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Automated Report

Technical Report for

Arcadis

National Grid, Philly Coke, Philadelphia, PA

B0036790.000.1

SGS Job Number: JC87093

Sampling Date: 04/26/19

Report to:

Arcadis U.S.
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Syracuse, NY 13202
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ATTN: John Brussel

Total number of pages in report: **1811**

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
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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 # JC87093 – Reissues

Dear Mr. Brussel,

The final report for SGS job number JC87093 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 Detention 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.

CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!

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SGS North America Inc.

Sample Summary

Arcadis

Job No: JC87093

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.000.1

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC87093-1	04/26/19	09:15	GB	04/26/19	SO	Soil	S-155 (10-12)
JC87093-2	04/26/19	09:30	GB	04/26/19	SO	Soil	S-155 (13-15)
JC87093-3	04/26/19	10:10	GB	04/26/19	SO	Soil	S-154 (9-11)
JC87093-4	04/26/19	10:35	GB	04/26/19	SO	Soil	S-154 (12-14)
JC87093-5	04/26/19	00:00	GB	04/26/19	SO	Soil	SO-DUP-0426-1
JC87093-6	04/26/19	13:45	GB	04/26/19	SO	Soil	S-158 (11-13)
JC87093-7	04/26/19	14:00	GB	04/26/19	SO	Soil	S-158 (18-20)
JC87093-7D	04/26/19	14:00	GB	04/26/19	SO	Soil Dup/MSD	S-158 (18-20)MSD
JC87093-7S	04/26/19	14:00	GB	04/26/19	SO	Soil Matrix Spike	S-158 (18-20)MS
JC87093-8	04/26/19	15:15	GB	04/26/19	SO	Soil	S-159 (11-13)
JC87093-9	04/26/19	15:35	GB	04/26/19	SO	Soil	S-159 (18-20)
JC87093-10	04/26/19	10:25	GB	04/26/19	SO	Soil	S-153 (7-9)
JC87093-11	04/26/19	10:40	GB	04/26/19	SO	Soil	S-153 (13.5-15)

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

SGS North America Inc.

Sample Summary
(continued)

Arcadis

Job No: JC87093

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.000.1

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC87093-12	04/26/19	00:00	GB	04/26/19	SO	Soil	SO-DUP2-0426

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Arcadis	**Job No**	JC87093
Site:	National Grid, Philly Coke, Philadelphia, PA	**Report Date**	5/14/2019 9:37:11 AM

On 04/26/2019, 12 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 0.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC87093 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:** V1C7213

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87420-2MS, JC87420-2MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Methyl Acetate are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Methyl Acetate are outside control limits. Outside control limits due to matrix interference.
- JC87093-4 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC87093-4 for Dichlorodifluoromethane: Associated CCV outside of control limits low.

Matrix: SO **Batch ID:** V3C6820

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86986-4DUP, JC86986-8MS were used as the QC samples indicated.
- JC87093-12: Confirmation run.
- JC87093-12 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.
- V3C6820-BS for Dibromochloromethane: High percent recoveries and no associated positive reported in the QC batch.
- JC87093-2 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-2 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC87093-11 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-2 for Dibromochloromethane: Associated CCV and BS outside of control limits high, sample was ND.
- JC87093-11 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC87093-9 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-9 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC87093-9 for Dibromochloromethane: Associated CCV and BS outside of control limits high, sample was ND.
- JC87093-11 for Dibromochloromethane: Associated CCV and BS outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** V3C6821

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87093-7DUP, JC87093-7MS were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Chlorobenzene, Styrene are outside control limits. Outside control limits due to matrix interference.

MS Volatiles By Method SW846 8260C

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Matrix: SO **Batch ID:** V3C6821

- JC87093-10 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-10 for Methyl Acetate: Associated CCV outside of control limits low.
- JC87093-5 for Methyl Acetate: Associated CCV outside of control limits low.
- JC87093-5 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-12 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-7 for Chloromethane: Associated CCV outside of control limits low.
- JC87093-12 for Methyl Acetate: Associated CCV outside of control limits low.
- JC87093-12 for 4-Bromofluorobenzene: Outside control limits due to matrix interference. Confirmed by reanalysis.
- JC87093-7 for Methyl Acetate: Associated CCV outside of control limits low.

Matrix: SO **Batch ID:** VD10652

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC87263-11MS, JC87263-11MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC87093-1: Diluted due to high concentration of target and non-target compound.
- JC87093-1 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC87093-1 for Acetone: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VD10654

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87652-1MS, JC87652-1MSD were used as the QC samples indicated.
- JC87093-6: Diluted due to high concentration of non-target compound.
- JC87093-8: Diluted due to high concentration of non-target compound.
- JC87093-6 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC87093-8 for Acetone: Associated CCV outside of control limits high, sample was ND.
- JC87093-8 for 1,2-Dichloroethane: Associated CCV outside of control limits low.
- JC87093-6 for Acetone: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VD10656

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC87093-3MS, JC87093-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC87093-3: Diluted due to high concentration of target compound.
- JC87093-3 for Acetone: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VI9105

- The data for SW846 8260C meets quality control requirements.
- JC87093-7: Confirmation run for internal standard areas.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO	Batch ID: OP20110

- All samples were extracted within the recommended method holding time.
- Sample(s) JC87093-7MS, JC87093-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC87093-6: Dilution required due to viscosity of the extract matrix.
- JC87093-1: Dilution required due to viscosity of the extract matrix.
- JC87093-1 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-6 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-4 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-1 for Phenol-d5: Outside control limits due to dilution.
- JC87093-4 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-5 for Nitrobenzene: Associated CCV outside of control limits high, sample was ND.
- JC87093-1 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC87093-1 for 2-Fluorophenol: Outside control limits due to dilution.
- JC87093-1 for Terphenyl-d14: Outside control limits due to dilution.
- JC87093-1 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC87093-8 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-10 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-5 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-12 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-2 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-8 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-9 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-3 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-10 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-11 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-11 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-2 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-3 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-7 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-7 for 1,4-Dioxane: Associated CCV outside of control limits high, sample was ND.
- JC87093-9 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JC87093-12 for Caprolactam: Associated CCV outside of control limits high, sample was ND.

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP14721

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87093-7PS, JC87093-7SDL, JC87093-7MS, JC87093-7MSD were used as the QC samples for metals.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony, Iron are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- RPD(s) for MS/MSD for Aluminum are outside control limits. High rpd due to possible sample nonhomogeneity.
- RPD(s) for Serial Dilution for Arsenic, Cadmium, Silver are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JC87093-11 for Zinc: Elevated detection limit due to dilution required for high interfering element.
- JC87093-3 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC87093-2 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC87093-3 for Chromium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC87093-2 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC87093-2 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-2 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC87093-10 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC87093-2 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC87093-2 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-4 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC87093-3 for Vanadium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-4 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-4 for Zinc: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-4 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC87093-4 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC87093-1 for Arsenic: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 6010D

Matrix: SO	Batch ID: MP14721

- JC87093-4 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC87093-3 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC87093-4 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC87093-3 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC87093-8 for Silver: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 7471B

Matrix: SO	Batch ID: MP14638

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87093-7MS, JC87093-7MSD were used as the QC samples for metals.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO	Batch ID: GN94892

- Sample(s) JC87372-18DUP were used as the QC samples for Solids, Percent.

Matrix: SO	Batch ID: GN94893

- Sample(s) JC87093-7DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 9012B/LACHAT

Matrix: SO	Batch ID: GP21029

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87073-9DUP, JC87073-9MS were used as the QC samples for Cyanide.
- Matrix Spike Recovery(s) for Cyanide are outside control limits. Spike recovery indicates possible matrix interference.

Matrix: SO	Batch ID: GP21053

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87525-5DUP, JC87525-5MS were used as the QC samples for Cyanide.
- Matrix Spike Recovery(s) for Cyanide are outside control limits. Spike recovery indicates possible matrix interference.

Matrix: SO	Batch ID: GP21104

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC87495-2DUP, JC87495-2MS were used as the QC samples for Cyanide.

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: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC87093-1	**S-155 (10-12)**					
Benzene [a]		247000	870	650	ug/kg	SW846 8260C
Chlorobenzene [a]		40700	3500	610	ug/kg	SW846 8260C
Ethylbenzene [a]		76000	1700	960	ug/kg	SW846 8260C
Isopropylbenzene [a]		2130 J	3500	1200	ug/kg	SW846 8260C
Toluene [a]		84400	1700	650	ug/kg	SW846 8260C
m,p-Xylene [a]		137000	1700	1300	ug/kg	SW846 8260C
o-Xylene [a]		38400	1700	1000	ug/kg	SW846 8260C
Xylene (total) [a]		175000	1700	1000	ug/kg	SW846 8260C
3&4-Methylphenol [b]		382 J	520	210	ug/kg	SW846 8270D
Acenaphthene		190000	2600	890	ug/kg	SW846 8270D
Acenaphthylene [b]		24500	260	130	ug/kg	SW846 8270D
Anthracene		178000	2600	1600	ug/kg	SW846 8270D
Benzo(a)anthracene		117000	2600	730	ug/kg	SW846 8270D
Benzo(a)pyrene		101000	2600	1200	ug/kg	SW846 8270D
Benzo(b)fluoranthene		106000	2600	1100	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		48900	2600	1300	ug/kg	SW846 8270D
Benzo(k)fluoranthene [b]		19300	260	120	ug/kg	SW846 8270D
1,1'-Biphenyl [b]		23200	520	35	ug/kg	SW846 8270D
Carbazole		63000	5200	370	ug/kg	SW846 8270D
Chrysene		100000	2600	810	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene [b]		18100	260	110	ug/kg	SW846 8270D
Dibenzofuran		113000	5200	1000	ug/kg	SW846 8270D
Fluoranthene		337000	26000	11000	ug/kg	SW846 8270D
Fluorene		186000	2600	1200	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		43000	2600	1200	ug/kg	SW846 8270D
2-Methylnaphthalene		29900	2600	580	ug/kg	SW846 8270D
Naphthalene		139000	2600	730	ug/kg	SW846 8270D
Phenanthrene		519000	26000	8700	ug/kg	SW846 8270D
Pyrene		232000	2600	820	ug/kg	SW846 8270D
Aluminum		11600	78	13	mg/kg	SW846 6010D
Arsenic [c]		34.5	6.3	0.88	mg/kg	SW846 6010D
Barium		128	31	3.0	mg/kg	SW846 6010D
Beryllium		0.82	0.31	0.13	mg/kg	SW846 6010D
Cadmium		1.8	0.78	0.11	mg/kg	SW846 6010D
Calcium		4070	780	69	mg/kg	SW846 6010D
Chromium		143	1.6	0.58	mg/kg	SW846 6010D
Cobalt		11.5	7.8	0.44	mg/kg	SW846 6010D
Copper [c]		82.8	7.8	2.6	mg/kg	SW846 6010D
Iron		38700	160	60	mg/kg	SW846 6010D
Lead [c]		175	6.3	1.3	mg/kg	SW846 6010D
Magnesium		3590	780	21	mg/kg	SW846 6010D
Manganese [c]		698	4.7	1.3	mg/kg	SW846 6010D
Mercury		1.8	0.24	0.10	mg/kg	SW846 7471B

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nickel		24.5	6.3	0.55	mg/kg	SW846 6010D
Potassium		1440 J	1600	50	mg/kg	SW846 6010D
Silver [c]		0.91 J	1.6	0.53	mg/kg	SW846 6010D
Sodium		153 J	1600	120	mg/kg	SW846 6010D
Vanadium		23.6	7.8	0.30	mg/kg	SW846 6010D
Zinc		529	7.8	3.6	mg/kg	SW846 6010D
Cyanide		7.2	0.41	0.20	mg/kg	SW846 9012B/LACHAT
JC87093-2	**S-155 (13-15)**					
Acetone		376	19	9.6	ug/kg	SW846 8260C
Benzene		2.9	0.96	0.72	ug/kg	SW846 8260C
2-Butanone (MEK)		57.7	19	7.2	ug/kg	SW846 8260C
Isopropylbenzene		2.6 J	3.8	1.3	ug/kg	SW846 8260C
Methylcyclohexane		4.6	3.8	1.4	ug/kg	SW846 8260C
Toluene		1.4 J	1.9	0.72	ug/kg	SW846 8260C
m,p-Xylene		2.8	1.9	1.4	ug/kg	SW846 8260C
o-Xylene		3.5	1.9	1.1	ug/kg	SW846 8260C
Xylene (total)		6.3	1.9	1.1	ug/kg	SW846 8260C
3&4-Methylphenol		315	120	49	ug/kg	SW846 8270D
Acenaphthene		809	59	21	ug/kg	SW846 8270D
Acenaphthylene		252	59	30	ug/kg	SW846 8270D
Acetophenone		22.5 J	300	13	ug/kg	SW846 8270D
Anthracene		359	59	36	ug/kg	SW846 8270D
Benzo(a)anthracene		284	59	17	ug/kg	SW846 8270D
Benzo(a)pyrene		549	59	27	ug/kg	SW846 8270D
Benzo(b)fluoranthene		460	59	26	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		434	59	30	ug/kg	SW846 8270D
Benzo(k)fluoranthene		170	59	28	ug/kg	SW846 8270D
1,1'-Biphenyl		109 J	120	8.2	ug/kg	SW846 8270D
Carbazole		81.4 J	120	8.6	ug/kg	SW846 8270D
Chrysene		374	59	19	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		98.2	59	26	ug/kg	SW846 8270D
Dibenzofuran		248	120	24	ug/kg	SW846 8270D
Fluoranthene		537	59	27	ug/kg	SW846 8270D
Fluorene		478	59	27	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		383	59	28	ug/kg	SW846 8270D
2-Methylnaphthalene		510	59	13	ug/kg	SW846 8270D
Naphthalene		1570	59	17	ug/kg	SW846 8270D
Phenanthrene		1190	59	20	ug/kg	SW846 8270D
Pyrene		632	59	19	ug/kg	SW846 8270D
Aluminum		22300	95	15	mg/kg	SW846 6010D
Antimony		1.4 J	3.8	0.78	mg/kg	SW846 6010D
Arsenic [c]		78.4	7.6	1.1	mg/kg	SW846 6010D
Barium		266	38	3.6	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Beryllium		1.6	0.38	0.15	mg/kg	SW846 6010D
Cadmium		3.0	0.95	0.13	mg/kg	SW846 6010D
Calcium		4570	950	84	mg/kg	SW846 6010D
Chromium		264	1.9	0.70	mg/kg	SW846 6010D
Cobalt		29.1	9.5	0.53	mg/kg	SW846 6010D
Copper [c]		194	9.5	3.2	mg/kg	SW846 6010D
Iron		50800	190	73	mg/kg	SW846 6010D
Lead [c]		380	7.6	1.6	mg/kg	SW846 6010D
Magnesium		5010	950	26	mg/kg	SW846 6010D
Manganese		1170	5.7	1.6	mg/kg	SW846 6010D
Mercury		2.4	0.26	0.12	mg/kg	SW846 7471B
Nickel		47.1	7.6	0.66	mg/kg	SW846 6010D
Potassium		2290	1900	60	mg/kg	SW846 6010D
Silver [c]		2.2	1.9	0.64	mg/kg	SW846 6010D
Sodium		356 J	1900	150	mg/kg	SW846 6010D
Vanadium		42.6	9.5	0.36	mg/kg	SW846 6010D
Zinc		1010	9.5	4.4	mg/kg	SW846 6010D
Cyanide		1.5	0.44	0.22	mg/kg	SW846 9012B/LACHAT
JC87093-3	**S-154 (9-11)**					
Benzene [d]		11400	81	61	ug/kg	SW846 8260C
Carbon disulfide [d]		206 J	320	150	ug/kg	SW846 8260C
Chlorobenzene [d]		163 J	320	57	ug/kg	SW846 8260C
Ethylbenzene [d]		94.9 J	160	89	ug/kg	SW846 8260C
Methyl Acetate [d]		431 J	810	220	ug/kg	SW846 8260C
Toluene [d]		594	160	61	ug/kg	SW846 8260C
3&4-Methylphenol		36.0 J	80	33	ug/kg	SW846 8270D
Acenaphthene		9540	200	69	ug/kg	SW846 8270D
Acenaphthylene		504	40	20	ug/kg	SW846 8270D
Anthracene		1610	40	25	ug/kg	SW846 8270D
Benzo(a)anthracene		318	40	11	ug/kg	SW846 8270D
Benzo(a)pyrene		249	40	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene		330	40	18	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		160	40	20	ug/kg	SW846 8270D
Benzo(k)fluoranthene		105	40	19	ug/kg	SW846 8270D
1,1'-Biphenyl		222	80	5.5	ug/kg	SW846 8270D
Carbazole		2540	80	5.8	ug/kg	SW846 8270D
Chrysene		362	40	13	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		43.8	40	18	ug/kg	SW846 8270D
Dibenzofuran		3620	80	16	ug/kg	SW846 8270D
Fluoranthene		1910	40	18	ug/kg	SW846 8270D
Fluorene		8690	200	92	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		158	40	19	ug/kg	SW846 8270D
2-Methylnaphthalene		319	40	9.1	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Naphthalene		3230	40	11	ug/kg	SW846 8270D
Phenanthrene		2900	40	13	ug/kg	SW846 8270D
Pyrene		1380	40	13	ug/kg	SW846 8270D
Aluminum		4510	67	11	mg/kg	SW846 6010D
Arsenic		5.2	2.7	0.37	mg/kg	SW846 6010D
Barium		58.2	27	2.5	mg/kg	SW846 6010D
Beryllium		0.43	0.27	0.11	mg/kg	SW846 6010D
Cadmium		0.19 J	0.67	0.094	mg/kg	SW846 6010D
Calcium		3160	670	59	mg/kg	SW846 6010D
Chromium [c]		28.2	1.3	0.50	mg/kg	SW846 6010D
Cobalt		5.4 J	6.7	0.37	mg/kg	SW846 6010D
Copper [c]		36.1	3.3	1.1	mg/kg	SW846 6010D
Iron		17000	67	26	mg/kg	SW846 6010D
Lead		55.8	2.7	0.55	mg/kg	SW846 6010D
Magnesium		1350	670	18	mg/kg	SW846 6010D
Manganese [c]		407	2.0	0.55	mg/kg	SW846 6010D
Mercury		0.29	0.033	0.014	mg/kg	SW846 7471B
Nickel		19.6	5.4	0.47	mg/kg	SW846 6010D
Potassium		501 J	1300	43	mg/kg	SW846 6010D
Sodium		123 J	1300	100	mg/kg	SW846 6010D
Vanadium [c]		14.6	6.7	0.25	mg/kg	SW846 6010D
Zinc		100	6.7	3.1	mg/kg	SW846 6010D
Cyanide		5.5	0.26	0.13	mg/kg	SW846 9012B/LACHAT
JC87093-4	**S-154 (12-14)**					
Acetone		208	22	11	ug/kg	SW846 8260C
Benzene		2.5	1.1	0.82	ug/kg	SW846 8260C
2-Butanone (MEK)		25.7	22	8.1	ug/kg	SW846 8260C
Ethylbenzene		1.2 J	2.2	1.2	ug/kg	SW846 8260C
Isopropylbenzene		1.8 J	4.3	1.5	ug/kg	SW846 8260C
Toluene		1.3 J	2.2	0.81	ug/kg	SW846 8260C
o-Xylene		1.4 J	2.2	1.3	ug/kg	SW846 8260C
Xylene (total)		1.4 J	2.2	1.3	ug/kg	SW846 8260C
3&4-Methylphenol		425	110	47	ug/kg	SW846 8270D
Acenaphthene		1890	57	20	ug/kg	SW846 8270D
Acenaphthylene		308	57	29	ug/kg	SW846 8270D
Acetophenone		21.0 J	290	12	ug/kg	SW846 8270D
Anthracene		1080	57	35	ug/kg	SW846 8270D
Benzo(a)anthracene		762	57	16	ug/kg	SW846 8270D
Benzo(a)pyrene		916	57	26	ug/kg	SW846 8270D
Benzo(b)fluoranthene		896	57	25	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		551	57	29	ug/kg	SW846 8270D
Benzo(k)fluoranthene		326	57	27	ug/kg	SW846 8270D
1,1'-Biphenyl		115	110	7.9	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Carbazole	204	110	8.3	ug/kg	SW846 8270D
Chrysene	892	57	18	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	146	57	25	ug/kg	SW846 8270D
Dibenzofuran	584	110	23	ug/kg	SW846 8270D
Fluoranthene	1880	57	26	ug/kg	SW846 8270D
Fluorene	1400	57	26	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	499	57	27	ug/kg	SW846 8270D
2-Methylnaphthalene	572	57	13	ug/kg	SW846 8270D
Naphthalene	1610	57	16	ug/kg	SW846 8270D
Phenanthrene	4560	57	19	ug/kg	SW846 8270D
Pyrene	2080	57	18	ug/kg	SW846 8270D
Aluminum	22800	87	14	mg/kg	SW846 6010D
Antimony	1.2 J	3.5	0.71	mg/kg	SW846 6010D
Arsenic [c]	140	6.9	0.97	mg/kg	SW846 6010D
Barium	276	35	3.3	mg/kg	SW846 6010D
Beryllium	1.7	0.35	0.14	mg/kg	SW846 6010D
Cadmium	3.9	0.87	0.12	mg/kg	SW846 6010D
Calcium	5000	870	76	mg/kg	SW846 6010D
Chromium	449	1.7	0.64	mg/kg	SW846 6010D
Cobalt	26.8	8.7	0.48	mg/kg	SW846 6010D
Copper [c]	220	8.7	2.9	mg/kg	SW846 6010D
Iron	42200	170	66	mg/kg	SW846 6010D
Lead [c]	561	6.9	1.4	mg/kg	SW846 6010D
Magnesium	5040	870	24	mg/kg	SW846 6010D
Manganese	1210	5.2	1.4	mg/kg	SW846 6010D
Mercury	2.1	0.23	0.10	mg/kg	SW846 7471B
Nickel	47.2	6.9	0.61	mg/kg	SW846 6010D
Potassium	2260	1700	55	mg/kg	SW846 6010D
Selenium [c]	2.3 J	6.9	2.2	mg/kg	SW846 6010D
Silver [c]	2.4	1.7	0.59	mg/kg	SW846 6010D
Sodium	335 J	1700	130	mg/kg	SW846 6010D
Vanadium	44.1	8.7	0.33	mg/kg	SW846 6010D
Zinc [c]	1690	17	8.0	mg/kg	SW846 6010D
Cyanide	3.2	0.37	0.19	mg/kg	SW846 9012B/LACHAT
JC87093-5 SO-DUP-0426-1					
Acetone	71.6	23	11	ug/kg	SW846 8260C
Benzene	4.2	1.1	0.86	ug/kg	SW846 8260C
2-Butanone (MEK)	11.6 J	23	8.5	ug/kg	SW846 8260C
Toluene	0.87 J	2.3	0.86	ug/kg	SW846 8260C
3&4-Methylphenol	681	120	49	ug/kg	SW846 8270D
Acenaphthene	1620	60	21	ug/kg	SW846 8270D
Acenaphthylene	331	60	30	ug/kg	SW846 8270D
Acetophenone	16.8 J	300	13	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Anthracene	867	60	37	ug/kg	SW846 8270D
Benzo(a)anthracene	741	60	17	ug/kg	SW846 8270D
Benzo(a)pyrene	799	60	27	ug/kg	SW846 8270D
Benzo(b)fluoranthene	807	60	27	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	468	60	30	ug/kg	SW846 8270D
Benzo(k)fluoranthene	257	60	28	ug/kg	SW846 8270D
1,1'-Biphenyl	143	120	8.2	ug/kg	SW846 8270D
Carbazole	115 J	120	8.7	ug/kg	SW846 8270D
Chrysene	868	60	19	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	119	60	27	ug/kg	SW846 8270D
Dibenzofuran	505	120	24	ug/kg	SW846 8270D
Fluoranthene	1810	60	27	ug/kg	SW846 8270D
Fluorene	1040	60	28	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	432	60	28	ug/kg	SW846 8270D
2-Methylnaphthalene	638	60	14	ug/kg	SW846 8270D
Naphthalene	1850	60	17	ug/kg	SW846 8270D
Phenanthrene	3300	60	20	ug/kg	SW846 8270D
Pyrene	2140	60	19	ug/kg	SW846 8270D
Aluminum	18500	93	15	mg/kg	SW846 6010D
Arsenic	33.9	3.7	0.52	mg/kg	SW846 6010D
Barium	159	37	3.5	mg/kg	SW846 6010D
Beryllium	1.3	0.37	0.15	mg/kg	SW846 6010D
Cadmium	1.4	0.93	0.13	mg/kg	SW846 6010D
Calcium	3900	930	82	mg/kg	SW846 6010D
Chromium	156	1.9	0.69	mg/kg	SW846 6010D
Cobalt	17.9	9.3	0.52	mg/kg	SW846 6010D
Copper	98.6	4.7	1.6	mg/kg	SW846 6010D
Iron	32900	93	36	mg/kg	SW846 6010D
Lead	187	3.7	0.76	mg/kg	SW846 6010D
Magnesium	5090	930	25	mg/kg	SW846 6010D
Manganese	1020	2.8	0.76	mg/kg	SW846 6010D
Mercury	2.4	0.26	0.11	mg/kg	SW846 7471B
Nickel	33.7	7.4	0.65	mg/kg	SW846 6010D
Potassium	2120	1900	59	mg/kg	SW846 6010D
Selenium	1.2 J	3.7	1.2	mg/kg	SW846 6010D
Sodium	267 J	1900	140	mg/kg	SW846 6010D
Vanadium	38.0	9.3	0.35	mg/kg	SW846 6010D
Zinc	540	9.3	4.3	mg/kg	SW846 6010D
Cyanide	1.5	0.44	0.22	mg/kg	SW846 9012B/LACHAT
JC87093-6 S-158 (11-13)					
Carbon disulfide [e]	11200	1500	670	ug/kg	SW846 8260C
Ethylbenzene [e]	537 J	730	400	ug/kg	SW846 8260C
Methyl Acetate [e]	1050 J	3600	1000	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Acenaphthene		9550	420	150	ug/kg	SW846 8270D
Acenaphthylene		44400	4200	2200	ug/kg	SW846 8270D
Acetophenone [b]		927	420	18	ug/kg	SW846 8270D
Anthracene		11700	420	260	ug/kg	SW846 8270D
Benzo(a)anthracene		10700	420	120	ug/kg	SW846 8270D
Benzo(a)pyrene [b]		8040	85	39	ug/kg	SW846 8270D
Benzo(b)fluoranthene		11200	420	190	ug/kg	SW846 8270D
Benzo(g,h,i)perylene [b]		5250	85	42	ug/kg	SW846 8270D
Benzo(k)fluoranthene		3590	420	200	ug/kg	SW846 8270D
1,1'-Biphenyl		16400	850	58	ug/kg	SW846 8270D
Carbazole [b]		2830	170	12	ug/kg	SW846 8270D
Chrysene		9020	420	130	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene [b]		1140	85	37	ug/kg	SW846 8270D
Dibenzofuran		51500	8500	1700	ug/kg	SW846 8270D
Fluoranthene		36400	420	190	ug/kg	SW846 8270D
Fluorene		51100	4200	1900	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [b]		5740	85	40	ug/kg	SW846 8270D
2-Methylnaphthalene		46100	4200	960	ug/kg	SW846 8270D
Naphthalene		423000	4200	1200	ug/kg	SW846 8270D
Phenanthrene		67800	4200	1400	ug/kg	SW846 8270D
Pyrene		24500	420	140	ug/kg	SW846 8270D
Aluminum		3230	64	10	mg/kg	SW846 6010D
Arsenic		18.2	2.5	0.36	mg/kg	SW846 6010D
Barium		104	25	2.4	mg/kg	SW846 6010D
Beryllium		0.29	0.25	0.10	mg/kg	SW846 6010D
Cadmium		0.28 J	0.64	0.089	mg/kg	SW846 6010D
Calcium		10900	640	56	mg/kg	SW846 6010D
Chromium		72.7	1.3	0.47	mg/kg	SW846 6010D
Cobalt		3.9 J	6.4	0.36	mg/kg	SW846 6010D
Copper		127	3.2	1.1	mg/kg	SW846 6010D
Iron		21600	64	24	mg/kg	SW846 6010D
Lead		101	2.5	0.52	mg/kg	SW846 6010D
Magnesium		1420	640	17	mg/kg	SW846 6010D
Manganese		262	1.9	0.52	mg/kg	SW846 6010D
Mercury		2.8	0.17	0.074	mg/kg	SW846 7471B
Nickel		17.2	5.1	0.44	mg/kg	SW846 6010D
Potassium		649 J	1300	40	mg/kg	SW846 6010D
Sodium		155 J	1300	99	mg/kg	SW846 6010D
Vanadium		12.4	6.4	0.24	mg/kg	SW846 6010D
Zinc		128	6.4	2.9	mg/kg	SW846 6010D
Cyanide		29.4	0.80	0.40	mg/kg	SW846 9012B/LACHAT
JC87093-7	**S-158 (18-20)**					
Acetone		224	16	8.2	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
2-Butanone (MEK)	51.9	16	6.1	ug/kg	SW846 8260C
Acenaphthene	23.1 J	56	19	ug/kg	SW846 8270D
Benzo(a)anthracene	35.1 J	56	16	ug/kg	SW846 8270D
Benzo(a)pyrene	32.2 J	56	25	ug/kg	SW846 8270D
Benzo(b)fluoranthene	33.2 J	56	25	ug/kg	SW846 8270D
1,1'-Biphenyl	10.3 J	110	7.7	ug/kg	SW846 8270D
Carbazole	8.5 J	110	8.1	ug/kg	SW846 8270D
Chrysene	45.5 J	56	18	ug/kg	SW846 8270D
Fluoranthene	57.7	56	25	ug/kg	SW846 8270D
Fluorene	31.5 J	56	26	ug/kg	SW846 8270D
2-Methylnaphthalene	30.0 J	56	13	ug/kg	SW846 8270D
Naphthalene	156	56	16	ug/kg	SW846 8270D
Phenanthrene	62.5	56	19	ug/kg	SW846 8270D
Pyrene	65.4	56	18	ug/kg	SW846 8270D
Aluminum	12500	82	13	mg/kg	SW846 6010D
Arsenic	4.1	3.3	0.46	mg/kg	SW846 6010D
Barium	116	33	3.1	mg/kg	SW846 6010D
Beryllium	0.69	0.33	0.13	mg/kg	SW846 6010D
Calcium	3380	820	73	mg/kg	SW846 6010D
Chromium	27.1	1.6	0.61	mg/kg	SW846 6010D
Cobalt	5.6 J	8.2	0.46	mg/kg	SW846 6010D
Copper	11.9	4.1	1.4	mg/kg	SW846 6010D
Iron	14400	82	32	mg/kg	SW846 6010D
Lead	21.4	3.3	0.68	mg/kg	SW846 6010D
Magnesium	3120	820	23	mg/kg	SW846 6010D
Manganese	333	2.5	0.68	mg/kg	SW846 6010D
Mercury	0.060	0.052	0.023	mg/kg	SW846 7471B
Nickel	16.0	6.6	0.58	mg/kg	SW846 6010D
Potassium	1280 J	1600	52	mg/kg	SW846 6010D
Sodium	240 J	1600	130	mg/kg	SW846 6010D
Vanadium	25.9	8.2	0.31	mg/kg	SW846 6010D
Zinc	56.1	8.2	3.8	mg/kg	SW846 6010D
Cyanide	0.34 J	0.41	0.20	mg/kg	SW846 9012B/LACHAT
JC87093-8 S-159 (11-13)					
Benzene [e]	1130	100	77	ug/kg	SW846 8260C
Carbon disulfide [e]	539	410	190	ug/kg	SW846 8260C
Ethylbenzene [e]	184 J	200	110	ug/kg	SW846 8260C
Toluene [e]	1520	200	77	ug/kg	SW846 8260C
m,p-Xylene [e]	1020	200	150	ug/kg	SW846 8260C
o-Xylene [e]	282	200	120	ug/kg	SW846 8260C
Xylene (total) [e]	1300	200	120	ug/kg	SW846 8260C
Acenaphthene	360	200	67	ug/kg	SW846 8270D
Acetophenone	66.4 J	200	8.4	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Benzo(a)anthracene	170	39	11	ug/kg	SW846 8270D
Benzo(a)pyrene	124	39	18	ug/kg	SW846 8270D
Benzo(b)fluoranthene	163	39	17	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	86.3	39	20	ug/kg	SW846 8270D
Benzo(k)fluoranthene	60.2	39	18	ug/kg	SW846 8270D
1,1'-Biphenyl	959	390	27	ug/kg	SW846 8270D
Chrysene	213	39	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	25.8 J	39	17	ug/kg	SW846 8270D
Dibenzofuran	560	390	80	ug/kg	SW846 8270D
Fluoranthene	278	39	17	ug/kg	SW846 8270D
Fluorene	615	200	90	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	76.4	39	18	ug/kg	SW846 8270D
2-Methylnaphthalene	2550	39	8.8	ug/kg	SW846 8270D
Naphthalene	29300	980	280	ug/kg	SW846 8270D
Phenanthrene	613	39	13	ug/kg	SW846 8270D
Pyrene	816	39	13	ug/kg	SW846 8270D
Aluminum	8420	63	10	mg/kg	SW846 6010D
Antimony	0.54 J	2.5	0.52	mg/kg	SW846 6010D
Arsenic [c]	12.0	5.0	0.71	mg/kg	SW846 6010D
Barium	27.0	25	2.4	mg/kg	SW846 6010D
Beryllium	1.8	0.25	0.10	mg/kg	SW846 6010D
Cadmium	0.95	0.63	0.088	mg/kg	SW846 6010D
Calcium	2600	630	56	mg/kg	SW846 6010D
Chromium	20.4	1.3	0.47	mg/kg	SW846 6010D
Cobalt	8.7	6.3	0.35	mg/kg	SW846 6010D
Copper [c]	293	6.3	2.1	mg/kg	SW846 6010D
Iron	36800	130	48	mg/kg	SW846 6010D
Lead [c]	79.8	5.0	1.0	mg/kg	SW846 6010D
Magnesium	448 J	630	17	mg/kg	SW846 6010D
Manganese [c]	402	3.8	1.0	mg/kg	SW846 6010D
Mercury	0.061	0.035	0.015	mg/kg	SW846 7471B
Nickel	18.6	5.0	0.44	mg/kg	SW846 6010D
Potassium	559 J	1300	40	mg/kg	SW846 6010D
Selenium [c]	4.3 J	5.0	1.6	mg/kg	SW846 6010D
Vanadium	13.2	6.3	0.24	mg/kg	SW846 6010D
Zinc	117	6.3	2.9	mg/kg	SW846 6010D
Cyanide	0.70	0.35	0.18	mg/kg	SW846 9012B/LACHAT
JC87093-9 S-159 (18-20)					
Acetone	107	13	6.5	ug/kg	SW846 8260C
2-Butanone (MEK)	22.3	13	4.9	ug/kg	SW846 8260C
Aluminum	22400	69	11	mg/kg	SW846 6010D
Arsenic	4.3	2.8	0.39	mg/kg	SW846 6010D
Barium	172	28	2.6	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Beryllium		1.1	0.28	0.11	mg/kg	SW846 6010D
Cadmium		0.11 J	0.69	0.097	mg/kg	SW846 6010D
Calcium		2770	690	61	mg/kg	SW846 6010D
Chromium		44.6	1.4	0.51	mg/kg	SW846 6010D
Cobalt		9.5	6.9	0.39	mg/kg	SW846 6010D
Copper		7.4	3.4	1.2	mg/kg	SW846 6010D
Iron		22700	69	26	mg/kg	SW846 6010D
Lead		15.5	2.8	0.57	mg/kg	SW846 6010D
Magnesium		5160	690	19	mg/kg	SW846 6010D
Manganese		309	2.1	0.57	mg/kg	SW846 6010D
Mercury		0.087	0.036	0.016	mg/kg	SW846 7471B
Nickel		25.4	5.5	0.48	mg/kg	SW846 6010D
Potassium		1840	1400	44	mg/kg	SW846 6010D
Sodium		255 J	1400	110	mg/kg	SW846 6010D
Vanadium		43.2	6.9	0.26	mg/kg	SW846 6010D
Zinc		61.2	6.9	3.2	mg/kg	SW846 6010D
Cyanide		0.21 J	0.35	0.18	mg/kg	SW846 9012B/LACHAT
JC87093-10	**S-153 (7-9)**					
Acetone		141	22	11	ug/kg	SW846 8260C
Benzene		8.7	1.1	0.83	ug/kg	SW846 8260C
2-Butanone (MEK)		13.9 J	22	8.3	ug/kg	SW846 8260C
Carbon disulfide		10.5	4.4	2.1	ug/kg	SW846 8260C
Ethylbenzene		1.8 J	2.2	1.2	ug/kg	SW846 8260C
Toluene		2.2	2.2	0.83	ug/kg	SW846 8260C
m,p-Xylene		2.3	2.2	1.6	ug/kg	SW846 8260C
o-Xylene		2.8	2.2	1.3	ug/kg	SW846 8260C
Xylene (total)		5.1	2.2	1.3	ug/kg	SW846 8260C
2-Methylphenol		93.6 J	110	35	ug/kg	SW846 8270D
3&4-Methylphenol		141	110	45	ug/kg	SW846 8270D
Phenol		257	110	29	ug/kg	SW846 8270D
Acenaphthene		2850	55	19	ug/kg	SW846 8270D
Acenaphthylene		703	55	28	ug/kg	SW846 8270D
Acetophenone		37.6 J	270	12	ug/kg	SW846 8270D
Benzo(a)anthracene		138	55	15	ug/kg	SW846 8270D
Benzo(a)pyrene		107	55	25	ug/kg	SW846 8270D
Benzo(b)fluoranthene		134	55	24	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		74.3	55	27	ug/kg	SW846 8270D
Benzo(k)fluoranthene		55.5	55	26	ug/kg	SW846 8270D
1,1'-Biphenyl		282	110	7.5	ug/kg	SW846 8270D
Carbazole		1200	110	7.9	ug/kg	SW846 8270D
Chrysene		151	55	17	ug/kg	SW846 8270D
Dibenzofuran		821	110	22	ug/kg	SW846 8270D
Fluoranthene		434	55	24	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

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Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Fluorene	2970	55	25	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	73.3	55	26	ug/kg	SW846 8270D
2-Methylnaphthalene	638	55	12	ug/kg	SW846 8270D
Naphthalene	8280	270	77	ug/kg	SW846 8270D
Phenanthrene	326	55	18	ug/kg	SW846 8270D
Pyrene	495	55	18	ug/kg	SW846 8270D
Aluminum	27800	87	14	mg/kg	SW846 6010D
Arsenic [c]	8.2	6.9	0.97	mg/kg	SW846 6010D
Barium	236	35	3.3	mg/kg	SW846 6010D
Beryllium	4.4	0.35	0.14	mg/kg	SW846 6010D
Calcium	15400	870	77	mg/kg	SW846 6010D
Chromium	75.4	1.7	0.64	mg/kg	SW846 6010D
Cobalt	39.5	8.7	0.49	mg/kg	SW846 6010D
Copper [c]	28.1	8.7	2.9	mg/kg	SW846 6010D
Iron	41600	170	67	mg/kg	SW846 6010D
Lead [c]	21.2	6.9	1.4	mg/kg	SW846 6010D
Magnesium	7630	870	24	mg/kg	SW846 6010D
Manganese [c]	523	5.2	1.4	mg/kg	SW846 6010D
Mercury	0.23	0.050	0.022	mg/kg	SW846 7471B
Nickel	205	6.9	0.61	mg/kg	SW846 6010D
Potassium	1780	1700	55	mg/kg	SW846 6010D
Vanadium	22.0	8.7	0.33	mg/kg	SW846 6010D
Zinc	323	8.7	4.0	mg/kg	SW846 6010D
Cyanide	2.2	0.39	0.19	mg/kg	SW846 9012B/LACHAT
JC87093-11 S-153 (13.5-15)					
Acetone	75.5	16	7.9	ug/kg	SW846 8260C
2-Butanone (MEK)	14.1 J	16	5.9	ug/kg	SW846 8260C
Toluene	0.63 J	1.6	0.59	ug/kg	SW846 8260C
3&4-Methylphenol	297	100	42	ug/kg	SW846 8270D
Acenaphthene	641	51	18	ug/kg	SW846 8270D
Acenaphthylene	194	51	26	ug/kg	SW846 8270D
Acetophenone	11.4 J	260	11	ug/kg	SW846 8270D
Anthracene	296	51	31	ug/kg	SW846 8270D
Benzo(a)anthracene	490	51	15	ug/kg	SW846 8270D
Benzo(a)pyrene	657	51	23	ug/kg	SW846 8270D
Benzo(b)fluoranthene	638	51	23	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	438	51	26	ug/kg	SW846 8270D
Benzo(k)fluoranthene	259	51	24	ug/kg	SW846 8270D
1,1'-Biphenyl	93.5 J	100	7.0	ug/kg	SW846 8270D
Carbazole	78.1 J	100	7.4	ug/kg	SW846 8270D
Chrysene	564	51	16	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	112	51	23	ug/kg	SW846 8270D
Dibenzofuran	143	100	21	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

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Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Fluoranthene	751	51	23	ug/kg	SW846 8270D
Fluorene	320	51	24	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	413	51	24	ug/kg	SW846 8270D
2-Methylnaphthalene	406	51	12	ug/kg	SW846 8270D
Naphthalene	1220	51	14	ug/kg	SW846 8270D
Phenanthrene	925	51	17	ug/kg	SW846 8270D
Pyrene	851	51	16	ug/kg	SW846 8270D
Aluminum	8140	78	13	mg/kg	SW846 6010D
Arsenic	13.0	3.1	0.44	mg/kg	SW846 6010D
Barium	89.1	31	3.0	mg/kg	SW846 6010D
Beryllium	0.53	0.31	0.12	mg/kg	SW846 6010D
Cadmium	0.48 J	0.78	0.11	mg/kg	SW846 6010D
Calcium	2280	780	69	mg/kg	SW846 6010D
Chromium	64.0	1.6	0.58	mg/kg	SW846 6010D
Cobalt	8.3	7.8	0.44	mg/kg	SW846 6010D
Copper	40.7	3.9	1.3	mg/kg	SW846 6010D
Iron	15800	78	30	mg/kg	SW846 6010D
Lead	107	3.1	0.64	mg/kg	SW846 6010D
Magnesium	2590	780	21	mg/kg	SW846 6010D
Manganese	354	2.3	0.64	mg/kg	SW846 6010D
Mercury	1.1	0.086	0.038	mg/kg	SW846 7471B
Nickel	15.9	6.2	0.55	mg/kg	SW846 6010D
Potassium	1040 J	1600	50	mg/kg	SW846 6010D
Sodium	135 J	1600	120	mg/kg	SW846 6010D
Vanadium	15.1	7.8	0.30	mg/kg	SW846 6010D
Zinc [c]	215	7.8	3.6	mg/kg	SW846 6010D
Cyanide	4.9	0.35	0.18	mg/kg	SW846 9012B/LACHAT
JC87093-12 SO-DUP2-0426					
Acetone	72.5	18	8.8	ug/kg	SW846 8260C
2-Butanone (MEK)	16.2 J	18	6.6	ug/kg	SW846 8260C
Isopropylbenzene	1.6 J	3.5	1.2	ug/kg	SW846 8260C
Methylcyclohexane	1.5 J	3.5	1.2	ug/kg	SW846 8260C
Toluene	3.3	1.8	0.66	ug/kg	SW846 8260C
3&4-Methylphenol	181	94	39	ug/kg	SW846 8270D
Acenaphthene	945	47	16	ug/kg	SW846 8270D
Acenaphthylene	251	47	24	ug/kg	SW846 8270D
Anthracene	672	47	29	ug/kg	SW846 8270D
Benzo(a)anthracene	994	47	13	ug/kg	SW846 8270D
Benzo(a)pyrene	1060	47	21	ug/kg	SW846 8270D
Benzo(b)fluoranthene	1020	47	21	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	599	47	24	ug/kg	SW846 8270D
Benzo(k)fluoranthene	417	47	22	ug/kg	SW846 8270D
1,1'-Biphenyl	92.4 J	94	6.5	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC87093
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/26/19

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Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Carbazole	71.1 J	94	6.8	ug/kg	SW846 8270D
Chrysene	1070	47	15	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	160	47	21	ug/kg	SW846 8270D
Dibenzofuran	147	94	19	ug/kg	SW846 8270D
Fluoranthene	1770	47	21	ug/kg	SW846 8270D
Fluorene	598	47	22	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	600	47	22	ug/kg	SW846 8270D
2-Methylnaphthalene	473	47	11	ug/kg	SW846 8270D
Naphthalene	1290	47	13	ug/kg	SW846 8270D
Phenanthrene	2300	47	16	ug/kg	SW846 8270D
Pyrene	2070	47	15	ug/kg	SW846 8270D
Aluminum	13800	73	12	mg/kg	SW846 6010D
Arsenic	27.6	2.9	0.41	mg/kg	SW846 6010D
Barium	148	29	2.8	mg/kg	SW846 6010D
Beryllium	1.0	0.29	0.12	mg/kg	SW846 6010D
Cadmium	1.6	0.73	0.10	mg/kg	SW846 6010D
Calcium	2630	730	65	mg/kg	SW846 6010D
Chromium	135	1.5	0.54	mg/kg	SW846 6010D
Cobalt	13.0	7.3	0.41	mg/kg	SW846 6010D
Copper	87.1	3.7	1.2	mg/kg	SW846 6010D
Iron	22000	73	28	mg/kg	SW846 6010D
Lead	189	2.9	0.60	mg/kg	SW846 6010D
Magnesium	3500	730	20	mg/kg	SW846 6010D
Manganese	462	2.2	0.60	mg/kg	SW846 6010D
Mercury	0.50	0.041	0.018	mg/kg	SW846 7471B
Nickel	25.7	5.9	0.51	mg/kg	SW846 6010D
Potassium	1530	1500	47	mg/kg	SW846 6010D
Selenium	1.2 J	2.9	0.95	mg/kg	SW846 6010D
Silver	0.44 J	0.73	0.25	mg/kg	SW846 6010D
Sodium	199 J	1500	110	mg/kg	SW846 6010D
Vanadium	28.4	7.3	0.28	mg/kg	SW846 6010D
Zinc	491	7.3	3.4	mg/kg	SW846 6010D
Cyanide	5.2	0.25	0.12	mg/kg	SW846 9012B/LACHAT

(a) Diluted due to high concentration of target and non-target compound.
(b) Dilution required due to viscosity of the extract matrix.
(c) Elevated detection limit due to dilution required for high interfering element.
(d) Diluted due to high concentration of target compound.
(e) Diluted due to high concentration of non-target compound.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	63.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264334.D	1	05/07/19 19:56	TDN	n/a	n/a	VD10652
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.4 g	10.0 ml	10.0 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	17000	8700	ug/kg	
71-43-2	Benzene	247000	870	650	ug/kg	
74-97-5	Bromochloromethane	ND	8700	750	ug/kg	
75-27-4	Bromodichloromethane	ND	3500	770	ug/kg	
75-25-2	Bromoform	ND	8700	700	ug/kg	
74-83-9	Bromomethane	ND	8700	1700	ug/kg	
78-93-3	2-Butanone (MEK)	ND	17000	6500	ug/kg	
75-15-0	Carbon disulfide	ND	3500	1600	ug/kg	
56-23-5	Carbon tetrachloride	ND	3500	950	ug/kg	
108-90-7	Chlorobenzene	40700	3500	610	ug/kg	
75-00-3	Chloroethane	ND	8700	1200	ug/kg	
67-66-3	Chloroform	ND	3500	650	ug/kg	
74-87-3	Chloromethane	ND	8700	3400	ug/kg	
110-82-7	Cyclohexane	ND	3500	700	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3500	1500	ug/kg	
124-48-1	Dibromochloromethane	ND	3500	590	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1700	560	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1700	530	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1700	620	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1700	600	ug/kg	
75-71-8	Dichlorodifluoromethane [c]	ND	8700	1100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1700	670	ug/kg	
107-06-2	1,2-Dichloroethane [c]	ND	1700	820	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1700	1100	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1700	1700	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1700	1200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3500	710	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3500	610	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3500	570	ug/kg	
100-41-4	Ethylbenzene	76000	1700	960	ug/kg	
76-13-1	Freon 113	ND	8700	1300	ug/kg	
591-78-6	2-Hexanone	ND	8700	2200	ug/kg	

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

Report of Analysis

Client Sample ID:	S-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	63.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	2130	3500	1200	ug/kg	J
79-20-9	Methyl Acetate	ND	8700	2400	ug/kg	
108-87-2	Methylcyclohexane	ND	3500	1200	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1700	610	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8700	2700	ug/kg	
75-09-2	Methylene chloride	ND	8700	4300	ug/kg	
100-42-5	Styrene	ND	3500	1000	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3500	680	ug/kg	
127-18-4	Tetrachloroethene	ND	3500	800	ug/kg	
108-88-3	Toluene	84400	1700	650	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8700	1700	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8700	1700	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3500	740	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3500	590	ug/kg	
79-01-6	Trichloroethene	ND	1700	1300	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8700	1200	ug/kg	
75-01-4	Vinyl chloride	ND	3500	810	ug/kg	
	m,p-Xylene	137000	1700	1300	ug/kg	
95-47-6	o-Xylene	38400	1700	1000	ug/kg	
1330-20-7	Xylene (total)	175000	1700	1000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-127%
17060-07-0	1,2-Dichloroethane-D4	92%		75-130%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	92%		79-127%

(a) Diluted due to high concentration of target and 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:	S-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	63.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	P129433.D	5	05/09/19 19:49	AR	05/06/19 17:35	OP20110	EP5858
Run #2	6P481792.D	50	05/10/19 12:50	AR	05/06/19 17:35	OP20110	E6P2588
Run #3	6P481790.D	500	05/10/19 12:01	AR	05/06/19 17:35	OP20110	E6P2588

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2	30.4 g	1.0 ml
Run #3	30.4 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	520	130	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1300	160	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	1300	220	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	1300	460	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1300	970	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	1300	280	ug/kg	
95-48-7	2-Methylphenol	ND	520	160	ug/kg	
	3&4-Methylphenol	382	520	210	ug/kg	J
88-75-5	2-Nitrophenol	ND	1300	170	ug/kg	
100-02-7	4-Nitrophenol	ND	2600	690	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	240	ug/kg	
108-95-2	Phenol	ND	520	130	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1300	170	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1300	190	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1300	150	ug/kg	
83-32-9	Acenaphthene	190000 [b]	2600	890	ug/kg	
208-96-8	Acenaphthylene	24500	260	130	ug/kg	
98-86-2	Acetophenone	ND	1300	55	ug/kg	
120-12-7	Anthracene	178000 [b]	2600	1600	ug/kg	
1912-24-9	Atrazine	ND	520	110	ug/kg	
56-55-3	Benzo(a)anthracene	117000 [b]	2600	730	ug/kg	
50-32-8	Benzo(a)pyrene	101000 [b]	2600	1200	ug/kg	
205-99-2	Benzo(b)fluoranthene	106000 [b]	2600	1100	ug/kg	
191-24-2	Benzo(g,h,i)perylene	48900 [b]	2600	1300	ug/kg	
207-08-9	Benzo(k)fluoranthene	19300	260	120	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	520	100	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	520	63	ug/kg	
92-52-4	1,1'-Biphenyl	23200	520	35	ug/kg	
100-52-7	Benzaldehyde	ND	1300	64	ug/kg	
91-58-7	2-Chloronaphthalene	ND	520	61	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-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	63.8
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	1300	93	ug/kg	
86-74-8	Carbazole	63000 [b]	5200	370	ug/kg	
105-60-2	Caprolactam	ND	520	100	ug/kg	
218-01-9	Chrysene	100000 [b]	2600	810	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	520	55	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	520	110	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	520	93	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	520	84	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	260	80	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	260	130	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	520	220	ug/kg	
123-91-1	1,4-Dioxane [c]	ND	260	170	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18100	260	110	ug/kg	
132-64-9	Dibenzofuran	113000 [b]	5200	1000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	520	42	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	520	64	ug/kg	
84-66-2	Diethyl phthalate	ND	520	55	ug/kg	
131-11-3	Dimethyl phthalate	ND	520	46	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	520	60	ug/kg	
206-44-0	Fluoranthene	337000 [d]	26000	11000	ug/kg	
86-73-7	Fluorene	186000 [b]	2600	1200	ug/kg	
118-74-1	Hexachlorobenzene	ND	520	65	ug/kg	
87-68-3	Hexachlorobutadiene	ND	260	100	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	2600	100	ug/kg	
67-72-1	Hexachloroethane	ND	1300	130	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	43000 [b]	2600	1200	ug/kg	
78-59-1	Isophorone	ND	520	55	ug/kg	
91-57-6	2-Methylnaphthalene	29900 [b]	2600	580	ug/kg	
88-74-4	2-Nitroaniline	ND	1300	61	ug/kg	
99-09-2	3-Nitroaniline	ND	1300	64	ug/kg	
100-01-6	4-Nitroaniline	ND	1300	67	ug/kg	
91-20-3	Naphthalene	139000 [b]	2600	730	ug/kg	
98-95-3	Nitrobenzene [c]	ND	520	100	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	520	75	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1300	94	ug/kg	
85-01-8	Phenanthrene	519000 [d]	26000	8700	ug/kg	
129-00-0	Pyrene	232000 [b]	2600	820	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1300	65	ug/kg	

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

Report of Analysis

Client Sample ID:	S-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	63.8
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	71%	59%	0% [e]	23-115%
4165-62-2	Phenol-d5	75%	56%	0% [e]	27-114%
118-79-6	2,4,6-Tribromophenol	76%	60%	0% [e]	19-152%
4165-60-0	Nitrobenzene-d5	79%	77%	0% [e]	26-134%
321-60-8	2-Fluorobiphenyl	88%	80%	77%	39-124%
1718-51-0	Terphenyl-d14	77%	82%	0% [e]	36-134%

(a) Dilution required due to viscosity of the extract matrix.
(b) Result is from Run# 2
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 3
(e) 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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	63.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11600	78	13	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.64 U	3.1	0.64	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	34.5	6.3	0.88	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Barium	128	31	3.0	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.82	0.31	0.13	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	1.8	0.78	0.11	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	4070	780	69	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium	143	1.6	0.58	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cobalt	11.5	7.8	0.44	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	82.8	7.8	2.6	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	38700	160	60	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	175	6.3	1.3	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	3590	780	21	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	698	4.7	1.3	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	1.8	0.24	0.10	mg/kg	5	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	24.5	6.3	0.55	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	1440 J	1600	50	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	2.0 U	6.3	2.0	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.91 J	1.6	0.53	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	153 J	1600	120	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	1.8 U	3.1	1.8	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Vanadium	23.6	7.8	0.30	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Zinc	529	7.8	3.6	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-155 (10-12)		
Lab Sample ID:	JC87093-1	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	63.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	7.2	0.41	0.20	mg/kg	1	05/06/19 14:54	KI	SW846 9012B/LACHAT
Solids, Percent	63.8			%	1	05/03/19 17:00	RC	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-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	54.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151778.D	1	05/05/19 16:12	MD	n/a	n/a	V3C6820
Run #2							

	Initial Weight
Run #1	4.8 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	376	19	9.6	ug/kg	
71-43-2	Benzene	2.9	0.96	0.72	ug/kg	
74-97-5	Bromochloromethane	ND	9.6	0.82	ug/kg	
75-27-4	Bromodichloromethane	ND	3.8	0.85	ug/kg	
75-25-2	Bromoform	ND	9.6	0.77	ug/kg	
74-83-9	Bromomethane	ND	9.6	1.9	ug/kg	
78-93-3	2-Butanone (MEK)	57.7	19	7.2	ug/kg	
75-15-0	Carbon disulfide	ND	3.8	1.8	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.8	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	3.8	0.68	ug/kg	
75-00-3	Chloroethane	ND	9.6	1.3	ug/kg	
67-66-3	Chloroform	ND	3.8	0.71	ug/kg	
74-87-3	Chloromethane [a]	ND	9.6	3.8	ug/kg	
110-82-7	Cyclohexane	ND	3.8	0.78	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.8	1.6	ug/kg	
124-48-1	Dibromochloromethane [b]	ND	3.8	0.65	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	0.69	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.9	0.66	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	9.6	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.9	0.74	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.9	0.90	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.9	1.3	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	0.78	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	0.63	ug/kg	
100-41-4	Ethylbenzene	ND	1.9	1.1	ug/kg	
76-13-1	Freon 113	ND	9.6	1.5	ug/kg	
591-78-6	2-Hexanone	ND	9.6	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:	S-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	54.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	2.6	3.8	1.3	ug/kg	J
79-20-9	Methyl Acetate	ND	9.6	2.7	ug/kg	
108-87-2	Methylcyclohexane	4.6	3.8	1.4	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.9	0.67	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [c]	ND	9.6	3.0	ug/kg	
75-09-2	Methylene chloride	ND	9.6	4.8	ug/kg	
100-42-5	Styrene	ND	3.8	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	0.75	ug/kg	
127-18-4	Tetrachloroethene	ND	3.8	0.88	ug/kg	
108-88-3	Toluene	1.4	1.9	0.72	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	9.6	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	9.6	1.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.8	0.82	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.8	0.65	ug/kg	
79-01-6	Trichloroethene	ND	1.9	1.5	ug/kg	
75-69-4	Trichlorofluoromethane	ND	9.6	1.3	ug/kg	
75-01-4	Vinyl chloride	ND	3.8	0.90	ug/kg	
	m,p-Xylene	2.8	1.9	1.4	ug/kg	
95-47-6	o-Xylene	3.5	1.9	1.1	ug/kg	
1330-20-7	Xylene (total)	6.3	1.9	1.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	110%		75-130%
2037-26-5	Toluene-D8	108%		80-120%
460-00-4	4-Bromofluorobenzene	127%		79-127%

(a) Associated CCV outside of control limits low.
(b) Associated CCV and BS outside of control limits high, sample was ND.
(c) 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-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	54.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129381.D	1	05/07/19 19:39	CC	05/06/19 17:35	OP20110	EP5856
Run #2							

	Initial Weight	Final Volume
Run #1	30.9 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	120	29	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	300	36	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	300	51	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	300	110	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	300	220	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	300	64	ug/kg	
95-48-7	2-Methylphenol	ND	120	38	ug/kg	
	3&4-Methylphenol	315	120	49	ug/kg	
88-75-5	2-Nitrophenol	ND	300	39	ug/kg	
100-02-7	4-Nitrophenol	ND	590	160	ug/kg	
87-86-5	Pentachlorophenol	ND	240	56	ug/kg	
108-95-2	Phenol	ND	120	31	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	300	39	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	300	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	300	35	ug/kg	
83-32-9	Acenaphthene	809	59	21	ug/kg	
208-96-8	Acenaphthylene	252	59	30	ug/kg	
98-86-2	Acetophenone	22.5	300	13	ug/kg	J
120-12-7	Anthracene	359	59	36	ug/kg	
1912-24-9	Atrazine	ND	120	25	ug/kg	
56-55-3	Benzo(a)anthracene	284	59	17	ug/kg	
50-32-8	Benzo(a)pyrene	549	59	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	460	59	26	ug/kg	
191-24-2	Benzo(g,h,i)perylene	434	59	30	ug/kg	
207-08-9	Benzo(k)fluoranthene	170	59	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	109	120	8.2	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	21	ug/kg	
86-74-8	Carbazole	81.4	120	8.6	ug/kg	J

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

Report of Analysis

Client Sample ID:	S-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	54.4
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 [a]	ND	120	23	ug/kg	
218-01-9	Chrysene	374	59	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	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	120	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	59	18	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	59	30	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	120	50	ug/kg	
123-91-1	1,4-Dioxane [a]	ND	59	39	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	98.2	59	26	ug/kg	
132-64-9	Dibenzofuran	248	120	24	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	120	9.7	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	537	59	27	ug/kg	
86-73-7	Fluorene	478	59	27	ug/kg	
118-74-1	Hexachlorobenzene	ND	120	15	ug/kg	
87-68-3	Hexachlorobutadiene	ND	59	24	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	590	24	ug/kg	
67-72-1	Hexachloroethane	ND	300	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	383	59	28	ug/kg	
78-59-1	Isophorone	ND	120	13	ug/kg	
91-57-6	2-Methylnaphthalene	510	59	13	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	15	ug/kg	
91-20-3	Naphthalene	1570	59	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	1190	59	20	ug/kg	
129-00-0	Pyrene	632	59	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	61%		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-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	54.4
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	60%		27-114%
118-79-6	2,4,6-Tribromophenol	66%		19-152%
4165-60-0	Nitrobenzene-d5	67%		26-134%
321-60-8	2-Fluorobiphenyl	80%		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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	54.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	22300	95	15	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	1.4 J	3.8	0.78	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	78.4	7.6	1.1	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Barium	266	38	3.6	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	1.6	0.38	0.15	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	3.0	0.95	0.13	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	4570	950	84	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium	264	1.9	0.70	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cobalt	29.1	9.5	0.53	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	194	9.5	3.2	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	50800	190	73	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	380	7.6	1.6	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	5010	950	26	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese	1170	5.7	1.6	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	2.4	0.26	0.12	mg/kg	5	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	47.1	7.6	0.66	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	2290	1900	60	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	2.5 U	7.6	2.5	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	2.2	1.9	0.64	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	356 J	1900	150	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	2.2 U	3.8	2.2	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Vanadium	42.6	9.5	0.36	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Zinc	1010	9.5	4.4	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-155 (13-15)		
Lab Sample ID:	JC87093-2	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	54.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	1.5	0.44	0.22	mg/kg	1	05/06/19 14:56	KI	SW846 9012B/LACHAT
Solids, Percent	54.4			%	1	05/03/19 17:00	RC	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-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	78.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264411.D	1	05/09/19 10:20	TDN	n/a	n/a	VD10656
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.3 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	1600	810	ug/kg	
71-43-2	Benzene	11400	81	61	ug/kg	
74-97-5	Bromochloromethane	ND	810	69	ug/kg	
75-27-4	Bromodichloromethane	ND	320	72	ug/kg	
75-25-2	Bromoform	ND	810	65	ug/kg	
74-83-9	Bromomethane	ND	810	160	ug/kg	
78-93-3	2-Butanone (MEK)	ND	1600	600	ug/kg	
75-15-0	Carbon disulfide	206	320	150	ug/kg	J
56-23-5	Carbon tetrachloride	ND	320	89	ug/kg	
108-90-7	Chlorobenzene	163	320	57	ug/kg	J
75-00-3	Chloroethane	ND	810	110	ug/kg	
67-66-3	Chloroform	ND	320	60	ug/kg	
74-87-3	Chloromethane	ND	810	320	ug/kg	
110-82-7	Cyclohexane	ND	320	66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	320	140	ug/kg	
124-48-1	Dibromochloromethane	ND	320	55	ug/kg	
106-93-4	1,2-Dibromoethane	ND	160	53	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	160	49	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	160	58	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	160	56	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	810	100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	160	62	ug/kg	
107-06-2	1,2-Dichloroethane	ND	160	76	ug/kg	
75-35-4	1,1-Dichloroethene	ND	160	110	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	160	150	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	160	110	ug/kg	
78-87-5	1,2-Dichloropropane	ND	320	66	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	320	57	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	320	53	ug/kg	
100-41-4	Ethylbenzene	94.9	160	89	ug/kg	J
76-13-1	Freon 113	ND	810	120	ug/kg	
591-78-6	2-Hexanone	ND	810	210	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-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	78.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	320	110	ug/kg	
79-20-9	Methyl Acetate	431	810	220	ug/kg	J
108-87-2	Methylcyclohexane	ND	320	110	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	160	57	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	810	250	ug/kg	
75-09-2	Methylene chloride	ND	810	400	ug/kg	
100-42-5	Styrene	ND	320	93	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	320	63	ug/kg	
127-18-4	Tetrachloroethene	ND	320	75	ug/kg	
108-88-3	Toluene	594	160	61	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	810	160	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	810	160	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	320	69	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	320	55	ug/kg	
79-01-6	Trichloroethene	ND	160	120	ug/kg	
75-69-4	Trichlorofluoromethane	ND	810	110	ug/kg	
75-01-4	Vinyl chloride	ND	320	76	ug/kg	
	m,p-Xylene	ND	160	120	ug/kg	
95-47-6	o-Xylene	ND	160	94	ug/kg	
1330-20-7	Xylene (total)	ND	160	94	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	95%		75-130%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	98%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	78.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129415.D	1	05/08/19 20:08	AR	05/06/19 17:35	OP20110	EP5857
Run #2	P129428.D	5	05/09/19 13:27	AR	05/06/19 17:35	OP20110	EP5858

	Initial Weight	Final Volume
Run #1	31.7 g	1.0 ml
Run #2	31.7 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	80	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	25	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	34	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	71	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	200	150	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	200	43	ug/kg	
95-48-7	2-Methylphenol	ND	80	26	ug/kg	
	3&4-Methylphenol	36.0	80	33	ug/kg	J
88-75-5	2-Nitrophenol	ND	200	27	ug/kg	
100-02-7	4-Nitrophenol	ND	400	110	ug/kg	
87-86-5	Pentachlorophenol	ND	160	38	ug/kg	
108-95-2	Phenol	ND	80	21	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	200	27	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	9540 [a]	200	69	ug/kg	
208-96-8	Acenaphthylene	504	40	20	ug/kg	
98-86-2	Acetophenone	ND	200	8.6	ug/kg	
120-12-7	Anthracene	1610	40	25	ug/kg	
1912-24-9	Atrazine	ND	80	17	ug/kg	
56-55-3	Benzo(a)anthracene	318	40	11	ug/kg	
50-32-8	Benzo(a)pyrene	249	40	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	330	40	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	160	40	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	105	40	19	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	80	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	80	9.8	ug/kg	
92-52-4	1,1'-Biphenyl	222	80	5.5	ug/kg	
100-52-7	Benzaldehyde	ND	200	10	ug/kg	
91-58-7	2-Chloronaphthalene	ND	80	9.6	ug/kg	
106-47-8	4-Chloroaniline	ND	200	14	ug/kg	
86-74-8	Carbazole	2540	80	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-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	78.6
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 [b]	ND	80	16	ug/kg	
218-01-9	Chrysene	362	40	13	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	80	8.6	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	80	17	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	80	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	80	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	80	33	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	40	27	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	43.8	40	18	ug/kg	
132-64-9	Dibenzofuran	3620	80	16	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	80	6.5	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	80	10	ug/kg	
84-66-2	Diethyl phthalate	ND	80	8.5	ug/kg	
131-11-3	Dimethyl phthalate	ND	80	7.1	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	80	9.4	ug/kg	
206-44-0	Fluoranthene	1910	40	18	ug/kg	
86-73-7	Fluorene	8690 [a]	200	92	ug/kg	
118-74-1	Hexachlorobenzene	ND	80	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	158	40	19	ug/kg	
78-59-1	Isophorone	ND	80	8.6	ug/kg	
91-57-6	2-Methylnaphthalene	319	40	9.1	ug/kg	
88-74-4	2-Nitroaniline	ND	200	9.5	ug/kg	
99-09-2	3-Nitroaniline	ND	200	10	ug/kg	
100-01-6	4-Nitroaniline	ND	200	10	ug/kg	
91-20-3	Naphthalene	3230	40	11	ug/kg	
98-95-3	Nitrobenzene	ND	80	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	80	12	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	15	ug/kg	
85-01-8	Phenanthrene	2900	40	13	ug/kg	
129-00-0	Pyrene	1380	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	70%	67%	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-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	78.6
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	70%	73%	27-114%
118-79-6	2,4,6-Tribromophenol	74%	63%	19-152%
4165-60-0	Nitrobenzene-d5	71%	74%	26-134%
321-60-8	2-Fluorobiphenyl	87%	84%	39-124%
1718-51-0	Terphenyl-d14	74%	75%	36-134%

(a) Result is from Run# 2
(b) 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-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	78.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4510	67	11	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.55 U	2.7	0.55	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic	5.2	2.7	0.37	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Barium	58.2	27	2.5	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.43	0.27	0.11	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.19 J	0.67	0.094	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	3160	670	59	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium [a]	28.2	1.3	0.50	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Cobalt	5.4 J	6.7	0.37	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	36.1	3.3	1.1	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	17000	67	26	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Lead	55.8	2.7	0.55	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Magnesium	1350	670	18	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	407	2.0	0.55	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.29	0.033	0.014	mg/kg	1	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	19.6	5.4	0.47	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	501 J	1300	43	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium	0.87 U	2.7	0.87	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Silver [a]	0.23 U	0.67	0.23	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	123 J	1300	100	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium	0.78 U	1.3	0.78	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Vanadium [a]	14.6	6.7	0.25	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Zinc	100	6.7	3.1	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-154 (9-11)		
Lab Sample ID:	JC87093-3	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	78.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	5.5	0.26	0.13	mg/kg	1	05/06/19 15:00	KI	SW846 9012B/LACHAT
Solids, Percent	78.6			%	1	05/03/19 17:00	RC	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-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	57.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1C164349.D	1	05/07/19 19:23	PS	n/a	n/a	V1C7213
Run #2							

	Initial Weight
Run #1	4.0 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	208	22	11	ug/kg	
71-43-2	Benzene	2.5	1.1	0.82	ug/kg	
74-97-5	Bromochloromethane	ND	11	0.93	ug/kg	
75-27-4	Bromodichloromethane	ND	4.3	0.96	ug/kg	
75-25-2	Bromoform	ND	11	0.87	ug/kg	
74-83-9	Bromomethane	ND	11	2.2	ug/kg	
78-93-3	2-Butanone (MEK)	25.7	22	8.1	ug/kg	
75-15-0	Carbon disulfide	ND	4.3	2.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.3	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	4.3	0.77	ug/kg	
75-00-3	Chloroethane	ND	11	1.5	ug/kg	
67-66-3	Chloroform	ND	4.3	0.80	ug/kg	
74-87-3	Chloromethane	ND	11	4.2	ug/kg	
110-82-7	Cyclohexane	ND	4.3	0.88	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.3	1.8	ug/kg	
124-48-1	Dibromochloromethane	ND	4.3	0.73	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.2	0.70	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.66	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.78	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.74	ug/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	11	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.2	0.83	ug/kg	
107-06-2	1,2-Dichloroethane [a]	ND	2.2	1.0	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.2	1.4	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	2.1	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	1.4	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.3	0.88	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.3	0.76	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.3	0.71	ug/kg	
100-41-4	Ethylbenzene	1.2	2.2	1.2	ug/kg	J
76-13-1	Freon 113	ND	11	1.6	ug/kg	
591-78-6	2-Hexanone	ND	11	2.7	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-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	57.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	1.8	4.3	1.5	ug/kg	J
79-20-9	Methyl Acetate	ND	11	3.0	ug/kg	
108-87-2	Methylcyclohexane	ND	4.3	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.2	0.76	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	11	3.4	ug/kg	
75-09-2	Methylene chloride	ND	11	5.4	ug/kg	
100-42-5	Styrene	ND	4.3	1.2	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.3	0.84	ug/kg	
127-18-4	Tetrachloroethene	ND	4.3	1.0	ug/kg	
108-88-3	Toluene	1.3	2.2	0.81	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	11	2.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	11	2.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.3	0.92	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.3	0.74	ug/kg	
79-01-6	Trichloroethene	ND	2.2	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	11	1.5	ug/kg	
75-01-4	Vinyl chloride	ND	4.3	1.0	ug/kg	
	m,p-Xylene	ND	2.2	1.6	ug/kg	
95-47-6	o-Xylene	1.4	2.2	1.3	ug/kg	J
1330-20-7	Xylene (total)	1.4	2.2	1.3	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-127%
17060-07-0	1,2-Dichloroethane-D4	94%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	102%		79-127%

(a) Associated CCV outside of control limits low.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	57.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129416.D	1	05/08/19 20:35	AR	05/06/19 17:35	OP20110	EP5857
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 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	290	35	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	290	49	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	290	100	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	290	220	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	290	62	ug/kg	
95-48-7	2-Methylphenol	ND	110	37	ug/kg	
	3&4-Methylphenol	425	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	ND	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	1890	57	20	ug/kg	
208-96-8	Acenaphthylene	308	57	29	ug/kg	
98-86-2	Acetophenone	21.0	290	12	ug/kg	J
120-12-7	Anthracene	1080	57	35	ug/kg	
1912-24-9	Atrazine	ND	110	25	ug/kg	
56-55-3	Benzo(a)anthracene	762	57	16	ug/kg	
50-32-8	Benzo(a)pyrene	916	57	26	ug/kg	
205-99-2	Benzo(b)fluoranthene	896	57	25	ug/kg	
191-24-2	Benzo(g,h,i)perylene	551	57	29	ug/kg	
207-08-9	Benzo(k)fluoranthene	326	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	115	110	7.9	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	204	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:	S-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	57.8
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 [a]	ND	110	23	ug/kg	
218-01-9	Chrysene	892	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	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 [a]	ND	57	38	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	146	57	25	ug/kg	
132-64-9	Dibenzofuran	584	110	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	9.4	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	1880	57	26	ug/kg	
86-73-7	Fluorene	1400	57	26	ug/kg	
118-74-1	Hexachlorobenzene	ND	110	15	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	499	57	27	ug/kg	
78-59-1	Isophorone	ND	110	12	ug/kg	
91-57-6	2-Methylnaphthalene	572	57	13	ug/kg	
88-74-4	2-Nitroaniline	ND	290	14	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	1610	57	16	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	4560	57	19	ug/kg	
129-00-0	Pyrene	2080	57	18	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	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-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	57.8
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	63%		27-114%
118-79-6	2,4,6-Tribromophenol	67%		19-152%
4165-60-0	Nitrobenzene-d5	67%		26-134%
321-60-8	2-Fluorobiphenyl	79%		39-124%
1718-51-0	Terphenyl-d14	77%		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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	57.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	22800	87	14	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	1.2 J	3.5	0.71	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	140	6.9	0.97	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Barium	276	35	3.3	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	1.7	0.35	0.14	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	3.9	0.87	0.12	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	5000	870	76	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium	449	1.7	0.64	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cobalt	26.8	8.7	0.48	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	220	8.7	2.9	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	42200	170	66	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	561	6.9	1.4	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	5040	870	24	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese	1210	5.2	1.4	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	2.1	0.23	0.10	mg/kg	5	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	47.2	6.9	0.61	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	2260	1700	55	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	2.3 J	6.9	2.2	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	2.4	1.7	0.59	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	335 J	1700	130	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	2.0 U	3.5	2.0	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Vanadium	44.1	8.7	0.33	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [5]
Zinc [a]	1690	17	8.0	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-154 (12-14)		
Lab Sample ID:	JC87093-4	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	57.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	3.2	0.37	0.19	mg/kg	1	05/06/19 15:01	KI	SW846 9012B/LACHAT
Solids, Percent	57.8			%	1	05/03/19 17:00	RC	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-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	54.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151826.D	1	05/06/19 19:12	PS	n/a	n/a	V3C6821
Run #2							

	Initial Weight
Run #1	4.0 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	71.6	23	11	ug/kg	
71-43-2	Benzene	4.2	1.1	0.86	ug/kg	
74-97-5	Bromochloromethane	ND	11	0.98	ug/kg	
75-27-4	Bromodichloromethane	ND	4.6	1.0	ug/kg	
75-25-2	Bromoform	ND	11	0.92	ug/kg	
74-83-9	Bromomethane	ND	11	2.3	ug/kg	
78-93-3	2-Butanone (MEK)	11.6	23	8.5	ug/kg	J
75-15-0	Carbon disulfide	ND	4.6	2.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.6	1.3	ug/kg	
108-90-7	Chlorobenzene	ND	4.6	0.81	ug/kg	
75-00-3	Chloroethane	ND	11	1.6	ug/kg	
67-66-3	Chloroform	ND	4.6	0.85	ug/kg	
74-87-3	Chloromethane [a]	ND	11	4.5	ug/kg	
110-82-7	Cyclohexane	ND	4.6	0.93	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.6	1.9	ug/kg	
124-48-1	Dibromochloromethane	ND	4.6	0.77	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.3	0.74	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.3	0.70	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.3	0.82	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.3	0.78	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	11	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.3	0.88	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.3	1.1	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.3	1.5	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.3	2.2	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.3	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.6	0.93	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.6	0.80	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.6	0.75	ug/kg	
100-41-4	Ethylbenzene	ND	2.3	1.3	ug/kg	
76-13-1	Freon 113	ND	11	1.7	ug/kg	
591-78-6	2-Hexanone	ND	11	2.9	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:	SO-DUP-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	54.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4.6	1.6	ug/kg	
79-20-9	Methyl Acetate [a]	ND	11	3.2	ug/kg	
108-87-2	Methylcyclohexane	ND	4.6	1.6	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.3	0.80	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	11	3.6	ug/kg	
75-09-2	Methylene chloride	ND	11	5.7	ug/kg	
100-42-5	Styrene	ND	4.6	1.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.6	0.89	ug/kg	
127-18-4	Tetrachloroethene	ND	4.6	1.1	ug/kg	
108-88-3	Toluene	0.87	2.3	0.86	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	11	2.3	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	11	2.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.6	0.97	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.6	0.78	ug/kg	
79-01-6	Trichloroethene	ND	2.3	1.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	11	1.6	ug/kg	
75-01-4	Vinyl chloride	ND	4.6	1.1	ug/kg	
	m,p-Xylene	ND	2.3	1.7	ug/kg	
95-47-6	o-Xylene	ND	2.3	1.3	ug/kg	
1330-20-7	Xylene (total)	ND	2.3	1.3	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	111%		75-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	111%		79-127%

(a) Associated CCV outside of control limits low.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	SO-DUP-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	54.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129431.D	1	05/09/19 18:55	AR	05/06/19 17:35	OP20110	EP5858
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 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	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	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	64	ug/kg	
95-48-7	2-Methylphenol	ND	120	38	ug/kg	
	3&4-Methylphenol	681	120	49	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	56	ug/kg	
108-95-2	Phenol	ND	120	31	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	1620	60	21	ug/kg	
208-96-8	Acenaphthylene	331	60	30	ug/kg	
98-86-2	Acetophenone	16.8	300	13	ug/kg	J
120-12-7	Anthracene	867	60	37	ug/kg	
1912-24-9	Atrazine	ND	120	26	ug/kg	
56-55-3	Benzo(a)anthracene	741	60	17	ug/kg	
50-32-8	Benzo(a)pyrene	799	60	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	807	60	27	ug/kg	
191-24-2	Benzo(g,h,i)perylene	468	60	30	ug/kg	
207-08-9	Benzo(k)fluoranthene	257	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	143	120	8.2	ug/kg	
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	115	120	8.7	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:	SO-DUP-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	54.8
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	120	24	ug/kg	
218-01-9	Chrysene	868	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	19	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 [a]	ND	60	40	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	119	60	27	ug/kg	
132-64-9	Dibenzofuran	505	120	24	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	1810	60	27	ug/kg	
86-73-7	Fluorene	1040	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	432	60	28	ug/kg	
78-59-1	Isophorone	ND	120	13	ug/kg	
91-57-6	2-Methylnaphthalene	638	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	1850	60	17	ug/kg	
98-95-3	Nitrobenzene [a]	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	3300	60	20	ug/kg	
129-00-0	Pyrene	2140	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	67%		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-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	54.8
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	68%		27-114%
118-79-6	2,4,6-Tribromophenol	68%		19-152%
4165-60-0	Nitrobenzene-d5	70%		26-134%
321-60-8	2-Fluorobiphenyl	85%		39-124%
1718-51-0	Terphenyl-d14	77%		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

SGS North America Inc.

Report of Analysis

Client Sample ID:	SO-DUP-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	54.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	18500	93	15	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.76 U	3.7	0.76	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Arsenic	33.9	3.7	0.52	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Barium	159	37	3.5	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.3	0.37	0.15	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cadmium	1.4	0.93	0.13	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Calcium	3900	930	82	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Chromium	156	1.9	0.69	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cobalt	17.9	9.3	0.52	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Copper	98.6	4.7	1.6	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Iron	32900	93	36	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Lead	187	3.7	0.76	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Magnesium	5090	930	25	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Manganese	1020	2.8	0.76	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Mercury	2.4	0.26	0.11	mg/kg	5	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	33.7	7.4	0.65	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Potassium	2120	1900	59	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 J	3.7	1.2	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Silver	0.32 U	0.93	0.32	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Sodium	267 J	1900	140	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Thallium	1.1 U	1.9	1.1	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Vanadium	38.0	9.3	0.35	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Zinc	540	9.3	4.3	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Prep QC Batch: MP14638
(4) Prep QC Batch: MP14721

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-0426-1		
Lab Sample ID:	JC87093-5	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	54.8
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	1.5	0.44	0.22	mg/kg	1	05/06/19 15:02	KI	SW846 9012B/LACHAT
Solids, Percent	54.8			%	1	05/03/19 17:00	RC	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-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	77.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264376.D	1	05/08/19 16:51	TDN	n/a	n/a	VD10654
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.9 g	10.0 ml	20.0 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	7300	3600	ug/kg	
71-43-2	Benzene	ND	360	270	ug/kg	
74-97-5	Bromochloromethane	ND	3600	310	ug/kg	
75-27-4	Bromodichloromethane	ND	1500	320	ug/kg	
75-25-2	Bromoform	ND	3600	290	ug/kg	
74-83-9	Bromomethane	ND	3600	720	ug/kg	
78-93-3	2-Butanone (MEK)	ND	7300	2700	ug/kg	
75-15-0	Carbon disulfide	11200	1500	670	ug/kg	
56-23-5	Carbon tetrachloride	ND	1500	400	ug/kg	
108-90-7	Chlorobenzene	ND	1500	260	ug/kg	
75-00-3	Chloroethane	ND	3600	500	ug/kg	
67-66-3	Chloroform	ND	1500	270	ug/kg	
74-87-3	Chloromethane	ND	3600	1400	ug/kg	
110-82-7	Cyclohexane	ND	1500	290	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1500	610	ug/kg	
124-48-1	Dibromochloromethane	ND	1500	250	ug/kg	
106-93-4	1,2-Dibromoethane	ND	730	240	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	730	220	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	730	260	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	730	250	ug/kg	
75-71-8	Dichlorodifluoromethane [c]	ND	3600	460	ug/kg	
75-34-3	1,1-Dichloroethane	ND	730	280	ug/kg	
107-06-2	1,2-Dichloroethane [c]	ND	730	340	ug/kg	
75-35-4	1,1-Dichloroethene	ND	730	480	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	730	690	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	730	480	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1500	300	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1500	260	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1500	240	ug/kg	
100-41-4	Ethylbenzene	537	730	400	ug/kg	J
76-13-1	Freon 113	ND	3600	550	ug/kg	
591-78-6	2-Hexanone	ND	3600	920	ug/kg	

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

Report of Analysis

Client Sample ID:	S-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	77.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1500	510	ug/kg	
79-20-9	Methyl Acetate	1050	3600	1000	ug/kg	J
108-87-2	Methylcyclohexane	ND	1500	510	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	730	260	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	3600	1100	ug/kg	
75-09-2	Methylene chloride	ND	3600	1800	ug/kg	
100-42-5	Styrene	ND	1500	420	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1500	280	ug/kg	
127-18-4	Tetrachloroethene	ND	1500	340	ug/kg	
108-88-3	Toluene	ND	730	270	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	3600	730	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	3600	730	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1500	310	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1500	250	ug/kg	
79-01-6	Trichloroethene	ND	730	550	ug/kg	
75-69-4	Trichlorofluoromethane	ND	3600	490	ug/kg	
75-01-4	Vinyl chloride	ND	1500	340	ug/kg	
	m,p-Xylene	ND	730	540	ug/kg	
95-47-6	o-Xylene	ND	730	420	ug/kg	
1330-20-7	Xylene (total)	ND	730	420	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	99%		80-120%
460-00-4	4-Bromofluorobenzene	97%		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 J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	77.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	P129432.D	2	05/09/19 19:22	AR	05/06/19 17:35	OP20110	EP5858
Run #2	6P481794.D	10	05/10/19 13:38	AR	05/06/19 17:35	OP20110	E6P2588
Run #3	6P481791.D	100	05/10/19 12:25	AR	05/06/19 17:35	OP20110	E6P2588

	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	170	42	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	420	52	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	420	72	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	420	150	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	420	320	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	420	91	ug/kg	
95-48-7	2-Methylphenol	ND	170	54	ug/kg	
	3&4-Methylphenol	ND	170	70	ug/kg	
88-75-5	2-Nitrophenol	ND	420	56	ug/kg	
100-02-7	4-Nitrophenol	ND	850	230	ug/kg	
87-86-5	Pentachlorophenol	ND	340	80	ug/kg	
108-95-2	Phenol	ND	170	44	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	420	56	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	420	63	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	420	51	ug/kg	
83-32-9	Acenaphthene	9550 [b]	420	150	ug/kg	
208-96-8	Acenaphthylene	44400 [c]	4200	2200	ug/kg	
98-86-2	Acetophenone	927	420	18	ug/kg	
120-12-7	Anthracene	11700 [b]	420	260	ug/kg	
1912-24-9	Atrazine	ND	170	36	ug/kg	
56-55-3	Benzo(a)anthracene	10700 [b]	420	120	ug/kg	
50-32-8	Benzo(a)pyrene	8040	85	39	ug/kg	
205-99-2	Benzo(b)fluoranthene	11200 [b]	420	190	ug/kg	
191-24-2	Benzo(g,h,i)perylene	5250	85	42	ug/kg	
207-08-9	Benzo(k)fluoranthene	3590 [b]	420	200	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	21	ug/kg	
92-52-4	1,1'-Biphenyl	16400 [b]	850	58	ug/kg	
100-52-7	Benzaldehyde	ND	420	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	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-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	77.9
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	420	31	ug/kg	
86-74-8	Carbazole	2830	170	12	ug/kg	
105-60-2	Caprolactam	ND	170	33	ug/kg	
218-01-9	Chrysene	9020 [b]	420	130	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	37	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	170	30	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	27	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	85	26	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	85	43	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	71	ug/kg	
123-91-1	1,4-Dioxane [d]	ND	85	56	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	1140	85	37	ug/kg	
132-64-9	Dibenzofuran	51500 [c]	8500	1700	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	14	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	21	ug/kg	
84-66-2	Diethyl phthalate	ND	170	18	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	15	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	170	20	ug/kg	
206-44-0	Fluoranthene	36400 [b]	420	190	ug/kg	
86-73-7	Fluorene	51100 [c]	4200	1900	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	21	ug/kg	
87-68-3	Hexachlorobutadiene	ND	85	34	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	850	34	ug/kg	
67-72-1	Hexachloroethane	ND	420	42	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	5740	85	40	ug/kg	
78-59-1	Isophorone	ND	170	18	ug/kg	
91-57-6	2-Methylnaphthalene	46100 [c]	4200	960	ug/kg	
88-74-4	2-Nitroaniline	ND	420	20	ug/kg	
99-09-2	3-Nitroaniline	ND	420	21	ug/kg	
100-01-6	4-Nitroaniline	ND	420	22	ug/kg	
91-20-3	Naphthalene	423000 [c]	4200	1200	ug/kg	
98-95-3	Nitrobenzene [d]	ND	170	33	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	24	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	420	31	ug/kg	
85-01-8	Phenanthrene	67800 [c]	4200	1400	ug/kg	
129-00-0	Pyrene	24500 [b]	420	140	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	420	22	ug/kg	

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

Report of Analysis

Client Sample ID:	S-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	77.9
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	85%	80%	82%	23-115%
4165-62-2	Phenol-d5	77%	88%	57%	27-114%
118-79-6	2,4,6-Tribromophenol	71%	62%	64%	19-152%
4165-60-0	Nitrobenzene-d5	105%	85%	94%	26-134%
321-60-8	2-Fluorobiphenyl	81%	77%	87%	39-124%
1718-51-0	Terphenyl-d14	71%	76%	83%	36-134%

(a) Dilution required due to viscosity of the extract matrix.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) 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-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	77.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3230	64	10	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.52 U	2.5	0.52	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Arsenic	18.2	2.5	0.36	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Barium	104	25	2.4	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.29	0.25	0.10	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.28 J	0.64	0.089	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Calcium	10900	640	56	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Chromium	72.7	1.3	0.47	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cobalt	3.9 J	6.4	0.36	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Copper	127	3.2	1.1	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Iron	21600	64	24	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Lead	101	2.5	0.52	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1420	640	17	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Manganese	262	1.9	0.52	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Mercury	2.8	0.17	0.074	mg/kg	5	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	17.2	5.1	0.44	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Potassium	649 J	1300	40	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.83 U	2.5	0.83	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Silver	0.22 U	0.64	0.22	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Sodium	155 J	1300	99	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.74 U	1.3	0.74	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Vanadium	12.4	6.4	0.24	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Zinc	128	6.4	2.9	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Prep QC Batch: MP14638
(4) Prep QC Batch: MP14721

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-158 (11-13)		
Lab Sample ID:	JC87093-6	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	77.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	29.4	0.80	0.40	mg/kg	3	05/08/19 15:36	KI	SW846 9012B/LACHAT
Solids, Percent	77.9			%	1	05/03/19 17:00	RC	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-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	58.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151809.D	1	05/06/19 12:39	PS	n/a	n/a	V3C6821
Run #2 [a]	I226025.D	1	05/07/19 12:14	TDN	n/a	n/a	VI9105

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.2 g		
Run #2	5.3 g	10.0 ml	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	224	16	8.2	ug/kg	
71-43-2	Benzene	ND	0.82	0.62	ug/kg	
74-97-5	Bromochloromethane	ND	8.2	0.70	ug/kg	
75-27-4	Bromodichloromethane	ND	3.3	0.72	ug/kg	
75-25-2	Bromoform	ND	8.2	0.66	ug/kg	
74-83-9	Bromomethane	ND	8.2	1.6	ug/kg	
78-93-3	2-Butanone (MEK)	51.9	16	6.1	ug/kg	
75-15-0	Carbon disulfide	ND	3.3	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.3	0.90	ug/kg	
108-90-7	Chlorobenzene	ND	3.3	0.58	ug/kg	
75-00-3	Chloroethane	ND	8.2	1.1	ug/kg	
67-66-3	Chloroform	ND	3.3	0.61	ug/kg	
74-87-3	Chloromethane [b]	ND	8.2	3.2	ug/kg	
110-82-7	Cyclohexane	ND	3.3	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.3	1.4	ug/kg	
124-48-1	Dibromochloromethane	ND	3.3	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	0.50	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.6	0.59	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.6	0.56	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.2	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.63	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.77	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	3.3	0.66	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.3	0.57	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.3	0.53	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.90	ug/kg	
76-13-1	Freon 113	ND	8.2	1.2	ug/kg	
591-78-6	2-Hexanone	ND	8.2	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-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	58.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	3.3	1.1	ug/kg	
79-20-9	Methyl Acetate [b]	ND	8.2	2.3	ug/kg	
108-87-2	Methylcyclohexane	ND	3.3	1.2	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	8.2	2.5	ug/kg	
75-09-2	Methylene chloride	ND	8.2	4.1	ug/kg	
100-42-5	Styrene	ND	3.3	0.94	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	0.64	ug/kg	
127-18-4	Tetrachloroethene	ND	3.3	0.75	ug/kg	
108-88-3	Toluene	ND	1.6	0.61	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.2	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.2	1.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.3	0.70	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.3	0.56	ug/kg	
79-01-6	Trichloroethene	ND	1.6	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.2	1.1	ug/kg	
75-01-4	Vinyl chloride	ND	3.3	0.77	ug/kg	
	m,p-Xylene	ND	1.6	1.2	ug/kg	
95-47-6	o-Xylene	ND	1.6	0.95	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.95	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	113%	116%	75-130%
2037-26-5	Toluene-D8	112%	100%	80-120%
460-00-4	4-Bromofluorobenzene	127%	105%	79-127%

(a) Confirmation run for internal standard areas.
(b) Associated CCV outside of control limits low.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	58.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129376.D	1	05/07/19 17:23	CC	05/06/19 17:35	OP20110	EP5856
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 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	34	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	280	48	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	280	100	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	280	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	280	60	ug/kg	
95-48-7	2-Methylphenol	ND	110	36	ug/kg	
	3&4-Methylphenol	ND	110	46	ug/kg	
88-75-5	2-Nitrophenol	ND	280	37	ug/kg	
100-02-7	4-Nitrophenol	ND	560	150	ug/kg	
87-86-5	Pentachlorophenol	ND	220	53	ug/kg	
108-95-2	Phenol	ND	110	29	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	280	37	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	280	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	280	33	ug/kg	
83-32-9	Acenaphthene	23.1	56	19	ug/kg	J
208-96-8	Acenaphthylene	ND	56	28	ug/kg	
98-86-2	Acetophenone	ND	280	12	ug/kg	
120-12-7	Anthracene	ND	56	34	ug/kg	
1912-24-9	Atrazine	ND	110	24	ug/kg	
56-55-3	Benzo(a)anthracene	35.1	56	16	ug/kg	J
50-32-8	Benzo(a)pyrene	32.2	56	25	ug/kg	J
205-99-2	Benzo(b)fluoranthene	33.2	56	25	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	56	28	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	56	26	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	10.3	110	7.7	ug/kg	J
100-52-7	Benzaldehyde	ND	280	14	ug/kg	
91-58-7	2-Chloronaphthalene	ND	110	13	ug/kg	
106-47-8	4-Chloroaniline	ND	280	20	ug/kg	
86-74-8	Carbazole	8.5	110	8.1	ug/kg	J

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

Report of Analysis

Client Sample ID:	S-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	58.9
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 [a]	ND	110	22	ug/kg	
218-01-9	Chrysene	45.5	56	18	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	110	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	110	24	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	56	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	56	28	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	110	47	ug/kg	
123-91-1	1,4-Dioxane [a]	ND	56	37	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	56	25	ug/kg	
132-64-9	Dibenzofuran	ND	110	23	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	9.1	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	57.7	56	25	ug/kg	
86-73-7	Fluorene	31.5	56	26	ug/kg	J
118-74-1	Hexachlorobenzene	ND	110	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	56	23	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	560	22	ug/kg	
67-72-1	Hexachloroethane	ND	280	28	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	56	26	ug/kg	
78-59-1	Isophorone	ND	110	12	ug/kg	
91-57-6	2-Methylnaphthalene	30.0	56	13	ug/kg	J
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	156	56	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	62.5	56	19	ug/kg	
129-00-0	Pyrene	65.4	56	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	67%		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-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	58.9
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	69%		19-152%
4165-60-0	Nitrobenzene-d5	74%		26-134%
321-60-8	2-Fluorobiphenyl	83%		39-124%
1718-51-0	Terphenyl-d14	77%		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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	58.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12500	82	13	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.68 U	3.3	0.68	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.1	3.3	0.46	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Barium	116	33	3.1	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.69	0.33	0.13	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.12 U	0.82	0.12	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Calcium	3380	820	73	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Chromium	27.1	1.6	0.61	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cobalt	5.6 J	8.2	0.46	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Copper	11.9	4.1	1.4	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Iron	14400	82	32	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Lead	21.4	3.3	0.68	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3120	820	23	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Manganese	333	2.5	0.68	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.060	0.052	0.023	mg/kg	1	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	16.0	6.6	0.58	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Potassium	1280 J	1600	52	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.1 U	3.3	1.1	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Silver	0.28 U	0.82	0.28	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Sodium	240 J	1600	130	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.96 U	1.6	0.96	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Vanadium	25.9	8.2	0.31	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]
Zinc	56.1	8.2	3.8	mg/kg	1	05/01/19	05/02/19	MET	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Prep QC Batch: MP14638
(4) Prep QC Batch: MP14721

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-158 (18-20)		
Lab Sample ID:	JC87093-7	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	58.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.34 J	0.41	0.20	mg/kg	1	05/06/19 15:05	KI	SW846 9012B/LACHAT
Solids, Percent	58.9			%	1	05/03/19 17:00	RC	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-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D264375.D	1	05/08/19 16:23	TDN	n/a	n/a	VD10654
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.2 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	2000	1000	ug/kg	
71-43-2	Benzene	1130	100	77	ug/kg	
74-97-5	Bromochloromethane	ND	1000	88	ug/kg	
75-27-4	Bromodichloromethane	ND	410	91	ug/kg	
75-25-2	Bromoform	ND	1000	83	ug/kg	
74-83-9	Bromomethane	ND	1000	200	ug/kg	
78-93-3	2-Butanone (MEK)	ND	2000	770	ug/kg	
75-15-0	Carbon disulfide	539	410	190	ug/kg	
56-23-5	Carbon tetrachloride	ND	410	110	ug/kg	
108-90-7	Chlorobenzene	ND	410	73	ug/kg	
75-00-3	Chloroethane	ND	1000	140	ug/kg	
67-66-3	Chloroform	ND	410	76	ug/kg	
74-87-3	Chloromethane	ND	1000	400	ug/kg	
110-82-7	Cyclohexane	ND	410	83	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	410	170	ug/kg	
124-48-1	Dibromochloromethane	ND	410	69	ug/kg	
106-93-4	1,2-Dibromoethane	ND	200	67	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	63	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	74	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	71	ug/kg	
75-71-8	Dichlorodifluoromethane [c]	ND	1000	130	ug/kg	
75-34-3	1,1-Dichloroethane	ND	200	79	ug/kg	
107-06-2	1,2-Dichloroethane [c]	ND	200	96	ug/kg	
75-35-4	1,1-Dichloroethene	ND	200	130	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	200	200	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	200	140	ug/kg	
78-87-5	1,2-Dichloropropane	ND	410	83	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	410	72	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	410	67	ug/kg	
100-41-4	Ethylbenzene	184	200	110	ug/kg	J
76-13-1	Freon 113	ND	1000	160	ug/kg	
591-78-6	2-Hexanone	ND	1000	260	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-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	410	140	ug/kg	
79-20-9	Methyl Acetate	ND	1000	280	ug/kg	
108-87-2	Methylcyclohexane	ND	410	140	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	200	72	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	1000	320	ug/kg	
75-09-2	Methylene chloride	ND	1000	510	ug/kg	
100-42-5	Styrene	ND	410	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	410	80	ug/kg	
127-18-4	Tetrachloroethene	ND	410	95	ug/kg	
108-88-3	Toluene	1520	200	77	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	1000	200	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1000	200	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	410	87	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	410	70	ug/kg	
79-01-6	Trichloroethene	ND	200	160	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1000	140	ug/kg	
75-01-4	Vinyl chloride	ND	410	96	ug/kg	
	m,p-Xylene	1020	200	150	ug/kg	
95-47-6	o-Xylene	282	200	120	ug/kg	
1330-20-7	Xylene (total)	1300	200	120	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	88%		75-130%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	93%		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 J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129380.D	1	05/07/19 19:12	CC	05/06/19 17:35	OP20110	EP5856
Run #2	P129412.D	5	05/08/19 18:47	AR	05/06/19 17:35	OP20110	EP5857
Run #3	P129426.D	25	05/09/19 12:32	AR	05/06/19 17:35	OP20110	EP5858

	Initial Weight	Final Volume
Run #1	31.6 g	1.0 ml
Run #2	31.6 g	1.0 ml
Run #3	31.6 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	78	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	24	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	70	ug/kg	
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	ND	78	25	ug/kg	
	3&4-Methylphenol	ND	78	32	ug/kg	
88-75-5	2-Nitrophenol	ND	200	26	ug/kg	
100-02-7	4-Nitrophenol	ND	390	100	ug/kg	
87-86-5	Pentachlorophenol	ND	160	37	ug/kg	
108-95-2	Phenol	ND	78	20	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	200	26	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	29	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	23	ug/kg	
83-32-9	Acenaphthene	360 [a]	200	67	ug/kg	
208-96-8	Acenaphthylene	ND	39	20	ug/kg	
98-86-2	Acetophenone	66.4	200	8.4	ug/kg	J
120-12-7	Anthracene	ND	39	24	ug/kg	
1912-24-9	Atrazine	ND	78	17	ug/kg	
56-55-3	Benzo(a)anthracene	170	39	11	ug/kg	
50-32-8	Benzo(a)pyrene	124	39	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	163	39	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	86.3	39	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	60.2	39	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	78	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	78	9.5	ug/kg	
92-52-4	1,1'-Biphenyl	959 [a]	390	27	ug/kg	
100-52-7	Benzaldehyde	ND	200	9.7	ug/kg	
91-58-7	2-Chloronaphthalene	ND	78	9.3	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:	S-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80.9
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	200	14	ug/kg	
86-74-8	Carbazole	ND	78	5.7	ug/kg	
105-60-2	Caprolactam [b]	ND	78	15	ug/kg	
218-01-9	Chrysene	213	39	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	78	8.4	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	78	17	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	78	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	78	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	39	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	39	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	78	33	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	39	26	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	25.8	39	17	ug/kg	J
132-64-9	Dibenzofuran	560 [a]	390	80	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	78	6.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	78	9.7	ug/kg	
84-66-2	Diethyl phthalate	ND	78	8.3	ug/kg	
131-11-3	Dimethyl phthalate	ND	78	7.0	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	78	9.2	ug/kg	
206-44-0	Fluoranthene	278	39	17	ug/kg	
86-73-7	Fluorene	615 [a]	200	90	ug/kg	
118-74-1	Hexachlorobenzene	ND	78	9.9	ug/kg	
87-68-3	Hexachlorobutadiene	ND	39	16	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	390	16	ug/kg	
67-72-1	Hexachloroethane	ND	200	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	76.4	39	18	ug/kg	
78-59-1	Isophorone	ND	78	8.4	ug/kg	
91-57-6	2-Methylnaphthalene	2550	39	8.8	ug/kg	
88-74-4	2-Nitroaniline	ND	200	9.2	ug/kg	
99-09-2	3-Nitroaniline	ND	200	9.8	ug/kg	
100-01-6	4-Nitroaniline	ND	200	10	ug/kg	
91-20-3	Naphthalene	29300 [c]	980	280	ug/kg	
98-95-3	Nitrobenzene	ND	78	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	78	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	14	ug/kg	
85-01-8	Phenanthrene	613	39	13	ug/kg	
129-00-0	Pyrene	816	39	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	200	9.9	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-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	80.9
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	66%	61%	64%	23-115%
4165-62-2	Phenol-d5	72%	64%	70%	27-114%
118-79-6	2,4,6-Tribromophenol	90%	72%	69%	19-152%
4165-60-0	Nitrobenzene-d5	89%	79%	83%	26-134%
321-60-8	2-Fluorobiphenyl	104%	83%	91%	39-124%
1718-51-0	Terphenyl-d14	76%	68%	76%	36-134%

(a) Result is from Run# 2
(b) Associated CCV outside of control limits high, sample was ND.
(c) Result is from Run# 3

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-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8420	63	10	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.54 J	2.5	0.52	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	12.0	5.0	0.71	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Barium	27.0	25	2.4	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	1.8	0.25	0.10	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.95	0.63	0.088	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	2600	630	56	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium	20.4	1.3	0.47	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cobalt	8.7	6.3	0.35	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	293	6.3	2.1	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	36800	130	48	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	79.8	5.0	1.0	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	448 J	630	17	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	402	3.8	1.0	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.061	0.035	0.015	mg/kg	1	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	18.6	5.0	0.44	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	559 J	1300	40	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	4.3 J	5.0	1.6	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.43 U	1.3	0.43	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	98 U	1300	98	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	1.5 U	2.5	1.5	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Vanadium	13.2	6.3	0.24	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Zinc	117	6.3	2.9	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-159 (11-13)		
Lab Sample ID:	JC87093-8	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.70	0.35	0.18	mg/kg	1	05/06/19 15:07	KI	SW846 9012B/LACHAT
Solids, Percent	80.9			%	1	05/03/19 17:00	RC	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-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	71.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151790.D	1	05/05/19 20:53	MD	n/a	n/a	V3C6820
Run #2							

	Initial Weight
Run #1	5.4 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	107	13	6.5	ug/kg	
71-43-2	Benzene	ND	0.65	0.49	ug/kg	
74-97-5	Bromochloromethane	ND	6.5	0.56	ug/kg	
75-27-4	Bromodichloromethane	ND	2.6	0.58	ug/kg	
75-25-2	Bromoform	ND	6.5	0.52	ug/kg	
74-83-9	Bromomethane	ND	6.5	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	22.3	13	4.9	ug/kg	
75-15-0	Carbon disulfide	ND	2.6	1.2	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.6	0.72	ug/kg	
108-90-7	Chlorobenzene	ND	2.6	0.46	ug/kg	
75-00-3	Chloroethane	ND	6.5	0.89	ug/kg	
67-66-3	Chloroform	ND	2.6	0.48	ug/kg	
74-87-3	Chloromethane [a]	ND	6.5	2.6	ug/kg	
110-82-7	Cyclohexane	ND	2.6	0.53	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.6	1.1	ug/kg	
124-48-1	Dibromochloromethane [b]	ND	2.6	0.44	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.3	0.42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.47	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.45	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.5	0.83	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.3	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.61	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.3	0.85	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.3	1.2	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.87	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.6	0.53	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.6	0.46	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.6	0.43	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.72	ug/kg	
76-13-1	Freon 113	ND	6.5	0.99	ug/kg	
591-78-6	2-Hexanone	ND	6.5	1.7	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-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	71.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.6	0.91	ug/kg	
79-20-9	Methyl Acetate	ND	6.5	1.8	ug/kg	
108-87-2	Methylcyclohexane	ND	2.6	0.92	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.46	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [c]	ND	6.5	2.0	ug/kg	
75-09-2	Methylene chloride	ND	6.5	3.3	ug/kg	
100-42-5	Styrene	ND	2.6	0.75	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.6	0.51	ug/kg	
127-18-4	Tetrachloroethene	ND	2.6	0.60	ug/kg	
108-88-3	Toluene	ND	1.3	0.49	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.5	1.3	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.5	1.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.6	0.55	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.6	0.45	ug/kg	
79-01-6	Trichloroethene	ND	1.3	0.99	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.5	0.89	ug/kg	
75-01-4	Vinyl chloride	ND	2.6	0.61	ug/kg	
	m,p-Xylene	ND	1.3	0.97	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.76	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.76	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		75-127%
17060-07-0	1,2-Dichloroethane-D4	111%		75-130%
2037-26-5	Toluene-D8	105%		80-120%
460-00-4	4-Bromofluorobenzene	119%		79-127%

(a) Associated CCV outside of control limits low.
(b) Associated CCV and BS outside of control limits high, sample was ND.
(c) 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-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	71.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129378.D	1	05/07/19 18:17	CC	05/06/19 17:35	OP20110	EP5856
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	94	23	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	29	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	230	40	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	230	83	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	230	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	230	50	ug/kg	
95-48-7	2-Methylphenol	ND	94	30	ug/kg	
	3&4-Methylphenol	ND	94	39	ug/kg	
88-75-5	2-Nitrophenol	ND	230	31	ug/kg	
100-02-7	4-Nitrophenol	ND	470	130	ug/kg	
87-86-5	Pentachlorophenol	ND	190	44	ug/kg	
108-95-2	Phenol	ND	94	24	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	230	31	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	35	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	28	ug/kg	
83-32-9	Acenaphthene	ND	47	16	ug/kg	
208-96-8	Acenaphthylene	ND	47	24	ug/kg	
98-86-2	Acetophenone	ND	230	10	ug/kg	
120-12-7	Anthracene	ND	47	29	ug/kg	
1912-24-9	Atrazine	ND	94	20	ug/kg	
56-55-3	Benzo(a)anthracene	ND	47	13	ug/kg	
50-32-8	Benzo(a)pyrene	ND	47	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	47	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	47	23	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	47	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	94	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	94	11	ug/kg	
92-52-4	1,1'-Biphenyl	ND	94	6.4	ug/kg	
100-52-7	Benzaldehyde	ND	230	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	94	11	ug/kg	
106-47-8	4-Chloroaniline	ND	230	17	ug/kg	
86-74-8	Carbazole	ND	94	6.8	ug/kg	

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

Report of Analysis

Client Sample ID:	S-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	71.1
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 [a]	ND	94	19	ug/kg	
218-01-9	Chrysene	ND	47	15	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	94	10	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	94	20	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	94	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	94	15	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	47	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	47	24	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	94	39	ug/kg	
123-91-1	1,4-Dioxane [a]	ND	47	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	47	21	ug/kg	
132-64-9	Dibenzofuran	ND	94	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	94	7.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	94	12	ug/kg	
84-66-2	Diethyl phthalate	ND	94	10	ug/kg	
131-11-3	Dimethyl phthalate	ND	94	8.3	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	94	11	ug/kg	
206-44-0	Fluoranthene	ND	47	21	ug/kg	
86-73-7	Fluorene	ND	47	22	ug/kg	
118-74-1	Hexachlorobenzene	ND	94	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	47	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	470	19	ug/kg	
67-72-1	Hexachloroethane	ND	230	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	47	22	ug/kg	
78-59-1	Isophorone	ND	94	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	47	11	ug/kg	
88-74-4	2-Nitroaniline	ND	230	11	ug/kg	
99-09-2	3-Nitroaniline	ND	230	12	ug/kg	
100-01-6	4-Nitroaniline	ND	230	12	ug/kg	
91-20-3	Naphthalene	ND	47	13	ug/kg	
98-95-3	Nitrobenzene	ND	94	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	94	14	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	17	ug/kg	
85-01-8	Phenanthrene	ND	47	16	ug/kg	
129-00-0	Pyrene	ND	47	15	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	230	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		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-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	71.1
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	73%		27-114%
118-79-6	2,4,6-Tribromophenol	76%		19-152%
4165-60-0	Nitrobenzene-d5	80%		26-134%
321-60-8	2-Fluorobiphenyl	86%		39-124%
1718-51-0	Terphenyl-d14	79%		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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	71.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	22400	69	11	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.57 U	2.8	0.57	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.3	2.8	0.39	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Barium	172	28	2.6	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.1	0.28	0.11	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.11 J	0.69	0.097	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Calcium	2770	690	61	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Chromium	44.6	1.4	0.51	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cobalt	9.5	6.9	0.39	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Copper	7.4	3.4	1.2	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Iron	22700	69	26	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Lead	15.5	2.8	0.57	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Magnesium	5160	690	19	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Manganese	309	2.1	0.57	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.087	0.036	0.016	mg/kg	1	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	25.4	5.5	0.48	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Potassium	1840	1400	44	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.90 U	2.8	0.90	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Silver	0.23 U	0.69	0.23	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Sodium	255 J	1400	110	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.80 U	1.4	0.80	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Vanadium	43.2	6.9	0.26	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Zinc	61.2	6.9	3.2	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Prep QC Batch: MP14638
(4) Prep QC Batch: MP14721

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-159 (18-20)		
Lab Sample ID:	JC87093-9	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	71.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.21 J	0.35	0.18	mg/kg	1	05/06/19 15:08	KI	SW846 9012B/LACHAT
Solids, Percent	71.1			%	1	05/03/19 17:00	RC	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-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	59.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151827.D	1	05/06/19 19:35	PS	n/a	n/a	V3C6821
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	141	22	11	ug/kg	
71-43-2	Benzene	8.7	1.1	0.83	ug/kg	
74-97-5	Bromochloromethane	ND	11	0.95	ug/kg	
75-27-4	Bromodichloromethane	ND	4.4	0.98	ug/kg	
75-25-2	Bromoform	ND	11	0.89	ug/kg	
74-83-9	Bromomethane	ND	11	2.2	ug/kg	
78-93-3	2-Butanone (MEK)	13.9	22	8.3	ug/kg	J
75-15-0	Carbon disulfide	10.5	4.4	2.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.4	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	4.4	0.78	ug/kg	
75-00-3	Chloroethane	ND	11	1.5	ug/kg	
67-66-3	Chloroform	ND	4.4	0.82	ug/kg	
74-87-3	Chloromethane [a]	ND	11	4.3	ug/kg	
110-82-7	Cyclohexane	ND	4.4	0.90	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.4	1.8	ug/kg	
124-48-1	Dibromochloromethane	ND	4.4	0.75	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.2	0.72	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.67	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.79	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.76	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	11	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.2	0.85	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.2	1.0	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.2	1.5	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	2.1	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.4	0.90	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.4	0.78	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.4	0.72	ug/kg	
100-41-4	Ethylbenzene	1.8	2.2	1.2	ug/kg	J
76-13-1	Freon 113	ND	11	1.7	ug/kg	
591-78-6	2-Hexanone	ND	11	2.8	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-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	59.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4.4	1.5	ug/kg	
79-20-9	Methyl Acetate [a]	ND	11	3.1	ug/kg	
108-87-2	Methylcyclohexane	ND	4.4	1.6	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.2	0.78	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	11	3.4	ug/kg	
75-09-2	Methylene chloride	ND	11	5.5	ug/kg	
100-42-5	Styrene	ND	4.4	1.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.4	0.86	ug/kg	
127-18-4	Tetrachloroethene	ND	4.4	1.0	ug/kg	
108-88-3	Toluene	2.2	2.2	0.83	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	11	2.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	11	2.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.4	0.94	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.4	0.76	ug/kg	
79-01-6	Trichloroethene	ND	2.2	1.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	11	1.5	ug/kg	
75-01-4	Vinyl chloride	ND	4.4	1.0	ug/kg	
	m,p-Xylene	2.3	2.2	1.6	ug/kg	
95-47-6	o-Xylene	2.8	2.2	1.3	ug/kg	
1330-20-7	Xylene (total)	5.1	2.2	1.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-127%
17060-07-0	1,2-Dichloroethane-D4	106%		75-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	125%		79-127%

(a) 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-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	59.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129379.D	1	05/07/19 18:44	CC	05/06/19 17:35	OP20110	EP5856
Run #2	P129411.D	5	05/08/19 17:20	AR	05/06/19 17:35	OP20110	EP5857

	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	110	27	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	270	34	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	270	47	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	270	97	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	270	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	270	59	ug/kg	
95-48-7	2-Methylphenol	93.6	110	35	ug/kg	J
	3&4-Methylphenol	141	110	45	ug/kg	
88-75-5	2-Nitrophenol	ND	270	36	ug/kg	
100-02-7	4-Nitrophenol	ND	550	150	ug/kg	
87-86-5	Pentachlorophenol	ND	220	51	ug/kg	
108-95-2	Phenol	257	110	29	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	270	36	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	270	41	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	270	33	ug/kg	
83-32-9	Acenaphthene	2850	55	19	ug/kg	
208-96-8	Acenaphthylene	703	55	28	ug/kg	
98-86-2	Acetophenone	37.6	270	12	ug/kg	J
120-12-7	Anthracene	ND	55	34	ug/kg	
1912-24-9	Atrazine	ND	110	23	ug/kg	
56-55-3	Benzo(a)anthracene	138	55	15	ug/kg	
50-32-8	Benzo(a)pyrene	107	55	25	ug/kg	
205-99-2	Benzo(b)fluoranthene	134	55	24	ug/kg	
191-24-2	Benzo(g,h,i)perylene	74.3	55	27	ug/kg	
207-08-9	Benzo(k)fluoranthene	55.5	55	26	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	282	110	7.5	ug/kg	
100-52-7	Benzaldehyde	ND	270	14	ug/kg	
91-58-7	2-Chloronaphthalene	ND	110	13	ug/kg	
106-47-8	4-Chloroaniline	ND	270	20	ug/kg	
86-74-8	Carbazole	1200	110	7.9	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-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	59.5
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 [a]	ND	110	22	ug/kg	
218-01-9	Chrysene	151	55	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	110	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	110	24	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	55	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	55	27	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	110	46	ug/kg	
123-91-1	1,4-Dioxane [a]	ND	55	36	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	55	24	ug/kg	
132-64-9	Dibenzofuran	821	110	22	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	8.9	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	9.7	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	110	13	ug/kg	
206-44-0	Fluoranthene	434	55	24	ug/kg	
86-73-7	Fluorene	2970	55	25	ug/kg	
118-74-1	Hexachlorobenzene	ND	110	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	55	22	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	550	22	ug/kg	
67-72-1	Hexachloroethane	ND	270	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	73.3	55	26	ug/kg	
78-59-1	Isophorone	ND	110	12	ug/kg	
91-57-6	2-Methylnaphthalene	638	55	12	ug/kg	
88-74-4	2-Nitroaniline	ND	270	13	ug/kg	
99-09-2	3-Nitroaniline	ND	270	14	ug/kg	
100-01-6	4-Nitroaniline	ND	270	14	ug/kg	
91-20-3	Naphthalene	8280 [b]	270	77	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	326	55	18	ug/kg	
129-00-0	Pyrene	495	55	18	ug/kg	
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	64%	60%	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-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	59.5
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	65%	63%	27-114%
118-79-6	2,4,6-Tribromophenol	74%	71%	19-152%
4165-60-0	Nitrobenzene-d5	69%	69%	26-134%
321-60-8	2-Fluorobiphenyl	83%	82%	39-124%
1718-51-0	Terphenyl-d14	76%	71%	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	59.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	27800	87	14	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.71 U	3.5	0.71	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	8.2	6.9	0.97	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Barium	236	35	3.3	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	4.4	0.35	0.14	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.12 U	0.87	0.12	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	15400	870	77	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium	75.4	1.7	0.64	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cobalt	39.5	8.7	0.49	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	28.1	8.7	2.9	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	41600	170	67	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	21.2	6.9	1.4	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	7630	870	24	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	523	5.2	1.4	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.23	0.050	0.022	mg/kg	1	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	205	6.9	0.61	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	1780	1700	55	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	2.3 U	6.9	2.3	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.59 U	1.7	0.59	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	130 U	1700	130	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	2.0 U	3.5	2.0	mg/kg	2	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]
Vanadium	22.0	8.7	0.33	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Zinc	323	8.7	4.0	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-153 (7-9)		
Lab Sample ID:	JC87093-10	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	59.5
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	2.2	0.39	0.19	mg/kg	1	05/06/19 15:09	KI	SW846 9012B/LACHAT
Solids, Percent	59.5			%	1	05/03/19 17:00	RC	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-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	63.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151792.D	1	05/05/19 21:39	MD	n/a	n/a	V3C6820
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	75.5	16	7.9	ug/kg	
71-43-2	Benzene	ND	0.79	0.59	ug/kg	
74-97-5	Bromochloromethane	ND	7.9	0.68	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.70	ug/kg	
75-25-2	Bromoform	ND	7.9	0.64	ug/kg	
74-83-9	Bromomethane	ND	7.9	1.6	ug/kg	
78-93-3	2-Butanone (MEK)	14.1	16	5.9	ug/kg	J
75-15-0	Carbon disulfide	ND	3.2	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.87	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.56	ug/kg	
75-00-3	Chloroethane	ND	7.9	1.1	ug/kg	
67-66-3	Chloroform	ND	3.2	0.59	ug/kg	
74-87-3	Chloromethane [a]	ND	7.9	3.1	ug/kg	
110-82-7	Cyclohexane	ND	3.2	0.64	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.2	1.3	ug/kg	
124-48-1	Dibromochloromethane [b]	ND	3.2	0.53	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.6	0.51	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.6	0.48	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.6	0.57	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.6	0.54	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.9	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	0.74	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	0.64	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	0.87	ug/kg	
76-13-1	Freon 113	ND	7.9	1.2	ug/kg	
591-78-6	2-Hexanone	ND	7.9	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:	S-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	63.4
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	7.9	2.2	ug/kg	
108-87-2	Methylcyclohexane	ND	3.2	1.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.6	0.56	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [c]	ND	7.9	2.5	ug/kg	
75-09-2	Methylene chloride	ND	7.9	3.9	ug/kg	
100-42-5	Styrene	ND	3.2	0.91	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.2	0.62	ug/kg	
127-18-4	Tetrachloroethene	ND	3.2	0.73	ug/kg	
108-88-3	Toluene	0.63	1.6	0.59	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	7.9	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.9	1.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.67	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	0.54	ug/kg	
79-01-6	Trichloroethene	ND	1.6	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.9	1.1	ug/kg	
75-01-4	Vinyl chloride	ND	3.2	0.74	ug/kg	
	m,p-Xylene	ND	1.6	1.2	ug/kg	
95-47-6	o-Xylene	ND	1.6	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.92	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	113%		75-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	111%		79-127%

(a) Associated CCV outside of control limits low.
(b) Associated CCV and BS outside of control limits high, sample was ND.
(c) 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-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	63.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129382.D	1	05/07/19 20:06	CC	05/06/19 17:35	OP20110	EP5856
Run #2							

	Initial Weight	Final Volume
Run #1	30.7 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	100	25	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	260	31	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	260	44	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	260	91	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	260	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	260	55	ug/kg	
95-48-7	2-Methylphenol	ND	100	33	ug/kg	
	3&4-Methylphenol	297	100	42	ug/kg	
88-75-5	2-Nitrophenol	ND	260	34	ug/kg	
100-02-7	4-Nitrophenol	ND	510	140	ug/kg	
87-86-5	Pentachlorophenol	ND	210	48	ug/kg	
108-95-2	Phenol	ND	100	27	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	260	34	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	260	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	260	31	ug/kg	
83-32-9	Acenaphthene	641	51	18	ug/kg	
208-96-8	Acenaphthylene	194	51	26	ug/kg	
98-86-2	Acetophenone	11.4	260	11	ug/kg	J
120-12-7	Anthracene	296	51	31	ug/kg	
1912-24-9	Atrazine	ND	100	22	ug/kg	
56-55-3	Benzo(a)anthracene	490	51	15	ug/kg	
50-32-8	Benzo(a)pyrene	657	51	23	ug/kg	
205-99-2	Benzo(b)fluoranthene	638	51	23	ug/kg	
191-24-2	Benzo(g,h,i)perylene	438	51	26	ug/kg	
207-08-9	Benzo(k)fluoranthene	259	51	24	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	100	20	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	100	13	ug/kg	
92-52-4	1,1'-Biphenyl	93.5	100	7.0	ug/kg	J
100-52-7	Benzaldehyde	ND	260	13	ug/kg	
91-58-7	2-Chloronaphthalene	ND	100	12	ug/kg	
106-47-8	4-Chloroaniline	ND	260	18	ug/kg	
86-74-8	Carbazole	78.1	100	7.4	ug/kg	J

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

Report of Analysis

Client Sample ID:	S-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	63.4
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 [a]	ND	100	20	ug/kg	
218-01-9	Chrysene	564	51	16	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	100	11	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	100	22	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	100	18	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	100	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	51	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	51	26	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	100	43	ug/kg	
123-91-1	1,4-Dioxane [a]	ND	51	34	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	112	51	23	ug/kg	
132-64-9	Dibenzofuran	143	100	21	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	100	8.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	100	13	ug/kg	
84-66-2	Diethyl phthalate	ND	100	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	100	9.1	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	100	12	ug/kg	
206-44-0	Fluoranthene	751	51	23	ug/kg	
86-73-7	Fluorene	320	51	24	ug/kg	
118-74-1	Hexachlorobenzene	ND	100	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	51	21	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	510	20	ug/kg	
67-72-1	Hexachloroethane	ND	260	25	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	413	51	24	ug/kg	
78-59-1	Isophorone	ND	100	11	ug/kg	
91-57-6	2-Methylnaphthalene	406	51	12	ug/kg	
88-74-4	2-Nitroaniline	ND	260	12	ug/kg	
99-09-2	3-Nitroaniline	ND	260	13	ug/kg	
100-01-6	4-Nitroaniline	ND	260	13	ug/kg	
91-20-3	Naphthalene	1220	51	14	ug/kg	
98-95-3	Nitrobenzene	ND	100	20	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	100	15	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	260	19	ug/kg	
85-01-8	Phenanthrene	925	51	17	ug/kg	
129-00-0	Pyrene	851	51	16	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	260	13	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-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	63.4
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	74%		19-152%
4165-60-0	Nitrobenzene-d5	70%		26-134%
321-60-8	2-Fluorobiphenyl	84%		39-124%
1718-51-0	Terphenyl-d14	81%		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-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	63.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8140	78	13	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.64 U	3.1	0.64	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Arsenic	13.0	3.1	0.44	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Barium	89.1	31	3.0	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.53	0.31	0.12	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.48 J	0.78	0.11	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Calcium	2280	780	69	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Chromium	64.0	1.6	0.58	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Cobalt	8.3	7.8	0.44	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Copper	40.7	3.9	1.3	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Iron	15800	78	30	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Lead	107	3.1	0.64	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Magnesium	2590	780	21	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Manganese	354	2.3	0.64	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Mercury	1.1	0.086	0.038	mg/kg	2	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	15.9	6.2	0.55	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Potassium	1040 J	1600	50	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Selenium	1.0 U	3.1	1.0	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Silver	0.27 U	0.78	0.27	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Sodium	135 J	1600	120	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Thallium	0.91 U	1.6	0.91	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Vanadium	15.1	7.8	0.30	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [5]
Zinc [a]	215	7.8	3.6	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Instrument QC Batch: MA46646
(4) Prep QC Batch: MP14638
(5) Prep QC Batch: MP14721

(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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-153 (13.5-15)		
Lab Sample ID:	JC87093-11	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	63.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	4.9	0.35	0.18	mg/kg	1	05/06/19 15:12	KI	SW846 9012B/LACHAT
Solids, Percent	63.4			%	1	05/03/19 17:00	RC	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-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	69.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151828.D	1	05/06/19 19:59	PS	n/a	n/a	V3C6821
Run #2 [a]	3C151793.D	1	05/05/19 22:02	MD	n/a	n/a	V3C6820

	Initial Weight
Run #1	4.1 g
Run #2	4.7 g

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	72.5	18	8.8	ug/kg	
71-43-2	Benzene	ND	0.88	0.67	ug/kg	
74-97-5	Bromochloromethane	ND	8.8	0.76	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.78	ug/kg	
75-25-2	Bromoform	ND	8.8	0.71	ug/kg	
74-83-9	Bromomethane	ND	8.8	1.8	ug/kg	
78-93-3	2-Butanone (MEK)	16.2	18	6.6	ug/kg	J
75-15-0	Carbon disulfide	ND	3.5	1.6	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.97	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.63	ug/kg	
75-00-3	Chloroethane	ND	8.8	1.2	ug/kg	
67-66-3	Chloroform	ND	3.5	0.66	ug/kg	
74-87-3	Chloromethane [b]	ND	8.8	3.5	ug/kg	
110-82-7	Cyclohexane	ND	3.5	0.72	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.5	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.60	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.8	0.57	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.54	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.63	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.8	0.61	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.8	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.8	0.68	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.8	0.83	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.8	1.2	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.8	1.7	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.72	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.62	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.58	ug/kg	
100-41-4	Ethylbenzene	ND	1.8	0.98	ug/kg	
76-13-1	Freon 113	ND	8.8	1.3	ug/kg	
591-78-6	2-Hexanone	ND	8.8	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:	SO-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8260C	**Percent Solids:**	69.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	1.6	3.5	1.2	ug/kg	J
79-20-9	Methyl Acetate [b]	ND	8.8	2.5	ug/kg	
108-87-2	Methylcyclohexane	1.5	3.5	1.2	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.8	0.62	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.8	2.8	ug/kg	
75-09-2	Methylene chloride	ND	8.8	4.4	ug/kg	
100-42-5	Styrene	ND	3.5	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	0.69	ug/kg	
127-18-4	Tetrachloroethene	ND	3.5	0.82	ug/kg	
108-88-3	Toluene	3.3	1.8	0.66	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.8	1.8	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.8	1.8	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.5	0.75	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	0.60	ug/kg	
79-01-6	Trichloroethene	ND	1.8	1.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.8	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	3.5	0.83	ug/kg	
	m,p-Xylene	ND	1.8	1.3	ug/kg	
95-47-6	o-Xylene	ND	1.8	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	1.8	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	125%	75-127%
17060-07-0	1,2-Dichloroethane-D4	101%	107%	75-130%
2037-26-5	Toluene-D8	108%	118%	80-120%
460-00-4	4-Bromofluorobenzene	132% [c]	171% [d]	79-127%

(a) Confirmation run.
(b) Associated CCV outside of control limits low.
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.
(d) Outside control limits due to matrix interference.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	SO-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	69.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P129383.D	1	05/07/19 20:33	CC	05/06/19 17:35	OP20110	EP5856
Run #2							

	Initial Weight	Final Volume
Run #1	30.7 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	94	23	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	240	29	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	240	40	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	240	84	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	240	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	240	51	ug/kg	
95-48-7	2-Methylphenol	ND	94	30	ug/kg	
	3&4-Methylphenol	181	94	39	ug/kg	
88-75-5	2-Nitrophenol	ND	240	31	ug/kg	
100-02-7	4-Nitrophenol	ND	470	130	ug/kg	
87-86-5	Pentachlorophenol	ND	190	44	ug/kg	
108-95-2	Phenol	ND	94	25	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	240	31	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	240	35	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	240	28	ug/kg	
83-32-9	Acenaphthene	945	47	16	ug/kg	
208-96-8	Acenaphthylene	251	47	24	ug/kg	
98-86-2	Acetophenone	ND	240	10	ug/kg	
120-12-7	Anthracene	672	47	29	ug/kg	
1912-24-9	Atrazine	ND	94	20	ug/kg	
56-55-3	Benzo(a)anthracene	994	47	13	ug/kg	
50-32-8	Benzo(a)pyrene	1060	47	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	1020	47	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	599	47	24	ug/kg	
207-08-9	Benzo(k)fluoranthene	417	47	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	94	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	94	12	ug/kg	
92-52-4	1,1'-Biphenyl	92.4	94	6.5	ug/kg	J
100-52-7	Benzaldehyde	ND	240	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	94	11	ug/kg	
106-47-8	4-Chloroaniline	ND	240	17	ug/kg	
86-74-8	Carbazole	71.1	94	6.8	ug/kg	J

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

Report of Analysis

Client Sample ID:	SO-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	69.0
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 [a]	ND	94	19	ug/kg	
218-01-9	Chrysene	1070	47	15	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	94	10	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	94	20	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	94	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	94	15	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	47	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	47	24	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	94	39	ug/kg	
123-91-1	1,4-Dioxane [a]	ND	47	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	160	47	21	ug/kg	
132-64-9	Dibenzofuran	147	94	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	94	7.7	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	94	12	ug/kg	
84-66-2	Diethyl phthalate	ND	94	10	ug/kg	
131-11-3	Dimethyl phthalate	ND	94	8.4	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	94	11	ug/kg	
206-44-0	Fluoranthene	1770	47	21	ug/kg	
86-73-7	Fluorene	598	47	22	ug/kg	
118-74-1	Hexachlorobenzene	ND	94	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	47	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	470	19	ug/kg	
67-72-1	Hexachloroethane	ND	240	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	600	47	22	ug/kg	
78-59-1	Isophorone	ND	94	10	ug/kg	
91-57-6	2-Methylnaphthalene	473	47	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	12	ug/kg	
91-20-3	Naphthalene	1290	47	13	ug/kg	
98-95-3	Nitrobenzene	ND	94	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	94	14	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	17	ug/kg	
85-01-8	Phenanthrene	2300	47	16	ug/kg	
129-00-0	Pyrene	2070	47	15	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	62%		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-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	69.0
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	62%		27-114%
118-79-6	2,4,6-Tribromophenol	61%		19-152%
4165-60-0	Nitrobenzene-d5	68%		26-134%
321-60-8	2-Fluorobiphenyl	77%		39-124%
1718-51-0	Terphenyl-d14	69%		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

SGS North America Inc.

Report of Analysis

Client Sample ID:	SO-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	69.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13800	73	12	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.60 U	2.9	0.60	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Arsenic	27.6	2.9	0.41	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Barium	148	29	2.8	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.0	0.29	0.12	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cadmium	1.6	0.73	0.10	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Calcium	2630	730	65	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Chromium	135	1.5	0.54	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Cobalt	13.0	7.3	0.41	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Copper	87.1	3.7	1.2	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Iron	22000	73	28	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Lead	189	2.9	0.60	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3500	730	20	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Manganese	462	2.2	0.60	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.50	0.041	0.018	mg/kg	1	04/30/19	04/30/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	25.7	5.9	0.51	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Potassium	1530	1500	47	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 J	2.9	0.95	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Silver	0.44 J	0.73	0.25	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Sodium	199 J	1500	110	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.85 U	1.5	0.85	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Vanadium	28.4	7.3	0.28	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]
Zinc	491	7.3	3.4	mg/kg	1	05/01/19	05/03/19	MET	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46615
(2) Instrument QC Batch: MA46638
(3) Prep QC Batch: MP14638
(4) Prep QC Batch: MP14721

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-DUP2-0426		
Lab Sample ID:	JC87093-12	**Date Sampled:**	04/26/19
Matrix:	SO - Soil	**Date Received:**	04/26/19
		Percent Solids:	69.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	5.2	0.25	0.12	mg/kg	1	05/07/19 17:58	KI	SW846 9012B/LACHAT
Solids, Percent	69			%	1	05/03/19 17:00	RC	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

SGS

SCL

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 #:
SGS Quote #:
Bottle Order Control #: KR-042419-63
SGS Job #: JC87093

Client / Reporting Information

Company Name: Arcadis
Street Address: 110 W. Fayette St #300
City: Syracuse State: NY Zip: 13202
Project Contact: Carrie Healy E-mail: Carrie.Healy@arcadis.com
Phone: 315-335-9594
Sampler(s) Name(s): G. Bystryn / B. Green Phone #:

Project Information

Project Name: Philadelphia Celec
Street: 4501 Richmond St
City: Philadelphia State: PA
Project #: B0036196.0001
Client Purchase Order #: B0036196.0001
Project Manager: John Brassil
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	Preserved	VOC 8260 TCL 20	CN	ATB 8270 TCL 20	MTBE									Matrix Codes	LAB USE ONLY
1	S-155 (10-12)		4/26/19	915	GB	G	SO	5					22					X	X	X	X									DW - Drinking Water	D48
2	S-155 (13-15)			930																										GW - Ground Water	62971
3	S-154 (9-11)			1010																										WW - Water	1406
4	S-154 (12-14)			1035																										SW - Surface Water	40127
5	~~Dup~~ SO-Dup-042619			—																										SO - Soil	
6	S-158 (11-13)			1345																										SL- Sludge	
	S-158 (19-20)			1400																										SED-Sediment	
7	S-158 (19-20) MS			1405																										Oil - Oil	
	S-158 (19-20) MSD			1400																										LIQ - Other Liquid	
8	S-159 (11-13)			1515																										AIR - Air	
9	S-159 (18-20)			1535																										SOL - Other Solid	
10	S-153 (7-9)			1025	BG																									WIP - Wipe	

INITIAL ASSESSMENT 2B
LABEL VERIFICATION

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; Oil - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WIP - 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	4/26/19 1637	1	2	4/26/19 1825	2
3		3	4		4
5		5			

Custody Seal #: [ ] Intact [ ] Not intact
Preserved where applicable: [ ] Absent
Therm. ID:
On Ice: [ ] Cooler Temp. °C 1.6 2.6

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

5.1 5

JC87093: Chain of Custody
Page 1 of 3

CHAIN OF CUSTODY

SGS

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 #: JC87093

Client / Reporting Information

Company Name: Arcadis
Street Address: 110 W. Fayette ST #300
City: Syracuse State: NY Zip: 13202
Project Contact: Chris Healy E-mail: Lawrence.healy@arcadis.com
Phone #: 315-335-9594
Sampler(s) Name(s): G. Brasel / B. Green
Phone #:

Project Information

Project Name: Philadelphia Gas Works
Street: 4301 Richmond St
City: Philadelphia State: PA
Project #: B0036T9.0001
Client Purchase Order #:
Project Manager: John Brasel

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	Methane	8260 TCL 20	CN	8270 TCL 20	AB	METAL											LAB USE ONLY
11	S153 (13.5-15)		4/26/19	1040	EG	G	SO	5					2	2			1	X	X	X	X	X											
12	SO-Drop 2-0426		↓	—		↓	↓	↓					↓	↓			↓	X	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	4/26/19 1630	1	2	4/26/19 1825	2
3		3	4		4
5		5			

Custody Seal #: [ ] Intact [ ] Not intact
Preserved where applicable: [ ] Absent
Therm. ID:
On Ice: [ ] Cooler Temp: 1.6 °C

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

JC87093: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: JC87093 **Client:** ARCADIS U.S. **Project:** NATIONAL GRID, PHILLY COKE, PHILADELPHI

Date / Time Received: 4/26/2019 6:25:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (1.6);

Cooler Temps (Corrected) °C: Cooler 1: (0.6);

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

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

Quality Control Preservation	Y	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	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

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

Sample Integrity - Instructions	Y	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

5.1

5

JC87093: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Arcadis

Job No: JC87093

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.000.1

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC87093-1 Collected: 26-APR-19 09:15 By: GB Received: 26-APR-19 By: AS S-155 (10-12)						
JC87093-1	SW846 7471B	30-APR-19 10:54	LL	30-APR-19	EAL	HG
JC87093-1	SW846 6010D	02-MAY-19 23:29	MET	01-MAY-19	MR	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V,ZN
JC87093-1	SW846 6010D	03-MAY-19 13:32	MET	01-MAY-19	MR	AG,AS,CU,FE,MN,PB,SE,TL
JC87093-1	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-1	SW846 9012B/LACHAT	06-MAY-19 14:54	KI	03-MAY-19	BM	CN
JC87093-1	SW846 8260C	07-MAY-19 19:56	TDN			V8260TCL20
JC87093-1	SW846 8270D	09-MAY-19 19:49	AR	06-MAY-19	AF	AB8270TCL20
JC87093-1	SW846 8270D	10-MAY-19 12:01	AR	06-MAY-19	AF	AB8270TCL20
JC87093-1	SW846 8270D	10-MAY-19 12:50	AR	06-MAY-19	AF	AB8270TCL20
JC87093-2 Collected: 26-APR-19 09:30 By: GB Received: 26-APR-19 By: AS S-155 (13-15)						
JC87093-2	SW846 7471B	30-APR-19 10:56	LL	30-APR-19	EAL	HG
JC87093-2	SW846 6010D	02-MAY-19 23:34	MET	01-MAY-19	MR	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V,ZN
JC87093-2	SW846 6010D	03-MAY-19 13:37	MET	01-MAY-19	MR	AG,AS,CU,FE,MN,PB,SE,TL
JC87093-2	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-2	SW846 8260C	05-MAY-19 16:12	MD			V8260TCL20
JC87093-2	SW846 9012B/LACHAT	06-MAY-19 14:56	KI	03-MAY-19	BM	CN
JC87093-2	SW846 8270D	07-MAY-19 19:39	CC	06-MAY-19	AF	AB8270TCL20
JC87093-3 Collected: 26-APR-19 10:10 By: GB Received: 26-APR-19 By: AS S-154 (9-11)						
JC87093-3	SW846 7471B	30-APR-19 10:52	LL	30-APR-19	EAL	HG
JC87093-3	SW846 6010D	02-MAY-19 23:39	MET	01-MAY-19	MR	AL,AS,BA,BE,CA,CD,CO,FE,K, MG,NA,NI,PB,SB,SE,TL,ZN
JC87093-3	SW846 6010D	03-MAY-19 13:42	MET	01-MAY-19	MR	AG,CR,CU,MN,V
JC87093-3	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-3	SW846 9012B/LACHAT	06-MAY-19 15:00	KI	03-MAY-19	BM	CN
JC87093-3	SW846 8270D	08-MAY-19 20:08	AR	06-MAY-19	AF	AB8270TCL20
JC87093-3	SW846 8260C	09-MAY-19 10:20	TDN			V8260TCL20
JC87093-3	SW846 8270D	09-MAY-19 13:27	AR	06-MAY-19	AF	AB8270TCL20

Internal Sample Tracking Chronicle

Arcadis

Job No: JC87093

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.000.1

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC87093-4 Collected: 26-APR-19 10:35 By: GB Received: 26-APR-19 By: AS S-154 (12-14)						
JC87093-4	SW846 7471B	30-APR-19 10:58	LL	30-APR-19	EAL	HG
JC87093-4	SW846 6010D	02-MAY-19 23:44	MET	01-MAY-19	MR	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V
JC87093-4	SW846 6010D	03-MAY-19 13:47	MET	01-MAY-19	MR	AG,AS,CU,FE,MN,PB,SE,TL
JC87093-4	SM2540 G 18TH ED MOD	09-MAY-19 17:00	RC			SOL104
JC87093-4	SW846 9012B/LACHAT	06-MAY-19 15:01	KI	03-MAY-19	BM	CN
JC87093-4	SW846 8260C	07-MAY-19 19:23	PS			V8260TCL20
JC87093-4	SW846 8270D	08-MAY-19 20:35	AR	06-MAY-19	AF	AB8270TCL20
JC87093-5 Collected: 26-APR-19 00:00 By: GB Received: 26-APR-19 By: AS SO-DUP-0426-1						
JC87093-5	SW846 7471B	30-APR-19 11:04	LL	30-APR-19	EAL	HG
JC87093-5	SW846 6010D	03-MAY-19	MET	01-MAY-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC87093-5	SM2540 G 18TH ED MOD	09-MAY-19 17:00	RC			SOL104
JC87093-5	SW846 9012B/LACHAT	06-MAY-19 15:02	KI	03-MAY-19	BM	CN
JC87093-5	SW846 8260C	06-MAY-19 19:12	PS			V8260TCL20
JC87093-5	SW846 8270D	09-MAY-19 18:55	AR	06-MAY-19	AF	AB8270TCL20
JC87093-6 Collected: 26-APR-19 13:45 By: GB Received: 26-APR-19 By: AS S-158 (11-13)						
JC87093-6	SW846 7471B	30-APR-19 11:05	LL	30-APR-19	EAL	HG
JC87093-6	SW846 6010D	03-MAY-19 00:05	MET	01-MAY-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC87093-6	SM2540 G 18TH ED MOD	09-MAY-19 17:00	RC			SOL104
JC87093-6	SW846 9012B/LACHAT	08-MAY-19 15:36	KI	08-MAY-19	BM	CN
JC87093-6	SW846 8260C	08-MAY-19 16:51	TDN			V8260TCL20
JC87093-6	SW846 8270D	09-MAY-19 19:22	AR	06-MAY-19	AF	AB8270TCL20
JC87093-6	SW846 8270D	10-MAY-19 12:25	AR	06-MAY-19	AF	AB8270TCL20
JC87093-6	SW846 8270D	10-MAY-19 13:38	AR	06-MAY-19	AF	AB8270TCL20

Internal Sample Tracking Chronicle

Arcadis

Job No: JC87093

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.000.1

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC87093-7	Collected: 26-APR-19 14:00 By: GB		Received: 26-APR-19 By: AS			
S-158 (18-20)						
JC87093-7	SW846 7471B	30-APR-19 10:20	LL	30-APR-19	EAL	HG
JC87093-7	SW846 6010D	02-MAY-19 23:19	MET	01-MAY-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC87093-7	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-7	SW846 8260C	06-MAY-19 12:39	PS			V8260TCL20
JC87093-7	SW846 9012B/LACHAT	06-MAY-19 15:05	KI	03-MAY-19	BM	CN
JC87093-7	SW846 8260C	07-MAY-19 12:14	TDN			V8260TCL20
JC87093-7	SW846 8270D	07-MAY-19 17:23	CC	06-MAY-19	AF	AB8270TCL20
JC87093-8	Collected: 26-APR-19 15:15 By: GB		Received: 26-APR-19 By: AS			
S-159 (11-13)						
JC87093-8	SW846 7471B	30-APR-19 10:41	LL	30-APR-19	EAL	HG
JC87093-8	SW846 6010D	03-MAY-19 00:10	MET	01-MAY-19	MR	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V,ZN
JC87093-8	SW846 6010D	03-MAY-19 13:53	MET	01-MAY-19	MR	AG,AS,CU,FE,MN,PB,SE,TL
JC87093-8	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-8	SW846 9012B/LACHAT	06-MAY-19 15:07	KI	03-MAY-19	BM	CN
JC87093-8	SW846 8270D	07-MAY-19 19:12	CC	06-MAY-19	AF	AB8270TCL20
JC87093-8	SW846 8260C	08-MAY-19 16:23	TDN			V8260TCL20
JC87093-8	SW846 8270D	08-MAY-19 18:47	AR	06-MAY-19	AF	AB8270TCL20
JC87093-8	SW846 8270D	09-MAY-19 12:32	AR	06-MAY-19	AF	AB8270TCL20
JC87093-9	Collected: 26-APR-19 15:35 By: GB		Received: 26-APR-19 By: AS			
S-159 (18-20)						
JC87093-9	SW846 7471B	30-APR-19 10:42	LL	30-APR-19	EAL	HG
JC87093-9	SW846 6010D	03-MAY-19 00:15	MET	01-MAY-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC87093-9	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-9	SW846 8260C	05-MAY-19 20:53	MD			V8260TCL20
JC87093-9	SW846 9012B/LACHAT	06-MAY-19 15:08	KI	03-MAY-19	BM	CN
JC87093-9	SW846 8270D	07-MAY-19 18:17	CC	06-MAY-19	AF	AB8270TCL20

Internal Sample Tracking Chronicle

Arcadis

Job No: JC87093

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.000.1

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC87093-10 Collected: 26-APR-19 10:25 By: GB Received: 26-APR-19 By: AS S-153 (7-9)						
JC87093-10	SW846 7471B	30-APR-19 10:44	LL	30-APR-19	EAL	HG
JC87093-10	SW846 6010D	03-MAY-19 00:21	MET	01-MAY-19	MR	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V,ZN
JC87093-10	SW846 6010D	03-MAY-19 13:58	MET	01-MAY-19	MR	AG,AS,CU,FE,MN,PB,SE,TL
JC87093-10	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-10	SW846 9012B/LACHAT	06-MAY-19 15:09	KI	03-MAY-19	BM	CN
JC87093-10	SW846 8260C	06-MAY-19 19:35	PS			V8260TCL20
JC87093-10	SW846 8270D	07-MAY-19 18:44	CC	06-MAY-19	AF	AB8270TCL20
JC87093-10	SW846 8270D	08-MAY-19 17:20	AR	06-MAY-19	AF	AB8270TCL20
JC87093-11 Collected: 26-APR-19 10:40 By: GB Received: 26-APR-19 By: AS S-153 (13.5-15)						
JC87093-11	SW846 7471B	30-APR-19 11:07	LL	30-APR-19	EAL	HG
JC87093-11	SW846 6010D	03-MAY-19 00:26	MET	01-MAY-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V
JC87093-11	SW846 6010D	03-MAY-19 14:13	MET	01-MAY-19	MR	ZN
JC87093-11	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-11	SW846 8260C	05-MAY-19 21:39	MD			V8260TCL20
JC87093-11	SW846 9012B/LACHAT	06-MAY-19 15:12	KI	03-MAY-19	BM	CN
JC87093-11	SW846 8270D	07-MAY-19 20:06	CC	06-MAY-19	AF	AB8270TCL20
JC87093-12 Collected: 26-APR-19 00:00 By: GB Received: 26-APR-19 By: AS SO-DUP2-0426						
JC87093-12	SW846 7471B	30-APR-19 10:47	LL	30-APR-19	EAL	HG
JC87093-12	SW846 6010D	03-MAY-19 00:31	MET	01-MAY-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC87093-12	SM2540 G 18TH ED MOD	03-MAY-19 17:00	RC			SOL104
JC87093-12	SW846 8260C	05-MAY-19 22:02	MD			V8260TCL20
JC87093-12	SW846 8260C	06-MAY-19 19:59	PS			V8260TCL20
JC87093-12	SW846 9012B/LACHAT	07-MAY-19 17:58	KI	06-MAY-19	KI	CN
JC87093-12	SW846 8270D	07-MAY-19 20:33	CC	06-MAY-19	AF	AB8270TCL20

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-1.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-1.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-1.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-1.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-1.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-1.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-1.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-1.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-1.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-1.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-1.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-1.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-1.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-1.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-1.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-1.1
JC87093-1.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-1.1
JC87093-1.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-1.1.1	Extract Storage	Angela Rastelli	05/08/19 11:51	Retrieve from Storage
JC87093-1.1.1	Angela Rastelli	GCMSP	05/08/19 11:51	Load on Instrument
JC87093-1.1.1	GCMSP	Angela Rastelli	05/10/19 09:43	Unload from Instrument
JC87093-1.1.1	Angela Rastelli	GCMS6P	05/10/19 09:43	Load on Instrument
JC87093-1.1.1	GCMS6P	Angela Rastelli	05/13/19 10:56	Unload from Instrument
JC87093-1.1.1	Angela Rastelli	Extract Freezer	05/13/19 10:56	Return to Storage
JC87093-1.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-1.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-1.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-1.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-1.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-1.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-1.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-1.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-1.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-1.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-1.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-1.2
JC87093-1.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-1.2
JC87093-1.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-1.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-1.3	Secured Storage	Thien Nguyen	05/06/19 08:50	Retrieve from Storage
JC87093-1.3	Thien Nguyen	Secured Storage	05/06/19 08:50	Return to Storage
JC87093-1.3	Dave Hunkele		06/13/19 05:05	Disposed

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-2.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-2.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-2.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-2.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-2.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-2.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-2.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-2.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-2.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-2.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-2.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-2.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-2.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-2.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-2.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-2.1
JC87093-2.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-2.1
JC87093-2.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-2.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-2.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-2.1.1	GCMSP	Angela Rastelli	05/08/19 11:49	Unload from Instrument
JC87093-2.1.1	Angela Rastelli	Extract Freezer	05/08/19 11:49	Return to Storage
JC87093-2.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-2.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-2.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-2.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-2.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-2.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-2.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-2.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-2.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-2.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-2.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-2.2
JC87093-2.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-2.2
JC87093-2.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-2.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-2.4	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-2.4	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-2.4	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-2.4	Prashant Shukla		05/06/19 10:54	Depleted

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-3.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-3.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-3.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-3.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-3.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-3.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-3.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-3.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-3.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-3.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-3.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-3.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-3.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-3.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-3.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-3.1
JC87093-3.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-3.1
JC87093-3.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-3.1.1	Extract Storage	Angela Rastelli	05/08/19 11:51	Retrieve from Storage
JC87093-3.1.1	Angela Rastelli	GCMSP	05/08/19 11:51	Load on Instrument
JC87093-3.1.1	GCMSP	Angela Rastelli	05/09/19 10:45	Unload from Instrument
JC87093-3.1.1	Angela Rastelli	Extract Freezer	05/09/19 10:45	Return to Storage
JC87093-3.1.1	Extract Freezer	Angela Rastelli	05/09/19 10:47	Retrieve from Storage
JC87093-3.1.1	Angela Rastelli	GCMSP	05/09/19 10:47	Load on Instrument
JC87093-3.1.1	GCMSP	Angela Rastelli	05/10/19 12:45	Unload from Instrument
JC87093-3.1.1	Angela Rastelli	Extract Freezer	05/10/19 12:45	Return to Storage
JC87093-3.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-3.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-3.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-3.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-3.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-3.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-3.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-3.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-3.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-3.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-3.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-3.2
JC87093-3.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-3.2
JC87093-3.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-3.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-3.3	Secured Storage	Thien Nguyen	05/06/19 08:50	Retrieve from Storage
JC87093-3.3	Thien Nguyen	Secured Storage	05/06/19 08:50	Return to Storage
JC87093-3.3	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-4.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-4.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-4.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-4.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-4.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-4.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-4.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-4.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-4.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-4.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-4.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-4.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-4.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-4.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-4.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-4.1
JC87093-4.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-4.1
JC87093-4.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-4.1.1	Extract Storage	Angela Rastelli	05/08/19 11:51	Retrieve from Storage
JC87093-4.1.1	Angela Rastelli	GCMSP	05/08/19 11:51	Load on Instrument
JC87093-4.1.1	GCMSP	Angela Rastelli	05/09/19 10:45	Unload from Instrument
JC87093-4.1.1	Angela Rastelli	Extract Freezer	05/09/19 10:45	Return to Storage
JC87093-4.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-4.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-4.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-4.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-4.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-4.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-4.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-4.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-4.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-4.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-4.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-4.2
JC87093-4.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-4.2
JC87093-4.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-4.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-4.5	Secured Storage	Prashant Shukla	05/07/19 15:45	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-4.5	Prashant Shukla	GCMS1C	05/07/19 15:45	Load on Instrument
JC87093-4.5	GCMS1C	Prashant Shukla	05/08/19 09:24	Unload from Instrument
JC87093-4.5	Prashant Shukla		05/08/19 09:24	Depleted
JC87093-5.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-5.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-5.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-5.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-5.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-5.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-5.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-5.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-5.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-5.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-5.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-5.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-5.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-5.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-5.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-5.1
JC87093-5.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-5.1
JC87093-5.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-5.1.1	Extract Storage	Angela Rastelli	05/08/19 11:51	Retrieve from Storage
JC87093-5.1.1	Angela Rastelli	GCMSP	05/08/19 11:51	Load on Instrument
JC87093-5.1.1	GCMSP	Angela Rastelli	05/10/19 12:45	Unload from Instrument
JC87093-5.1.1	Angela Rastelli	Extract Freezer	05/10/19 12:45	Return to Storage
JC87093-5.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-5.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-5.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-5.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-5.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-5.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-5.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-5.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-5.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-5.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-5.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-5.2
JC87093-5.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-5.2
JC87093-5.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-5.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-5.4	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-5.4	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-5.4	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-5.4	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-5.5	Secured Storage	Prashant Shukla	05/06/19 16:18	Retrieve from Storage
JC87093-5.5	Prashant Shukla	GCMS3C	05/06/19 16:18	Load on Instrument
JC87093-5.5	GCMS3C	Prashant Shukla	05/07/19 08:56	Unload from Instrument
JC87093-5.5	Prashant Shukla		05/07/19 08:58	Depleted
JC87093-6.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-6.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-6.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-6.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-6.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-6.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-6.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-6.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-6.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-6.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-6.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-6.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-6.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-6.1	Secured Storage	Benjamin Gaines	05/08/19 08:47	Retrieve from Storage
JC87093-6.1	Benjamin Gaines	Secured Staging Area	05/08/19 08:47	Return to Storage
JC87093-6.1	Secured Staging Area	Benjamin Gaines	05/08/19 08:57	Retrieve from Storage
JC87093-6.1	Benjamin Gaines	Secured Storage	05/08/19 10:24	Return to Storage
JC87093-6.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-6.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-6.1
JC87093-6.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-6.1
JC87093-6.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-6.1.1	Extract Storage	Angela Rastelli	05/08/19 11:51	Retrieve from Storage
JC87093-6.1.1	Angela Rastelli	GCMSP	05/08/19 11:51	Load on Instrument
JC87093-6.1.1	GCMSP	Angela Rastelli	05/10/19 09:43	Unload from Instrument
JC87093-6.1.1	Angela Rastelli	GCMS6P	05/10/19 09:43	Load on Instrument
JC87093-6.1.1	GCMS6P	Angela Rastelli	05/13/19 10:56	Unload from Instrument
JC87093-6.1.1	Angela Rastelli	Extract Freezer	05/13/19 10:56	Return to Storage
JC87093-6.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-6.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-6.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-6.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-6.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-6.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-6.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-6.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-6.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-6.2	Secured Storage	Todd Shoemaker	05/08/19 09:41	Retrieve from Storage
JC87093-6.2	Todd Shoemaker	Secured Staging Area	05/08/19 09:41	Return to Storage
JC87093-6.2	Secured Staging Area	Beatrice Marcelino	05/08/19 12:14	Retrieve from Storage
JC87093-6.2	Beatrice Marcelino	Secured Storage	05/08/19 16:53	Return to Storage
JC87093-6.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-6.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-6.2
JC87093-6.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-6.2
JC87093-6.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-6.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-6.3	Secured Storage	Thien Nguyen	05/07/19 11:06	Retrieve from Storage
JC87093-6.3	Thien Nguyen	Secured Storage	05/07/19 11:06	Return to Storage
JC87093-6.3	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-7.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-7.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-7.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-7.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-7.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-7.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-7.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-7.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-7.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-7.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-7.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-7.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-7.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-7.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-7.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-7.1
JC87093-7.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-7.1
JC87093-7.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-7.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-7.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-7.1.1	GCMSP	Angela Rastelli	05/08/19 11:49	Unload from Instrument
JC87093-7.1.1	Angela Rastelli	Extract Freezer	05/08/19 11:49	Return to Storage
JC87093-7.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-7.3	Secured Storage	Prashant Shukla	05/06/19 13:57	Retrieve from Storage
JC87093-7.3	Prashant Shukla	Secured Storage	05/06/19 13:57	Return to Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-7.3	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-7.5	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-7.5	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-7.5	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-7.5	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-7.5	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-7.5.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-7.5
JC87093-7.5.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-7.5
JC87093-7.5.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-7.5.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-7.6	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-7.6	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-7.6	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-7.6	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-7.6	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-7.7	Secured Storage	Thien Nguyen	05/07/19 11:06	Retrieve from Storage
JC87093-7.7	Thien Nguyen	Secured Storage	05/07/19 11:06	Return to Storage
JC87093-7.7	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-7.10	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-7.10	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-7.10	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-7.10	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-7.11	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-7.11	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-7.11	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-7.11	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-7.12	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-7.12	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-7.12	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-7.12	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-7.13	Secured Storage	Prashant Shukla	05/06/19 11:08	Retrieve from Storage
JC87093-7.13	Prashant Shukla	GCMS3C	05/06/19 11:08	Load on Instrument
JC87093-7.13	GCMS3C	Prashant Shukla	05/07/19 08:56	Unload from Instrument
JC87093-7.13	Prashant Shukla		05/07/19 08:58	Depleted
JC87093-7.14	Secured Storage	Prashant Shukla	05/06/19 15:10	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-7.14	Prashant Shukla	GCMS3C	05/06/19 15:10	Load on Instrument
JC87093-7.14	GCMS3C	Prashant Shukla	05/07/19 08:56	Unload from Instrument
JC87093-7.14	Prashant Shukla		05/07/19 08:58	Depleted
JC87093-7.15	Secured Storage	Prashant Shukla	05/06/19 14:03	Retrieve from Storage
JC87093-7.15	Prashant Shukla	GCMS3C	05/06/19 14:03	Load on Instrument
JC87093-7.15	GCMS3C	Prashant Shukla	05/07/19 08:56	Unload from Instrument
JC87093-7.15	Prashant Shukla		05/07/19 08:58	Depleted
JC87093-8.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-8.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-8.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-8.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-8.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-8.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-8.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-8.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-8.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-8.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-8.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-8.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-8.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-8.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-8.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-8.1
JC87093-8.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-8.1
JC87093-8.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-8.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-8.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-8.1.1	GCMSP	Angela Rastelli	05/10/19 12:45	Unload from Instrument
JC87093-8.1.1	Angela Rastelli	Extract Freezer	05/10/19 12:45	Return to Storage
JC87093-8.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-8.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-8.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-8.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-8.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-8.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-8.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-8.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-8.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-8.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-8.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-8.2

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-8.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-8.2
JC87093-8.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-8.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-8.3	Secured Storage	Thien Nguyen	05/06/19 08:50	Retrieve from Storage
JC87093-8.3	Thien Nguyen	Secured Storage	05/06/19 08:50	Return to Storage
JC87093-8.3	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-9.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-9.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-9.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-9.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-9.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-9.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-9.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-9.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-9.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-9.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-9.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-9.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-9.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-9.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-9.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-9.1
JC87093-9.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-9.1
JC87093-9.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-9.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-9.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-9.1.1	GCMSP	Angela Rastelli	05/08/19 11:49	Unload from Instrument
JC87093-9.1.1	Angela Rastelli	Extract Freezer	05/08/19 11:49	Return to Storage
JC87093-9.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-9.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-9.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-9.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-9.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-9.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-9.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-9.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-9.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-9.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-9.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-9.2
JC87093-9.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-9.2

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-9.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-9.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-9.4	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-9.4	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-9.4	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-9.4	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-10.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-10.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-10.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-10.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-10.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-10.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-10.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-10.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-10.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-10.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-10.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-10.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-10.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-10.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-10.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-10.1
JC87093-10.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-10.1
JC87093-10.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-10.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-10.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-10.1.1	GCMSP	Angela Rastelli	05/09/19 10:45	Unload from Instrument
JC87093-10.1.1	Angela Rastelli	Extract Freezer	05/09/19 10:45	Return to Storage
JC87093-10.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-10.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-10.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-10.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-10.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-10.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-10.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-10.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage
JC87093-10.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-10.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-10.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-10.2
JC87093-10.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-10.2

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-10.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-10.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-10.4	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-10.4	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-10.4	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-10.4	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-10.5	Secured Storage	Prashant Shukla	05/06/19 16:18	Retrieve from Storage
JC87093-10.5	Prashant Shukla	GCMS3C	05/06/19 16:18	Load on Instrument
JC87093-10.5	GCMS3C	Prashant Shukla	05/07/19 08:56	Unload from Instrument
JC87093-10.5	Prashant Shukla		05/07/19 08:58	Depleted
JC87093-11.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-11.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-11.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-11.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-11.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-11.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-11.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-11.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-11.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-11.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-11.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-11.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-11.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-11.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-11.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-11.1
JC87093-11.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-11.1
JC87093-11.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-11.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-11.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-11.1.1	GCMSP	Angela Rastelli	05/08/19 11:49	Unload from Instrument
JC87093-11.1.1	Angela Rastelli	Extract Freezer	05/08/19 11:49	Return to Storage
JC87093-11.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-11.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-11.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-11.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-11.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-11.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-11.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-11.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-11.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-11.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-11.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-11.2
JC87093-11.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-11.2
JC87093-11.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-11.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-11.4	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-11.4	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-11.4	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-11.4	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-12.1	Secured Storage	Dwayne Johnson	04/29/19 11:28	Retrieve from Storage
JC87093-12.1	Dwayne Johnson	Secured Staging Area	04/29/19 11:28	Return to Storage
JC87093-12.1	Secured Staging Area	Edouard Adrian Lee	04/29/19 11:31	Retrieve from Storage
JC87093-12.1	Edouard Adrian Lee	Secured Storage	04/30/19 12:01	Return to Storage
JC87093-12.1	Secured Storage	Sahara Feliciano	05/02/19 21:19	Retrieve from Storage
JC87093-12.1	Sahara Feliciano	Secured Staging Area	05/02/19 21:19	Return to Storage
JC87093-12.1	Secured Staging Area	Ruchitaben Chauhan	05/03/19 16:16	Retrieve from Storage
JC87093-12.1	Ruchitaben Chauhan	Secured Storage	05/03/19 17:50	Return to Storage
JC87093-12.1	Secured Storage	Sahara Feliciano	05/05/19 15:10	Retrieve from Storage
JC87093-12.1	Sahara Feliciano	Secured Staging Area	05/05/19 15:10	Return to Storage
JC87093-12.1	Secured Staging Area	Natasha Torres	05/06/19 07:32	Retrieve from Storage
JC87093-12.1	Natasha Torres	Sarah Halim	05/06/19 15:44	Custody Transfer
JC87093-12.1	Sarah Halim	Secured Storage	05/07/19 00:08	Return to Storage
JC87093-12.1	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-12.1.1	Sarah Halim	Organics Prep	05/06/19 15:49	Extract from JC87093-12.1
JC87093-12.1.1	Organics Prep	Sarah Halim	05/07/19 00:08	Extract from JC87093-12.1
JC87093-12.1.1	Sarah Halim	Extract Storage	05/07/19 00:08	Return to Storage
JC87093-12.1.1	Extract Storage	Christine Change	05/07/19 13:53	Retrieve from Storage
JC87093-12.1.1	Christine Change	GCMSP	05/07/19 13:53	Load on Instrument
JC87093-12.1.1	GCMSP	Angela Rastelli	05/08/19 11:49	Unload from Instrument
JC87093-12.1.1	Angela Rastelli	Extract Freezer	05/08/19 11:49	Return to Storage
JC87093-12.1.1	Extract Freezer		06/17/19 09:00	Disposed
JC87093-12.2	Secured Storage	Sahara Feliciano	05/01/19 15:31	Retrieve from Storage
JC87093-12.2	Sahara Feliciano	Secured Staging Area	05/01/19 15:31	Return to Storage
JC87093-12.2	Secured Staging Area	Moustafa Ramadan	05/01/19 17:00	Retrieve from Storage
JC87093-12.2	Moustafa Ramadan	Secured Storage	05/01/19 17:20	Return to Storage
JC87093-12.2	Secured Storage	Todd Shoemaker	05/03/19 10:57	Retrieve from Storage
JC87093-12.2	Todd Shoemaker	Secured Staging Area	05/03/19 10:57	Return to Storage
JC87093-12.2	Secured Staging Area	Beatrice Marcelino	05/03/19 13:09	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/26/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC87093-12.2	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC87093-12.2	Secured Storage	Matthew Robbins	05/06/19 17:56	Retrieve from Storage
JC87093-12.2	Matthew Robbins	Secured Staging Area	05/06/19 17:56	Return to Storage
JC87093-12.2	Secured Staging Area	Kimberly Ignace	05/06/19 19:59	Retrieve from Storage
JC87093-12.2	Kimberly Ignace	Secured Storage	05/06/19 20:00	Return to Storage
JC87093-12.2	Dave Hunkele		06/13/19 05:05	Disposed
JC87093-12.2.1	Moustafa Ramadan	Metals Digestion	05/01/19 17:02	Digestate from JC87093-12.2
JC87093-12.2.1	Metals Digestion	Moustafa Ramadan	05/01/19 17:02	Digestate from JC87093-12.2
JC87093-12.2.1	Moustafa Ramadan	Metals Digestate Storage	05/01/19 17:02	Return to Storage
JC87093-12.2.1	Metals Digestate Storage		07/08/19 09:00	Disposed
JC87093-12.4	Secured Storage	Maricela Delgaolillo	05/05/19 17:52	Retrieve from Storage
JC87093-12.4	Maricela Delgaolillo	GCMS3C	05/05/19 17:52	Load on Instrument
JC87093-12.4	GCMS3C	Prashant Shukla	05/06/19 10:53	Unload from Instrument
JC87093-12.4	Prashant Shukla		05/06/19 10:54	Depleted
JC87093-12.5	Secured Storage	Prashant Shukla	05/06/19 16:18	Retrieve from Storage
JC87093-12.5	Prashant Shukla	GCMS3C	05/06/19 16:18	Load on Instrument
JC87093-12.5	GCMS3C	Prashant Shukla	05/07/19 08:56	Unload from Instrument
JC87093-12.5	Prashant Shukla		05/07/19 08:58	Depleted

MS Volatiles

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6820-MB	3C151776.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6820-MB	3C151776.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

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	102%	75-127%
17060-07-0	1,2-Dichloroethane-D4	107%	75-130%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	107%	79-127%

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

Method Blank Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6821-MB	3C151805.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6821-MB	3C151805.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

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	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	108%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	106%	79-127%

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

Method Blank Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10652-MB	D264315.D	1	05/07/19	TDN	n/a	n/a	VD10652

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

JC87093-1

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10652-MB	D264315.D	1	05/07/19	TDN	n/a	n/a	VD10652

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

JC87093-1

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	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	93%	75-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	97%	79-127%

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

Method Blank Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7213-MB	1C164338.D	1	05/07/19	PS	n/a	n/a	V1C7213

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

JC87093-4

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7213-MB	1C164338.D	1	05/07/19	PS	n/a	n/a	V1C7213

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

JC87093-4

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	98%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	75-130%
2037-26-5	Toluene-D8	101%	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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10654-MB	D264361.D	1	05/08/19	TDN	n/a	n/a	VD10654

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

JC87093-6, JC87093-8

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10654-MB	D264361.D	1	05/08/19	TDN	n/a	n/a	VD10654

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

JC87093-6, JC87093-8

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	96.7	250	50	ug/kg	J
120-82-1	1,2,4-Trichlorobenzene	75.3	250	50	ug/kg	J
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	92%	75-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	97%	79-127%

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

Method Blank Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10656-MB	D264408.D	1	05/09/19	TDN	n/a	n/a	VD10656

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

JC87093-3

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10656-MB	D264408.D	1	05/09/19	TDN	n/a	n/a	VD10656

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

JC87093-3

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	103%	75-127%
17060-07-0	1,2-Dichloroethane-D4	94%	75-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	101%	79-127%

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

Method Blank Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6820-MB2	3C151805A.D	1	05/06/19	MD	n/a	n/a	V3C6820

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

JC86986-4DUP, JC86986-8MS

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6820-MB2	3C151805A.D	1	05/06/19	MD	n/a	n/a	V3C6820

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

JC86986-4DUP, JC86986-8MS

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	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	108%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	106%	79-127%

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

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6820-BS	3C151774.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	201	101	48-149
71-43-2	Benzene	50	47.0	94	74-117
74-97-5	Bromochloromethane	50	49.4	99	82-121
75-27-4	Bromodichloromethane	50	54.2	108	78-119
75-25-2	Bromoform	50	57.2	114	76-130
74-83-9	Bromomethane	50	41.2	82	58-137
78-93-3	2-Butanone (MEK)	200	201	101	65-143
75-15-0	Carbon disulfide	50	45.1	90	66-140
56-23-5	Carbon tetrachloride	50	54.4	109	69-136
108-90-7	Chlorobenzene	50	47.6	95	79-117
75-00-3	Chloroethane	50	43.1	86	62-139
67-66-3	Chloroform	50	46.2	92	76-119
74-87-3	Chloromethane	50	36.9	74	52-144
110-82-7	Cyclohexane	50	45.1	90	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	56.3	113	72-124
124-48-1	Dibromochloromethane	50	62.1	124* [a]	78-122
106-93-4	1,2-Dibromoethane	50	45.6	91	80-116
95-50-1	1,2-Dichlorobenzene	50	46.2	92	77-117
541-73-1	1,3-Dichlorobenzene	50	46.3	93	75-117
106-46-7	1,4-Dichlorobenzene	50	45.6	91	76-115
75-71-8	Dichlorodifluoromethane	50	41.0	82	43-156
75-34-3	1,1-Dichloroethane	50	44.8	90	75-124
107-06-2	1,2-Dichloroethane	50	49.3	99	74-124
75-35-4	1,1-Dichloroethene	50	47.3	95	64-129
156-59-2	cis-1,2-Dichloroethene	50	47.2	94	74-118
156-60-5	trans-1,2-Dichloroethene	50	46.2	92	71-125
78-87-5	1,2-Dichloropropane	50	42.7	85	80-119
10061-01-5	cis-1,3-Dichloropropene	50	52.4	105	80-119
10061-02-6	trans-1,3-Dichloropropene	50	54.8	110	78-119
100-41-4	Ethylbenzene	50	46.5	93	75-118
76-13-1	Freon 113	50	50.5	101	60-181
591-78-6	2-Hexanone	200	198	99	63-138
98-82-8	Isopropylbenzene	50	47.8	96	74-122
79-20-9	Methyl Acetate	50	44.3	89	61-140
108-87-2	Methylcyclohexane	50	41.7	83	67-136
1634-04-4	Methyl Tert Butyl Ether	50	50.6	101	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6820-BS	3C151774.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	233	117	73-136
75-09-2	Methylene chloride	50	46.1	92	73-120
100-42-5	Styrene	50	48.3	97	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	46.8	94	72-120
127-18-4	Tetrachloroethene	50	50.4	101	69-128
108-88-3	Toluene	50	46.8	94	74-117
87-61-6	1,2,3-Trichlorobenzene	50	51.4	103	72-133
120-82-1	1,2,4-Trichlorobenzene	50	50.3	101	73-132
71-55-6	1,1,1-Trichloroethane	50	49.7	99	73-131
79-00-5	1,1,2-Trichloroethane	50	47.0	94	79-117
79-01-6	Trichloroethene	50	46.8	94	80-120
75-69-4	Trichlorofluoromethane	50	49.5	99	63-141
75-01-4	Vinyl chloride	50	40.7	81	55-145
	m,p-Xylene	100	92.8	93	75-120
95-47-6	o-Xylene	50	48.3	97	75-119
1330-20-7	Xylene (total)	150	141	94	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	108%	75-130%
2037-26-5	Toluene-D8	104%	80-120%
460-00-4	4-Bromofluorobenzene	105%	79-127%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6821-BS	3C151803.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	177	89	48-149
71-43-2	Benzene	50	45.1	90	74-117
74-97-5	Bromochloromethane	50	48.2	96	82-121
75-27-4	Bromodichloromethane	50	51.9	104	78-119
75-25-2	Bromoform	50	54.3	109	76-130
74-83-9	Bromomethane	50	43.9	88	58-137
78-93-3	2-Butanone (MEK)	200	189	95	65-143
75-15-0	Carbon disulfide	50	42.6	85	66-140
56-23-5	Carbon tetrachloride	50	51.8	104	69-136
108-90-7	Chlorobenzene	50	44.3	89	79-117
75-00-3	Chloroethane	50	45.2	90	62-139
67-66-3	Chloroform	50	44.2	88	76-119
74-87-3	Chloromethane	50	39.6	79	52-144
110-82-7	Cyclohexane	50	43.4	87	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	51.7	103	72-124
124-48-1	Dibromochloromethane	50	58.2	116	78-122
106-93-4	1,2-Dibromoethane	50	42.3	85	80-116
95-50-1	1,2-Dichlorobenzene	50	43.6	87	77-117
541-73-1	1,3-Dichlorobenzene	50	43.6	87	75-117
106-46-7	1,4-Dichlorobenzene	50	43.1	86	76-115
75-71-8	Dichlorodifluoromethane	50	47.2	94	43-156
75-34-3	1,1-Dichloroethane	50	43.0	86	75-124
107-06-2	1,2-Dichloroethane	50	47.2	94	74-124
75-35-4	1,1-Dichloroethene	50	44.6	89	64-129
156-59-2	cis-1,2-Dichloroethene	50	44.5	89	74-118
156-60-5	trans-1,2-Dichloroethene	50	44.0	88	71-125
78-87-5	1,2-Dichloropropane	50	41.9	84	80-119
10061-01-5	cis-1,3-Dichloropropene	50	49.1	98	80-119
10061-02-6	trans-1,3-Dichloropropene	50	51.0	102	78-119
100-41-4	Ethylbenzene	50	43.2	86	75-118
76-13-1	Freon 113	50	48.1	96	60-181
591-78-6	2-Hexanone	200	179	90	63-138
98-82-8	Isopropylbenzene	50	45.2	90	74-122
79-20-9	Methyl Acetate	50	37.9	76	61-140
108-87-2	Methylcyclohexane	50	40.6	81	67-136
1634-04-4	Methyl Tert Butyl Ether	50	47.6	95	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6821-BS	3C151803.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	219	110	73-136
75-09-2	Methylene chloride	50	41.6	83	73-120
100-42-5	Styrene	50	45.4	91	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	43.0	86	72-120
127-18-4	Tetrachloroethene	50	47.8	96	69-128
108-88-3	Toluene	50	44.1	88	74-117
87-61-6	1,2,3-Trichlorobenzene	50	48.9	98	72-133
120-82-1	1,2,4-Trichlorobenzene	50	48.0	96	73-132
71-55-6	1,1,1-Trichloroethane	50	48.0	96	73-131
79-00-5	1,1,2-Trichloroethane	50	44.0	88	79-117
79-01-6	Trichloroethene	50	46.3	93	80-120
75-69-4	Trichlorofluoromethane	50	50.2	100	63-141
75-01-4	Vinyl chloride	50	42.6	85	55-145
	m,p-Xylene	100	87.3	87	75-120
95-47-6	o-Xylene	50	45.2	90	75-119
1330-20-7	Xylene (total)	150	132	88	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	107%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	104%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10652-BS	D264313.D	1	05/07/19	TDN	n/a	n/a	VD10652

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

JC87093-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	12300	123	48-149
71-43-2	Benzene	2500	2520	101	74-117
74-97-5	Bromochloromethane	2500	2690	108	82-121
75-27-4	Bromodichloromethane	2500	2450	98	78-119
75-25-2	Bromoform	2500	2560	102	76-130
74-83-9	Bromomethane	2500	2590	104	58-137
78-93-3	2-Butanone (MEK)	10000	11300	113	65-143
75-15-0	Carbon disulfide	2500	2730	109	66-140
56-23-5	Carbon tetrachloride	2500	2370	95	69-136
108-90-7	Chlorobenzene	2500	2370	95	79-117
75-00-3	Chloroethane	2500	2450	98	62-139
67-66-3	Chloroform	2500	2430	97	76-119
74-87-3	Chloromethane	2500	2290	92	52-144
110-82-7	Cyclohexane	2500	2770	111	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2810	112	72-124
124-48-1	Dibromochloromethane	2500	2570	103	78-122
106-93-4	1,2-Dibromoethane	2500	2240	90	80-116
95-50-1	1,2-Dichlorobenzene	2500	2740	110	77-117
541-73-1	1,3-Dichlorobenzene	2500	2690	108	75-117
106-46-7	1,4-Dichlorobenzene	2500	2660	106	76-115
75-71-8	Dichlorodifluoromethane	2500	2000	80	43-156
75-34-3	1,1-Dichloroethane	2500	2560	102	75-124
107-06-2	1,2-Dichloroethane	2500	2100	84	74-124
75-35-4	1,1-Dichloroethene	2500	2630	105	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2650	106	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2670	107	71-125
78-87-5	1,2-Dichloropropane	2500	2560	102	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2490	100	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2420	97	78-119
100-41-4	Ethylbenzene	2500	2480	99	75-118
76-13-1	Freon 113	2500	2450	98	60-181
591-78-6	2-Hexanone	10000	10500	105	63-138
98-82-8	Isopropylbenzene	2500	2720	109	74-122
79-20-9	Methyl Acetate	2500	2740	110	61-140
108-87-2	Methylcyclohexane	2500	2910	116	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2500	100	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10652-BS	D264313.D	1	05/07/19	TDN	n/a	n/a	VD10652

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

JC87093-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	10300	103	73-136
75-09-2	Methylene chloride	2500	2670	107	73-120
100-42-5	Styrene	2500	2490	100	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2500	100	72-120
127-18-4	Tetrachloroethene	2500	2500	100	69-128
108-88-3	Toluene	2500	2470	99	74-117
87-61-6	1,2,3-Trichlorobenzene	2500	2940	118	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	3040	122	73-132
71-55-6	1,1,1-Trichloroethane	2500	2410	96	73-131
79-00-5	1,1,2-Trichloroethane	2500	2560	102	79-117
79-01-6	Trichloroethene	2500	2430	97	80-120
75-69-4	Trichlorofluoromethane	2500	2270	91	63-141
75-01-4	Vinyl chloride	2500	2710	108	55-145
	m,p-Xylene	5000	5050	101	75-120
95-47-6	o-Xylene	2500	2490	100	75-119
1330-20-7	Xylene (total)	7500	7540	101	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	98%	80-120%
460-00-4	4-Bromofluorobenzene	96%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7213-BS	1C164336.D	1	05/07/19	PS	n/a	n/a	V1C7213

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

JC87093-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	225	113	48-149
71-43-2	Benzene	50	46.0	92	74-117
74-97-5	Bromochloromethane	50	49.8	100	82-121
75-27-4	Bromodichloromethane	50	46.2	92	78-119
75-25-2	Bromoform	50	52.8	106	76-130
74-83-9	Bromomethane	50	45.5	91	58-137
78-93-3	2-Butanone (MEK)	200	233	117	65-143
75-15-0	Carbon disulfide	50	46.1	92	66-140
56-23-5	Carbon tetrachloride	50	43.9	88	69-136
108-90-7	Chlorobenzene	50	48.2	96	79-117
75-00-3	Chloroethane	50	47.7	95	62-139
67-66-3	Chloroform	50	43.4	87	76-119
74-87-3	Chloromethane	50	46.0	92	52-144
110-82-7	Cyclohexane	50	45.5	91	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	44.9	90	72-124
124-48-1	Dibromochloromethane	50	50.2	100	78-122
106-93-4	1,2-Dibromoethane	50	42.6	85	80-116
95-50-1	1,2-Dichlorobenzene	50	50.3	101	77-117
541-73-1	1,3-Dichlorobenzene	50	49.0	98	75-117
106-46-7	1,4-Dichlorobenzene	50	48.6	97	76-115
75-71-8	Dichlorodifluoromethane	50	43.1	86	43-156
75-34-3	1,1-Dichloroethane	50	45.6	91	75-124
107-06-2	1,2-Dichloroethane	50	39.2	78	74-124
75-35-4	1,1-Dichloroethene	50	48.6	97	64-129
156-59-2	cis-1,2-Dichloroethene	50	47.8	96	74-118
156-60-5	trans-1,2-Dichloroethene	50	47.8	96	71-125
78-87-5	1,2-Dichloropropane	50	47.2	94	80-119
10061-01-5	cis-1,3-Dichloropropene	50	47.4	95	80-119
10061-02-6	trans-1,3-Dichloropropene	50	46.1	92	78-119
100-41-4	Ethylbenzene	50	45.5	91	75-118
76-13-1	Freon 113	50	48.6	97	60-181
591-78-6	2-Hexanone	200	218	109	63-138
98-82-8	Isopropylbenzene	50	46.5	93	74-122
79-20-9	Methyl Acetate	50	43.4	87	61-140
108-87-2	Methylcyclohexane	50	44.2	88	67-136
1634-04-4	Methyl Tert Butyl Ether	50	46.1	92	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7213-BS	1C164336.D	1	05/07/19	PS	n/a	n/a	V1C7213

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

JC87093-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	187	94	73-136
75-09-2	Methylene chloride	50	48.3	97	73-120
100-42-5	Styrene	50	48.5	97	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	72-120
127-18-4	Tetrachloroethene	50	49.6	99	69-128
108-88-3	Toluene	50	46.7	93	74-117
87-61-6	1,2,3-Trichlorobenzene	50	49.9	100	72-133
120-82-1	1,2,4-Trichlorobenzene	50	51.3	103	73-132
71-55-6	1,1,1-Trichloroethane	50	44.4	89	73-131
79-00-5	1,1,2-Trichloroethane	50	49.7	99	79-117
79-01-6	Trichloroethene	50	49.5	99	80-120
75-69-4	Trichlorofluoromethane	50	45.5	91	63-141
75-01-4	Vinyl chloride	50	48.7	97	55-145
	m,p-Xylene	100	94.3	94	75-120
95-47-6	o-Xylene	50	48.3	97	75-119
1330-20-7	Xylene (total)	150	143	95	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	75-130%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	95%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10654-BS	D264359.D	1	05/08/19	TDN	n/a	n/a	VD10654

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

JC87093-6, JC87093-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	11700	117	48-149
71-43-2	Benzene	2500	2390	96	74-117
74-97-5	Bromochloromethane	2500	2490	100	82-121
75-27-4	Bromodichloromethane	2500	2310	92	78-119
75-25-2	Bromoform	2500	2410	96	76-130
74-83-9	Bromomethane	2500	2400	96	58-137
78-93-3	2-Butanone (MEK)	10000	10700	107	65-143
75-15-0	Carbon disulfide	2500	2430	97	66-140
56-23-5	Carbon tetrachloride	2500	2260	90	69-136
108-90-7	Chlorobenzene	2500	2250	90	79-117
75-00-3	Chloroethane	2500	2310	92	62-139
67-66-3	Chloroform	2500	2290	92	76-119
74-87-3	Chloromethane	2500	2330	93	52-144
110-82-7	Cyclohexane	2500	2540	102	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2720	109	72-124
124-48-1	Dibromochloromethane	2500	2440	98	78-122
106-93-4	1,2-Dibromoethane	2500	2180	87	80-116
95-50-1	1,2-Dichlorobenzene	2500	2580	103	77-117
541-73-1	1,3-Dichlorobenzene	2500	2550	102	75-117
106-46-7	1,4-Dichlorobenzene	2500	2520	101	76-115
75-71-8	Dichlorodifluoromethane	2500	1740	70	43-156
75-34-3	1,1-Dichloroethane	2500	2440	98	75-124
107-06-2	1,2-Dichloroethane	2500	1990	80	74-124
75-35-4	1,1-Dichloroethene	2500	2390	96	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2500	100	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2490	100	71-125
78-87-5	1,2-Dichloropropane	2500	2470	99	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2370	95	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2340	94	78-119
100-41-4	Ethylbenzene	2500	2380	95	75-118
76-13-1	Freon 113	2500	2290	92	60-181
591-78-6	2-Hexanone	10000	10400	104	63-138
98-82-8	Isopropylbenzene	2500	2630	105	74-122
79-20-9	Methyl Acetate	2500	2620	105	61-140
108-87-2	Methylcyclohexane	2500	2680	107	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2410	96	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10654-BS	D264359.D	1	05/08/19	TDN	n/a	n/a	VD10654

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

JC87093-6, JC87093-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	10000	100	73-136
75-09-2	Methylene chloride	2500	2510	100	73-120
100-42-5	Styrene	2500	2400	96	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2400	96	72-120
127-18-4	Tetrachloroethene	2500	2390	96	69-128
108-88-3	Toluene	2500	2390	96	74-117
87-61-6	1,2,3-Trichlorobenzene	2500	2770	111	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	2860	114	73-132
71-55-6	1,1,1-Trichloroethane	2500	2280	91	73-131
79-00-5	1,1,2-Trichloroethane	2500	2450	98	79-117
79-01-6	Trichloroethene	2500	2290	92	80-120
75-69-4	Trichlorofluoromethane	2500	2100	84	63-141
75-01-4	Vinyl chloride	2500	2590	104	55-145
	m,p-Xylene	5000	4830	97	75-120
95-47-6	o-Xylene	2500	2440	98	75-119
1330-20-7	Xylene (total)	7500	7270	97	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	100%	80-120%
460-00-4	4-Bromofluorobenzene	96%	79-127%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10656-BS	D264405.D	1	05/09/19	TDN	n/a	n/a	VD10656
VD10656-BSD	D264406.D	1	05/09/19	TDN	n/a	n/a	VD10656

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

JC87093-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10000	14500	145	13600	136	6	48-149/30
71-43-2	Benzene	2500	2560	102	2530	101	1	74-117/20
74-97-5	Bromochloromethane	2500	2700	108	2730	109	1	82-121/20
75-27-4	Bromodichloromethane	2500	2490	100	2480	99	0	78-119/20
75-25-2	Bromoform	2500	2470	99	2470	99	0	76-130/20
74-83-9	Bromomethane	2500	2710	108	2790	112	3	58-137/20
78-93-3	2-Butanone (MEK)	10000	12300	123	12000	120	2	65-143/20
75-15-0	Carbon disulfide	2500	2730	109	2720	109	0	66-140/21
56-23-5	Carbon tetrachloride	2500	2430	97	2440	98	0	69-136/20
108-90-7	Chlorobenzene	2500	2380	95	2360	94	1	79-117/20
75-00-3	Chloroethane	2500	2720	109	2750	110	1	62-139/20
67-66-3	Chloroform	2500	2520	101	2500	100	1	76-119/20
74-87-3	Chloromethane	2500	3130	125	3170	127	1	52-144/22
110-82-7	Cyclohexane	2500	2930	117	2980	119	2	64-136/20
96-12-8	1,2-Dibromo-3-chloropropane	2500	2840	114	2820	113	1	72-124/20
124-48-1	Dibromochloromethane	2500	2540	102	2520	101	1	78-122/20
106-93-4	1,2-Dibromoethane	2500	2220	89	2250	90	1	80-116/20
95-50-1	1,2-Dichlorobenzene	2500	2670	107	2690	108	1	77-117/20
541-73-1	1,3-Dichlorobenzene	2500	2650	106	2660	106	0	75-117/20
106-46-7	1,4-Dichlorobenzene	2500	2620	105	2620	105	0	76-115/20
75-71-8	Dichlorodifluoromethane	2500	2190	88	2210	88	1	43-156/22
75-34-3	1,1-Dichloroethane	2500	2740	110	2700	108	1	75-124/20
107-06-2	1,2-Dichloroethane	2500	2170	87	2130	85	2	74-124/20
75-35-4	1,1-Dichloroethene	2500	2640	106	2570	103	3	64-129/25
156-59-2	cis-1,2-Dichloroethene	2500	2720	109	2710	108	0	74-118/20
156-60-5	trans-1,2-Dichloroethene	2500	2720	109	2710	108	0	71-125/20
78-87-5	1,2-Dichloropropane	2500	2660	106	2660	106	0	80-119/20
10061-01-5	cis-1,3-Dichloropropene	2500	2550	102	2560	102	0	80-119/20
10061-02-6	trans-1,3-Dichloropropene	2500	2520	101	2460	98	2	78-119/20
100-41-4	Ethylbenzene	2500	2520	101	2500	100	1	75-118/20
76-13-1	Freon 113	2500	2350	94	2410	96	3	60-181/23
591-78-6	2-Hexanone	10000	11500	115	11200	112	3	63-138/20
98-82-8	Isopropylbenzene	2500	2690	108	2670	107	1	74-122/20
79-20-9	Methyl Acetate	2500	2920	117	2880	115	1	61-140/23
108-87-2	Methylcyclohexane	2500	2780	111	2790	112	0	67-136/20
1634-04-4	Methyl Tert Butyl Ether	2500	2610	104	2650	106	2	75-123/21

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10656-BS	D264405.D	1	05/09/19	TDN	n/a	n/a	VD10656
VD10656-BSD	D264406.D	1	05/09/19	TDN	n/a	n/a	VD10656

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

JC87093-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	10900	109	11200	112	3	73-136/20
75-09-2	Methylene chloride	2500	2810	112	2790	112	1	73-120/20
100-42-5	Styrene	2500	2540	102	2530	101	0	78-120/20
79-34-5	1,1,2,2-Tetrachloroethane	2500	2610	104	2620	105	0	72-120/20
127-18-4	Tetrachloroethene	2500	2440	98	2390	96	2	69-128/20
108-88-3	Toluene	2500	2510	100	2450	98	2	74-117/20
87-61-6	1,2,3-Trichlorobenzene	2500	2630	105	2640	106	0	72-133/20
120-82-1	1,2,4-Trichlorobenzene	2500	2720	109	2730	109	0	73-132/20
71-55-6	1,1,1-Trichloroethane	2500	2460	98	2500	100	2	73-131/18
79-00-5	1,1,2-Trichloroethane	2500	2620	105	2590	104	1	79-117/20
79-01-6	Trichloroethene	2500	2440	98	2390	96	2	80-120/20
75-69-4	Trichlorofluoromethane	2500	2440	98	2470	99	1	63-141/20
75-01-4	Vinyl chloride	2500	2870	115	2970	119	3	55-145/23
	m,p-Xylene	5000	5090	102	5010	100	2	75-120/20
95-47-6	o-Xylene	2500	2540	102	2520	101	1	75-119/20
1330-20-7	Xylene (total)	7500	7630	102	7530	100	1	76-119/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	103%	103%	75-127%
17060-07-0	1,2-Dichloroethane-D4	92%	91%	75-130%
2037-26-5	Toluene-D8	101%	99%	80-120%
460-00-4	4-Bromofluorobenzene	99%	97%	79-127%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86986-8MS	3C151807.D	1	05/06/19	MD	n/a	n/a	V3C6820
JC86986-8	3C151785.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

CAS No.	Compound	JC86986-8 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	240		304	375	44	10-157
71-43-2	Benzene	ND		76	75.3	99	58-125
74-97-5	Bromochloromethane	ND		76	73.4	97	60-127
75-27-4	Bromodichloromethane	ND		76	81.5	107	57-128
75-25-2	Bromoform	ND		76	71.3	94	48-133
74-83-9	Bromomethane	ND		76	79.9	105	31-141
78-93-3	2-Butanone (MEK)	56.1		304	283	75	29-146
75-15-0	Carbon disulfide	ND		76	65.3	86	47-145
56-23-5	Carbon tetrachloride	ND		76	77.8	102	51-143
108-90-7	Chlorobenzene	ND		76	68.8	91	54-130
75-00-3	Chloroethane	ND		76	78.4	103	22-153
67-66-3	Chloroform	ND		76	72.8	96	61-125
74-87-3	Chloromethane	ND		76	67.8	89	43-142
110-82-7	Cyclohexane	ND		76	62.0	82	37-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		76	69.8	92	41-127
124-48-1	Dibromochloromethane	ND		76	89.2	117	56-127
106-93-4	1,2-Dibromoethane	ND		76	80.3	106	54-121
95-50-1	1,2-Dichlorobenzene	ND		76	56.5	74	41-134
541-73-1	1,3-Dichlorobenzene	ND		76	60.2	79	41-135
106-46-7	1,4-Dichlorobenzene	ND		76	59.3	78	41-133
75-71-8	Dichlorodifluoromethane	ND		76	80.1	105	30-153
75-34-3	1,1-Dichloroethane	ND		76	71.4	94	61-131
107-06-2	1,2-Dichloroethane	ND		76	72.9	96	56-126
75-35-4	1,1-Dichloroethene	ND		76	76.4	101	53-132
156-59-2	cis-1,2-Dichloroethene	ND		76	72.8	96	57-125
156-60-5	trans-1,2-Dichloroethene	ND		76	71.1	94	56-130
78-87-5	1,2-Dichloropropane	ND		76	67.5	89	63-126
10061-01-5	cis-1,3-Dichloropropene	ND		76	73.0	96	55-126
10061-02-6	trans-1,3-Dichloropropene	ND		76	78.4	103	51-126
100-41-4	Ethylbenzene	ND		76	70.9	93	49-132
76-13-1	Freon 113	ND		76	78.1	103	42-179
591-78-6	2-Hexanone	ND		304	255	84	25-150
98-82-8	Isopropylbenzene	ND		76	67.4	89	43-141
79-20-9	Methyl Acetate	ND		76	65.0	86	32-158
108-87-2	Methylcyclohexane	ND		76	50.8	67	22-158
1634-04-4	Methyl Tert Butyl Ether	ND		76	71.8	94	58-123

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86986-8MS	3C151807.D	1	05/06/19	MD	n/a	n/a	V3C6820
JC86986-8	3C151785.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

CAS No.	Compound	JC86986-8 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		304	307	101	40-140
75-09-2	Methylene chloride	ND		76	67.3	89	57-123
100-42-5	Styrene	ND		76	64.0	84	46-139
79-34-5	1,1,2,2-Tetrachloroethane	ND		76	71.4	94	44-127
127-18-4	Tetrachloroethene	ND		76	78.9	104	39-154
108-88-3	Toluene	ND		76	78.2	103	54-127
87-61-6	1,2,3-Trichlorobenzene	ND		76	29.1	38	17-151
120-82-1	1,2,4-Trichlorobenzene	ND		76	34.7	46	19-153
71-55-6	1,1,1-Trichloroethane	ND		76	79.7	105	57-138
79-00-5	1,1,2-Trichloroethane	ND		76	70.2	92	53-127
79-01-6	Trichloroethene	ND		76	75.2	99	52-140
75-69-4	Trichlorofluoromethane	ND		76	84.6	111	46-142
75-01-4	Vinyl chloride	ND		76	76.4	101	43-146
	m,p-Xylene	ND		152	139	91	45-137
95-47-6	o-Xylene	ND		76	70.1	92	48-135
1330-20-7	Xylene (total)	ND		228	209	92	46-137

CAS No.	Surrogate Recoveries	MS	JC86986-8	Limits
1868-53-7	Dibromofluoromethane	98%	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	103%	116%	75-130%
2037-26-5	Toluene-D8	111%	101%	80-120%
460-00-4	4-Bromofluorobenzene	120%	106%	79-127%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87093-7MS	3C151819.D	1	05/06/19	PS	n/a	n/a	V3C6821
JC87093-7	3C151809.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

CAS No.	Compound	JC87093-7 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	224		303	394	56	10-157
71-43-2	Benzene	ND		75.8	49.3	65	58-125
74-97-5	Bromochloromethane	ND		75.8	50.8	67	60-127
75-27-4	Bromodichloromethane	ND		75.8	53.7	71	57-128
75-25-2	Bromoform	ND		75.8	44.9	59	48-133
74-83-9	Bromomethane	ND		75.8	54.2	72	31-141
78-93-3	2-Butanone (MEK)	51.9		303	224	57	29-146
75-15-0	Carbon disulfide	ND		75.8	39.7	52	47-145
56-23-5	Carbon tetrachloride	ND		75.8	53.5	71	51-143
108-90-7	Chlorobenzene	ND		75.8	39.8	53* [a]	54-130
75-00-3	Chloroethane	ND		75.8	57.2	75	22-153
67-66-3	Chloroform	ND		75.8	48.8	64	61-125
74-87-3	Chloromethane	ND		75.8	48.5	64	43-142
110-82-7	Cyclohexane	ND		75.8	40.6	54	37-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		75.8	37.4	49	41-127
124-48-1	Dibromochloromethane	ND		75.8	53.2	70	56-127
106-93-4	1,2-Dibromoethane	ND		75.8	39.5	52* [a]	54-121
95-50-1	1,2-Dichlorobenzene	ND		75.8	27.0	36* [a]	41-134
541-73-1	1,3-Dichlorobenzene	ND		75.8	27.3	36* [a]	41-135
106-46-7	1,4-Dichlorobenzene	ND		75.8	27.1	36* [a]	41-133
75-71-8	Dichlorodifluoromethane	ND		75.8	47.5	63	30-153
75-34-3	1,1-Dichloroethane	ND		75.8	48.7	64	61-131
107-06-2	1,2-Dichloroethane	ND		75.8	49.5	65	56-126
75-35-4	1,1-Dichloroethene	ND		75.8	49.6	65	53-132
156-59-2	cis-1,2-Dichloroethene	ND		75.8	48.6	64	57-125
156-60-5	trans-1,2-Dichloroethene	ND		75.8	45.7	60	56-130
78-87-5	1,2-Dichloropropane	ND		75.8	46.6	61* [a]	63-126
10061-01-5	cis-1,3-Dichloropropene	ND		75.8	46.4	61	55-126
10061-02-6	trans-1,3-Dichloropropene	ND		75.8	45.0	59	51-126
100-41-4	Ethylbenzene	ND		75.8	41.0	54	49-132
76-13-1	Freon 113	ND		75.8	47.5	63	42-179
591-78-6	2-Hexanone	ND		303	153	50	25-150
98-82-8	Isopropylbenzene	ND		75.8	38.1	50	43-141
79-20-9	Methyl Acetate	ND		75.8	37.6	50	32-158
108-87-2	Methylcyclohexane	ND		75.8	29.3	39	22-158
1634-04-4	Methyl Tert Butyl Ether	ND		75.8	50.5	67	58-123

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87093-7MS	3C151819.D	1	05/06/19	PS	n/a	n/a	V3C6821
JC87093-7	3C151809.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

CAS No.	Compound	JC87093-7 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		303	206	68	40-140
75-09-2	Methylene chloride	ND		75.8	47.6	63	57-123
100-42-5	Styrene	ND		75.8	34.3	45* [a]	46-139
79-34-5	1,1,2,2-Tetrachloroethane	ND		75.8	36.2	48	44-127
127-18-4	Tetrachloroethene	ND		75.8	44.3	58	39-154
108-88-3	Toluene	ND		75.8	45.4	60	54-127
87-61-6	1,2,3-Trichlorobenzene	ND		75.8	16.4	22	17-151
120-82-1	1,2,4-Trichlorobenzene	ND		75.8	18.2	24	19-153
71-55-6	1,1,1-Trichloroethane	ND		75.8	52.8	70	57-138
79-00-5	1,1,2-Trichloroethane	ND		75.8	42.8	56	53-127
79-01-6	Trichloroethene	ND		75.8	46.5	61	52-140
75-69-4	Trichlorofluoromethane	ND		75.8	57.9	76	46-142
75-01-4	Vinyl chloride	ND		75.8	49.9	66	43-146
	m,p-Xylene	ND		152	79.0	52	45-137
95-47-6	o-Xylene	ND		75.8	41.4	55	48-135
1330-20-7	Xylene (total)	ND		227	120	53	46-137

CAS No.	Surrogate Recoveries	MS	JC87093-7	Limits
1868-53-7	Dibromofluoromethane	100%	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	101%	113%	75-130%
2037-26-5	Toluene-D8	104%	112%	80-120%
460-00-4	4-Bromofluorobenzene	107%	127%	79-127%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87263-11MS	D264323.D	1	05/07/19	TDN	n/a	n/a	VD10652
JC87263-11MSD	D264324.D	1	05/07/19	TDN	n/a	n/a	VD10652
JC87263-11 [a]	D264318.D	1	05/07/19	TDN	n/a	n/a	VD10652

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

JC87093-1

CAS No.	Compound	JC87263-11 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		25000	30200	121	25000	30200	121	0	10-157/31
71-43-2	Benzene	ND		6240	5770	92	6240	5770	92	0	58-125/22
74-97-5	Bromochloromethane	ND		6240	6120	98	6240	6230	100	2	60-127/22
75-27-4	Bromodichloromethane	ND		6240	5550	89	6240	5530	89	0	57-128/22
75-25-2	Bromoform	ND		6240	6020	97	6240	5980	96	1	48-133/21
74-83-9	Bromomethane	ND		6240	2360	38	6240	2340	38	1	31-141/28
78-93-3	2-Butanone (MEK)	ND		25000	28300	113	25000	27900	112	1	29-146/27
75-15-0	Carbon disulfide	ND		6240	6100	98	6240	6080	97	0	47-145/24
56-23-5	Carbon tetrachloride	ND		6240	5190	83	6240	5160	83	1	51-143/25
108-90-7	Chlorobenzene	ND		6240	5480	88	6240	5590	90	2	54-130/22
75-00-3	Chloroethane	ND		6240	2610	42	6240	2650	42	2	22-153/32
67-66-3	Chloroform	ND		6240	5370	86	6240	5440	87	1	61-125/22
74-87-3	Chloromethane	ND		6240	6280	101	6240	6020	97	4	43-142/27
110-82-7	Cyclohexane	98.5	J	6240	6200	98	6240	6100	96	2	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		6240	6560	105	6240	6470	104	1	41-127/23
124-48-1	Dibromochloromethane	ND		6240	5890	94	6240	5920	95	1	56-127/21
106-93-4	1,2-Dibromoethane	ND		6240	5220	84	6240	5230	84	0	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		6240	6270	101	6240	6360	102	1	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		6240	6100	98	6240	6200	99	2	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		6240	6020	97	6240	6180	99	3	41-133/22
75-71-8	Dichlorodifluoromethane	ND		6240	4120	66	6240	3910	63	5	30-153/29
75-34-3	1,1-Dichloroethane	ND		6240	5730	92	6240	5850	94	2	61-131/23
107-06-2	1,2-Dichloroethane	ND		6240	4720	76	6240	4770	76	1	56-126/21
75-35-4	1,1-Dichloroethene	ND		6240	6180	99	6240	6180	99	0	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		6240	5930	95	6240	6010	96	1	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		6240	5900	95	6240	6000	96	2	56-130/23
78-87-5	1,2-Dichloropropane	ND		6240	5860	94	6240	5870	94	0	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		6240	5190	83	6240	5170	83	0	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		6240	5070	81	6240	5150	83	2	51-126/21
100-41-4	Ethylbenzene	ND		6240	5730	92	6240	5790	93	1	49-132/23
76-13-1	Freon 113	ND		6240	4940	79	6240	4890	78	1	42-179/25
591-78-6	2-Hexanone	ND		25000	26200	105	25000	26200	105	0	25-150/25
98-82-8	Isopropylbenzene	ND		6240	6380	102	6240	6370	102	0	43-141/25
79-20-9	Methyl Acetate	ND		6240	6570	105	6240	6310	101	4	32-158/26
108-87-2	Methylcyclohexane	253		6240	6220	96	6240	6050	93	3	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		6240	5820	93	6240	5850	94	1	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87263-11MS	D264323.D	1	05/07/19	TDN	n/a	n/a	VD10652
JC87263-11MSD	D264324.D	1	05/07/19	TDN	n/a	n/a	VD10652
JC87263-11 [a]	D264318.D	1	05/07/19	TDN	n/a	n/a	VD10652

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

JC87093-1

CAS No.	Compound	JC87263-11 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		25000	24300	97	25000	24600	99	1	40-140/24
75-09-2	Methylene chloride	ND		6240	6250	100	6240	6360	102	2	57-123/23
100-42-5	Styrene	ND		6240	5830	93	6240	5890	94	1	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		6240	5510	88	6240	5590	90	1	44-127/26
127-18-4	Tetrachloroethene	ND		6240	5610	90	6240	5640	90	1	39-154/26
108-88-3	Toluene	ND		6240	5730	92	6240	5730	92	0	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		6240	7150	115	6240	7100	114	1	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		6240	7350	118	6240	7230	116	2	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		6240	5240	84	6240	5280	85	1	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		6240	5950	95	6240	6020	97	1	53-127/22
79-01-6	Trichloroethene	ND		6240	5480	88	6240	5500	88	0	52-140/24
75-69-4	Trichlorofluoromethane	ND		6240	4810	77	6240	4630	74	4	46-142/27
75-01-4	Vinyl chloride	ND		6240	6160	99	6240	5720	92	7	43-146/26
	m,p-Xylene	ND		12500	11700	94	12500	11700	94	0	45-137/23
95-47-6	o-Xylene	ND		6240	5850	94	6240	5870	94	0	48-135/22
1330-20-7	Xylene (total)	ND		18700	17500	94	18700	17600	94	1	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC87263-11	Limits
1868-53-7	Dibromofluoromethane	97%	97%	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	85%	96%	75-130%
2037-26-5	Toluene-D8	99%	98%	98%	80-120%
460-00-4	4-Bromofluorobenzene	93%	94%	95%	79-127%

(a) Diluted due to high concentration of non-target compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87420-2MS	1C164344.D	1	05/07/19	PS	n/a	n/a	V1C7213
JC87420-2MSD	1C164345.D	1	05/07/19	PS	n/a	n/a	V1C7213
JC87420-2	1C164339.D	1	05/07/19	PS	n/a	n/a	V1C7213

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

JC87093-4

CAS No.	Compound	JC87420-2 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	23.8		227	160	60	227	163	61	2	10-157/31
71-43-2	Benzene	ND		56.7	48.2	85	56.7	49.9	88	3	58-125/22
74-97-5	Bromochloromethane	ND		56.7	55.3	98	56.7	56.7	100	3	60-127/22
75-27-4	Bromodichloromethane	ND		56.7	47.6	84	56.7	47.9	85	1	57-128/22
75-25-2	Bromoform	ND		56.7	47.9	85	56.7	47.3	83	1	48-133/21
74-83-9	Bromomethane	ND		56.7	53.4	94	56.7	55.9	99	5	31-141/28
78-93-3	2-Butanone (MEK)	ND		227	194	86	227	194	86	0	29-146/27
75-15-0	Carbon disulfide	ND		56.7	42.8	76	56.7	43.8	77	2	47-145/24
56-23-5	Carbon tetrachloride	ND		56.7	43.6	77	56.7	43.9	77	1	51-143/25
108-90-7	Chlorobenzene	1.4	J	56.7	44.3	76	56.7	44.3	76	0	54-130/22
75-00-3	Chloroethane	ND		56.7	53.2	94	56.7	55.1	97	4	22-153/32
67-66-3	Chloroform	ND		56.7	47.8	84	56.7	49.1	87	3	61-125/22
74-87-3	Chloromethane	ND		56.7	49.4	87	56.7	51.7	91	5	43-142/27
110-82-7	Cyclohexane	ND		56.7	34.9	62	56.7	33.3	59	5	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		56.7	40.0	71	56.7	42.5	75	6	41-127/23
124-48-1	Dibromochloromethane	ND		56.7	49.9	88	56.7	49.6	88	1	56-127/21
106-93-4	1,2-Dibromoethane	ND		56.7	51.5	91	56.7	52.8	93	2	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		56.7	35.6	63	56.7	35.3	62	1	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		56.7	33.5	59	56.7	33.6	59	0	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		56.7	34.1	60	56.7	33.9	60	1	41-133/22
75-71-8	Dichlorodifluoromethane	ND		56.7	45.1	80	56.7	46.2	82	2	30-153/29
75-34-3	1,1-Dichloroethane	ND		56.7	50.8	90	56.7	52.2	92	3	61-131/23
107-06-2	1,2-Dichloroethane	ND		56.7	42.3	75	56.7	43.7	77	3	56-126/21
75-35-4	1,1-Dichloroethene	ND		56.7	50.5	89	56.7	52.4	92	4	53-132/23
156-59-2	cis-1,2-Dichloroethene	1.4		56.7	53.6	92	56.7	54.6	94	2	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		56.7	49.8	88	56.7	51.0	90	2	56-130/23
78-87-5	1,2-Dichloropropane	ND		56.7	49.9	88	56.7	51.1	90	2	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		56.7	45.5	80	56.7	46.8	83	3	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		56.7	46.3	82	56.7	46.6	82	1	51-126/21
100-41-4	Ethylbenzene	ND		56.7	38.9	69	56.7	38.2	67	2	49-132/23
76-13-1	Freon 113	ND		56.7	44.5	79	56.7	43.6	77	2	42-179/25
591-78-6	2-Hexanone	ND		227	190	84	227	194	86	2	25-150/25
98-82-8	Isopropylbenzene	ND		56.7	34.5	61	56.7	33.0	58	4	43-141/25
79-20-9	Methyl Acetate	ND		56.7	107	189* [a]	56.7	112	198* [a]	5	32-158/26
108-87-2	Methylcyclohexane	ND		56.7	25.3	45	56.7	23.3	41	8	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		56.7	50.3	89	56.7	50.9	90	1	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87420-2MS	1C164344.D	1	05/07/19	PS	n/a	n/a	V1C7213
JC87420-2MSD	1C164345.D	1	05/07/19	PS	n/a	n/a	V1C7213
JC87420-2	1C164339.D	1	05/07/19	PS	n/a	n/a	V1C7213

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

JC87093-4

CAS No.	Compound	JC87420-2 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		227	183	81	227	187	83	2	40-140/24
75-09-2	Methylene chloride	ND		56.7	54.1	95	56.7	55.3	98	2	57-123/23
100-42-5	Styrene	ND		56.7	41.2	73	56.7	41.2	73	0	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		56.7	49.4	87	56.7	53.0	94	7	44-127/26
127-18-4	Tetrachloroethene	ND		56.7	39.4	70	56.7	38.7	68	2	39-154/26
108-88-3	Toluene	1.0	J	56.7	46.0	79	56.7	46.6	80	1	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		56.7	18.7	33	56.7	16.8	30	11	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		56.7	19.7	35	56.7	17.7	31	11	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		56.7	47.5	84	56.7	47.4	84	0	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		56.7	52.8	93	56.7	54.0	95	2	53-127/22
79-01-6	Trichloroethene	1.4		56.7	48.1	82	56.7	49.6	85	3	52-140/24
75-69-4	Trichlorofluoromethane	ND		56.7	46.5	82	56.7	47.5	84	2	46-142/27
75-01-4	Vinyl chloride	0.52	J	56.7	55.7	97	56.7	57.6	101	3	43-146/26
	m,p-Xylene	ND		113	80.2	71	113	78.8	70	2	45-137/23
95-47-6	o-Xylene	ND		56.7	41.9	74	56.7	40.9	72	2	48-135/22
1330-20-7	Xylene (total)	ND		170	122	72	170	120	71	2	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC87420-2	Limits
1868-53-7	Dibromofluoromethane	102%	103%	102%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	86%	91%	75-130%
2037-26-5	Toluene-D8	102%	103%	101%	80-120%
460-00-4	4-Bromofluorobenzene	99%	102%	102%	79-127%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87652-1MS	D264363.D	1	05/08/19	TDN	n/a	n/a	VD10654
JC87652-1MSD	D264364.D	1	05/08/19	TDN	n/a	n/a	VD10654
JC87652-1 [a]	D264362.D	1	05/08/19	TDN	n/a	n/a	VD10654

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

JC87093-6, JC87093-8

CAS No.	Compound	JC87652-1 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		13600	15300	113	13600	14600	108	5	10-157/31
71-43-2	Benzene	ND		3390	2880	85	3390	2940	87	2	58-125/22
74-97-5	Bromochloromethane	ND		3390	3070	90	3390	3080	91	0	60-127/22
75-27-4	Bromodichloromethane	ND		3390	2830	83	3390	2860	84	1	57-128/22
75-25-2	Bromoform	ND		3390	3020	89	3390	3020	89	0	48-133/21
74-83-9	Bromomethane	ND		3390	1160	34	3390	1200	35	3	31-141/28
78-93-3	2-Butanone (MEK)	ND		13600	14700	108	13600	14300	105	3	29-146/27
75-15-0	Carbon disulfide	ND		3390	2930	86	3390	2940	87	0	47-145/24
56-23-5	Carbon tetrachloride	ND		3390	2620	77	3390	2630	77	0	51-143/25
108-90-7	Chlorobenzene	ND		3390	2750	81	3390	2780	82	1	54-130/22
75-00-3	Chloroethane	ND		3390	1250	37	3390	1280	38	2	22-153/32
67-66-3	Chloroform	ND		3390	2740	81	3390	2730	80	0	61-125/22
74-87-3	Chloromethane	ND		3390	2530	75	3390	2440	72	4	43-142/27
110-82-7	Cyclohexane	39.4	J	3390	3240	94	3390	3270	95	1	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		3390	3680	108	3390	3110	92	17	41-127/23
124-48-1	Dibromochloromethane	ND		3390	2920	86	3390	2910	86	0	56-127/21
106-93-4	1,2-Dibromoethane	ND		3390	2680	79	3390	2670	79	0	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		3390	3010	89	3390	2990	88	1	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		3390	3050	90	3390	3030	89	1	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		3390	2980	88	3390	2960	87	1	41-133/22
75-71-8	Dichlorodifluoromethane	ND		3390	1900	56	3390	1880	55	1	30-153/29
75-34-3	1,1-Dichloroethane	ND		3390	2940	87	3390	2920	86	1	61-131/23
107-06-2	1,2-Dichloroethane	ND		3390	2440	72	3390	2430	72	0	56-126/21
75-35-4	1,1-Dichloroethene	ND		3390	2960	87	3390	2960	87	0	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		3390	3000	88	3390	3010	89	0	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		3390	3000	88	3390	2980	88	1	56-130/23
78-87-5	1,2-Dichloropropane	ND		3390	3020	89	3390	3030	89	0	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		3390	2940	87	3390	2930	86	0	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		3390	2760	81	3390	2750	81	0	51-126/21
100-41-4	Ethylbenzene	793		3390	3630	84	3390	3680	85	1	49-132/23
76-13-1	Freon 113	ND		3390	2550	75	3390	2540	75	0	42-179/25
591-78-6	2-Hexanone	ND		13600	13400	99	13600	13100	96	2	25-150/25
98-82-8	Isopropylbenzene	840		3390	4050	95	3390	4160	98	3	43-141/25
79-20-9	Methyl Acetate	ND		3390	3360	99	3390	3230	95	4	32-158/26
108-87-2	Methylcyclohexane	426		3390	3570	93	3390	3590	93	1	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		3390	3010	89	3390	2980	88	1	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87652-1MS	D264363.D	1	05/08/19	TDN	n/a	n/a	VD10654
JC87652-1MSD	D264364.D	1	05/08/19	TDN	n/a	n/a	VD10654
JC87652-1 [a]	D264362.D	1	05/08/19	TDN	n/a	n/a	VD10654

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

JC87093-6, JC87093-8

CAS No.	Compound	JC87652-1 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		13600	13400	99	13600	13200	97	2	40-140/24
75-09-2	Methylene chloride	ND		3390	3100	91	3390	3090	91	0	57-123/23
100-42-5	Styrene	ND		3390	3040	90	3390	3060	90	1	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		3390	3090	91	3390	3070	90	1	44-127/26
127-18-4	Tetrachloroethene	ND		3390	2760	81	3390	2840	84	3	39-154/26
108-88-3	Toluene	218		3390	2980	81	3390	3030	83	2	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		3390	3080	91	3390	3130	92	2	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		3390	3030	89	3390	3110	92	3	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		3390	2690	79	3390	2700	80	0	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		3390	3020	89	3390	3040	90	1	53-127/22
79-01-6	Trichloroethene	ND		3390	2760	81	3390	2780	82	1	52-140/24
75-69-4	Trichlorofluoromethane	ND		3390	2360	70	3390	2360	70	0	46-142/27
75-01-4	Vinyl chloride	ND		3390	3070	90	3390	3010	89	2	43-146/26
	m,p-Xylene	1500		6790	7300	85	6790	7440	87	2	45-137/23
95-47-6	o-Xylene	1450		3390	4370	86	3390	4460	89	2	48-135/22
1330-20-7	Xylene (total)	2950		10200	11700	86	10200	11900	88	2	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC87652-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	88%	87%	92%	75-130%
2037-26-5	Toluene-D8	97%	97%	99%	80-120%
460-00-4	4-Bromofluorobenzene	97%	96%	101%	79-127%

(a) Diluted due to high concentration of non-target compound. Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87093-3MS	D264416.D	1	05/09/19	TDN	n/a	n/a	VD10656
JC87093-3MSD	D264417.D	1	05/09/19	TDN	n/a	n/a	VD10656
JC87093-3 [a]	D264411.D	1	05/09/19	TDN	n/a	n/a	VD10656

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

JC87093-3

CAS No.	Compound	JC87093-3 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		32300	36200	112	32300	36000	111	1	10-157/31
71-43-2	Benzene	11400		8080	17700	78	8080	17800	79	1	58-125/22
74-97-5	Bromochloromethane	ND		8080	7620	94	8080	7820	97	3	60-127/22
75-27-4	Bromodichloromethane	ND		8080	7030	87	8080	7160	89	2	57-128/22
75-25-2	Bromoform	ND		8080	7580	94	8080	7500	93	1	48-133/21
74-83-9	Bromomethane	ND		8080	3400	42	8080	3280	41	4	31-141/28
78-93-3	2-Butanone (MEK)	ND		32300	36000	111	32300	34500	107	4	29-146/27
75-15-0	Carbon disulfide	206	J	8080	7270	87	8080	7480	90	3	47-145/24
56-23-5	Carbon tetrachloride	ND		8080	6570	81	8080	6670	83	2	51-143/25
108-90-7	Chlorobenzene	163	J	8080	7110	86	8080	7200	87	1	54-130/22
75-00-3	Chloroethane	ND		8080	4110	51	8080	4110	51	0	22-153/32
67-66-3	Chloroform	ND		8080	6720	83	8080	7000	87	4	61-125/22
74-87-3	Chloromethane	ND		8080	6960	86	8080	7710	95	10	43-142/27
110-82-7	Cyclohexane	ND		8080	6990	87	8080	7210	89	3	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		8080	8320	103	8080	8160	101	2	41-127/23
124-48-1	Dibromochloromethane	ND		8080	7450	92	8080	7790	96	4	56-127/21
106-93-4	1,2-Dibromoethane	ND		8080	6780	84	8080	6820	84	1	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		8080	7870	97	8080	7870	97	0	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		8080	7550	93	8080	7660	95	1	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		8080	7480	93	8080	7600	94	2	41-133/22
75-71-8	Dichlorodifluoromethane	ND		8080	4210	52	8080	4420	55	5	30-153/29
75-34-3	1,1-Dichloroethane	ND		8080	7190	89	8080	7410	92	3	61-131/23
107-06-2	1,2-Dichloroethane	ND		8080	6170	76	8080	6350	79	3	56-126/21
75-35-4	1,1-Dichloroethene	ND		8080	7190	89	8080	7570	94	5	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		8080	7450	92	8080	7740	96	4	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		8080	7360	91	8080	7610	94	3	56-130/23
78-87-5	1,2-Dichloropropane	ND		8080	7500	93	8080	7660	95	2	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		8080	6750	84	8080	6950	86	3	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		8080	6600	82	8080	6710	83	2	51-126/21
100-41-4	Ethylbenzene	94.9	J	8080	7260	89	8080	7440	91	2	49-132/23
76-13-1	Freon 113	ND		8080	5930	73	8080	6130	76	3	42-179/25
591-78-6	2-Hexanone	ND		32300	34800	108	32300	33500	104	4	25-150/25
98-82-8	Isopropylbenzene	ND		8080	7920	98	8080	7870	97	1	43-141/25
79-20-9	Methyl Acetate	431	J	8080	8260	97	8080	8300	97	0	32-158/26
108-87-2	Methylcyclohexane	ND		8080	6560	81	8080	7040	87	7	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		8080	7370	91	8080	7300	90	1	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87093-3MS	D264416.D	1	05/09/19	TDN	n/a	n/a	VD10656
JC87093-3MSD	D264417.D	1	05/09/19	TDN	n/a	n/a	VD10656
JC87093-3 [a]	D264411.D	1	05/09/19	TDN	n/a	n/a	VD10656

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

JC87093-3

CAS No.	Compound	JC87093-3 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		32300	33400	103	32300	32600	101	2	40-140/24
75-09-2	Methylene chloride	ND		8080	7610	94	8080	7820	97	3	57-123/23
100-42-5	Styrene	ND		8080	7390	91	8080	7500	93	1	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		8080	7260	90	8080	7300	90	1	44-127/26
127-18-4	Tetrachloroethene	ND		8080	7020	87	8080	7080	88	1	39-154/26
108-88-3	Toluene	594		8080	7920	91	8080	7970	91	1	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		8080	7620	94	8080	7890	98	3	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		8080	8000	99	8080	8070	100	1	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		8080	6760	84	8080	6770	84	0	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		8080	7580	94	8080	7660	95	1	53-127/22
79-01-6	Trichloroethene	ND		8080	6870	85	8080	7120	88	4	52-140/24
75-69-4	Trichlorofluoromethane	ND		8080	5520	68	8080	5740	71	4	46-142/27
75-01-4	Vinyl chloride	ND		8080	5820	72	8080	6120	76	5	43-146/26
	m,p-Xylene	ND		16200	14800	92	16200	14900	92	1	45-137/23
95-47-6	o-Xylene	ND		8080	7550	93	8080	7440	92	1	48-135/22
1330-20-7	Xylene (total)	ND		24200	22300	91	24200	22300	91	0	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC87093-3	Limits
1868-53-7	Dibromofluoromethane	95%	96%	102%	75-127%
17060-07-0	1,2-Dichloroethane-D4	85%	86%	95%	75-130%
2037-26-5	Toluene-D8	100%	99%	100%	80-120%
460-00-4	4-Bromofluorobenzene	92%	95%	98%	79-127%

(a) Diluted due to high concentration of target compound.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86986-4DUP	3C151806.D	1	05/06/19	MD	n/a	n/a	V3C6820
JC86986-4	3C151782.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

CAS No.	Compound	JC86986-4 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	134		116		14	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)	31.7		26.3		19	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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86986-4DUP	3C151806.D	1	05/06/19	MD	n/a	n/a	V3C6820
JC86986-4	3C151782.D	1	05/05/19	MD	n/a	n/a	V3C6820

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

JC87093-2, JC87093-9, JC87093-11

CAS No.	Compound	JC86986-4 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	JC86986-4	Limits
1868-53-7	Dibromofluoromethane	101%	102%	75-127%
17060-07-0	1,2-Dichloroethane-D4	115%	114%	75-130%
2037-26-5	Toluene-D8	106%	104%	80-120%
460-00-4	4-Bromofluorobenzene	114%	112%	79-127%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87093-7DUP	3C151814.D	1	05/06/19	PS	n/a	n/a	V3C6821
JC87093-7	3C151809.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

CAS No.	Compound	JC87093-7 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	224		192		15	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)	51.9		53.4		3	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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87093-7DUP	3C151814.D	1	05/06/19	PS	n/a	n/a	V3C6821
JC87093-7	3C151809.D	1	05/06/19	PS	n/a	n/a	V3C6821

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

JC87093-5, JC87093-7, JC87093-10, JC87093-12

CAS No.	Compound	JC87093-7 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	JC87093-7	Limits
1868-53-7	Dibromofluoromethane	97%	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	105%	113%	75-130%
2037-26-5	Toluene-D8	111%	112%	80-120%
460-00-4	4-Bromofluorobenzene	125%	127%	79-127%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7200-BFB
Lab File ID: 1C164004.D
Instrument ID: GCMS1C
Injection Date: 04/24/19
Injection Time: 14:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	9866	18.0		Pass
75	30.0 - 60.0% of mass 95	26882	49.0		Pass
95	Base peak, 100% relative abundance	54821	100.0		Pass
96	5.0 - 9.0% of mass 95	3741	6.82		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	47850	87.3		Pass
175	5.0 - 9.0% of mass 174	3704	6.76	(7.74) [a]	Pass
176	95.0 - 101.0% of mass 174	46538	84.9	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	3149	5.74	(6.77) [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
V1C7200-IC7200	1C164005.D	04/24/19	15:12	00:32	Initial cal 0.5
V1C7200-IC7200	1C164006.D	04/24/19	15:38	00:58	Initial cal 1
V1C7200-IC7200	1C164007.D	04/24/19	16:05	01:25	Initial cal 2
V1C7200-IC7200	1C164008.D	04/24/19	16:31	01:51	Initial cal 4
V1C7200-IC7200	1C164009.D	04/24/19	16:58	02:18	Initial cal 8
V1C7200-IC7200	1C164010.D	04/24/19	17:24	02:44	Initial cal 20
V1C7200-ICC7200	1C164011.D	04/24/19	17:51	03:11	Initial cal 50
V1C7200-IC7200	1C164012.D	04/24/19	18:17	03:37	Initial cal 100
V1C7200-IC7200	1C164013.D	04/24/19	18:44	04:04	Initial cal 200
V1C7200-ICV7200	1C164016.D	04/24/19	20:03	05:23	Initial cal verification 50
V1C7200-ICV7200	1C164017.D	04/24/19	20:30	05:50	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7213-BFB
Lab File ID: 1C164333.D
Instrument ID: GCMS1C
Injection Date: 05/07/19
Injection Time: 12:04

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	10071	15.9		Pass
75	30.0 - 60.0% of mass 95	28288	44.7		Pass
95	Base peak, 100% relative abundance	63347	100.0		Pass
96	5.0 - 9.0% of mass 95	4312	6.81		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	60323	95.2		Pass
175	5.0 - 9.0% of mass 174	4658	7.35	(7.72) [a]	Pass
176	95.0 - 101.0% of mass 174	59304	93.6	(98.3) [a]	Pass
177	5.0 - 9.0% of mass 176	3895	6.15	(6.57) [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
V1C7213-CC7200	1C164334.D	05/07/19	12:30	00:26	Continuing cal 50
V1C7213-BS	1C164336.D	05/07/19	13:32	01:28	Blank Spike
V1C7213-MB	1C164338.D	05/07/19	14:33	02:29	Method Blank
JC87420-2	1C164339.D	05/07/19	14:59	02:55	(used for QC only; not part of job JC87093)
ZZZZZZ	1C164340.D	05/07/19	15:25	03:21	(unrelated sample)
ZZZZZZ	1C164341.D	05/07/19	15:51	03:47	(unrelated sample)
ZZZZZZ	1C164342.D	05/07/19	16:18	04:14	(unrelated sample)
ZZZZZZ	1C164343.D	05/07/19	16:44	04:40	(unrelated sample)
JC87420-2MS	1C164344.D	05/07/19	17:11	05:07	Matrix Spike
JC87420-2MSD	1C164345.D	05/07/19	17:37	05:33	Matrix Spike Duplicate
ZZZZZZ	1C164347.D	05/07/19	18:30	06:26	(unrelated sample)
ZZZZZZ	1C164348.D	05/07/19	18:56	06:52	(unrelated sample)
JC87093-4	1C164349.D	05/07/19	19:23	07:19	S-154 (12-14)
ZZZZZZ	1C164350.D	05/07/19	19:49	07:45	(unrelated sample)
ZZZZZZ	1C164351.D	05/07/19	20:16	08:12	(unrelated sample)
ZZZZZZ	1C164352.D	05/07/19	20:42	08:38	(unrelated sample)
ZZZZZZ	1C164353.D	05/07/19	21:08	09:04	(unrelated sample)
ZZZZZZ	1C164355.D	05/07/19	22:01	09:57	(unrelated sample)
ZZZZZZ	1C164356.D	05/07/19	22:27	10:23	(unrelated sample)
ZZZZZZ	1C164357.D	05/07/19	22:53	10:49	(unrelated sample)
ZZZZZZ	1C164358.D	05/07/19	23:20	11:16	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6743-BFB
Lab File ID: 3C149621.D
Instrument ID: GCMS3C
Injection Date: 02/13/19
Injection Time: 17:27

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20405	18.6		Pass
75	30.0 - 60.0% of mass 95	53912	49.2		Pass
95	Base peak, 100% relative abundance	109629	100.0		Pass
96	5.0 - 9.0% of mass 95	7437	6.78		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	102597	93.6		Pass
175	5.0 - 9.0% of mass 174	7596	6.93	(7.40) [a]	Pass
176	95.0 - 101.0% of mass 174	99168	90.5	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	6330	5.77	(6.38) [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
V3C6743-IC6743	3C149623.D	02/13/19	18:33	01:06	Initial cal 0.5
V3C6743-IC6743	3C149624.D	02/13/19	18:56	01:29	Initial cal 1
V3C6743-IC6743	3C149628.D	02/13/19	20:29	03:02	Initial cal 2
V3C6743-IC6743	3C149629.D	02/13/19	20:52	03:25	Initial cal 4
V3C6743-IC6743	3C149630.D	02/13/19	21:15	03:48	Initial cal 8
V3C6743-IC6743	3C149631.D	02/13/19	21:39	04:12	Initial cal 20
V3C6743-ICC6743	3C149632.D	02/13/19	22:02	04:35	Initial cal 50
V3C6743-IC6743	3C149633.D	02/13/19	22:25	04:58	Initial cal 100
V3C6743-IC6743	3C149634.D	02/13/19	22:48	05:21	Initial cal 200
V3C6743-ICV6743	3C149637.D	02/13/19	23:59	06:32	Initial cal verification 50
V3C6743-ICV6743	3C149638.D	02/14/19	00:23	06:56	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6820-BFB
Lab File ID: 3C151772.D
Instrument ID: GCMS3C
Injection Date: 05/05/19
Injection Time: 12:35

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18288	16.1		Pass
75	30.0 - 60.0% of mass 95	55208	48.6		Pass
95	Base peak, 100% relative abundance	113669	100.0		Pass
96	5.0 - 9.0% of mass 95	7830	6.89		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	101728	89.5		Pass
175	5.0 - 9.0% of mass 174	7858	6.91	(7.72) [a]	Pass
176	95.0 - 101.0% of mass 174	97760	86.0	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	6702	5.90	(6.86) [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
V3C6820-CC6743	3C151772.D	05/05/19	12:35	00:00	Continuing cal 50
V3C6820-BS	3C151774.D	05/05/19	13:59	01:24	Blank Spike
V3C6820-MB	3C151776.D	05/05/19	14:46	02:11	Method Blank
JC87093-2	3C151778.D	05/05/19	16:12	03:37	S-155 (13-15)
JC86986-4	3C151782.D	05/05/19	17:47	05:12	(used for QC only; not part of job JC87093)
ZZZZZZ	3C151784.D	05/05/19	18:34	05:59	(unrelated sample)
JC86986-8	3C151785.D	05/05/19	18:57	06:22	(used for QC only; not part of job JC87093)
ZZZZZZ	3C151786.D	05/05/19	19:20	06:45	(unrelated sample)
ZZZZZZ	3C151787.D	05/05/19	19:43	07:08	(unrelated sample)
ZZZZZZ	3C151788.D	05/05/19	20:07	07:32	(unrelated sample)
JC87093-9	3C151790.D	05/05/19	20:53	08:18	S-159 (18-20)
JC87093-11	3C151792.D	05/05/19	21:39	09:04	S-153 (13.5-15)
JC87093-12	3C151793.D	05/05/19	22:02	09:27	SO-DUP2-0426
ZZZZZZ	3C151794.D	05/05/19	22:26	09:51	(unrelated sample)
ZZZZZZ	3C151795.D	05/05/19	22:49	10:14	(unrelated sample)
ZZZZZZ	3C151796.D	05/05/19	23:12	10:37	(unrelated sample)
ZZZZZZ	3C151797.D	05/05/19	23:35	11:00	(unrelated sample)
ZZZZZZ	3C151798.D	05/05/19	23:58	11:23	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6821-BFB
Lab File ID: 3C151801.D
Instrument ID: GCMS3C
Injection Date: 05/06/19
Injection Time: 08:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14503	16.0		Pass
75	30.0 - 60.0% of mass 95	44690	49.2		Pass
95	Base peak, 100% relative abundance	90827	100.0		Pass
96	5.0 - 9.0% of mass 95	6243	6.87		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	86024	94.7		Pass
175	5.0 - 9.0% of mass 174	6654	7.33	(7.74) [a]	Pass
176	95.0 - 101.0% of mass 174	83682	92.1	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	5249	5.78	(6.27) [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
V3C6821-CC6743	3C151801.D	05/06/19	08:55	00:00	Continuing cal 50
V3C6821-BS	3C151803.D	05/06/19	10:04	01:09	Blank Spike
V3C6820-BS2	3C151803A.D	05/06/19	10:04	01:09	Blank Spike
V3C6820-MB2	3C151805A.D	05/06/19	11:06	02:11	Method Blank
V3C6821-MB	3C151805.D	05/06/19	11:06	02:11	Method Blank
ZZZZZZ	3C151805B.D	05/06/19	11:06	02:11	(unrelated sample)
JC86986-4DUP	3C151806.D	05/06/19	11:30	02:35	Duplicate
JC86986-8MS	3C151807.D	05/06/19	11:53	02:58	Matrix Spike
JC87093-7	3C151809.D	05/06/19	12:39	03:44	S-158 (18-20)
JC87123-6	3C151810.D	05/06/19	13:02	04:07	(used for QC only; not part of job JC87093)
JC87123-7DUP	3C151811.D	05/06/19	13:25	04:30	Duplicate
ZZZZZZ	3C151812.D	05/06/19	13:48	04:53	(unrelated sample)
ZZZZZZ	3C151813.D	05/06/19	14:11	05:16	(unrelated sample)
JC87093-7DUP	3C151814.D	05/06/19	14:35	05:40	Duplicate
ZZZZZZ	3C151815.D	05/06/19	14:58	06:03	(unrelated sample)
ZZZZZZ	3C151816.D	05/06/19	15:21	06:26	(unrelated sample)
ZZZZZZ	3C151817.D	05/06/19	15:44	06:49	(unrelated sample)
ZZZZZZ	3C151818.D	05/06/19	16:07	07:12	(unrelated sample)
JC87093-7MS	3C151819.D	05/06/19	16:30	07:35	Matrix Spike
JC87123-6MS	3C151821.D	05/06/19	17:17	08:22	Matrix Spike
JC87123-7	3C151822.D	05/06/19	17:40	08:45	(used for QC only; not part of job JC87093)
ZZZZZZ	3C151823.D	05/06/19	18:03	09:08	(unrelated sample)
ZZZZZZ	3C151824.D	05/06/19	18:26	09:31	(unrelated sample)
ZZZZZZ	3C151825.D	05/06/19	18:49	09:54	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6821-BFB
Lab File ID: 3C151801.D
Instrument ID: GCMS3C
Injection Date: 05/06/19
Injection Time: 08:55

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JC87093-5	3C151826.D	05/06/19	19:12	10:17	SO-DUP-0426-1
JC87093-10	3C151827.D	05/06/19	19:35	10:40	S-153 (7-9)
JC87093-12	3C151828.D	05/06/19	19:59	11:04	SO-DUP2-0426
ZZZZZZ	3C151829.D	05/06/19	20:22	11:27	(unrelated sample)
ZZZZZZ	3C151830.D	05/06/19	20:45	11:50	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10606-BFB
Lab File ID: D263009.D
Instrument ID: GCMSD
Injection Date: 03/14/19
Injection Time: 17:27

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10652-BFB
Lab File ID: D264310.D
Instrument ID: GCMSD
Injection Date: 05/07/19
Injection Time: 08:03

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20248	17.4		Pass
75	30.0 - 60.0% of mass 95	54528	46.7		Pass
95	Base peak, 100% relative abundance	116675	100.0		Pass
96	5.0 - 9.0% of mass 95	8060	6.91		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	94181	80.7		Pass
175	5.0 - 9.0% of mass 174	6880	5.90	(7.31) [a]	Pass
176	95.0 - 101.0% of mass 174	92456	79.2	(98.2) [a]	Pass
177	5.0 - 9.0% of mass 176	6377	5.47	(6.90) [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
VD10652-CC10606	D264310.D	05/07/19	08:03	00:00	Continuing cal 20
VD10652-BS	D264313.D	05/07/19	09:39	01:36	Blank Spike
ZZZZZZ	D264315A.D	05/07/19	10:40	02:37	(unrelated sample)
VD10652-MB	D264315.D	05/07/19	10:40	02:37	Method Blank
ZZZZZZ	D264316.D	05/07/19	11:09	03:06	(unrelated sample)
ZZZZZZ	D264317.D	05/07/19	11:42	03:39	(unrelated sample)
JC87263-11	D264318.D	05/07/19	12:11	04:08	(used for QC only; not part of job JC87093)
ZZZZZZ	D264319.D	05/07/19	12:40	04:37	(unrelated sample)
ZZZZZZ	D264320.D	05/07/19	13:09	05:06	(unrelated sample)
ZZZZZZ	D264321.D	05/07/19	13:38	05:35	(unrelated sample)
ZZZZZZ	D264322.D	05/07/19	14:07	06:04	(unrelated sample)
JC87263-11MS	D264323.D	05/07/19	14:35	06:32	Matrix Spike
JC87263-11MSD	D264324.D	05/07/19	15:04	07:01	Matrix Spike Duplicate
ZZZZZZ	D264326.D	05/07/19	16:02	07:59	(unrelated sample)
ZZZZZZ	D264327.D	05/07/19	16:31	08:28	(unrelated sample)
ZZZZZZ	D264330.D	05/07/19	17:57	09:54	(unrelated sample)
JC87093-1	D264334.D	05/07/19	19:56	11:53	S-155 (10-12)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10654-BFB
Lab File ID: D264356.D
Instrument ID: GCMSD
Injection Date: 05/08/19
Injection Time: 06:56

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18610	17.1		Pass
75	30.0 - 60.0% of mass 95	50482	46.3		Pass
95	Base peak, 100% relative abundance	109115	100.0		Pass
96	5.0 - 9.0% of mass 95	7071	6.48		Pass
173	Less than 2.0% of mass 174	305	0.28	(0.34) [a]	Pass
174	50.0 - 150.0% of mass 95	89981	82.5		Pass
175	5.0 - 9.0% of mass 174	6521	5.98	(7.25) [a]	Pass
176	95.0 - 101.0% of mass 174	87973	80.6	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	5930	5.43	(6.74) [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
VD10654-CC10606	D264356.D	05/08/19	06:56	00:00	Continuing cal 50
VD10654-BS	D264359.D	05/08/19	08:30	01:34	Blank Spike
VD10654-MB	D264361.D	05/08/19	09:40	02:44	Method Blank
ZZZZZZ	D264361A.D	05/08/19	09:40	02:44	(unrelated sample)
JC87652-1	D264362.D	05/08/19	10:09	03:13	(used for QC only; not part of job JC87093)
JC87652-1MS	D264363.D	05/08/19	10:37	03:41	Matrix Spike
JC87652-1MSD	D264364.D	05/08/19	11:06	04:10	Matrix Spike Duplicate
ZZZZZZ	D264367.D	05/08/19	12:33	05:37	(unrelated sample)
ZZZZZZ	D264368.D	05/08/19	13:01	06:05	(unrelated sample)
ZZZZZZ	D264369.D	05/08/19	13:30	06:34	(unrelated sample)
ZZZZZZ	D264370.D	05/08/19	13:59	07:03	(unrelated sample)
ZZZZZZ	D264371.D	05/08/19	14:28	07:32	(unrelated sample)
ZZZZZZ	D264372.D	05/08/19	14:57	08:01	(unrelated sample)
JC87093-8	D264375.D	05/08/19	16:23	09:27	S-159 (11-13)
JC87093-6	D264376.D	05/08/19	16:51	09:55	S-158 (11-13)
ZZZZZZ	D264377.D	05/08/19	17:20	10:24	(unrelated sample)
ZZZZZZ	D264378.D	05/08/19	17:49	10:53	(unrelated sample)
ZZZZZZ	D264379.D	05/08/19	18:18	11:22	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10656-BFB
Lab File ID: D264404.D
Instrument ID: GCMSD
Injection Date: 05/09/19
Injection Time: 06:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18819	17.9		Pass
75	30.0 - 60.0% of mass 95	50043	47.5		Pass
95	Base peak, 100% relative abundance	105339	100.0		Pass
96	5.0 - 9.0% of mass 95	7021	6.67		Pass
173	Less than 2.0% of mass 174	234	0.22	(0.27) [a]	Pass
174	50.0 - 150.0% of mass 95	87109	82.7		Pass
175	5.0 - 9.0% of mass 174	6238	5.92	(7.16) [a]	Pass
176	95.0 - 101.0% of mass 174	85440	81.1	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	5496	5.22	(6.43) [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
VD10656-CC10606	D264404.D	05/09/19	06:52	00:00	Continuing cal 20
VD10656-BS	D264405.D	05/09/19	07:28	00:36	Blank Spike
VD10656-BSD	D264406.D	05/09/19	07:57	01:05	Blank Spike Duplicate
VD10656-MB	D264408.D	05/09/19	08:54	02:02	Method Blank
ZZZZZZ	D264408A.D	05/09/19	08:54	02:02	(unrelated sample)
ZZZZZZ	D264409.D	05/09/19	09:23	02:31	(unrelated sample)
ZZZZZZ	D264410.D	05/09/19	09:52	03:00	(unrelated sample)
JC87093-3	D264411.D	05/09/19	10:20	03:28	S-154 (9-11)
ZZZZZZ	D264412.D	05/09/19	10:49	03:57	(unrelated sample)
ZZZZZZ	D264413.D	05/09/19	11:18	04:26	(unrelated sample)
JC87093-3MS	D264416.D	05/09/19	12:44	05:52	Matrix Spike
JC87093-3MSD	D264417.D	05/09/19	13:13	06:21	Matrix Spike Duplicate
ZZZZZZ	D264419.D	05/09/19	14:10	07:18	(unrelated sample)
ZZZZZZ	D264420.D	05/09/19	14:39	07:47	(unrelated sample)
ZZZZZZ	D264421.D	05/09/19	15:08	08:16	(unrelated sample)
ZZZZZZ	D264422.D	05/09/19	15:36	08:44	(unrelated sample)
ZZZZZZ	D264428.D	05/09/19	18:29	11:37	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-BFB
Lab File ID: I223174.D
Instrument ID: GCMSI
Injection Date: 11/27/18
Injection Time: 17:41

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9105-BFB
Lab File ID: I226017.D
Instrument ID: GCMSI
Injection Date: 05/07/19
Injection Time: 07:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9580	20.0		Pass
75	30.0 - 60.0% of mass 95	24120	50.4		Pass
95	Base peak, 100% relative abundance	47827	100.0		Pass
96	5.0 - 9.0% of mass 95	3084	6.45		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	48776	102.0		Pass
175	5.0 - 9.0% of mass 174	3675	7.68	(7.53) [a]	Pass
176	95.0 - 101.0% of mass 174	46635	97.5	(95.6) [a]	Pass
177	5.0 - 9.0% of mass 176	3064	6.41	(6.57) [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
VI9105-CC8986	I226017.D	05/07/19	07:55	00:00	Continuing cal 20
VI9105-BS	I226020.D	05/07/19	09:49	01:54	Blank Spike
VI9105-MB	I226022.D	05/07/19	10:47	02:52	Method Blank
ZZZZZZ	I226022A.D	05/07/19	10:47	02:52	(unrelated sample)
ZZZZZZ	I226023.D	05/07/19	11:16	03:21	(unrelated sample)
JC87093-7	I226025.D	05/07/19	12:14	04:19	S-158 (18-20)
ZZZZZZ	I226026.D	05/07/19	12:43	04:48	(unrelated sample)
ZZZZZZ	I226027.D	05/07/19	13:13	05:18	(unrelated sample)
JC87045-6	I226028.D	05/07/19	13:42	05:47	(used for QC only; not part of job JC87093)
ZZZZZZ	I226029.D	05/07/19	14:11	06:16	(unrelated sample)
ZZZZZZ	I226030.D	05/07/19	14:40	06:45	(unrelated sample)
JC87045-6MS	I226031.D	05/07/19	15:09	07:14	Matrix Spike
JC87045-6MSD	I226032.D	05/07/19	15:38	07:43	Matrix Spike Duplicate
ZZZZZZ	I226035.D	05/07/19	17:06	09:11	(unrelated sample)
ZZZZZZ	I226036.D	05/07/19	17:35	09:40	(unrelated sample)
JC87045-6	I226037.D	05/07/19	18:04	10:09	(used for QC only; not part of job JC87093)

Internal Standard Area Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V1C7213-CC7200	**Injection Date:**	05/07/19
Lab File ID:	1C164334.D	**Injection Time:**	12:30
Instrument ID:	GCMS1C	**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	66036	7.36	219580	9.60	311653	10.52	248742	13.66	128598	15.97
Upper Limit [a]	132072	7.86	439160	10.10	623306	11.02	497484	14.16	257196	16.47
Lower Limit [b]	33018	6.86	109790	9.10	155827	10.02	124371	13.16	64299	15.47

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V1C7213-BS	66852	7.37	225889	9.60	318818	10.52	252331	13.66	132583	15.97
V1C7213-MB	60720	7.36	238897	9.60	326177	10.52	262897	13.66	135192	15.97
JC87420-2	56562	7.36	203519	9.60	282185	10.52	225226	13.66	106327	15.97
ZZZZZZ	50014	7.37	194915	9.60	270689	10.52	215868	13.66	104579	15.97
ZZZZZZ	54936	7.36	203913	9.60	282312	10.52	228983	13.66	116134	15.97
ZZZZZZ	55650	7.37	203836	9.60	284383	10.52	229623	13.66	112585	15.97
ZZZZZZ	62417	7.36	209452	9.60	291139	10.52	239148	13.66	125121	15.97
JC87420-2MS	48447	7.36	193081	9.60	276803	10.52	212176	13.66	104027	15.97
JC87420-2MSD	46964	7.36	188711	9.60	269484	10.52	205150	13.66	93408	15.97
ZZZZZZ	60043	7.36	214224	9.60	297217	10.52	240105	13.66	124296	15.97
ZZZZZZ	58902	7.36	215318	9.60	297354	10.52	241660	13.66	125320	15.97
JC87093-4	60740	7.36	186454	9.60	265583	10.52	207543	13.66	96209	15.97
ZZZZZZ	65971	7.37	228791	9.60	319850	10.52	260208	13.66	136703	15.97
ZZZZZZ	65845	7.36	240756	9.60	332878	10.52	271523	13.66	143618	15.97
ZZZZZZ	74229	7.36	266235	9.60	367120	10.52	294525	13.66	146675	15.97
ZZZZZZ	70224	7.36	259239	9.60	364914	10.52	293407	13.66	150778	15.97
ZZZZZZ	64694	7.36	249033	9.60	345948	10.52	277196	13.66	135380	15.97
ZZZZZZ	78996	7.36	250633	9.60	345112	10.52	277834	13.66	137497	15.97
ZZZZZZ	74372	7.37	251362	9.60	350514	10.52	283160	13.66	147573	15.97
ZZZZZZ	69745	7.36	230604	9.60	318146	10.52	262402	13.66	139040	15.97

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V3C6820-CC6743	**Injection Date:**	05/05/19
Lab File ID:	3C151772.D	**Injection Time:**	12:35
Instrument ID:	GCMS3C	**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	65141	2.58	275169	4.03	358902	4.69	319896	7.40	182529	9.32
Upper Limit [a]	130282	3.08	550338	4.53	717804	5.19	639792	7.90	365058	9.82
Lower Limit [b]	32571	2.08	137585	3.53	179451	4.19	159948	6.90	91265	8.82

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3C6820-BS	60241	2.58	269686	4.03	354401	4.69	313309	7.40	177994	9.32
V3C6820-MB	59787	2.57	265198	4.03	349213	4.69	314681	7.40	174937	9.32
JC87093-2	49267	2.57	221673	4.03	299669	4.69	241284	7.40	105060	9.32
JC86986-4	55841	2.57	217519	4.03	286603	4.69	248946	7.39	127319	9.32
ZZZZZZ	51594	2.57	199446	4.03	265432	4.69	238570	7.40	140443	9.32
JC86986-8	60821	2.57	240939	4.03	325475	4.69	291537	7.40	163534	9.32
ZZZZZZ	50818	2.57	204228	4.03	264591	4.69	223252	7.39	105489	9.32
ZZZZZZ	49651	2.57	249964	4.03	330446	4.69	293696	7.40	161802	9.32
ZZZZZZ	53075	2.57	255334	4.03	340286	4.69	303909	7.39	170772	9.32
JC87093-9	51157	2.57	213934	4.03	275083	4.69	236203	7.39	111291	9.32
JC87093-11	57583	2.57	245587	4.03	327381	4.69	294684	7.40	155636	9.32
JC87093-12 [c]	41272	2.57	162594	4.03	259329	4.69	178013	7.39	62662[d]	9.32
ZZZZZZ	50795	2.57	225806	4.03	285434	4.69	254355	7.39	141462	9.32
ZZZZZZ	47997	2.57	227965	4.03	297209	4.69	270312	7.39	150662	9.32
ZZZZZZ	51866	2.57	253820	4.03	334260	4.69	296981	7.39	170179	9.32
ZZZZZZ	48487	2.57	250168	4.03	324670	4.69	294006	7.39	163856	9.32
ZZZZZZ	55435	2.57	260303	4.03	334249	4.69	305663	7.39	173583	9.32

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V3C6821-CC6743	**Injection Date:**	05/06/19
Lab File ID:	3C151801.D	**Injection Time:**	08:55
Instrument ID:	GCMS3C	**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	58634	2.57	280510	4.03	358158	4.69	320309	7.39	184327	9.32
Upper Limit [a]	117268	3.07	561020	4.53	716316	5.19	640618	7.89	368654	9.82
Lower Limit [b]	29317	2.07	140255	3.53	179079	4.19	160155	6.89	92164	8.82

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3C6820-BS2	53535	2.57	258230	4.03	338109	4.69	302704	7.39	172271	9.32
V3C6821-BS	53535	2.57	258230	4.03	338109	4.69	302704	7.39	172271	9.32
V3C6820-MB2	54159	2.57	260767	4.03	336526	4.69	298355	7.39	169503	9.32
ZZZZZZ	54159	2.57	260767	4.03	336526	4.69	298355	7.39	169503	9.32
V3C6821-MB	54159	2.57	260767	4.03	336526	4.69	298355	7.39	169503	9.32
JC86986-4DUP	50741	2.57	215893	4.03	272799	4.69	230845	7.39	109786	9.32
JC86986-8MS	35180	2.57	212875	4.03	266490	4.69	217747	7.39	95781	9.32
JC87093-7	43704	2.57	202760	4.03	259247	4.69	206844	7.39	85828[c]	9.32
JC87123-6	50463	2.57	256340	4.03	336613	4.69	297980	7.39	166184	9.32
JC87123-7DUP	49176	2.57	245025	4.03	321889	4.69	286778	7.39	159311	9.32
ZZZZZZ	44069	2.57	242574	4.03	322547	4.69	285518	7.39	159306	9.32
ZZZZZZ	45480	2.57	248741	4.03	317244	4.69	280376	7.39	155840	9.32
JC87093-7DUP	42189	2.57	217548	4.03	276749	4.69	216117	7.39	90470[c]	9.32
ZZZZZZ	49120	2.57	251803	4.03	328803	4.69	295192	7.39	167739	9.32
ZZZZZZ	45299	2.57	242605	4.03	310250	4.69	276296	7.39	152382	9.32
ZZZZZZ	48406	2.57	245067	4.03	315482	4.69	284266	7.39	161569	9.32
ZZZZZZ	39096	2.57	232128	4.03	289503	4.69	248031	7.39	118732	9.32
JC87093-7MS	37898	2.57	241103	4.03	314081	4.69	275127	7.39	151664	9.32
JC87123-6MS	43698	2.58	259237	4.03	331421	4.69	295451	7.39	166459	9.32
JC87123-7	46283	2.57	233717	4.03	298609	4.69	268999	7.39	154148	9.32
ZZZZZZ	47810	2.57	230833	4.03	299491	4.69	267573	7.39	150314	9.32
ZZZZZZ	45778	2.57	214532	4.03	275863	4.69	250752	7.39	144875	9.32
ZZZZZZ	46410	2.57	239741	4.03	317653	4.69	272735	7.39	138389	9.32
JC87093-5	48994	2.57	243813	4.03	315123	4.69	280999	7.39	150972	9.32
JC87093-10	42622	2.57	235314	4.03	309504	4.69	269412	7.39	128459	9.32
JC87093-12	42590	2.57	215259	4.03	299545	4.69	238404	7.39	101577	9.32
ZZZZZZ	43795	2.57	221709	4.03	287542	4.69	241817	7.39	111579	9.32
ZZZZZZ	43302	2.57	219556	4.03	276021	4.69	229442	7.39	104594	9.32

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

Internal Standard Area Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V3C6821-CC6743	**Injection Date:**	05/06/19
Lab File ID:	3C151801.D	**Injection Time:**	08:55
Instrument ID:	GCMS3C	**Method:**	SW846 8260C

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10652-CC10606	**Injection Date:**	05/07/19
Lab File ID:	D264310.D	**Injection Time:**	08:03
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	132700	7.46	269925	9.72	408955	10.68	406076	14.09	240126	16.73
Upper Limit [a]	265400	7.96	539850	10.22	817910	11.18	812152	14.59	480252	17.23
Lower Limit [b]	66350	6.96	134963	9.22	204478	10.18	203038	13.59	120063	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
VD10652-BS	128821	7.46	259381	9.72	395845	10.67	394600	14.08	234207	16.73
ZZZZZZ	135219	7.45	254966	9.72	391001	10.67	388441	14.08	225003	16.73
VD10652-MB	135219	7.45	254966	9.72	391001	10.67	388441	14.08	225003	16.73
ZZZZZZ	129465	7.46	259011	9.72	394992	10.67	386799	14.08	219429	16.73
ZZZZZZ	120487	7.45	224702	9.72	339556	10.68	343630	14.09	196754	16.73
JC87263-11	119111	7.46	204790	9.72	315552	10.67	315210	14.08	197657	16.73
ZZZZZZ	130063	7.46	256508	9.72	393912	10.67	402276	14.08	237565	16.73
ZZZZZZ	126507	7.46	252701	9.72	385739	10.67	384632	14.08	229392	16.73
ZZZZZZ	135217	7.47	258403	9.72	387586	10.67	385659	14.08	271478	16.73
ZZZZZZ	121527	7.46	256146	9.72	385350	10.67	376563	14.08	224064	16.73
JC87263-11MS	128351	7.47	243278	9.72	367683	10.67	356669	14.08	223864	16.73
JC87263-11MSD	123986	7.48	250931	9.72	380536	10.67	371835	14.08	230782	16.73
ZZZZZZ	129427	7.47	255709	9.72	386654	10.67	380337	14.08	225616	16.73
ZZZZZZ	139633	7.47	251329	9.72	371744	10.67	370924	14.08	248438	16.73
ZZZZZZ	128545	7.45	244270	9.72	368123	10.67	366572	14.08	238008	16.73
JC87093-1 [c]	111108	7.45	215668	9.72	323691	10.67	325044	14.08	202227	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 target and non-target compound.

Internal Standard Area Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10654-CC10606	**Injection Date:**	05/08/19
Lab File ID:	D264356.D	**Injection Time:**	06:56
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	128871	7.46	250397	9.72	384549	10.68	378251	14.09	223810	16.73
Upper Limit [a]	257742	7.96	500794	10.22	769098	11.18	756502	14.59	447620	17.23
Lower Limit [b]	64436	6.96	125199	9.22	192275	10.18	189126	13.59	111905	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
VD10654-BS	130104	7.47	250815	9.72	385744	10.67	376829	14.08	226971	16.73
VD10654-MB	126530	7.46	238613	9.72	365773	10.67	365762	14.08	212464	16.73
ZZZZZZ	126530	7.46	238613	9.72	365773	10.67	365762	14.08	212464	16.73
JC87652-1	126634	7.47	240027	9.72	371652	10.67	379206	14.08	241746	16.73
JC87652-1MS	129025	7.47	236418	9.72	363667	10.67	377383	14.08	250157	16.73
JC87652-1MSD	122799	7.49	232156	9.72	350655	10.67	365078	14.08	246394	16.73
ZZZZZZ	131977	7.46	246158	9.72	376599	10.67	372047	14.08	226185	16.73
ZZZZZZ	124557	7.46	247973	9.72	380158	10.67	370198	14.08	218995	16.73
ZZZZZZ	126126	7.46	241668	9.72	369604	10.67	369812	14.08	212930	16.73
ZZZZZZ	123136	7.46	247805	9.72	378940	10.67	371014	14.08	215985	16.73
ZZZZZZ	121915	7.47	241214	9.72	365867	10.67	362953	14.08	233849	16.73
ZZZZZZ	126769	7.47	253195	9.72	387975	10.67	395041	14.08	237700	16.73
JC87093-8 [c]	124658	7.46	248515	9.72	378539	10.67	374691	14.08	232769	16.73
JC87093-6 [c]	129298	7.45	258358	9.72	391461	10.67	390573	14.08	232481	16.73
ZZZZZZ	130945	7.46	242150	9.72	373147	10.67	364627	14.08	223745	16.73
ZZZZZZ	130756	7.46	247903	9.72	383612	10.67	388517	14.08	226453	16.73
ZZZZZZ	131136	7.46	247418	9.72	382531	10.67	374702	14.08	228538	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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10656-CC10606	**Injection Date:**	05/09/19
Lab File ID:	D264404.D	**Injection Time:**	06:52
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	124042	7.45	241817	9.72	384420	10.67	372425	14.08	214027	16.73
Upper Limit [a]	248084	7.95	483634	10.22	768840	11.17	744850	14.58	428054	17.23
Lower Limit [b]	62021	6.95	120909	9.22	192210	10.17	186213	13.58	107014	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
VD10656-BS	134384	7.46	245732	9.72	386734	10.68	378599	14.08	221358	16.73
VD10656-BSD	124660	7.45	227931	9.72	362117	10.67	368306	14.08	217141	16.73
VD10656-MB	127378	7.47	236492	9.72	379153	10.68	380994	14.09	207959	16.73
ZZZZZZ	127378	7.47	236492	9.72	379153	10.68	380994	14.09	207959	16.73
ZZZZZZ	129492	7.46	228607	9.72	361355	10.67	366991	14.08	205832	16.73
ZZZZZZ	127380	7.46	234804	9.72	371530	10.67	367043	14.08	204799	16.73
JC87093-3 [c]	124339	7.46	229282	9.72	363444	10.67	361454	14.08	207733	16.73
ZZZZZZ	135704	7.51	228034	9.72	357101	10.68	388970	14.09	312648	16.73
ZZZZZZ	130148	7.48	229717	9.72	351609	10.67	417823	14.08	252885	16.73
JC87093-3MS	103908	7.49	216020	9.72	327654	10.67	322884	14.08	204057	16.73
JC87093-3MSD	98025	7.46	223575	9.72	337838	10.67	342596	14.08	207791	16.73
ZZZZZZ	103754	7.46	228912	9.72	342735	10.67	334503	14.08	212405	16.73
ZZZZZZ	104554	7.45	225898	9.72	347687	10.67	337271	14.08	207122	16.73
ZZZZZZ	107269	7.48	210545	9.72	319009	10.67	336334	14.08	226293	16.73
ZZZZZZ	100590	7.46	221051	9.72	339506	10.67	345822	14.08	239199	16.73
ZZZZZZ	112417	7.46	234058	9.72	363043	10.67	363299	14.08	201880	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 target compound.

Internal Standard Area Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VI9105-CC8986	**Injection Date:**	05/07/19
Lab File ID:	I226017.D	**Injection Time:**	07:55
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	41451	7.35	143931	9.69	186928	10.63	153982	13.76	89532	16.11
Upper Limit [a]	82902	7.85	287862	10.19	373856	11.13	307964	14.26	179064	16.61
Lower Limit [b]	20726	6.85	71966	9.19	93464	10.13	76991	13.26	44766	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
VI9105-BS	46682	7.35	146869	9.69	193310	10.63	157597	13.76	97417	16.11
VI9105-MB	37431	7.34	141577	9.70	179577	10.63	149821	13.76	84395	16.11
ZZZZZZ	37431	7.34	141577	9.70	179577	10.63	149821	13.76	84395	16.11
ZZZZZZ	34541	7.35	136346	9.69	169434	10.63	145330	13.76	90628	16.11
JC87093-7 [c]	47568	7.38	154582	9.69	197104	10.63	162543	13.76	94338	16.11
ZZZZZZ	43575	7.35	145581	9.69	188001	10.63	150965	13.76	85423	16.11
ZZZZZZ	38420	7.35	144860	9.69	190003	10.63	160022	13.76	102673	16.11
JC87045-6	41634	7.35	163163	9.69	215703	10.63	177563	13.76	110395	16.11
ZZZZZZ	44898	7.35	159540	9.69	206041	10.63	170364	13.76	108224	16.11
ZZZZZZ	47175	7.35	156655	9.69	200873	10.63	167869	13.76	105559	16.11
JC87045-6MS	59216	7.35	175997	9.69	233808	10.63	192473	13.76	119846	16.11
JC87045-6MSD	62984	7.35	176413	9.69	239176	10.63	196456	13.76	123853	16.11
ZZZZZZ	51972	7.35	154195	9.69	195184	10.63	164618	13.76	94710	16.11
ZZZZZZ	52682	7.35	156448	9.70	198877	10.63	166803	13.76	95817	16.11
JC87045-6	55522	7.35	167281	9.69	218743	10.63	177520	13.76	100089	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) Confirmation run for internal standard areas.

Surrogate Recovery Summary

Job Number: JC87093
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
JC87093-1	D264334.D	100	92	98	92
JC87093-2	3C151778.D	105	110	108	127
JC87093-3	D264411.D	102	95	100	98
JC87093-4	1C164349.D	105	94	103	102
JC87093-5	3C151826.D	102	111	101	111
JC87093-6	D264376.D	97	90	99	97
JC87093-7	3C151809.D	105	113	112	127
JC87093-7	I226025.D	104	116	100	105
JC87093-8	D264375.D	97	88	99	93
JC87093-9	3C151790.D	103	111	105	119
JC87093-10	3C151827.D	100	106	101	125
JC87093-11	3C151792.D	108	113	101	111
JC87093-12	3C151828.D	106	101	108	132* [a]
JC87093-12	3C151793.D	125	107	118	171* [b]
JC86986-4DUP	3C151806.D	101	115	106	114
JC86986-8MS	3C151807.D	98	103	111	120
JC87093-3MS	D264416.D	95	85	100	92
JC87093-3MSD	D264417.D	96	86	99	95
JC87093-7DUP	3C151814.D	97	105	111	125
JC87093-7MS	3C151819.D	100	101	104	107
JC87263-11MS	D264323.D	97	86	99	93
JC87263-11MSD	D264324.D	97	85	98	94
JC87420-2MS	1C164344.D	102	86	102	99
JC87420-2MSD	1C164345.D	103	86	103	102
JC87652-1MS	D264363.D	99	88	97	97
JC87652-1MSD	D264364.D	98	87	97	96
V1C7213-BS	1C164336.D	99	86	101	95
V1C7213-MB	1C164338.D	98	86	101	96
V3C6820-BS	3C151774.D	101	108	104	105
V3C6820-MB	3C151776.D	102	107	100	107
V3C6821-BS	3C151803.D	101	107	102	104
V3C6821-MB	3C151805.D	101	108	102	106
VD10652-BS	D264313.D	100	89	98	96
VD10652-MB	D264315.D	101	93	99	97
VD10654-BS	D264359.D	100	89	100	96
VD10654-MB	D264361.D	98	92	99	97
VD10656-BS	D264405.D	103	92	101	99
VD10656-BSD	D264406.D	103	91	99	97
VD10656-MB	D264408.D	103	94	99	101
V3C6820-MB2	3C151805A.D	101	108	102	106

Surrogate Recovery Summary

Job Number: JC87093
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. Confirmed by reanalysis.
(b) Outside control limits due to matrix interference.

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: V1C7200-ICC7200
Lab FileID: 1C164011.D

Response Factor Report GCMS1C

```
Method       : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title        : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update  : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Calibration Files
1   =1C164006.D  0.5 =1C164005.D  100 =1C164012.D  50  =1C164011.D
20  =1C164010.D  200 =1C164013.D  4   =1C164008.D  2   =1C164007.D
8   =1C164009.D      =
```

Compound	1	0.5	100	50	20	200	4	2	8	Avg	%RSD
1) tert butyl alcohol-d9 ----------ISTD----------											
2) tertiary butyl alcohol			1.382	1.299	1.340	1.361	1.299	1.213	1.403	1.328	4.83
3) ethanol										0.000#	-1.00
4) 1,4-dioxane			0.130	0.123	0.121	0.129	0.098		0.127	0.121	9.95
5) I pentafluorobenzene ----------ISTD----------											
6) chlorodifluoromethane	0.492	0.512	0.534	0.549	0.507	0.505	0.517	0.551	0.521	0.521	3.87
7) dichlorodifluoromethane	0.773	0.591	0.765	0.779	0.784	0.729	0.774	0.703	0.755	0.739	8.32
8) chloromethane	0.571	0.599	0.529	0.543	0.539	0.485	0.545	0.525	0.543	0.542	5.79
9) vinyl chloride	0.554	0.448	0.517	0.536	0.535	0.492	0.522	0.478	0.510	0.510	6.43
10) 1,3-butadiene	0.316	0.275	0.331	0.345	0.323	0.313	0.326	0.329	0.325	0.320	5.99
11) bromomethane	0.440	0.384	0.368	0.384	0.387	0.347	0.399	0.384	0.407	0.389	6.61
12) chloroethane	0.317		0.311	0.311	0.314	0.288	0.308	0.287	0.308	0.306	3.76
13) trichlorofluoromethane	0.750	0.686	0.781	0.802	0.802	0.736	0.790	0.737	0.764	0.761	4.99
14) vinyl bromide	0.298		0.306	0.312	0.310	0.290	0.309	0.264	0.298	0.298	5.34
15) ethyl ether			0.214	0.213	0.205	0.205	0.194	0.184	0.207	0.203	5.20
16) acrolein			0.055	0.054	0.052	0.054			0.047	0.052	6.21
17) freon 113	0.300		0.351	0.363	0.337	0.334	0.352	0.310	0.344	0.336	6.37
18) 1,1-dichloroethene	0.419	0.397	0.405	0.422	0.394	0.375	0.411	0.441	0.421	0.409	4.69
19) acetone			0.104	0.099	0.101	0.098	0.102	0.100	0.109	0.102	3.51
20) acetonitrile			0.042	0.042	0.044	0.041	0.045	0.036	0.047	0.042	8.67
21) iodomethane			0.491	0.436	0.336	0.486	0.244		0.274	0.378	28.61

----- Linear regression ----- Coefficient = 0.9965
Response Ratio = -0.02896 + 0.48886 *A

Initial Calibration Summary

Job Number: JC87093 **Sample:** V1C7200-ICC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164011.D
Project: National Grid, Philly Coke, Philadelphia, PA

22)	carbon disulfide										
		1.504	1.254	1.307	1.239	1.184	1.344	1.425	1.320	1.322	7.83
23)	methylene chloride										
			0.438	0.446	0.435	0.413	0.449	0.463	0.465	0.444	3.97
24)	methyl acetate										
			0.247	0.255	0.252	0.242	0.227		0.266	0.248	5.36
25)	methyl tert butyl ether										
		1.046	1.090	1.150	1.157	1.107	1.092	1.131	1.062	1.147	1.109	3.60
26)	trans-1,2-dichloroethene										
		0.464	0.513	0.432	0.454	0.441	0.403	0.460	0.469	0.453	0.454	6.53
27)	di-isopropyl ether										
		1.333	1.349	1.388	1.406	1.374	1.300	1.370	1.370	1.402	1.366	2.49
28)	2-butanone										
			0.040	0.040	0.040	0.038	0.036	0.033	0.041	0.038	7.39
29)	1,1-dichloroethane										
		0.750	0.767	0.745	0.784	0.784	0.690	0.822	0.803	0.793	0.771	5.06
30)	chloroprene										
		0.667	0.610	0.667	0.695	0.674	0.628	0.672	0.676	0.692	0.665	4.22
31)	acrylonitrile										
			0.116	0.116	0.114	0.112	0.091		0.116	0.111	8.79
32)	hexane										
		0.697	0.673	0.714	0.743	0.696	0.670	0.744	0.704	0.713	0.706	3.70
33)	vinyl acetate										
			0.068	0.070	0.068	0.064	0.051		0.065	0.064	10.57
34)	ethyl tert-butyl ether										
		1.212	1.278	1.365	1.379	1.338	1.293	1.326	1.283	1.373	1.316	4.18
35)	ethyl acetate										
			0.049	0.051	0.051	0.047	0.042		0.050	0.048	7.05
36)	2,2-dichloropropane										
		0.694	0.658	0.679	0.712	0.672	0.634	0.712	0.718	0.707	0.687	4.19
37)	cis-1,2-dichloroethene										
		0.494	0.474	0.473	0.491	0.484	0.435	0.515	0.538	0.508	0.490	5.95
38)	methyl acrylate										
			0.055	0.055	0.052	0.054	0.034		0.051	0.050	16.35
39)	propionitrile										
		0.043	0.049	0.049	0.051	0.047	0.048	0.045	0.056	0.048	7.62
40)	bromochloromethane										
		0.190	0.219	0.222	0.218	0.203	0.221	0.205	0.225	0.213	5.78
41)	tetrahydrofuran										
			0.046	0.047	0.047	0.044	0.040		0.051	0.046	7.90
42)	chloroform										
		0.556	0.659	0.511	0.528	0.526	0.476	0.541	0.568	0.545	0.546	9.23
43)	t-butyl formate										
			0.295	0.333	0.269	0.306	0.271	0.258	0.322	0.293	9.86
44)	dibromofluoromethane (s)										
		0.417	0.417	0.428	0.425	0.423	0.422	0.422	0.419	0.422	0.422	0.84
45)	methacrylonitrile										
			0.145	0.149	0.142	0.141	0.139	0.119	0.145	0.140	6.95
46)	1,1,1-trichloroethane										
		0.690	0.624	0.724	0.745	0.707	0.684	0.731	0.729	0.723	0.706	5.21
47)	cyclohexane										
		0.767	0.570	0.688	0.716	0.747	0.642	0.727	0.682	0.735	0.697	8.70
48)	1,1-dichloropropene										
		0.582	0.575	0.589	0.621	0.597	0.558	0.617	0.619	0.625	0.598	3.96
49)	iso-butyl alcohol										
			0.015	0.016	0.016	0.015	0.015		0.017	0.016	6.04
50)	carbon tetrachloride										
		0.615	0.548	0.630	0.652	0.615	0.595	0.628	0.631	0.637	0.617	4.92
51)	tert amyl alcohol										
			0.015	0.015	0.015	0.015	0.014		0.015	0.015	4.02

Initial Calibration Summary

Job Number: JC87093 **Sample:** V1C7200-ICC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164011.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
52) I   1,4-difluorobenzene   ----------------ISTD--------------------
53)  1,2-dichloroethane-d4 (s)
           0.318 0.309 0.311 0.307 0.320 0.309 0.315 0.316 0.322   0.314    1.71
54)  n-butyl alcohol
                       0.008 0.008 0.008 0.008 0.007 0.006 0.008   0.007#  10.61
55)  2,2,4-trimethylpentane
           1.191 0.971 1.196 1.241 1.226 1.116 1.321 1.241 1.300   1.200    8.73
56)  benzene
           1.277 1.410 1.156 1.208 1.232 1.050 1.307 1.309 1.318   1.252    8.40
57)  tert-amyl methyl ether
           0.160       0.199 0.203 0.202 0.187 0.195 0.197 0.218   0.195    8.56
58)  heptane
           0.241       0.270 0.280 0.275 0.250 0.291 0.263 0.291   0.270    6.66
59)  isopropyl acetate
                       0.055 0.054 0.051 0.052 0.044       0.055   0.052    7.85
60)  1,2-dichloroethane
           0.469       0.383 0.389 0.397 0.354 0.406 0.420 0.437   0.407    8.68
61)  trichloroethene
           0.318 0.289 0.322 0.335 0.327 0.300 0.324 0.349 0.337   0.322    5.76
62)  ethyl acrylate
           0.260       0.310 0.317 0.310 0.294 0.305 0.290 0.334   0.302    7.23
63)  2-nitropropane
                                                                   0.000#  -1.00
64)  2-chloroethyl vinyl ether
           0.133 0.144 0.147 0.165 0.147 0.144 0.143 0.139 0.175   0.149    8.87
65)  methyl methacrylate
                       0.064 0.064 0.063 0.061 0.057       0.067   0.063    5.13
66)  1,2-dichloropropane
           0.304 0.295 0.288 0.298 0.309 0.265 0.310 0.295 0.318   0.298    5.11
67)  dibromomethane
           0.157       0.177 0.180 0.176 0.167 0.175 0.176 0.189   0.175    5.24
68)  methylcyclohexane
           0.634       0.521 0.543 0.528 0.490 0.573 0.596 0.561   0.556    8.20
69)  bromodichloromethane
           0.403 0.408 0.435 0.434 0.420 0.409 0.418 0.440 0.434   0.422    3.25
70)  epichlorohydrin
                       0.024 0.024 0.024 0.024 0.023 0.022 0.026   0.024    5.06
71)  cis-1,3-dichloropropene
           0.474 0.492 0.485 0.495 0.487 0.459 0.489 0.474 0.508   0.485    2.90
72)  4-methyl-2-pentanone
           0.085 0.093 0.084 0.085 0.086 0.079 0.087 0.086 0.095   0.087    5.57
73)  3-methyl-1-butanol
                       0.011 0.011 0.011 0.011 0.010 0.010 0.012   0.011    7.44

74) I   chlorobenzene-d5      ----------------ISTD--------------------
75)  toluene-d8 (s)
           1.348 1.350 1.347 1.337 1.339 1.329 1.340 1.373 1.358   1.347    0.97
76)  toluene
           0.939 1.030 0.869 0.885 0.868 0.807 0.945 0.951 0.941   0.915    7.06
77)  trans-1,3-dichloropropene
           0.484 0.524 0.521 0.530 0.511 0.489 0.514 0.512 0.550   0.515    3.90
78)  ethyl methacrylate
           0.318 0.322 0.387 0.386 0.381 0.360 0.369 0.343 0.410   0.364    8.59
79)  1,1,2-trichloroethane
           0.218 0.226 0.254 0.255 0.247 0.239 0.250 0.228 0.252   0.241    5.71
80)  tetrachloroethene
           0.303 0.314 0.320 0.329 0.310 0.296 0.333 0.342 0.316   0.318    4.67
81)  1,3-dichloropropane
           0.403 0.435 0.446 0.453 0.449 0.413 0.457 0.455 0.468   0.442    4.85
```

Initial Calibration Summary

Job Number: JC87093 **Sample:** V1C7200-ICC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164011.D
Project: National Grid, Philly Coke, Philadelphia, PA

82)	2-hexanone											
		0.090	0.093	0.099	0.101	0.103	0.090	0.104	0.103	0.112	0.099	7.35
83)	butyl acetate											
				0.179	0.182	0.182	0.169	0.185	0.175	0.197	0.181	4.76
84)	dibromochloromethane											
		0.339	0.332	0.393	0.384	0.361	0.379	0.353	0.348	0.372	0.363	5.78
85)	1,2-dibromoethane											
		0.361	0.331	0.408	0.404	0.397	0.389	0.385	0.374	0.397	0.383	6.40
86)	n-butyl ether											
		1.382	1.483	1.373	1.378	1.344	1.251	1.382	1.389	1.411	1.377	4.42
87)	chlorobenzene											
		0.920	0.986	0.916	0.921	0.899	0.853	0.939	0.964	0.960	0.928	4.25
88)	1,1,1,2-tetrachloroethane											
		0.324	0.295	0.356	0.357	0.339	0.333	0.348	0.334	0.352	0.338	5.77
89)	ethylbenzene											
		1.702	1.965	1.601	1.641	1.586	1.451	1.744	1.745	1.706	1.682	8.40
90)	m,p-xylene											
		0.639	0.694	0.597	0.610	0.605	0.531	0.640	0.662	0.647	0.625	7.43
91)	o-xylene											
		0.579	0.640	0.578	0.596	0.589	0.523	0.630	0.613	0.621	0.597	5.94
92)	styrene											
		1.012	1.014	0.962	0.994	0.977	0.863	1.026	1.016	1.041	0.989	5.39
93)	bromoform											
		0.192	0.196	0.246	0.238	0.218	0.240	0.208	0.219	0.223	0.220	8.70
94)	butyl acrylate											
		0.559	0.548	0.599	0.602	0.588	0.567	0.571	0.570	0.613	0.580	3.78
95)	isopropylbenzene											
		1.584	1.811	1.567	1.586	1.550	1.439	1.621	1.675	1.615	1.605	6.24
96)	cis-1,4-dichloro-2-butene											
				0.144	0.140	0.133	0.139	0.122		0.139	0.136	5.71
97)	I 1,4-dichlorobenzene-d ----------ISTD----------											
98)	4-bromofluorobenzene (s)											
		0.928	0.944	0.940	0.931	0.929	0.953	0.938	0.939	0.946	0.939	0.88
99)	bromobenzene											
		0.786	0.827	0.771	0.783	0.775	0.715	0.807	0.790	0.812	0.785	4.07
100)	1,1,2,2-tetrachloroethane											
		0.534	0.595	0.640	0.636	0.620	0.627	0.617	0.630	0.643	0.616	5.50
101)	trans-1,4-dichloro-2-butene											
				0.172	0.173	0.163	0.169	0.156		0.173	0.168	4.12
102)	1,2,3-trichloropropane											
				0.159	0.161	0.160	0.153	0.152		0.166	0.159	3.34
103)	n-propylbenzene											
		3.621	3.902	3.473	3.603	3.492	3.166	3.771	3.767	3.702	3.611	5.99
104)	4-ethyltoluene											
											0.000#	-1.00
105)	2-chlorotoluene											
		0.711	0.707	0.687	0.704	0.698	0.632	0.745	0.712	0.730	0.703	4.49
106)	4-chlorotoluene											
		2.237	2.571	2.146	2.168	2.135	1.999	2.233	2.250	2.259	2.222	6.95
107)	1,3,5-trimethylbenzene											
		2.592	2.907	2.534	2.589	2.514	2.345	2.646	2.629	2.688	2.605	5.78
108)	tert-butylbenzene											
		0.410		0.444	0.454	0.445	0.419	0.438	0.428	0.455	0.437	3.73
109)	1,2,4-trimethylbenzene											
		2.607	2.950	2.508	2.555	2.524	2.336	2.674	2.687	2.641	2.609	6.39
110)	sec-butylbenzene											
		3.232	3.413	3.187	3.258	3.154	2.939	3.312	3.383	3.266	3.238	4.33
111)	1,3-dichlorobenzene											
		1.445	1.636	1.452	1.464	1.455	1.355	1.548	1.512	1.514	1.487	5.28

Initial Calibration Summary

Job Number: JC87093 **Sample:** V1C7200-ICC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164011.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
112)  p-isopropyltoluene
            2.786 2.957 2.732 2.790 2.752 2.523 2.887 2.790 2.854   2.785    4.35
113)  1,4-dichlorobenzene
            1.493 1.639 1.446 1.465 1.431 1.353 1.504 1.505 1.532   1.485    5.27
114)  benzyl chloride
            1.189 1.386 1.309 1.309 1.235 1.251 1.224 1.242 1.363   1.279    5.20
115)  1,2-dichlorobenzene
            1.320 1.499 1.392 1.407 1.373 1.307 1.426 1.316 1.446   1.387    4.70
116)  1,4-diethylbenzene
                                                                    0.000#  -1.00
117)  n-butylbenzene
            1.370 1.505 1.385 1.420 1.389 1.283 1.500 1.437 1.451   1.416    4.88
118)  1,2-dibromo-3-chloropropane
                        0.127 0.126 0.127 0.123 0.123 0.107 0.130   0.123    6.19
119)  1,3,5-trichlorobenzene
            1.100 1.285 1.142 1.142 1.117 1.054 1.158 1.126 1.151   1.142    5.47
120)  1,2,4,5-tetramethylbenzene
                                                                    0.000#  -1.00
121)  2-ethylhexyl acrylate
                        0.637 0.584 0.506 0.622             0.508   0.571   10.83
122)  1,2,4-trichlorobenzene
            0.932 0.910 0.957 0.953 0.923 0.884 0.955 0.888 0.967   0.930    3.30
123)  hexachlorobutadiene
            0.631 0.662 0.651 0.674 0.645 0.602 0.670 0.676 0.666   0.653    3.71
124)  naphthalene
            1.716 2.032 1.812 1.824 1.812 1.701 1.780 1.708 1.898   1.809    5.85
125)  1,2,3-trichlorobenzene
            0.778 0.998 0.887 0.889 0.844 0.828 0.898 0.866 0.918   0.879    7.01
126)  hexachloroethane
            0.423       0.537 0.524 0.489 0.526 0.492 0.496 0.494   0.498    7.10
127)  2-methylnaphthalene
                        1.258 1.223 1.122 1.198 0.958       1.152   1.152    9.26
128)  bis(chloromethyl)ether
                                                                    0.000#  -1.00
129)  ethylenimine
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M1CS7200.M        Thu Apr 25 08:06:45 2019
```

6.10.1

6

Initial Calibration Verification

Job Number: JC87093 **Sample:** V1C7200-ICV7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164016.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V1C7200\1C164016.D Vial: 14
Acq On : 24 Apr 2019 8:03 pm Operator: ROBERTS
Sample : ICV7200-50 Inst : GCMS1C
Misc : MS34128,V1C7200,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Apr 25 08:03:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.010 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		tert butyl alcohol-d9	1.000	1.000	0.0	102	-0.02	7.36
2	M	tertiary butyl alcohol	1.328	1.294	2.6	102	-0.02	7.48
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.121	0.121	0.0	100	0.00	11.25
5	I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	9.60
6	M	chlorodifluoromethane	0.521	0.552	-6.0	106	0.00	3.90
7	M	dichlorodifluoromethane	0.739	0.681	7.8	92	0.00	3.86
8	M	chloromethane	0.542	0.580	-7.0	112	0.00	4.28
9	M	vinyl chloride	0.510	0.478	6.3	94	0.00	4.51
10		1,3-butadiene	0.320	0.378	-18.1	115	0.00	4.59
11	M	bromomethane	0.389	0.368	5.4	101	0.02	5.19
12	M	chloroethane	0.306	0.269	12.1	91	0.01	5.38
13	M	trichlorofluoromethane	0.761	0.738	3.0	97	0.00	5.81
14		vinyl bromide	0.298	0.310	-4.0	104	0.00	5.72
15	M	ethyl ether	0.203	0.212	-4.4	105	0.00	6.25
16	M	acrolein	0.052	0.055	-5.8	107	0.00	6.54
17		freon 113	0.336	0.386	-14.9	112	0.00	6.62
18	M	1,1-dichloroethene	0.409	0.386	5.6	96	0.00	6.68
19	M	acetone	0.102	0.099	2.9	104	0.00	6.75
20	M	acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane	50.000	44.599	10.8	98	0.00	6.97
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide	1.322	1.384	-4.7	111	0.00	7.09
23	M	methylene chloride	0.444	0.428	3.6	101	0.00	7.42
24	M	methyl acetate	0.248	0.234	5.6	97	0.00	7.21
25	M	methyl tert butyl ether	1.109	1.096	1.2	100	0.00	7.71
26	M	trans-1,2-dichloroethene	0.454	0.432	4.8	100	0.00	7.79
27	M	di-isopropyl ether	1.366	1.296	5.1	97	0.00	8.30
28	M	2-butanone	0.038	0.039	-2.6	102	0.00	9.06
29	M	1,1-dichloroethane	0.771	0.766	0.6	103	0.00	8.36
30	M	chloroprene	0.665	0.685	-3.0	104	0.00	8.46
31	M	acrylonitrile	0.111	0.113	-1.8	103	0.00	7.77
32		hexane	0.706	0.766	-8.5	108	0.00	8.06
33	M	vinyl acetate	0.064	0.062	3.1	94	0.00	8.34
34	M	ethyl tert-butyl ether	1.316	1.284	2.4	98	0.00	8.77
35	M	ethyl acetate	0.048	0.049	-2.1	101	0.00	9.07
36	M	2,2-dichloropropane	0.687	0.660	3.9	98	0.00	9.08
37	M	cis-1,2-dichloroethene	0.490	0.466	4.9	100	0.00	9.10

Initial Calibration Verification

Job Number: JC87093 **Sample:** V1C7200-ICV7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164016.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		methyl acrylate	0.050	0.053	-6.0	101	0.00	9.15
39	M	propionitrile	0.048	0.049	-2.1	104	0.00	9.18
40	M	bromochloromethane	0.213	0.219	-2.8	103	0.00	9.42
41	M	tetrahydrofuran	0.046	0.046	0.0	104	0.00	9.45
42	M	chloroform	0.546	0.514	5.9	102	0.00	9.47
43	M	t-butyl formate	0.293	0.289	1.4	91	0.00	9.48
44	S	dibromofluoromethane (s)	0.422	0.431	-2.1	107	0.00	9.67
45	M	methacrylonitrile	0.140	0.142	-1.4	100	0.00	9.36
46	M	1,1,1-trichloroethane	0.706	0.705	0.1	99	0.00	9.70
47		cyclohexane	0.697	0.660	5.3	97	0.00	9.76
48		1,1-dichloropropene	0.598	0.601	-0.5	102	0.00	9.88
49		iso-butyl alcohol	0.016	0.015	6.3	99	0.00	9.91
50		carbon tetrachloride	0.617	0.637	-3.2	103	0.00	9.91
51		tert amyl alcohol	0.015	0.015	0.0	105	0.00	10.02
52	I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.52
53	S	1,2-dichloroethane-d4 (s)	0.314	0.301	4.1	104	0.00	10.09
54	M	n-butyl alcohol	0.007	0.007#	0.0	102	0.00	10.65
55		2,2,4-trimethylpentane	1.200	1.162	3.2	99	0.00	10.11
56	M	benzene	1.252	1.169	6.6	103	0.00	10.15
57	M	tert-amyl methyl ether	0.195	0.186	4.6	97	0.00	10.16
58	M	heptane	0.270	0.321	-18.9	122	0.00	10.29
59	M	isopropyl acetate	0.052	0.049	5.8	96	0.00	10.06
60	M	1,2-dichloroethane	0.407	0.364	10.6	99	0.00	10.18
61	M	trichloroethene	0.322	0.326	-1.2	103	0.00	10.86
62		ethyl acrylate	0.302	0.306	-1.3	102	0.00	10.86
63	M	2-nitropropane		----------NA----------				
64	M	2-chloroethyl vinyl ether	0.149	0.164	-10.1	105	0.00	11.65
65	M	methyl methacrylate	0.063	0.061	3.2	102	0.00	11.12
66	M	1,2-dichloropropane	0.298	0.286	4.0	102	0.00	11.13
67	M	dibromomethane	0.175	0.168	4.0	99	0.00	11.30
68	M	methylcyclohexane	0.556	0.521	6.3	102	0.00	11.06
69	M	bromodichloromethane	0.422	0.406	3.8	99	0.00	11.43
70		epichlorohydrin	0.024	0.024	0.0	106	0.00	11.79
71	M	cis-1,3-dichloropropene	0.485	0.475	2.1	102	0.00	11.87
72	M	4-methyl-2-pentanone	0.087	0.082	5.7	101	0.00	11.96
73	M	3-methyl-1-butanol	0.011	0.011	0.0	102	0.00	11.98
74	I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	13.66
75	S	toluene-d8 (s)	1.347	1.318	2.2	104	0.00	12.15
76		toluene	0.915	0.856	6.4	102	0.00	12.22
77		trans-1,3-dichloropropene	0.515	0.517	-0.4	103	0.00	12.43
78		ethyl methacrylate	0.364	0.372	-2.2	102	0.00	12.41
79		1,1,2-trichloroethane	0.241	0.243	-0.8	100	0.00	12.65
80	M	tetrachloroethene		----------NA----------				
81	M	1,3-dichloropropane	0.442	0.437	1.1	102	0.00	12.83
82		2-hexanone	0.099	0.097	2.0	102	0.00	12.80
83	M	butyl acetate	0.181	0.175	3.3	102	0.00	12.87
84	M	dibromochloromethane	0.363	0.382	-5.2	105	0.00	13.10
85	M	1,2-dibromoethane	0.383	0.385	-0.5	101	0.00	13.24
86		n-butyl ether	1.377	1.387	-0.7	106	0.00	13.57
87	M	chlorobenzene	0.928	0.900	3.0	103	0.00	13.69
88	M	1,1,1,2-tetrachloroethane	0.338	0.345	-2.1	102	0.00	13.75
89	M	ethylbenzene	1.682	1.566	6.9	101	0.00	13.73
90	M	m,p-xylene	0.625	0.589	5.8	102	0.00	13.84
91	M	o-xylene	0.597	0.567	5.0	101	0.00	14.26
92	M	styrene	0.989	0.957	3.2	102	0.00	14.27
93	M	bromoform	0.220	0.244	-10.9	108	0.00	14.55
94		butyl acrylate	0.580	0.569	1.9	100	0.00	14.07
95		isopropylbenzene	1.605	1.540	4.0	103	0.00	14.59

Initial Calibration Verification

Job Number: JC87093 **Sample:** V1C7200-ICV7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164016.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		cis-1,4-dichloro-2-butene	0.136	0.133	2.2	100	0.00	14.69
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	15.97
98	S	4-bromofluorobenzene (s)	0.939	0.936	0.3	106	0.00	14.81
99	M	bromobenzene	0.785	0.756	3.7	102	0.00	15.00
100	M	1,1,2,2-tetrachloroethane	0.616	0.611	0.8	101	0.00	14.92
101	M	trans-1,4-dichloro-2-bute	0.168	0.185	-10.1	112	0.00	14.96
102	M	1,2,3-trichloropropane	0.159	0.156	1.9	102	0.00	14.99
103	M	n-propylbenzene	3.611	3.485	3.5	102	0.00	15.00
104		4-ethyltoluene		----------NA----------				
105	M	2-chlorotoluene	0.703	0.677	3.7	101	0.00	15.15
106	M	4-chlorotoluene	2.222	2.130	4.1	104	0.00	15.25
107	M	1,3,5-trimethylbenzene	2.605	2.486	4.6	101	0.00	15.15
108	M	tert-butylbenzene	0.437	0.445	-1.8	103	0.00	15.49
109	M	1,2,4-trimethylbenzene	2.609	2.504	4.0	103	0.00	15.54
110	M	sec-butylbenzene	3.238	3.165	2.3	102	0.00	15.71
111	M	1,3-dichlorobenzene	1.487	1.459	1.9	105	0.00	15.91
112	M	p-isopropyltoluene	2.785	2.742	1.5	104	0.00	15.83
113	M	1,4-dichlorobenzene	1.485	1.432	3.6	103	0.00	16.00
114		benzyl chloride	1.279	1.601	-25.2	129	0.00	16.12
115	M	1,2-dichlorobenzene	1.387	1.375	0.9	103	0.00	16.40
116		1,4-diethylbenzene		----------NA----------				
117	M	n-butylbenzene	1.416	1.382	2.4	102	0.00	16.25
118	M	1,2-dibromo-3-chloropropa	0.123	0.119	3.3	100	0.00	17.19
119		1,3,5-trichlorobenzene	1.142	1.121	1.8	103	0.00	17.35
120		1,2,4,5-tetramethylbenzen		----------NA----------				
121		2-ethylhexyl acrylate	0.571	0.589	-3.2	106	0.00	17.88
122	M	1,2,4-trichlorobenzene	0.930	0.890	4.3	98	0.00	17.92
123	M	hexachlorobutadiene	0.653	0.630	3.5	99	0.00	18.01
124	M	naphthalene	1.809	1.780	1.6	103	0.00	18.16
125	M	1,2,3-trichlorobenzene	0.879	0.827	5.9	98	0.00	18.38
126	m	hexachloroethane	0.498	0.527	-5.8	106	0.00	16.66
127		2-methylnaphthalene	1.152	1.152	0.0	99	0.00	19.13
128		bis(chloromethyl)ether		----------NA----------				
129		ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Thu Apr 25 08:06:32 2019

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: V1C7200-ICV7200
Lab FileID: 1C164017.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\V1C7200\1C164017.D         Vial: 15
Acq On    : 24 Apr 2019   8:30 pm                    Operator: ROBERTS
Sample    : ICV7200-50                               Inst    : GCMS1C
Misc      : MS34128,V1C7200,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title        : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update  : Thu Apr 25 08:03:13 2019
Response via : Multiple Level Calibration

Min. RRF     :   0.010  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		tert butyl alcohol-d9	1.000	1.000	0.0	104	-0.02	7.36
2	M	tertiary butyl alcohol		----------NA----------				
3		ethanol		----------NA----------				
4	M	1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	9.60
6	M	chlorodifluoromethane		----------NA----------				
7	M	dichlorodifluoromethane		----------NA----------				
8	M	chloromethane		----------NA----------				
9	M	vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11	M	bromomethane		----------NA----------				
12	M	chloroethane		----------NA----------				
13	M	trichlorofluoromethane		----------NA----------				
14		vinyl bromide		----------NA----------				
15	M	ethyl ether		----------NA----------				
16	M	acrolein		----------NA----------				
17		freon 113		----------NA----------				
18	M	1,1-dichloroethene		----------NA----------				
19	M	acetone		----------NA----------				
20	M	acetonitrile	0.042	0.042	0.0	105	0.00	7.22
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide		----------NA----------				
23	M	methylene chloride		----------NA----------				
24	M	methyl acetate		----------NA----------				
25	M	methyl tert butyl ether		----------NA----------				
26	M	trans-1,2-dichloroethene		----------NA----------				
27	M	di-isopropyl ether		----------NA----------				
28	M	2-butanone		----------NA----------				
29	M	1,1-dichloroethane		----------NA----------				
30	M	chloroprene		----------NA----------				
31	M	acrylonitrile		----------NA----------				
32		hexane		----------NA----------				
33	M	vinyl acetate		----------NA----------				
34	M	ethyl tert-butyl ether		----------NA----------				
35	M	ethyl acetate		----------NA----------				
36	M	2,2-dichloropropane		----------NA----------				
37	M	cis-1,2-dichloroethene		----------NA----------				

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7200-ICV7200
Lab FileID: 1C164017.D

38		methyl acrylate		----------NA----------				
39	M	propionitrile		----------NA----------				
40	M	bromochloromethane		----------NA----------				
41	M	tetrahydrofuran		----------NA----------				
42	M	chloroform		----------NA----------				
43	M	t-butyl formate		----------NA----------				
44	S	dibromofluoromethane (s)	0.422	0.418	0.9	106	0.00	9.67
45	M	methacrylonitrile		----------NA----------				
46	M	1,1,1-trichloroethane		----------NA----------				
47		cyclohexane		----------NA----------				
48		1,1-dichloropropene		----------NA----------				
49		iso-butyl alcohol		----------NA----------				
50		carbon tetrachloride		----------NA----------				
51		tert amyl alcohol		----------NA----------				
52	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	10.52
53	S	1,2-dichloroethane-d4 (s)	0.314	0.311	1.0	105	0.00	10.09
54	M	n-butyl alcohol		----------NA----------				
55		2,2,4-trimethylpentane		----------NA----------				
56	M	benzene		----------NA----------				
57	M	tert-amyl methyl ether		----------NA----------				
58	M	heptane		----------NA----------				
59	M	isopropyl acetate		----------NA----------				
60	M	1,2-dichloroethane		----------NA----------				
61	M	trichloroethene		----------NA----------				
62		ethyl acrylate		----------NA----------				
63	M	2-nitropropane		----------NA----------				
64	M	2-chloroethyl vinyl ether		----------NA----------				
65	M	methyl methacrylate		----------NA----------				
66	M	1,2-dichloropropane		----------NA----------				
67	M	dibromomethane		----------NA----------				
68	M	methylcyclohexane		----------NA----------				
69	M	bromodichloromethane		----------NA----------				
70		epichlorohydrin		----------NA----------				
71	M	cis-1,3-dichloropropene		----------NA----------				
72	M	4-methyl-2-pentanone		----------NA----------				
73	M	3-methyl-1-butanol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.66
75	S	toluene-d8 (s)	1.347	1.330	1.3	107	0.00	12.15
76		toluene		----------NA----------				
77		trans-1,3-dichloropropene		----------NA----------				
78		ethyl methacrylate		----------NA----------				
79		1,1,2-trichloroethane		----------NA----------				
80	M	tetrachloroethene	0.318	0.309	2.8	101	0.00	12.80
81	M	1,3-dichloropropane		----------NA----------				
82		2-hexanone		----------NA----------				
83	M	butyl acetate		----------NA----------				
84	M	dibromochloromethane		----------NA----------				
85	M	1,2-dibromoethane		----------NA----------				
86		n-butyl ether		----------NA----------				
87	M	chlorobenzene		----------NA----------				
88	M	1,1,1,2-tetrachloroethane		----------NA----------				
89	M	ethylbenzene		----------NA----------				
90	M	m,p-xylene		----------NA----------				
91	M	o-xylene		----------NA----------				
92	M	styrene		----------NA----------				
93	M	bromoform		----------NA----------				
94		butyl acrylate		----------NA----------				
95		isopropylbenzene		----------NA----------				

Initial Calibration Verification

Job Number: JC87093 **Sample:** V1C7200-ICV7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164017.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		cis-1,4-dichloro-2-butene		----------NA----------				
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.97
98	S	4-bromofluorobenzene (s)	0.939	0.934	0.5	106	0.00	14.81
99	M	bromobenzene		----------NA----------				
100	M	1,1,2,2-tetrachloroethane		----------NA----------				
101	M	trans-1,4-dichloro-2-bute		----------NA----------				
102	M	1,2,3-trichloropropane		----------NA----------				
103	M	n-propylbenzene		----------NA----------				
104		4-ethyltoluene		----------NA----------				
105	M	2-chlorotoluene		----------NA----------				
106	M	4-chlorotoluene		----------NA----------				
107	M	1,3,5-trimethylbenzene		----------NA----------				
108	M	tert-butylbenzene		----------NA----------				
109	M	1,2,4-trimethylbenzene		----------NA----------				
110	M	sec-butylbenzene		----------NA----------				
111	M	1,3-dichlorobenzene		----------NA----------				
112	M	p-isopropyltoluene		----------NA----------				
113	M	1,4-dichlorobenzene		----------NA----------				
114		benzyl chloride		----------NA----------				
115	M	1,2-dichlorobenzene		----------NA----------				
116		1,4-diethylbenzene		----------NA----------				
117	M	n-butylbenzene		----------NA----------				
118	M	1,2-dibromo-3-chloropropa		----------NA----------				
119		1,3,5-trichlorobenzene		----------NA----------				
120		1,2,4,5-tetramethylbenzen		----------NA----------				
121		2-ethylhexyl acrylate		----------NA----------				
122	M	1,2,4-trichlorobenzene		----------NA----------				
123	M	hexachlorobutadiene		----------NA----------				
124	M	naphthalene		----------NA----------				
125	M	1,2,3-trichlorobenzene		----------NA----------				
126	m	hexachloroethane		----------NA----------				
127		2-methylnaphthalene		----------NA----------				
128		bis(chloromethyl)ether		----------NA----------				
129		ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Thu Apr 25 08:06:34 2019

6.10.3

6

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V1C7213-CC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164334.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\ke...c7213-rush\1c164334.d Vial: 2
Acq On    :  7 May 2019  12:30 pm                    Operator: PrashanS
Sample    : CC7200-50                                Inst    : GCMS1C
Misc      : MS34529,V1C7213,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title        : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
Last Update  : Thu Apr 25 08:03:13 2019
Response via : Multiple Level Calibration

Min. RRF     :   0.010  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		tert butyl alcohol-d9	1.000	1.000	0.0	117	-0.02	7.36
2	M	tertiary butyl alcohol	1.328	1.308	1.5	118	-0.02	7.48
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.121	0.119	1.7	113	0.01	11.26
5	I	pentafluorobenzene	1.000	1.000	0.0	133	0.00	9.60
6	M	chlorodifluoromethane	0.521	0.409	21.5#	100	0.00	3.90
7	M	dichlorodifluoromethane	0.739	0.588	20.4#	101	0.00	3.86
8	M	chloromethane	0.542	0.453	16.4	111	0.00	4.28
9	M	vinyl chloride	0.510	0.450	11.8	112	0.00	4.51
10		1,3-butadiene	0.320	0.280	12.5	108	0.00	4.59
11	M	bromomethane	0.389	0.330	15.2	115	0.02	5.20
12	M	chloroethane	0.306	0.277	9.5	119	0.01	5.38
13	M	trichlorofluoromethane	0.761	0.650	14.6	108	0.00	5.81
14		vinyl bromide	0.298	0.389	-30.5#	166	0.01	5.73
15	M	ethyl ether	0.203	0.201	1.0	126	0.00	6.25
16	M	acrolein	0.052	0.056	-7.7	140	0.00	6.54
17		freon 113	0.336	0.308	8.3	113	0.00	6.62
18	M	1,1-dichloroethene	0.409	0.374	8.6	118	0.00	6.68
19	M	acetone	0.102	0.109	-6.9	147	0.00	6.76
20	M	acetonitrile	0.042	0.037	11.9	117	0.00	7.22
		----------	True	Calc.	% Drift	----------		
21	M	iodomethane	50.000	43.223	13.6	121	0.00	6.97
		----------	AvgRF	CCRF	% Dev	----------		
22	M	carbon disulfide	1.322	1.146	13.3	117	0.00	7.09
23	M	methylene chloride	0.444	0.409	7.9	122	0.00	7.42
24	M	methyl acetate	0.248	0.219	11.7	115	0.00	7.21
25	M	methyl tert butyl ether	1.109	1.006	9.3	116	0.00	7.71
26	M	trans-1,2-dichloroethene	0.454	0.413	9.0	121	0.00	7.79
27	M	di-isopropyl ether	1.366	1.189	13.0	113	0.00	8.31
28	M	2-butanone	0.038	0.043	-13.2	144	0.00	9.06
29	M	1,1-dichloroethane	0.771	0.664	13.9	113	0.00	8.36
30	M	chloroprene	0.665	0.549	17.4	105	0.00	8.46
31	M	acrylonitrile	0.111	0.107	3.6	123	0.00	7.77
32		hexane	0.706	0.594	15.9	107	0.00	8.06
33	M	vinyl acetate	0.064	0.065	-1.6	125	0.00	8.34
34	M	ethyl tert-butyl ether	1.316	1.175	10.7	114	0.00	8.77
35	M	ethyl acetate	0.048	0.045	6.3	118	0.00	9.07
36	M	2,2-dichloropropane	0.687	0.570	17.0	107	0.00	9.08
37	M	cis-1,2-dichloroethene	0.490	0.452	7.8	123	0.00	9.10

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V1C7213-CC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164334.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		methyl acrylate	0.050	0.051	-2.0	123	0.00	9.16
39	M	propionitrile	0.048	0.045	6.3	123	0.00	9.19
40	M	bromochloromethane	0.213	0.207	2.8	124	0.00	9.41
41	M	tetrahydrofuran	0.046	0.045	2.2	129	0.00	9.45
42	M	chloroform	0.546	0.457	16.3	115	0.00	9.47
43	M	t-butyl formate	0.293	0.268	8.5	107	0.00	9.48
44	S	dibromofluoromethane (s)	0.422	0.424	-0.5	133	0.00	9.67
45	M	methacrylonitrile	0.140	0.137	2.1	123	0.00	9.36
46	M	1,1,1-trichloroethane	0.706	0.602	14.7	108	0.00	9.70
47		cyclohexane	0.697	0.597	14.3	111	0.00	9.76
48		1,1-dichloropropene	0.598	0.525	12.2	113	0.00	9.88
49		iso-butyl alcohol	0.016	0.014	12.5	115	0.00	9.90
50		carbon tetrachloride	0.617	0.520	15.7	106	0.00	9.90
51		tert amyl alcohol	0.015	0.013	13.3	115	0.00	10.02
52	I	1,4-difluorobenzene	1.000	1.000	0.0	134	0.00	10.52
53	S	1,2-dichloroethane-d4 (s)	0.314	0.272	13.4	119	0.00	10.09
54	M	n-butyl alcohol	0.007	0.007#	0.0	124	0.00	10.65
55		2,2,4-trimethylpentane	1.200	0.979	18.4	106	0.00	10.11
56	M	benzene	1.252	1.100	12.1	122	0.00	10.15
57	M	tert-amyl methyl ether	0.195	0.178	8.7	117	0.00	10.16
58	M	heptane	0.270	0.229	15.2	109	0.00	10.29
59	M	isopropyl acetate	0.052	0.052	0.0	128	0.00	10.06
60	M	1,2-dichloroethane	0.407	0.308	24.3#	106	0.00	10.18
61	M	trichloroethene	0.322	0.306	5.0	122	0.00	10.86
62		ethyl acrylate	0.302	0.277	8.3	117	0.00	10.86
63	M	2-nitropropane		----------NA----------				
64	M	2-chloroethyl vinyl ether	0.149	0.153	-2.7	124	0.00	11.65
65	M	methyl methacrylate	0.063	0.061	3.2	128	0.00	11.12
66	M	1,2-dichloropropane	0.298	0.270	9.4	121	0.00	11.13
67	M	dibromomethane	0.175	0.160	8.6	119	0.00	11.30
68	M	methylcyclohexane	0.556	0.459	17.4	113	0.00	11.06
69	M	bromodichloromethane	0.422	0.372	11.8	115	0.00	11.43
70		epichlorohydrin	0.024	0.023	4.2	124	0.00	11.79
71	M	cis-1,3-dichloropropene	0.485	0.440	9.3	119	0.00	11.87
72	M	4-methyl-2-pentanone	0.087	0.079	9.2	124	0.00	11.96
73	M	3-methyl-1-butanol	0.011	0.010	9.1	122	0.00	11.98
74	I	chlorobenzene-d5	1.000	1.000	0.0	137	0.00	13.66
75	S	toluene-d8 (s)	1.347	1.337	0.7	137	0.00	12.15
76		toluene	0.915	0.802	12.3	124	0.00	12.22
77		trans-1,3-dichloropropene	0.515	0.456	11.5	117	0.00	12.43
78		ethyl methacrylate	0.364	0.344	5.5	122	0.00	12.41
79		1,1,2-trichloroethane	0.241	0.239	0.8	128	0.00	12.65
80	M	tetrachloroethene	0.318	0.293	7.9	122	0.00	12.80
81	M	1,3-dichloropropane	0.442	0.411	7.0	124	0.00	12.83
82		2-hexanone	0.099	0.103	-4.0	140	0.00	12.80
83	M	butyl acetate	0.181	0.166	8.3	125	0.00	12.87
84	M	dibromochloromethane	0.363	0.350	3.6	124	0.00	13.10
85	M	1,2-dibromoethane	0.383	0.315	17.8	106	0.00	13.24
86		n-butyl ether	1.377	1.204	12.6	119	0.00	13.57
87	M	chlorobenzene	0.928	0.845	8.9	126	0.00	13.69
88	M	1,1,1,2-tetrachloroethane	0.338	0.316	6.5	121	0.00	13.75
89	M	ethylbenzene	1.682	1.436	14.6	120	0.00	13.73
90	M	m,p-xylene	0.625	0.561	10.2	126	0.00	13.84
91	M	o-xylene	0.597	0.552	7.5	127	0.00	14.26
92	M	styrene	0.989	0.913	7.7	125	0.00	14.27
93	M	bromoform	0.220	0.226	-2.7	130	0.00	14.55
94		butyl acrylate	0.580	0.515	11.2	117	0.00	14.08
95		isopropylbenzene	1.605	1.397	13.0	120	0.00	14.59

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V1C7213-CC7200
Account: BBLNYS Arcadis **Lab FileID:** 1C164334.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		cis-1,4-dichloro-2-butene	0.136	0.117	14.0	114	0.00	14.68
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	15.97
98	S	4-bromofluorobenzene (s)	0.939	0.890	5.2	129	0.00	14.81
99	M	bromobenzene	0.785	0.749	4.6	129	0.00	15.00
100	M	1,1,2,2-tetrachloroethane	0.616	0.622	-1.0	132	0.00	14.92
101	M	trans-1,4-dichloro-2-bute	0.168	0.143	14.9	111	0.00	14.96
102	M	1,2,3-trichloropropane	0.159	0.152	4.4	127	0.00	14.99
103	M	n-propylbenzene	3.611	3.222	10.8	120	0.00	14.99
104		4-ethyltoluene		----------NA----------				
105	M	2-chlorotoluene	0.703	0.663	5.7	127	0.00	15.15
106	M	4-chlorotoluene	2.222	1.900	14.5	118	0.00	15.25
107	M	1,3,5-trimethylbenzene	2.605	2.271	12.8	118	0.00	15.15
108	M	tert-butylbenzene	0.437	0.424	3.0	126	0.00	15.49
109	M	1,2,4-trimethylbenzene	2.609	2.276	12.8	120	0.00	15.54
110	M	sec-butylbenzene	3.238	2.943	9.1	122	0.00	15.71
111	M	1,3-dichlorobenzene	1.487	1.398	6.0	129	0.00	15.92
112	M	p-isopropyltoluene	2.785	2.503	10.1	121	0.00	15.83
113	M	1,4-dichlorobenzene	1.485	1.401	5.7	129	0.00	16.00
114		benzyl chloride	1.279	1.291	-0.9	133	0.00	16.12
115	M	1,2-dichlorobenzene	1.387	1.351	2.6	129	0.00	16.40
116		1,4-diethylbenzene		----------NA----------				
117	M	n-butylbenzene	1.416	1.286	9.2	122	0.00	16.25
118	M	1,2-dibromo-3-chloropropa	0.123	0.109	11.4	117	0.00	17.19
119		1,3,5-trichlorobenzene	1.142	1.110	2.8	131	0.00	17.35
120		1,2,4,5-tetramethylbenzen		----------NA----------				
121		2-ethylhexyl acrylate	0.571	0.500	12.4	115	0.00	17.88
122	M	1,2,4-trichlorobenzene	0.930	0.918	1.3	130	0.00	17.92
123	M	hexachlorobutadiene	0.653	0.584	10.6	117	0.00	18.01
124	M	naphthalene	1.809	1.766	2.4	130	0.00	18.16
125	M	1,2,3-trichlorobenzene	0.879	0.859	2.3	130	0.00	18.37
126	m	hexachloroethane	0.498	0.490	1.6	126	0.00	16.66
127		2-methylnaphthalene	1.152	1.184	-2.8	130	0.00	19.12
128		bis(chloromethyl)ether		----------NA----------				
129		ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1C164011.D M1CS7200.M Wed May 08 04:49:49 2019

6.10.4

6

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: V3C6743-ICC6743
Lab FileID: 3C149632.D

Response Factor Report MS3C

```
Method       : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title        : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
Last Update  : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Calibration Files
4   =3C149629.D  8   =3C149630.D  0.5 =3C149623.D  50  =3C149632.D
100 =3C149633.D  1   =3C149624.D  200 =3C149634.D  20  =3C149631.D
2   =3C149628.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	1.056	1.147		1.164	1.113		1.067	1.127	1.041	1.102	4.31
4) 1,4-dioxane	0.131	0.123		0.142	0.140		0.135	0.135		0.134	4.96
5) I pentafluorobenzene ----------ISTD----------											
6) chlorodifluoromethane	0.320	0.313		0.327	0.291		0.266	0.320	0.283	0.303	7.64
7) dichlorodifluoromethane	0.436	0.469		0.476	0.428	0.382	0.387	0.468	0.409	0.432	8.59
8) chloromethane	0.372	0.389		0.385	0.342	0.322	0.317	0.382	0.344	0.357	8.13
9) 1,3-butadiene	0.248	0.242		0.251	0.225	0.242	0.204	0.253	0.192	0.232	9.91
10) vinyl chloride	0.389	0.398		0.400	0.359	0.267	0.332	0.391	0.333	0.359	12.92
11) bromomethane	0.237	0.235		0.234	0.184		0.168	0.237	0.207	0.215	13.40
12) chloroethane	0.228	0.234		0.238	0.215	0.156	0.209	0.235	0.190	0.213	13.14
13) vinyl Bromide	0.316	0.335		0.346	0.315	0.233	0.301	0.340	0.277	0.308	12.28
14) trichlorofluoromethane	0.544	0.577	0.497	0.589	0.538	0.476	0.515	0.574	0.467	0.531	8.45
15) ethyl ether	0.157	0.156		0.164	0.154		0.145	0.164	0.118	0.151	10.69
16) 2-chloropropane	0.119	0.127		0.136	0.126	0.117	0.113	0.129	0.098	0.121	9.63
17) acrolein	0.023	0.030		0.036	0.033		0.032	0.033		0.031	14.56
18) freon 113	0.268	0.266		0.288	0.269	0.225	0.255	0.281	0.180	0.254	13.92
19) 1,1-dichloroethene	0.283	0.295		0.312	0.291	0.275	0.271	0.305	0.231	0.283	8.87
20) acetone	0.016	0.016		0.017	0.016	0.015	0.015	0.016	0.013	0.016	7.61
21) acetonitrile	0.027	0.024		0.025	0.022		0.021	0.024		0.024	7.93
22) iodomethane *This compound does not meet initial calibration criteria*	0.108	0.126		0.326	0.329		0.311	0.191		0.232	44.37

Initial Calibration Summary

Job Number: JC87093 **Sample:** V3C6743-ICC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149632.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
23)  carbon disulfide
           0.826 0.803       0.819 0.761       0.712 0.805 0.822   0.793    5.28
24)  methylene chloride
           0.338 0.319       0.316 0.290       0.276 0.316 0.310   0.309    6.67
25)  methyl acetate
           0.155 0.160       0.160 0.148       0.141 0.155 0.125   0.149    8.50
26)  methyl tert butyl ether
           0.794 0.779       0.816 0.748 0.772 0.716 0.782 0.625   0.754    7.96
27)  trans-1,2-dichloroethene
           0.332 0.326       0.348 0.321 0.337 0.304 0.343 0.265   0.322    8.32
28)  hexane
           0.525 0.526       0.545 0.498 0.546 0.468 0.552 0.420   0.510    9.01
29)  di-isopropyl ether
           0.956 0.961 0.807 1.000 0.911 0.992 0.864 0.978 0.771   0.916    9.16
30)  ethyl tert-butyl ether
           0.935 0.936 0.768 0.996 0.912 0.981 0.875 0.968 0.773   0.905    9.34
31)  2-butanone
           0.023 0.026       0.028 0.025       0.025 0.027 0.019   0.025   11.52
32)  1,1-dichloroethane
           0.539 0.552 0.406 0.584 0.540 0.550 0.510 0.576 0.454   0.523   11.16
33)  chloroprene
           0.484 0.495 0.402 0.519 0.481 0.489 0.460 0.506 0.351   0.465   11.70
34)  acrylonitrile
           0.062 0.061       0.069 0.063       0.061 0.065         0.064    5.03
35)  vinyl acetate
           0.050 0.052       0.063 0.061       0.059 0.058         0.057    9.43
36)  ethyl acetate
           0.011 0.028       0.036 0.033       0.032 0.032         0.029   31.43
            ----- Linear regression -----  Coefficient =  0.9963
              Response Ratio = -0.00125 + 0.03349 *A

37)  2,2-dichloropropane
           0.492 0.480       0.534 0.498 0.495 0.475 0.512 0.365   0.482   10.49
38)  cis-1,2-dichloroethene
           0.355 0.360       0.381 0.355 0.340 0.335 0.375 0.283   0.348    8.75
39)  propionitrile
           0.029 0.030       0.030 0.027 0.031 0.027 0.029 0.024   0.028    7.90
40)  bromochloromethane
           0.202 0.204       0.210 0.192 0.198 0.182 0.210 0.163   0.195    8.16
41)  tetrahydrofuran
                 0.023       0.026 0.025       0.024 0.023         0.024    4.50
42)  chloroform
           0.587 0.570       0.597 0.555 0.637 0.529 0.584 0.469   0.566    8.87
43)  tert-Butyl Formate
           0.173 0.164       0.206 0.205       0.210 0.181 0.116   0.179   18.50
44)  isobutyl alcohol
           0.043 0.044       0.047 0.042       0.041 0.046         0.044    5.28
45)  dibromofluoromethane (s)
           0.357 0.363 0.359 0.367 0.364 0.361 0.362 0.360 0.358   0.361    0.93
46)  methacrylonitrile
           0.080 0.086       0.094 0.089       0.086 0.089 0.063   0.084   12.09
47)  1,1,1-trichloroethane
           0.519 0.525       0.566 0.531 0.502 0.508 0.550 0.387   0.511   10.62
48)  cyclohexane
           0.543 0.573 0.508 0.571 0.524 0.442 0.494 0.565 0.483   0.523    8.56
49)  1,1-dichloropropene
           0.181 0.173       0.186 0.170       0.160 0.181 0.123   0.168   12.92
50)  tert-amyl alcohol
           0.022 0.022       0.022 0.023       0.022 0.022         0.022    1.91
51)  carbon tetrachloride
```

```
            0.403 0.415       0.459 0.443 0.363 0.426 0.433 0.288   0.404   13.60

52) I   1,4-difluorobenzene   ----------------ISTD--------------------
53)  1,2-dichloroethane-d4 (s)
            0.273 0.271 0.278 0.269 0.265 0.279 0.267 0.269 0.274   0.272    1.75
54)  2,2,4-trimethylpentane
            0.936 0.949       0.995 0.939 0.974 0.888 1.002 0.735   0.927    9.26
55)  tert-amyl methyl ether
            0.209 0.209       0.223 0.214 0.216 0.206 0.212 0.168   0.207    8.03
56)  n-butyl alcohol
            0.004 0.004       0.005 0.005       0.005 0.004         0.005   13.85
57)  benzene
            0.959 0.955 0.838 0.976 0.911 1.007 0.859 0.975 0.796   0.920    7.93
58)  heptane
            0.195 0.204       0.212 0.204       0.194 0.216 0.152   0.197   10.90
59)  isopropyl acetate
            0.209 0.209       0.223 0.214       0.206 0.212         0.212    2.77
60)  1,2-dichloroethane
            0.305 0.287       0.293 0.279 0.347 0.268 0.293 0.264   0.292    8.95
61)  trichloroethene
            0.256 0.261       0.269 0.253 0.254 0.241 0.269 0.197   0.250    9.24
62)  ethyl acrylate
            0.200 0.198       0.216 0.205       0.201 0.204         0.204    3.01
63)  2-nitropropane
            0.058 0.057       0.066 0.065       0.065 0.062         0.062    6.04
64)  2-chloroethyl vinyl ether
            0.123 0.123 0.110 0.128 0.120 0.138 0.115 0.124 0.106   0.121    7.99
65)  methyl methacrylate
            0.042 0.049       0.058 0.055       0.053 0.054         0.052   10.93
66)  1,2-dichloropropane
            0.215 0.226       0.232 0.218 0.249 0.207 0.227 0.174   0.219   10.13
67)  methylcyclohexane
            0.507 0.477       0.477 0.449       0.423 0.488 0.445   0.466    6.23
68)  dibromomethane
            0.122 0.120       0.128 0.123 0.115 0.120 0.125 0.104   0.120    6.13
69)  bromodichloromethane
            0.264 0.263       0.307 0.301 0.297 0.294 0.280 0.216   0.278   10.69
70)  epichlorohydrin
            0.015 0.014       0.016 0.015       0.015 0.015         0.015    3.25
71)  cis-1,3-dichloropropene
            0.331 0.333       0.379 0.369 0.374 0.356 0.358 0.281   0.348    9.22
72)  4-methyl-2-pentanone
            0.027 0.028       0.033 0.031 0.031 0.030 0.031 0.023   0.029   10.37
73)  3-methyl-1-butanol
                                                                      0.000   -1.00

74) I   chlorobenzene-d5      ----------------ISTD--------------------
75)  toluene-d8 (s)
            1.238 1.242 1.234 1.240 1.240 1.233 1.234 1.245 1.232   1.238    0.35
76)  toluene
            0.742 0.733 0.658 0.750 0.705 0.804 0.666 0.742 0.623   0.714    7.87
77)  trans-1,3-dichloropropene
            0.308 0.317       0.373 0.355 0.326 0.347 0.338 0.260   0.328   10.57
78)  ethyl methacrylate
            0.254 0.268       0.298 0.278 0.309 0.269 0.273 0.233   0.273    8.70
79)  1,1,2-trichloroethane
            0.177 0.176       0.183 0.172 0.204 0.164 0.184 0.144   0.176    9.72
80)  2-hexanone
            0.066 0.066       0.071 0.067 0.078 0.066 0.068 0.056   0.067    9.40
81)  tetrachloroethene
```

```
            0.346 0.359 0.268 0.373 0.351 0.366 0.334 0.368 0.283   0.339   11.23
 82)  1,3-dichloropropane
            0.360 0.372 0.304 0.377 0.347 0.406 0.331 0.365 0.327   0.354    8.68
 83)  butyl acetate
            0.128 0.129       0.137 0.127       0.127 0.129 0.108   0.126    6.88
 84)  dibromochloromethane
            0.178 0.189       0.240 0.241 0.202 0.240 0.211 0.154   0.207   15.59
 85)  1,2-dibromoethane
            0.259 0.260       0.279 0.257 0.269 0.248 0.263 0.202   0.255    9.05
 86)  n-butyl ether
            1.189 1.224 1.061 1.225 1.145 1.291 1.107 1.206 1.005   1.161    7.78
 87)  chlorobenzene
            0.817 0.807 0.713 0.815 0.766 0.920 0.733 0.796 0.704   0.786    8.48
 88)  1,1,1,2-tetrachloroethane
            0.239 0.242       0.293 0.283 0.268 0.282 0.265 0.201   0.259   11.64
 89)  ethylbenzene
            1.421 1.421 1.316 1.438 1.341 1.585 1.273 1.429 1.206   1.381    8.03
 90)  m,p-xylene
            0.563 0.570 0.514 0.567 0.526 0.620 0.500 0.557 0.480   0.544    7.93
 91)  o-xylene
            1.152 1.120 1.039 1.137 1.059 1.202 1.026 1.120 0.975   1.092    6.56
 92)  styrene
            0.884 0.908 0.775 0.940 0.873 0.979 0.853 0.907 0.753   0.875    8.35
 93)  bromoform
            0.097 0.104       0.144 0.152       0.160 0.118         0.129   20.48
             ----- Linear regression -----  Coefficient =  0.9974
               Response Ratio = -0.00744 + 0.15778 *A

 94)  butyl acrylate
            0.344 0.362       0.416 0.396 0.422 0.409 0.382 0.303   0.379   10.79
 95)  isopropylbenzene
            1.457 1.451 1.234 1.482 1.375 1.520 1.324 1.471 1.214   1.392    8.03
 96)  cis-1,4-dichloro-2-butene
            0.065 0.070       0.083 0.082       0.086 0.075         0.077   10.64

 97) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 98)  4-bromofluorobenzene (s)
            0.817 0.838 0.846 0.815 0.808 0.824 0.799 0.821 0.830   0.822    1.76
 99)  bromobenzene
            0.672 0.692 0.626 0.686 0.636 0.776 0.604 0.680 0.594   0.663    8.40
100)  1,1,2,2-tetrachloroethane
            0.452 0.441 0.431 0.469 0.442 0.522 0.437 0.458 0.404   0.451    7.20
101)  trans-1,4-dichloro-2-butene
            0.033 0.039       0.064 0.063       0.065 0.049         0.052   26.81
             ----- Linear regression -----  Coefficient =  0.9983
               Response Ratio = -0.00341 + 0.06526 *A

102)  1,2,3-trichloropropane
            0.146 0.149       0.154 0.144       0.140 0.150 0.122   0.143    7.35
103)  n-propylbenzene
            3.142 3.207       3.152 2.863 3.518 2.622 3.207 2.613   3.041   10.38
104)  2-chlorotoluene
            0.648 0.666 0.534 0.657 0.612 0.708 0.578 0.653 0.539   0.622    9.67
105)  4-chlorotoluene
            0.653 0.657 0.541 0.660 0.615 0.687 0.585 0.654 0.533   0.620    9.00
106)  1,3,5-trimethylbenzene
            2.272 2.322 2.008 2.346 2.182 2.568 2.028 2.326 1.858   2.212    9.78
107)  tert-butylbenzene
            2.074 2.090 1.725 2.087 1.946 2.146 1.819 2.129 1.702   1.969    8.99
108)  1,2,4-trimethylbenzene
```

Initial Calibration Summary

Job Number: JC87093 **Sample:** V3C6743-ICC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149632.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
            2.332 2.357 2.033 2.353 2.192 2.567 2.051 2.339 2.041   2.252    8.18
109)  sec-butylbenzene
            3.002 3.055 2.332 3.055 2.837 3.218 2.617 3.118 2.519   2.861   10.67
110)  1,3-dichlorobenzene
            1.351 1.360 1.248 1.352 1.261 1.463 1.180 1.341 1.163   1.302    7.41
111)  p-isopropyltoluene
            2.633 2.677 2.236 2.705 2.531 2.685 2.338 2.724 2.130   2.518    8.95
112)  1,4-dichlorobenzene
            1.321 1.348 1.389 1.347 1.256 1.604 1.197 1.337 1.183   1.331    9.36
113)  1,2-dichlorobenzene
            1.237 1.234 1.210 1.256 1.179 1.427 1.124 1.239 1.079   1.220    7.97
114)  n-butylbenzene
            1.299 1.329 1.033 1.352 1.281 1.313 1.213 1.356 1.022   1.244   10.45
115)  1,2-dibromo-3-chloropropane
            0.070 0.085       0.114 0.115       0.115 0.096 0.052   0.092   26.79
             ----- Linear regression -----  Coefficient =  0.9990
               Response Ratio = -0.00335 + 0.11529 *A

116)  1,3,5-Trichlorobenzene
            1.248 1.221 1.024 1.254 1.178 1.335 1.100 1.244 1.049   1.184    8.84
117)  1,2,4-trichlorobenzene
            1.044 1.055 0.945 1.071 1.015 1.189 0.933 1.050 0.873   1.019    9.10
118)  hexachlorobutadiene
            0.644 0.652       0.700 0.676 0.603 0.623 0.692 0.490   0.635   10.62
119)  naphthalene
            1.797 1.779 1.723 1.894 1.795 2.068 1.652 1.859 1.500   1.785    8.87
120)  1,2,3-trichlorobenzene
            0.988 0.977 0.879 1.003 0.938 1.039 0.862 0.993 0.830   0.945    7.66
121)  hexachloroethane
            0.237 0.265       0.373 0.394       0.403 0.310         0.330   21.17
             ----- Linear regression -----  Coefficient =  0.9985
               Response Ratio = -0.01860 + 0.40159 *A

122)  Benzyl chloride
            0.614 0.640       0.896 0.905       0.913 0.757         0.788   17.42
123)  2-ethylhexyl acrylate
                  0.317       0.524 0.536       0.530 0.396         0.460   21.54
             ----- Linear regression -----  Coefficient =  0.9989
               Response Ratio = -0.00815 + 0.54600 *A

124)  2-methylnaphthalene
            1.092 1.111       1.162 1.021       0.894 1.136         1.069    9.21
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M3C6743.M         Fri Feb 15 11:14:06 2019   MS3C
```

6.10.5

6

Initial Calibration Verification

Job Number: JC87093 **Sample:** V3C6743-ICV6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149637.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\MSDChem\1\DATA\V3C6743\3C149637.D         Vial: 17
Acq On    : 13 Feb 2019  11:59 pm                    Operator: juntaep
Sample    : ICV6743-50                               Inst    : MS3C
Misc      : MS32156,V3C6743,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title        : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
Last Update  : Fri Feb 15 09:30:13 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	99	0.00	2.58
2	ethanol		----------NA----------				
3	tertiary butyl alcohol	1.102	1.177	-6.8	100	0.00	2.64
4	1,4-dioxane	0.134	0.144	-7.5	100	0.00	5.29
5 I	pentafluorobenzene	1.000	1.000	0.0	98	0.00	4.03
6	chlorodifluoromethane	0.303	0.316	-4.3	95	0.00	1.10
7	dichlorodifluoromethane	0.432	0.505	-16.9	104	0.00	1.08
8	chloromethane	0.357	0.380	-6.4	97	0.00	1.22
9	1,3-butadiene	0.232	0.288	-24.1	113	0.00	1.32
10	vinyl chloride	0.359	0.402	-12.0	99	0.00	1.30
11	bromomethane	0.215	0.255	-18.6	107	0.00	1.54
12	chloroethane	0.213	0.239	-12.2	99	0.00	1.62
13	vinyl Bromide	0.308	0.275	10.7	78	0.00	1.75
14	trichlorofluoromethane	0.531	0.594	-11.9	99	0.00	1.77
15	ethyl ether	0.151	0.158	-4.6	95	0.00	1.99
16	2-chloropropane	0.121	0.131	-8.3	95	0.00	2.07
17	acrolein	0.031	0.031	0.0	84	0.00	2.14
18	freon 113	0.254	0.300	-18.1	103	0.00	2.13
19	1,1-dichloroethene	0.283	0.287	-1.4	91	0.00	2.16
20	acetone		----------NA----------				
21	acetonitrile		----------NA----------				
22	iodomethane	0.232	0.286	-23.3	86	0.00	2.29
23	carbon disulfide	0.793	0.886	-11.7	106	0.00	2.31
24	methylene chloride	0.309	0.305	1.3	95	0.00	2.56
25	methyl acetate	0.149	0.149	0.0	92	0.00	2.47
26	methyl tert butyl ether	0.754	0.806	-6.9	97	0.00	2.71
27	trans-1,2-dichloroethene	0.322	0.337	-4.7	95	0.00	2.73
28	hexane	0.510	0.525	-2.9	95	0.00	2.88
29	di-isopropyl ether	0.916	0.931	-1.6	92	0.00	3.08
30	ethyl tert-butyl ether	0.905	0.924	-2.1	91	0.00	3.37
31	2-butanone	0.025	0.027	-8.0	96	0.00	3.60
32	1,1-dichloroethane	0.523	0.572	-9.4	96	0.00	3.10
33	chloroprene	0.465	0.535	-15.1	101	0.00	3.13
34	acrylonitrile	0.064	0.068	-6.3	97	0.00	2.80
35	vinyl acetate	0.057	0.061	-7.0	95	0.00	3.12
	----------	True	Calc.	% Drift	----------		
36	ethyl acetate	50.000	50.550	-1.1	89	0.00	3.61
	----------	AvgRF	CCRF	% Dev	----------		
37	2,2-dichloropropane	0.482	0.524	-8.7	97	0.00	3.54

Initial Calibration Verification

Job Number: JC87093 **Sample:** V3C6743-ICV6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149637.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		cis-1,2-dichloroethene	0.348	0.377	-8.3	98	0.00	3.58
39		propionitrile	0.028	0.029	-3.6	96	0.00	3.72
40		bromochloromethane	0.195	0.204	-4.6	96	0.00	3.78
41		tetrahydrofuran	0.024	0.026	-8.3	99	0.00	3.78
42		chloroform	0.566	0.585	-3.4	97	0.00	3.85
43		tert-Butyl Formate	0.179	0.144	19.6	69	0.00	3.86
44		isobutyl alcohol	0.044	0.045	-2.3	95	0.00	4.26
45	S	dibromofluoromethane (s)	0.361	0.367	-1.7	98	0.00	3.99
46		methacrylonitrile	0.084	0.091	-8.3	96	0.00	3.81
47		1,1,1-trichloroethane	0.511	0.550	-7.6	96	0.00	3.96
48		cyclohexane	0.523	0.585	-11.9	101	0.00	3.94
49		1,1-dichloropropene	0.168	0.184	-9.5	97	0.00	4.11
50		tert-amyl alcohol	0.022	0.022	0.0	96	0.00	4.33
51		carbon tetrachloride	0.404	0.452	-11.9	97	0.00	4.07
52	I	1,4-difluorobenzene	1.000	1.000	0.0	98	0.00	4.69
53	S	1,2-dichloroethane-d4 (s)	0.272	0.264	2.9	96	0.00	4.31
54		2,2,4-trimethylpentane	0.927	0.958	-3.3	94	0.00	4.26
55		tert-amyl methyl ether	0.207	0.204	1.4	90	0.00	4.36
56		n-butyl alcohol	0.005	0.005	0.0	95	0.00	4.90
57		benzene	0.920	0.959	-4.2	96	0.00	4.28
58		heptane	0.197	0.231	-17.3	107	0.00	4.45
59		isopropyl acetate	0.212	0.204	3.8	90	0.00	4.36
60		1,2-dichloroethane	0.292	0.288	1.4	96	0.00	4.38
61		trichloroethene	0.250	0.267	-6.8	98	0.00	4.90
62		ethyl acrylate	0.204	0.206	-1.0	94	0.00	5.04
63		2-nitropropane	0.062	0.067	-8.1	99	0.00	5.75
64		2-chloroethyl vinyl ether	0.121	0.122	-0.8	94	0.00	5.76
65		methyl methacrylate	0.052	0.056	-7.7	95	0.00	5.27
66		1,2-dichloropropane	0.219	0.224	-2.3	95	0.00	5.17
67		methylcyclohexane	0.466	0.465	0.2	96	0.00	5.01
68		dibromomethane	0.120	0.127	-5.8	98	0.00	5.30
69		bromodichloromethane	0.278	0.295	-6.1	95	0.00	5.45
70		epichlorohydrin	0.015	0.016	-6.7	97	0.00	5.85
71		cis-1,3-dichloropropene	0.348	0.376	-8.0	97	0.00	5.89
72		4-methyl-2-pentanone	0.029	0.031	-6.9	94	0.00	6.04
73		3-methyl-1-butanol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	98	0.00	7.40
75	S	toluene-d8 (s)	1.238	1.242	-0.3	98	0.00	6.08
76		toluene	0.714	0.748	-4.8	98	0.00	6.15
77		trans-1,3-dichloropropene	0.328	0.345	-5.2	91	0.00	6.44
78		ethyl methacrylate	0.273	0.274	-0.4	90	0.00	6.47
79		1,1,2-trichloroethane	0.176	0.181	-2.8	97	0.00	6.60
80		2-hexanone	0.067	0.068	-1.5	94	0.00	6.80
81		tetrachloroethene		----------NA----------				
82		1,3-dichloropropane	0.354	0.374	-5.6	97	0.00	6.75
83		butyl acetate	0.126	0.131	-4.0	94	0.00	6.89
84		dibromochloromethane	0.207	0.244	-17.9	100	0.00	6.92
85		1,2-dibromoethane	0.255	0.257	-0.8	90	0.00	7.02
86		n-butyl ether	1.161	1.174	-1.1	94	0.00	7.47
87		chlorobenzene	0.786	0.805	-2.4	97	0.00	7.42
88		1,1,1,2-tetrachloroethane	0.259	0.291	-12.4	98	0.00	7.51
89		ethylbenzene	1.381	1.441	-4.3	98	0.00	7.49
90		m,p-xylene	0.544	0.576	-5.9	100	0.00	7.60
91		o-xylene	1.092	1.141	-4.5	98	0.00	7.93
92		styrene	0.875	0.923	-5.5	96	0.00	7.96
		----------	True	Calc.	% Drift	----------		
93		bromoform	50.000	49.962	0.1	102	0.00	8.13

Initial Calibration Verification

Job Number: JC87093 **Sample:** V3C6743-ICV6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149637.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
94		butyl acrylate	0.379	0.407	-7.4	96	0.00	7.92
95		isopropylbenzene	1.392	1.494	-7.3	99	0.00	8.23
96		cis-1,4-dichloro-2-butene	0.077	0.076	1.3	90	0.00	8.36
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	9.33
98	S	4-bromofluorobenzene (s)	0.822	0.818	0.5	98	0.00	8.40
99		bromobenzene	0.663	0.673	-1.5	96	0.00	8.51
100		1,1,2,2-tetrachloroethane	0.451	0.446	1.1	93	0.00	8.55
			True	Calc.	% Drift			
101		trans-1,4-dichloro-2-bute	50.000	55.414	-10.8	104	0.00	8.60
			AvgRF	CCRF	% Dev			
102		1,2,3-trichloropropane	0.143	0.148	-3.5	94	0.00	8.59
103		n-propylbenzene	3.041	3.179	-4.5	98	0.00	8.57
104		2-chlorotoluene	0.622	0.655	-5.3	97	0.00	8.66
105		4-chlorotoluene	0.620	0.667	-7.6	99	0.00	8.75
106		1,3,5-trimethylbenzene	2.212	2.341	-5.8	97	0.00	8.72
107		tert-butylbenzene	1.969	2.115	-7.4	99	0.00	8.97
108		1,2,4-trimethylbenzene	2.252	2.396	-6.4	99	0.00	9.02
109		sec-butylbenzene	2.861	3.129	-9.4	100	0.00	9.14
110		1,3-dichlorobenzene	1.302	1.335	-2.5	96	0.00	9.26
111		p-isopropyltoluene	2.518	2.758	-9.5	99	0.00	9.26
112		1,4-dichlorobenzene	1.331	1.309	1.7	95	0.00	9.34
113		1,2-dichlorobenzene	1.220	1.221	-0.1	95	0.00	9.64
114		n-butylbenzene	1.244	1.365	-9.7	98	0.00	9.59
			True	Calc.	% Drift			
115		1,2-dibromo-3-chloropropa	50.000	49.548	0.9	95	0.00	10.27
			AvgRF	CCRF	% Dev			
116		1,3,5-Trichlorobenzene	1.184	1.197	-1.1	93	0.00	10.39
117		1,2,4-trichlorobenzene	1.019	1.013	0.6	92	0.00	10.89
118		hexachlorobutadiene	0.635	0.681	-7.2	95	0.00	10.97
119		naphthalene	1.785	1.801	-0.9	93	0.00	11.08
120		1,2,3-trichlorobenzene	0.945	0.928	1.8	90	0.00	11.27
			True	Calc.	% Drift			
121		hexachloroethane	50.000	51.693	-3.4	104	0.00	9.80
			AvgRF	CCRF	% Dev			
122		Benzyl chloride	0.788	0.675	14.3	73	0.00	9.46
			True	Calc.	% Drift			
123		2-ethylhexyl acrylate	10.000	9.962	0.4	94	0.00	11.02
			AvgRF	CCRF	% Dev			
124		2-methylnaphthalene	1.069	1.159	-8.4	97	0.00	11.94

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C149632.D M3C6743.M Fri Feb 15 11:14:05 2019 MS3C

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: V3C6743-ICV6743
Lab FileID: 3C149638.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\V3C6743\3C149638.D         Vial: 18
Acq On    : 14 Feb 2019  12:23 am                    Operator: juntaep
Sample    : ICV6743-50                               Inst    : MS3C
Misc      : MS32156,V3C6743,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title        : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
Last Update  : Thu Feb 14 14:08:59 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	90	0.00	2.57
2		ethanol		----------NA----------				
3		tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	98	0.00	4.03
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		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	0.016	0.015	6.3	85	0.00	2.25
21		acetonitrile	0.024	0.023	4.2	89	0.00	2.51
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		----------NA----------				
35		vinyl acetate		----------NA----------				
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
37		2,2-dichloropropane		----------NA----------				

Initial Calibration Verification

Job Number: JC87093 **Sample:** V3C6743-ICV6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149638.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		cis-1,2-dichloroethene		----------NA----------				
39		propionitrile		----------NA----------				
40		bromochloromethane		----------NA----------				
41		tetrahydrofuran		----------NA----------				
42		chloroform		----------NA----------				
43		tert-Butyl Formate		----------NA----------				
44		isobutyl alcohol		----------NA----------				
45	S	dibromofluoromethane (s)	0.361	0.358	0.8	95	0.00	3.99
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	96	0.00	4.69
53	S	1,2-dichloroethane-d4 (s)	0.272	0.265	2.6	95	0.00	4.31
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	97	0.00	7.40
75	S	toluene-d8 (s)	1.238	1.236	0.2	97	0.00	6.08
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	0.339	0.390	-15.0	101	0.00	6.62
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----------				
		----------	True	Calc.	% Drift	----------		
93		bromoform		----------NA----------				

6.10.7

6

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6743-ICV6743
Lab FileID: 3C149638.D

			AvgRF	CCRF	% Dev			
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	97	0.00	9.33
98	S	4-bromofluorobenzene (s)	0.822	0.817	0.6	97	0.00	8.40
99		bromobenzene		NA				
100		1,1,2,2-tetrachloroethane		NA				

	True	Calc.	% Drift
101	trans-1,4-dichloro-2-bute	NA	

		AvgRF	CCRF	% Dev
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	

	True	Calc.	% Drift
115	1,2-dibromo-3-chloropropa	NA	

		AvgRF	CCRF	% Dev
116	1,3,5-Trichlorobenzene		NA	
117	1,2,4-trichlorobenzene		NA	
118	hexachlorobutadiene		NA	
119	naphthalene		NA	
120	1,2,3-trichlorobenzene		NA	

	True	Calc.	% Drift
121	hexachloroethane	NA	

		AvgRF	CCRF	% Dev
122	Benzyl chloride		NA	

	True	Calc.	% Drift
123	2-ethylhexyl acrylate	NA	

		AvgRF	CCRF	% Dev
124	2-methylnaphthalene		NA	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C149632.D M3C6743.M Thu Feb 14 14:13:20 2019 MS3C

6.10.7

6

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V3C6820-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151772.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\lo...-7\v3c6820\3c151772.d Vial: 2
Acq On    :  5 May 2019  12:35 pm                    Operator: mariceld
Sample    : CC6743-50                                Inst    : MS3C
Misc      : MS34270,V3C6820,5.0,,,,1                 Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title        : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
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	109	0.00	2.58
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.102	1.032	6.4	96	0.00	2.64
4		1,4-dioxane	0.134	0.130	3.0	99	0.00	5.29
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	4.03
6		chlorodifluoromethane	0.303	0.268	11.6	84	0.00	1.10
7		dichlorodifluoromethane	0.432	0.364	15.7	78	0.00	1.08
8		chloromethane	0.357	0.275	23.0#	73	0.00	1.22
9		1,3-butadiene	0.232	0.214	7.8	87	0.00	1.32
10		vinyl chloride	0.359	0.305	15.0	78	0.00	1.30
11		bromomethane	0.215	0.192	10.7	84	0.00	1.54
12		chloroethane	0.213	0.192	9.9	83	0.00	1.62
13		vinyl Bromide	0.308	0.267	13.3	79	0.00	1.75
14		trichlorofluoromethane	0.531	0.534	-0.6	93	0.00	1.77
15		ethyl ether	0.151	0.151	0.0	94	0.00	1.99
16		2-chloropropane	0.121	0.108	10.7	81	0.00	2.07
17		acrolein	0.031	0.033	-6.5	95	0.00	2.14
18		freon 113	0.254	0.262	-3.1	93	0.00	2.13
19		1,1-dichloroethene	0.283	0.271	4.2	89	0.00	2.16
20		acetone	0.016	0.016	0.0	93	0.00	2.25
21		acetonitrile	0.024	0.020	16.7	80	0.00	2.51
22		iodomethane	0.232	0.256	-10.3	80	0.00	2.29
23		carbon disulfide	0.793	0.726	8.4	91	0.00	2.31
24		methylene chloride	0.309	0.288	6.8	93	0.00	2.56
25		methyl acetate	0.149	0.135	9.4	86	0.00	2.47
26		methyl tert butyl ether	0.754	0.769	-2.0	96	0.00	2.71
27		trans-1,2-dichloroethene	0.322	0.299	7.1	88	0.00	2.73
28		hexane	0.510	0.404	20.8#	76	0.00	2.88
29		di-isopropyl ether	0.916	0.748	18.3	77	0.00	3.08
30		ethyl tert-butyl ether	0.905	0.867	4.2	89	0.00	3.36
31		2-butanone	0.025	0.026	-4.0	97	0.00	3.60
32		1,1-dichloroethane	0.523	0.480	8.2	84	0.00	3.09
33		chloroprene	0.465	0.451	3.0	89	0.00	3.13
34		acrylonitrile	0.064	0.063	1.6	93	0.00	2.80
35		vinyl acetate	0.057	0.060	-5.3	97	0.00	3.12
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	50.000	46.801	6.4	86	0.00	3.62
		----------	AvgRF	CCRF	% Dev	----------		
37		2,2-dichloropropane	0.482	0.465	3.5	89	0.00	3.54

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V3C6820-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151772.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		cis-1,2-dichloroethene	0.348	0.332	4.6	89	0.00	3.57
39		propionitrile	0.028	0.027	3.6	92	0.00	3.71
40		bromochloromethane	0.195	0.195	0.0	95	0.00	3.78
41		tetrahydrofuran	0.024	0.027	-12.5	108	0.00	3.78
42		chloroform	0.566	0.530	6.4	91	0.00	3.85
43		tert-Butyl Formate	0.179	0.178	0.6	89	0.00	3.86
44		isobutyl alcohol	0.044	0.035	20.5#	78	0.00	4.26
45	S	dibromofluoromethane (s)	0.361	0.362	-0.3	101	0.00	3.99
46		methacrylonitrile	0.084	0.089	-6.0	97	0.00	3.81
47		1,1,1-trichloroethane	0.511	0.514	-0.6	93	0.00	3.95
48		cyclohexane	0.523	0.475	9.2	85	0.00	3.94
49		1,1-dichloropropene	0.168	0.162	3.6	89	0.00	4.11
50		tert-amyl alcohol	0.022	0.019	13.6	87	0.00	4.33
51		carbon tetrachloride	0.404	0.446	-10.4	100	0.00	4.07
52	I	1,4-difluorobenzene	1.000	1.000	0.0	97	0.00	4.69
53	S	1,2-dichloroethane-d4 (s)	0.272	0.295	-8.5	106	0.00	4.31
54		2,2,4-trimethylpentane	0.927	0.788	15.0	77	0.00	4.26
55		tert-amyl methyl ether	0.207	0.217	-4.8	94	0.00	4.36
56		n-butyl alcohol	0.005	0.005	0.0	97	0.00	4.90
57		benzene	0.920	0.879	4.5	87	0.00	4.28
58		heptane	0.197	0.151	23.4#	69	0.00	4.45
59		isopropyl acetate	0.212	0.217	-2.4	94	0.00	4.36
60		1,2-dichloroethane	0.292	0.292	0.0	96	0.00	4.38
61		trichloroethene	0.250	0.248	0.8	89	0.00	4.90
62		ethyl acrylate	0.204	0.216	-5.9	97	0.00	5.04
63		2-nitropropane	0.062	0.067	-8.1	97	-0.01	5.75
64		2-chloroethyl vinyl ether	0.121	0.121	0.0	91	0.00	5.76
65		methyl methacrylate	0.052	0.059	-13.5	99	0.00	5.27
66		1,2-dichloropropane	0.219	0.196	10.5	82	0.00	5.17
67		methylcyclohexane	0.466	0.415	10.9	84	0.00	5.01
68		dibromomethane	0.120	0.123	-2.5	93	0.00	5.29
69		bromodichloromethane	0.278	0.305	-9.7	96	0.00	5.45
70		epichlorohydrin	0.015	0.016	-6.7	99	0.00	5.84
71		cis-1,3-dichloropropene	0.348	0.366	-5.2	94	0.00	5.89
72		4-methyl-2-pentanone	0.029	0.035	-20.7#	104	0.00	6.03
73		3-methyl-1-butanol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	7.40
75	S	toluene-d8 (s)	1.238	1.263	-2.0	102	0.00	6.08
76		toluene	0.714	0.667	6.6	90	0.00	6.15
77		trans-1,3-dichloropropene	0.328	0.357	-8.8	96	0.00	6.43
78		ethyl methacrylate	0.273	0.278	-1.8	94	0.00	6.47
79		1,1,2-trichloroethane	0.176	0.167	5.1	91	0.00	6.60
80		2-hexanone	0.067	0.067	0.0	95	0.00	6.80
81		tetrachloroethene	0.339	0.350	-3.2	94	0.00	6.62
82		1,3-dichloropropane	0.354	0.342	3.4	91	0.00	6.75
83		butyl acetate	0.126	0.126	0.0	93	0.00	6.89
84		dibromochloromethane	0.207	0.257	-24.2#	108	0.00	6.92
85		1,2-dibromoethane	0.255	0.236	7.5	85	0.00	7.01
86		n-butyl ether	1.161	0.941	18.9	77	0.00	7.47
87		chlorobenzene	0.786	0.759	3.4	94	0.00	7.42
88		1,1,1,2-tetrachloroethane	0.259	0.285	-10.0	98	0.00	7.50
89		ethylbenzene	1.381	1.305	5.5	91	0.00	7.49
90		m,p-xylene	0.544	0.506	7.0	90	0.00	7.60
91		o-xylene	1.092	1.058	3.1	94	0.00	7.93
92		styrene	0.875	0.847	3.2	91	0.00	7.96
		----------	True	Calc.	% Drift	----------		
93		bromoform	50.000	56.138	-12.3	118	0.00	8.13

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V3C6820-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151772.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
94		butyl acrylate	0.379	0.375	1.1	91	0.00	7.92
95		isopropylbenzene	1.392	1.333	4.2	90	0.00	8.23
96		cis-1,4-dichloro-2-butene	0.077	0.082	-6.5	100	0.00	8.36
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	9.32
98	S	4-bromofluorobenzene (s)	0.822	0.866	-5.4	111	0.00	8.39
99		bromobenzene	0.663	0.623	6.0	95	0.00	8.51
100		1,1,2,2-tetrachloroethane	0.451	0.423	6.2	94	0.00	8.55
			True	Calc.	% Drift			
101		trans-1,4-dichloro-2-bute	50.000	56.517	-13.0	114	0.00	8.60
			AvgRF	CCRF	% Dev			
102		1,2,3-trichloropropane	0.143	0.147	-2.8	100	0.00	8.58
103		n-propylbenzene	3.041	2.673	12.1	88	0.00	8.56
104		2-chlorotoluene	0.622	0.574	7.7	91	0.00	8.65
105		4-chlorotoluene	0.620	0.585	5.6	92	0.00	8.75
106		1,3,5-trimethylbenzene	2.212	2.064	6.7	92	0.00	8.71
107		tert-butylbenzene	1.969	1.824	7.4	91	0.00	8.97
108		1,2,4-trimethylbenzene	2.252	2.071	8.0	92	0.00	9.02
109		sec-butylbenzene	2.861	2.601	9.1	89	0.00	9.14
110		1,3-dichlorobenzene	1.302	1.209	7.1	93	0.00	9.26
111		p-isopropyltoluene	2.518	2.362	6.2	91	0.00	9.26
112		1,4-dichlorobenzene	1.331	1.225	8.0	95	0.00	9.34
113		1,2-dichlorobenzene	1.220	1.139	6.6	95	0.00	9.63
114		n-butylbenzene	1.244	1.115	10.4	86	0.00	9.59
			True	Calc.	% Drift			
115		1,2-dibromo-3-chloropropa	50.000	55.984	-12.0	115	0.00	10.27
			AvgRF	CCRF	% Dev			
116		1,3,5-Trichlorobenzene	1.184	1.185	-0.1	98	0.00	10.38
117		1,2,4-trichlorobenzene	1.019	1.042	-2.3	101	0.00	10.88
118		hexachlorobutadiene	0.635	0.673	-6.0	100	0.00	10.97
119		naphthalene	1.785	1.896	-6.2	104	0.00	11.07
120		1,2,3-trichlorobenzene	0.945	0.975	-3.2	101	0.00	11.27
			True	Calc.	% Drift			
121		hexachloroethane	50.000	53.514	-7.0	115	0.00	9.80
			AvgRF	CCRF	% Dev			
122		Benzyl chloride	0.788	0.896	-13.7	104	0.00	9.46
			True	Calc.	% Drift			
123		2-ethylhexyl acrylate	10.000	10.320	-3.2	104	0.00	11.02
			AvgRF	CCRF	% Dev			
124		2-methylnaphthalene	1.069	1.310	-22.5#	117	0.00	11.94

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C149632.D M3C6743.M Mon May 06 19:48:24 2019

6.10.8

6

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V3C6821-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151801.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

Data File : X:\voa-gcms\complete...sa\v3c6821\3c151801.d Vial: 1
Acq On : 6 May 2019 8:55 am Operator: PrashanS
Sample : CC6743-50 Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
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	98	0.00	2.57
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.102	0.986	10.5	83	0.00	2.64
4		1,4-dioxane	0.134	0.129	3.7	89	0.00	5.29
5	I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	4.03
6		chlorodifluoromethane	0.303	0.243	19.8	78	0.00	1.10
7		dichlorodifluoromethane	0.432	0.404	6.5	88	0.00	1.08
8		chloromethane	0.357	0.277	22.4#	75	0.00	1.23
9		1,3-butadiene	0.232	0.196	15.5	82	0.00	1.32
10		vinyl chloride	0.359	0.302	15.9	79	0.00	1.30
11		bromomethane	0.215	0.191	11.2	85	0.00	1.54
12		chloroethane	0.213	0.184	13.6	81	0.00	1.62
13		vinyl Bromide	0.308	0.259	15.9	78	0.00	1.75
14		trichlorofluoromethane	0.531	0.510	4.0	90	0.00	1.77
15		ethyl ether	0.151	0.137	9.3	87	0.00	1.99
16		2-chloropropane	0.121	0.099	18.2	76	0.00	2.07
17		acrolein	0.031	0.030	3.2	87	0.00	2.14
18		freon 113	0.254	0.241	5.1	87	0.00	2.13
19		1,1-dichloroethene	0.283	0.248	12.4	83	0.00	2.16
20		acetone	0.016	0.013	18.8	80	0.00	2.24
21		acetonitrile	0.024	0.017	29.2#	71	0.00	2.51
22		iodomethane	0.232	0.242	-4.3	77	0.00	2.29
23		carbon disulfide	0.793	0.653	17.7	83	0.00	2.31
24		methylene chloride	0.309	0.249	19.4	82	0.00	2.56
25		methyl acetate	0.149	0.111	25.5#	72	0.00	2.47
26		methyl tert butyl ether	0.754	0.689	8.6	88	0.00	2.71
27		trans-1,2-dichloroethene	0.322	0.269	16.5	81	0.00	2.73
28		hexane	0.510	0.386	24.3#	74	0.00	2.87
29		di-isopropyl ether	0.916	0.660	27.9#	69	0.00	3.08
30		ethyl tert-butyl ether	0.905	0.761	15.9	80	0.00	3.36
31		2-butanone	0.025	0.023	8.0	86	0.00	3.60
32		1,1-dichloroethane	0.523	0.429	18.0	77	0.00	3.09
33		chloroprene	0.465	0.400	14.0	80	0.00	3.13
34		acrylonitrile	0.064	0.054	15.6	82	0.00	2.80
35		vinyl acetate	0.057	0.054	5.3	88	0.00	3.12
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	50.000	40.554	18.9	75	0.00	3.61
		----------	AvgRF	CCRF	% Dev	----------		
37		2,2-dichloropropane	0.482	0.426	11.6	83	0.00	3.54

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V3C6821-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151801.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		cis-1,2-dichloroethene	0.348	0.298	14.4	82	0.00	3.57
39		propionitrile	0.028	0.024	14.3	83	0.00	3.71
40		bromochloromethane	0.195	0.182	6.7	90	0.00	3.78
41		tetrahydrofuran	0.024	0.024	0.0	96	0.00	3.78
42		chloroform	0.566	0.470	17.0	82	0.00	3.84
43		tert-Butyl Formate	0.179	0.148	17.3	75	0.00	3.85
44		isobutyl alcohol	0.044	0.031	29.5#	69	0.00	4.26
45	S	dibromofluoromethane (s)	0.361	0.358	0.8	102	0.00	3.99
46		methacrylonitrile	0.084	0.078	7.1	87	0.00	3.81
47		1,1,1-trichloroethane	0.511	0.463	9.4	85	0.00	3.95
48		cyclohexane	0.523	0.436	16.6	80	0.00	3.94
49		1,1-dichloropropene	0.168	0.142	15.5	80	0.00	4.10
50		tert-amyl alcohol	0.022	0.016	27.3#	76	0.00	4.33
51		carbon tetrachloride	0.404	0.401	0.7	91	0.00	4.06
52	I	1,4-difluorobenzene	1.000	1.000	0.0	97	0.00	4.69
53	S	1,2-dichloroethane-d4 (s)	0.272	0.289	-6.2	104	0.00	4.31
54		2,2,4-trimethylpentane	0.927	0.738	20.4#	72	0.00	4.26
55		tert-amyl methyl ether	0.207	0.197	4.8	85	0.00	4.36
56		n-butyl alcohol	0.005	0.004	20.0	83	0.00	4.89
57		benzene	0.920	0.803	12.7	79	0.00	4.28
58		heptane	0.197	0.157	20.3#	72	0.00	4.45
59		isopropyl acetate	0.212	0.197	7.1	85	0.00	4.36
60		1,2-dichloroethane	0.292	0.267	8.6	88	0.00	4.38
61		trichloroethene	0.250	0.227	9.2	81	0.00	4.90
62		ethyl acrylate	0.204	0.182	10.8	82	0.00	5.04
63		2-nitropropane	0.062	0.058	6.5	85	-0.01	5.75
64		2-chloroethyl vinyl ether	0.121	0.107	11.6	81	0.00	5.76
65		methyl methacrylate	0.052	0.053	-1.9	89	0.00	5.27
66		1,2-dichloropropane	0.219	0.176	19.6	73	0.00	5.17
67		methylcyclohexane	0.466	0.373	20.0	76	0.00	5.01
68		dibromomethane	0.120	0.113	5.8	85	0.00	5.29
69		bromodichloromethane	0.278	0.279	-0.4	88	0.00	5.45
70		epichlorohydrin	0.015	0.015	0.0	90	0.00	5.84
71		cis-1,3-dichloropropene	0.348	0.333	4.3	85	0.00	5.88
72		4-methyl-2-pentanone	0.029	0.032	-10.3	94	0.00	6.03
73		3-methyl-1-butanol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	7.39
75	S	toluene-d8 (s)	1.238	1.276	-3.1	104	0.00	6.08
76		toluene	0.714	0.616	13.7	83	0.00	6.15
77		trans-1,3-dichloropropene	0.328	0.329	-0.3	89	0.00	6.43
78		ethyl methacrylate	0.273	0.254	7.0	86	0.00	6.47
79		1,1,2-trichloroethane	0.176	0.153	13.1	84	0.00	6.60
80		2-hexanone	0.067	0.060	10.4	85	0.00	6.80
81		tetrachloroethene	0.339	0.320	5.6	86	0.00	6.62
82		1,3-dichloropropane	0.354	0.309	12.7	83	0.00	6.75
83		butyl acetate	0.126	0.111	11.9	82	0.00	6.89
84		dibromochloromethane	0.207	0.233	-12.6	98	0.00	6.92
85		1,2-dibromoethane	0.255	0.214	16.1	77	0.00	7.01
86		n-butyl ether	1.161	0.840	27.6#	69	0.00	7.47
87		chlorobenzene	0.786	0.688	12.5	85	0.00	7.42
88		1,1,1,2-tetrachloroethane	0.259	0.261	-0.8	90	0.00	7.50
89		ethylbenzene	1.381	1.184	14.3	83	0.00	7.49
90		m,p-xylene	0.544	0.468	14.0	83	0.00	7.59
91		o-xylene	1.092	0.971	11.1	86	0.00	7.93
92		styrene	0.875	0.784	10.4	84	0.00	7.96
		----------	True	Calc.	% Drift	----------		
93		bromoform	50.000	52.753	-5.5	111	0.00	8.13

Continuing Calibration Summary

Job Number: JC87093 **Sample:** V3C6821-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151801.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
94		butyl acrylate	0.379	0.339	10.6	82	0.00	7.92
95		isopropylbenzene	1.392	1.235	11.3	84	0.00	8.22
96		cis-1,4-dichloro-2-butene	0.077	0.073	5.2	89	0.00	8.36
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	9.32
98	S	4-bromofluorobenzene (s)	0.822	0.854	-3.9	110	0.00	8.39
99		bromobenzene	0.663	0.577	13.0	88	0.00	8.51
100		1,1,2,2-tetrachloroethane	0.451	0.379	16.0	85	0.00	8.55
			True	Calc.	% Drift			
101		trans-1,4-dichloro-2-bute	50.000	50.796	-1.6	103	0.00	8.60
			AvgRF	CCRF	% Dev			
102		1,2,3-trichloropropane	0.143	0.129	9.8	89	0.00	8.58
103		n-propylbenzene	3.041	2.433	20.0	81	0.00	8.56
104		2-chlorotoluene	0.622	0.524	15.8	84	0.00	8.65
105		4-chlorotoluene	0.620	0.529	14.7	84	0.00	8.75
106		1,3,5-trimethylbenzene	2.212	1.914	13.5	86	0.00	8.71
107		tert-butylbenzene	1.969	1.661	15.6	84	0.00	8.97
108		1,2,4-trimethylbenzene	2.252	1.893	15.9	85	0.00	9.02
109		sec-butylbenzene	2.861	2.374	17.0	82	0.00	9.14
110		1,3-dichlorobenzene	1.302	1.120	14.0	87	0.00	9.26
111		p-isopropyltoluene	2.518	2.166	14.0	84	0.00	9.26
112		1,4-dichlorobenzene	1.331	1.124	15.6	88	0.00	9.34
113		1,2-dichlorobenzene	1.220	1.042	14.6	87	0.00	9.63
114		n-butylbenzene	1.244	1.042	16.2	81	0.00	9.59
			True	Calc.	% Drift			
115		1,2-dibromo-3-chloropropa	50.000	51.415	-2.8	106	0.00	10.27
			AvgRF	CCRF	% Dev			
116		1,3,5-Trichlorobenzene	1.184	1.095	7.5	92	0.00	10.38
117		1,2,4-trichlorobenzene	1.019	0.966	5.2	95	0.00	10.88
118		hexachlorobutadiene	0.635	0.635	0.0	95	0.00	10.97
119		naphthalene	1.785	1.698	4.9	94	0.00	11.07
120		1,2,3-trichlorobenzene	0.945	0.894	5.4	94	0.00	11.27
			True	Calc.	% Drift			
121		hexachloroethane	50.000	49.423	1.2	107	0.00	9.80
			AvgRF	CCRF	% Dev			
122		Benzyl chloride	0.788	0.853	-8.2	100	0.00	9.46
			True	Calc.	% Drift			
123		2-ethylhexyl acrylate	10.000	9.095	9.0	92	0.00	11.02
			AvgRF	CCRF	% Dev			
124		2-methylnaphthalene	1.069	1.181	-10.5	107	0.00	11.94

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C149632.D M3C6743.M Wed May 08 07:47:56 2019

Initial Calibration Summary

Job Number: JC87093 **Sample:** VD10606-ICC10606
Account: BBLNYS Arcadis **Lab FileID:** D263017.D
Project: National Grid, Philly Coke, Philadelphia, PA

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: JC87093 **Sample:** VD10606-ICC10606
Account: BBLNYS Arcadis **Lab FileID:** D263017.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
            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: JC87093 **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: JC87093 **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: JC87093 **Sample:** VD10606-ICC10606
Account: BBLNYS Arcadis **Lab FileID:** D263017.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
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: JC87093
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: JC87093 **Sample:** VD10606-ICV10606
Account: BBLNYS Arcadis **Lab FileID:** D263022.D
Project: National Grid, Philly Coke, Philadelphia, PA

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: JC87093 **Sample:** VD10606-ICV10606
Account: BBLNYS Arcadis **Lab FileID:** D263022.D
Project: National Grid, Philly Coke, Philadelphia, PA

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: JC87093
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: JC87093 **Sample:** VD10606-ICV10606
Account: BBLNYS Arcadis **Lab FileID:** D263023.D
Project: National Grid, Philly Coke, Philadelphia, PA

			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: JC87093
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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: VD10652-CC10606
Lab FileID: D264310.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\ni...-19\vd10652\d264310.d Vial: 4
Acq On    :  7 May 2019   8:03 am                    Operator: thienn
Sample    : cc10606-20                               Inst    : MSD
Misc      : ms32144,vd10652,5,,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	144	-0.01	7.46
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.326	1.238	6.6	128	0.02	7.58
4		1,4-dioxane	0.121	0.121	0.0	139	0.00	11.35
5	I	pentafluorobenzene	1.000	1.000	0.0	142	0.00	9.72
6		chlorodifluoromethane	1.055	0.820	22.3#	110	0.00	4.40
7		dichlorodifluoromethane	1.452	1.102	24.1#	102	0.00	4.41
8		chloromethane	1.216	1.018	16.3	114	0.00	4.69
9		1,3-butadiene	0.673	0.648	3.7	138	-0.02	4.96
10		vinyl chloride	1.237	1.293	-4.5	140	0.00	4.95
11		bromomethane	0.637	0.603	5.3	130	0.00	5.51
12		chloroethane	0.542	0.500	7.7	127	0.00	5.66
13		trichlorofluoromethane	1.114	0.960	13.8	115	0.00	6.14
14		vinyl bromide	0.568	0.660	-16.2	158	-0.01	6.00
15		ethyl ether	0.276	0.286	-3.6	143	0.00	6.47
16		2-chloropropane	1.189	1.004	15.6	124	0.00	6.67
17		acrolein	0.092	0.101	-9.8	154	0.00	6.65
18		freon 113	0.654	0.570	12.8	121	0.00	6.92
19		1,1-dichloroethene	0.617	0.560	9.2	131	0.00	6.88
20		acetone	0.039	0.052	-33.3#	182	0.00	6.84
21		acetonitrile	0.082	0.081	1.2	141	-0.01	7.20
22		iodomethane	0.970	0.888	8.5	128	-0.01	7.12
23		carbon disulfide	2.010	1.928	4.1	135	0.00	7.29
24		methylene chloride	0.648	0.617	4.8	135	0.00	7.53
25		methyl acetate	0.343	0.342	0.3	138	0.00	7.29
26		methyl tert butyl ether	1.873	1.674	10.6	129	0.00	7.90
27		trans-1,2-dichloroethene	0.565	0.544	3.7	134	0.00	7.93
28		hexane	0.364	0.390	-7.1	149	0.00	8.31
29		di-isopropyl ether	2.142	1.966	8.2	131	0.00	8.49
30		2-butanone	0.046	0.051	-10.9	153	0.00	9.09
31		1,1-dichloroethane	1.006	0.944	6.2	131	0.00	8.48
32		chloroprene	0.899	0.765	14.9	118	0.00	8.59
33		acrylonitrile	0.158	0.163	-3.2	141	0.00	7.77
34		vinyl acetate	0.110	0.099	10.0	121	0.00	8.41
35		ethyl tert-butyl ether	2.113	1.901	10.0	128	0.00	8.95
36		ethyl acetate	0.065	0.067	-3.1	139	0.00	9.13
37		2,2-dichloropropane	1.080	0.955	11.6	128	0.00	9.24
38		cis-1,2-dichloroethene	0.619	0.588	5.0	134	0.00	9.18
39		propionitrile	0.069	0.072	-4.3	143	0.00	9.14

---------- True Calc. % Drift ----------

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10652-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264310.D
Project: National Grid, Philly Coke, Philadelphia, PA

40		methyl acrylate	20.000	18.266	8.7	128	0.00	9.22
		----------	AvgRF	CCRF	% Dev	----------		
41		methacrylonitrile	0.180	0.169	6.1	132	0.00	9.36
42		bromochloromethane	0.279	0.270	3.2	131	0.00	9.48
43		tetrahydrofuran	0.134	0.125	6.7	130	0.00	9.52
44		chloroform	1.017	0.884	13.1	128	0.00	9.56
45		tert-butyl formate	0.573	0.490	14.5	122	0.00	9.61
46	S	dibromofluoromethane (s)	0.472	0.460	2.5	137	0.00	9.75
47		1,1,1-trichloroethane	1.043	0.888	14.9	121	0.00	9.86
48		cyclohexane	1.049	1.117	-6.5	150	0.00	10.01
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.672	12.7	124	0.00	10.03
51		carbon tetrachloride	0.890	0.752	15.5	121	0.00	10.07
52		tert-amyl alcohol	0.032	0.029	9.4	126	0.00	10.10
53		isopropyl acetate	0.120	0.105	12.5	125	0.00	10.15
54	I	1,4-difluorobenzene	1.000	1.000	0.0	144	0.00	10.68
55	S	1,2-dichloroethane-d4 (s)	0.375	0.346	7.7	134	-0.01	10.17
56		n-butyl alcohol	0.012	0.011	8.3	135	0.00	10.69
57		2,2,4-trimethylpentane	1.240	1.246	-0.5	147	0.00	10.40
58		benzene	1.518	1.400	7.8	133	0.00	10.27
59		tert-amyl methyl ether	1.385	1.181	14.7	125	0.00	10.36
60		heptane	0.203	0.223	-9.9	156	0.00	10.56
61		1,2-dichloroethane	0.534	0.416	22.1#	116	0.00	10.27
62		ethyl acrylate	0.391	0.331	15.3	123	0.00	10.98
63		trichloroethene	0.377	0.332	11.9	128	0.00	11.01
64		2-chloroethyl vinyl ether	0.198	0.186	6.1	130	0.00	11.81
65		methyl methacrylate	0.085	0.072	15.3	120	0.00	11.26
66		methylcyclohexane	0.644	0.653	-1.4	149	0.00	11.35
67		1,2-dichloropropane	0.377	0.353	6.4	133	0.00	11.29
68		dibromomethane	0.218	0.197	9.6	127	0.00	11.40
69		bromodichloromethane	0.505	0.448	11.3	126	0.00	11.56
70		2-nitropropane	0.079	0.067	15.2	127	0.00	11.74
71		epichlorohydrin	0.036	0.034	5.6	135	0.00	11.89
72		cis-1,3-dichloropropene	0.608	0.552	9.2	129	0.00	12.06
73		4-methyl-2-pentanone	0.131	0.126	3.8	135	0.00	12.15
74		isoamyl alcohol	0.010	0.010	0.0	130	0.00	12.14
75	I	chlorobenzene-d5	1.000	1.000	0.0	141	0.00	14.09
76	S	toluene-d8 (s)	1.219	1.188	2.5	136	0.00	12.41
77		toluene	0.956	0.865	9.5	129	0.00	12.49
78		ethyl methacrylate	0.453	0.400	11.7	121	0.00	12.67
79		trans-1,3-dichloropropene	0.556	0.500	10.1	126	0.00	12.66
80		1,1,2-trichloroethane	0.255	0.235	7.8	130	0.00	12.91
81		tetrachloroethene	0.312	0.287	8.0	132	0.00	13.12
82		2-hexanone	0.115	0.120	-4.3	140	0.00	13.09
83		1,3-dichloropropane	0.549	0.493	10.2	125	0.00	13.11
84		butyl acetate	0.235	0.222	5.5	130	0.00	13.20
85		dibromochloromethane	0.359	0.329	8.4	129	0.00	13.39
86		1,2-dibromoethane	0.396	0.323	18.4	112	0.00	13.57
87		n-butyl ether	1.743	1.610	7.6	130	0.00	14.10
88		chlorobenzene	1.108	0.974	12.1	125	0.00	14.12
89		1,1,1,2-tetrachloroethane	0.426	0.377	11.5	126	0.00	14.19
90		ethylbenzene	1.895	1.736	8.4	130	0.00	14.20
91		m,p-xylene	0.722	0.670	7.2	132	0.00	14.34
92		o-xylene	1.587	1.472	7.2	131	0.00	14.79
93		styrene	1.230	1.116	9.3	125	0.00	14.80
94		butyl acrylate	0.744	0.662	11.0	122	0.00	14.59
95		n-amyl acetate	0.315	0.285	9.5	128	0.00	14.82

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10652-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264310.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		isopropylbenzene	1.852	1.852	0.0	142	0.00	15.19
97		bromoform	0.259	0.236	8.9	128	0.00	15.04
98		cis-1,4-dichloro-2-butene	0.172	0.142	17.4	121	0.00	15.19
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	16.73
100	S	4-bromofluorobenzene (s)	0.926	0.899	2.9	134	0.00	15.40
101		1,1,2,2-tetrachloroethane	0.773	0.727	6.0	130	0.00	15.47
102		trans-1,4-dichloro-2-bute	0.193	0.177	8.3	121	0.00	15.50
103		1,2,3-trichloropropane	0.223	0.207	7.2	125	0.00	15.57
104		bromobenzene	0.876	0.793	9.5	127	0.00	15.61
105		n-propylbenzene	3.463	3.619	-4.5	144	0.00	15.66
106		2-chlorotoluene	0.776	0.751	3.2	133	0.00	15.81
107		4-chlorotoluene	2.286	2.237	2.1	134	0.00	15.93
108		1,3,5-trimethylbenzene	2.646	2.762	-4.4	144	0.00	15.84
109		tert-butylbenzene	2.053	2.149	-4.7	147	0.00	16.22
110		1,2,4-trimethylbenzene	2.639	2.793	-5.8	143	0.00	16.28
111		sec-butylbenzene	3.024	3.349	-10.7	152	0.00	16.47
112		p-isopropyltoluene	2.517	2.857	-13.5	151	0.00	16.62
113		1,3-dichlorobenzene	1.531	1.552	-1.4	138	0.00	16.65
114		1,4-dichlorobenzene	1.588	1.569	1.2	134	0.00	16.76
115		1,2-dichlorobenzene	1.534	1.560	-1.7	137	0.00	17.17
116		benzyl chloride	1.490	1.632	-9.5	142	0.00	16.85
117		n-butylbenzene	1.176	1.391	-18.3	152	0.00	17.08
118		2-ethylhexyl acrylate	0.248	0.293	-18.1	492#	0.00	18.98
119		hexachloroethane	0.391	0.453	-15.9	164	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.138	0.136	1.4	127	0.00	18.01
121		1,3,5-trichlorobenzene	1.032	1.262	-22.3#	161	0.00	18.25
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	20.000	21.453	-7.3	165	0.00	18.98
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.501	-6.6	144	0.00	19.13
		----------	True	Calc.	% Drift	----------		
124		naphthalene	20.000	19.967	0.2	157	0.00	19.32
125		1,2,3-trichlorobenzene	20.000	21.372	-6.9	166	0.00	19.58
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.451	-0.9	220#	0.00	20.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263016.D MD10606.M Tue May 07 23:40:40 2019

6.10.13

6

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10654-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264356.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\VD10654\d264356.D          Vial: 1
Acq On    :  8 May 2019   6:56 am                    Operator: thienn
Sample    : cc10606-50                               Inst    : MSD
Misc      : ms34538,vd10654,5,,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  : Wed Mar 27 14:25:51 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	142	-0.01	7.46
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.326	1.187	10.5	117	0.00	7.57
4		1,4-dioxane	0.121	0.110	9.1	122	0.00	11.35
5	I	pentafluorobenzene	1.000	1.000	0.0	133	0.00	9.72
6		chlorodifluoromethane	1.055	0.742	29.7#	89	0.00	4.41
7		dichlorodifluoromethane	1.452	0.966	33.5#	81	0.00	4.41
8		chloromethane	1.216	1.090	10.4	105	0.00	4.70
9		1,3-butadiene	0.673	0.545	19.0	95	0.00	4.98
10		vinyl chloride	1.237	1.092	11.7	106	-0.01	4.94
11		bromomethane	0.637	0.604	5.2	111	0.00	5.52
12		chloroethane	0.542	0.482	11.1	107	0.00	5.66
13		trichlorofluoromethane	1.114	0.906	18.7	97	0.00	6.14
14		vinyl bromide	0.568	0.615	-8.3	126	0.00	6.01
15		ethyl ether	0.276	0.286	-3.6	129	0.00	6.47
16		2-chloropropane	1.189	1.002	15.7	112	0.00	6.68
17		acrolein	0.092	0.104	-13.0	140	-0.01	6.64
18		freon 113	0.654	0.550	15.9	103	0.00	6.92
19		1,1-dichloroethene	0.617	0.557	9.7	116	-0.01	6.88
20		acetone	0.039	0.054	-38.5#	168	0.00	6.83
21		acetonitrile	0.082	0.080	2.4	130	-0.01	7.20
22		iodomethane	0.970	0.872	10.1	111	-0.01	7.12
23		carbon disulfide	2.010	1.821	9.4	114	0.00	7.29
24		methylene chloride	0.648	0.612	5.6	122	0.00	7.53
25		methyl acetate	0.343	0.332	3.2	125	0.00	7.29
26		methyl tert butyl ether	1.873	1.697	9.4	117	0.00	7.90
27		trans-1,2-dichloroethene	0.565	0.526	6.9	118	0.00	7.93
28		hexane	0.364	0.373	-2.5	129	0.00	8.30
29		di-isopropyl ether	2.142	1.986	7.3	118	0.00	8.49
30		2-butanone	0.046	0.051	-10.9	136	0.00	9.10
31		1,1-dichloroethane	1.006	0.920	8.5	115	0.00	8.48
32		chloroprene	0.899	0.775	13.8	105	0.00	8.59
33		acrylonitrile	0.158	0.170	-7.6	132	0.00	7.77
34		vinyl acetate	0.110	0.104	5.5	112	0.00	8.41
35		ethyl tert-butyl ether	2.113	1.939	8.2	115	0.00	8.95
36		ethyl acetate	0.065	0.069	-6.2	132	0.00	9.13
37		2,2-dichloropropane	1.080	0.940	13.0	111	0.00	9.24
38		cis-1,2-dichloroethene	0.619	0.581	6.1	119	0.00	9.19
39		propionitrile	0.069	0.072	-4.3	130	-0.01	9.13

---------- True Calc. % Drift ----------

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10654-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264356.D
Project: National Grid, Philly Coke, Philadelphia, PA

40		methyl acrylate	50.000	46.220	7.6	114	0.00	9.22
		----------	AvgRF	CCRF	% Dev	----------		
41		methacrylonitrile	0.180	0.181	-0.6	125	0.00	9.35
42		bromochloromethane	0.279	0.268	3.9	117	0.00	9.48
43		tetrahydrofuran	0.134	0.129	3.7	125	0.00	9.52
44		chloroform	1.017	0.871	14.4	113	0.00	9.56
45		tert-butyl formate	0.573	0.525	8.4	112	0.00	9.61
46	S	dibromofluoromethane (s)	0.472	0.466	1.3	129	-0.01	9.75
47		1,1,1-trichloroethane	1.043	0.885	15.1	106	0.00	9.86
48		cyclohexane	1.049	1.054	-0.5	123	0.00	10.01
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.660	14.3	109	0.00	10.03
51		carbon tetrachloride	0.890	0.736	17.3	103	0.00	10.07
52		tert-amyl alcohol	0.032	0.029	9.4	123	0.00	10.11
53		isopropyl acetate	0.120	0.113	5.8	120	0.00	10.15
54	I	1,4-difluorobenzene	1.000	1.000	0.0	135	0.00	10.68
55	S	1,2-dichloroethane-d4 (s)	0.375	0.323	13.9	118	-0.01	10.17
56		n-butyl alcohol	0.012	0.011	8.3	128	0.00	10.68
57		2,2,4-trimethylpentane	1.240	1.257	-1.4	125	0.00	10.40
58		benzene	1.518	1.362	10.3	118	0.00	10.27
59		tert-amyl methyl ether	1.385	1.203	13.1	114	0.00	10.36
60		heptane	0.203	0.206	-1.5	133	0.00	10.56
61		1,2-dichloroethane	0.534	0.398	25.5#	102	0.00	10.27
62		ethyl acrylate	0.391	0.352	10.0	118	0.00	10.97
63		trichloroethene	0.377	0.329	12.7	115	-0.01	11.01
64		2-chloroethyl vinyl ether	0.198	0.191	3.5	121	0.00	11.81
65		methyl methacrylate	0.085	0.081	4.7	119	0.00	11.25
66		methylcyclohexane	0.644	0.640	0.6	128	0.00	11.36
67		1,2-dichloropropane	0.377	0.351	6.9	121	0.00	11.29
68		dibromomethane	0.218	0.193	11.5	113	0.00	11.40
69		bromodichloromethane	0.505	0.442	12.5	113	0.00	11.56
70		2-nitropropane	0.079	0.064	19.0	107	0.00	11.74
71		epichlorohydrin	0.036	0.035	2.8	125	-0.01	11.88
72		cis-1,3-dichloropropene	0.608	0.552	9.2	117	0.00	12.06
73		4-methyl-2-pentanone	0.131	0.126	3.8	124	0.00	12.15
74		isoamyl alcohol	0.010	0.011	-10.0	123	0.00	12.14
75	I	chlorobenzene-d5	1.000	1.000	0.0	133	0.00	14.09
76	S	toluene-d8 (s)	1.219	1.214	0.4	132	-0.01	12.41
77		toluene	0.956	0.864	9.6	116	0.00	12.49
78		ethyl methacrylate	0.453	0.421	7.1	115	-0.01	12.67
79		trans-1,3-dichloropropene	0.556	0.493	11.3	112	0.00	12.66
80		1,1,2-trichloroethane	0.255	0.234	8.2	116	-0.01	12.90
81		tetrachloroethene	0.312	0.282	9.6	116	0.00	13.12
82		2-hexanone	0.115	0.122	-6.1	130	0.00	13.09
83		1,3-dichloropropane	0.549	0.481	12.4	112	0.00	13.11
84		butyl acetate	0.235	0.231	1.7	123	0.00	13.20
85		dibromochloromethane	0.359	0.334	7.0	114	0.00	13.39
86		1,2-dibromoethane	0.396	0.334	15.7	105	0.00	13.57
87		n-butyl ether	1.743	1.601	8.1	120	0.00	14.10
88		chlorobenzene	1.108	0.942	15.0	110	0.00	14.12
89		1,1,1,2-tetrachloroethane	0.426	0.378	11.3	110	0.00	14.19
90		ethylbenzene	1.895	1.698	10.4	116	-0.01	14.20
91		m,p-xylene	0.722	0.657	9.0	117	0.00	14.34
92		o-xylene	1.587	1.439	9.3	117	0.00	14.79
93		styrene	1.230	1.114	9.4	114	-0.01	14.79
94		butyl acrylate	0.744	0.732	1.6	118	0.00	14.58
95		n-amyl acetate	0.315	0.297	5.7	118	0.00	14.82

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10654-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264356.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		isopropylbenzene	1.852	1.817	1.9	126	0.00	15.19
97		bromoform	0.259	0.240	7.3	114	-0.01	15.04
98		cis-1,4-dichloro-2-butene	0.172	0.146	15.1	107	0.00	15.19
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	125	-0.01	16.73
100	S	4-bromofluorobenzene (s)	0.926	0.892	3.7	127	0.00	15.40
101		1,1,2,2-tetrachloroethane	0.773	0.712	7.9	118	0.00	15.47
102		trans-1,4-dichloro-2-bute	0.193	0.182	5.7	112	0.00	15.50
103		1,2,3-trichloropropane	0.223	0.202	9.4	114	0.00	15.57
104		bromobenzene	0.876	0.773	11.8	111	0.00	15.61
105		n-propylbenzene	3.463	3.500	-1.1	127	0.00	15.66
106		2-chlorotoluene	0.776	0.732	5.7	118	-0.01	15.80
107		4-chlorotoluene	2.286	2.160	5.5	119	0.00	15.93
108		1,3,5-trimethylbenzene	2.646	2.720	-2.8	127	0.00	15.84
109		tert-butylbenzene	2.053	2.187	-6.5	132	0.00	16.22
110		1,2,4-trimethylbenzene	2.639	2.720	-3.1	126	0.00	16.28
111		sec-butylbenzene	3.024	3.282	-8.5	132	0.00	16.47
112		p-isopropyltoluene	2.517	2.811	-11.7	131	0.00	16.62
113		1,3-dichlorobenzene	1.531	1.490	2.7	120	0.00	16.65
114		1,4-dichlorobenzene	1.588	1.523	4.1	119	0.00	16.76
115		1,2-dichlorobenzene	1.534	1.522	0.8	120	0.00	17.17
116		benzyl chloride	1.490	1.691	-13.5	126	0.00	16.85
117		n-butylbenzene	1.176	1.392	-18.4	133	0.00	17.08
118		2-ethylhexyl acrylate	0.248	0.689	-177.8#	449#	0.00	18.98
119		hexachloroethane	0.391	0.461	-17.9	137	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.138	0.144	-4.3	113	-0.01	18.00
121		1,3,5-trichlorobenzene	1.032	1.253	-21.4#	133	0.00	18.25
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	50.000	56.103	-12.2	137	0.00	18.98
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.486	-3.4	115	-0.01	19.12
		----------	True	Calc.	% Drift	----------		
124		naphthalene	50.000	54.912	-9.8	134	-0.01	19.31
125		1,2,3-trichlorobenzene	50.000	54.616	-9.2	134	-0.01	19.58
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.786	-75.8#	208#	-0.01	20.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263017.D MD10606.M Wed May 08 10:37:33 2019 RPT1

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10656-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264404.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\ni...-19\vd10656\d264404.d Vial: 2
Acq On    :  9 May 2019   6:52 am                    Operator: thienn
Sample    : cc10606-20                               Inst    : MSD
Misc      : ms32144,vd10656,5,,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	135	-0.02	7.45
2	ethanol		----------NA----------				
3	tertiary butyl alcohol	1.326	1.320	0.5	127	0.00	7.56
4	1,4-dioxane	0.121	0.134	-10.7	144	0.00	11.35
5 I	pentafluorobenzene	1.000	1.000	0.0	127	0.00	9.72
6	chlorodifluoromethane	1.055	0.982	6.9	117	0.00	4.40
7	dichlorodifluoromethane	1.452	1.277	12.1	106	0.00	4.41
8	chloromethane	1.216	1.435	-18.0	144	-0.01	4.69
9	1,3-butadiene	0.673	0.741	-10.1	141	-0.02	4.96
10	vinyl chloride	1.237	1.408	-13.8	137	-0.01	4.95
11	bromomethane	0.637	0.679	-6.6	131	-0.01	5.51
12	chloroethane	0.542	0.584	-7.7	133	0.00	5.66
13	trichlorofluoromethane	1.114	1.067	4.2	115	0.00	6.14
14	vinyl bromide	0.568	0.697	-22.7#	149	0.00	6.01
15	ethyl ether	0.276	0.322	-16.7	145	0.00	6.47
16	2-chloropropane	1.189	1.240	-4.3	137	0.00	6.67
17	acrolein	0.092	0.122	-32.6#	167	0.00	6.66
18	freon 113	0.654	0.614	6.1	117	0.00	6.93
19	1,1-dichloroethene	0.617	0.627	-1.6	132	-0.01	6.88
20	acetone	0.039	0.056	-43.6#	173	-0.01	6.83
21	acetonitrile	0.082	0.097	-18.3	151	0.00	7.21
22	iodomethane	0.970	0.949	2.2	123	-0.01	7.13
23	carbon disulfide	2.010	2.178	-8.4	136	0.00	7.29
24	methylene chloride	0.648	0.714	-10.2	140	0.00	7.53
25	methyl acetate	0.343	0.401	-16.9	145	0.00	7.29
26	methyl tert butyl ether	1.873	1.877	-0.2	129	0.00	7.91
27	trans-1,2-dichloroethene	0.565	0.623	-10.3	138	0.00	7.93
28	hexane	0.364	0.439	-20.6#	150	0.00	8.30
29	di-isopropyl ether	2.142	2.346	-9.5	140	0.00	8.49
30	2-butanone	0.046	0.055	-19.6	146	0.00	9.09
31	1,1-dichloroethane	1.006	1.119	-11.2	139	0.00	8.48
32	chloroprene	0.899	0.917	-2.0	126	0.00	8.60
33	acrylonitrile	0.158	0.188	-19.0	145	0.00	7.77
34	vinyl acetate	0.110	0.114	-3.6	126	0.00	8.41
35	ethyl tert-butyl ether	2.113	2.172	-2.8	131	0.00	8.95
36	ethyl acetate	0.065	0.083	-27.7#	155	-0.01	9.13
37	2,2-dichloropropane	1.080	1.092	-1.1	131	0.00	9.24
38	cis-1,2-dichloroethene	0.619	0.684	-10.5	140	-0.01	9.18
39	propionitrile	0.069	0.084	-21.7#	150	-0.01	9.14

---------- True Calc. % Drift ----------

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10656-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264404.D
Project: National Grid, Philly Coke, Philadelphia, PA

40		methyl acrylate	20.000	20.273	-1.4	128	0.00	9.22
		----------	AvgRF	CCRF	% Dev	----------		
41		methacrylonitrile	0.180	0.197	-9.4	138	0.00	9.36
42		bromochloromethane	0.279	0.306	-9.7	133	-0.01	9.48
43		tetrahydrofuran	0.134	0.149	-11.2	138	0.00	9.52
44		chloroform	1.017	1.028	-1.1	134	0.00	9.56
45		tert-butyl formate	0.573	0.560	2.3	125	-0.01	9.61
46	S	dibromofluoromethane (s)	0.472	0.480	-1.7	128	-0.01	9.75
47		1,1,1-trichloroethane	1.043	1.018	2.4	124	-0.01	9.86
48		cyclohexane	1.049	1.189	-13.3	143	0.00	10.01
49		isobutyl alcohol		----------NA----------				
50		1,1-dichloropropene	0.770	0.790	-2.6	130	-0.01	10.03
51		carbon tetrachloride	0.890	0.849	4.6	122	-0.01	10.07
52		tert-amyl alcohol	0.032	0.031	3.1	124	0.00	10.11
53		isopropyl acetate	0.120	0.119	0.8	126	0.00	10.16
54	I	1,4-difluorobenzene	1.000	1.000	0.0	135	-0.01	10.67
55	S	1,2-dichloroethane-d4 (s)	0.375	0.358	4.5	131	-0.01	10.18
56		n-butyl alcohol	0.012	0.013	-8.3	145	0.00	10.69
57		2,2,4-trimethylpentane	1.240	1.305	-5.2	144	-0.01	10.40
58		benzene	1.518	1.556	-2.5	139	0.00	10.28
59		tert-amyl methyl ether	1.385	1.265	8.7	126	0.00	10.37
60		heptane	0.203	0.230	-13.3	151	0.00	10.56
61		1,2-dichloroethane	0.534	0.469	12.2	123	0.00	10.27
62		ethyl acrylate	0.391	0.359	8.2	126	0.00	10.98
63		trichloroethene	0.377	0.369	2.1	134	-0.01	11.01
64		2-chloroethyl vinyl ether	0.198	0.205	-3.5	135	-0.01	11.81
65		methyl methacrylate	0.085	0.077	9.4	122	0.00	11.25
66		methylcyclohexane	0.644	0.679	-5.4	146	0.00	11.36
67		1,2-dichloropropane	0.377	0.401	-6.4	143	0.00	11.30
68		dibromomethane	0.218	0.215	1.4	130	0.00	11.41
69		bromodichloromethane	0.505	0.502	0.6	133	0.00	11.56
70		2-nitropropane	0.079	0.073	7.6	130	0.00	11.74
71		epichlorohydrin	0.036	0.039	-8.3	145	-0.01	11.89
72		cis-1,3-dichloropropene	0.608	0.615	-1.2	135	-0.01	12.05
73		4-methyl-2-pentanone	0.131	0.138	-5.3	139	0.00	12.15
74		isoamyl alcohol	0.010	0.011	-10.0	135	0.00	12.14
75	I	chlorobenzene-d5	1.000	1.000	0.0	129	-0.01	14.08
76	S	toluene-d8 (s)	1.219	1.248	-2.4	131	-0.01	12.41
77		toluene	0.956	0.981	-2.6	134	0.00	12.49
78		ethyl methacrylate	0.453	0.445	1.8	123	-0.01	12.67
79		trans-1,3-dichloropropene	0.556	0.562	-1.1	130	-0.01	12.66
80		1,1,2-trichloroethane	0.255	0.266	-4.3	135	-0.01	12.91
81		tetrachloroethene	0.312	0.316	-1.3	133	0.00	13.12
82		2-hexanone	0.115	0.125	-8.7	134	0.00	13.09
83		1,3-dichloropropane	0.549	0.559	-1.8	130	0.00	13.11
84		butyl acetate	0.235	0.248	-5.5	134	-0.01	13.19
85		dibromochloromethane	0.359	0.361	-0.6	130	-0.01	13.39
86		1,2-dibromoethane	0.396	0.349	11.9	112	-0.01	13.57
87		n-butyl ether	1.743	1.830	-5.0	135	0.00	14.10
88		chlorobenzene	1.108	1.077	2.8	126	-0.01	14.12
89		1,1,1,2-tetrachloroethane	0.426	0.418	1.9	128	-0.01	14.19
90		ethylbenzene	1.895	1.934	-2.1	133	-0.01	14.20
91		m,p-xylene	0.722	0.738	-2.2	133	-0.01	14.33
92		o-xylene	1.587	1.630	-2.7	133	0.00	14.79
93		styrene	1.230	1.229	0.1	126	-0.01	14.79
94		butyl acrylate	0.744	0.737	0.9	125	0.00	14.59
95		n-amyl acetate	0.315	0.317	-0.6	131	-0.01	14.82

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VD10656-CC10606
Account: BBLNYS Arcadis **Lab FileID:** D264404.D
Project: National Grid, Philly Coke, Philadelphia, PA

96		isopropylbenzene	1.852	1.989	-7.4	140	-0.01	15.19
97		bromoform	0.259	0.249	3.9	124	-0.01	15.04
98		cis-1,4-dichloro-2-butene	0.172	0.155	9.9	121	0.00	15.19
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	120	-0.01	16.73
100	S	4-bromofluorobenzene (s)	0.926	0.910	1.7	121	0.00	15.41
101		1,1,2,2-tetrachloroethane	0.773	0.817	-5.7	131	-0.01	15.46
102		trans-1,4-dichloro-2-bute	0.193	0.204	-5.7	124	0.00	15.51
103		1,2,3-trichloropropane	0.223	0.223	0.0	120	0.00	15.57
104		bromobenzene	0.876	0.869	0.8	124	-0.01	15.61
105		n-propylbenzene	3.463	4.048	-16.9	144	-0.01	15.66
106		2-chlorotoluene	0.776	0.825	-6.3	131	-0.01	15.80
107		4-chlorotoluene	2.286	2.489	-8.9	133	0.00	15.93
108		1,3,5-trimethylbenzene	2.646	3.042	-15.0	142	-0.01	15.84
109		tert-butylbenzene	2.053	2.330	-13.5	142	0.00	16.22
110		1,2,4-trimethylbenzene	2.639	3.067	-16.2	140	0.00	16.28
111		sec-butylbenzene	3.024	3.546	-17.3	143	-0.01	16.47
112		p-isopropyltoluene	2.517	3.014	-19.7	142	0.00	16.62
113		1,3-dichlorobenzene	1.531	1.670	-9.1	133	-0.01	16.65
114		1,4-dichlorobenzene	1.588	1.687	-6.2	129	0.00	16.76
115		1,2-dichlorobenzene	1.534	1.687	-10.0	133	0.00	17.17
116		benzyl chloride	1.490	1.757	-17.9	137	-0.01	16.85
117		n-butylbenzene	1.176	1.459	-24.1#	142	0.00	17.08
118		2-ethylhexyl acrylate	0.248	0.216	12.9	323#	0.00	18.98
119		hexachloroethane	0.391	0.474	-21.2#	153	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.138	0.148	-7.2	123	-0.01	18.01
121		1,3,5-trichlorobenzene	1.032	1.216	-17.8	138	0.00	18.25
		----------	True	Calc.	% Drift	----------		
122		1,2,4-trichlorobenzene	20.000	20.495	-2.5	140	-0.01	18.97
		----------	AvgRF	CCRF	% Dev	----------		
123		hexachlorobutadiene	0.470	0.497	-5.7	127	-0.01	19.13
		----------	True	Calc.	% Drift	----------		
124		naphthalene	20.000	19.385	3.1	136	-0.01	19.31
125		1,2,3-trichlorobenzene	20.000	19.866	0.7	136	-0.01	19.58
		----------	AvgRF	CCRF	% Dev	----------		
126		2-methylnaphthalene	0.447	0.333	25.5#	145	-0.01	20.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
d263016.D MD10606.M Thu May 09 23:44:08 2019

6.10.15

6

Initial Calibration Summary

Job Number: JC87093
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: JC87093 **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)
```

```
      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: JC87093 **Sample:** VI8986-ICC8986
Account: BBLNYS Arcadis **Lab FileID:** I223181.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
 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: JC87093 **Sample:** VI8986-ICC8986
Account: BBLNYS Arcadis **Lab FileID:** I223181.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
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: JC87093
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: JC87093 **Sample:** VI8986-ICV8986
Account: BBLNYS Arcadis **Lab FileID:** I223186.D
Project: National Grid, Philly Coke, Philadelphia, PA

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

Initial Calibration Verification

Job Number: JC87093 **Sample:** VI8986-ICV8986
Account: BBLNYS Arcadis **Lab FileID:** I223186.D
Project: National Grid, Philly Coke, Philadelphia, PA

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

6.10.17 6

Initial Calibration Verification

Job Number: JC87093
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: JC87093
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: JC87093
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: JC87093 **Sample:** VI9105-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I226017.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\ke...ay 8\vi9105\i226017.d Vial: 3
Acq On    :  7 May 2019   7:55 am                    Operator: thienn
Sample    : cc8986-20                                Inst    : GCMSI
Misc      : MS34332,VI9105,5,,100,5,1                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	68	-0.03	7.35
2		tertiary butyl alcohol	1.035	1.165	-12.6	77	-0.04	7.47
3		1,4-dioxane	0.116	0.130	-12.1	74	-0.03	11.28
4	I	pentafluorobenzene	1.000	1.000	0.0	81	-0.03	9.69
5		dichlorodifluoromethane	0.437	0.593	-35.7#	106	0.00	3.89
6		chlorodifluoromethane	0.412	0.438	-6.3	84	0.00	3.92
7		chloromethane	0.404	0.418	-3.5	90	-0.01	4.28
8		vinyl chloride	0.341	0.370	-8.5	85	-0.01	4.52
9		1,3-butadiene	0.238	0.229	3.8	76	-0.01	4.61
10		bromomethane	0.227	0.252	-11.0	91	0.00	5.18
11		chloroethane	0.206	0.206	0.0	76	-0.01	5.39
12		vinyl bromide	0.263	0.309	-17.5	91	-0.01	5.73
13		trichlorofluoromethane	0.521	0.617	-18.4	93	-0.01	5.86
14		ethyl ether	0.148	0.132	10.8	69	-0.02	6.30
15		2-chloropropane	0.120	0.120	0.0	73	-0.02	6.50
16		acrolein	0.048	0.047	2.1	86	-0.02	6.49
17		freon 113	0.255	0.269	-5.5	81	-0.02	6.71
18		1,1-dichloroethene	0.465	0.469	-0.9	79	-0.02	6.71
19		acetone	0.084	0.082	2.4	76	-0.02	6.69
		----------	True	Calc.	% Drift	----------		
20		iodomethane	20.000	16.064	19.7	74	-0.02	6.96
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide	1.002	0.858	14.4	71	-0.02	7.11
22		acetonitrile	0.042	0.033	21.4#	61	-0.02	7.09
		----------	True	Calc.	% Drift	----------		
23		methyl acetate	20.000	16.146	19.3	68	-0.02	7.19
		----------	AvgRF	CCRF	% Dev	----------		
24		methylene chloride	0.345	0.320	7.2	78	-0.02	7.42
25		acrylonitrile	0.099	0.081	18.2	68	-0.02	7.70
26		methyl tert butyl ether	0.817	0.821	-0.5	79	-0.02	7.80
27		trans-1,2-dichloroethene	0.444	0.448	-0.9	79	-0.02	7.84
28		hexane	0.535	0.398	25.6#	59	-0.02	8.22
29		1,1-dichloroethane	0.566	0.558	1.4	78	-0.03	8.41
30		vinyl acetate	0.054	0.047	13.0	73	-0.02	8.36
31		di-isopropyl ether	1.004	0.856	14.7	67	-0.02	8.43
32		chloroprene	0.478	0.486	-1.7	77	-0.02	8.52
33		ethyl tert-butyl ether	0.969	0.906	6.5	74	-0.02	8.89

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VI9105-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I226017.D
Project: National Grid, Philly Coke, Philadelphia, PA

34		2-butanone	0.032	0.028	12.5	69	-0.03	9.06
35		2,2-dichloropropane	0.491	0.572	-16.5	90	-0.03	9.16
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	20.000	14.818	25.9#	59	-0.02	9.10
		----------	AvgRF	CCRF	% Dev	----------		
37		cis-1,2-dichloroethene	0.365	0.355	2.7	78	-0.03	9.13
38		propionitrile	0.046	0.042	8.7	70	-0.03	9.11
		----------	True	Calc.	% Drift	----------		
39		methyl acrylate	20.000	16.893	15.5	72	-0.02	9.18
		----------	AvgRF	CCRF	% Dev	----------		
40		methacrylonitrile	0.117	0.104	11.1	73	-0.03	9.32
41		bromochloromethane	0.164	0.172	-4.9	80	-0.02	9.43
42		tetrahydrofuran	0.036	0.036	0.0	80	-0.02	9.47
43		chloroform	0.586	0.624	-6.5	83	-0.03	9.52
44		carbon tetrachloride	0.479	0.542	-13.2	87	-0.03	10.00
45		1,1-dichloropropene	0.441	0.441	0.0	80	-0.03	9.97
46		isobutyl alcohol		----------NA----------				
47	S	dibromofluoromethane (s)	0.393	0.415	-5.6	84	-0.03	9.71
48		1,1,1-trichloroethane	0.523	0.605	-15.7	90	-0.03	9.79
49		cyclohexane	0.461	0.432	6.3	73	-0.02	9.92
		----------	True	Calc.	% Drift	----------		
50		tert-amyl alcohol	100.000	98.829	1.2	84	-0.03	10.07
		----------	AvgRF	CCRF	% Dev	----------		
51	I	1,4-difluorobenzene	1.000	1.000	0.0	81	-0.02	10.63
52	S	1,2-dichloroethane-d4 (s)	0.312	0.369	-18.3	94	-0.03	10.13
53		isopropyl acetate	0.045	0.041	8.9	72	-0.02	10.12
54		1,2-dichloroethane	0.328	0.390	-18.9	96	-0.03	10.22
55		benzene	0.977	0.959	1.8	76	-0.03	10.21
56		2,2,4-trimethylpentane	1.000	0.802	19.8	62	-0.03	10.33
57		tert-amyl methyl ether	0.167	0.170	-1.8	78	-0.02	10.31
58		heptane	0.209	0.154	26.3#	56	-0.02	10.50
59		n-butyl alcohol	0.008	0.008	0.0	70	-0.03	10.66
60		trichloroethene	0.262	0.262	0.0	79	-0.03	10.95
61		ethyl acrylate	0.277	0.239	13.7	70	-0.02	10.93
62		methylcyclohexane	0.443	0.368	16.9	65	-0.02	11.26
63		1,2-dichloropropane	0.250	0.217	13.2	70	-0.03	11.22
64		methyl methacrylate	0.059	0.053	10.2	74	-0.03	11.19
65		dibromomethane	0.146	0.148	-1.4	79	-0.03	11.33
66		bromodichloromethane	0.346	0.377	-9.0	86	-0.03	11.48
67		2-nitropropane	0.060	0.067	-11.7	92	-0.03	11.66
68		2-chloroethyl vinyl ether	0.146	0.134	8.2	71	-0.03	11.72
69		epichlorohydrin	0.024	0.023	4.2	75	-0.03	11.79
70		cis-1,3-dichloropropene	0.391	0.386	1.3	75	-0.02	11.95
71		4-methyl-2-pentanone	0.078	0.070	10.3	70	-0.03	12.03
72		3-methyl-1-butanol	0.007	0.006	14.3	71	-0.03	12.03
73	I	chlorobenzene-d5	1.000	1.000	0.0	80	-0.03	13.76
74	S	toluene-d8 (s)	1.282	1.274	0.6	79	-0.02	12.26
75		toluene	0.692	0.709	-2.5	79	-0.03	12.33
76		trans-1,3-dichloropropene	0.416	0.455	-9.4	83	-0.02	12.50
77		ethyl methacrylate	0.314	0.285	9.2	68	-0.02	12.51
78		1,1,2-trichloroethane	0.203	0.193	4.9	74	-0.03	12.72
79		1,3-dichloropropane	0.370	0.367	0.8	74	-0.03	12.90

Continuing Calibration Summary

Job Number: JC87093 **Sample:** VI9105-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I226017.D
Project: National Grid, Philly Coke, Philadelphia, PA

80		tetrachloroethene	0.347	0.381	-9.8	84	-0.02	12.90
81		2-hexanone	0.091	0.080	12.1	68	-0.02	12.89
82		butyl acetate	0.158	0.133	15.8	64	-0.02	12.98
83		n-butyl ether	1.143	0.869	24.0#	60	-0.02	13.77
84		dibromochloromethane	0.317	0.342	-7.9	83	-0.03	13.15
85		1,2-dibromoethane	0.276	0.283	-2.5	79	-0.03	13.30
86		chlorobenzene	0.737	0.784	-6.4	81	-0.03	13.79
87		1,1,1,2-tetrachloroethane	0.293	0.313	-6.8	85	-0.03	13.85
88		ethylbenzene	1.289	1.293	-0.3	78	-0.02	13.86
89		m,p-xylene	0.507	0.514	-1.4	78	-0.03	13.98
90		o-xylene	0.505	0.500	1.0	79	-0.02	14.38
91		styrene	0.848	0.849	-0.1	79	-0.03	14.39
92		butyl acrylate	0.484	0.420	13.2	67	-0.02	14.21
93		cis-1,4-dichloro-2-butene	0.124	0.148	-19.4	91	-0.02	14.75
94		bromoform	0.223	0.248	-11.2	87	-0.03	14.61
95		isopropylbenzene	1.271	1.257	1.1	75	-0.02	14.73
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	77	-0.02	16.11
97	S	4-bromofluorobenzene (s)	0.762	0.809	-6.2	83	-0.03	14.93
98		1,1,2,2-tetrachloroethane	0.517	0.499	3.5	74	-0.03	14.99
99		trans-1,4-dichloro-2-bute	0.135	0.147	-8.9	86	-0.03	15.02
100		1,2,3-trichloropropane	0.133	0.147	-10.5	82	-0.03	15.08
101		bromobenzene	0.617	0.671	-8.8	82	-0.02	15.11
102		n-propylbenzene	2.563	2.532	1.2	74	-0.03	15.15
103		2-chlorotoluene	0.538	0.554	-3.0	79	-0.02	15.28
104		4-chlorotoluene	1.532	1.654	-8.0	81	-0.03	15.39
105		1,3,5-trimethylbenzene	1.928	1.989	-3.2	77	-0.02	15.31
106		tert-butylbenzene	0.357	0.347	2.8	72	-0.02	15.65
107		1,2,4-trimethylbenzene	1.976	2.013	-1.9	77	-0.03	15.70
108		sec-butylbenzene	2.485	2.359	5.1	73	-0.03	15.87
109		p-isopropyltoluene	2.157	2.139	0.8	74	-0.03	16.00
110		benzyl chloride	1.210	1.261	-4.2	78	-0.03	16.22
111		1,3-dichlorobenzene	1.178	1.291	-9.6	82	-0.03	16.04
112		1,4-dichlorobenzene	1.203	1.315	-9.3	82	-0.03	16.13
113		1,2-dichlorobenzene	1.153	1.234	-7.0	79	-0.03	16.51
114		n-butylbenzene	1.122	1.106	1.4	73	-0.02	16.43
115		hexachloroethane	0.430	0.489	-13.7	86	-0.02	16.84
116		1,2-dibromo-3-chloropropa	0.160	0.161	-0.6	80	-0.03	17.30
117		nitrobenzene	0.055	0.052	5.5	74	-0.03	17.49
118		1,3,5-trichlorobenzene	1.171	1.277	-9.1	81	-0.03	17.52
119		1,2,4-trichlorobenzene	1.053	1.107	-5.1	76	-0.03	18.17
120		2-ethylhexyl acrylate	0.859	0.788	8.3	67	-0.03	18.20
121		hexachlorobutadiene	0.693	0.766	-10.5	85	-0.02	18.31
122		naphthalene	2.037	2.096	-2.9	78	-0.03	18.46
123		1,2,3-trichlorobenzene	1.036	1.036	0.0	75	-0.03	18.68
124		2-methylnaphthalene	0.726	1.016	-39.9#	109	-0.03	19.56

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I223180.D MI8986.M Wed May 08 02:50:02 2019

6.10.19

6

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264334.d
Acq On : 7 May 2019 7:56 pm
Operator : thienn
Sample : JC87093-1 Inst : MSD
Misc : ms34369,vd10652,5.4,,10,10,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 01:10:14 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

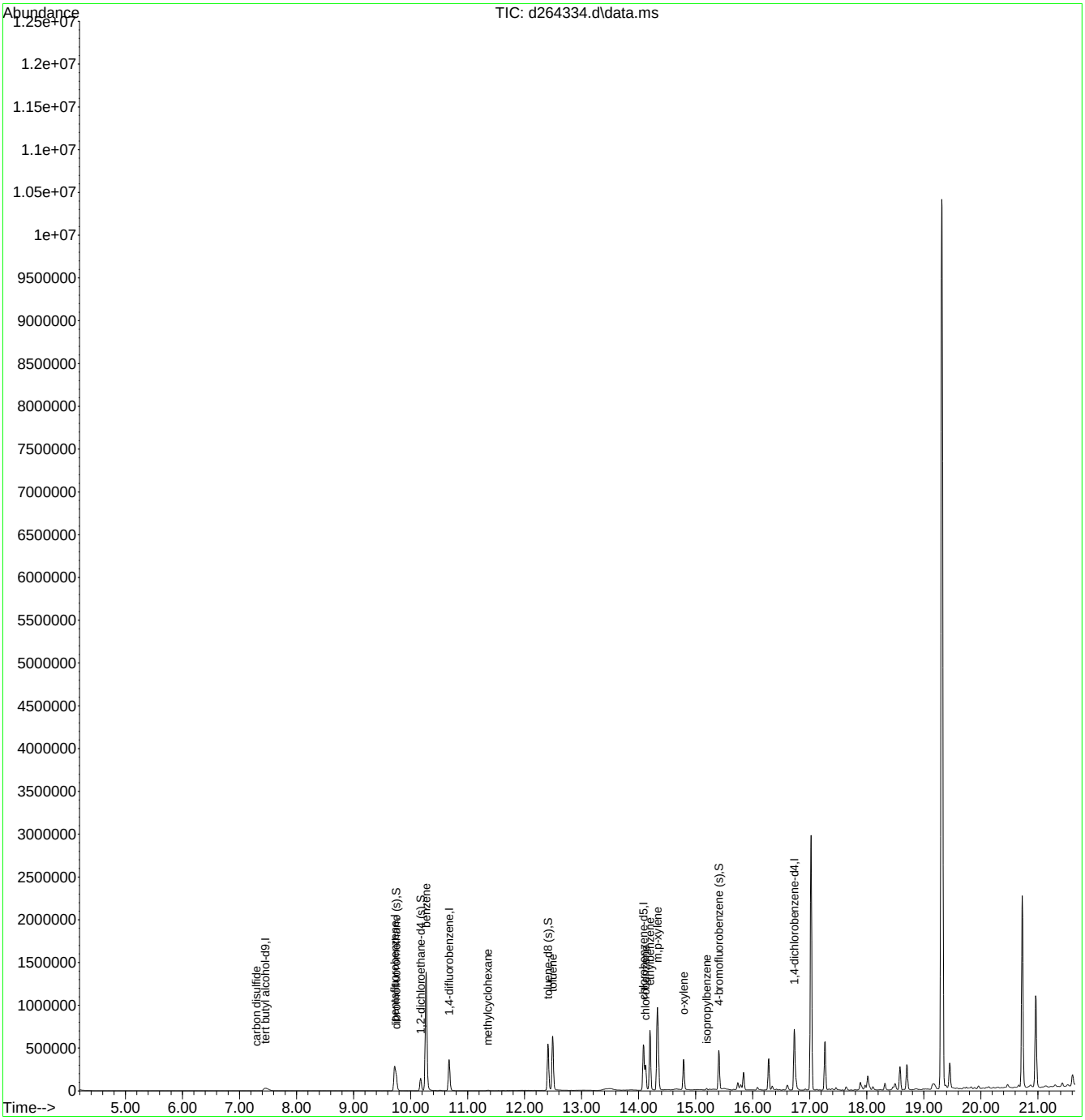
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.452	65	111108	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	215668	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	323691	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	325044	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	202227	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	102037	50.14	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.28%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	111081	45.78	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 91.56%			
76) toluene-d8 (s)	12.410	98	389605	49.15	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.30%			
100) 4-bromofluorobenzene (s)	15.407	95	172580	46.06	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 92.12%			
Target Compounds						Qvalue
23) carbon disulfide	7.295	76	4470	0.52	ug/L	78
58) benzene	10.271	78	1399977	142.44	ug/L	96
66) methylcyclohexane	11.354	83	2736	0.66	ug/L	100
77) toluene	12.494	92	302629	48.67	ug/L	98
88) chlorobenzene	14.120	112	169044	23.48	ug/L	98
90) ethylbenzene	14.199	91	539993	43.83	ug/L	99
91) m,p-xylene	14.330	106	370753	78.97	ug/L	99
92) o-xylene	14.790	91	228240	22.13	ug/L	90
96) isopropylbenzene	15.193	105	14761	1.23	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

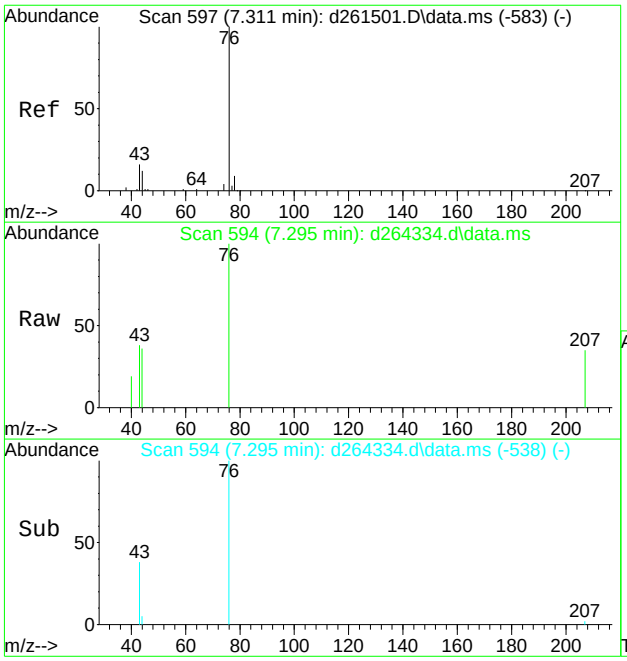
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264334.d
Acq On : 7 May 2019 7:56 pm
Operator : thienn
Sample : JC87093-1 Inst : MSD
Misc : ms34369,vd10652,5.4,,10,10,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 01:10:14 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



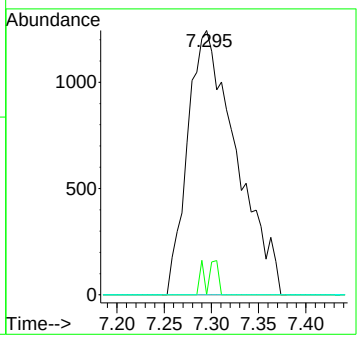
MD10606.M Wed May 08 01:18:02 2019 Page: 2

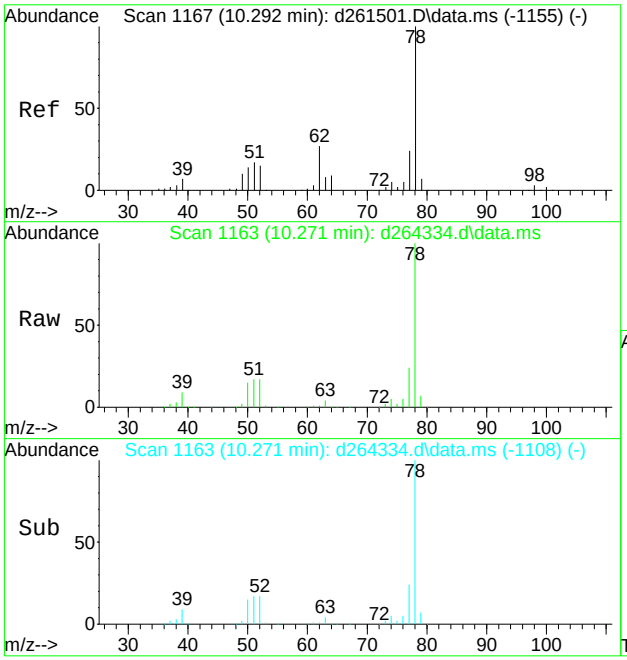


#23
carbon disulfide
Concen: 0.52 ug/L
RT: 7.295 min Scan# 594
Delta R.T. -0.005 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion: 76 Resp: 4470

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.5
38	0.0	0.0	34.3

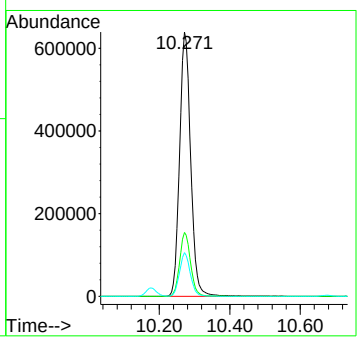


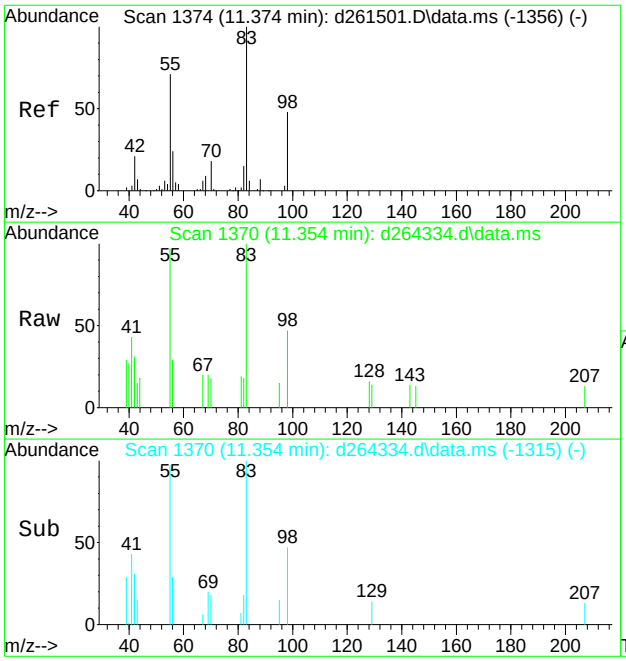


#58
benzene
Concen: 142.44 ug/L
RT: 10.271 min Scan# 1163
Delta R.T. -0.010 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion: 78 Resp: 1399977

Ion	Ratio	Lower	Upper
78	100		
77	24.1	0.0	53.8
51	16.5	0.0	50.1

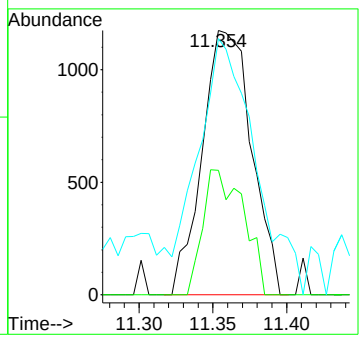


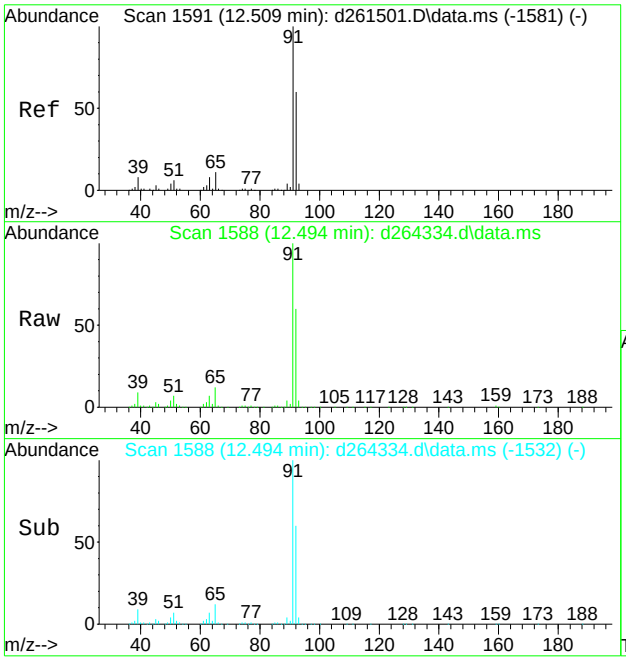


#66
methylcyclohexane
Concen: 0.66 ug/L
RT: 11.354 min Scan# 1370
Delta R.T. -0.010 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion: 83 Resp: 2736

Ion	Ratio	Lower	Upper
83	100		
98	47.1	27.3	67.3
55	78.9	59.4	99.4

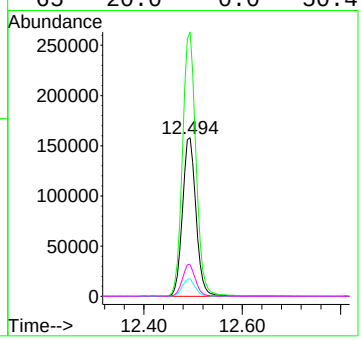


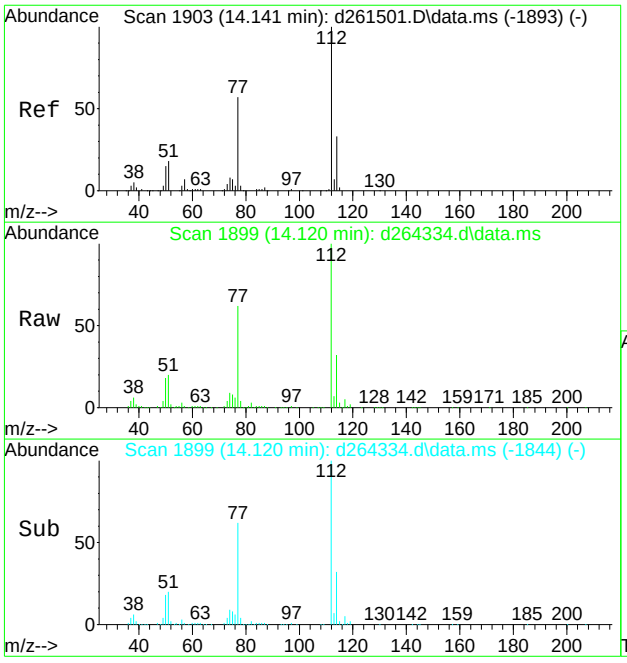


#77
toluene
Concen: 48.67 ug/L
RT: 12.494 min Scan# 1588
Delta R.T. -0.005 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion: 92 Resp: 302629

Ion	Ratio	Lower	Upper
92	100		
91	166.5	149.2	189.2
51	11.1	0.0	42.2
65	20.0	0.0	50.4

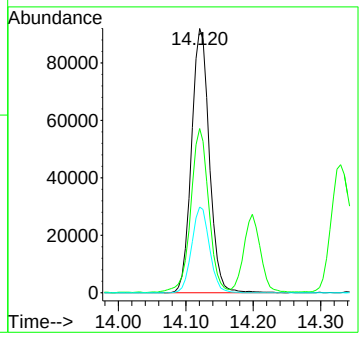


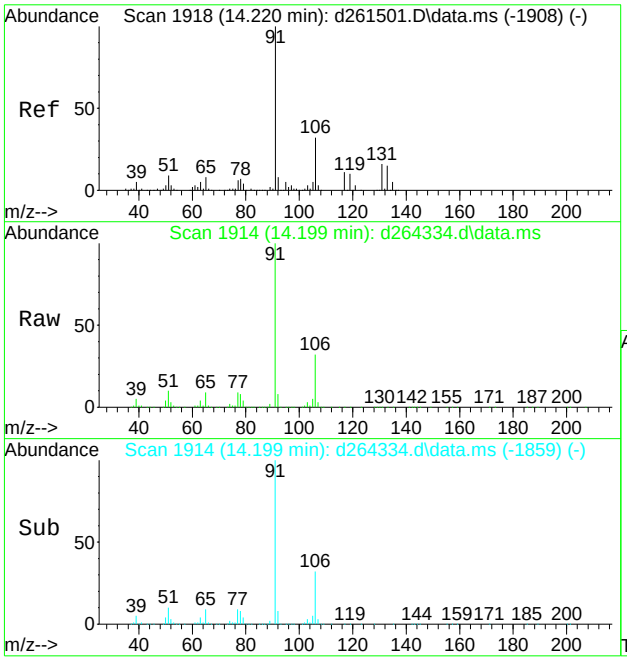


#88
chlorobenzene
Concen: 23.48 ug/L
RT: 14.120 min Scan# 1899
Delta R.T. -0.010 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion:112 Resp: 169044

Ion	Ratio	Lower	Upper
112	100		
77	61.8	29.2	89.2
114	32.4	2.2	62.2

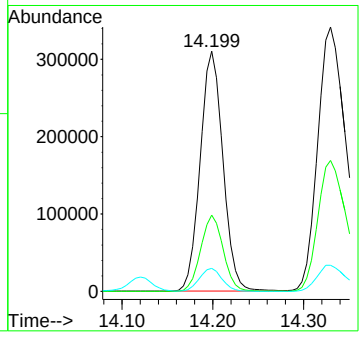


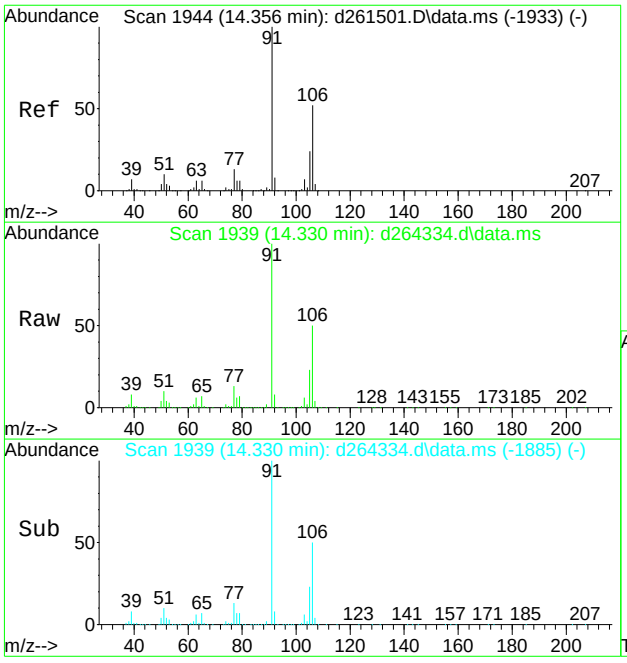


#90
ethylbenzene
Concen: 43.83 ug/L
RT: 14.199 min Scan# 1914
Delta R.T. -0.010 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion: 91 Resp: 539993

Ion	Ratio	Lower	Upper
91	100		
106	31.8	1.2	61.2
51	9.6	0.0	40.0

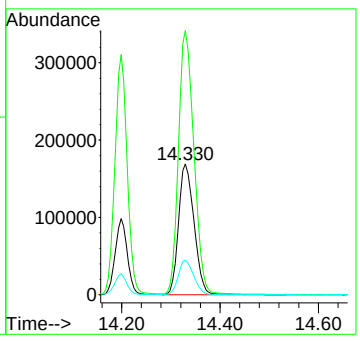


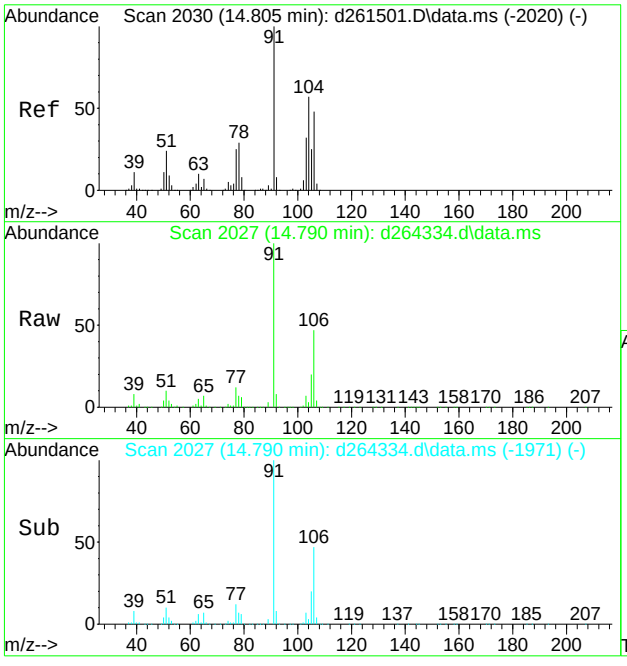


#91
m,p-xylene
Concen: 78.97 ug/L
RT: 14.330 min Scan# 1939
Delta R.T. -0.015 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion:106 Resp: 370753

Ion	Ratio	Lower	Upper
106	100		
91	201.4	173.0	233.0
77	26.1	0.0	57.4

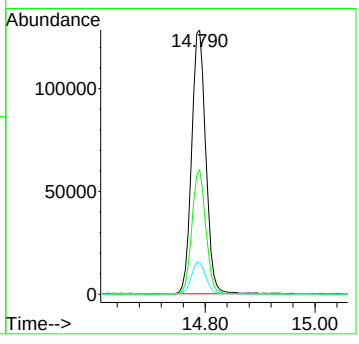


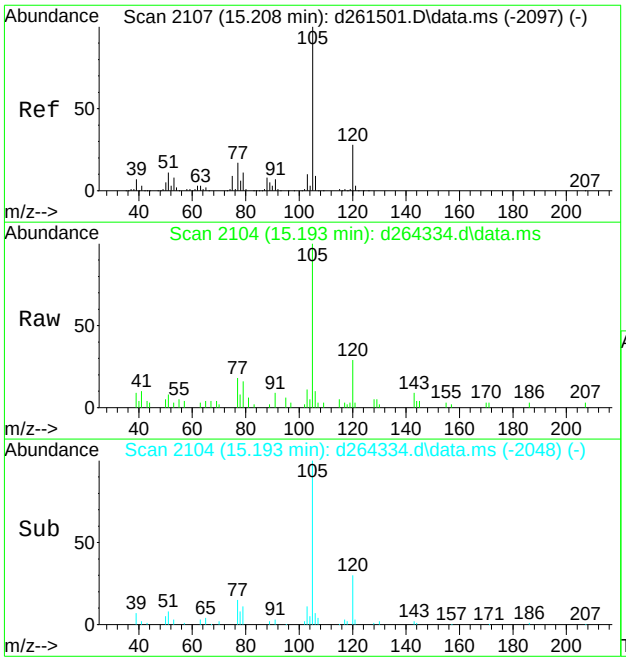


#92
o-xylene
Concen: 22.13 ug/L
RT: 14.790 min Scan# 2027
Delta R.T. -0.005 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion: 91 Resp: 228240

Ion	Ratio	Lower	Upper
91	100		
106	47.4	16.5	76.5
77	11.9	0.0	55.2

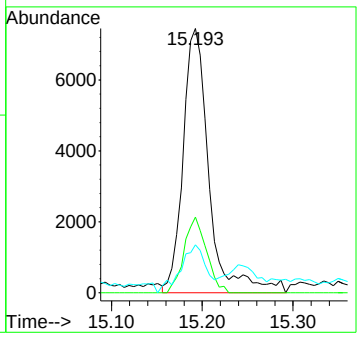




#96
isopropylbenzene
Concen: 1.23 ug/L
RT: 15.193 min Scan# 2104
Delta R.T. -0.005 min
Lab File: d264334.d
Acq: 7 May 2019 7:56 pm

Tgt Ion:105 Resp: 14761

Ion	Ratio	Lower	Upper
105	100		
120	28.6	7.0	47.0
77	15.5	0.0	38.6



7.1.1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151778.d
Acq On : 5 May 2019 4:12 pm
Operator : mariceld
Sample : jc87093-2 Inst : MS3C
Misc : MS34369,V3C6820,4.8,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 20:10:16 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

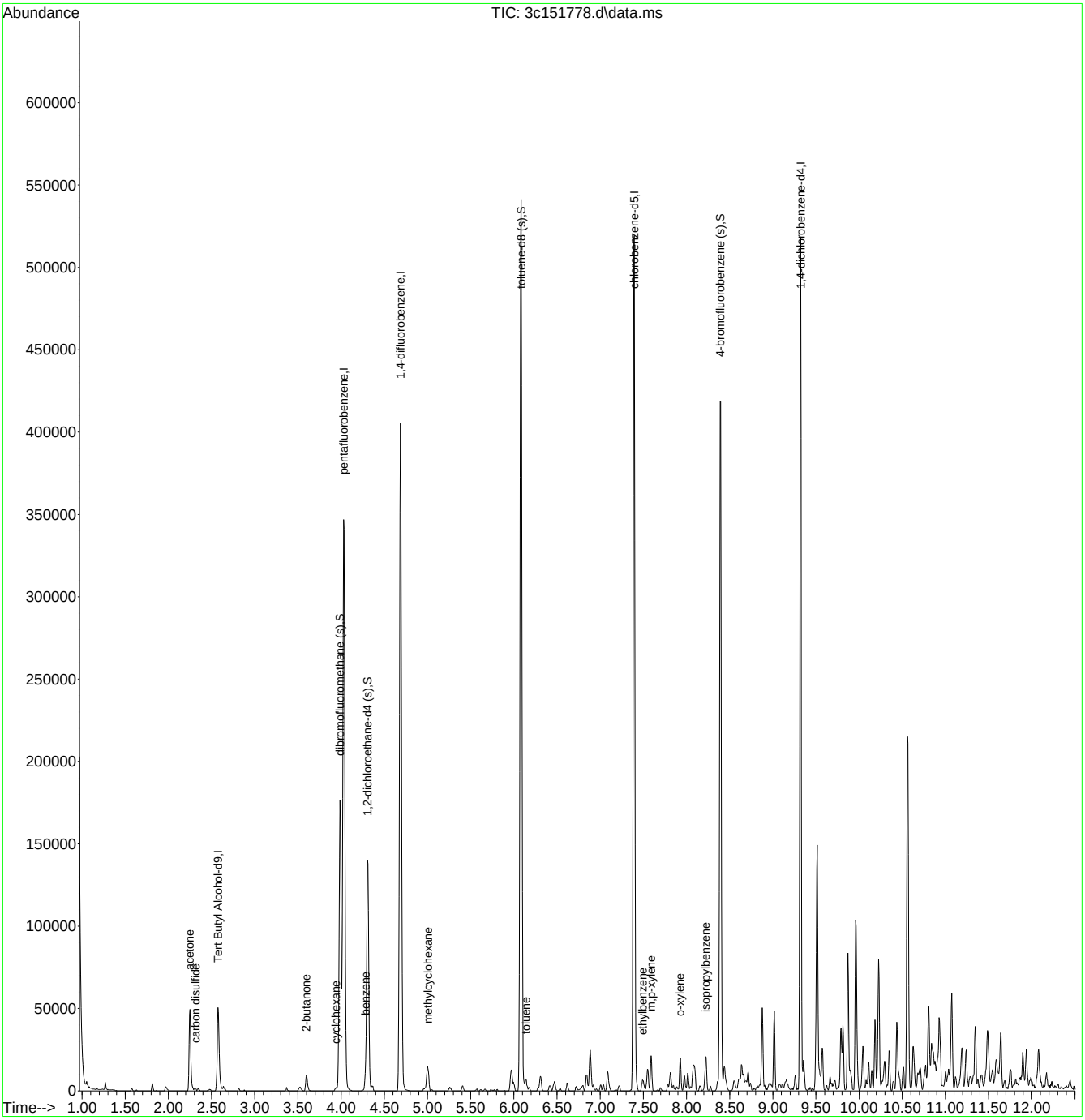
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	49267	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	221673	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	299669	50.00	ug/L	0.00
74) chlorobenzene-d5	7.396	117	241284	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	105060	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	84135	52.53	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 105.06%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	89843	55.18	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 110.36%			
75) toluene-d8 (s)	6.084	98	321528	53.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.68%			
98) 4-bromofluorobenzene (s)	8.390	95	109638	63.47	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 126.94%			
Target Compounds						Qvalue
20) acetone	2.245	58	13556	196.28	ug/L	98
23) carbon disulfide	2.313	76	1746	0.50	ug/L	69
31) 2-butanone	3.594	72	3280	30.15	ug/L #	45
48) cyclohexane	3.939	84	824	0.36	ug/L #	64
57) benzene	4.284	78	8332	1.51	ug/L	96
67) methylcyclohexane	5.006	83	6772	2.42	ug/L	96
76) toluene	6.141	92	2481	0.72	ug/L #	84
89) ethylbenzene	7.491	91	2056	0.31	ug/L	91
90) m,p-xylene	7.590	106	3840	1.46	ug/L	92
91) o-xylene	7.925	91	9584	1.82	ug/L	97
95) isopropylbenzene	8.223	105	9030	1.34	ug/L	91

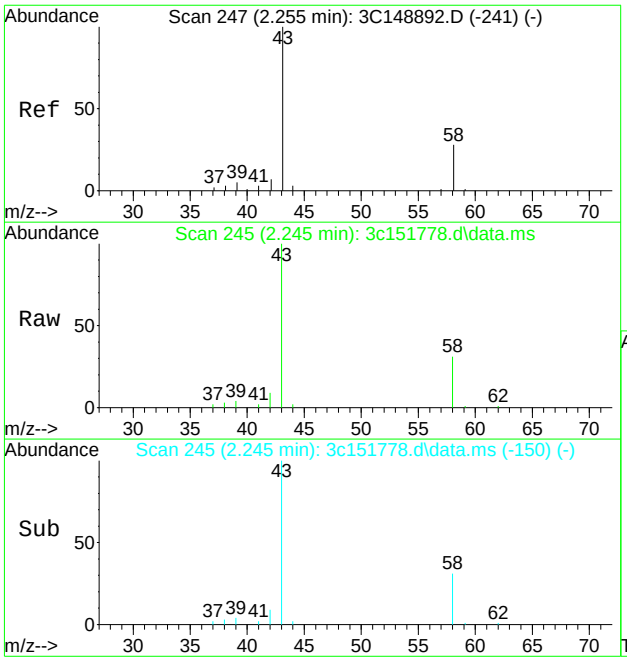
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151778.d
Acq On : 5 May 2019 4:12 pm
Operator : mariceld
Sample : jc87093-2 Inst : MS3C
Misc : MS34369,V3C6820,4.8,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 20:10:16 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

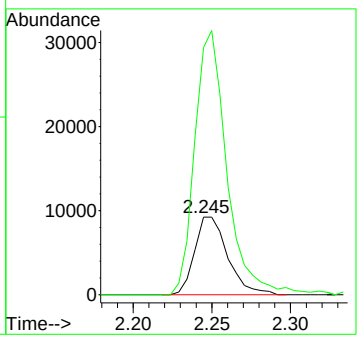


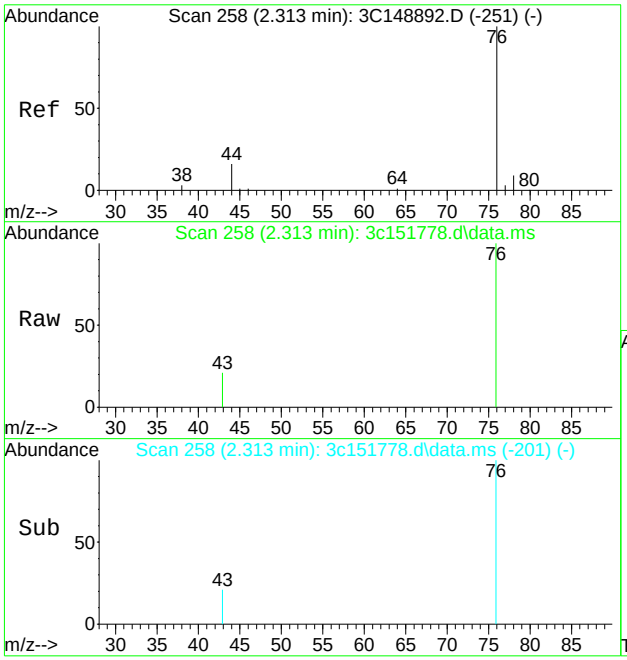


#20
acetone
Concen: 196.28 ug/L
RT: 2.245 min Scan# 245
Delta R.T. -0.005 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 58 Resp: 13556

Ion	Ratio	Lower	Upper
58	100		
43	318.2	284.5	344.5

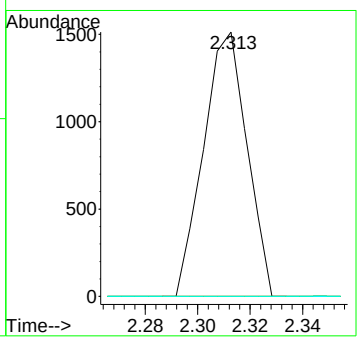


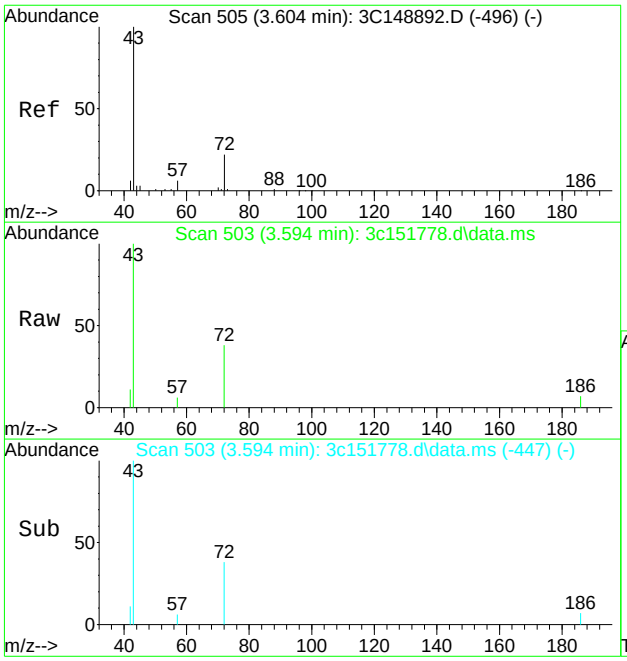


#23
carbon disulfide
Concen: 0.50 ug/L
RT: 2.313 min Scan# 258
Delta R.T. 0.000 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 76 Resp: 1746

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

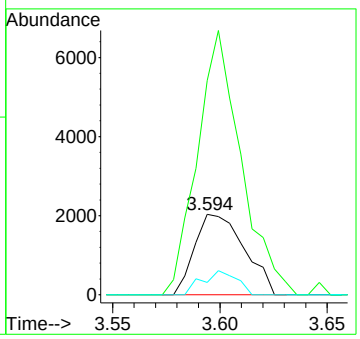


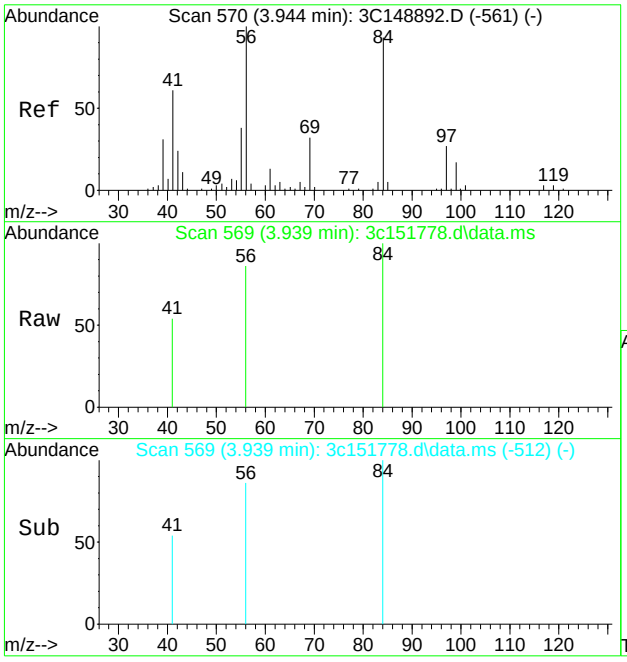


#31
2-butanone
Concen: 30.15 ug/L
RT: 3.594 min Scan# 503
Delta R.T. -0.005 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 72 Resp: 3280

Ion	Ratio	Lower	Upper
72	100		
43	266.1	372.9	432.9#
57	15.4	0.0	59.6

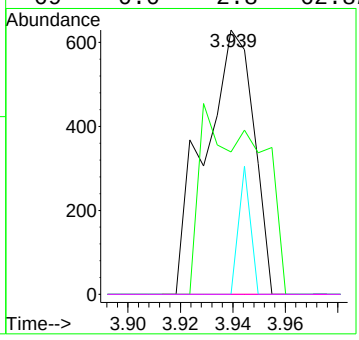




#48
cyclohexane
Concen: 0.36 ug/L
RT: 3.939 min Scan# 569
Delta R.T. 0.000 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

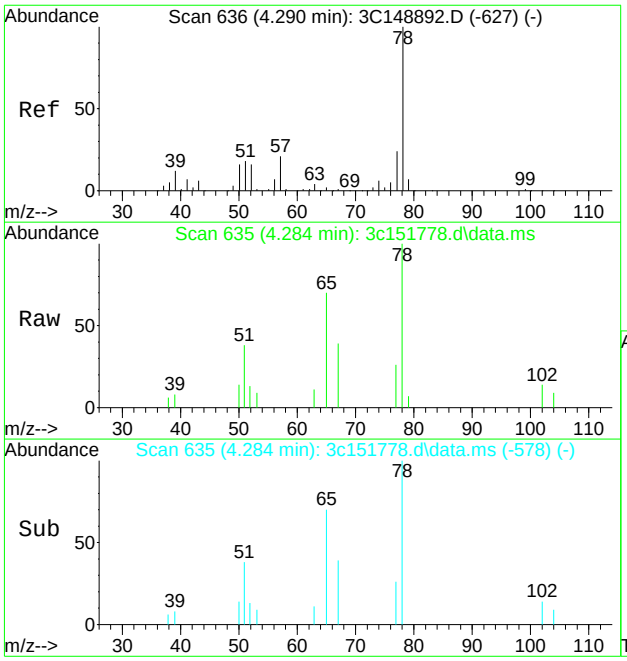
Tgt Ion: 84 Resp: 824

Ion	Ratio	Lower	Upper
84	100		
41	53.8	29.0	89.0
55	0.0	7.6	67.6#
69	0.0	2.8	62.8#



7.1.2

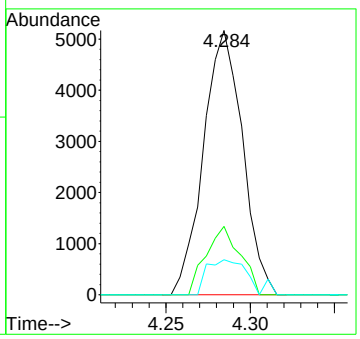
7

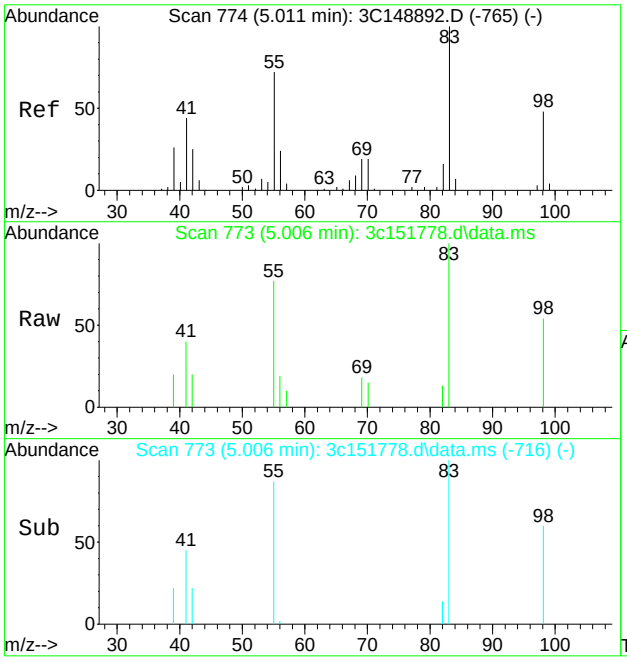


#57
benzene
Concen: 1.51 ug/L
RT: 4.284 min Scan# 635
Delta R.T. 0.000 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 78 Resp: 8332

Ion	Ratio	Lower	Upper
78	100		
77	25.9	0.0	54.0
52	13.3	0.0	44.9

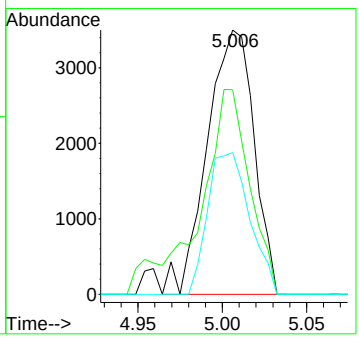


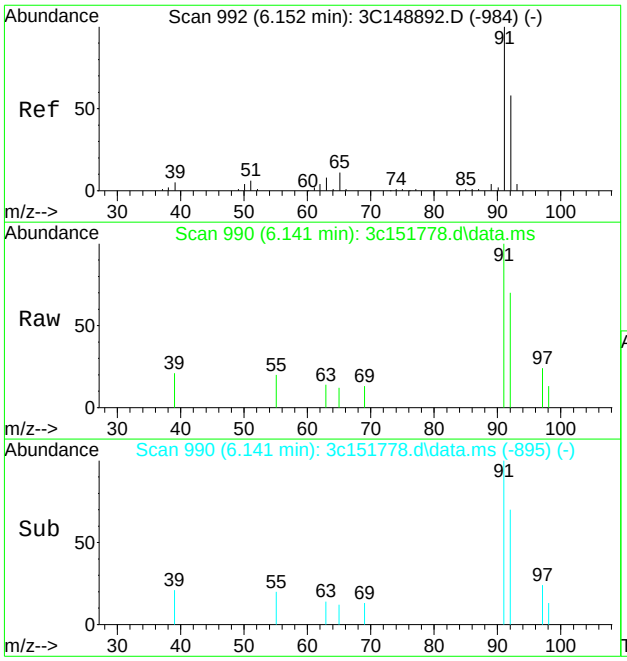


#67
methylcyclohexane
Concen: 2.42 ug/L
RT: 5.006 min Scan# 773
Delta R.T. 0.000 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 83 Resp: 6772

Ion	Ratio	Lower	Upper
83	100		
55	77.4	42.2	102.2
98	53.6	22.5	82.5

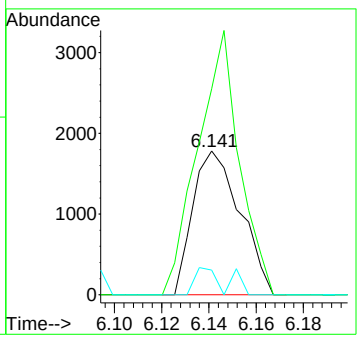


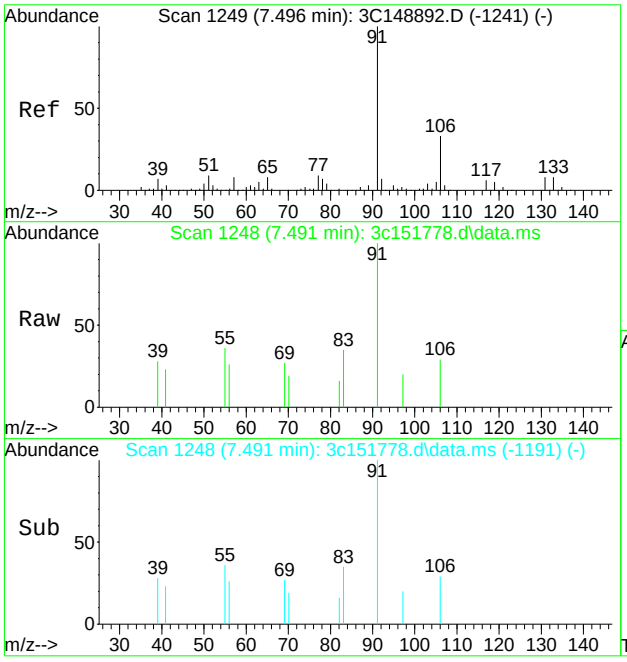


#76
toluene
Concen: 0.72 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 92 Resp: 2481

Ion	Ratio	Lower	Upper
92	100		
91	143.2	147.5	187.5#
65	17.2	0.0	38.2

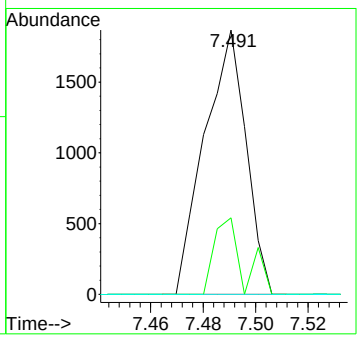


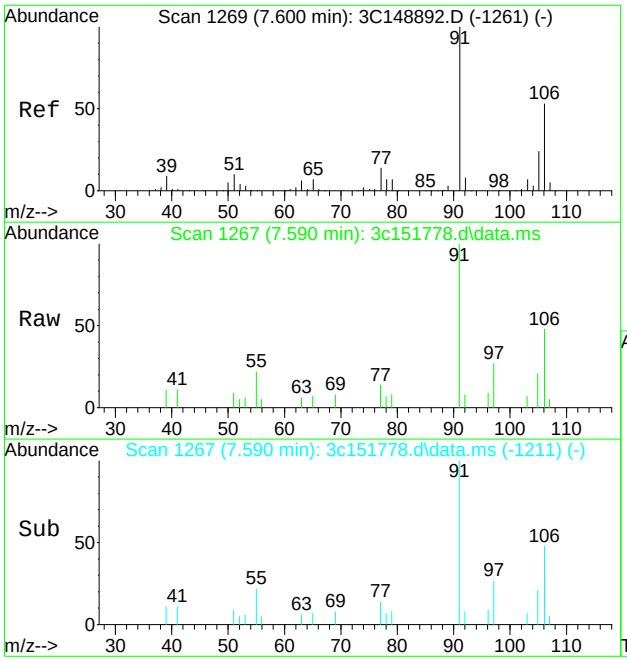


#89
ethylbenzene
Concen: 0.31 ug/L
RT: 7.491 min Scan# 1248
Delta R.T. 0.000 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 91 Resp: 2056

Ion	Ratio	Lower	Upper
91	100		
106	28.9	2.2	62.2
77	0.0	0.0	38.4

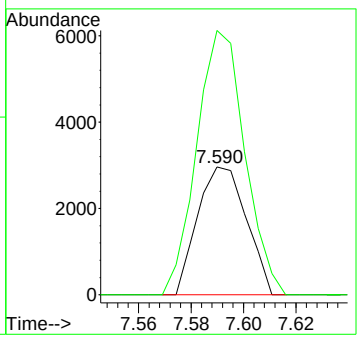


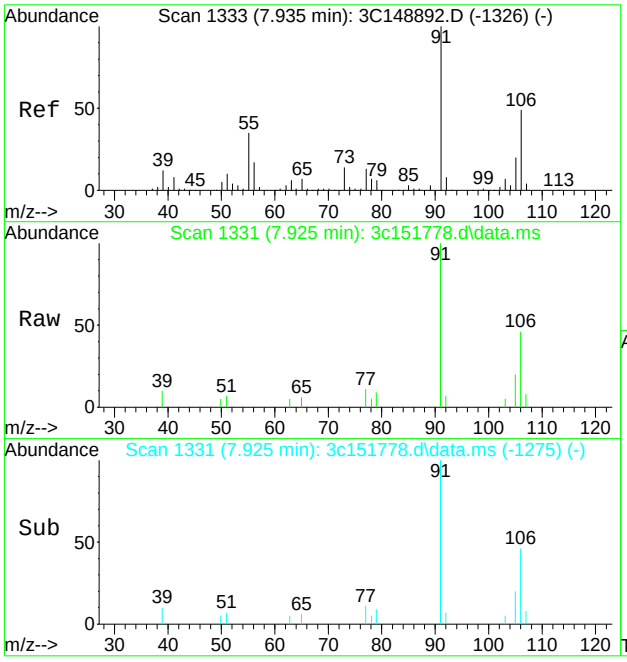


#90
m,p-xylene
Concen: 1.46 ug/L
RT: 7.590 min Scan# 1267
Delta R.T. -0.005 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion:106 Resp: 3840

Ion	Ratio	Lower	Upper
106	100		
91	207.0	164.8	224.8

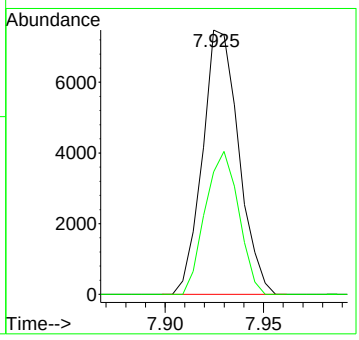


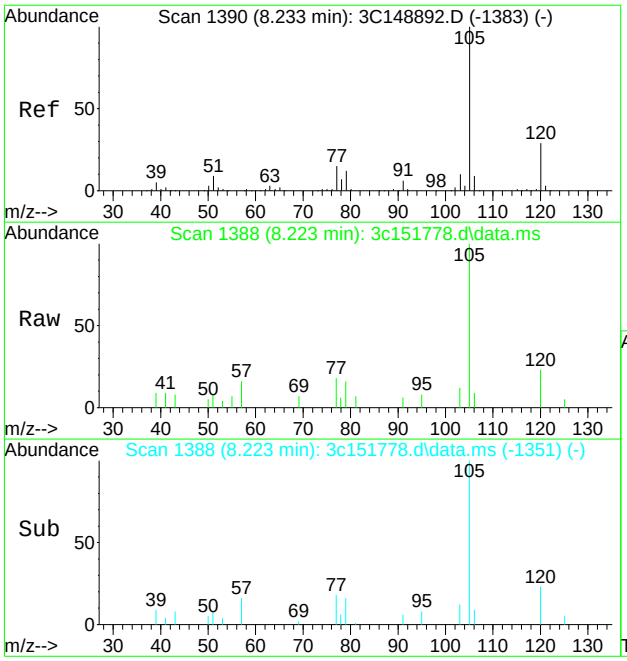


#91
o-xylene
Concen: 1.82 ug/L
RT: 7.925 min Scan# 1331
Delta R.T. -0.005 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion: 91 Resp: 9584

Ion	Ratio	Lower	Upper
91	100		
106	46.4	18.3	78.3

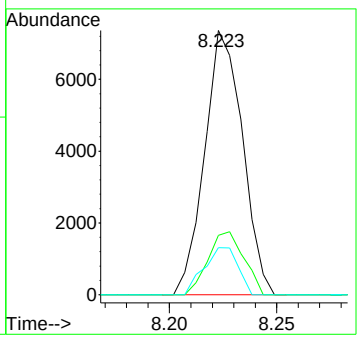




#95
isopropylbenzene
Concen: 1.34 ug/L
RT: 8.223 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 3c151778.d
Acq: 5 May 2019 4:12 pm

Tgt Ion:105 Resp: 9030

Ion	Ratio	Lower	Upper
105	100		
120	22.5	7.6	47.6
77	17.9	0.0	35.1



7.1.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264411.d
Acq On : 9 May 2019 10:20 am
Operator : thienn
Sample : JC87093-3 Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:56:04 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

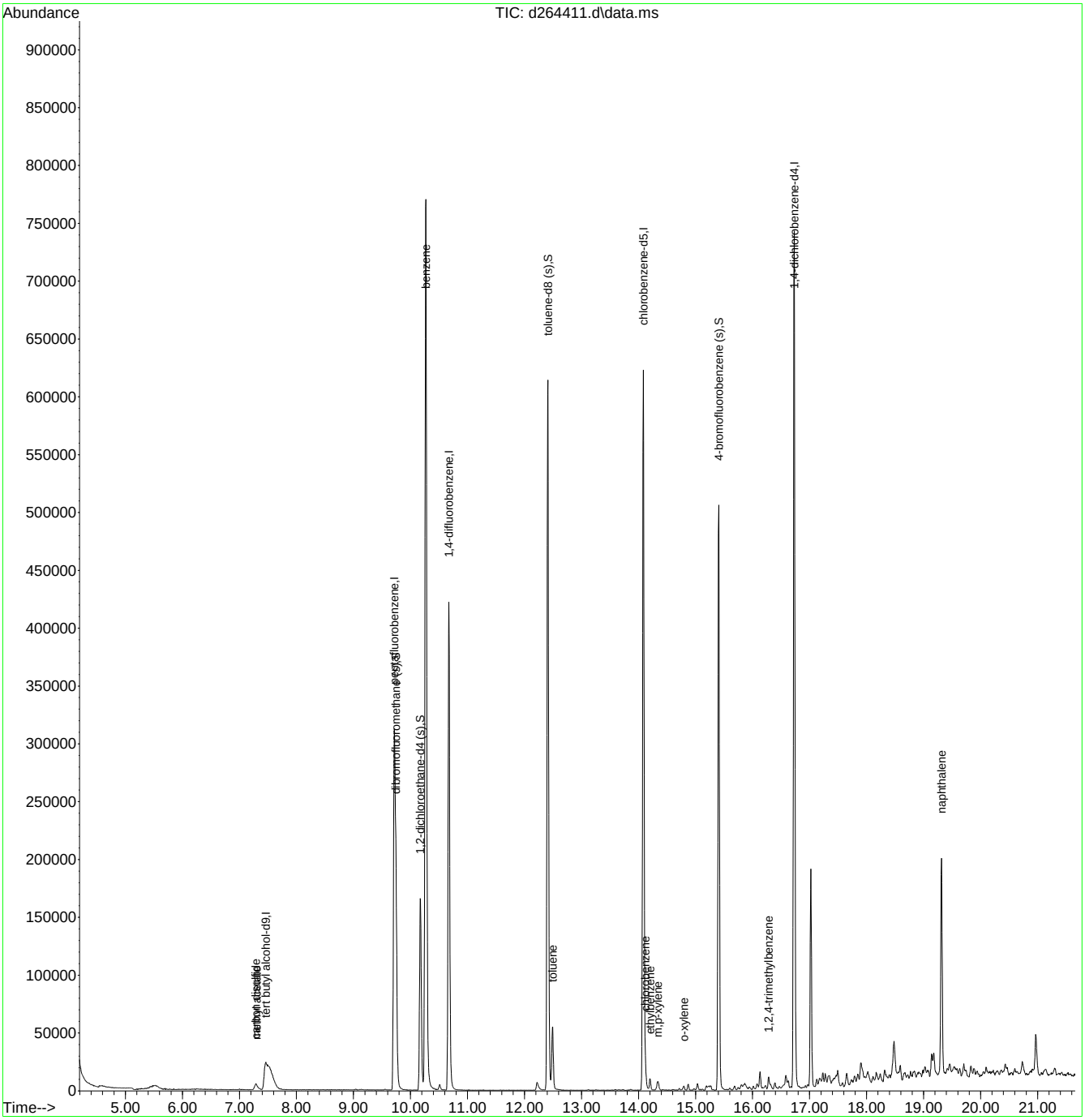
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.462	65	124339	500.00	ug/L	-0.01
5) pentafluorobenzene	9.716	168	229282	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.674	114	363444	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	361454	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	207733	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.743	113	110558	51.11	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.22%			
55) 1,2-dichloroethane-d4 (s)	10.171	65	128868	47.30	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 94.60%			
76) toluene-d8 (s)	12.410	98	440976	50.03	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.06%			
100) 4-bromofluorobenzene (s)	15.407	95	187740	48.77	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.54%			
Target Compounds						Qvalue
23) carbon disulfide	7.290	76	11737	1.27	ug/L	95
25) methyl acetate	7.300	43	4193	2.66	ug/L	84
58) benzene	10.271	78	778041	70.50	ug/L	96
77) toluene	12.494	92	25439	3.68	ug/L	96
88) chlorobenzene	14.120	112	8089	1.01	ug/L	99
90) ethylbenzene	14.204	91	8046	0.59	ug/L	97
91) m,p-xylene	14.335	106	3533	0.68	ug/L	97
92) o-xylene	14.795	91	2801	0.24	ug/L	93
110) 1,2,4-trimethylbenzene	16.280	105	7065	0.64	ug/L	94
124) naphthalene	19.314	128	175707	21.36	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

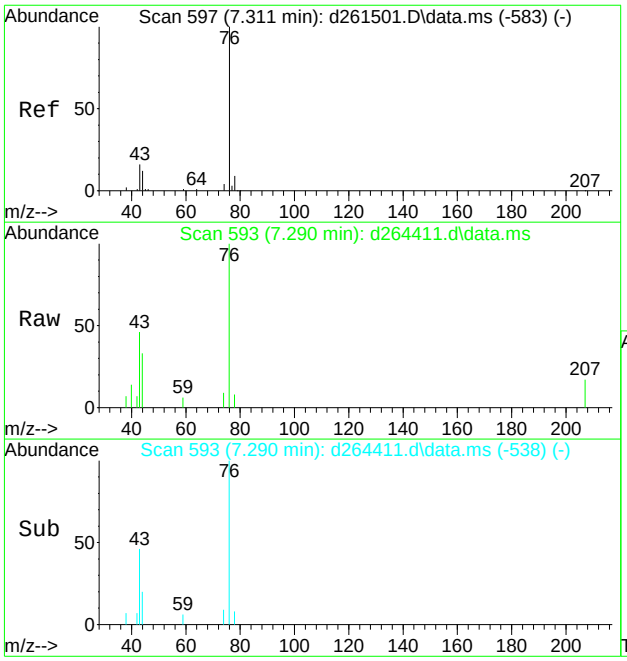
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264411.d
Acq On : 9 May 2019 10:20 am
Operator : thienn
Sample : JC87093-3 Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:56:04 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



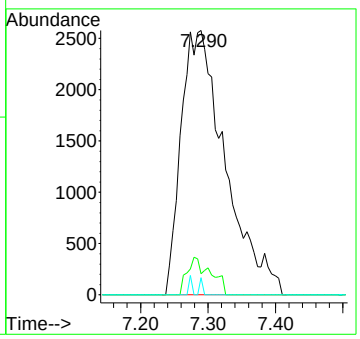
MD10606.M Fri May 10 00:23:57 2019 Page: 2

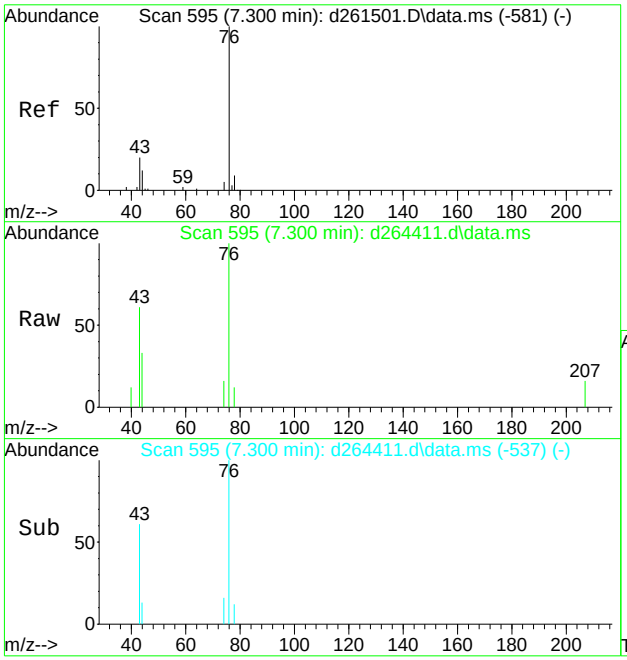


#23
carbon disulfide
Concen: 1.27 ug/L
RT: 7.290 min Scan# 593
Delta R.T. -0.010 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion: 76 Resp: 11737

Ion	Ratio	Lower	Upper
76	100		
78	8.0	0.0	39.5
38	6.5	0.0	34.3

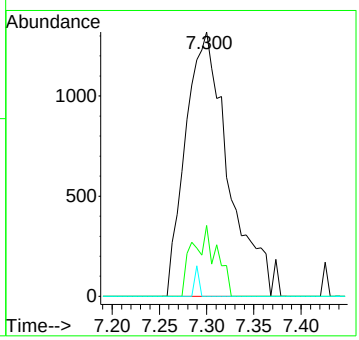


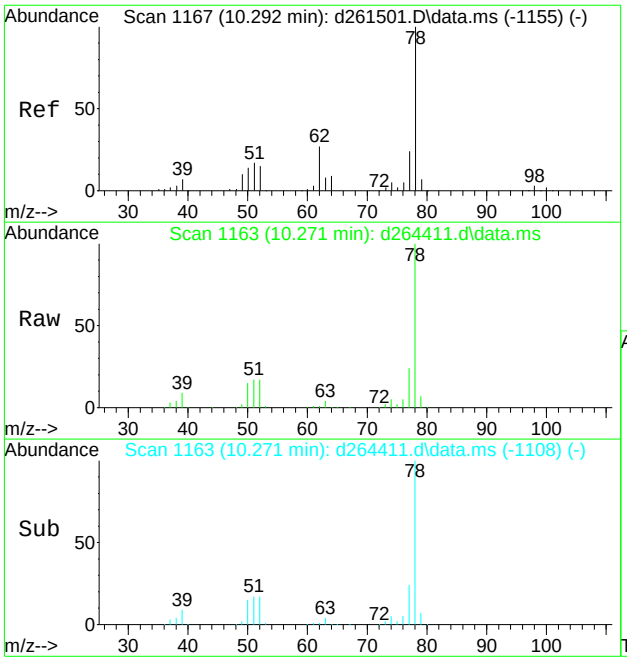


#25
methyl acetate
Concen: 2.66 ug/L
RT: 7.300 min Scan# 595
Delta R.T. 0.005 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion: 43 Resp: 4193

Ion	Ratio	Lower	Upper
43	100		
74	26.8	0.0	50.5
59	0.0	0.0	37.9

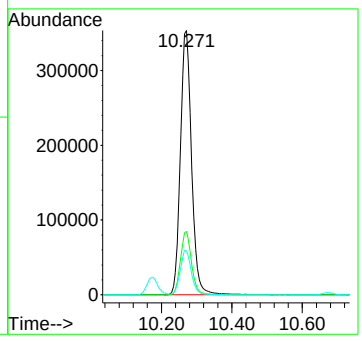


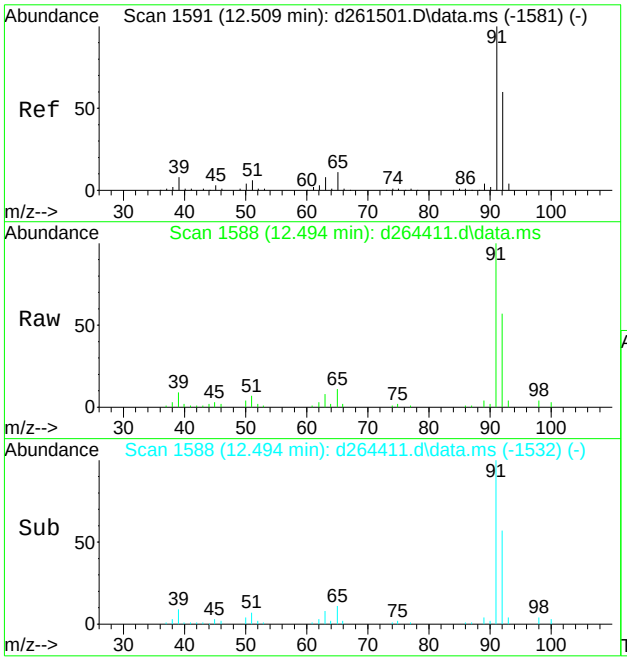


#58
benzene
Concen: 70.50 ug/L
RT: 10.271 min Scan# 1163
Delta R.T. -0.010 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion: 78 Resp: 778041

Ion	Ratio	Lower	Upper
78	100		
77	24.0	0.0	53.8
51	16.6	0.0	50.1

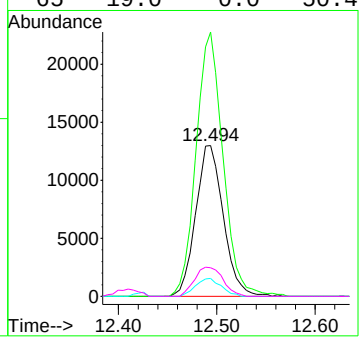


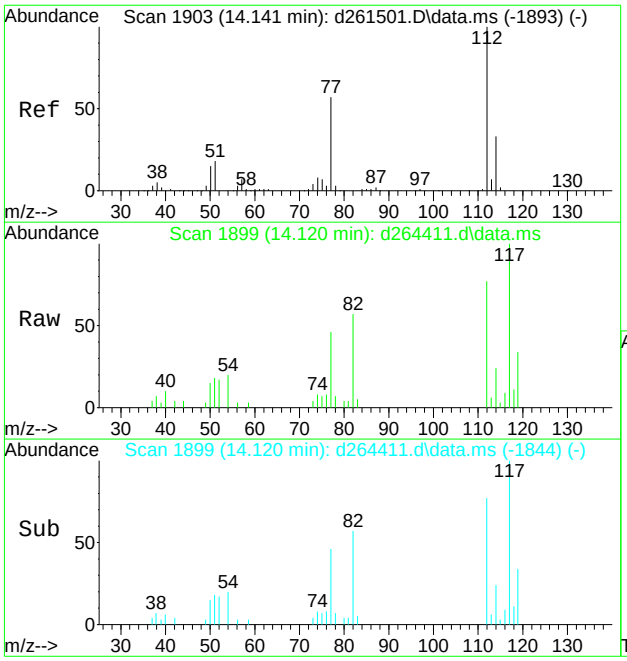


#77
toluene
Concen: 3.68 ug/L
RT: 12.494 min Scan# 1588
Delta R.T. -0.005 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion: 92 Resp: 25439

Ion	Ratio	Lower	Upper
92	100		
91	175.2	149.2	189.2
51	11.9	0.0	42.2
65	19.0	0.0	50.4

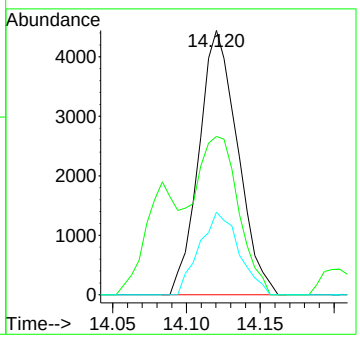


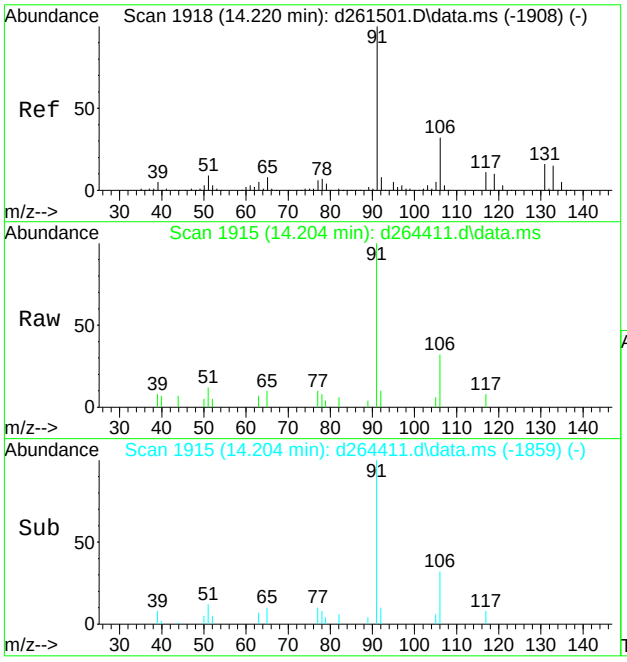


#88
chlorobenzene
Concen: 1.01 ug/L
RT: 14.120 min Scan# 1899
Delta R.T. -0.010 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion:112 Resp: 8089

Ion	Ratio	Lower	Upper
112	100		
77	59.9	29.2	89.2
114	31.3	2.2	62.2

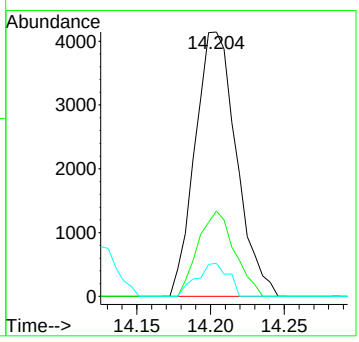


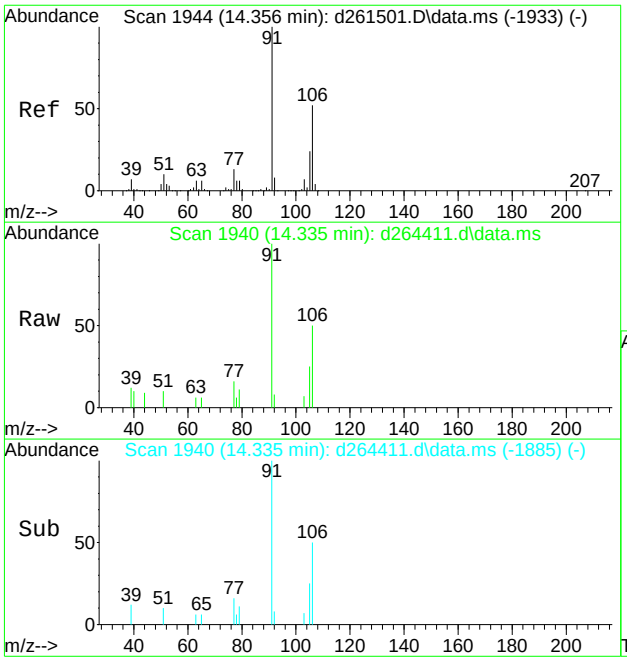


#90
ethylbenzene
Concen: 0.59 ug/L
RT: 14.204 min Scan# 1915
Delta R.T. -0.005 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion: 91 Resp: 8046

Ion	Ratio	Lower	Upper
91	100		
106	32.2	1.2	61.2
51	12.5	0.0	40.0

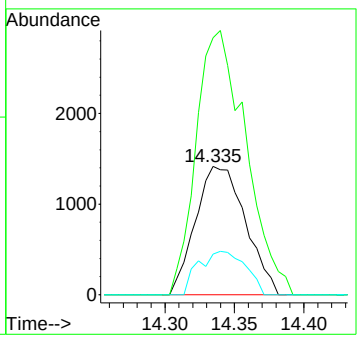


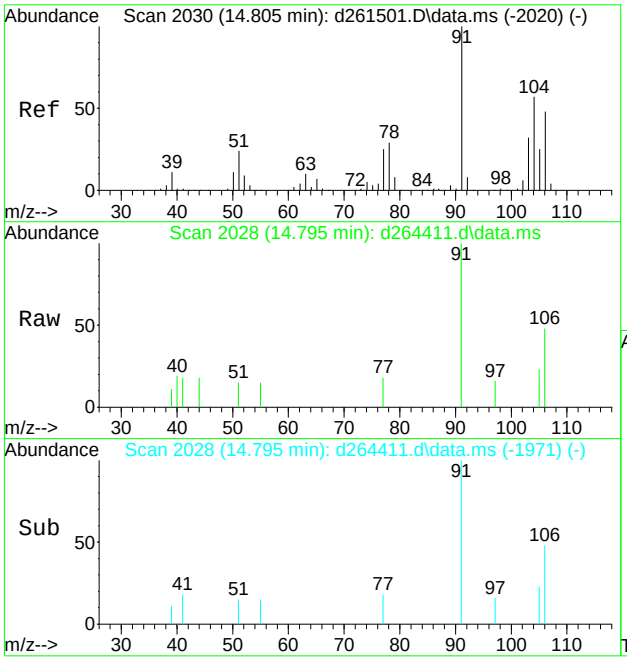


#91
m,p-xylene
Concen: 0.68 ug/L
RT: 14.335 min Scan# 1940
Delta R.T. -0.010 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion:106 Resp: 3533

Ion	Ratio	Lower	Upper
106	100		
91	200.3	173.0	233.0
77	31.8	0.0	57.4

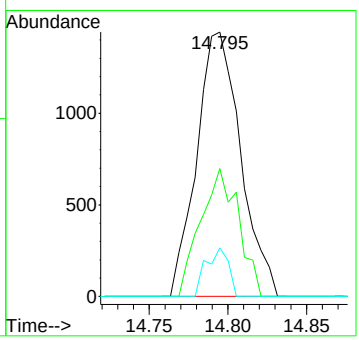


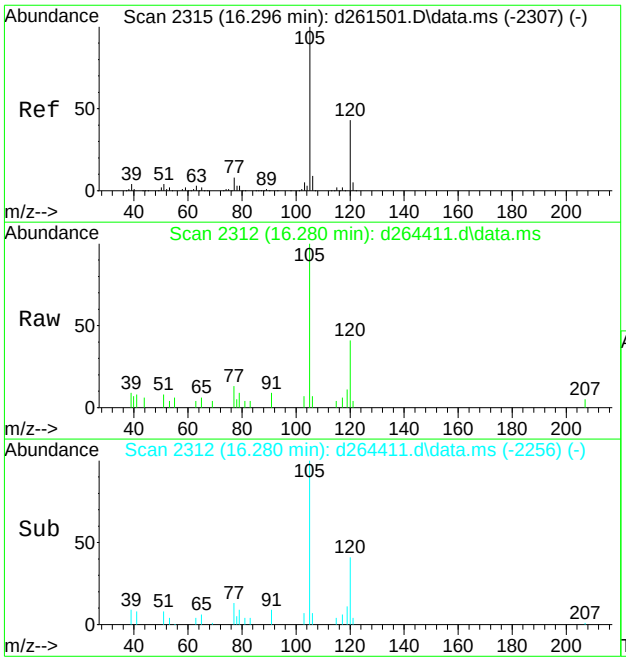


#92
o-xylene
Concen: 0.24 ug/L
RT: 14.795 min Scan# 2028
Delta R.T. 0.000 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion: 91 Resp: 2801

Ion	Ratio	Lower	Upper
91	100		
106	48.3	16.5	76.5
77	18.4	0.0	55.2

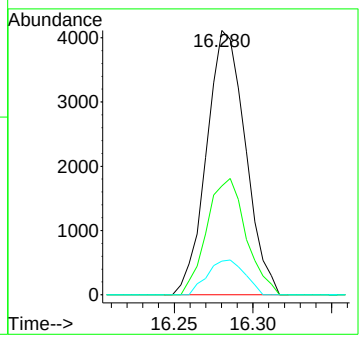


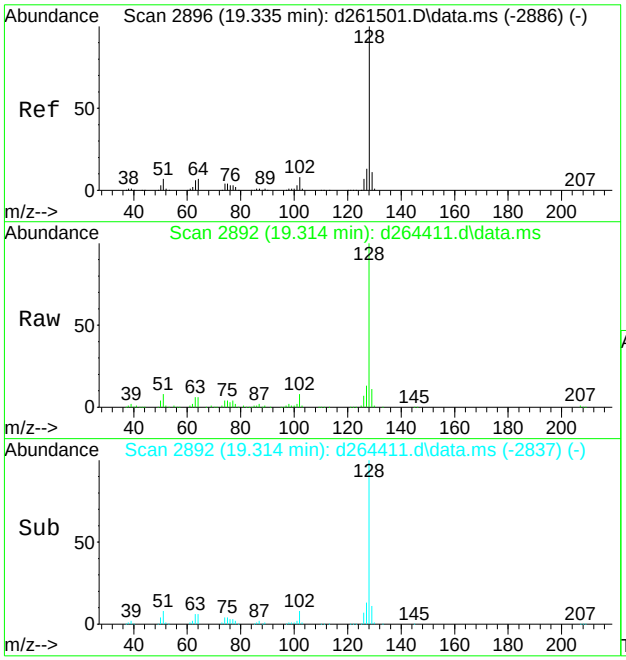


#110
1,2,4-trimethylbenzene
Concen: 0.64 ug/L
RT: 16.280 min Scan# 2312
Delta R.T. -0.005 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion:105 Resp: 7065

Ion	Ratio	Lower	Upper
105	100		
120	41.1	16.4	76.4
77	12.7	0.0	42.6

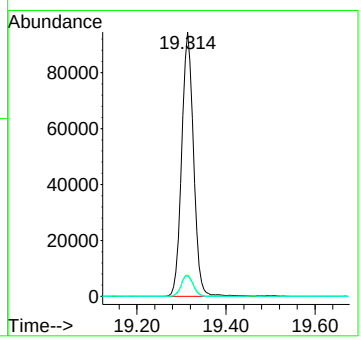




#124
naphthalene
Concen: 21.36 ug/L
RT: 19.314 min Scan# 2892
Delta R.T. -0.010 min
Lab File: d264411.d
Acq: 9 May 2019 10:20 am

Tgt Ion:128 Resp: 175707

Ion	Ratio	Lower	Upper
128	100		
102	8.1	0.0	38.5
51	7.7	0.0	36.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164349.d
Acq On : 7 May 2019 7:23 pm
Operator : PrashanS
Sample : JC87093-4 Inst : GCMS1C
Misc : MS34369,V1C7213,4.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:18:47 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

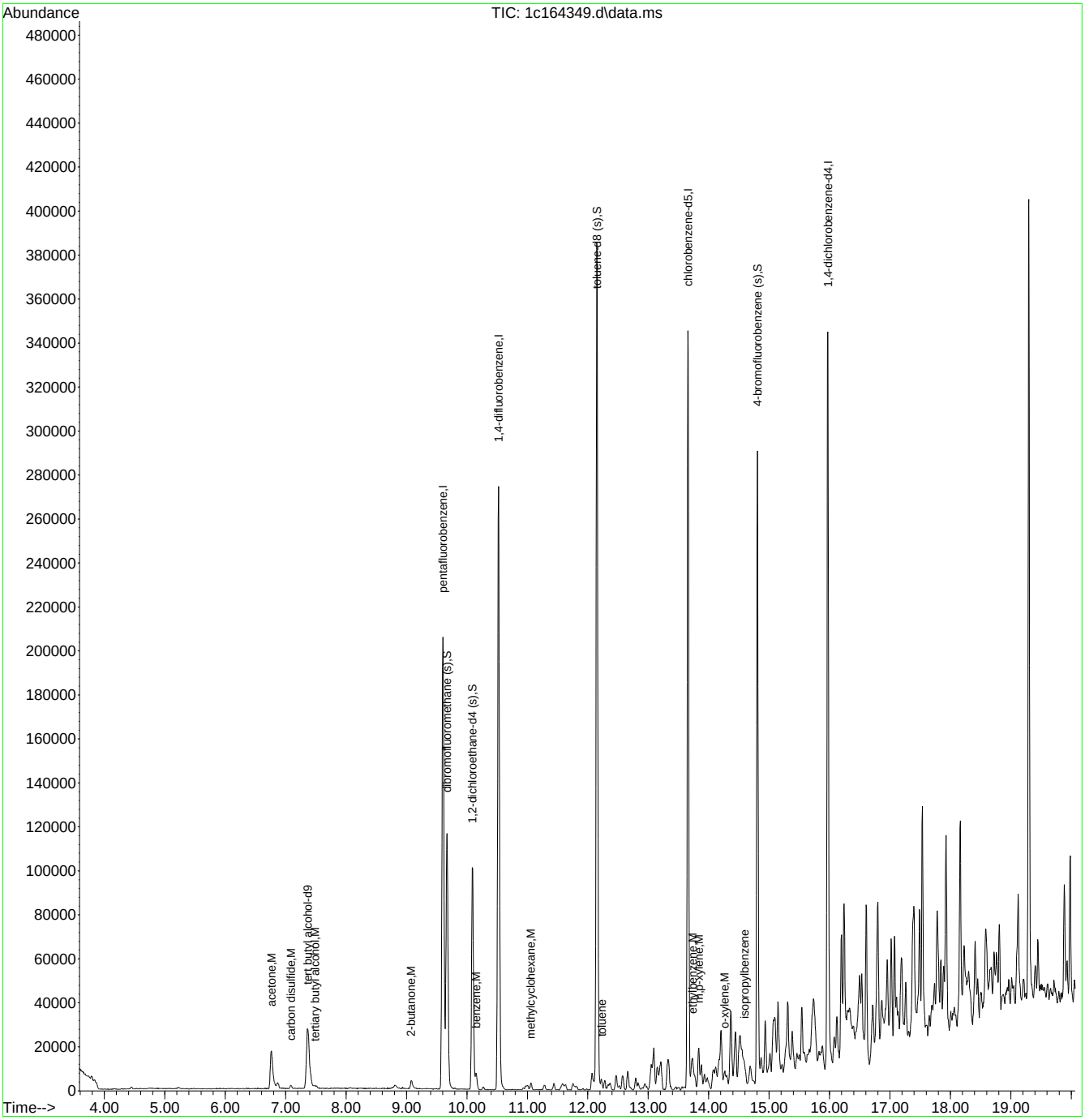
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.364	65	60740	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	186454	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	265583	50.00	ug/L	0.00
74) chlorobenzene-d5	13.656	117	207543	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.973	152	96209	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.665	113	82518	52.48	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.96%			
53) 1,2-dichloroethane-d4 (s)	10.089	65	78411	47.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 94.00%			
75) toluene-d8 (s)	12.149	98	286777	51.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.60%			
98) 4-bromofluorobenzene (s)	14.806	95	91767	50.81	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.62%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.484	59	1736	10.76	ug/L	60
19) acetone	6.762	43	36416	96.02	ug/L	93
22) carbon disulfide	7.086	76	2660	0.54	ug/L	83
28) 2-butanone	9.074	72	1696	11.90	ug/L #	29
56) benzene	10.151	78	7616	1.15	ug/L	90
68) methylcyclohexane	11.056	83	1824	0.62	ug/L	79
76) toluene	12.233	92	2316	0.61	ug/L #	83
89) ethylbenzene	13.734	91	3939	0.56	ug/L	84
90) m,p-xylene	13.839	106	1859	0.72	ug/L	86
91) o-xylene	14.262	106	1567	0.63	ug/L	91
95) isopropylbenzene	14.592	105	5443	0.82	ug/L	99

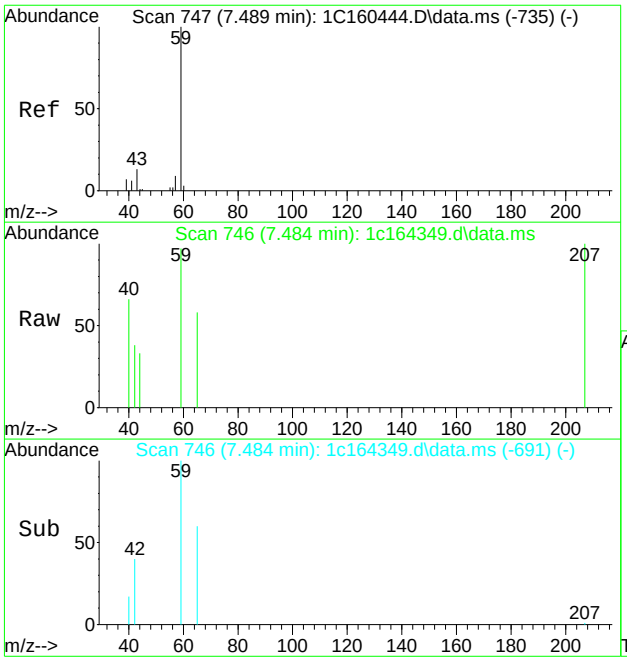
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164349.d
Acq On : 7 May 2019 7:23 pm
Operator : PrashanS
Sample : JC87093-4 Inst : GCMS1C
Misc : MS34369,V1C7213,4.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:18:47 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

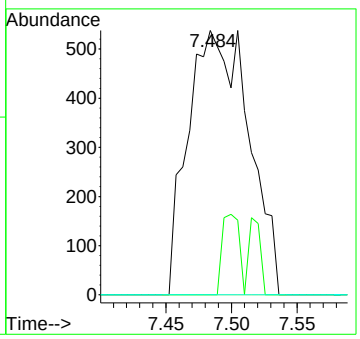


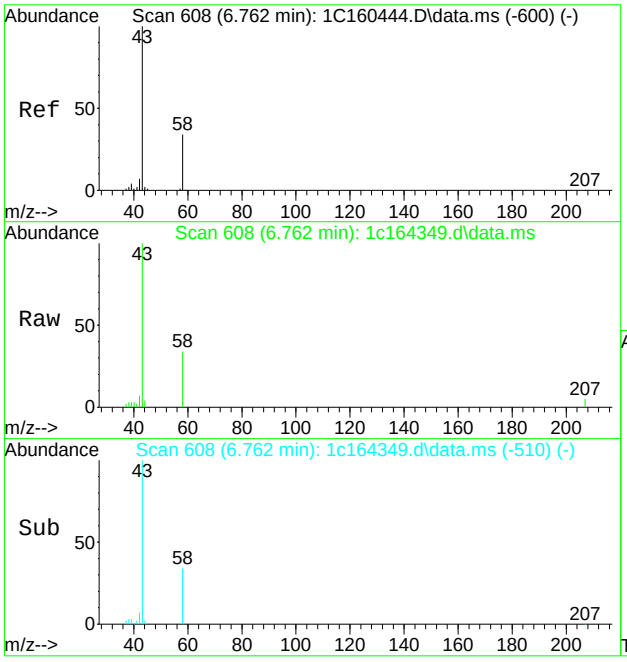


#2
tertiary butyl alcohol
Concen: 10.76 ug/L
RT: 7.484 min Scan# 746
Delta R.T. -0.010 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion: 59 Resp: 1736

Ion	Ratio	Lower	Upper
59	100		
41	0.0	0.0	49.8
43	0.0	0.0	44.3

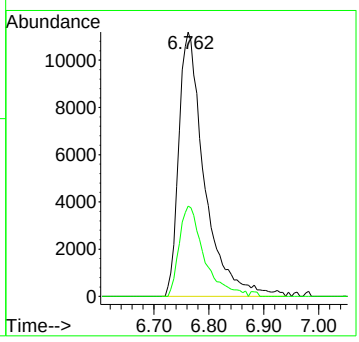


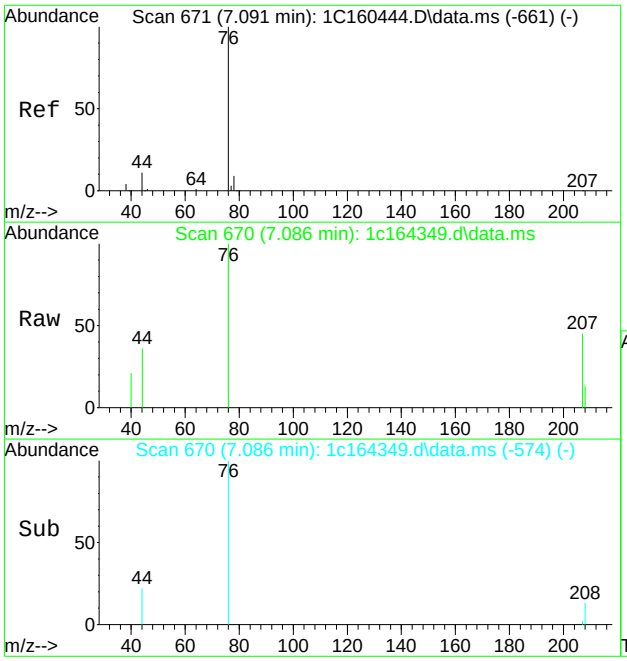


#19
acetone
Concen: 96.02 ug/L
RT: 6.762 min Scan# 608
Delta R.T. 0.011 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion: 43 Resp: 36416

Ion	Ratio	Lower	Upper
43	100		
58	34.1	0.5	60.5

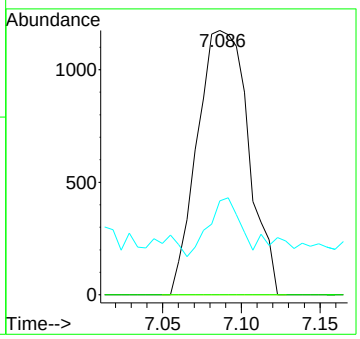


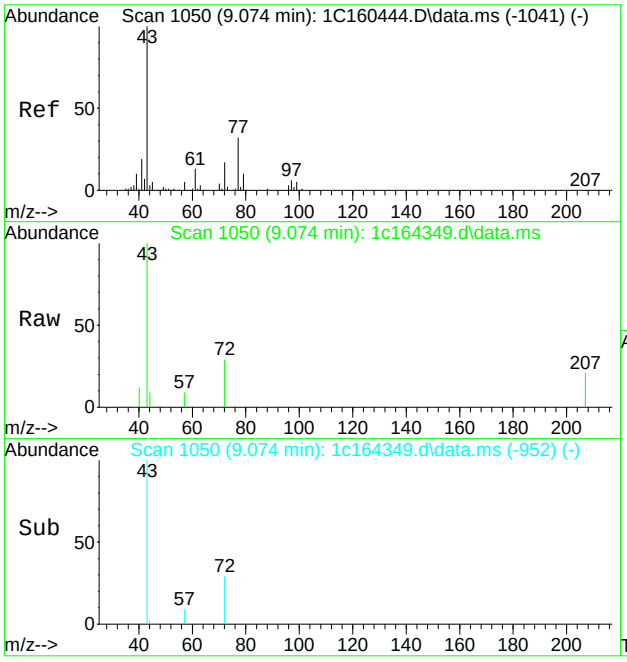


#22
carbon disulfide
Concen: 0.54 ug/L
RT: 7.086 min Scan# 670
Delta R.T. 0.000 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion: 76 Resp: 2660

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.3
44	16.2	0.0	42.1

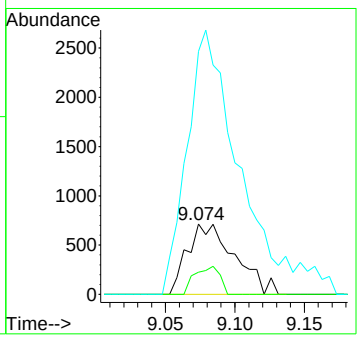




#28
2-butanone
Concen: 11.90 ug/L
RT: 9.074 min Scan# 1050
Delta R.T. 0.011 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

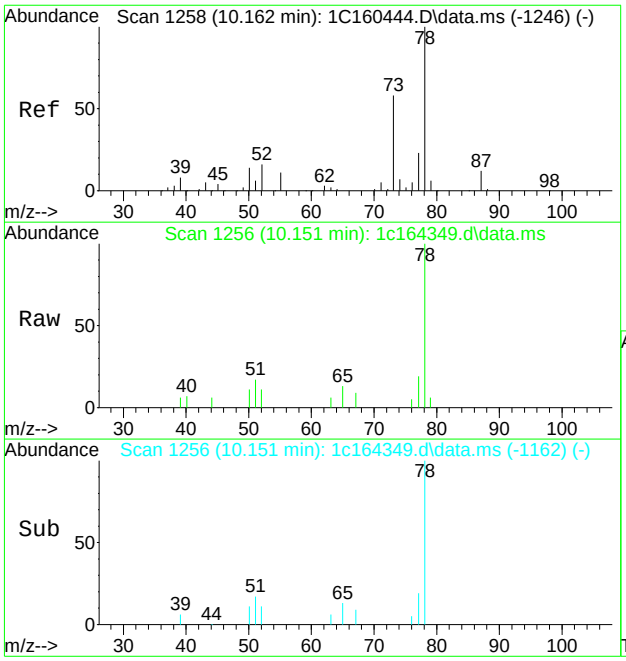
Tgt Ion: 72 Resp: 1696

Ion	Ratio	Lower	Upper
72	100		
57	31.4	2.9	62.9
43	345.5	541.8	601.8#



7.1.4

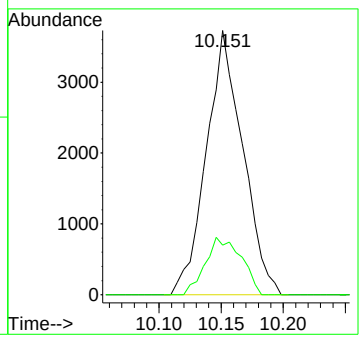
7

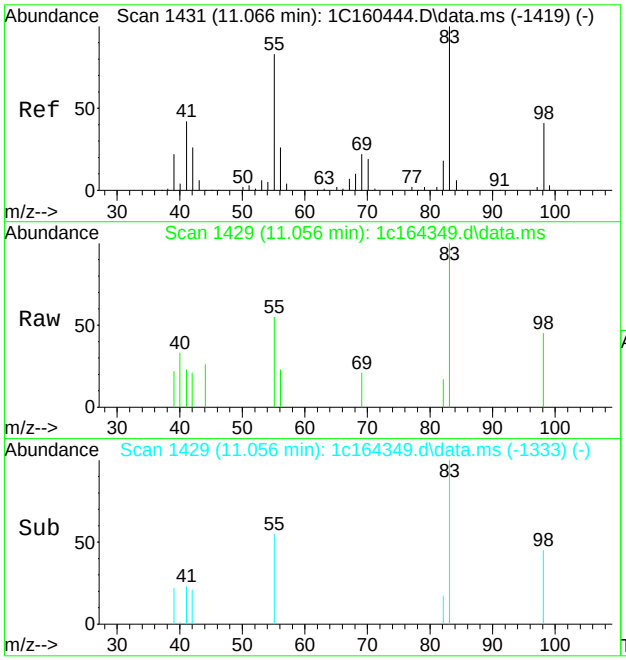


#56
benzene
Concen: 1.15 ug/L
RT: 10.151 min Scan# 1256
Delta R.T. 0.000 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion: 78 Resp: 7616

Ion	Ratio	Lower	Upper
78	100		
77	18.8	0.0	53.6

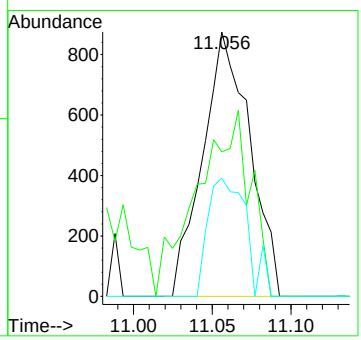




#68
methylcyclohexane
Concen: 0.62 ug/L
RT: 11.056 min Scan# 1429
Delta R.T. 0.000 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

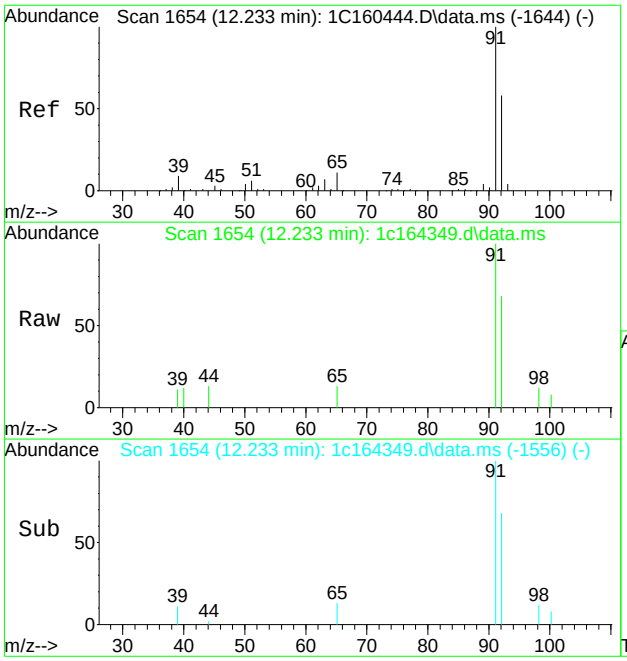
Tgt Ion: 83 Resp: 1824

Ion	Ratio	Lower	Upper
83	100		
55	54.6	50.5	110.5
98	44.8	11.8	71.8



7.1.4

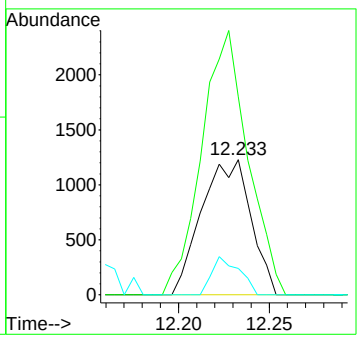
7

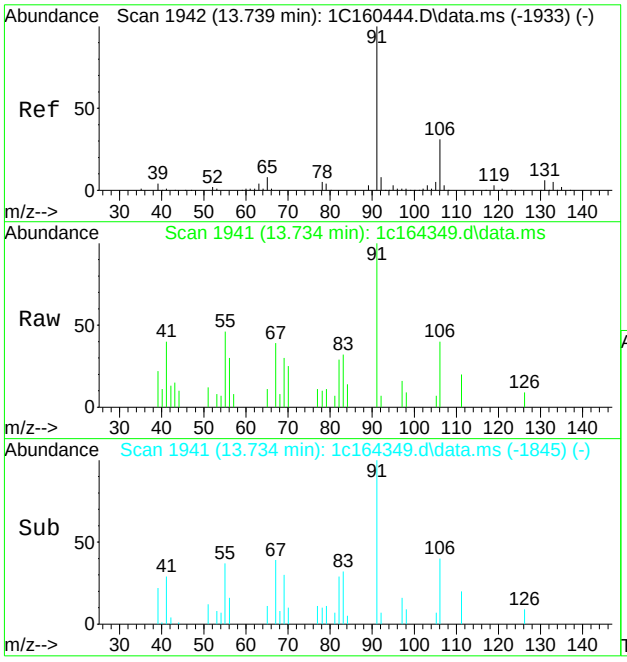


#76
toluene
Concen: 0.61 ug/L
RT: 12.233 min Scan# 1654
Delta R.T. 0.011 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion: 92 Resp: 2316

Ion	Ratio	Lower	Upper
92	100		
91	146.6	152.4	192.4#
65	19.5	0.0	39.8

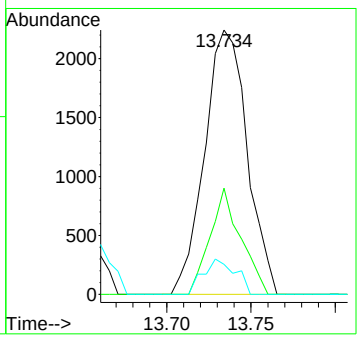


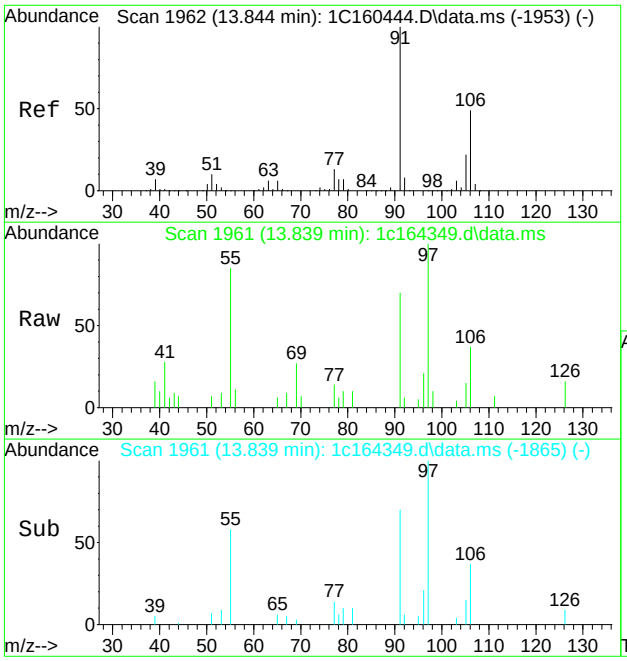


#89
ethylbenzene
Concen: 0.56 ug/L
RT: 13.734 min Scan# 1941
Delta R.T. 0.000 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion: 91 Resp: 3939

Ion	Ratio	Lower	Upper
91	100		
106	40.2	0.2	60.2
65	11.4	0.0	39.1

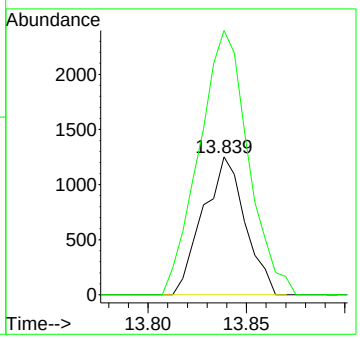


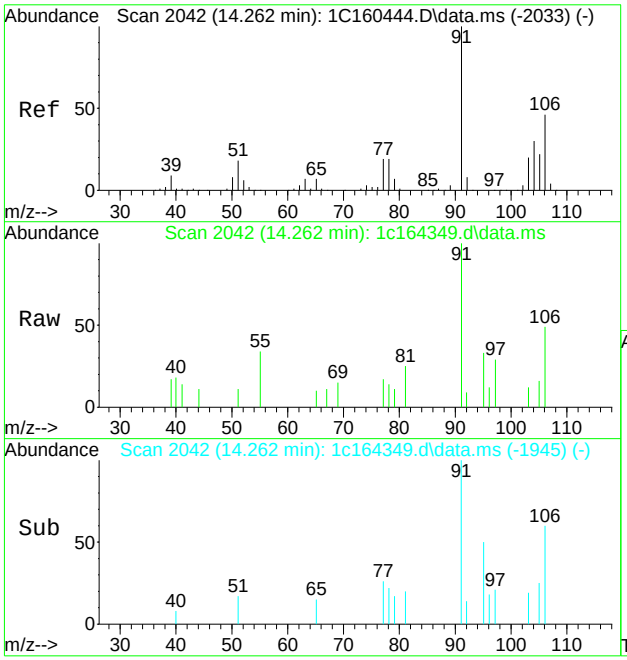


#90
m,p-xylene
Concen: 0.72 ug/L
RT: 13.839 min Scan# 1961
Delta R.T. 0.000 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion:106 Resp: 1859

Ion	Ratio	Lower	Upper
106	100		
91	191.5	183.1	243.1

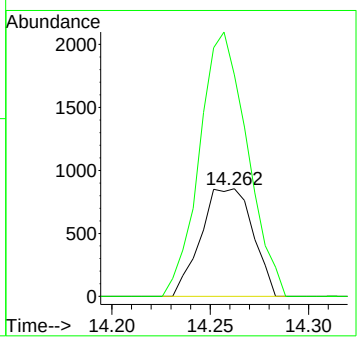


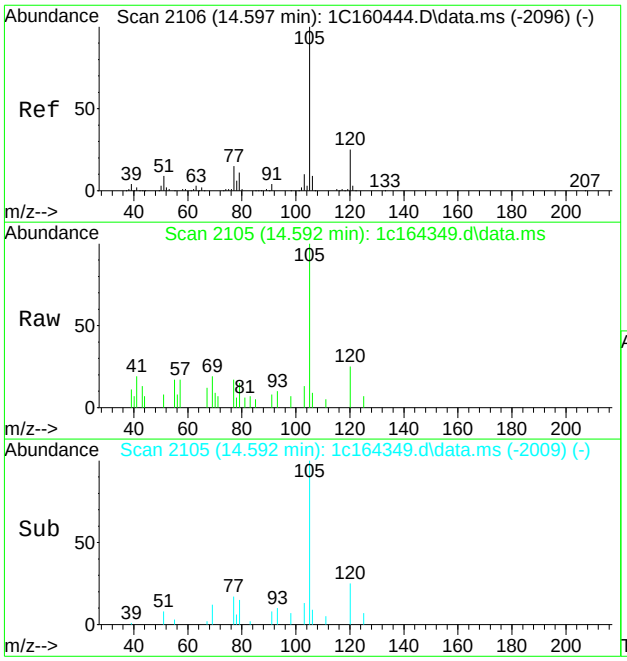


#91
o-xylene
Concen: 0.63 ug/L
RT: 14.262 min Scan# 2042
Delta R.T. 0.005 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion:106 Resp: 1567

Ion	Ratio	Lower	Upper
106	100		
91	206.0	191.0	251.0

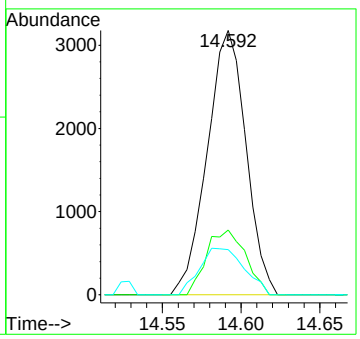




#95
isopropylbenzene
Concen: 0.82 ug/L
RT: 14.592 min Scan# 2105
Delta R.T. 0.000 min
Lab File: 1c164349.d
Acq: 7 May 2019 7:23 pm

Tgt Ion:105 Resp: 5443

Ion	Ratio	Lower	Upper
105	100		
120	24.5	4.3	44.3
77	17.1	0.0	35.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151826.d
Acq On : 6 May 2019 7:12 pm
Operator : PrashanS
Sample : JC87093-5 Inst : MS3C
Misc : MS34369,V3C6821,4.0,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:27:08 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

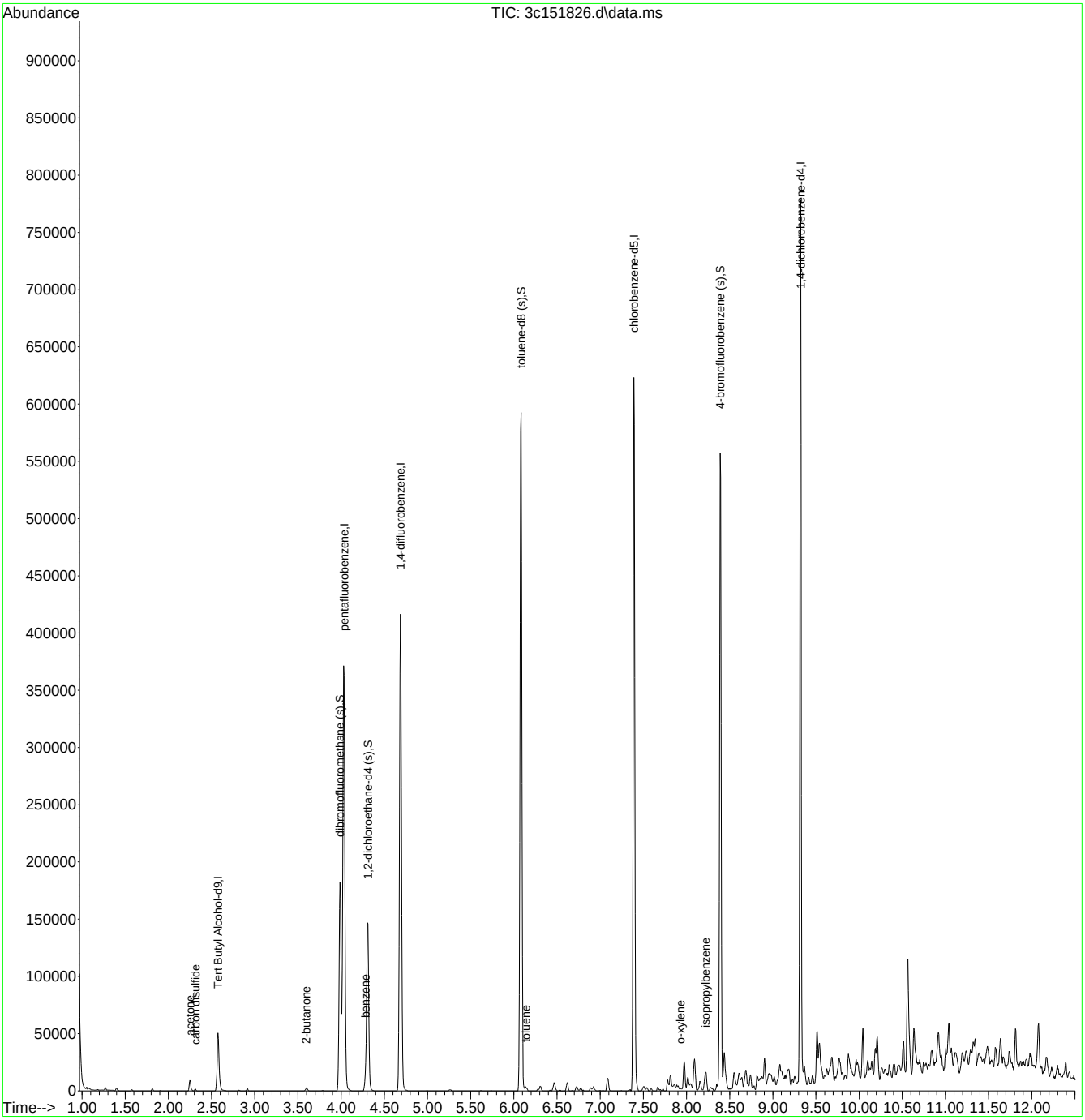
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	48994	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	243813	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	315123	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	280999	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	150972	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	90186	51.19	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.38%			
53) 1,2-dichloroethane-d4 (s)	4.311	65	94848	55.40	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 110.80%			
75) toluene-d8 (s)	6.084	98	352211	50.64	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.28%			
98) 4-bromofluorobenzene (s)	8.390	95	137936	55.57	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 111.14%			
Target Compounds						Qvalue
20) acetone	2.250	58	2385	31.40	ug/L	90
23) carbon disulfide	2.313	76	1505	0.39	ug/L	72
31) 2-butanone	3.594	72	611	5.11	ug/L #	9
57) benzene	4.284	78	10770	1.86	ug/L	97
76) toluene	6.141	92	1527	0.38	ug/L #	78
91) o-xylene	7.930	91	1443	0.24	ug/L	97
95) isopropylbenzene	8.223	105	3790	0.48	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

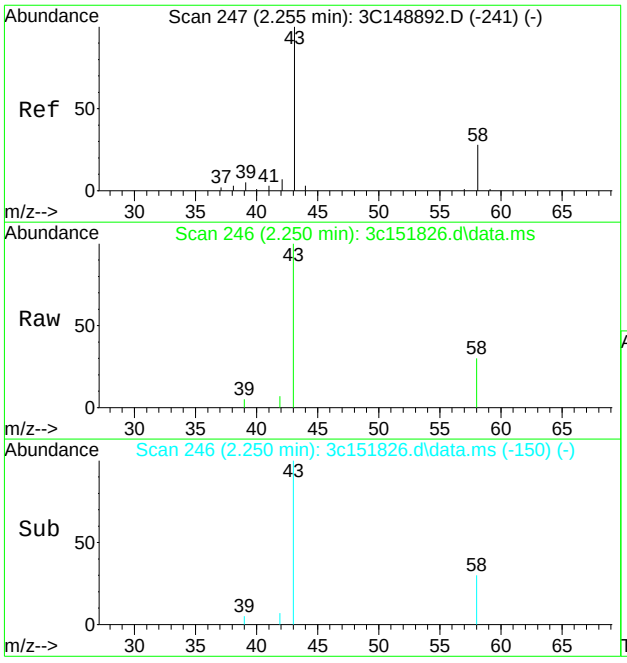
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151826.d
Acq On : 6 May 2019 7:12 pm
Operator : PrashanS
Sample : JC87093-5 Inst : MS3C
Misc : MS34369,V3C6821,4.0,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:27:08 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



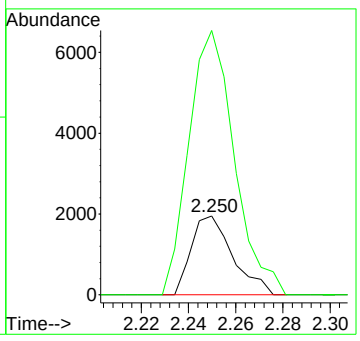
M3C6743.M Tue May 07 00:27:33 2019 Page: 2

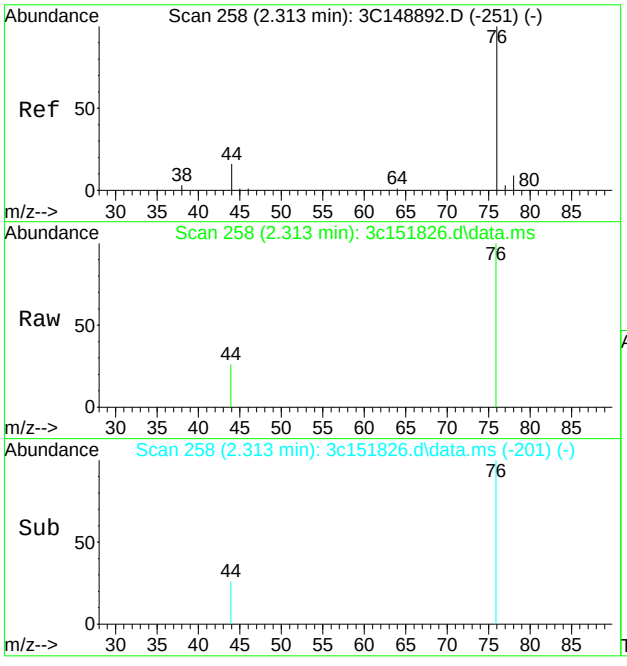


#20
acetone
Concen: 31.40 ug/L
RT: 2.250 min Scan# 246
Delta R.T. -0.000 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion: 58 Resp: 2385

Ion	Ratio	Lower	Upper
58	100		
43	335.1	284.5	344.5

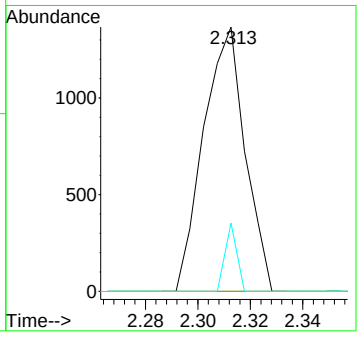


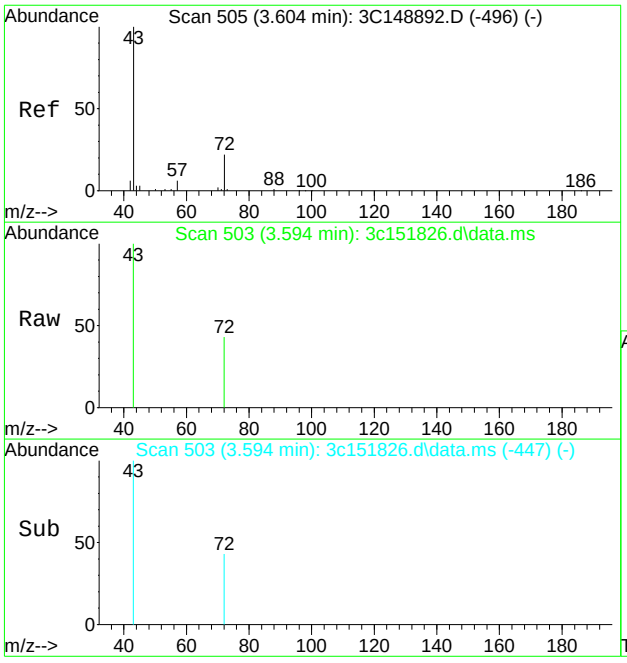


#23
carbon disulfide
Concen: 0.39 ug/L
RT: 2.313 min Scan# 258
Delta R.T. 0.000 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion: 76 Resp: 1505

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	25.9	0.0	44.0

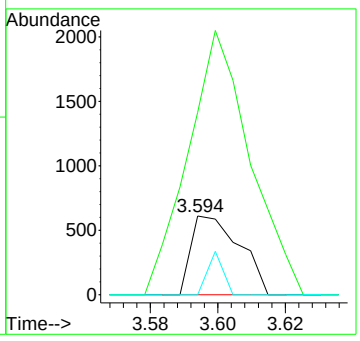


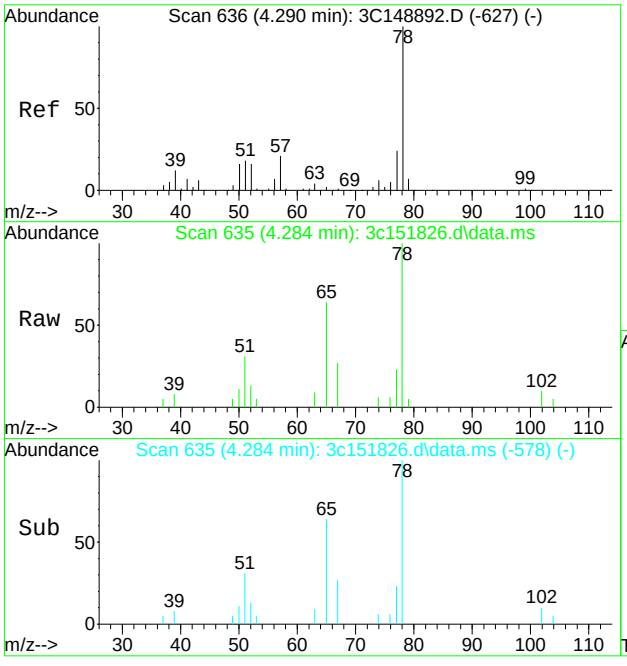


#31
2-butanone
Concen: 5.11 ug/L
RT: 3.594 min Scan# 503
Delta R.T. -0.005 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion: 72 Resp: 611

Ion	Ratio	Lower	Upper
72	100		
43	180.2	372.9	432.9#
57	0.0	0.0	59.6

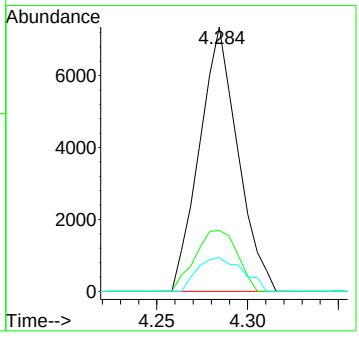


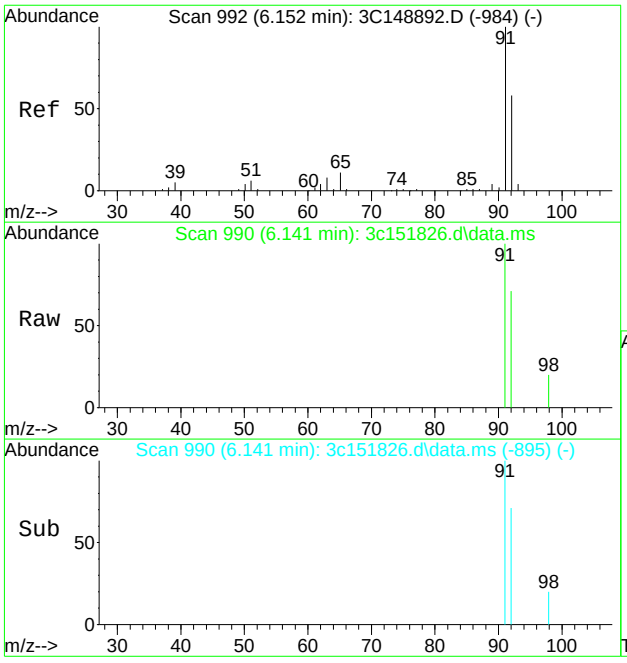


#57
benzene
Concen: 1.86 ug/L
RT: 4.284 min Scan# 635
Delta R.T. 0.000 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion: 78 Resp: 10770

Ion	Ratio	Lower	Upper
78	100		
77	23.0	0.0	54.0
52	12.8	0.0	44.9

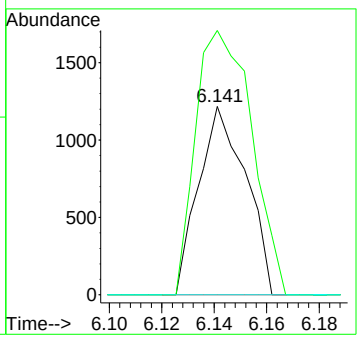


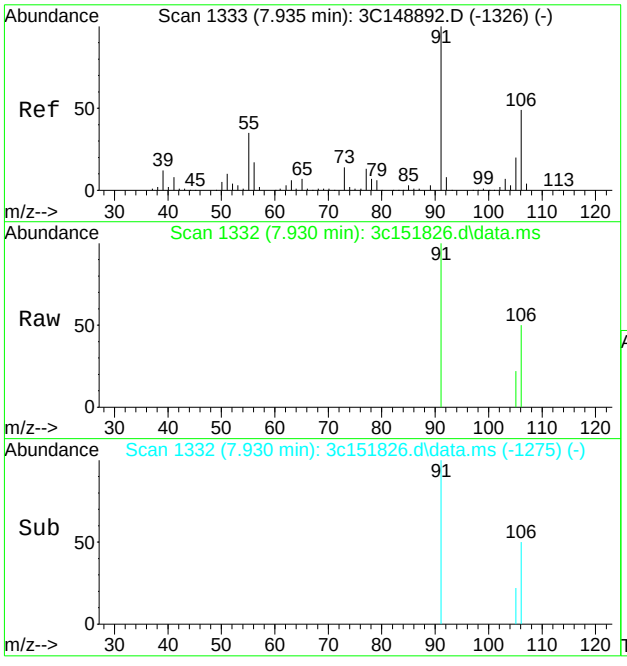


#76
toluene
Concen: 0.38 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion: 92 Resp: 1527

Ion	Ratio	Lower	Upper
92	100		
91	140.3	147.5	187.5#
65	0.0	0.0	38.2

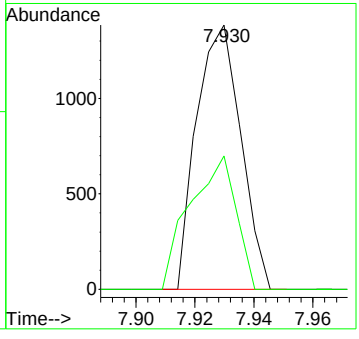


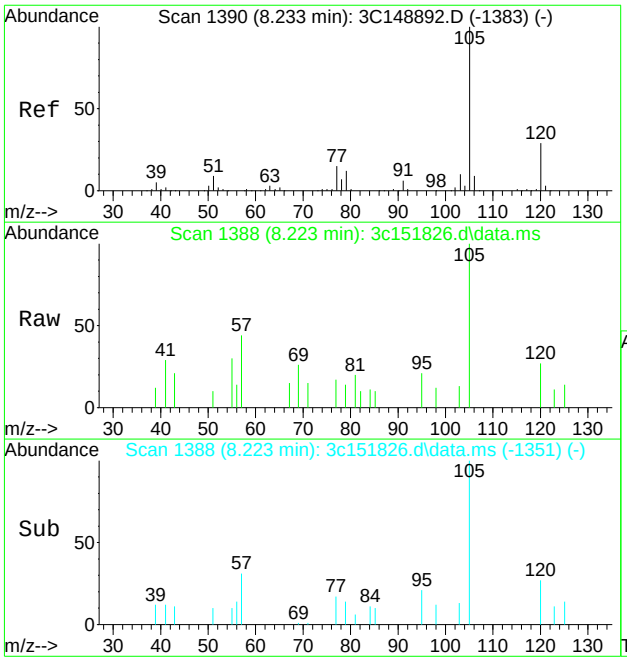


#91
o-xylene
Concen: 0.24 ug/L
RT: 7.930 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion: 91 Resp: 1443

Ion	Ratio	Lower	Upper
91	100		
106	50.4	18.3	78.3

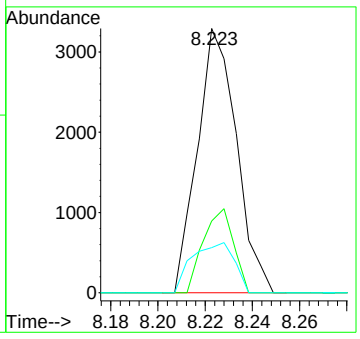




#95
isopropylbenzene
Concen: 0.48 ug/L
RT: 8.223 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 3c151826.d
Acq: 6 May 2019 7:12 pm

Tgt Ion:105 Resp: 3790

Ion	Ratio	Lower	Upper
105	100		
120	27.1	7.6	47.6
77	17.1	0.0	35.1



7.1.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-9\vd10654\
Data File : d264376.d
Acq On : 8 May 2019 4:51 pm
Operator : thienn
Sample : jc87093-6 Inst : MSD
Misc : ms34369,vd10654,4.9,,20,10,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 03:55:16 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

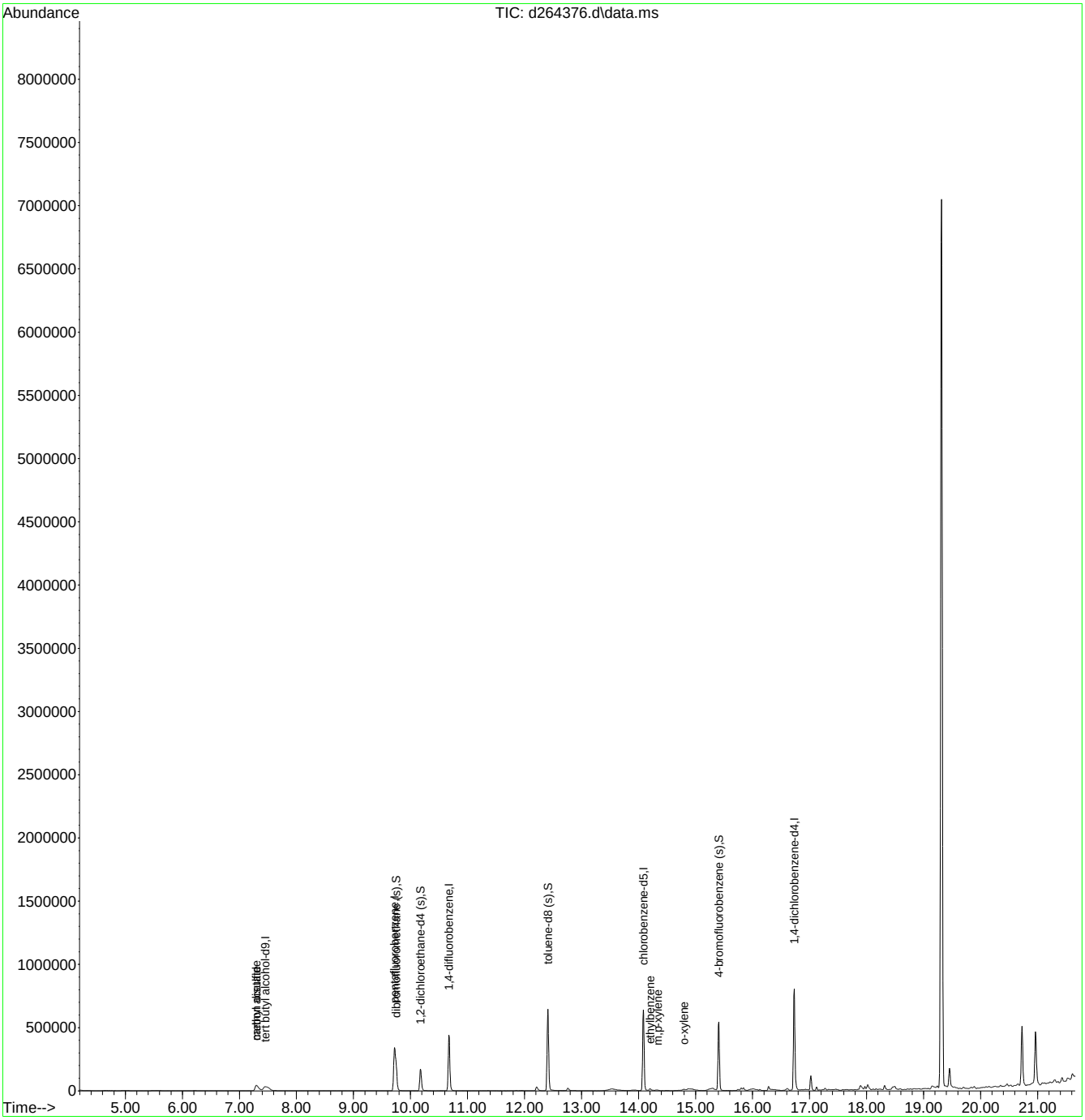
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.452	65	129298	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	258358	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	391461	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	390573	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	232481	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	118576	48.64	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.28%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	132231	45.06	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 90.12%			
76) toluene-d8 (s)	12.410	98	472635	49.63	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.26%			
100) 4-bromofluorobenzene (s)	15.407	95	208530	48.41	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.82%			
Target Compounds						Qvalue
23) carbon disulfide	7.295	76	159984	15.40	ug/L	99
25) methyl acetate	7.295	43	2565	1.45	ug/L	92
90) ethylbenzene	14.204	91	10957	0.74	ug/L	98
91) m,p-xylene	14.335	106	1841	0.33	ug/L #	68
92) o-xylene	14.795	91	3595	0.29	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

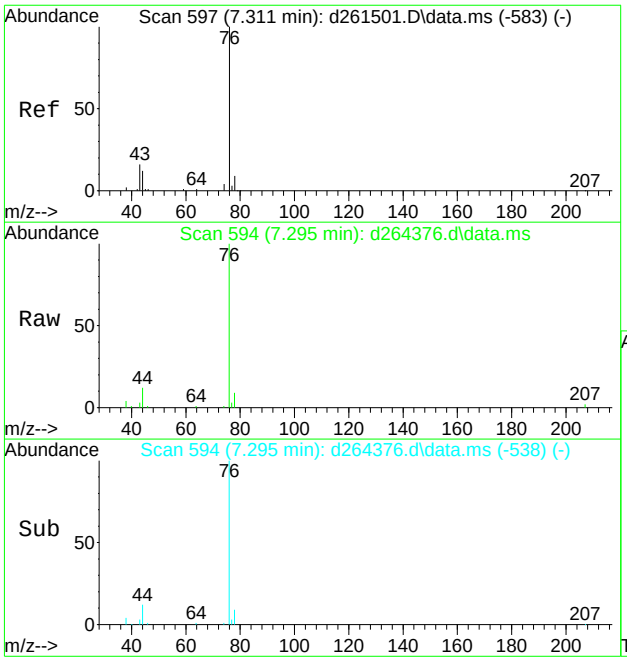
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-9\vd10654\
Data File : d264376.d
Acq On : 8 May 2019 4:51 pm
Operator : thienn
Sample : jc87093-6 Inst : MSD
Misc : ms34369,vd10654,4.9,,20,10,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 03:55:16 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



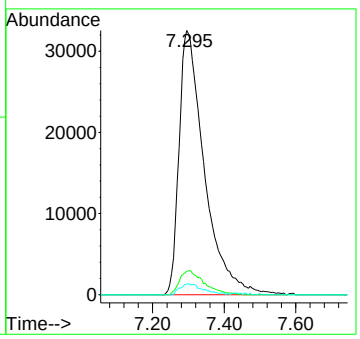
MD10606.M Thu May 09 03:55:24 2019 Page: 2

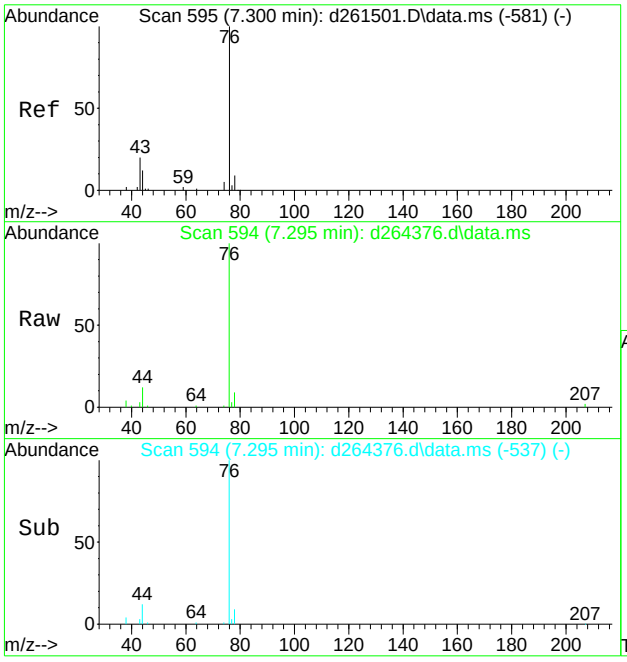


#23
carbon disulfide
Concen: 15.40 ug/L
RT: 7.295 min Scan# 594
Delta R.T. -0.005 min
Lab File: d264376.d
Acq: 8 May 2019 4:51 pm

Tgt Ion: 76 Resp: 159984

Ion	Ratio	Lower	Upper
76	100		
78	8.9	0.0	39.5
38	4.1	0.0	34.3

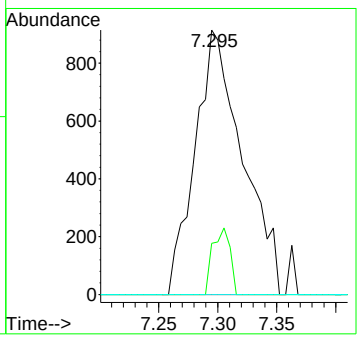


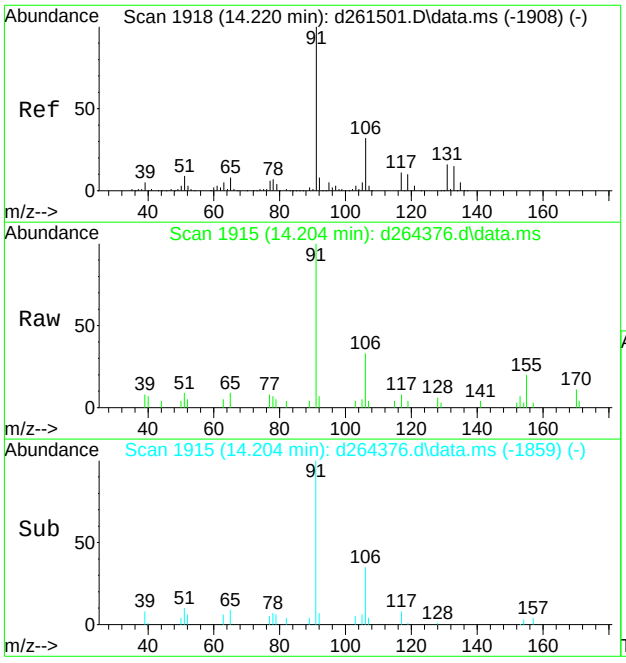


#25
methyl acetate
Concen: 1.45 ug/L
RT: 7.295 min Scan# 594
Delta R.T. 0.000 min
Lab File: d264376.d
Acq: 8 May 2019 4:51 pm

Tgt Ion: 43 Resp: 2565

Ion	Ratio	Lower	Upper
43	100		
74	19.3	0.0	50.5
59	0.0	0.0	37.9

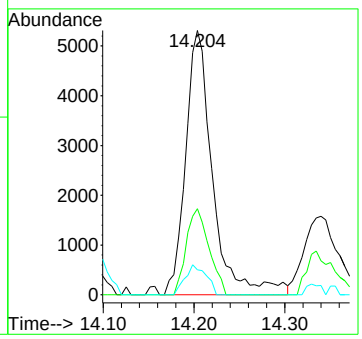


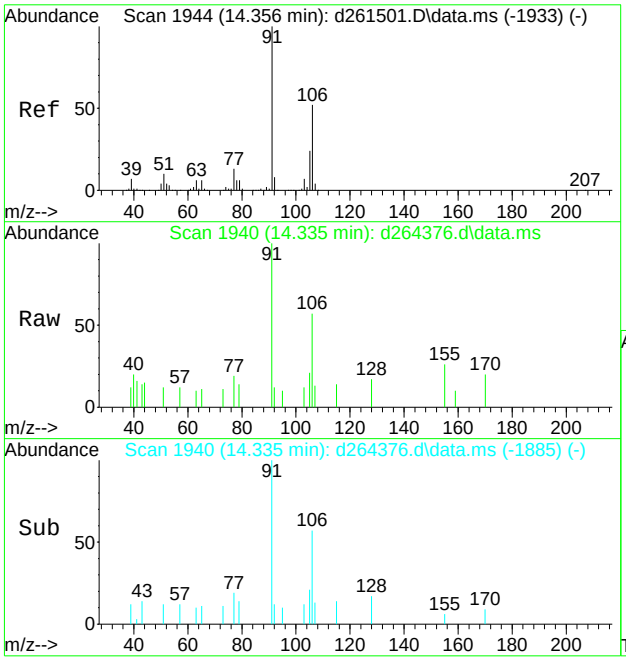


#90
ethylbenzene
Concen: 0.74 ug/L
RT: 14.204 min Scan# 1915
Delta R.T. -0.005 min
Lab File: d264376.d
Acq: 8 May 2019 4:51 pm

Tgt Ion: 91 Resp: 10957

Ion	Ratio	Lower	Upper
91	100		
106	32.6	1.2	61.2
51	9.5	0.0	40.0

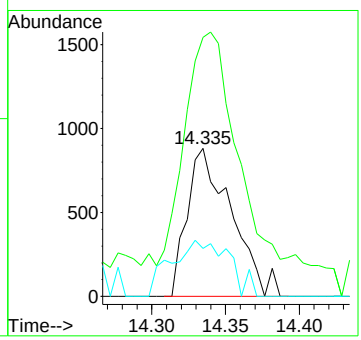


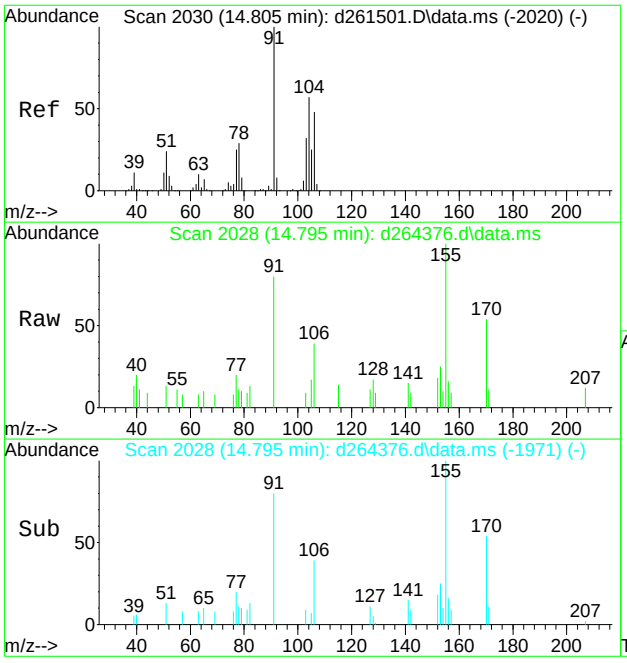


#91
m,p-xylene
Concen: 0.33 ug/L
RT: 14.335 min Scan# 1940
Delta R.T. -0.010 min
Lab File: d264376.d
Acq: 8 May 2019 4:51 pm

Tgt Ion:106 Resp: 1841

Ion	Ratio	Lower	Upper
106	100		
91	148.7	173.0	233.0#
77	32.5	0.0	57.4

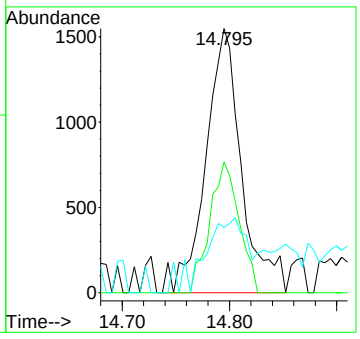




#92
o-xylene
Concen: 0.29 ug/L
RT: 14.795 min Scan# 2028
Delta R.T. 0.000 min
Lab File: d264376.d
Acq: 8 May 2019 4:51 pm

Tgt Ion: 91 Resp: 3595

Ion	Ratio	Lower	Upper
91	100		
106	49.5	16.5	76.5
77	24.6	0.0	55.2



7.1.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151809.d
Acq On : 6 May 2019 12:39 pm
Operator : PrashanS
Sample : JC87093-7 Inst : MS3C
Misc : MS34369,V3C6821,5.2,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:43:38 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

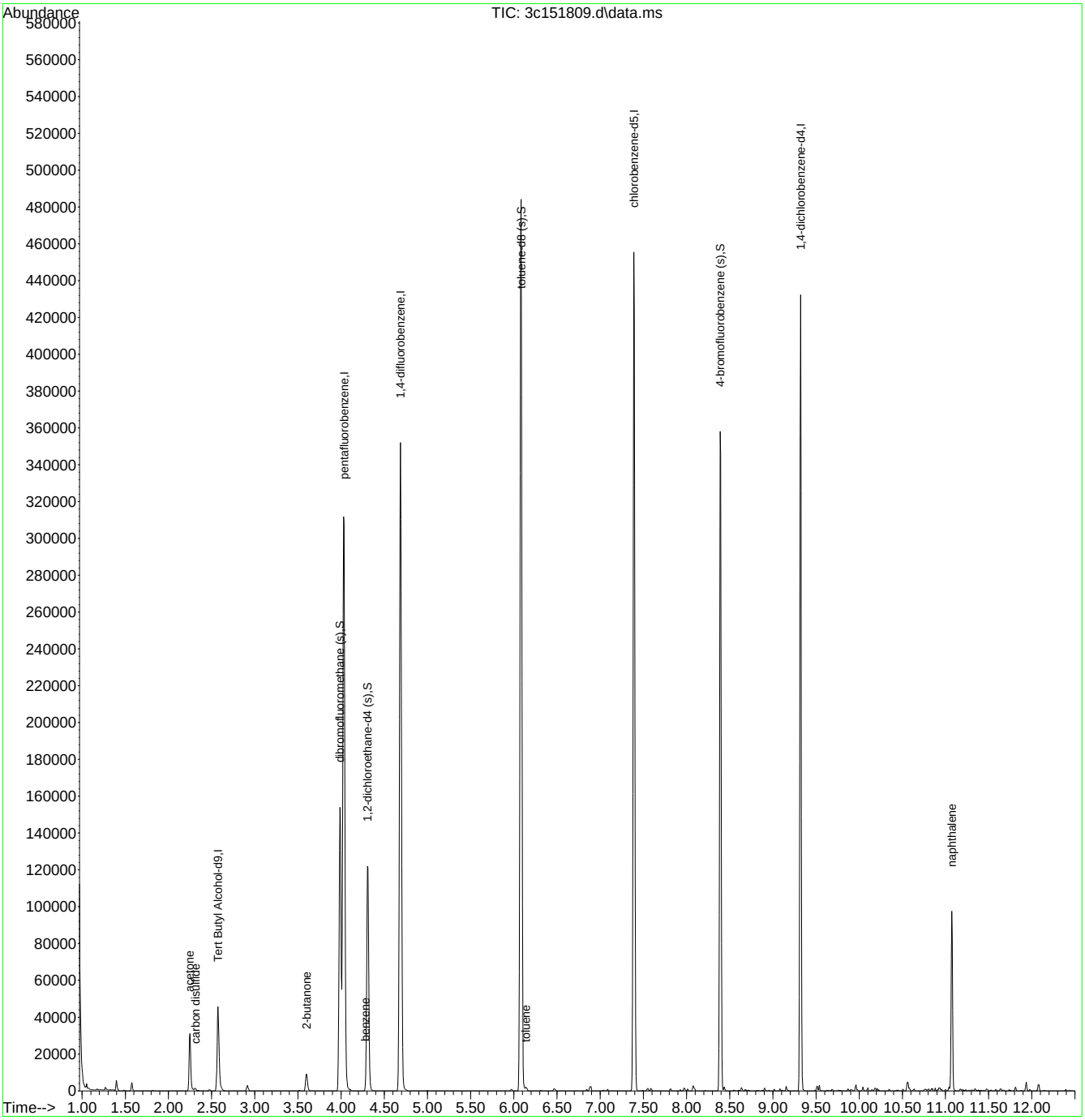
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	43704	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	202760	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	259247	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	206844	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	85828	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	76559	52.25	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.50%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	79290	56.29	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 112.58%			
75) toluene-d8 (s)	6.083	98	287259	56.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.22%			
98) 4-bromofluorobenzene (s)	8.390	95	89424	63.37	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 126.74%			
Target Compounds						Qvalue
20) acetone	2.244	58	8686	137.50	ug/L #	84
23) carbon disulfide	2.312	76	1728	0.54	ug/L	69
31) 2-butanone	3.599	72	3165	31.81	ug/L #	66
57) benzene	4.279	78	960	0.20	ug/L	56
76) toluene	6.141	92	809	0.27	ug/L	95
119) naphthalene	11.073	128	59874	19.54	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

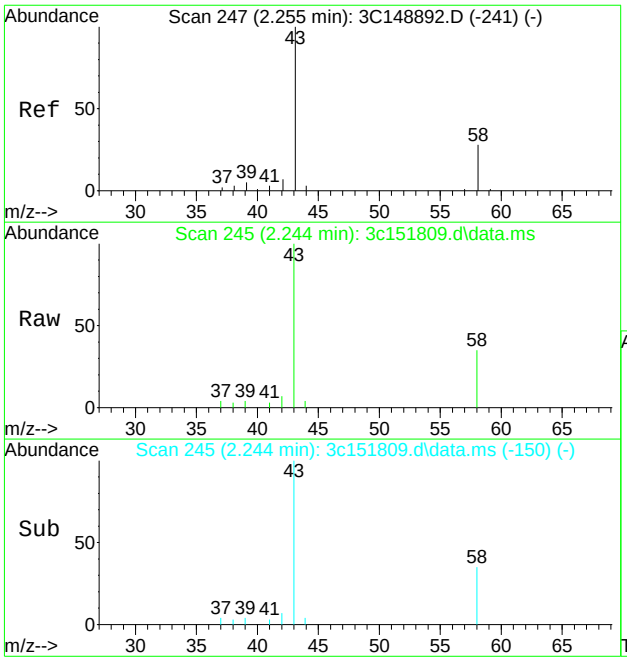
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151809.d
Acq On : 6 May 2019 12:39 pm
Operator : PrashanS
Sample : JC87093-7 Inst : MS3C
Misc : MS34369,V3C6821,5.2,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:43:38 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



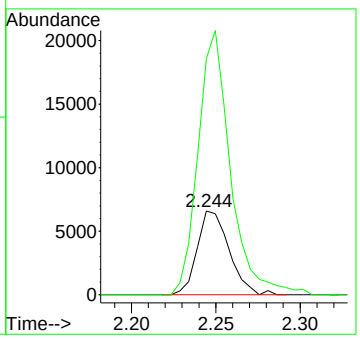
M3C6743.M Mon May 06 23:43:53 2019 Page: 2

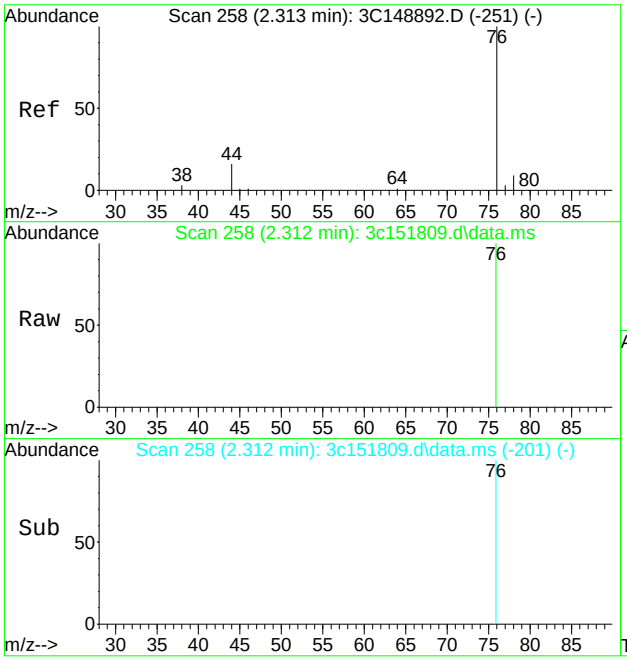


#20
acetone
Concen: 137.50 ug/L
RT: 2.244 min Scan# 245
Delta R.T. -0.005 min
Lab File: 3c151809.d
Acq: 6 May 2019 12:39 pm

Tgt Ion: 58 Resp: 8686

Ion	Ratio	Lower	Upper
58	100		
43	281.7	284.5	344.5#

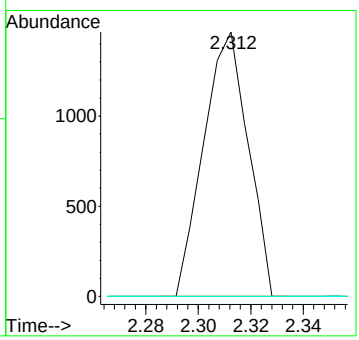


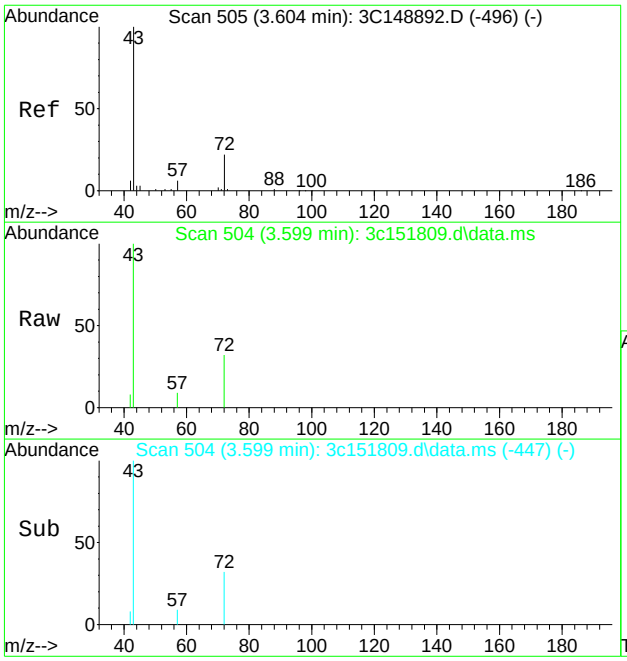


#23
carbon disulfide
Concen: 0.54 ug/L
RT: 2.312 min Scan# 258
Delta R.T. -0.000 min
Lab File: 3c151809.d
Acq: 6 May 2019 12:39 pm

Tgt Ion: 76 Resp: 1728

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

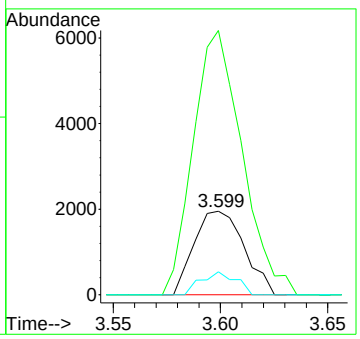


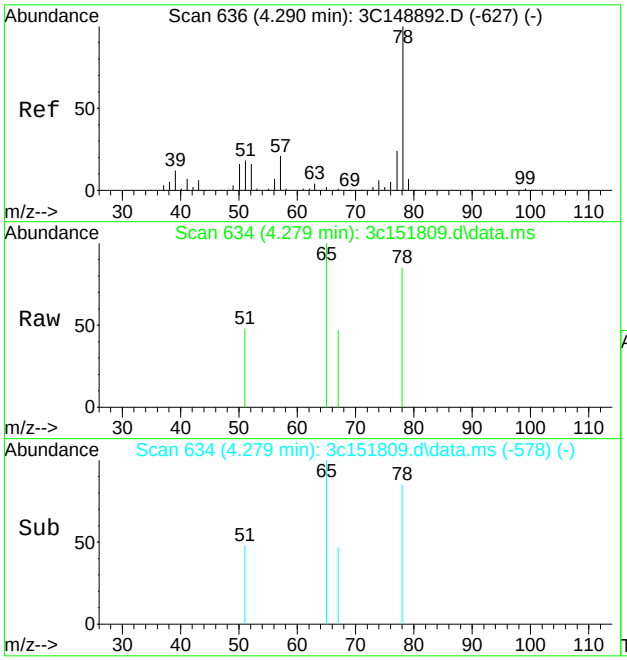


#31
2-butanone
Concen: 31.81 ug/L
RT: 3.599 min Scan# 504
Delta R.T. -0.000 min
Lab File: 3c151809.d
Acq: 6 May 2019 12:39 pm

Tgt Ion: 72 Resp: 3165

Ion	Ratio	Lower	Upper
72	100		
43	316.0	372.9	432.9#
57	27.6	0.0	59.6

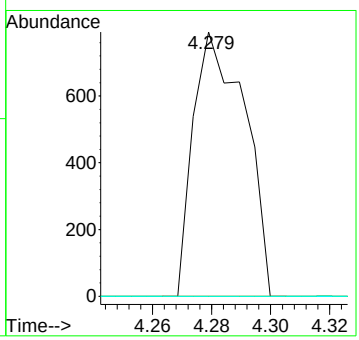


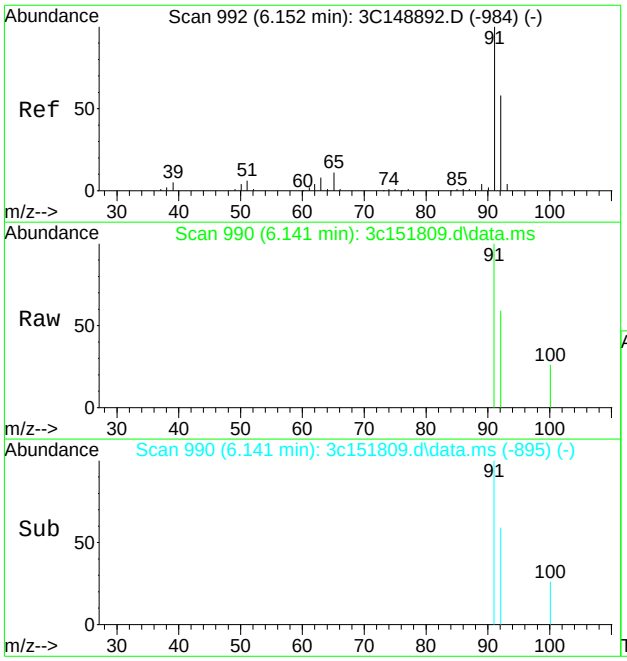


#57
benzene
Concen: 0.20 ug/L
RT: 4.279 min Scan# 634
Delta R.T. -0.005 min
Lab File: 3c151809.d
Acq: 6 May 2019 12:39 pm

Tgt Ion: 78 Resp: 960

Ion	Ratio	Lower	Upper
78	100		
77	0.0	0.0	54.0
52	0.0	0.0	44.9

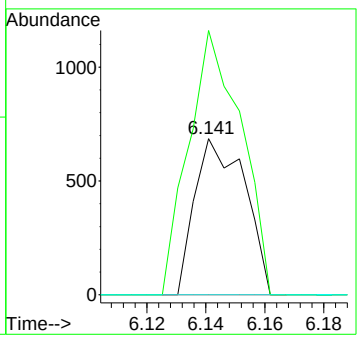


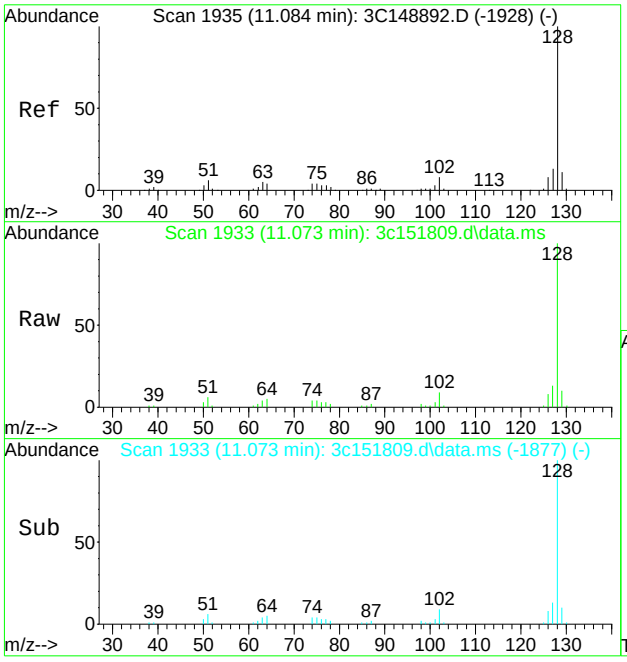


#76
toluene
Concen: 0.27 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151809.d
Acq: 6 May 2019 12:39 pm

Tgt Ion: 92 Resp: 809

Ion	Ratio	Lower	Upper
92	100		
91	169.4	147.5	187.5
65	0.0	0.0	38.2

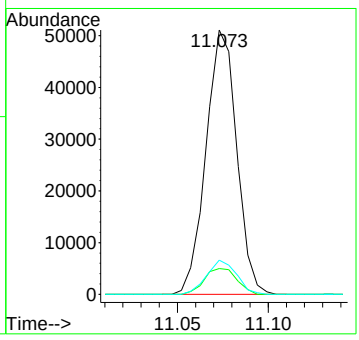




#119
naphthalene
Concen: 19.54 ug/L
RT: 11.073 min Scan# 1933
Delta R.T. -0.005 min
Lab File: 3c151809.d
Acq: 6 May 2019 12:39 pm

Tgt Ion:128 Resp: 59874

Ion	Ratio	Lower	Upper
128	100		
129	9.7	0.0	40.9
127	12.9	0.0	42.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\vi9105\
Data File : i226025.d
Acq On : 7 May 2019 12:14 pm
Operator : thienn
Sample : jc87093-7 Inst : GCMSI
Misc : MS34369,VI9105,5.3,,100,10,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 08 02:14:29 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

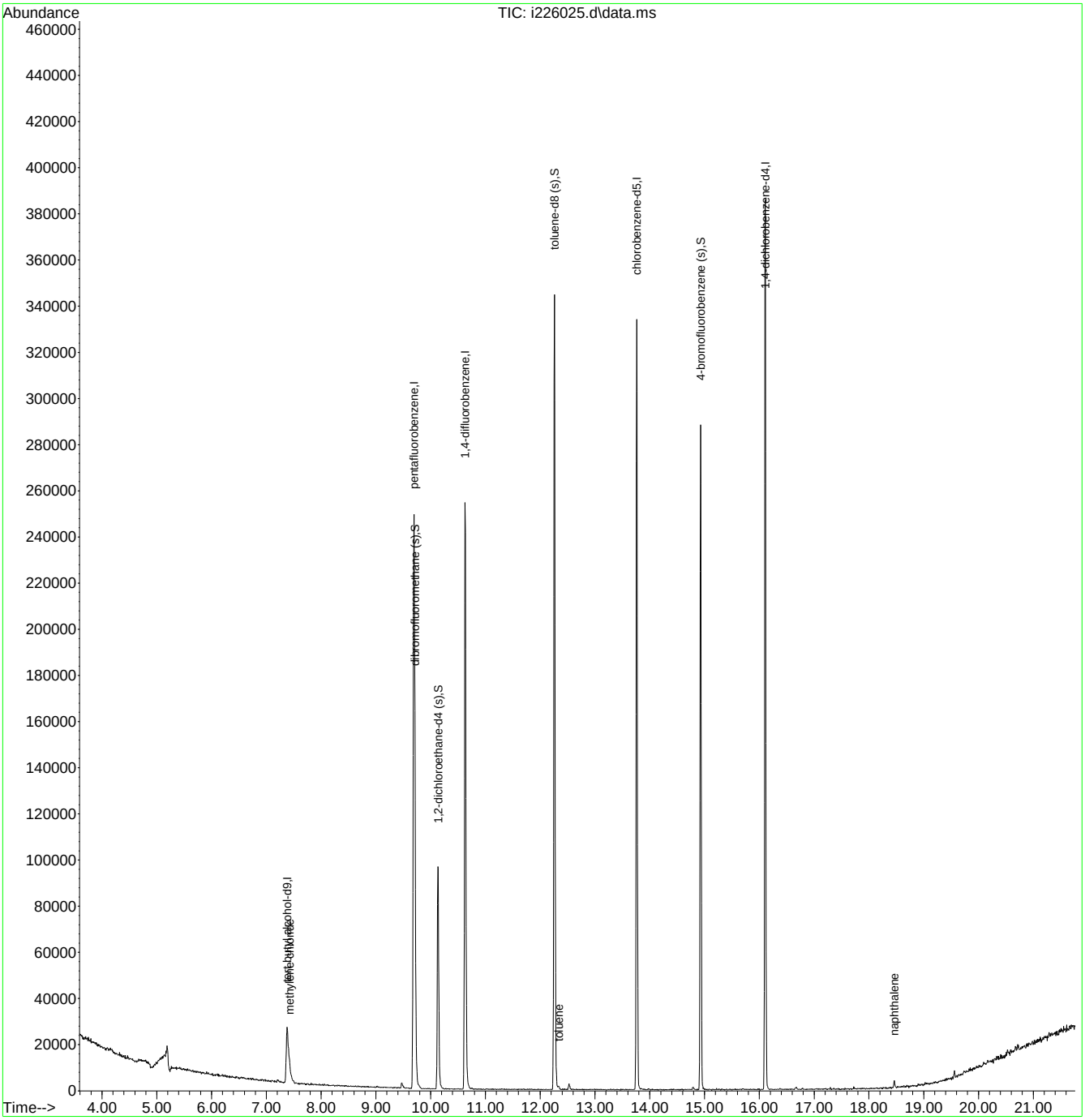
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.379	65	47568	500.00	ug/L	0.00
4) pentafluorobenzene	9.691	168	154582	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.627	114	197104	50.00	ug/L	-0.03
73) chlorobenzene-d5	13.760	117	162543	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	94338	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	63458	52.24	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.48%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	71626	58.22	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 116.44%			
74) toluene-d8 (s)	12.259	98	207453	49.78	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.56%			
97) 4-bromofluorobenzene (s)	14.926	95	75171	52.25	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.50%			
Target Compounds						Qvalue
24) methylene chloride	7.421	84	450	0.42	ug/L #	75
75) toluene	12.337	92	471	0.21	ug/L	95
122) naphthalene	18.462	128	3131	0.81	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

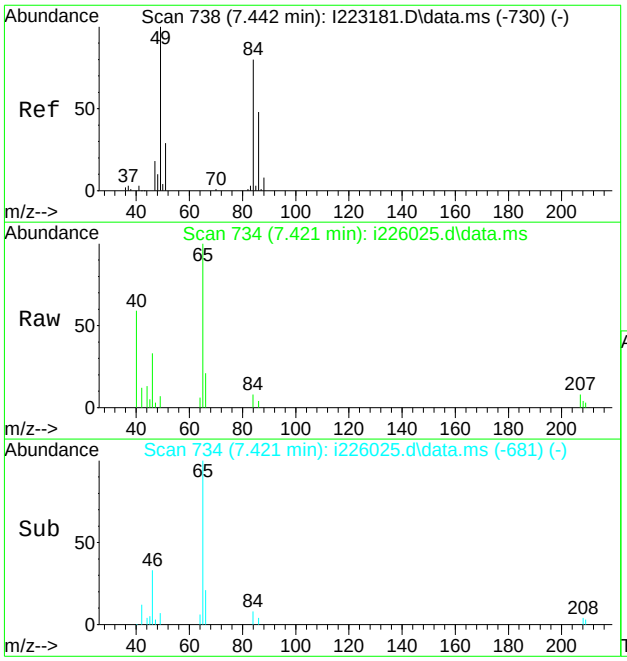
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\vi9105\
Data File : i226025.d
Acq On : 7 May 2019 12:14 pm
Operator : thienn
Sample : jc87093-7 Inst : GCMSI
Misc : MS34369,VI9105,5.3,,100,10,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 08 02:14:29 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



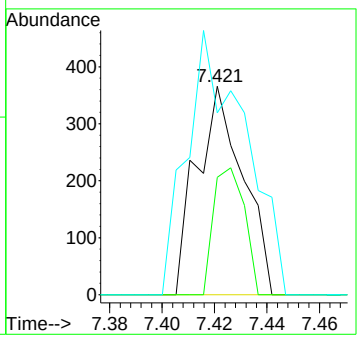
MI8986.M Wed May 08 02:52:17 2019 Page: 2

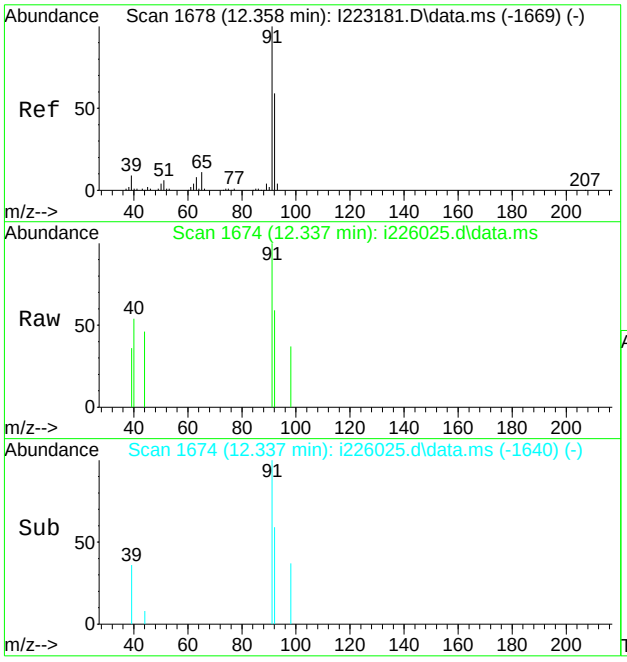


#24
methylene chloride
Concen: 0.42 ug/L
RT: 7.421 min Scan# 734
Delta R.T. -0.021 min
Lab File: i226025.d
Acq: 7 May 2019 12:14 pm

Tgt Ion: 84 Resp: 450

Ion	Ratio	Lower	Upper
84	100		
86	56.3	30.4	90.4
49	87.2	95.7	155.7#

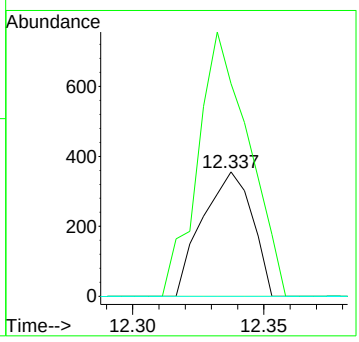


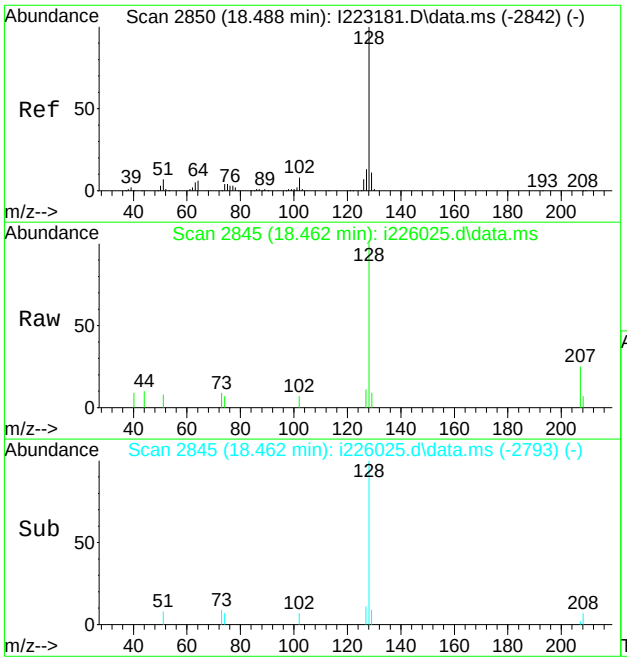


#75
toluene
Concen: 0.21 ug/L
RT: 12.337 min Scan# 1674
Delta R.T. -0.021 min
Lab File: i226025.d
Acq: 7 May 2019 12:14 pm

Tgt Ion: 92 Resp: 471

Ion	Ratio	Lower	Upper
92	100		
91	170.8	149.6	189.6
65	0.0	0.0	38.7

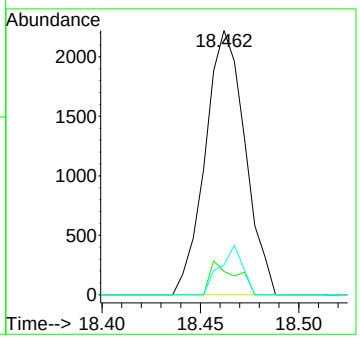




#122
naphthalene
Concen: 0.81 ug/L
RT: 18.462 min Scan# 2845
Delta R.T. -0.026 min
Lab File: i226025.d
Acq: 7 May 2019 12:14 pm

Tgt Ion:128 Resp: 3131

Ion	Ratio	Lower	Upper
128	100		
129	8.8	0.0	41.0
127	11.3	0.0	42.7



7.1.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-9\vd10654\
Data File : d264375.d
Acq On : 8 May 2019 4:23 pm
Operator : thienn
Sample : jc87093-8 Inst : MSD
Misc : ms34369,vd10654,3.2,,100,10,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 03:53:23 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

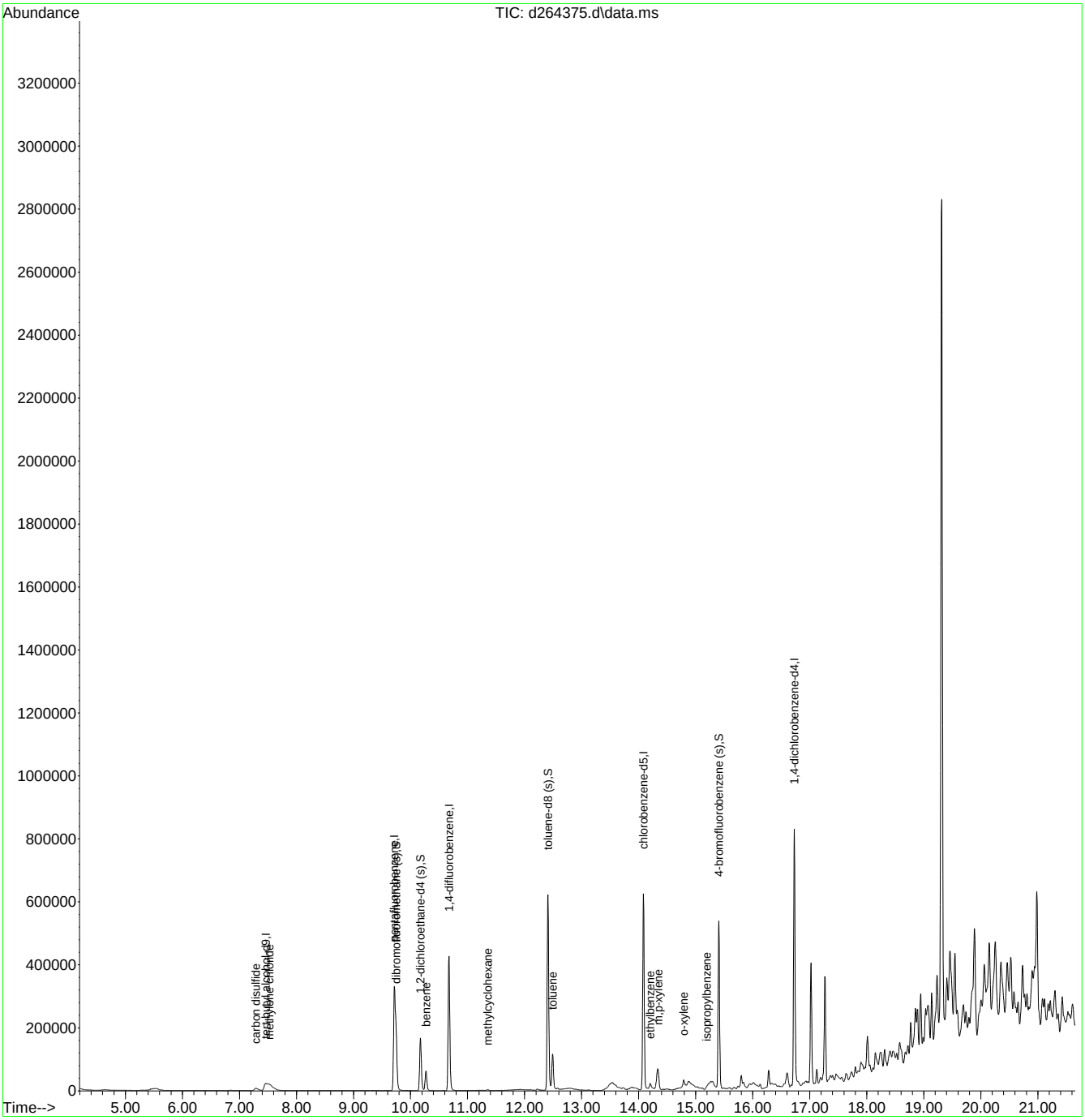
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.462	65	124658	500.00	ug/L	-0.01
5) pentafluorobenzene	9.717	168	248515	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.674	114	378539	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	374691	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	232769	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	113353	48.34	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.68%			
55) 1,2-dichloroethane-d4 (s)	10.172	65	125399	44.19	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 88.38%			
76) toluene-d8 (s)	12.410	98	453454	49.63	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.26%			
100) 4-bromofluorobenzene (s)	15.407	95	199892	46.34	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 92.68%			
Target Compounds						Qvalue
23) carbon disulfide	7.290	76	26251	2.63	ug/L	99
24) methylene chloride	7.525	84	1155	0.36	ug/L	94
58) benzene	10.271	78	63272	5.50	ug/L	97
66) methylcyclohexane	11.354	83	1402	0.29	ug/L	92
77) toluene	12.494	92	53167	7.42	ug/L	96
90) ethylbenzene	14.204	91	12722	0.90	ug/L	96
91) m,p-xylene	14.340	106	26819	4.96	ug/L	93
92) o-xylene	14.790	91	16339	1.37	ug/L	90
96) isopropylbenzene	15.193	105	3180	0.23	ug/L	89

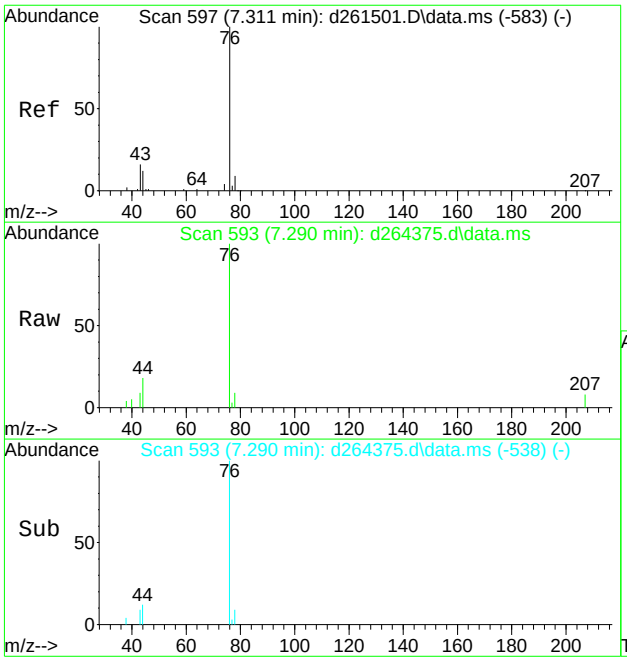
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-9\vd10654\
Data File : d264375.d
Acq On : 8 May 2019 4:23 pm
Operator : thienn
Sample : jc87093-8 Inst : MSD
Misc : ms34369,vd10654,3.2,,100,10,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 03:53:23 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

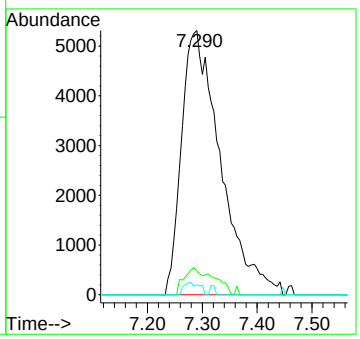


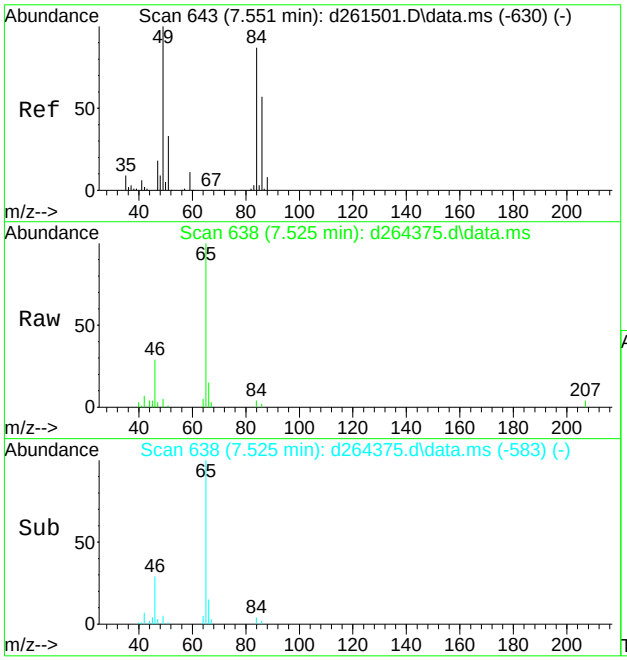


#23
carbon disulfide
Concen: 2.63 ug/L
RT: 7.290 min Scan# 593
Delta R.T. -0.010 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion: 76 Resp: 26251

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	39.5
38	3.8	0.0	34.3

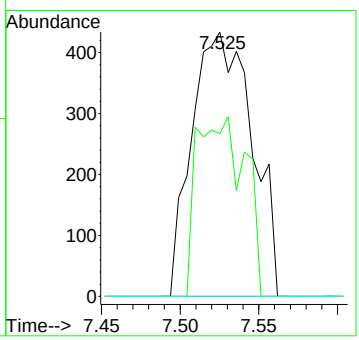


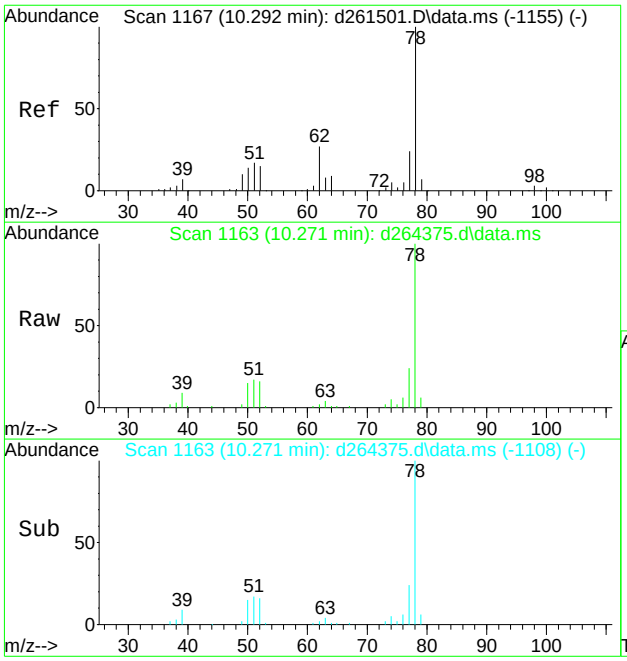


#24
methylene chloride
Concen: 0.36 ug/L
RT: 7.525 min Scan# 638
Delta R.T. -0.010 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion: 84 Resp: 1155

Ion	Ratio	Lower	Upper
84	100		
86	61.5	33.3	93.3
88	0.0	0.0	40.4

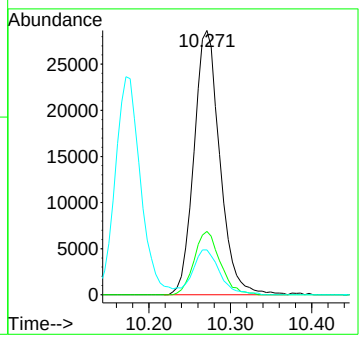


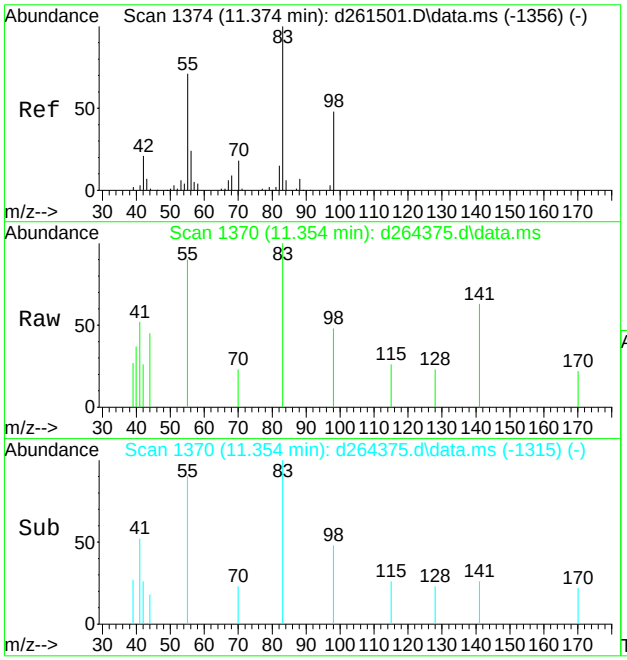


#58
benzene
Concen: 5.50 ug/L
RT: 10.271 min Scan# 1163
Delta R.T. -0.010 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion: 78 Resp: 63272

Ion	Ratio	Lower	Upper
78	100		
77	23.9	0.0	53.8
51	16.9	0.0	50.1

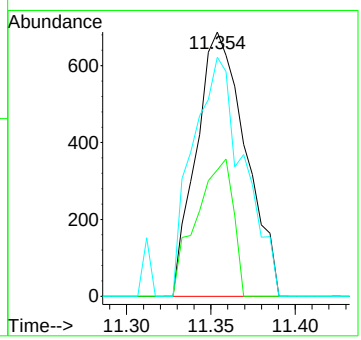




#66
methylcyclohexane
Concen: 0.29 ug/L
RT: 11.354 min Scan# 1370
Delta R.T. -0.010 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

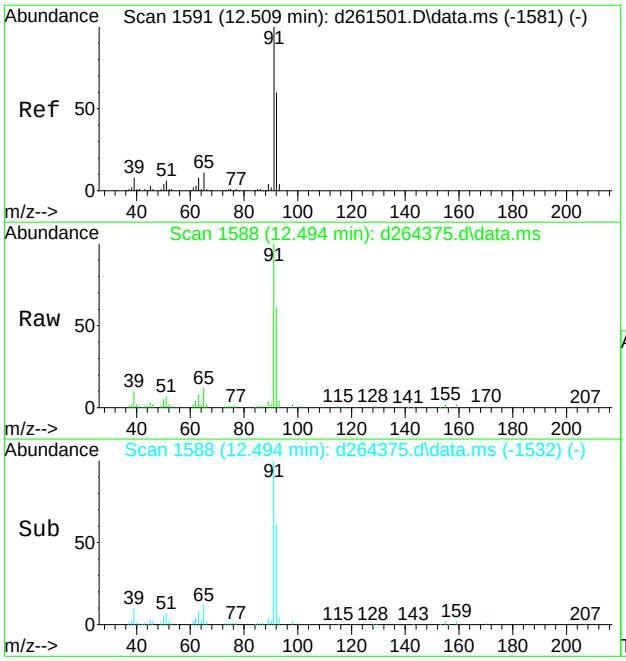
Tgt Ion: 83 Resp: 1402

Ion	Ratio	Lower	Upper
83	100		
98	47.8	27.3	67.3
55	90.4	59.4	99.4



7.1.9

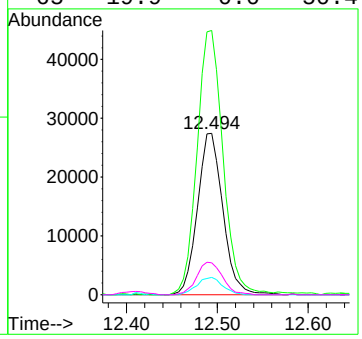
7

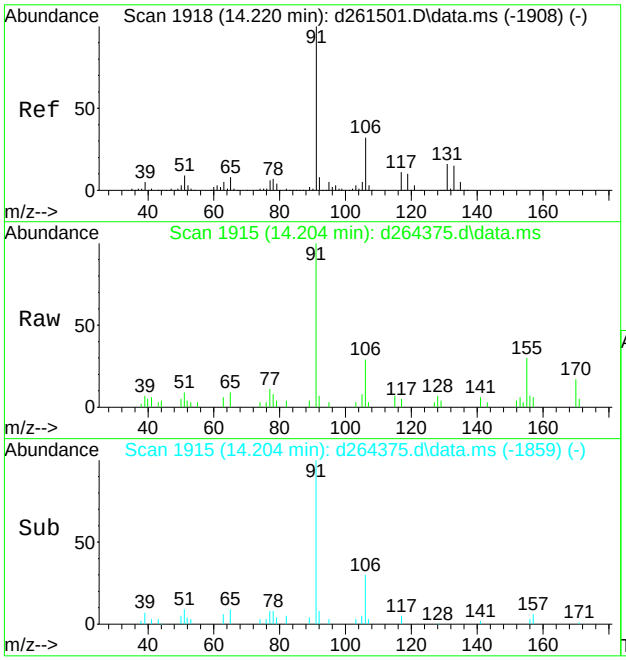


#77
toluene
Concen: 7.42 ug/L
RT: 12.494 min Scan# 1588
Delta R.T. -0.005 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion: 92 Resp: 53167

Ion	Ratio	Lower	Upper
92	100		
91	163.7	149.2	189.2
51	10.9	0.0	42.2
65	19.9	0.0	50.4

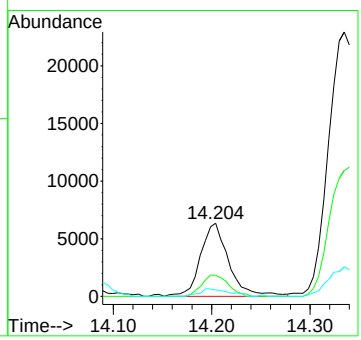


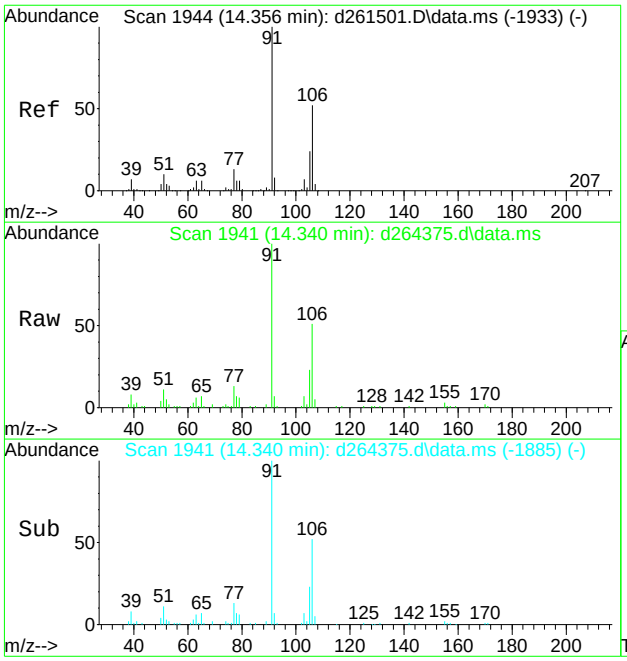


#90
ethylbenzene
Concen: 0.90 ug/L
RT: 14.204 min Scan# 1915
Delta R.T. -0.005 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion: 91 Resp: 12722

Ion	Ratio	Lower	Upper
91	100		
106	28.8	1.2	61.2
51	8.8	0.0	40.0

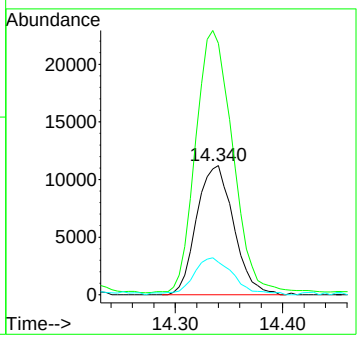


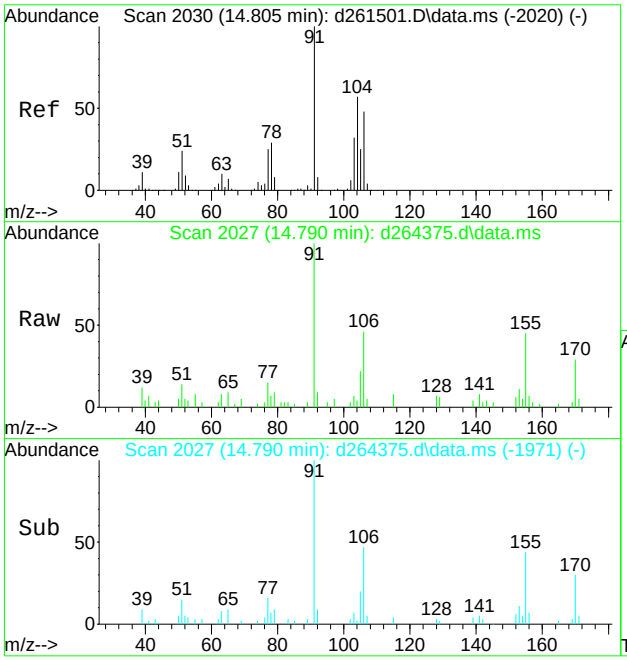


#91
m,p-xylene
Concen: 4.96 ug/L
RT: 14.340 min Scan# 1941
Delta R.T. -0.005 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion:106 Resp: 26819

Ion	Ratio	Lower	Upper
106	100		
91	192.0	173.0	233.0
77	25.2	0.0	57.4

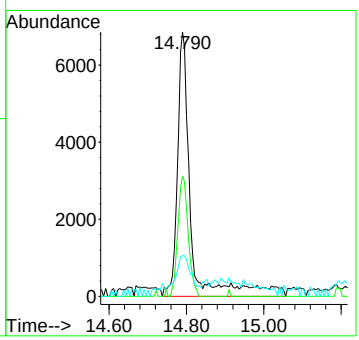


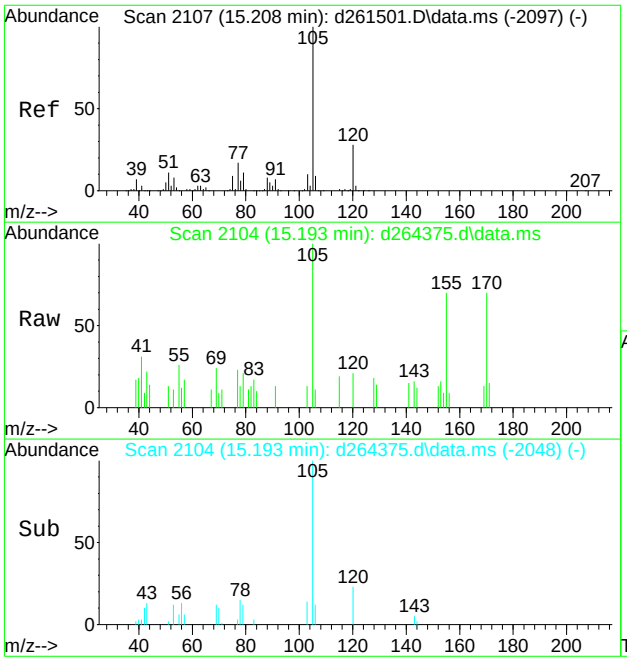


#92
o-xylene
Concen: 1.37 ug/L
RT: 14.790 min Scan# 2027
Delta R.T. -0.005 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion: 91 Resp: 16339

Ion	Ratio	Lower	Upper
91	100		
106	45.5	16.5	76.5
77	12.8	0.0	55.2

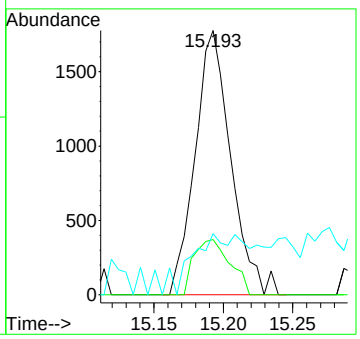




#96
isopropylbenzene
Concen: 0.23 ug/L
RT: 15.193 min Scan# 2104
Delta R.T. -0.005 min
Lab File: d264375.d
Acq: 8 May 2019 4:23 pm

Tgt Ion:105 Resp: 3180

Ion	Ratio	Lower	Upper
105	100		
120	20.9	7.0	47.0
77	23.2	0.0	38.6



7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151790.d
Acq On : 5 May 2019 8:53 pm
Operator : mariceld
Sample : jc87093-9 Inst : MS3C
Misc : MS34369,V3C6820,5.4,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 21:23:47 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

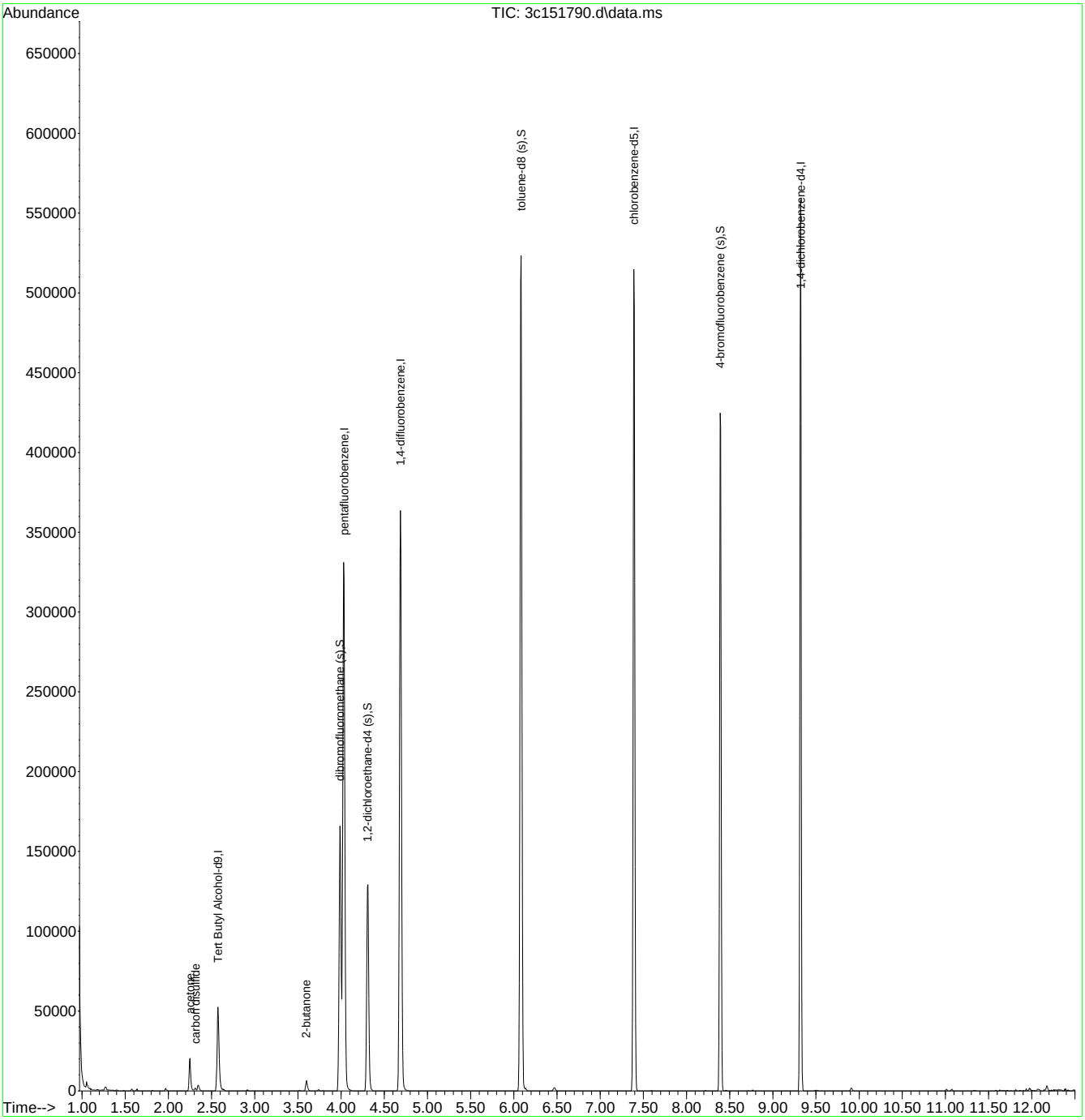
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	51157	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	213934	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	275083	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	236203	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	111291	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	79450	51.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.78%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	82830	55.42	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 110.84%			
75) toluene-d8 (s)	6.084	98	306741	52.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.94%			
98) 4-bromofluorobenzene (s)	8.390	95	108622	59.36	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 118.72%			
Target Compounds						Qvalue
20) acetone	2.250	58	5502	82.55	ug/L	92
23) carbon disulfide	2.313	76	2028	0.60	ug/L	69
31) 2-butanone	3.594	72	1801	17.16	ug/L #	37

(#) = qualifier out of range (m) = manual integration (+) = signals summed

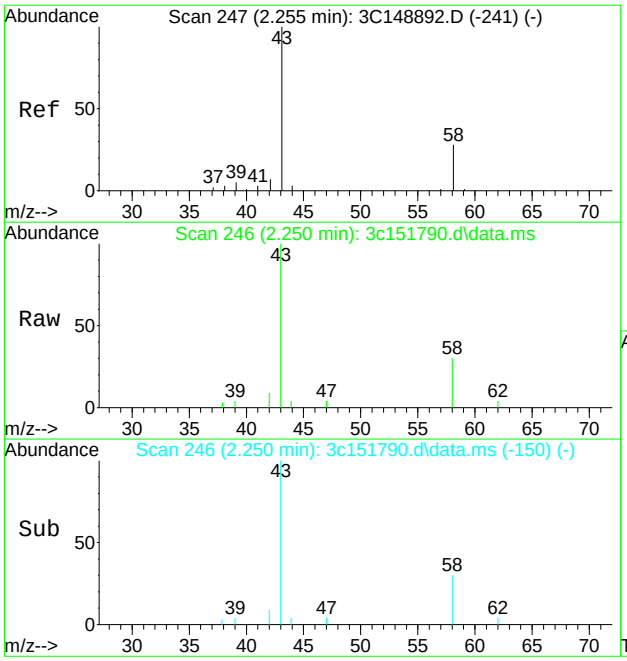
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151790.d
Acq On : 5 May 2019 8:53 pm
Operator : mariceld
Sample : jc87093-9 Inst : MS3C
Misc : MS34369,V3C6820,5.4,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 21:23:47 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



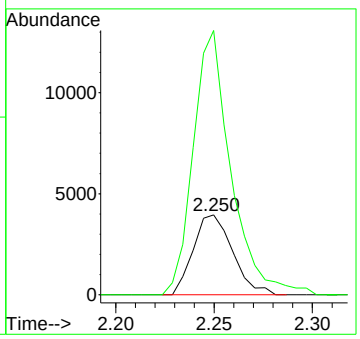
M3C6743.M Mon May 06 21:23:54 2019 Page: 2

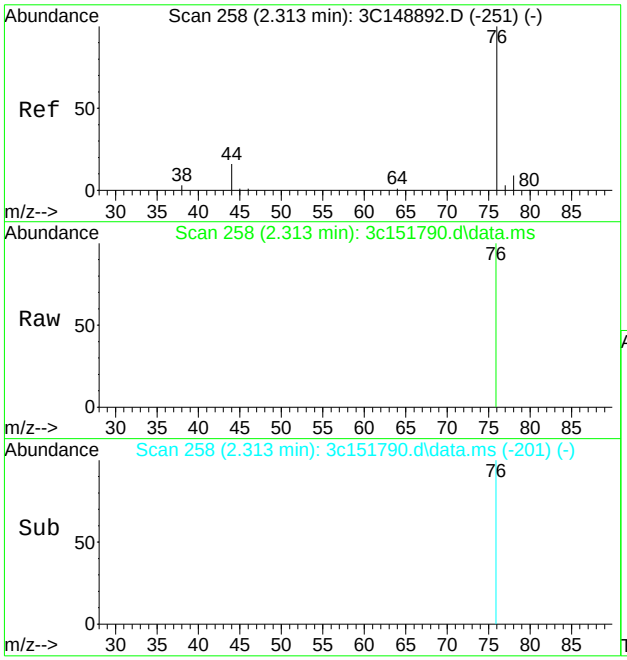


#20
acetone
Concen: 82.55 ug/L
RT: 2.250 min Scan# 246
Delta R.T. 0.000 min
Lab File: 3c151790.d
Acq: 5 May 2019 8:53 pm

Tgt Ion: 58 Resp: 5502

Ion	Ratio	Lower	Upper
58	100		
43	330.8	284.5	344.5

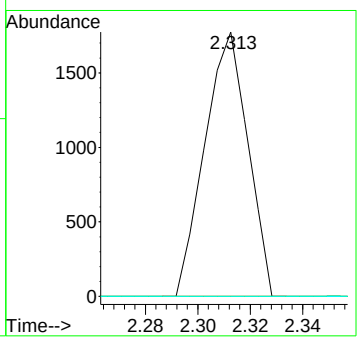


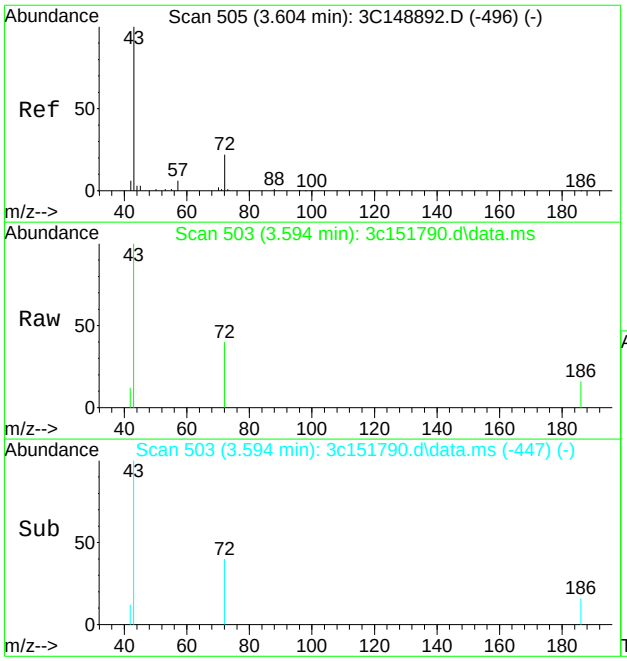


#23
carbon disulfide
Concen: 0.60 ug/L
RT: 2.313 min Scan# 258
Delta R.T. 0.000 min
Lab File: 3c151790.d
Acq: 5 May 2019 8:53 pm

Tgt Ion: 76 Resp: 2028

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

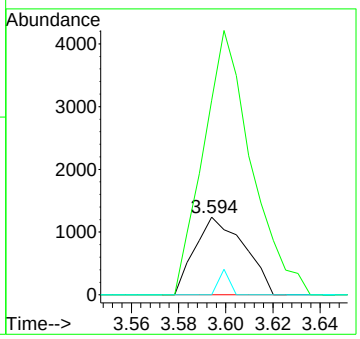




#31
2-butanone
Concen: 17.16 ug/L
RT: 3.594 min Scan# 503
Delta R.T. -0.005 min
Lab File: 3c151790.d
Acq: 5 May 2019 8:53 pm

Tgt Ion: 72 Resp: 1801

Ion	Ratio	Lower	Upper
72	100		
43	250.2	372.9	432.9#
57	0.0	0.0	59.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151827.d
Acq On : 6 May 2019 7:35 pm
Operator : PrashanS
Sample : JC87093-10 Inst : MS3C
Misc : MS34369,V3C6821,3.8,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:29:19 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

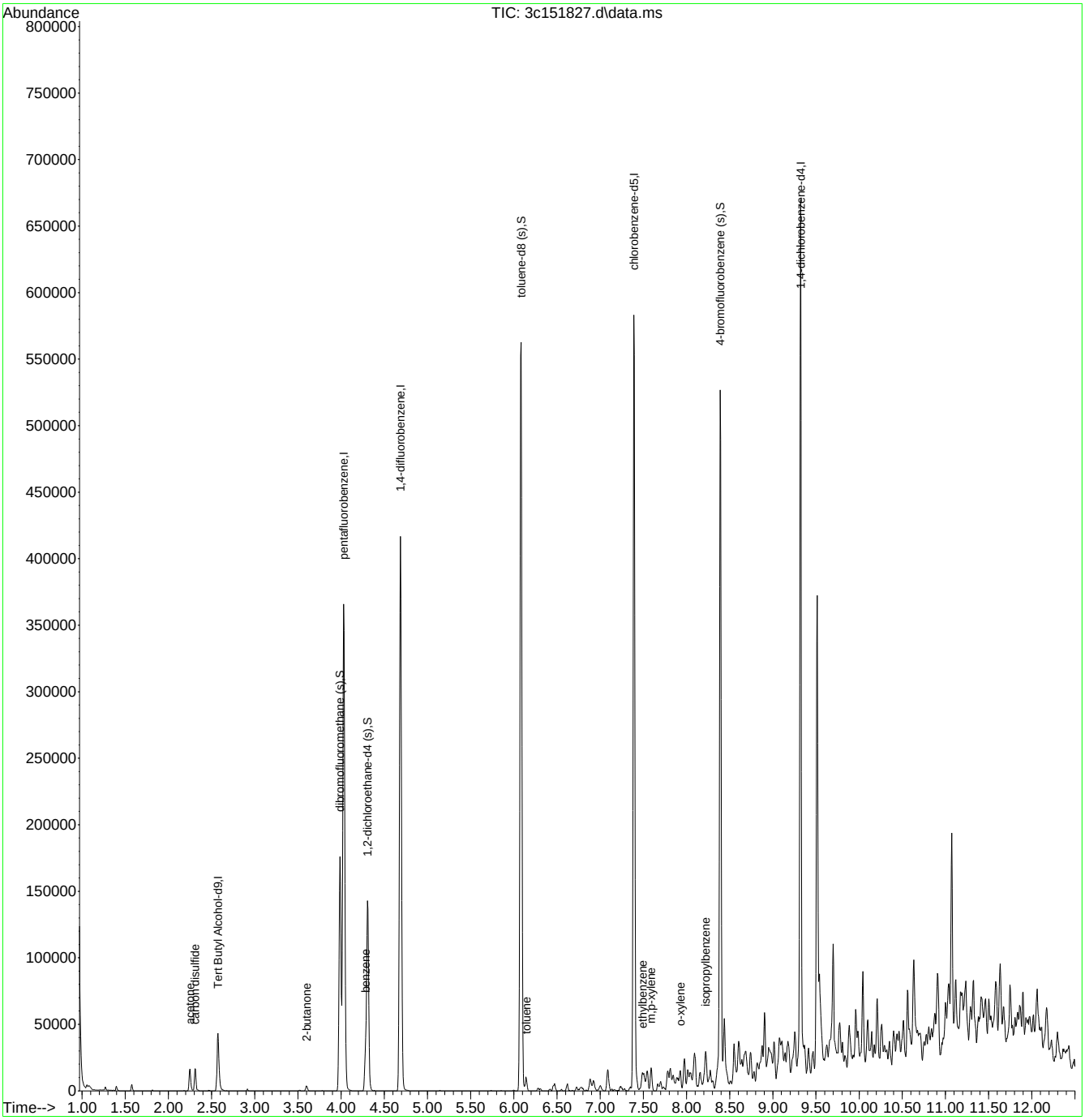
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	42622	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	235314	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	309504	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	269412	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	128459	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	85234	50.13	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.26%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	88784	52.80	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 105.60%			
75) toluene-d8 (s)	6.084	98	338177	50.71	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.42%			
98) 4-bromofluorobenzene (s)	8.390	95	132015	62.51	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 125.02%			
Target Compounds						Qvalue
20) acetone	2.250	58	4672	63.73	ug/L	90
23) carbon disulfide	2.307	76	17709	4.75	ug/L	95
31) 2-butanone	3.599	72	726	6.29	ug/L #	34
57) benzene	4.284	78	22394	3.93	ug/L	97
76) toluene	6.146	92	3758	0.98	ug/L	91
89) ethylbenzene	7.491	91	6039	0.81	ug/L	95
90) m,p-xylene	7.590	106	3017	1.03	ug/L	94
91) o-xylene	7.930	91	7417	1.26	ug/L	80
95) isopropylbenzene	8.223	105	3889	0.52	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

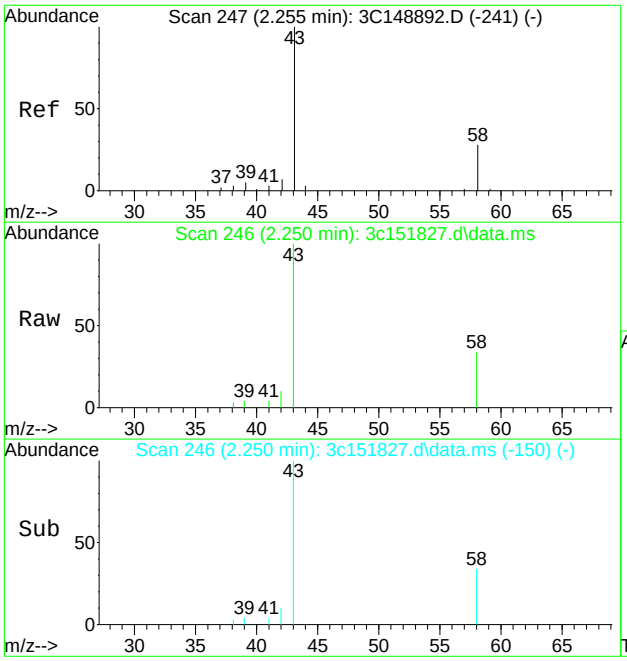
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151827.d
Acq On : 6 May 2019 7:35 pm
Operator : PrashanS
Sample : JC87093-10 Inst : MS3C
Misc : MS34369,V3C6821,3.8,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:29:19 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



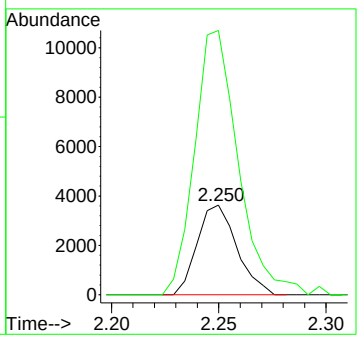
M3C6743.M Tue May 07 00:29:40 2019 Page: 2

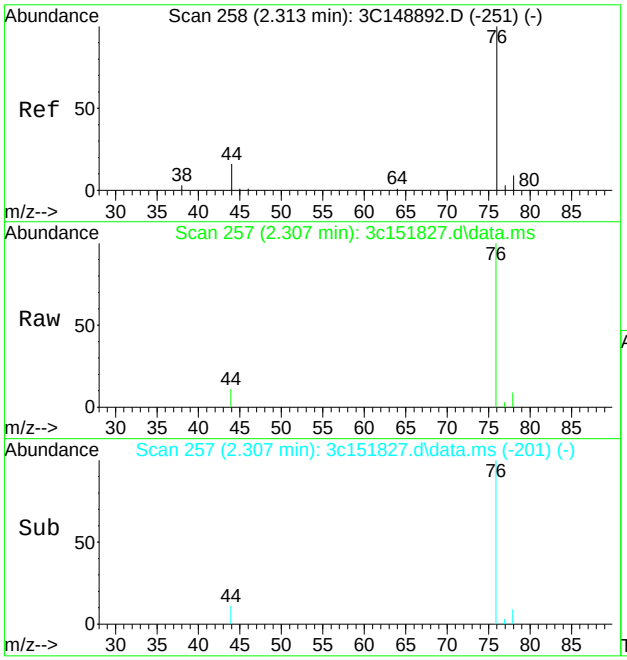


#20
acetone
Concen: 63.73 ug/L
RT: 2.250 min Scan# 246
Delta R.T. 0.000 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 58 Resp: 4672

Ion	Ratio	Lower	Upper
58	100		
43	294.7	284.5	344.5

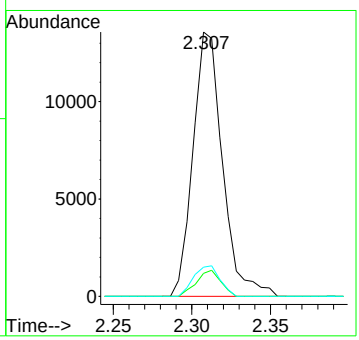


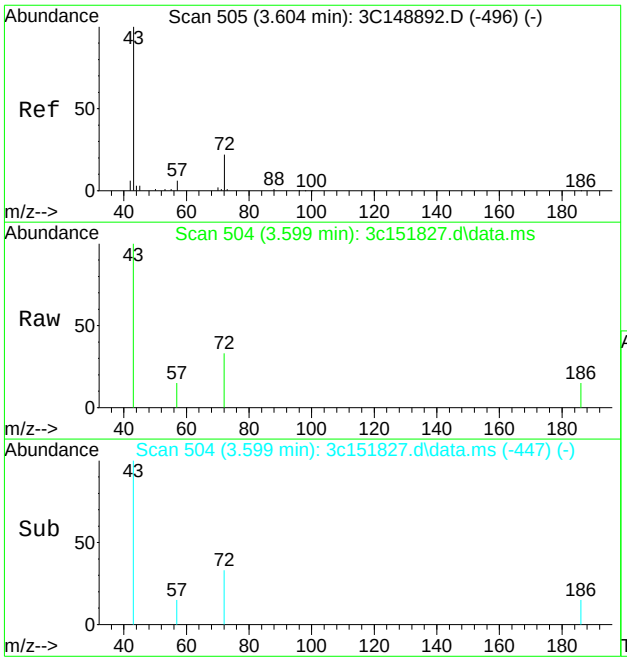


#23
carbon disulfide
Concen: 4.75 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 76 Resp: 17709

Ion	Ratio	Lower	Upper
76	100		
78	8.7	0.0	39.0
44	11.0	0.0	44.0

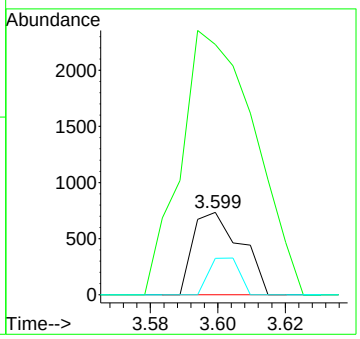


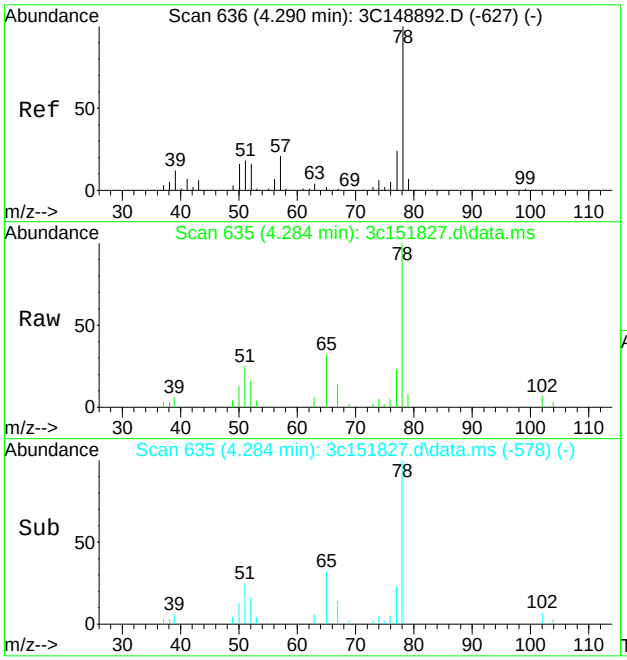


#31
2-butanone
Concen: 6.29 ug/L
RT: 3.599 min Scan# 504
Delta R.T. 0.000 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 72 Resp: 726

Ion	Ratio	Lower	Upper
72	100		
43	239.9	372.9	432.9#
57	44.4	0.0	59.6

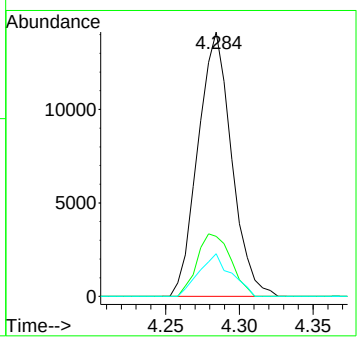


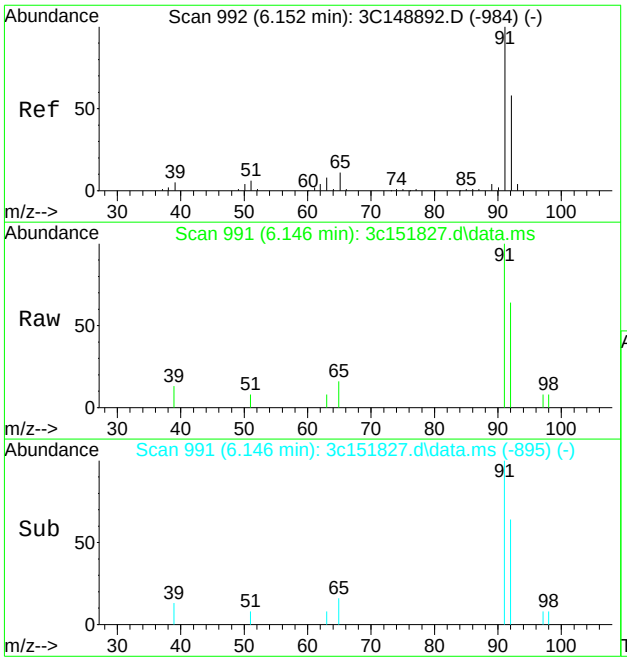


#57
benzene
Concen: 3.93 ug/L
RT: 4.284 min Scan# 635
Delta R.T. 0.000 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 78 Resp: 22394

Ion	Ratio	Lower	Upper
78	100		
77	22.8	0.0	54.0
52	16.1	0.0	44.9

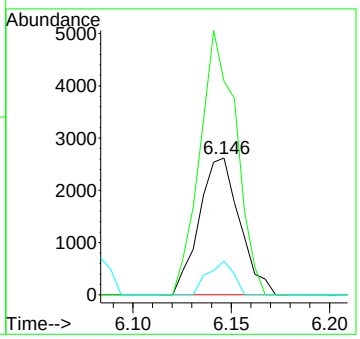


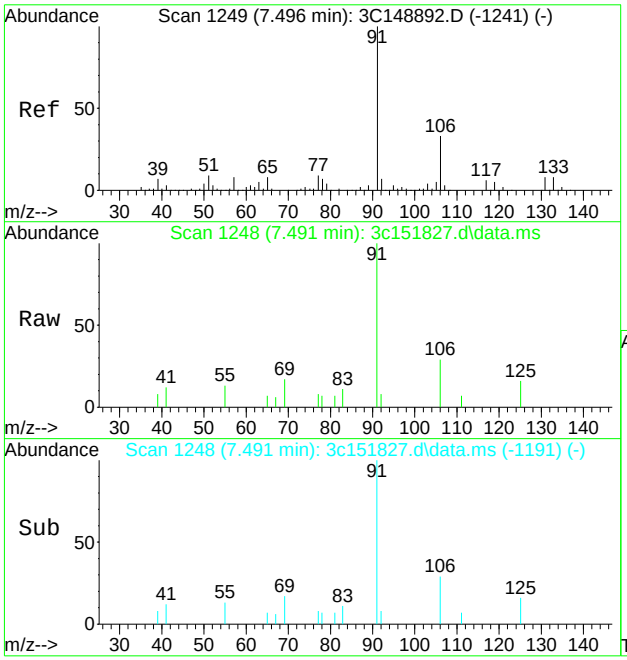


#76
toluene
Concen: 0.98 ug/L
RT: 6.146 min Scan# 991
Delta R.T. 0.000 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 92 Resp: 3758

Ion	Ratio	Lower	Upper
92	100		
91	156.0	147.5	187.5
65	24.5	0.0	38.2

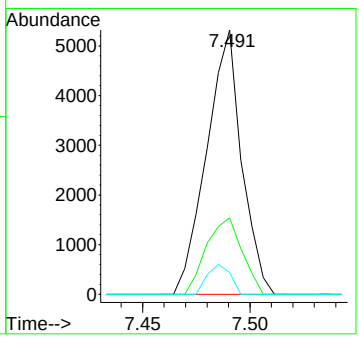


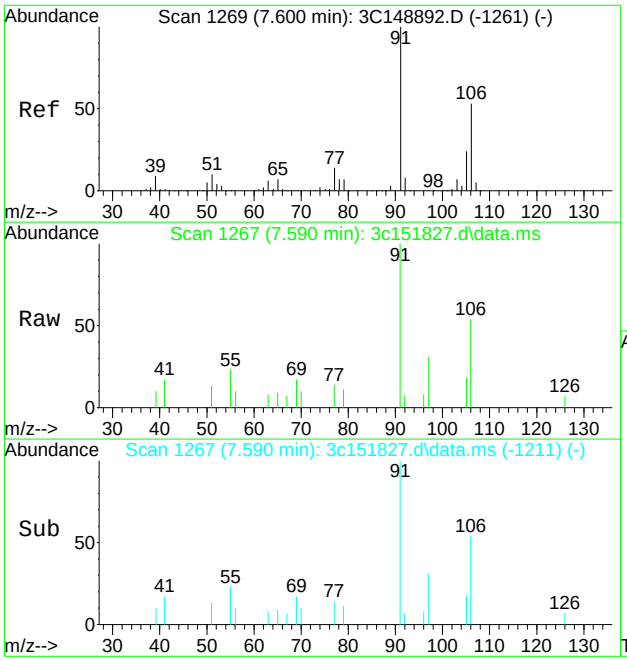


#89
ethylbenzene
Concen: 0.81 ug/L
RT: 7.491 min Scan# 1248
Delta R.T. 0.000 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 91 Resp: 6039

Ion	Ratio	Lower	Upper
91	100		
106	29.0	2.2	62.2
77	8.3	0.0	38.4

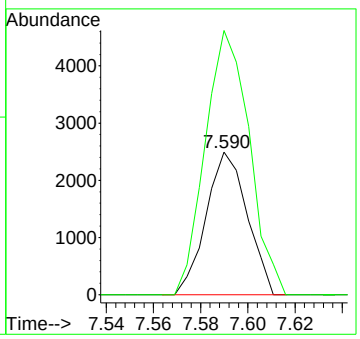


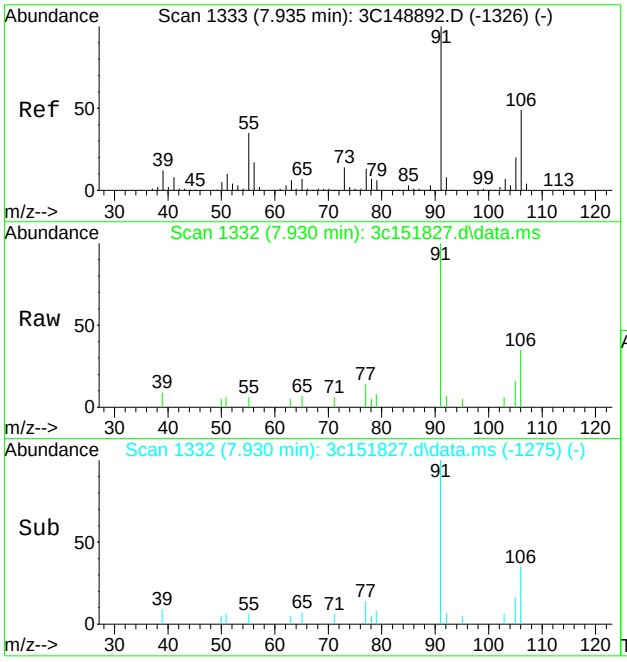


#90
m,p-xylene
Concen: 1.03 ug/L
RT: 7.590 min Scan# 1267
Delta R.T. -0.005 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion:106 Resp: 3017

Ion	Ratio	Lower	Upper
106	100		
91	185.2	164.8	224.8

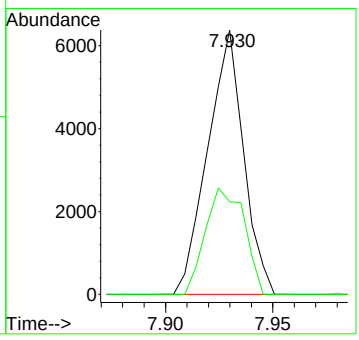


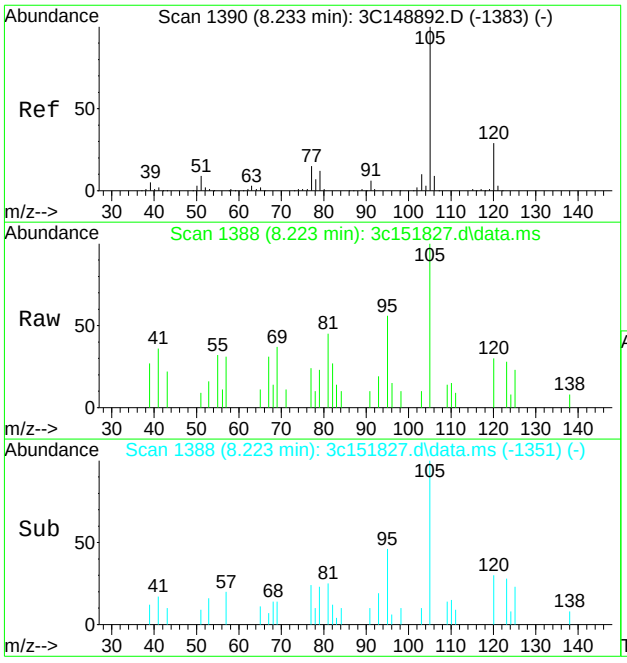


#91
o-xylene
Concen: 1.26 ug/L
RT: 7.930 min Scan# 1332
Delta R.T. 0.000 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion: 91 Resp: 7417

Ion	Ratio	Lower	Upper
91	100		
106	35.0	18.3	78.3

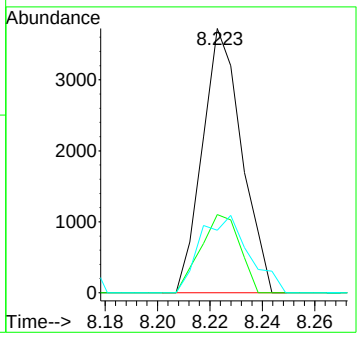




#95
isopropylbenzene
Concen: 0.52 ug/L
RT: 8.223 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 3c151827.d
Acq: 6 May 2019 7:35 pm

Tgt Ion:105 Resp: 3889

Ion	Ratio	Lower	Upper
105	100		
120	29.6	7.6	47.6
77	23.6	0.0	35.1



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6820\
Data File : 3c151792.d
Acq On : 5 May 2019 9:39 pm
Operator : mariceld
Sample : jc87093-11 Inst : MS3C
Misc : MS34369,V3C6820,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 08 16:20:05 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

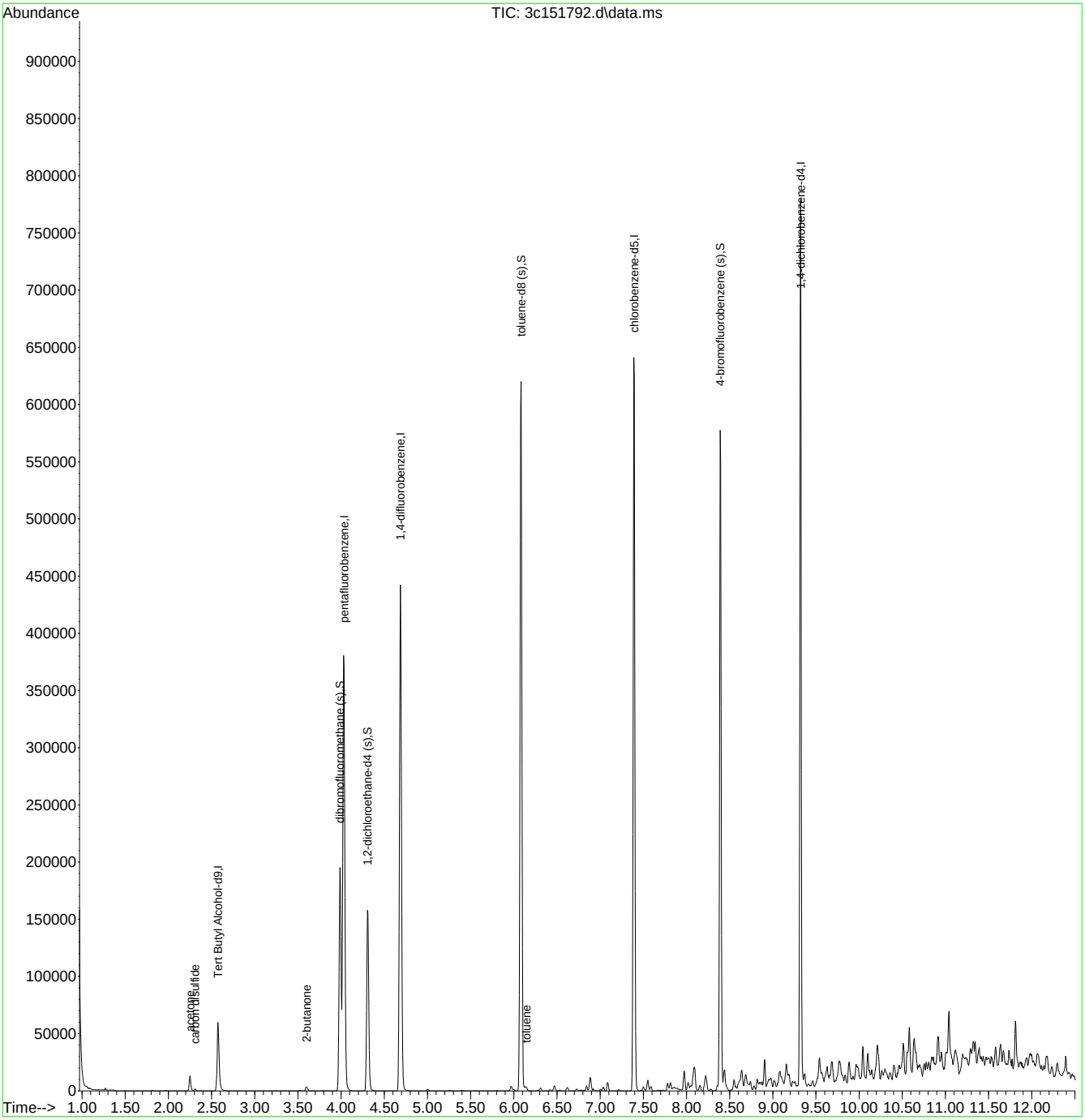
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	57583	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	245587	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	327381	50.00	ug/L	0.00
74) chlorobenzene-d5	7.396	117	294684	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	155636	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	95712	53.93	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 107.86%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	100092	56.27	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 112.54%			
75) toluene-d8 (s)	6.084	98	367772	50.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
98) 4-bromofluorobenzene (s)	8.390	95	142623	55.74	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 111.48%			
Target Compounds						Qvalue
20) acetone	2.250	58	3664	47.89	ug/L	99
23) carbon disulfide	2.307	76	1985	0.51	ug/L	69
31) 2-butanone	3.599	72	1078	8.95	ug/L #	39
76) toluene	6.146	92	1679	0.40	ug/L #	69

(#) = qualifier out of range (m) = manual integration (+) = signals summed

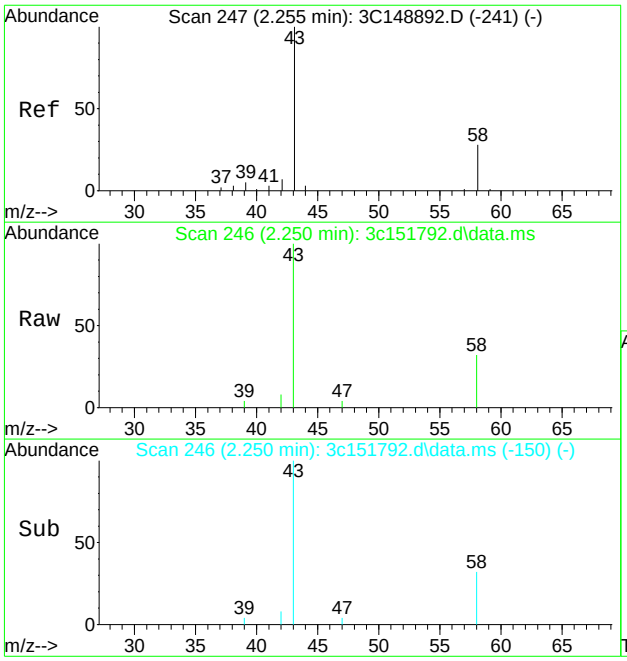
Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6820\
Data File : 3c151792.d
Acq On : 5 May 2019 9:39 pm
Operator : mariceld
Sample : jc87093-11 Inst : MS3C
Misc : MS34369,V3C6820,5.0,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 08 16:20:05 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



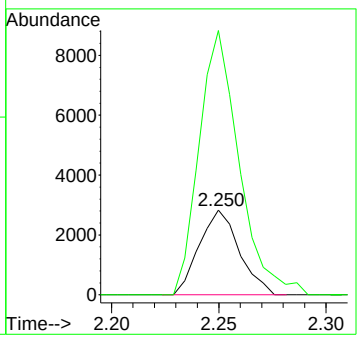
M3C6743.M Wed May 08 16:21:21 2019 Page: 2

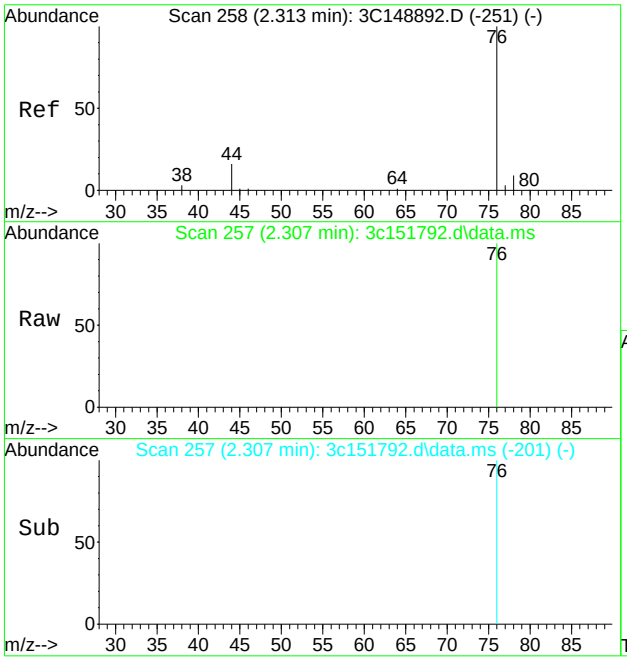


#20
acetone
Concen: 47.89 ug/L
RT: 2.250 min Scan# 246
Delta R.T. -0.000 min
Lab File: 3c151792.d
Acq: 5 May 2019 9:39 pm

Tgt Ion: 58 Resp: 3664

Ion	Ratio	Lower	Upper
58	100		
43	312.6	284.5	344.5

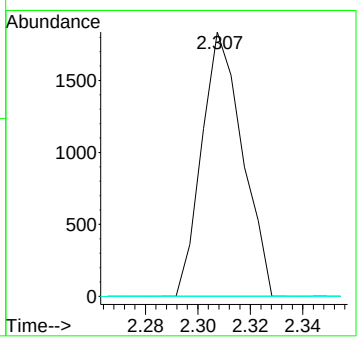


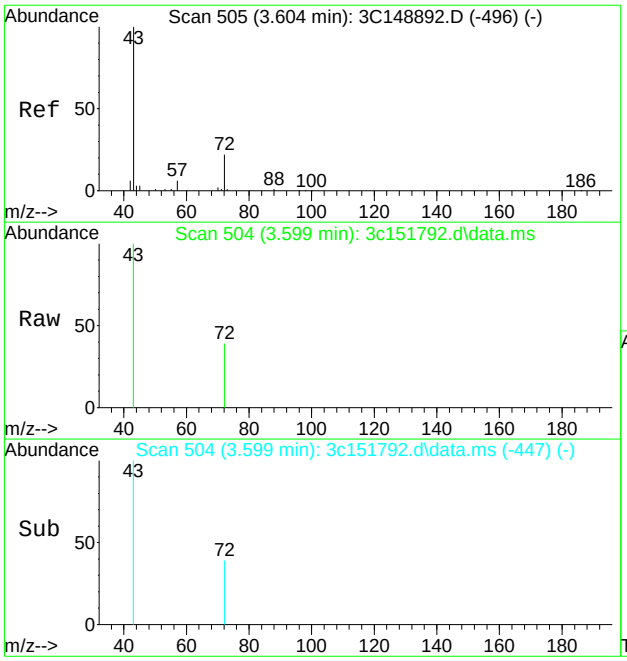


#23
carbon disulfide
Concen: 0.51 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151792.d
Acq: 5 May 2019 9:39 pm

Tgt Ion: 76 Resp: 1985

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

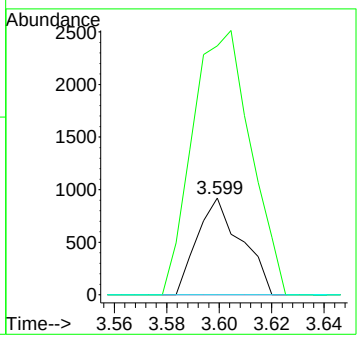


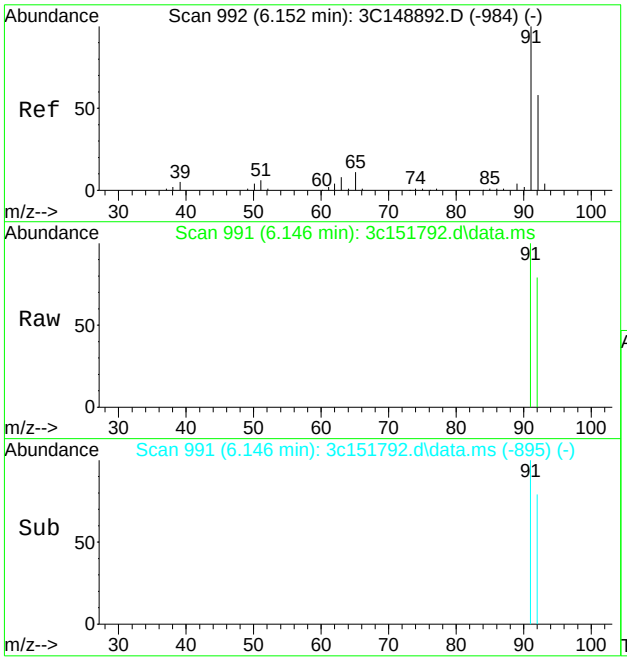


#31
2-butanone
Concen: 8.95 ug/L
RT: 3.599 min Scan# 504
Delta R.T. -0.000 min
Lab File: 3c151792.d
Acq: 5 May 2019 9:39 pm

Tgt Ion: 72 Resp: 1078

Ion	Ratio	Lower	Upper
72	100		
43	257.2	372.9	432.9#
57	0.0	0.0	59.6

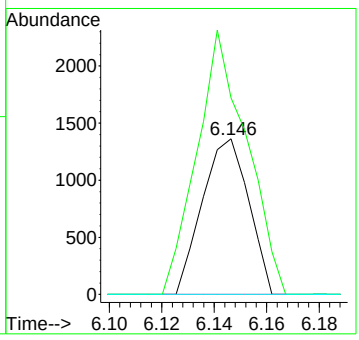




#76
toluene
Concen: 0.40 ug/L
RT: 6.146 min Scan# 991
Delta R.T. 0.000 min
Lab File: 3c151792.d
Acq: 5 May 2019 9:39 pm

Tgt Ion: 92 Resp: 1679

Ion	Ratio	Lower	Upper
92	100		
91	126.3	147.5	187.5#
65	0.0	0.0	38.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151828.d
Acq On : 6 May 2019 7:59 pm
Operator : PrashanS
Sample : JC87093-12 Inst : MS3C
Misc : MS34369,V3C6821,4.1,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:31:44 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

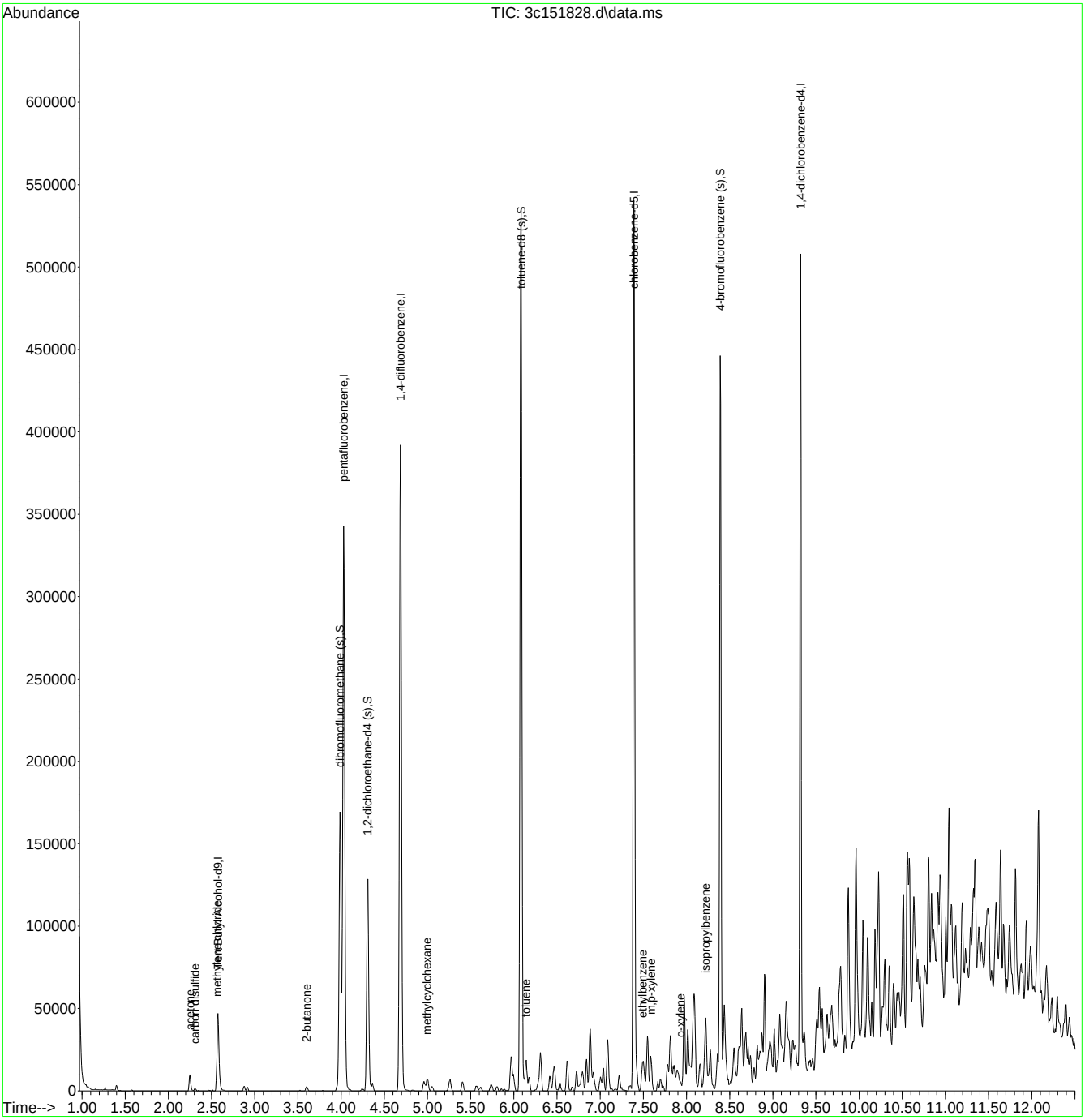
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	42590	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	215259	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	299545	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	238404	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	101577	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	82629	53.12	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery	=	106.24%	
53) 1,2-dichloroethane-d4 (s)	4.305	65	82014	50.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery	=	100.78%	
75) toluene-d8 (s)	6.084	98	320039	54.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	108.48%	
98) 4-bromofluorobenzene (s)	8.390	95	110438	66.13	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery	=	132.26%#	
Target Compounds						Qvalue
20) acetone	2.250	58	2752	41.03	ug/L	100
23) carbon disulfide	2.307	76	1869	0.55	ug/L	69
24) methylene chloride	2.564	84	1903	1.43	ug/L	89
31) 2-butanone	3.599	72	970	9.18	ug/L #	36
67) methylcyclohexane	4.996	83	2337	0.84	ug/L	80
76) toluene	6.141	92	6380	1.88	ug/L	99
89) ethylbenzene	7.490	91	1540	0.23	ug/L	90
90) m,p-xylene	7.590	106	1275	0.49	ug/L	94
91) o-xylene	7.930	91	2838	0.54	ug/L	98
95) isopropylbenzene	8.223	105	6106	0.92	ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

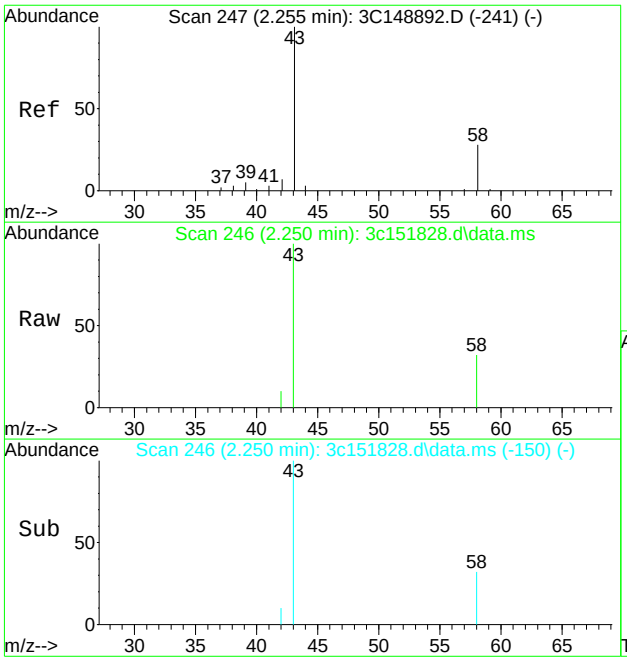
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151828.d
Acq On : 6 May 2019 7:59 pm
Operator : PrashanS
Sample : JC87093-12 Inst : MS3C
Misc : MS34369,V3C6821,4.1,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:31:44 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



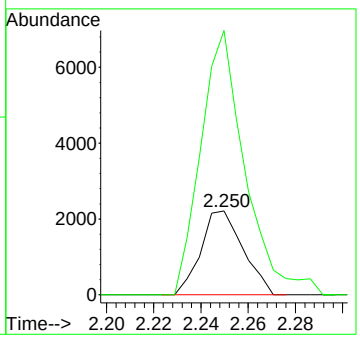
M3C6743.M Tue May 07 00:31:54 2019 Page: 2

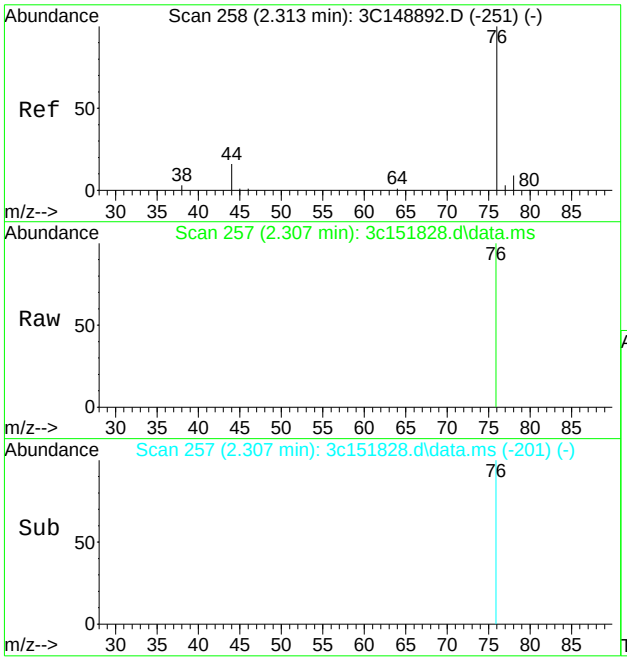


#20
acetone
Concen: 41.03 ug/L
RT: 2.250 min Scan# 246
Delta R.T. -0.000 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 58 Resp: 2752

Ion	Ratio	Lower	Upper
58	100		
43	314.9	284.5	344.5

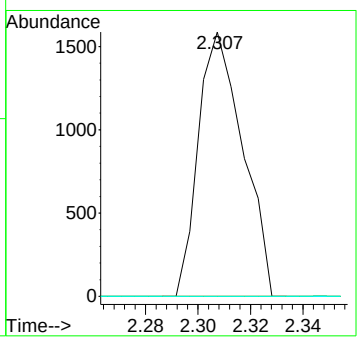


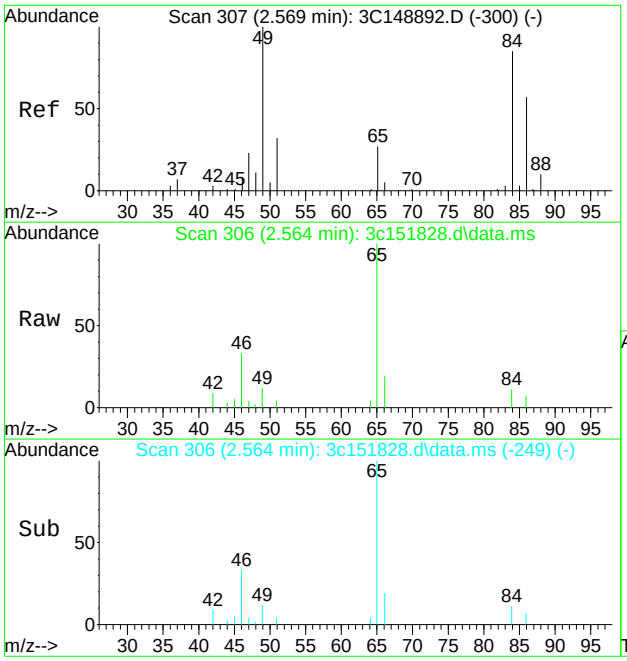


#23
carbon disulfide
Concen: 0.55 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 76 Resp: 1869

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

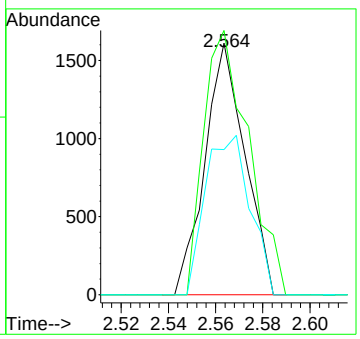


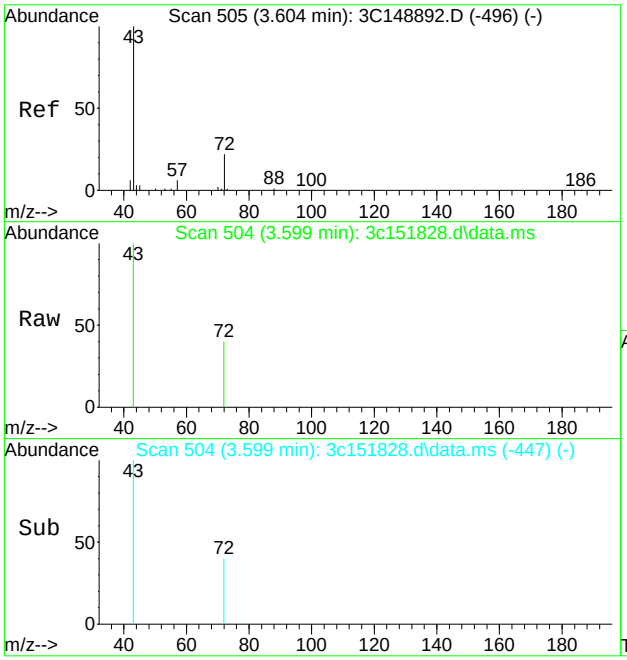


#24
methylene chloride
Concen: 1.43 ug/L
RT: 2.564 min Scan# 306
Delta R.T. -0.000 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 84 Resp: 1903

Ion	Ratio	Lower	Upper
84	100		
49	105.0	87.1	147.1
86	57.7	37.5	97.5

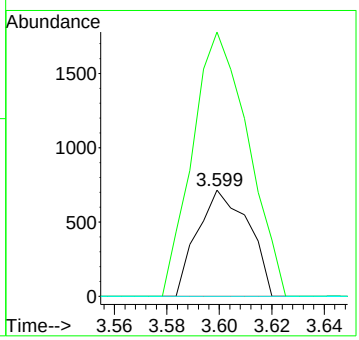


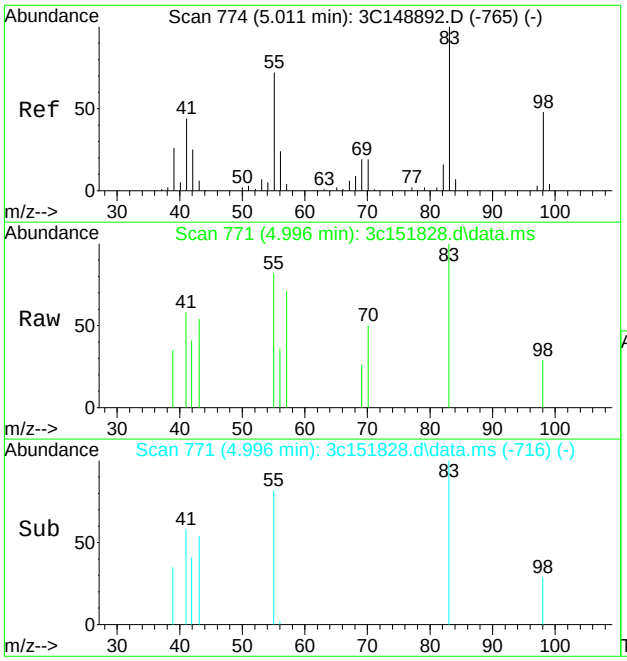


#31
2-butanone
Concen: 9.18 ug/L
RT: 3.599 min Scan# 504
Delta R.T. -0.000 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 72 Resp: 970

Ion	Ratio	Lower	Upper
72	100		
43	248.5	372.9	432.9#
57	0.0	0.0	59.6

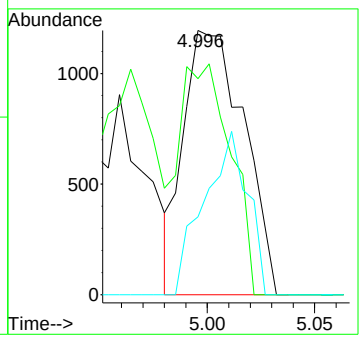


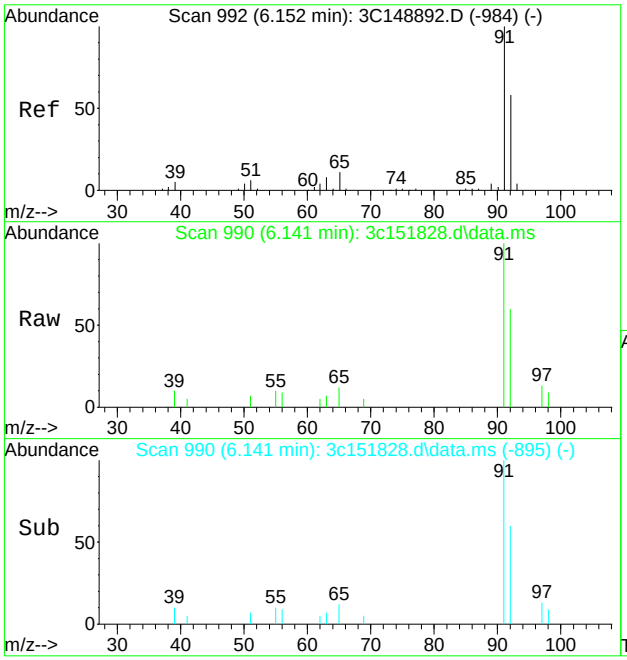


#67
methylcyclohexane
Concen: 0.84 ug/L
RT: 4.996 min Scan# 771
Delta R.T. -0.011 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 83 Resp: 2337

Ion	Ratio	Lower	Upper
83	100		
55	81.7	42.2	102.2
98	29.5	22.5	82.5

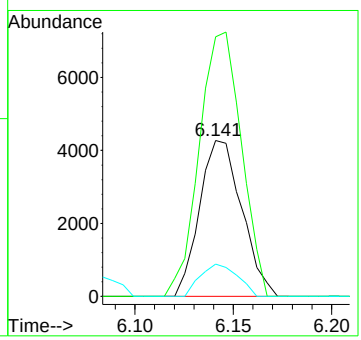


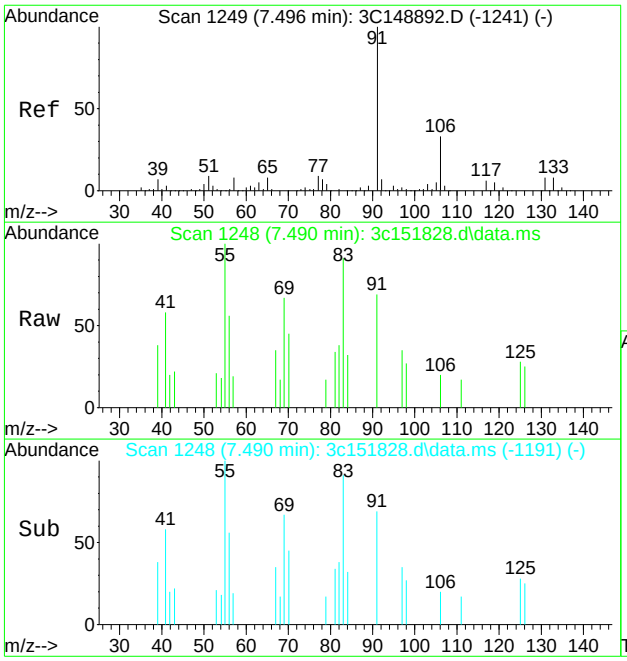


#76
toluene
Concen: 1.88 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 92 Resp: 6380

Ion	Ratio	Lower	Upper
92	100		
91	166.6	147.5	187.5
65	20.7	0.0	38.2

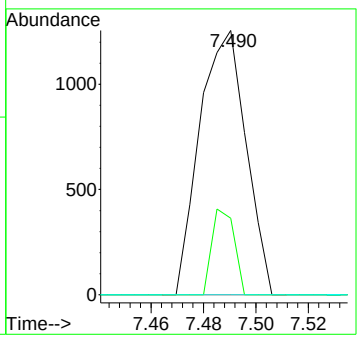


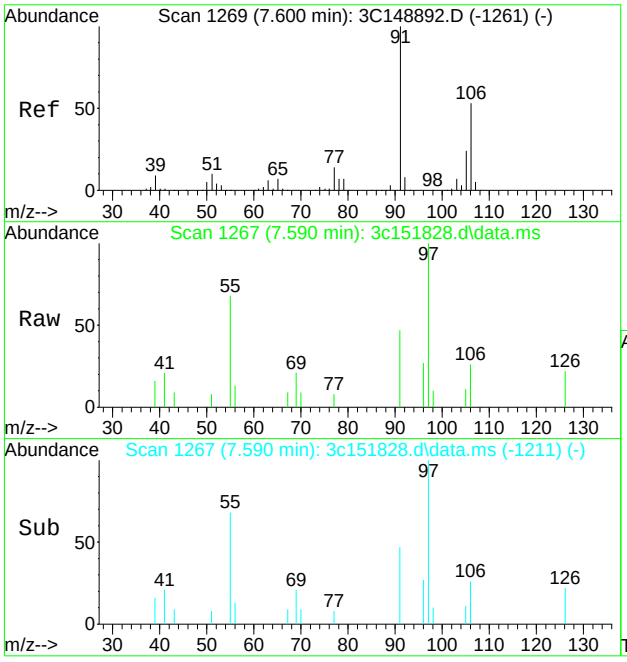


#89
ethylbenzene
Concen: 0.23 ug/L
RT: 7.490 min Scan# 1248
Delta R.T. -0.000 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 91 Resp: 1540

Ion	Ratio	Lower	Upper
91	100		
106	28.9	2.2	62.2
77	0.0	0.0	38.4

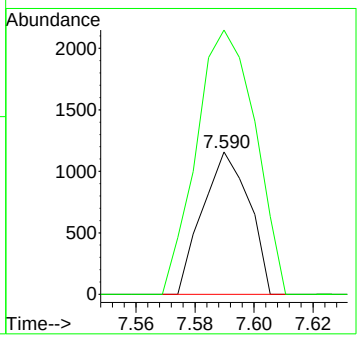


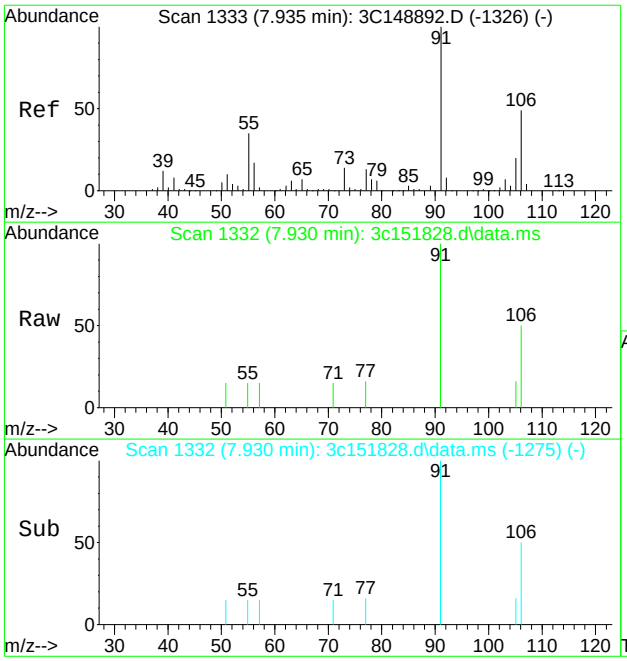


#90
m,p-xylene
Concen: 0.49 ug/L
RT: 7.590 min Scan# 1267
Delta R.T. -0.005 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion:106 Resp: 1275

Ion	Ratio	Lower	Upper
106	100		
91	185.8	164.8	224.8

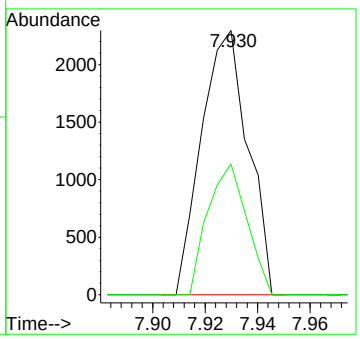


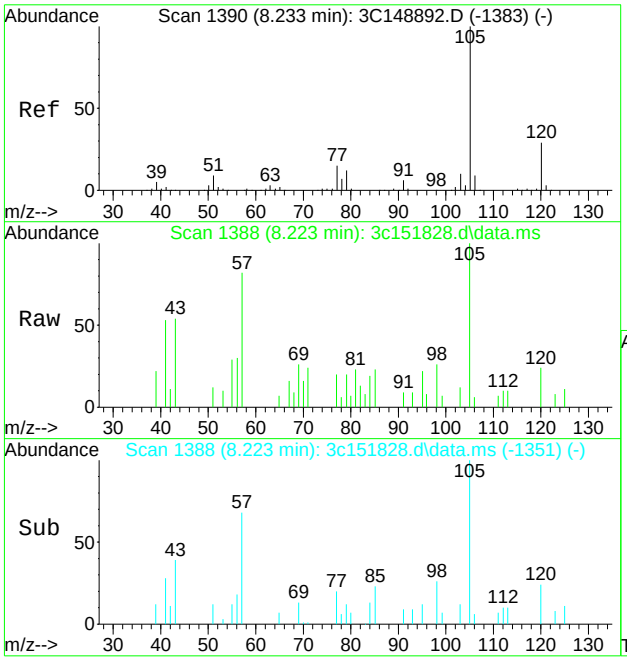


#91
o-xylene
Concen: 0.54 ug/L
RT: 7.930 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion: 91 Resp: 2838

Ion	Ratio	Lower	Upper
91	100		
106	49.5	18.3	78.3

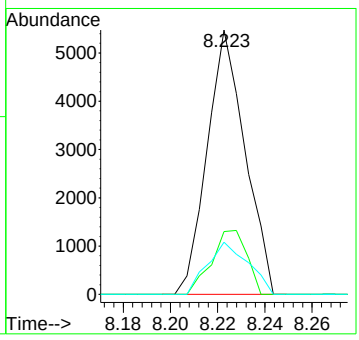




#95
isopropylbenzene
Concen: 0.92 ug/L
RT: 8.223 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 3c151828.d
Acq: 6 May 2019 7:59 pm

Tgt Ion:105 Resp: 6106

Ion	Ratio	Lower	Upper
105	100		
120	23.8	7.6	47.6
77	19.7	0.0	35.1



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6820\
Data File : 3c151793.d
Acq On : 5 May 2019 10:02 pm
Operator : mariceld
Sample : jc87093-12 Inst : MS3C
Misc : MS34369,V3C6820,4.7,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 09 16:04:10 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

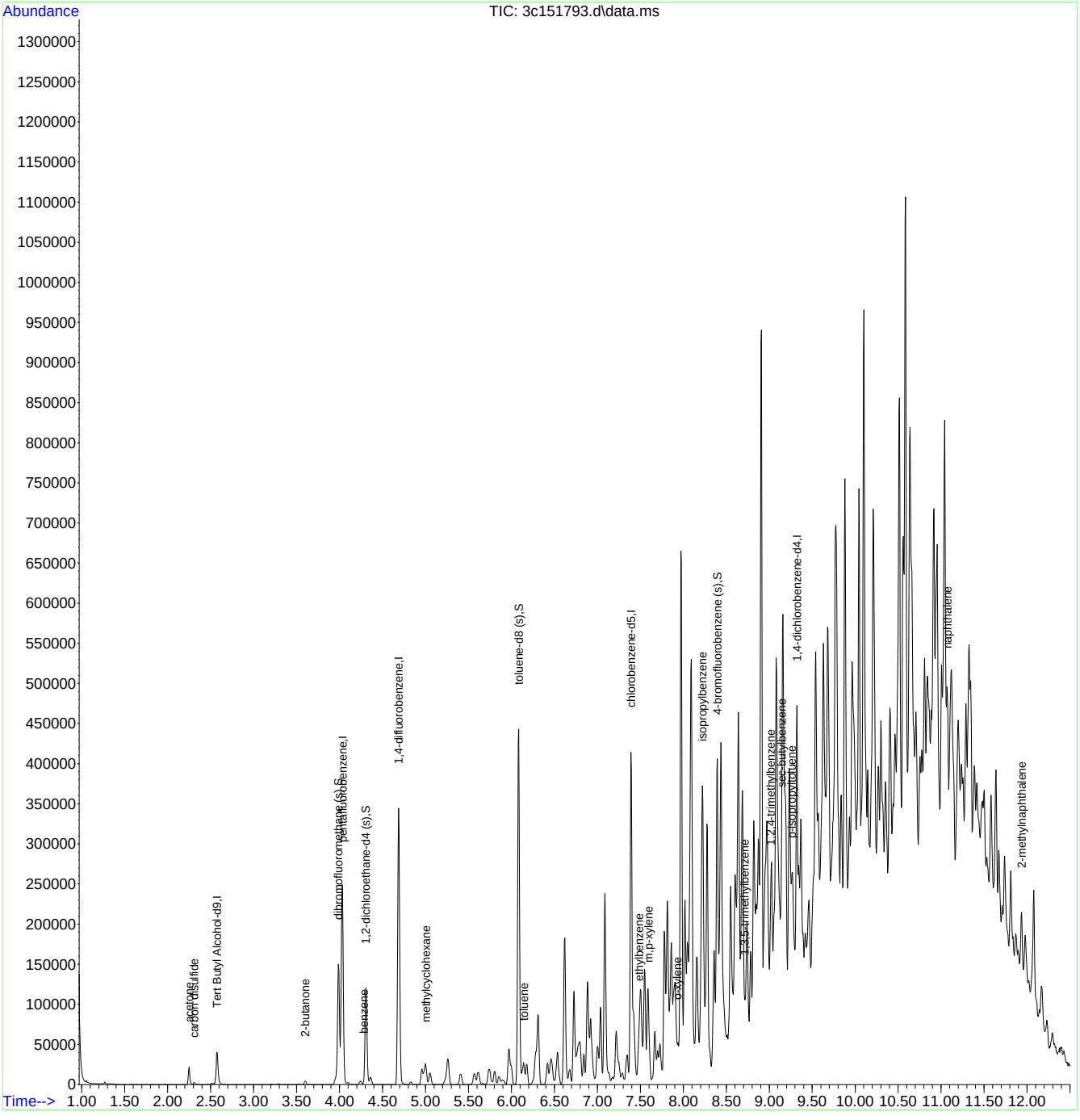
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	41272	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	162594	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	259329	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	178013	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	62662	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	73399	62.47	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 124.94%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	75719	53.74	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 107.48%			
75) toluene-d8 (s)	6.084	98	259458	58.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 117.78%			
98) 4-bromofluorobenzene (s)	8.395	95	87967	85.38	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 170.76%#			
Target Compounds						Qvalue
20) acetone	2.250	58	5591	110.37	ug/L	89
23) carbon disulfide	2.307	76	2878	1.12	ug/L	86
31) 2-butanone	3.599	72	1318	16.52	ug/L #	51
57) benzene	4.284	78	1387	0.29	ug/L	56
67) methylcyclohexane	5.006	83	4140	1.71	ug/L	96
76) toluene	6.146	92	6379	2.51	ug/L	93
89) ethylbenzene	7.485	91	5057	1.03	ug/L	83
90) m,p-xylene	7.595	106	3205	1.65	ug/L	94
91) o-xylene	7.930	91	8565	2.20	ug/L	98
95) isopropylbenzene	8.223	105	13623	2.75	ug/L	93
106) 1,3,5-trimethylbenzene	8.714	105	16201	5.84	ug/L	96
108) 1,2,4-trimethylbenzene	9.018	105	22054	7.82	ug/L	95
109) sec-butylbenzene	9.143	105	10008	2.79	ug/L	97
111) p-isopropyltoluene	9.258	119	6248	1.98	ug/L	87
119) naphthalene	11.073	128	78243	34.97	ug/L	98
124) 2-methylnaphthalene	11.936	142	12954	9.67	ug/L	88

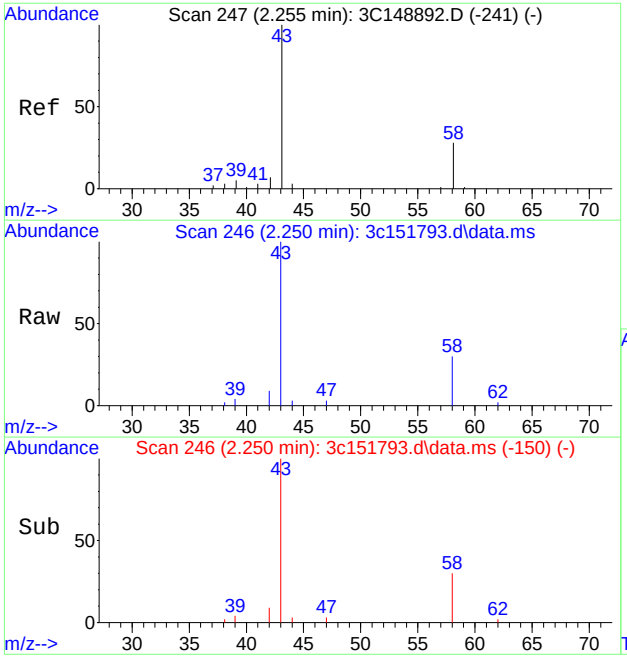
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6820\
Data File : 3c151793.d
Acq On : 5 May 2019 10:02 pm
Operator : mariceld
Sample : jc87093-12 Inst : MS3C
Misc : MS34369,V3C6820,4.7,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 09 16:04:10 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

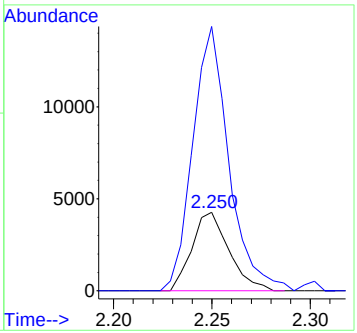


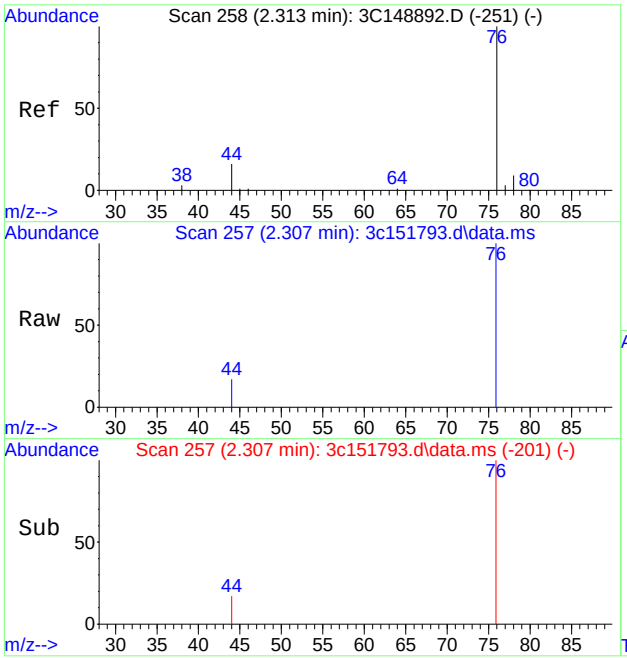


#20
acetone
Concen: 110.37 ug/L
RT: 2.250 min Scan# 246
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 58 Resp: 5591

Ion	Ratio	Lower	Upper
58	100		
43	336.3	284.5	344.5

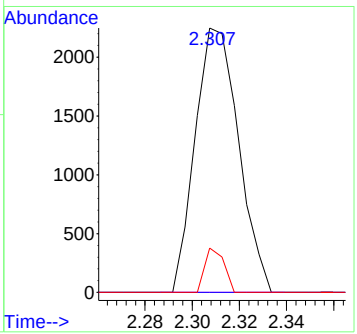




#23
carbon disulfide
Concen: 1.12 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

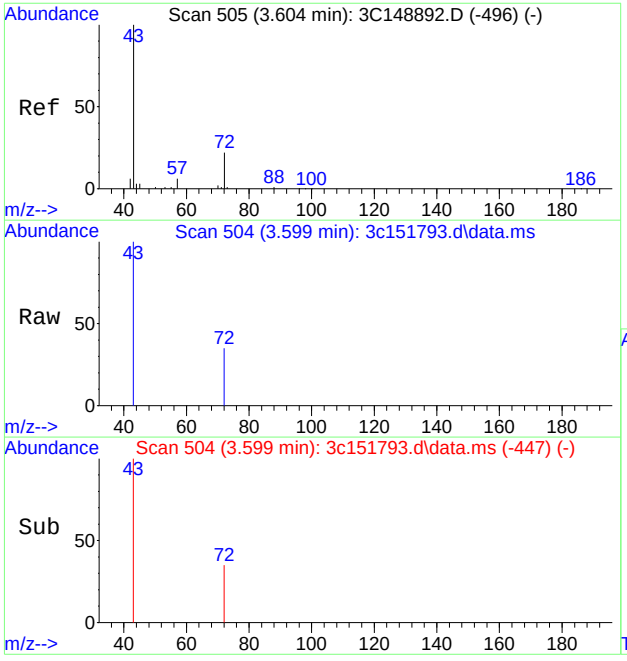
Tgt Ion: 76 Resp: 2878

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	16.8	0.0	44.0



7.1.14

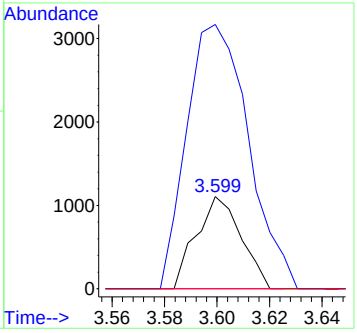
7

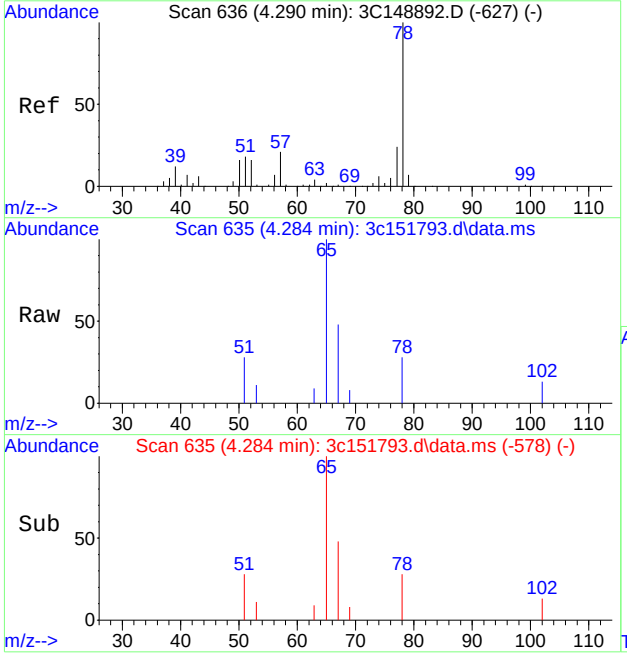


#31
2-butanone
Concen: 16.52 ug/L
RT: 3.599 min Scan# 504
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 72 Resp: 1318

Ion	Ratio	Lower	Upper
72	100		
43	286.2	372.9	432.9#
57	0.0	0.0	59.6

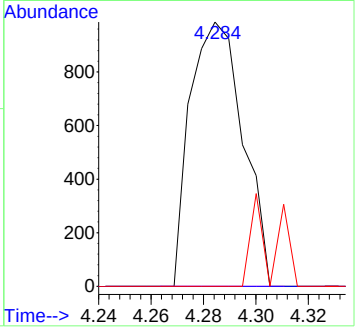


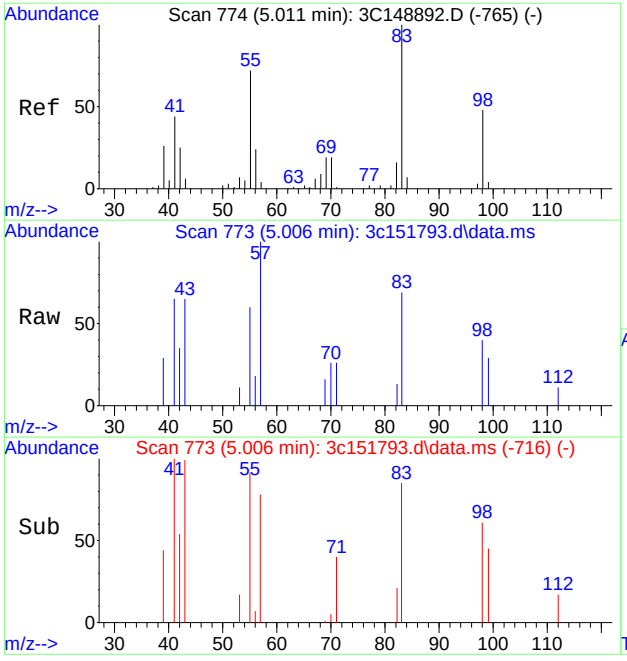


#57
benzene
Concen: 0.29 ug/L
RT: 4.284 min Scan# 635
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 78 Resp: 1387

Ion	Ratio	Lower	Upper
78	100		
77	0.0	0.0	54.0
52	0.0	0.0	44.9

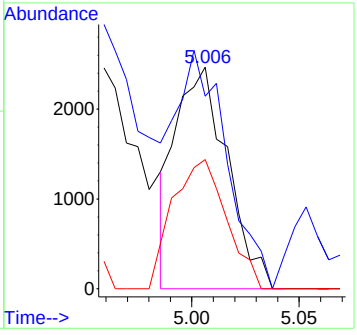


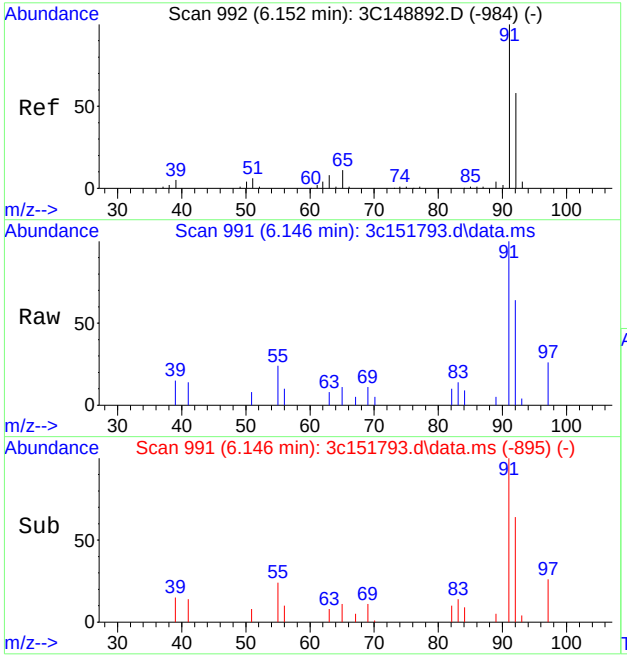


#67
methylcyclohexane
Concen: 1.71 ug/L
RT: 5.006 min Scan# 773
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 83 Resp: 4140

Ion	Ratio	Lower	Upper
83	100		
55	72.5	42.2	102.2
98	58.4	22.5	82.5

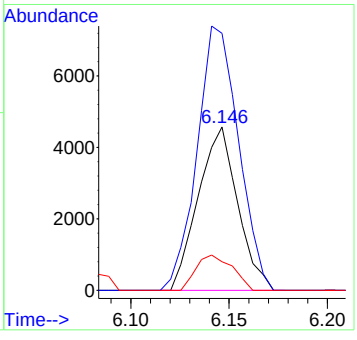


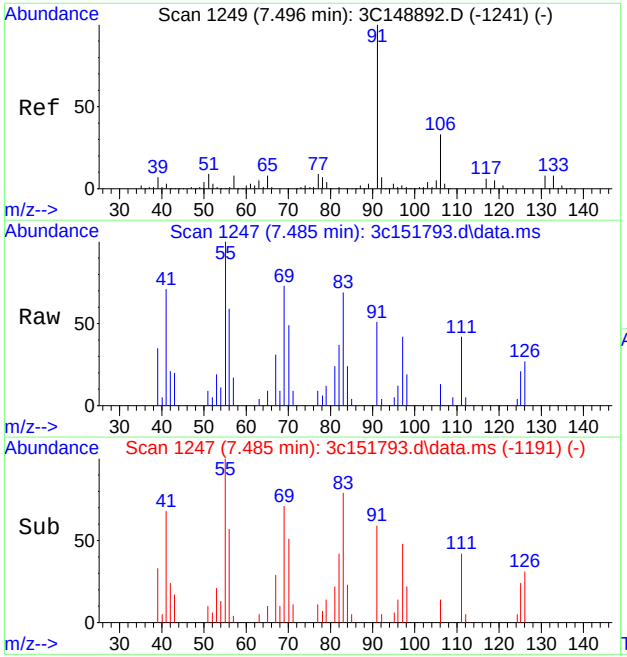


#76
toluene
Concen: 2.51 ug/L
RT: 6.146 min Scan# 991
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 92 Resp: 6379

Ion	Ratio	Lower	Upper
92	100		
91	157.2	147.5	187.5
65	17.5	0.0	38.2

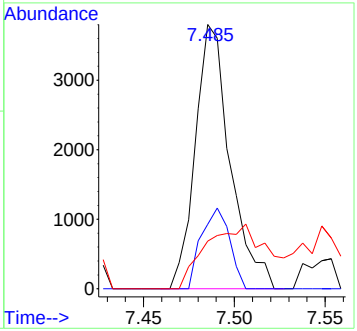


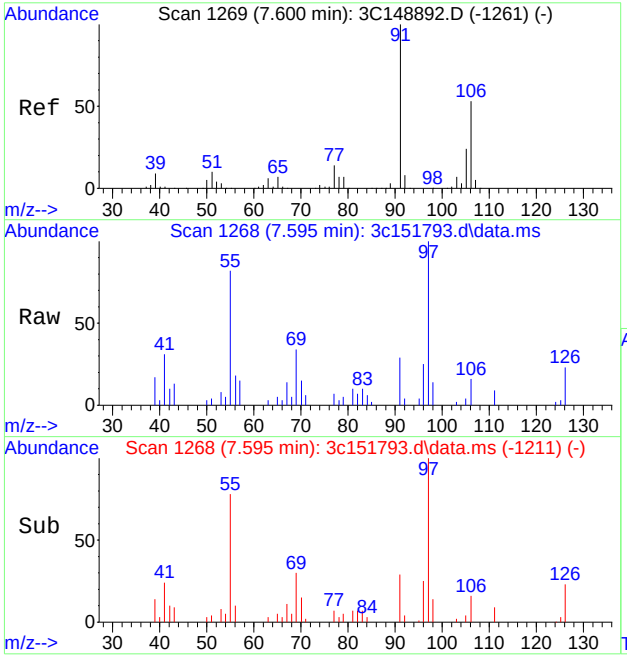


#89
ethylbenzene
Concen: 1.03 ug/L
RT: 7.485 min Scan# 1247
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 91 Resp: 5057

Ion	Ratio	Lower	Upper
91	100		
106	24.4	2.2	62.2
77	18.0	0.0	38.4

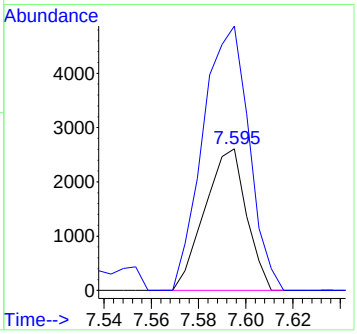


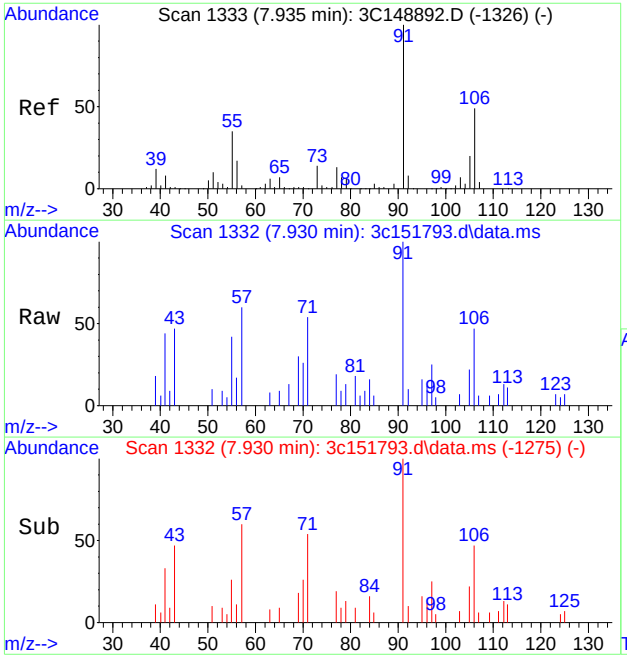


#90
m,p-xylene
Concen: 1.65 ug/L
RT: 7.595 min Scan# 1268
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:106 Resp: 3205

Ion	Ratio	Lower	Upper
106	100		
91	186.6	164.8	224.8

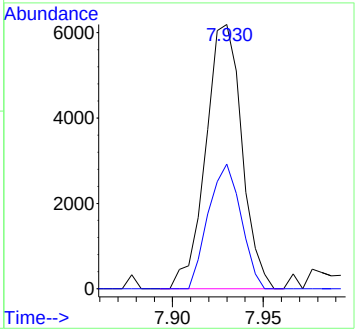


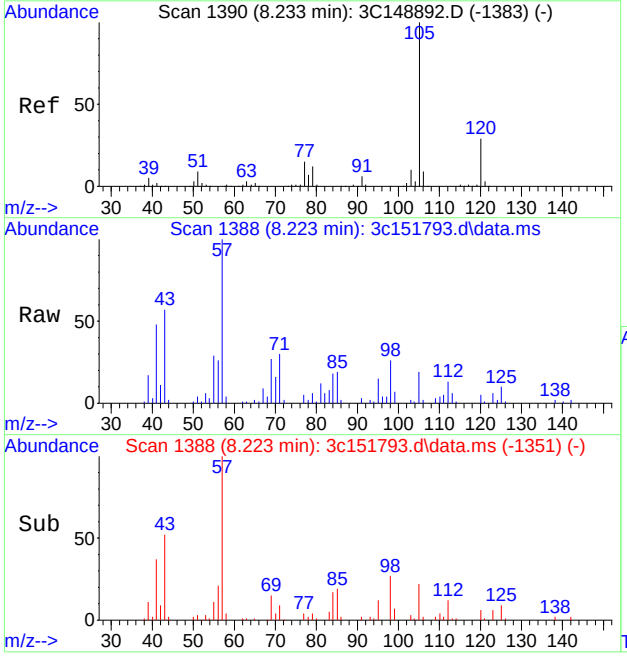


#91
o-xylene
Concen: 2.20 ug/L
RT: 7.930 min Scan# 1332
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion: 91 Resp: 8565

Ion	Ratio	Lower	Upper
91	100		
106	47.2	18.3	78.3

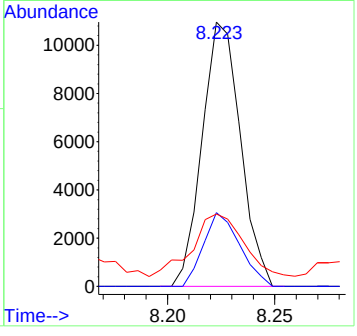


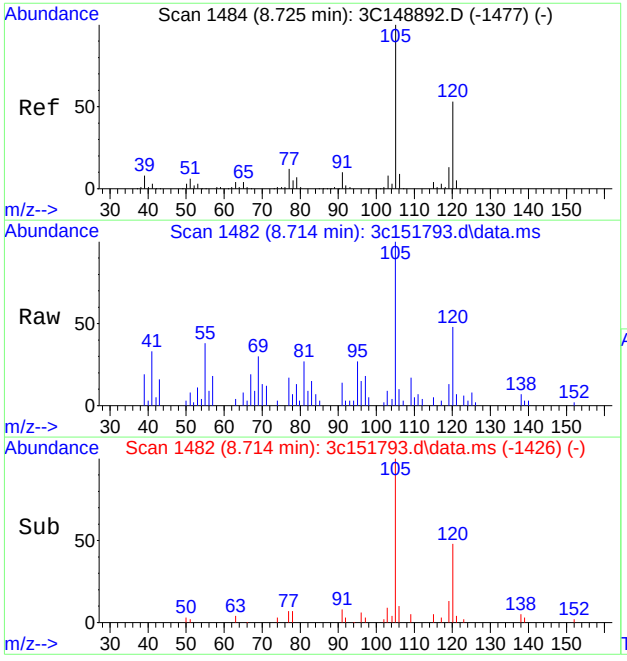


#95
isopropylbenzene
Concen: 2.75 ug/L
RT: 8.223 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:105 Resp: 13623

Ion	Ratio	Lower	Upper
105	100		
120	27.9	7.6	47.6
77	23.0	0.0	35.1

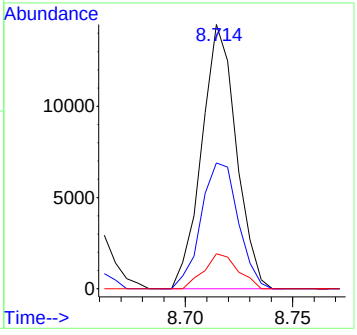


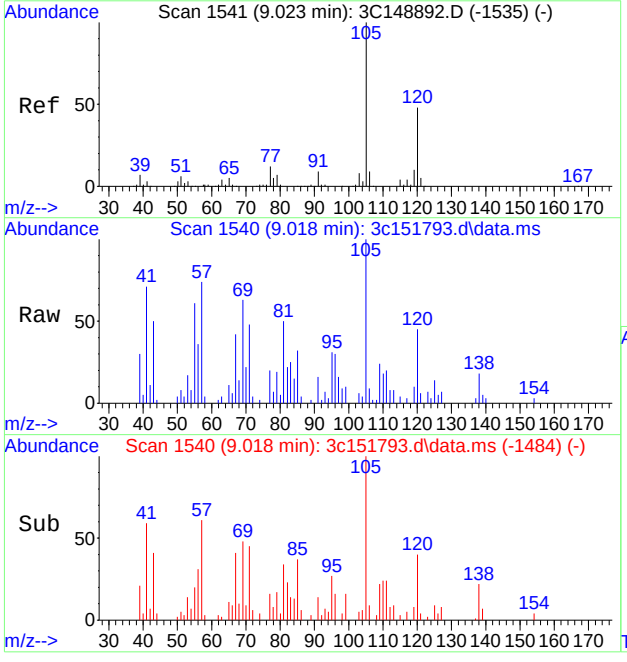


#106
1,3,5-trimethylbenzene
Concen: 5.84 ug/L
RT: 8.714 min Scan# 1482
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:105 Resp: 16201

Ion	Ratio	Lower	Upper
105	100		
120	47.6	20.9	80.9
119	13.2	0.0	42.6

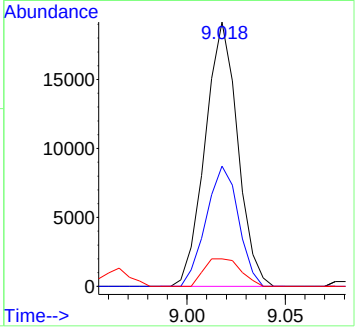


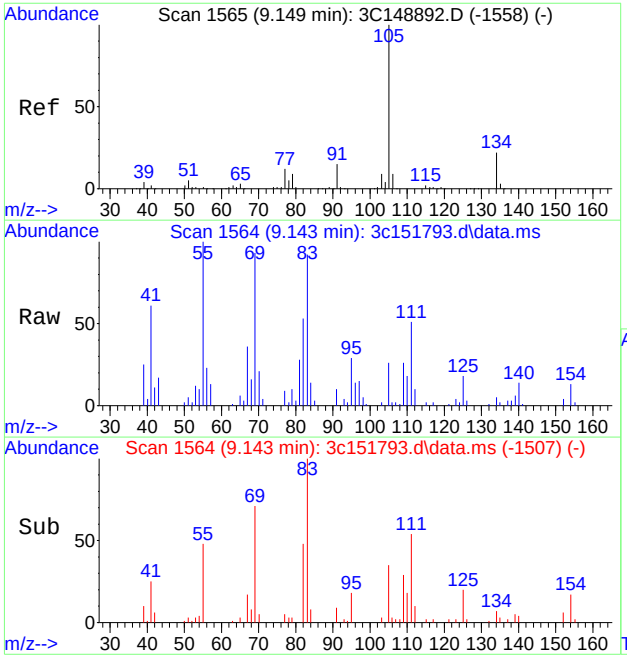


#108
1,2,4-trimethylbenzene
Concen: 7.82 ug/L
RT: 9.018 min Scan# 1540
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:105 Resp: 22054

Ion	Ratio	Lower	Upper
105	100		
120	45.5	18.5	78.5
119	10.4	0.0	43.1

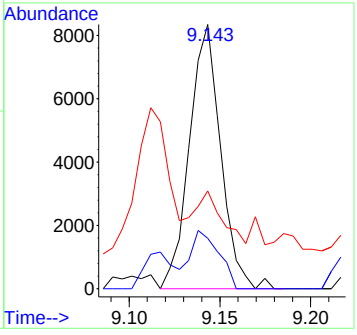


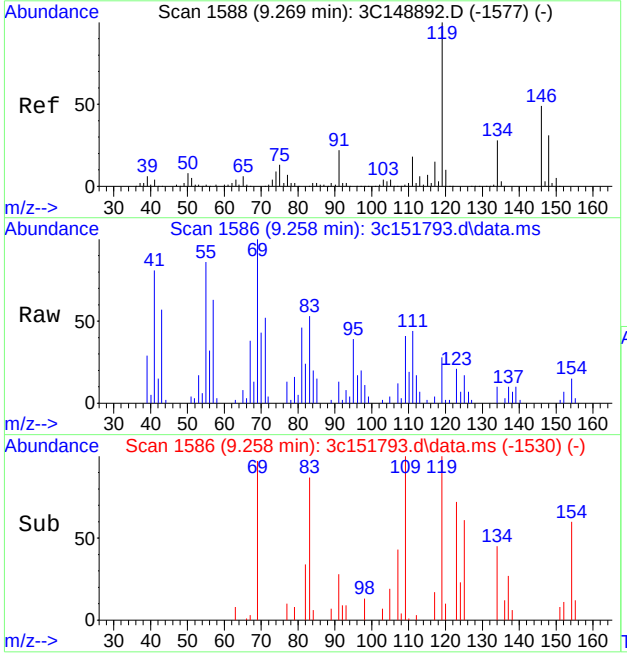


#109
sec-butylbenzene
Concen: 2.79 ug/L
RT: 9.143 min Scan# 1564
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:105 Resp: 10008

Ion	Ratio	Lower	Upper
105	100		
134	19.1	0.0	51.3
91	16.2	0.0	45.7

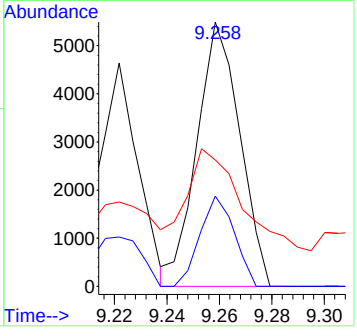




#111
p-isopropyltoluene
Concen: 1.98 ug/L
RT: 9.258 min Scan# 1586
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

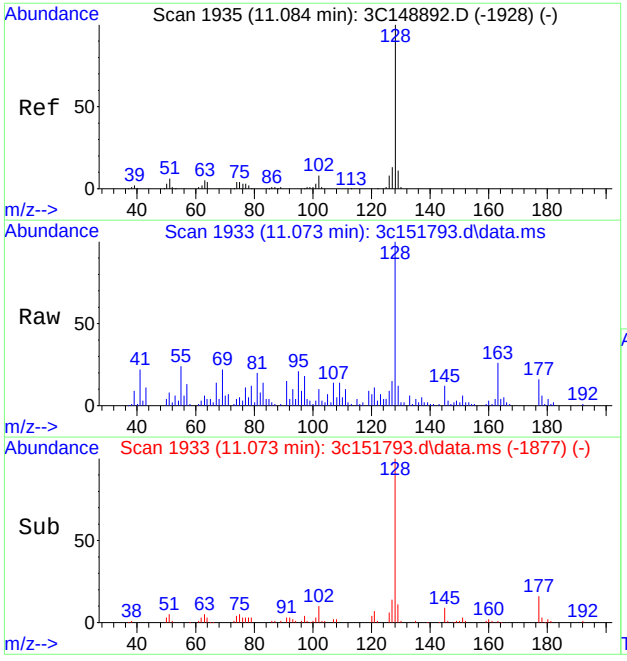
Tgt Ion:119 Resp: 6248

Ion	Ratio	Lower	Upper
119	100		
134	34.2	0.0	57.2
91	28.8	0.0	52.8



7.1.14

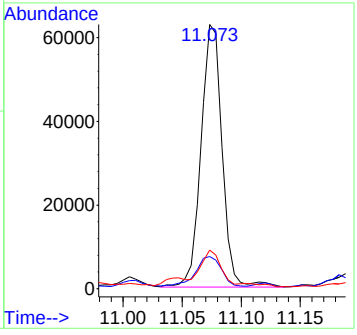
7

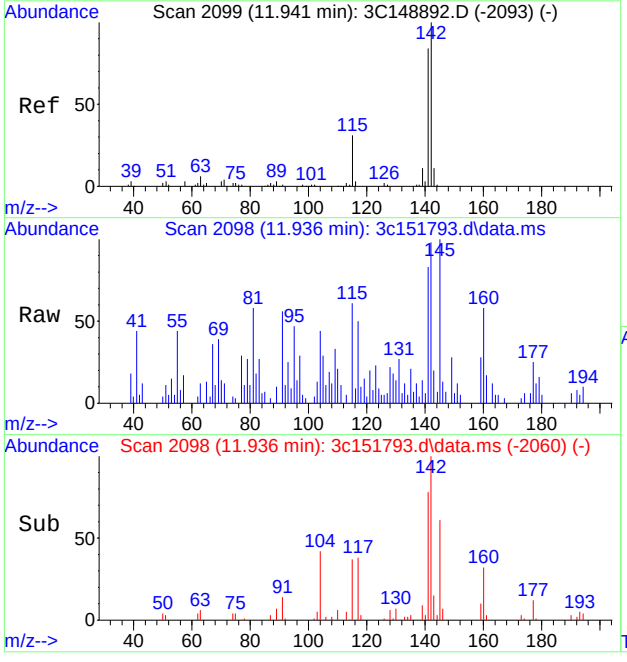


#119
naphthalene
Concen: 34.97 ug/L
RT: 11.073 min Scan# 1933
Delta R.T. -0.005 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:128 Resp: 78243

Ion	Ratio	Lower	Upper
128	100		
129	11.4	0.0	40.9
127	13.9	0.0	42.7

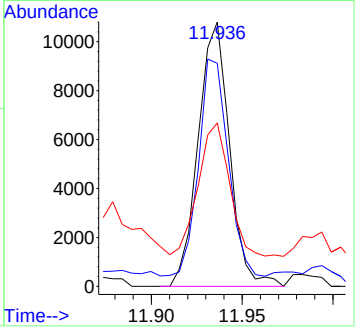




#124
2-methylnaphthalene
Concen: 9.67 ug/L
RT: 11.936 min Scan# 2098
Delta R.T. 0.000 min
Lab File: 3c151793.d
Acq: 5 May 2019 10:02 pm

Tgt Ion:142 Resp: 12954

Ion	Ratio	Lower	Upper
142	100		
141	80.5	64.5	104.5
115	50.4	12.0	52.0



7.1.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151776.d
Acq On : 5 May 2019 2:46 pm
Operator : mariceld
Sample : MB Inst : MS3C
Misc : MS34232,V3C6820,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:57:47 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

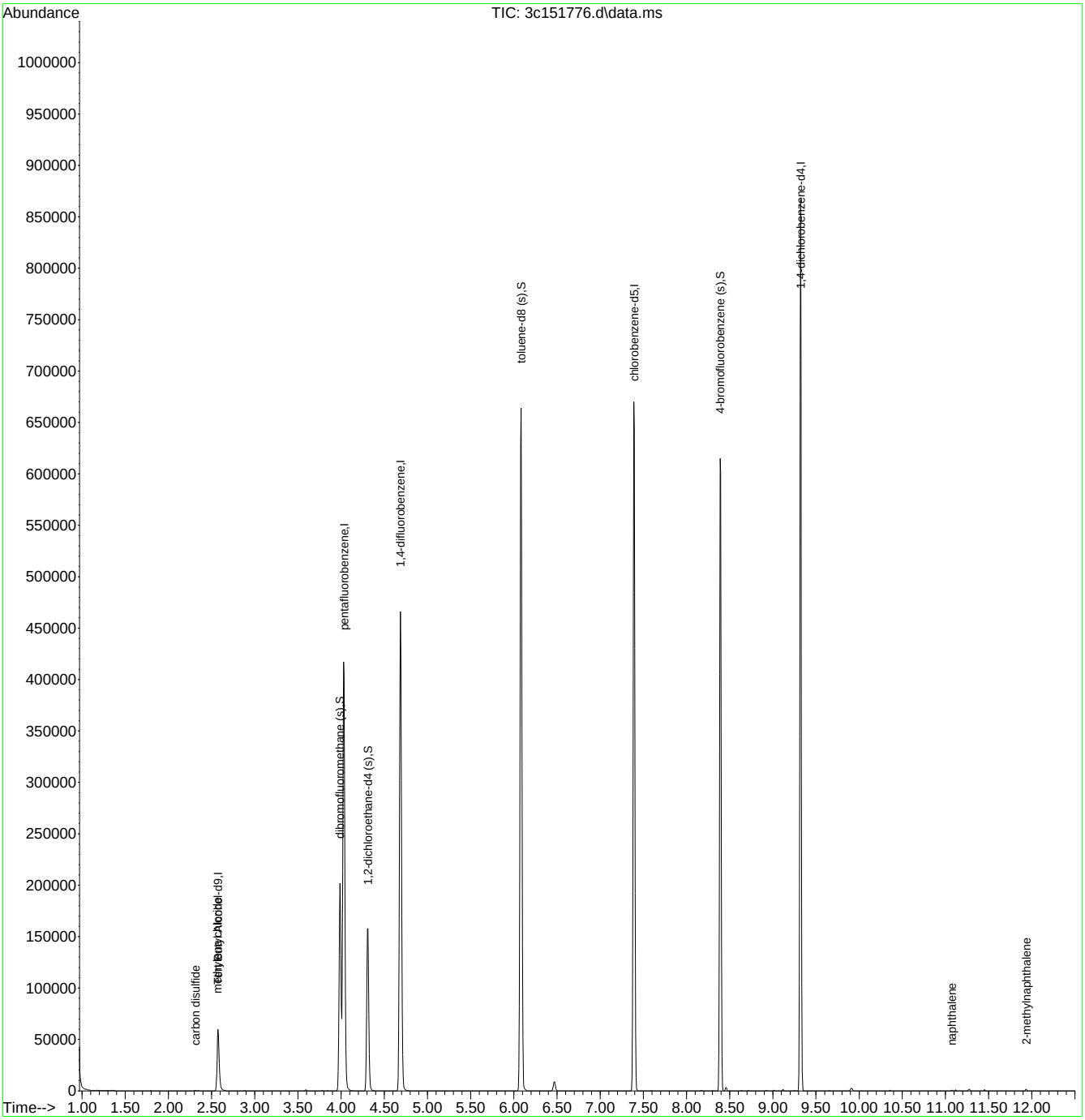
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	59787	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	265198	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	349213	50.00	ug/L	0.00
74) chlorobenzene-d5	7.396	117	314681	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	174937	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	97280	50.76	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.52%			
53) 1,2-dichloroethane-d4 (s)	4.311	65	101113	53.29	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.58%			
75) toluene-d8 (s)	6.084	98	390819	50.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.36%			
98) 4-bromofluorobenzene (s)	8.390	95	153181	53.26	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 106.52%			
Target Compounds						Qvalue
23) carbon disulfide	2.313	76	577	0.14	ug/L	69
24) methylene chloride	2.569	84	551	0.34	ug/L #	63
119) naphthalene	11.073	128	626	0.10	ug/L	69
124) 2-methylnaphthalene	11.936	142	700	0.19	ug/L #	78

(#) = qualifier out of range (m) = manual integration (+) = signals summed

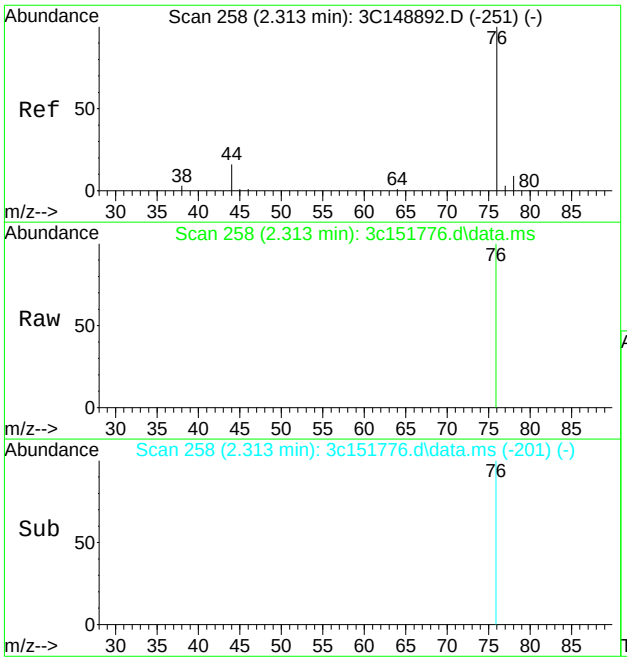
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151776.d
Acq On : 5 May 2019 2:46 pm
Operator : mariceld
Sample : MB Inst : MS3C
Misc : MS34232,V3C6820,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:57:47 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



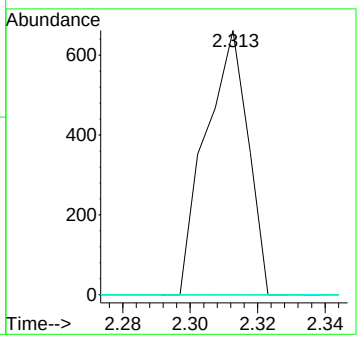
M3C6743.M Mon May 06 19:58:11 2019 Page: 2

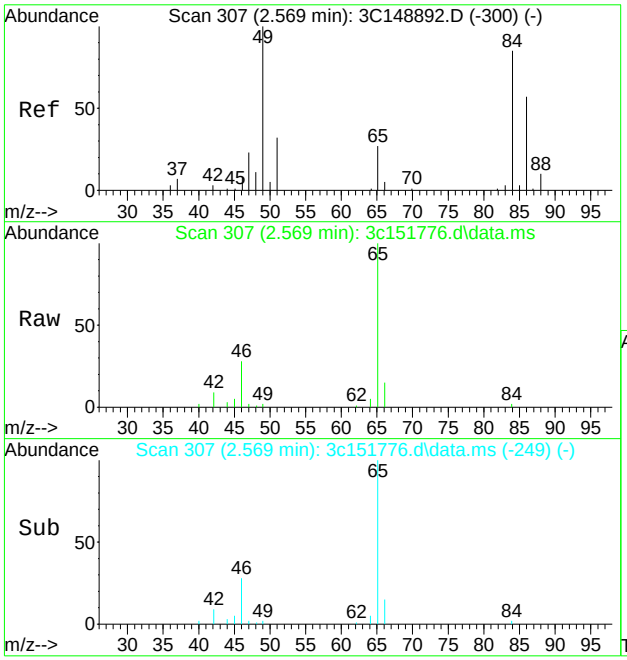


#23
carbon disulfide
Concen: 0.14 ug/L
RT: 2.313 min Scan# 258
Delta R.T. 0.000 min
Lab File: 3c151776.d
Acq: 5 May 2019 2:46 pm

Tgt Ion: 76 Resp: 577

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

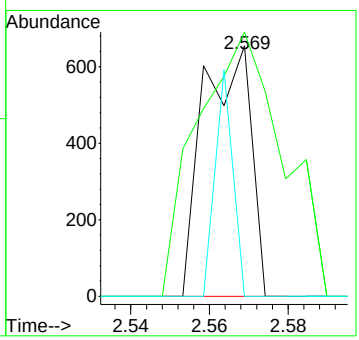


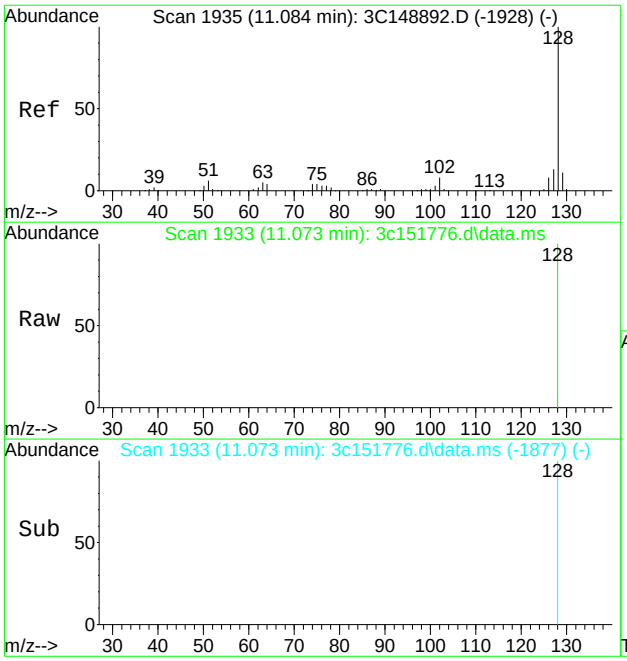


#24
methylene chloride
Concen: 0.34 ug/L
RT: 2.569 min Scan# 307
Delta R.T. 0.005 min
Lab File: 3c151776.d
Acq: 5 May 2019 2:46 pm

Tgt Ion: 84 Resp: 551

Ion	Ratio	Lower	Upper
84	100		
49	105.5	87.1	147.1
86	0.0	37.5	97.5#

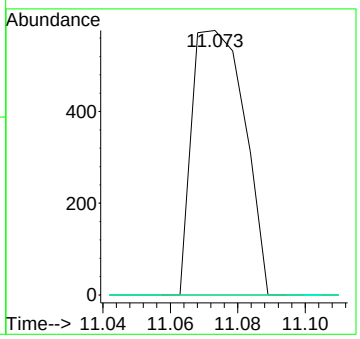


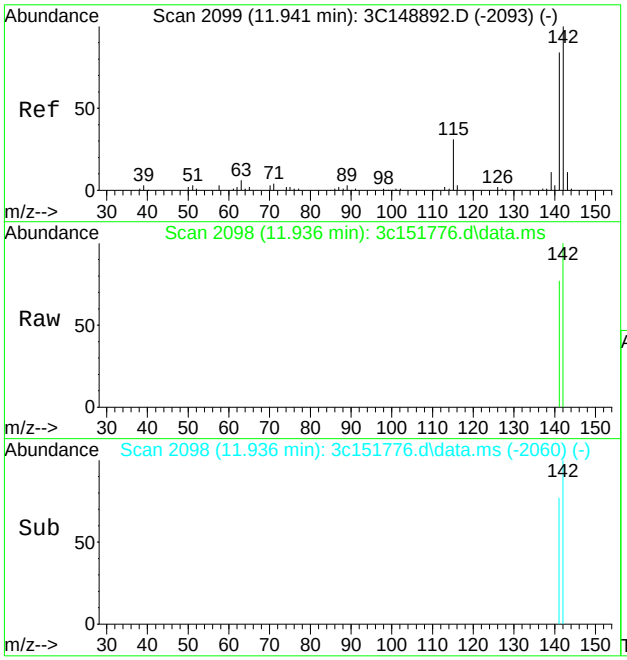


#119
naphthalene
Concen: 0.10 ug/L
RT: 11.073 min Scan# 1933
Delta R.T. -0.005 min
Lab File: 3c151776.d
Acq: 5 May 2019 2:46 pm

Tgt Ion:128 Resp: 626

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	40.9
127	0.0	0.0	42.7

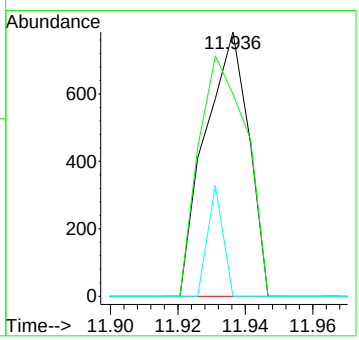




#124
2-methylnaphthalene
Concen: 0.19 ug/L
RT: 11.936 min Scan# 2098
Delta R.T. 0.000 min
Lab File: 3c151776.d
Acq: 5 May 2019 2:46 pm

Tgt Ion:142 Resp: 700

Ion	Ratio	Lower	Upper
142	100		
141	76.5	64.5	104.5
115	0.0	12.0	52.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151805.d
Acq On : 6 May 2019 11:06 am
Operator : PrashanS
Sample : MB Inst : MS3C
Misc : MS34232,V3C6821,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:27:23 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

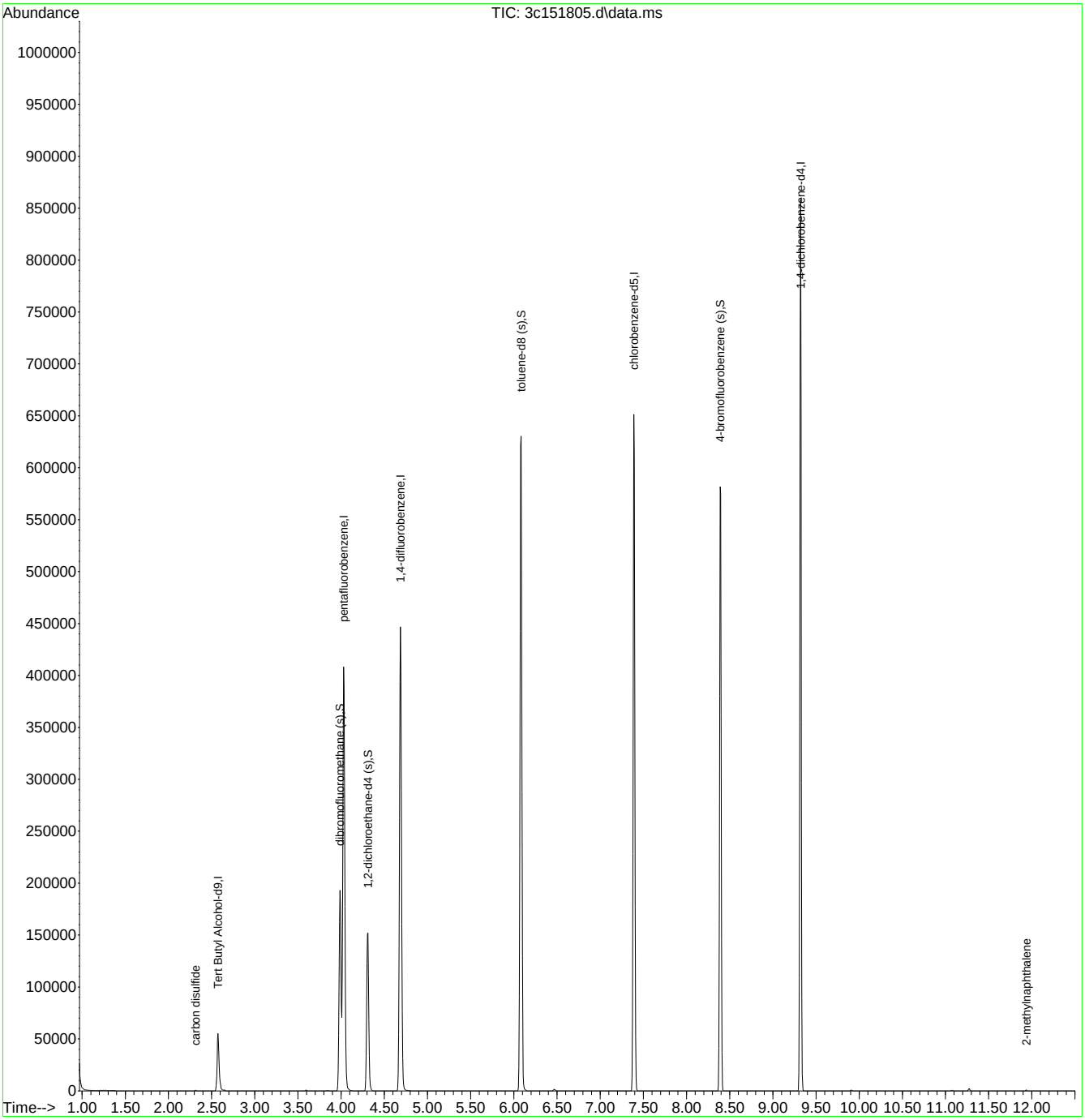
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	54159	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	260767	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	336526	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	298355	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	169503	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	94820	50.32	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.64%			
53) 1,2-dichloroethane-d4 (s)	4.310	65	98495	53.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 107.74%			
75) toluene-d8 (s)	6.083	98	378408	51.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
98) 4-bromofluorobenzene (s)	8.390	95	147329	52.87	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.74%			
Target Compounds						Qvalue
23) carbon disulfide	2.312	76	473	0.11	ug/L	69
124) 2-methylnaphthalene	11.936	142	456	0.13	ug/L #	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

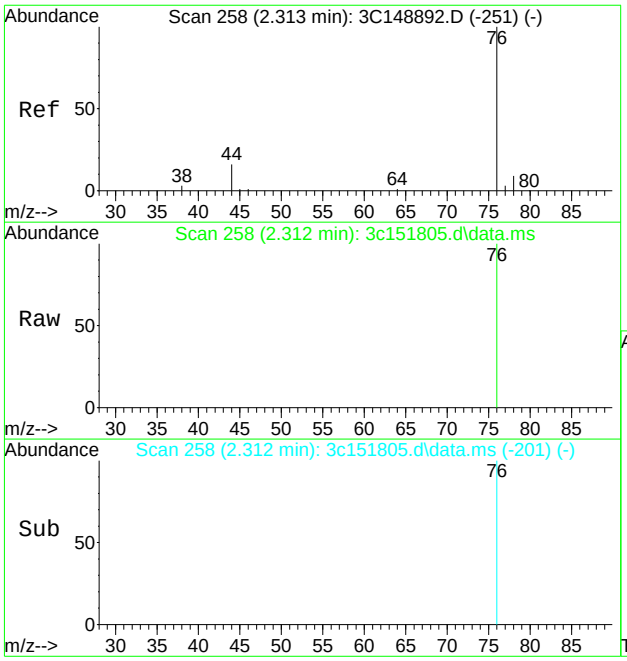
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151805.d
Acq On : 6 May 2019 11:06 am
Operator : PrashanS
Sample : MB Inst : MS3C
Misc : MS34232,V3C6821,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:27:23 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



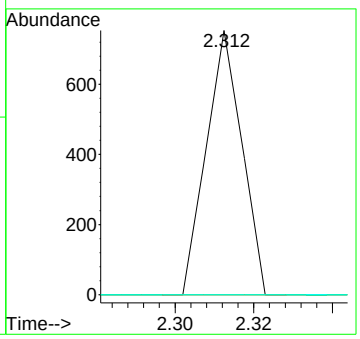
M3C6743.M Mon May 06 23:27:49 2019 Page: 2

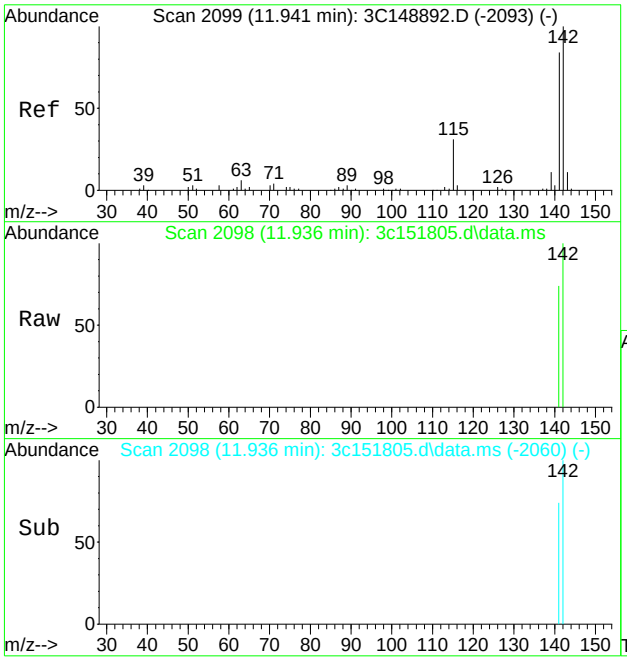


#23
carbon disulfide
Concen: 0.11 ug/L
RT: 2.312 min Scan# 258
Delta R.T. -0.000 min
Lab File: 3c151805.d
Acq: 6 May 2019 11:06 am

Tgt Ion: 76 Resp: 473

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

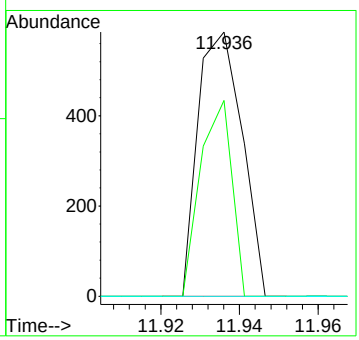




#124
2-methylnaphthalene
Concen: 0.13 ug/L
RT: 11.936 min Scan# 2098
Delta R.T. -0.000 min
Lab File: 3c151805.d
Acq: 6 May 2019 11:06 am

Tgt Ion:142 Resp: 456

Ion	Ratio	Lower	Upper
142	100		
141	74.1	64.5	104.5
115	0.0	12.0	52.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264315.d
Acq On : 7 May 2019 10:40 am
Operator : thienn
Sample : mb Inst : MSD
Misc : ms34437,vd10652,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:47:03 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	7.451	65	135219	500.00	ug/L	-0.02
5) pentafluorobenzene	9.716	168	254966	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.673	114	391001	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.083	117	388441	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	225003	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.747	113	121168	50.37	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.74%			
55) 1,2-dichloroethane-d4 (s)	10.171	65	136277	46.49	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 92.98%			
76) toluene-d8 (s)	12.409	98	467560	49.36	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.72%			
100) 4-bromofluorobenzene (s)	15.406	95	201443	48.32	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.64%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

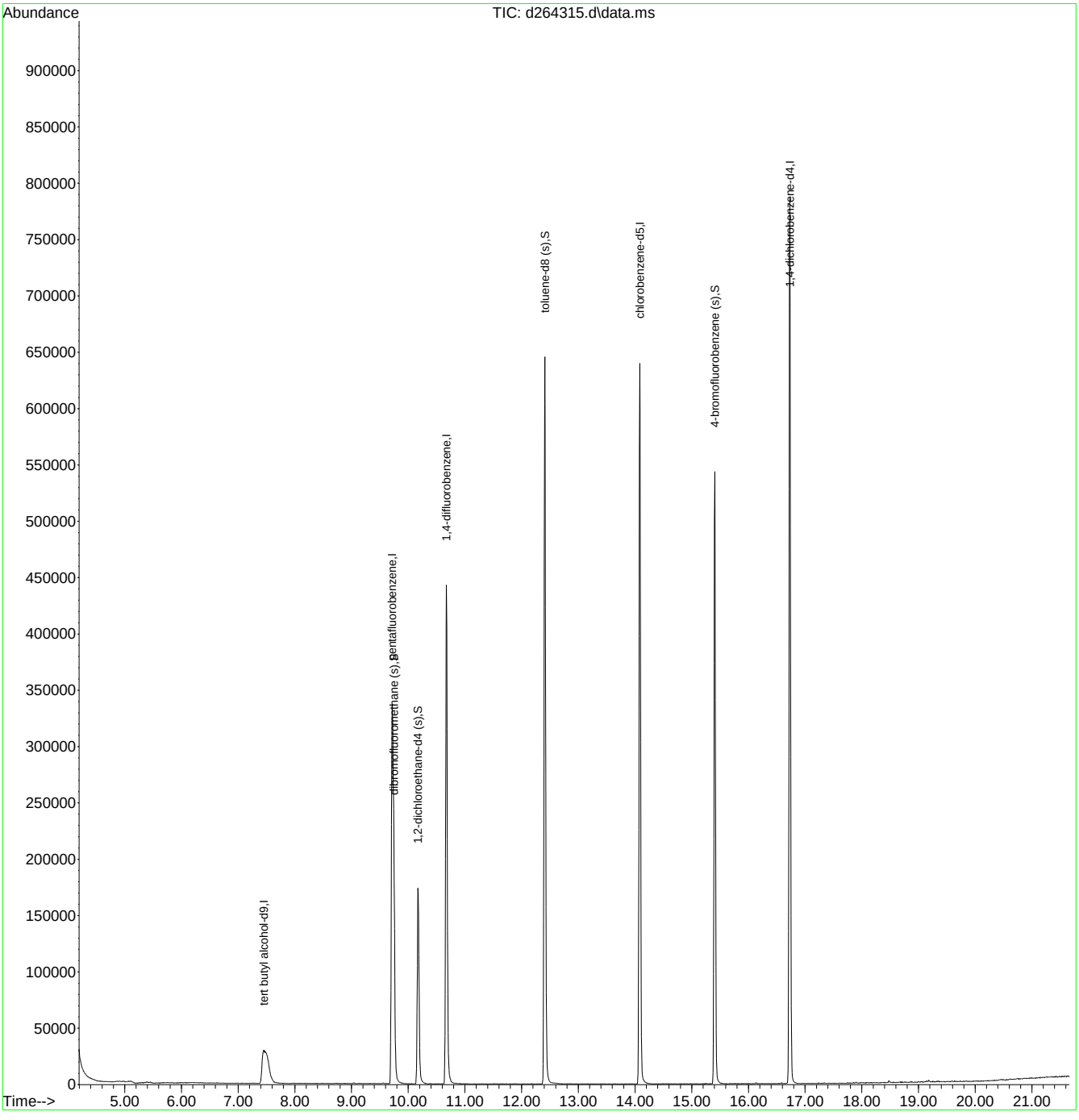
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264315.d
Acq On : 7 May 2019 10:40 am
Operator : thienn
Sample : mb Inst : MSD
Misc : ms34437,vd10652,5,,100,5,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:47:03 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



MD10606.M Wed May 08 01:16:58 2019 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164338.d
Acq On : 7 May 2019 2:33 pm
Operator : PrashanS
Sample : MB Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:41:59 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

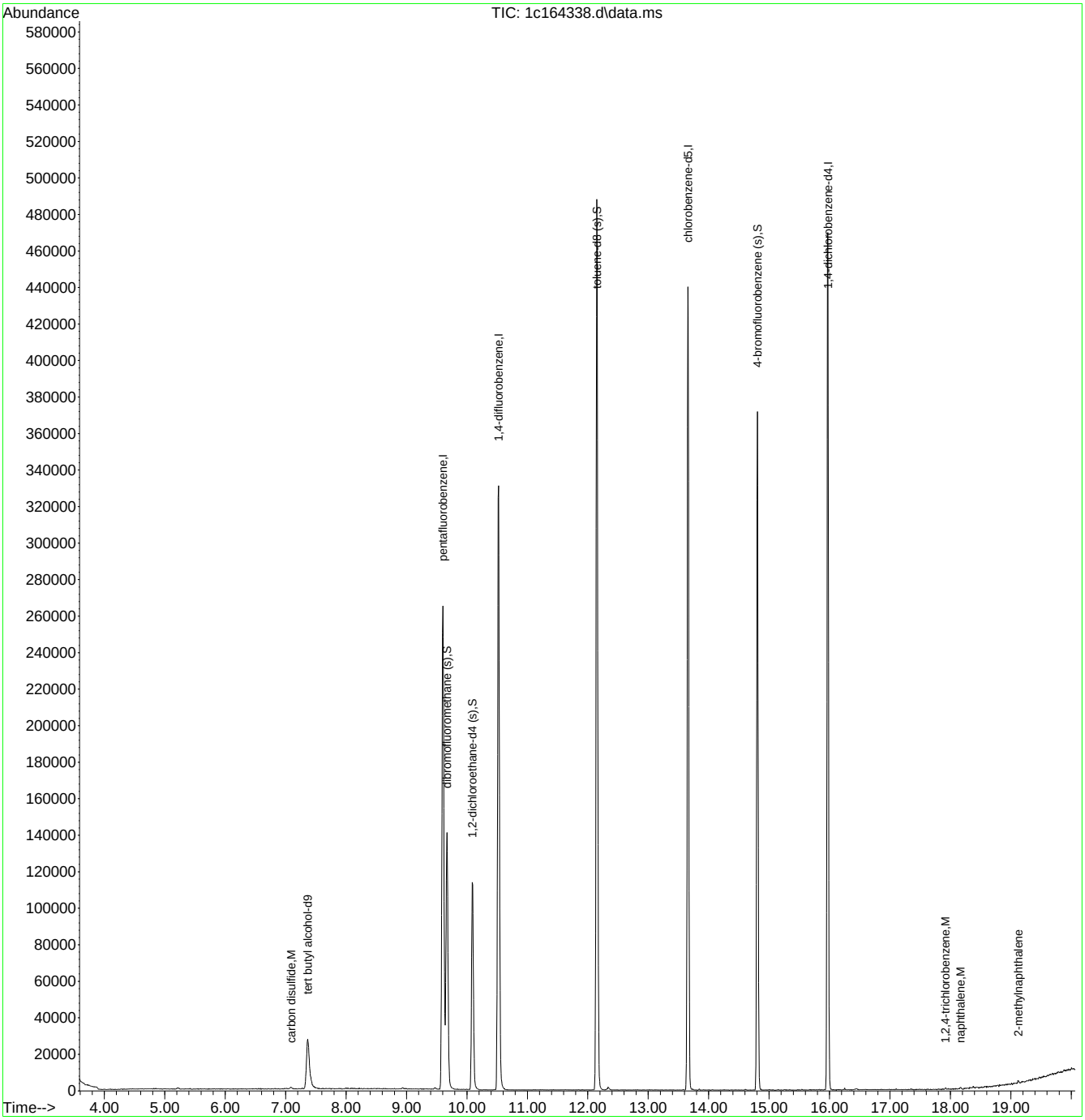
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	60720	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	238897	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	326177	50.00	ug/L	0.00
74) chlorobenzene-d5	13.655	117	262897	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	135192	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	98449	48.86	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.72%			
53) 1,2-dichloroethane-d4 (s)	10.088	65	87850	42.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.74%			
75) toluene-d8 (s)	12.149	98	358950	50.69	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.38%			
98) 4-bromofluorobenzene (s)	14.806	95	122419	48.24	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.48%			
Target Compounds						Qvalue
22) carbon disulfide	7.092	76	1313	0.21	ug/L	72
122) 1,2,4-trichlorobenzene	17.918	180	394	0.16	ug/L	77
124) naphthalene	18.164	128	1133	0.23	ug/L	68
127) 2-methylnaphthalene	19.126	142	639	0.21	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

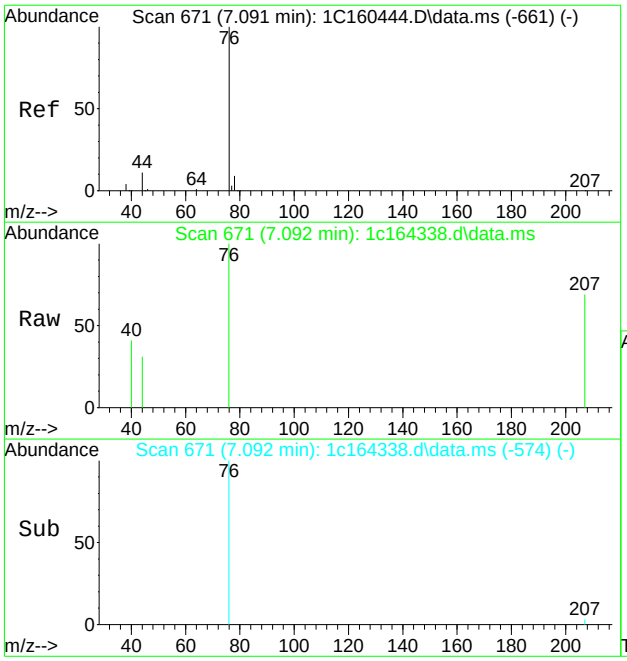
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164338.d
Acq On : 7 May 2019 2:33 pm
Operator : PrashanS
Sample : MB Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:41:59 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



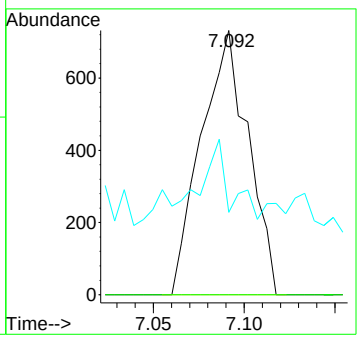
M1CS7200.M Wed May 08 04:53:44 2019 Page: 2

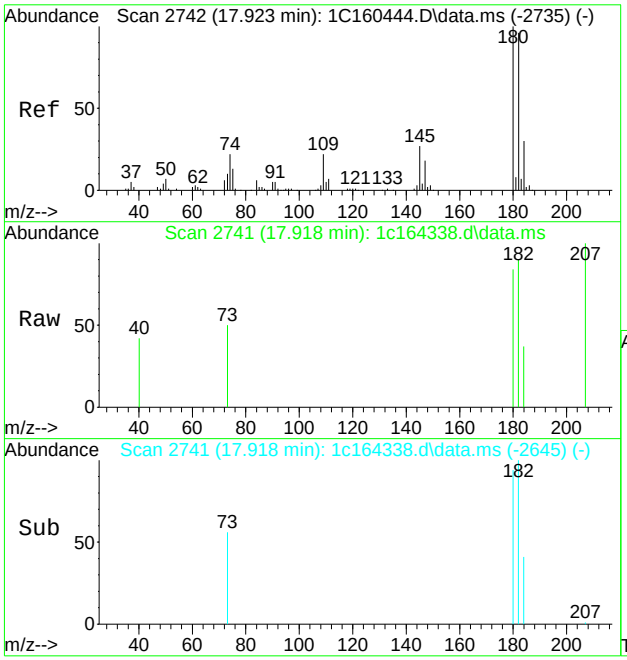


#22
carbon disulfide
Concen: 0.21 ug/L
RT: 7.092 min Scan# 671
Delta R.T. 0.005 min
Lab File: 1c164338.d
Acq: 7 May 2019 2:33 pm

Tgt Ion: 76 Resp: 1313

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.3
44	0.5	0.0	42.1

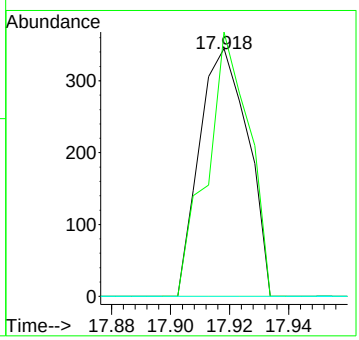


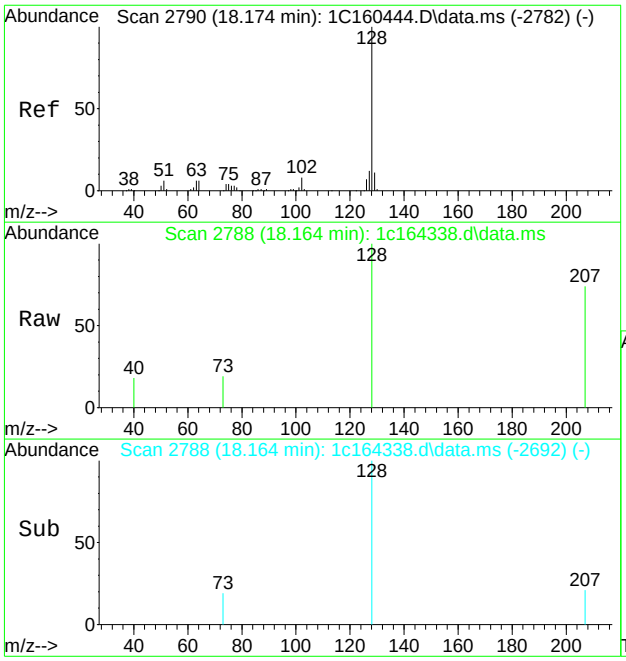


#122
1,2,4-trichlorobenzene
Concen: 0.16 ug/L
RT: 17.918 min Scan# 2741
Delta R.T. 0.000 min
Lab File: 1c164338.d
Acq: 7 May 2019 2:33 pm

Tgt Ion:180 Resp: 394

Ion	Ratio	Lower	Upper
180	100		
182	106.7	63.9	123.9
145	0.0	0.0	59.7

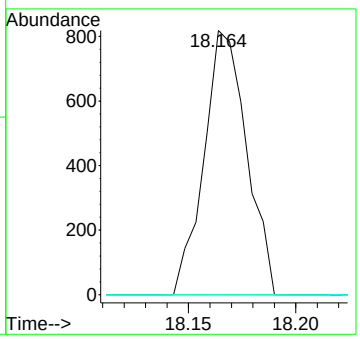


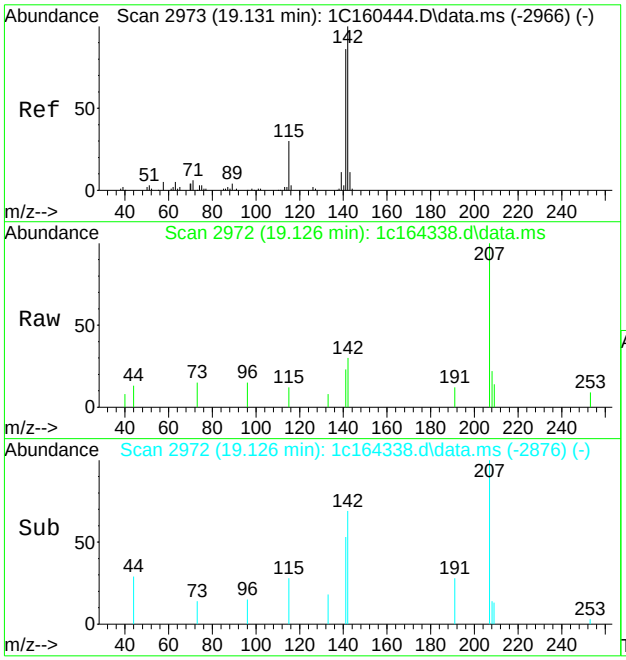


#124
naphthalene
Concen: 0.23 ug/L
RT: 18.164 min Scan# 2788
Delta R.T. 0.000 min
Lab File: 1c164338.d
Acq: 7 May 2019 2:33 pm

Tgt Ion:128 Resp: 1133

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	43.5
129	0.0	0.0	41.2

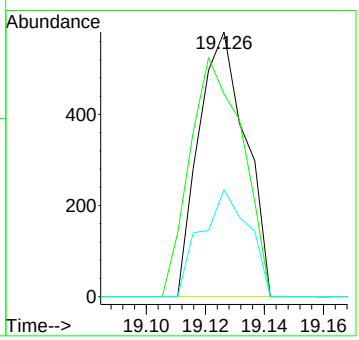




#127
2-methylnaphthalene
Concen: 0.21 ug/L
RT: 19.126 min Scan# 2972
Delta R.T. 0.000 min
Lab File: 1c164338.d
Acq: 7 May 2019 2:33 pm

Tgt Ion:142 Resp: 639

Ion	Ratio	Lower	Upper
142	100		
141	76.6	67.4	107.4
115	40.4	13.2	53.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264361.D
Acq On : 8 May 2019 9:40 am
Operator : thienn
Sample : mb
Misc : ms34579,vd10654,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 11:57:23 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	7.462	65	126530	500.00	ug/L	-0.01
5) pentafluorobenzene	9.717	168	238613	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.674	114	365773	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	365762	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	212464	50.00	ug/L	-0.01

System Monitoring Compounds

46) dibromofluoromethane (s)	9.743	113	110694	49.17	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.34%			
55) 1,2-dichloroethane-d4 (s)	10.172	65	126769	46.23	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 92.46%			
76) toluene-d8 (s)	12.410	98	440601	49.40	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.80%			
100) 4-bromofluorobenzene (s)	15.407	95	191805	48.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.44%			

Target Compounds

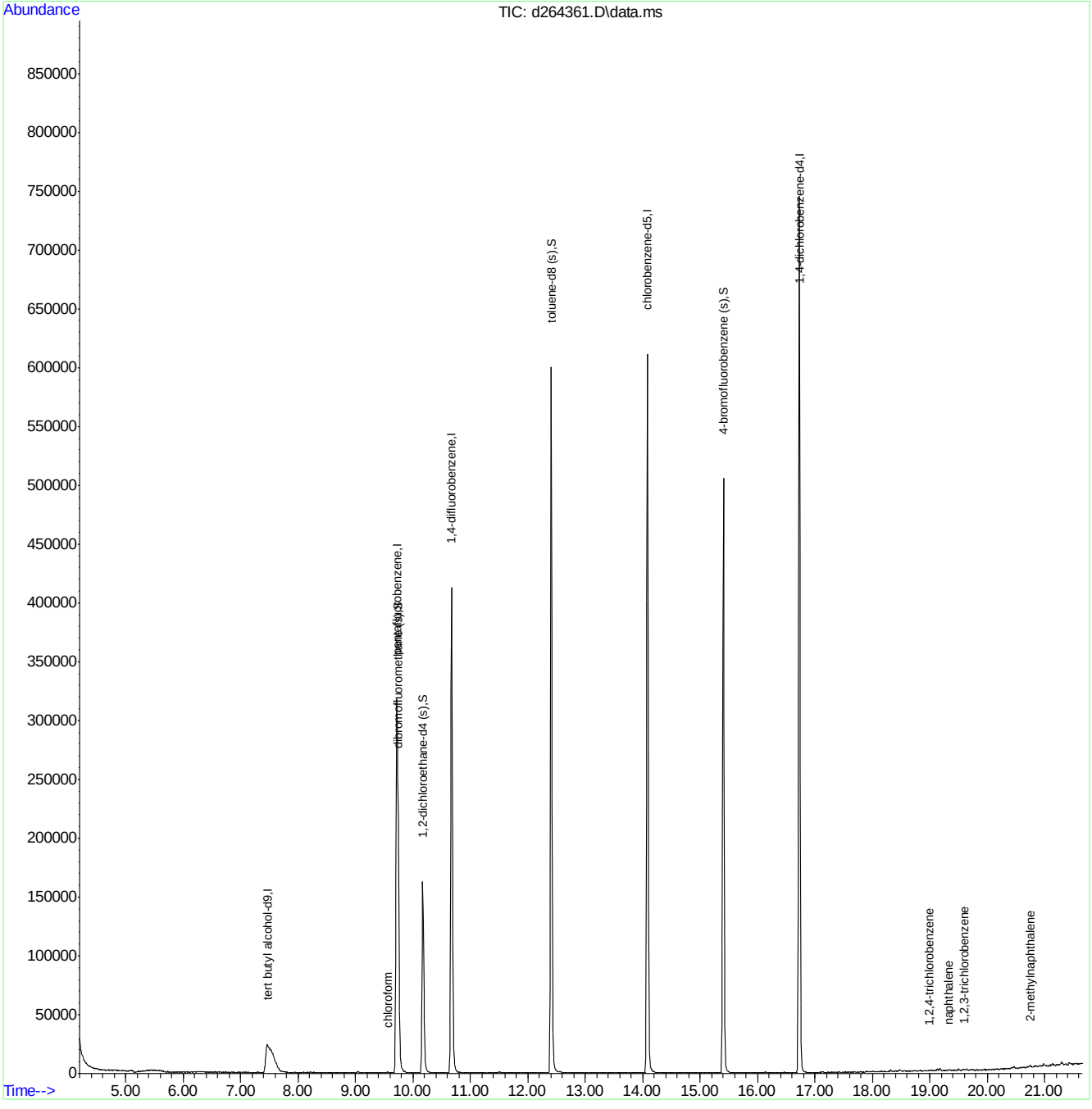
						Qvalue
44) chloroform	9.560	83	556	0.11	ug/L	76
122) 1,2,4-trichlorobenzene	18.990	180	234	1.51	ug/L	68
124) naphthalene	19.335	128	1219	1.95	ug/L	78
125) 1,2,3-trichlorobenzene	19.596	180	386	1.93	ug/L #	83
126) 2-methylnaphthalene	20.742	142	872	0.46	ug/L	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

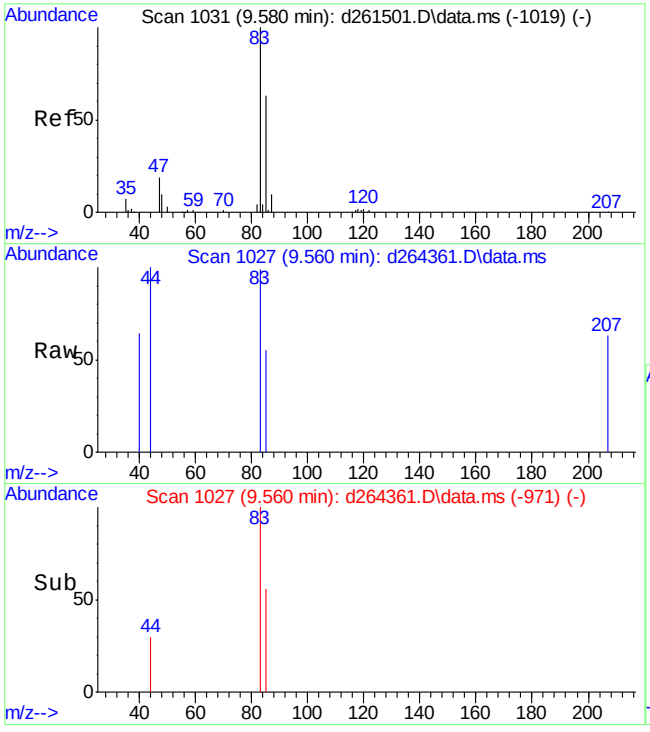
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264361.D
Acq On : 8 May 2019 9:40 am
Operator : thienn
Sample : mb
Misc : ms34579,vd10654,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 11:57:23 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



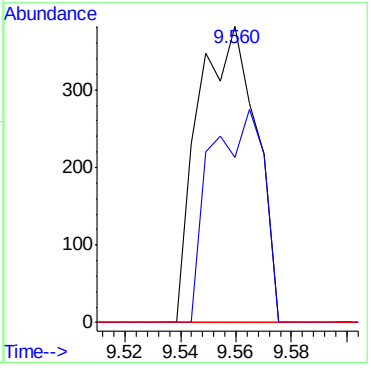
MD10606.M Wed May 08 11:57:29 2019 RPT1 Page: 2

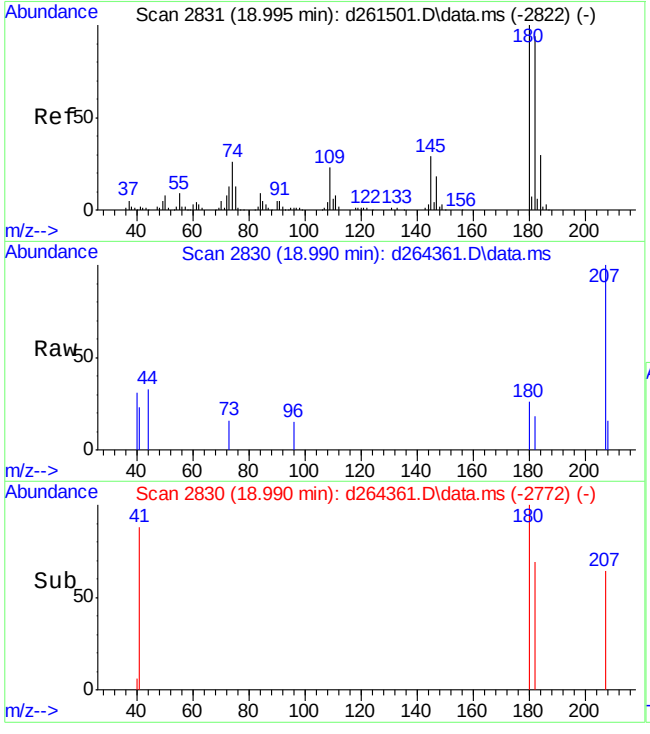


#44
chloroform
Concen: 0.11 ug/L
RT: 9.560 min Scan# 1027
Delta R.T. -0.005 min
Lab File: d264361.D
Acq: 8 May 2019 9:40 am

Tgt Ion: 83 Resp: 556

Ion	Ratio	Lower	Upper
83	100		
85	55.8	36.2	96.2
47	0.0	0.0	56.4

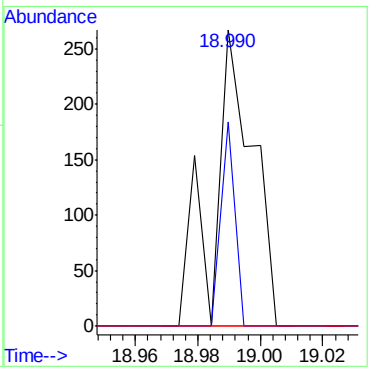


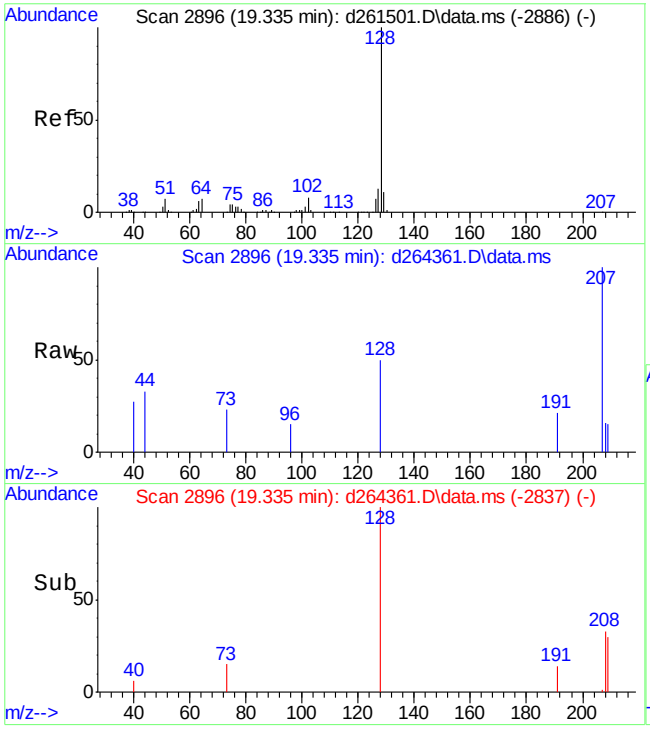


#122
1,2,4-trichlorobenzene
Concen: 1.51 ug/L
RT: 18.990 min Scan# 2830
Delta R.T. 0.005 min
Lab File: d264361.D
Acq: 8 May 2019 9:40 am

Tgt Ion:180 Resp: 234

Ion	Ratio	Lower	Upper
180	100		
182	68.9	64.6	124.6
74	0.0	0.0	56.5

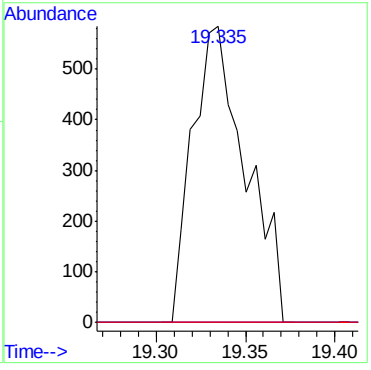


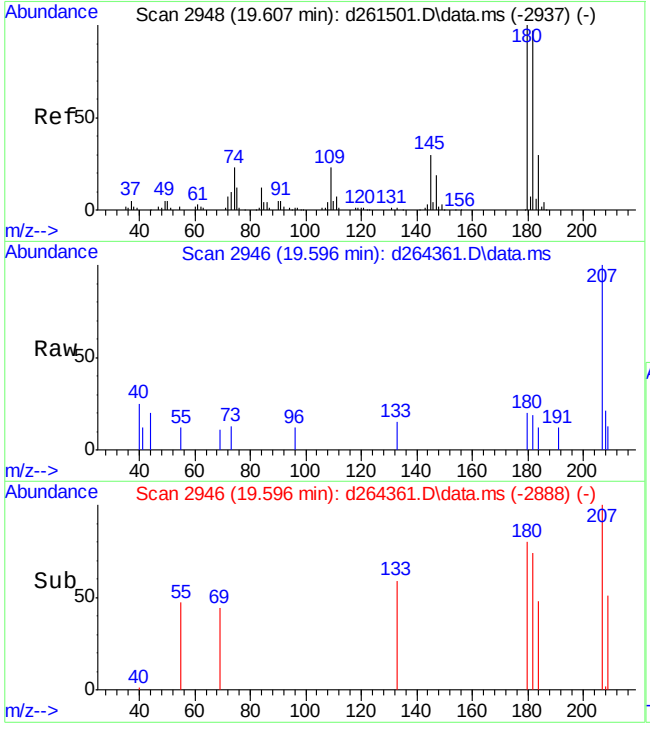


#124
naphthalene
Concen: 1.95 ug/L
RT: 19.335 min Scan# 2896
Delta R.T. 0.011 min
Lab File: d264361.D
Acq: 8 May 2019 9:40 am

Tgt Ion:128 Resp: 1219

Ion	Ratio	Lower	Upper
128	100		
102	0.0	0.0	38.5
51	0.0	0.0	36.8

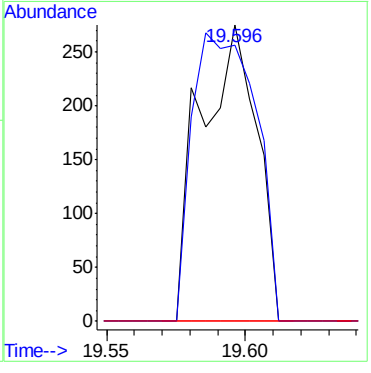


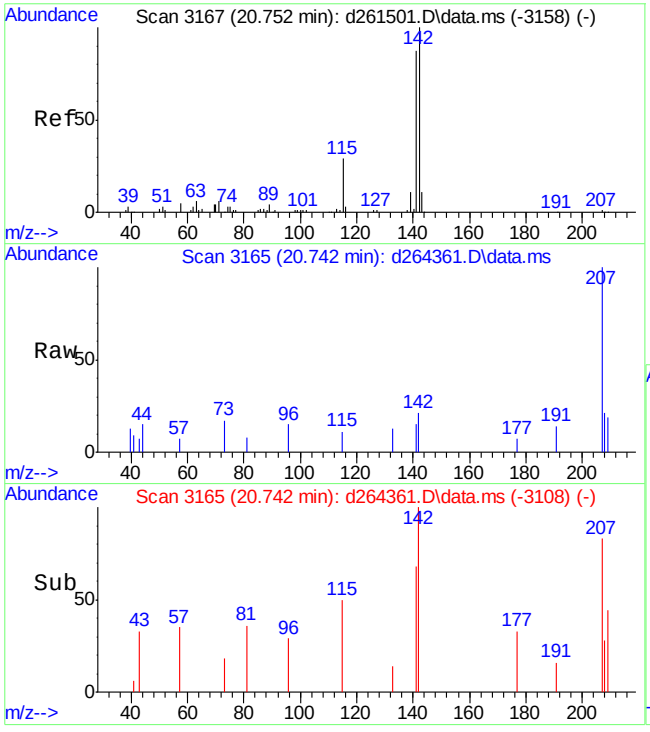


#125
1,2,3-trichlorobenzene
Concen: 1.93 ug/L
RT: 19.596 min Scan# 2946
Delta R.T. 0.005 min
Lab File: d264361.D
Acq: 8 May 2019 9:40 am

Tgt Ion:180 Resp: 386

Ion	Ratio	Lower	Upper
180	100		
182	93.1	66.6	126.6
145	0.0	1.3	61.3#

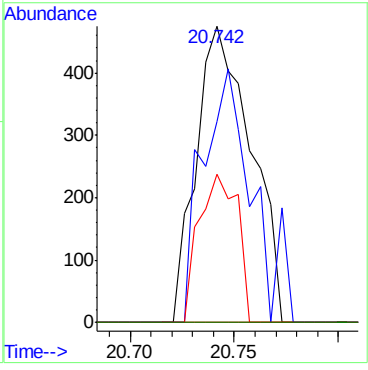




#126
2-methylnaphthalene
Concen: 0.46 ug/L
RT: 20.742 min Scan# 3165
Delta R.T. 0.000 min
Lab File: d264361.D
Acq: 8 May 2019 9:40 am

Tgt Ion:142 Resp: 872

Ion	Ratio	Lower	Upper
142	100		
141	68.0	64.5	104.5
115	50.1	1.9	61.9
143	0.0	0.0	40.8



7.2.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264408.d
Acq On : 9 May 2019 8:54 am
Operator : thienn
Sample : mb Inst : MSD
Misc : ms34537,vd10656,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:52:38 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	127378	500.00	ug/L	0.00
5) pentafluorobenzene	9.719	168	236492	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.676	114	379153	50.00	ug/L	0.00
75) chlorobenzene-d5	14.086	117	380994	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.732	152	207959	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.750	113	115301	51.67	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.34%			
55) 1,2-dichloroethane-d4 (s)	10.174	65	134104	47.18	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 94.36%			
76) toluene-d8 (s)	12.412	98	457937	49.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.58%			
100) 4-bromofluorobenzene (s)	15.404	95	194793	50.55	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.10%			

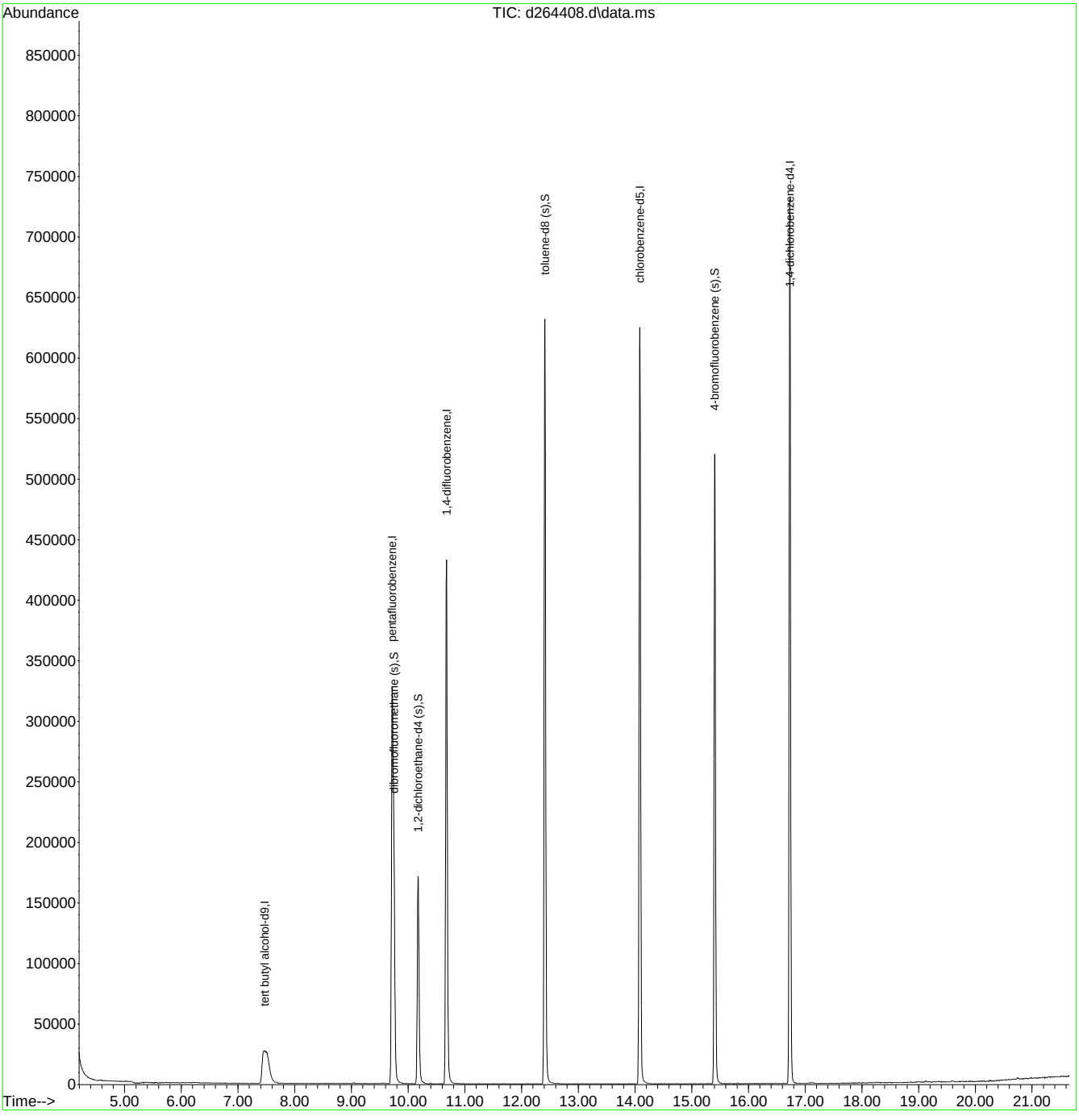
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264408.d
Acq On : 9 May 2019 8:54 am
Operator : thienn
Sample : mb Inst : MSD
Misc : ms34537,vd10656,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:52:38 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



MD10606.M Fri May 10 00:23:46 2019 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151805a.d
Acq On : 6 May 2019 11:06 am
Operator : PrashanS
Sample : MB2 Inst : MS3C
Misc : MS34232,V3C6820,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:27:23 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

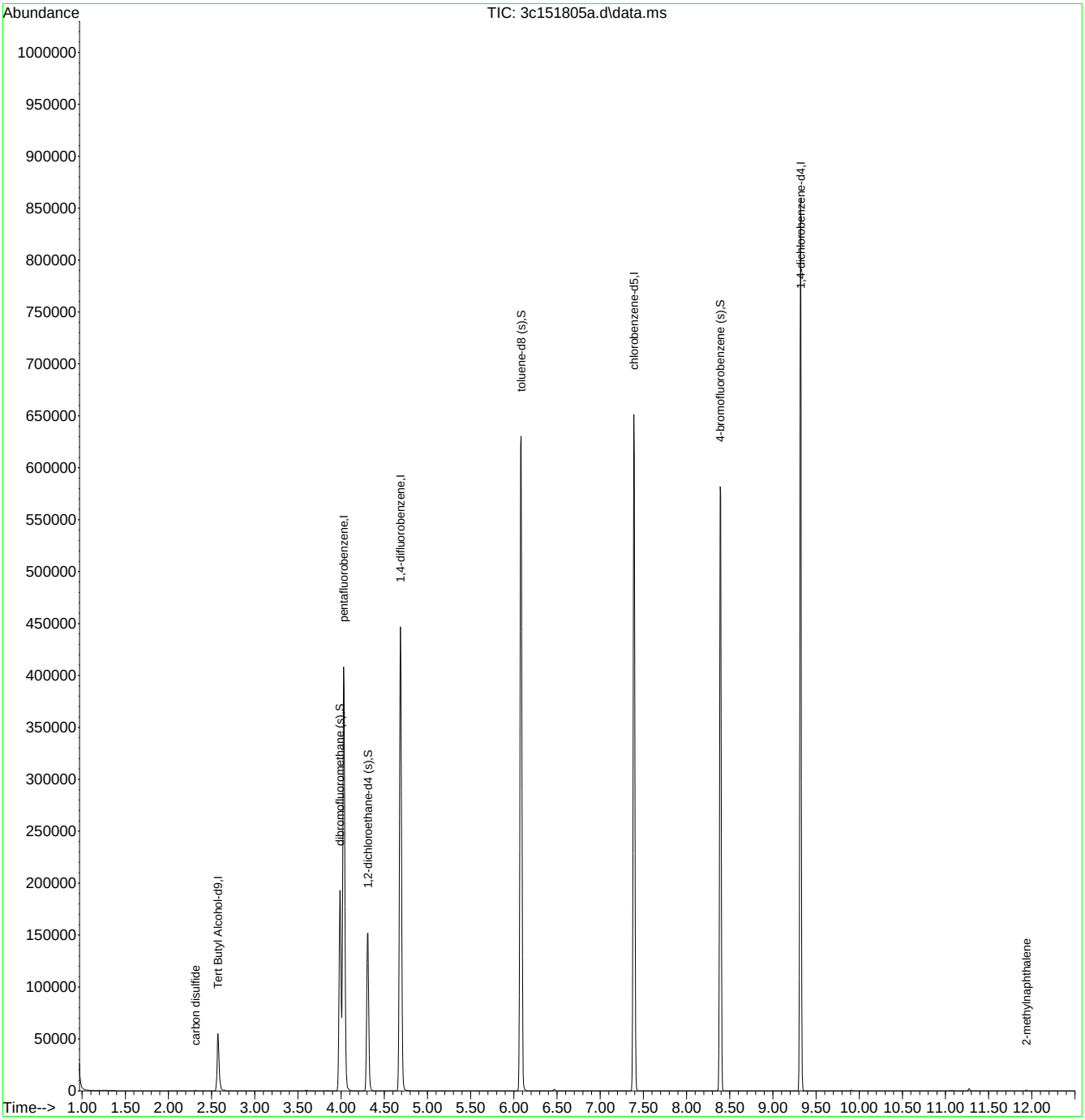
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	54159	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	260767	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	336526	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	298355	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	169503	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	94820	50.32	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.64%			
53) 1,2-dichloroethane-d4 (s)	4.310	65	98495	53.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 107.74%			
75) toluene-d8 (s)	6.083	98	378408	51.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
98) 4-bromofluorobenzene (s)	8.390	95	147329	52.87	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.74%			
Target Compounds						Qvalue
23) carbon disulfide	2.312	76	473	0.11	ug/L	69
124) 2-methylnaphthalene	11.936	142	456	0.13	ug/L #	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

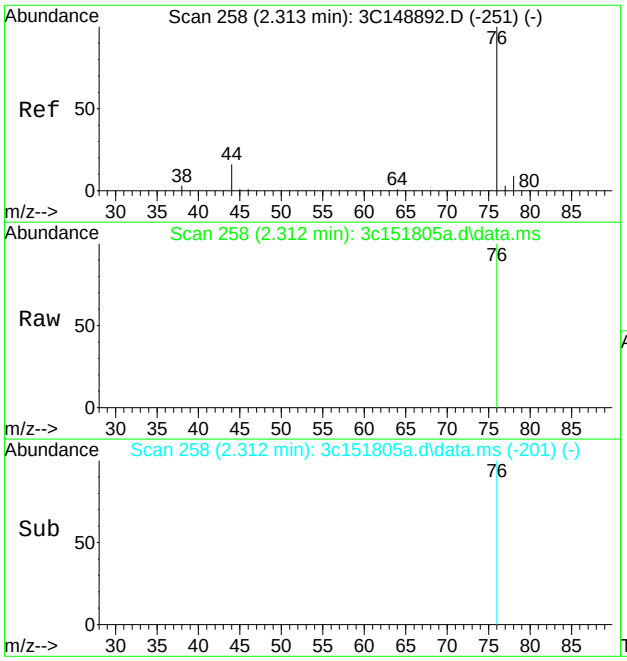
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151805a.d
Acq On : 6 May 2019 11:06 am
Operator : PrashanS
Sample : MB2 Inst : MS3C
Misc : MS34232,V3C6820,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:27:23 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



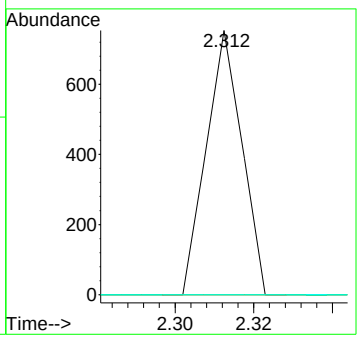
M3C6743.M Mon May 06 23:37:15 2019 Page: 2

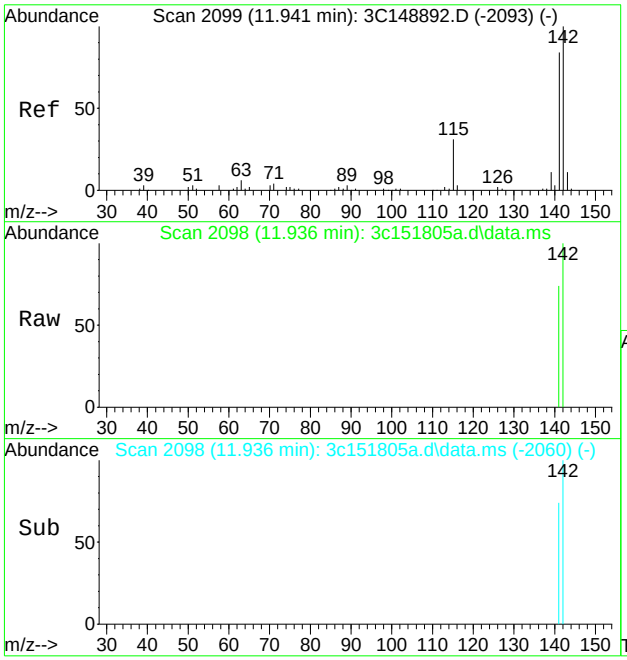


#23
carbon disulfide
Concen: 0.11 ug/L
RT: 2.312 min Scan# 258
Delta R.T. -0.000 min
Lab File: 3c151805a.d
Acq: 6 May 2019 11:06 am

Tgt Ion: 76 Resp: 473

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

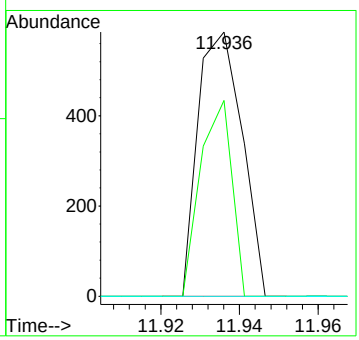




#124
2-methylnaphthalene
Concen: 0.13 ug/L
RT: 11.936 min Scan# 2098
Delta R.T. -0.000 min
Lab File: 3c151805a.d
Acq: 6 May 2019 11:06 am

Tgt Ion:142 Resp: 456

Ion	Ratio	Lower	Upper
142	100		
141	74.1	64.5	104.5
115	0.0	12.0	52.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151774.d
Acq On : 5 May 2019 1:59 pm
Operator : mariceld
Sample : BS Inst : MS3C
Misc : MS34371,V3C6820,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:54:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.579	65	60241	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	269686	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	354401	50.00	ug/L	0.00
74) chlorobenzene-d5	7.396	117	313309	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	177994	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	97935	50.26	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.52%			
53) 1,2-dichloroethane-d4 (s)	4.310	65	103869	53.94	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 107.88%			
75) toluene-d8 (s)	6.083	98	401856	51.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.64%			
98) 4-bromofluorobenzene (s)	8.390	95	153142	52.33	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 104.66%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	2.642	59	32910	247.82	ug/L	95
4) 1,4-dioxane	5.289	88	20231	1249.96	ug/L	95
6) chlorodifluoromethane	1.104	51	70027	42.86	ug/L	92
7) dichlorodifluoromethane	1.078	85	95579	41.03	ug/L	98
8) chloromethane	1.225	50	70991	36.91	ug/L	99
9) 1,3-butadiene	1.319	54	56270	44.94	ug/L	97
10) vinyl chloride	1.298	62	78826	40.74	ug/L	97
11) bromomethane	1.538	94	47672	41.19	ug/L	99
12) chloroethane	1.617	64	49513	43.07	ug/L	96
13) vinyl Bromide	1.748	106	69740	42.00	ug/L	100
14) trichlorofluoromethane	1.774	101	141848	49.54	ug/L	98
15) ethyl ether	1.993	74	40883	50.14	ug/L	82
16) 2-chloropropane	2.072	63	29167	44.80	ug/L #	80
17) acrolein	2.140	56	8597	51.27	ug/L	88
18) freon 113	2.135	151	69181	50.54	ug/L	98
19) 1,1-dichloroethene	2.161	96	72200	47.31	ug/L	99
20) acetone	2.250	58	16852	200.56	ug/L	98
21) acetonitrile	2.511	41	51511	397.26	ug/L	97
22) iodomethane	2.286	142	73577	58.79	ug/L	97
23) carbon disulfide	2.312	76	192984	45.14	ug/L	96
24) methylene chloride	2.564	84	76967	46.13	ug/L	91
25) methyl acetate	2.469	43	35673	44.33	ug/L	93
26) methyl tert butyl ether	2.710	73	206014	50.65	ug/L	99
27) trans-1,2-dichloroethene	2.731	96	80226	46.18	ug/L	99
28) hexane	2.877	57	106470	38.72	ug/L	97
29) di-isopropyl ether	3.076	45	202956	41.10	ug/L	95
30) ethyl tert-butyl ether	3.364	59	230041	47.13	ug/L	98
31) 2-butanone	3.599	72	26636	201.28	ug/L #	85
32) 1,1-dichloroethane	3.092	63	126537	44.82	ug/L	98
33) chloroprene	3.134	53	118078	47.08	ug/L	97
34) acrylonitrile	2.804	53	16404	47.81	ug/L	99
35) vinyl acetate	3.123	86	15781	51.30	ug/L #	51
36) ethyl acetate	3.615	45	7465	43.20	ug/L	86
37) 2,2-dichloropropane	3.542	77	121787	46.88	ug/L	95
38) cis-1,2-dichloroethene	3.573	96	88566	47.17	ug/L	99
39) propionitrile	3.714	54	71958	472.57	ug/L	98
40) bromochloromethane	3.782	130	51962	49.36	ug/L	88
41) tetrahydrofuran	3.782	71	7022	53.35	ug/L #	77
42) chloroform	3.845	83	141006	46.18	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151774.d
Acq On : 5 May 2019 1:59 pm
Operator : mariceld
Sample : BS Inst : MS3C
Misc : MS34371,V3C6820,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:54:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-Butyl Formate	3.850	59	46118	47.73	ug/L		90
44)	isobutyl alcohol	4.263	41	91211	384.90	ug/L		98
46)	methacrylonitrile	3.814	67	23295	51.54	ug/L		90
47)	1,1,1-trichloroethane	3.955	97	136917	49.69	ug/L		96
48)	cyclohexane	3.939	84	127152	45.12	ug/L		91
49)	1,1-dichloropropene	4.106	110	41397	45.71	ug/L		98
50)	tert-amyl alcohol	4.326	59	25417	211.88	ug/L		82
51)	carbon tetrachloride	4.070	119	118520	54.42	ug/L		98
54)	2,2,4-trimethylpentane	4.263	57	272648	41.48	ug/L		98
55)	tert-amyl methyl ether	4.358	87	75042	51.09	ug/L		95
56)	n-butyl alcohol	4.896	56	82012	2500.62	ug/L		98
57)	benzene	4.284	78	306613	47.04	ug/L		100
58)	heptane	4.452	57	49946	35.82	ug/L		94
59)	isopropyl acetate	4.358	87	75042	49.89	ug/L	#	75
60)	1,2-dichloroethane	4.378	62	101997	49.28	ug/L		99
61)	trichloroethene	4.901	95	82842	46.77	ug/L		92
62)	ethyl acrylate	5.037	55	69685	48.15	ug/L		97
63)	2-nitropropane	5.754	41	23043	52.24	ug/L	#	55
64)	2-chloroethyl vinyl ether	5.764	63	208092	242.74	ug/L		96
65)	methyl methacrylate	5.273	100	21043	57.55	ug/L	#	72
66)	1,2-dichloropropane	5.168	63	66100	42.68	ug/L		84
67)	methylcyclohexane	5.006	83	137836	41.69	ug/L		95
68)	dibromomethane	5.294	93	42932	50.63	ug/L		91
69)	bromodichloromethane	5.445	83	106756	54.21	ug/L		99
70)	epichlorohydrin	5.843	57	28360	263.68	ug/L		95
71)	cis-1,3-dichloropropene	5.890	75	129084	52.39	ug/L		97
72)	4-methyl-2-pentanone	6.031	85	48060	233.00	ug/L	#	77
76)	toluene	6.146	92	209167	46.78	ug/L		98
77)	trans-1,3-dichloropropene	6.434	75	112618	54.80	ug/L		98
78)	ethyl methacrylate	6.465	69	87594	51.26	ug/L		95
79)	1,1,2-trichloroethane	6.596	83	51737	47.03	ug/L		95
80)	2-hexanone	6.800	58	83364	198.03	ug/L	#	84
81)	tetrachloroethene	6.617	166	106834	50.36	ug/L		97
82)	1,3-dichloropropane	6.748	76	105937	47.73	ug/L		97
83)	butyl acetate	6.889	56	37673	47.60	ug/L		90
84)	dibromochloromethane	6.915	129	80423	62.07	ug/L		99
85)	1,2-dibromoethane	7.014	107	72776	45.60	ug/L		99
86)	n-butyl ether	7.470	57	290643	39.94	ug/L		99
87)	chlorobenzene	7.417	112	234426	47.62	ug/L		99
88)	1,1,1,2-tetrachloroethane	7.501	131	90105	55.45	ug/L		97
89)	ethylbenzene	7.490	91	402389	46.50	ug/L		100
90)	m,p-xylene	7.595	106	316447	92.80	ug/L		95
91)	o-xylene	7.930	91	330633	48.31	ug/L		97
92)	styrene	7.956	104	264686	48.29	ug/L		98
93)	bromoform	8.129	173	54243	57.22	ug/L		98
94)	butyl acrylate	7.925	55	116563	49.04	ug/L		97
95)	isopropylbenzene	8.228	105	416966	47.81	ug/L		99
96)	cis-1,4-dichloro-2-butene	8.359	53	25369	52.66	ug/L	#	90
99)	bromobenzene	8.505	156	111346	47.19	ug/L		95
100)	1,1,2,2-tetrachloroethane	8.547	83	75143	46.83	ug/L		99
101)	trans-1,4-dichloro-2-b...	8.604	88	12322	55.65	ug/L		90
102)	1,2,3-trichloropropane	8.584	110	26829	52.56	ug/L		97
103)	n-propylbenzene	8.563	91	473897	43.78	ug/L		99
104)	2-chlorotoluene	8.652	126	101560	45.88	ug/L		90
105)	4-chlorotoluene	8.751	126	103905	47.04	ug/L		95
106)	1,3,5-trimethylbenzene	8.714	105	368239	46.76	ug/L		98
107)	tert-butylbenzene	8.965	119	324499	46.31	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151774.d
Acq On : 5 May 2019 1:59 pm
Operator : mariceld
Sample : BS Inst : MS3C
Misc : MS34371,V3C6820,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:54:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	370783	46.26	ug/L	97
109) sec-butylbenzene	9.143	105	463230	45.48	ug/L	99
110) 1,3-dichlorobenzene	9.263	146	214548	46.28	ug/L	98
111) p-isopropyltoluene	9.258	119	416941	46.52	ug/L	98
112) 1,4-dichlorobenzene	9.342	146	216266	45.63	ug/L	99
113) 1,2-dichlorobenzene	9.635	146	200564	46.16	ug/L	97
114) n-butylbenzene	9.583	92	194882	44.00	ug/L	99
115) 1,2-dibromo-3-chloropr...	10.273	157	22508	56.29	ug/L	97
116) 1,3,5-Trichlorobenzene	10.388	180	205583	48.79	ug/L	96
117) 1,2,4-trichlorobenzene	10.880	180	182489	50.29	ug/L	99
118) hexachlorobutadiene	10.969	225	120557	53.34	ug/L	96
119) naphthalene	11.073	128	333744	52.51	ug/L	99
120) 1,2,3-trichlorobenzene	11.267	180	173076	51.43	ug/L	99
121) hexachloroethane	9.797	201	74084	54.14	ug/L #	89
122) Benzyl chloride	9.462	91	152178	54.27	ug/L	100
123) 2-ethylhexyl acrylate	11.016	70	17997	10.01	ug/L	92
124) 2-methylnaphthalene	11.936	142	114289	30.03	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

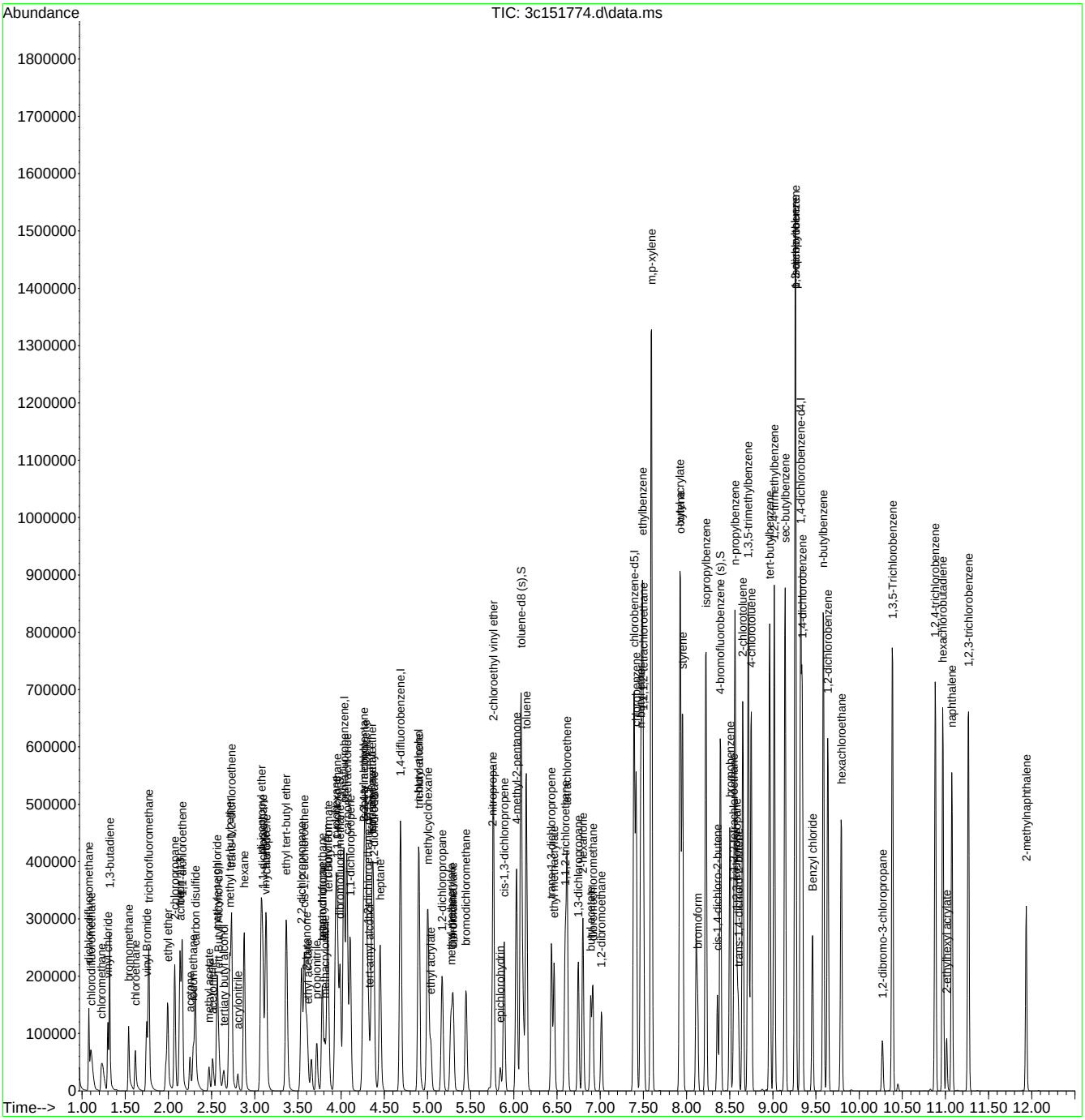
7.3.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151774.d
Acq On : 5 May 2019 1:59 pm
Operator : mariceld
Sample : BS Inst : MS3C
Misc : MS34371,V3C6820,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:54:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151803.d
Acq On : 6 May 2019 10:04 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:25:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	53535	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	258230	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	338109	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	302704	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	172271	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	94691	50.75	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.50%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	97961	53.32	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.64%			
75) toluene-d8 (s)	6.084	98	381709	50.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.90%			
98) 4-bromofluorobenzene (s)	8.390	95	147042	51.91	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.82%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	2.637	59	28161	238.62	ug/L	94
4) 1,4-dioxane	5.294	88	18102	1258.52	ug/L	88
6) chlorodifluoromethane	1.104	51	64933	41.51	ug/L	93
7) dichlorodifluoromethane	1.078	85	105251	47.19	ug/L	99
8) chloromethane	1.225	50	72968	39.62	ug/L	94
9) 1,3-butadiene	1.319	54	51276	42.77	ug/L	97
10) vinyl chloride	1.298	62	78925	42.60	ug/L	97
11) bromomethane	1.539	94	48654	43.90	ug/L	100
12) chloroethane	1.617	64	49755	45.20	ug/L	99
13) vinyl Bromide	1.748	106	69025	43.41	ug/L	99
14) trichlorofluoromethane	1.774	101	137595	50.18	ug/L	99
15) ethyl ether	1.988	74	36586	46.86	ug/L	91
16) 2-chloropropane	2.072	63	25538	40.97	ug/L	91
17) acrolein	2.140	56	7840	48.83	ug/L	83
18) freon 113	2.135	151	63091	48.13	ug/L	94
19) 1,1-dichloroethene	2.161	96	65148	44.58	ug/L	97
20) acetone	2.250	58	14245	177.06	ug/L	95
21) acetonitrile	2.511	41	44689	359.94	ug/L	97
22) iodomethane	2.286	142	70217	58.60	ug/L	98
23) carbon disulfide	2.307	76	174502	42.63	ug/L	96
24) methylene chloride	2.564	84	66397	41.56	ug/L	90
25) methyl acetate	2.470	43	29182	37.87	ug/L	95
26) methyl tert butyl ether	2.710	73	185372	47.60	ug/L	98
27) trans-1,2-dichloroethene	2.731	96	73202	44.00	ug/L	94
28) hexane	2.872	57	100574	38.20	ug/L	95
29) di-isopropyl ether	3.076	45	180654	38.21	ug/L	95
30) ethyl tert-butyl ether	3.364	59	206750	44.23	ug/L	98
31) 2-butanone	3.599	72	23919	188.77	ug/L	91
32) 1,1-dichloroethane	3.092	63	116355	43.04	ug/L	97
33) chloroprene	3.134	53	106948	44.53	ug/L	96
34) acrylonitrile	2.799	53	14722	44.81	ug/L	89
35) vinyl acetate	3.123	86	14974	50.84	ug/L #	36
36) ethyl acetate	3.610	45	6841	41.42	ug/L #	64
37) 2,2-dichloropropane	3.542	77	114818	46.16	ug/L	98
38) cis-1,2-dichloroethene	3.573	96	79950	44.47	ug/L	100
39) propionitrile	3.714	54	64173	440.14	ug/L	100
40) bromochloromethane	3.782	130	48564	48.18	ug/L	84
41) tetrahydrofuran	3.782	71	6182	49.05	ug/L #	84
42) chloroform	3.840	83	129152	44.18	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151803.d
Acq On : 6 May 2019 10:04 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:25:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-Butyl Formate	3.850	59	42017	45.41	ug/L		91
44)	isobutyl alcohol	4.263	41	84152	370.87	ug/L		93
46)	methacrylonitrile	3.808	67	21393	49.44	ug/L		86
47)	1,1,1-trichloroethane	3.955	97	126571	47.97	ug/L		96
48)	cyclohexane	3.939	84	116993	43.35	ug/L		92
49)	1,1-dichloropropene	4.107	110	38432	44.32	ug/L		95
50)	tert-amyl alcohol	4.326	59	22044	191.91	ug/L	#	70
51)	carbon tetrachloride	4.065	119	108022	51.80	ug/L		99
54)	2,2,4-trimethylpentane	4.263	57	249365	39.76	ug/L		99
55)	tert-amyl methyl ether	4.358	87	69231	49.40	ug/L		94
56)	n-butyl alcohol	4.896	56	76404	2441.89	ug/L		97
57)	benzene	4.284	78	280571	45.12	ug/L		98
58)	heptane	4.452	57	50225	37.76	ug/L		94
59)	isopropyl acetate	4.358	87	69231	48.24	ug/L	#	81
60)	1,2-dichloroethane	4.379	62	93212	47.21	ug/L		99
61)	trichloroethene	4.896	95	78174	46.27	ug/L		98
62)	ethyl acrylate	5.038	55	63887	46.27	ug/L		99
63)	2-nitropropane	5.749	41	20583	48.91	ug/L	#	7
64)	2-chloroethyl vinyl ether	5.765	63	186187	227.65	ug/L		96
65)	methyl methacrylate	5.268	100	19016	54.51	ug/L	#	78
66)	1,2-dichloropropane	5.168	63	61896	41.89	ug/L		89
67)	methylcyclohexane	5.001	83	128002	40.58	ug/L		97
68)	dibromomethane	5.294	93	38667	47.79	ug/L		87
69)	bromodichloromethane	5.446	83	97525	51.91	ug/L		100
70)	epichlorohydrin	5.843	57	25752	250.97	ug/L		94
71)	cis-1,3-dichloropropene	5.890	75	115424	49.11	ug/L		95
72)	4-methyl-2-pentanone	6.031	85	43048	218.76	ug/L	#	80
76)	toluene	6.141	92	190633	44.13	ug/L		97
77)	trans-1,3-dichloropropene	6.434	75	101345	51.04	ug/L		99
78)	ethyl methacrylate	6.465	69	77523	46.95	ug/L		93
79)	1,1,2-trichloroethane	6.596	83	46792	44.02	ug/L		97
80)	2-hexanone	6.800	58	72756	178.89	ug/L	#	86
81)	tetrachloroethene	6.617	166	97930	47.78	ug/L		99
82)	1,3-dichloropropane	6.748	76	95060	44.33	ug/L		99
83)	butyl acetate	6.889	56	33348	43.61	ug/L		94
84)	dibromochloromethane	6.915	129	72915	58.25	ug/L		99
85)	1,2-dibromoethane	7.015	107	65245	42.31	ug/L		99
86)	n-butyl ether	7.470	57	253122	36.00	ug/L		96
87)	chlorobenzene	7.417	112	210838	44.33	ug/L		99
88)	1,1,1,2-tetrachloroethane	7.501	131	81967	52.21	ug/L		98
89)	ethylbenzene	7.485	91	361169	43.19	ug/L		100
90)	m,p-xylene	7.590	106	287643	87.30	ug/L		95
91)	o-xylene	7.930	91	298631	45.16	ug/L		98
92)	styrene	7.956	104	240171	45.35	ug/L		99
93)	bromoform	8.129	173	49609	54.29	ug/L		94
94)	butyl acrylate	7.919	55	102045	44.43	ug/L		99
95)	isopropylbenzene	8.223	105	381136	45.23	ug/L		98
96)	cis-1,4-dichloro-2-butene	8.359	53	22044	47.36	ug/L	#	81
99)	bromobenzene	8.505	156	101247	44.34	ug/L		90
100)	1,1,2,2-tetrachloroethane	8.547	83	66718	42.96	ug/L		98
101)	trans-1,4-dichloro-2-b...	8.599	88	10860	50.91	ug/L		91
102)	1,2,3-trichloropropane	8.584	110	23639	47.85	ug/L		94
103)	n-propylbenzene	8.563	91	422297	40.31	ug/L		99
104)	2-chlorotoluene	8.652	126	93161	43.49	ug/L		94
105)	4-chlorotoluene	8.751	126	93099	43.55	ug/L		97
106)	1,3,5-trimethylbenzene	8.714	105	334458	43.88	ug/L		99
107)	tert-butylbenzene	8.965	119	294425	43.41	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151803.d
Acq On : 6 May 2019 10:04 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:25:00 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	336317	43.35	ug/L	99
109) sec-butylbenzene	9.143	105	419551	42.56	ug/L	99
110) 1,3-dichlorobenzene	9.258	146	195622	43.60	ug/L	97
111) p-isopropyltoluene	9.258	119	376791	43.44	ug/L	98
112) 1,4-dichlorobenzene	9.342	146	197621	43.08	ug/L	98
113) 1,2-dichlorobenzene	9.635	146	183510	43.64	ug/L	96
114) n-butylbenzene	9.583	92	179607	41.90	ug/L	97
115) 1,2-dibromo-3-chloropr...	10.268	157	19965	51.71	ug/L	98
116) 1,3,5-Trichlorobenzene	10.383	180	192841	47.29	ug/L	98
117) 1,2,4-trichlorobenzene	10.880	180	168742	48.05	ug/L	98
118) hexachlorobutadiene	10.969	225	109603	50.10	ug/L	98
119) naphthalene	11.073	128	302862	49.24	ug/L	99
120) 1,2,3-trichlorobenzene	11.262	180	159119	48.85	ug/L	99
121) hexachloroethane	9.792	201	66846	50.63	ug/L	90
122) Benzyl chloride	9.457	91	145982	53.79	ug/L	98
123) 2-ethylhexyl acrylate	11.011	70	16091	9.30	ug/L	98
124) 2-methylnaphthalene	11.936	142	105042	28.51	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151803.d
Acq On    :  6 May 2019  10:04 am
Operator  : PrashanS
Sample    : BS                                    Inst    : MS3C
Misc      : MS34371,V3C6821,5.0,,,,1
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:25:00 2019
Quant Title  : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration
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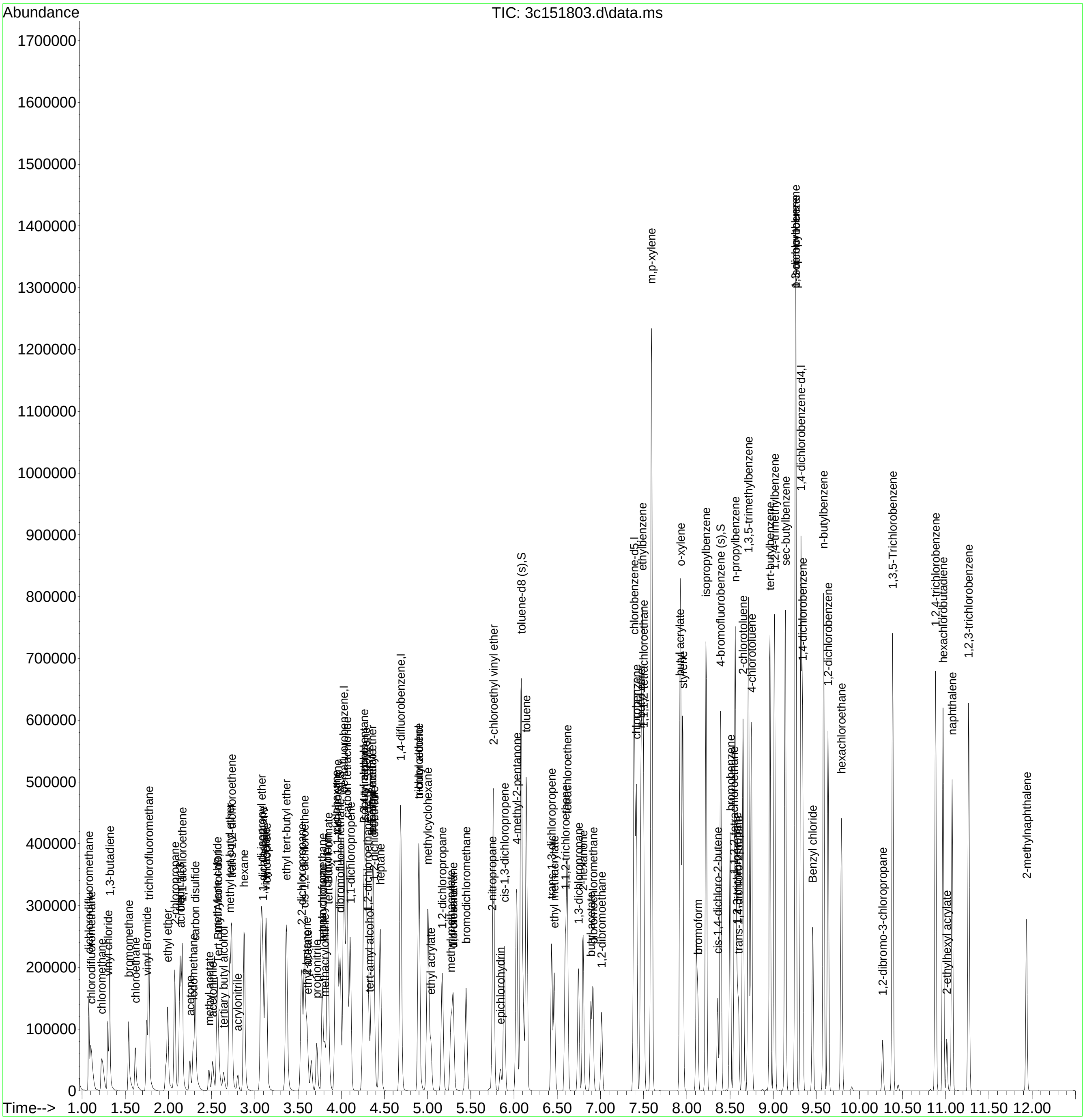


M3C6743.M Mon May 06 23:25:32 2019 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264313.d
Acq On : 7 May 2019 9:39 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:45:08 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	7.457	65	128821	500.00	ug/L	-0.02
5) pentafluorobenzene	9.721	168	259381	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.673	114	395845	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.083	117	394600	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	234207	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.747	113	122522	50.06	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.12%			
55) 1,2-dichloroethane-d4 (s)	10.176	65	131915	44.45	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 88.90%			
76) toluene-d8 (s)	12.410	98	472661	49.12	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.24%			
100) 4-bromofluorobenzene (s)	15.406	95	207809	47.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.572	59	87264	255.51	ug/L	96
4) 1,4-dioxane	11.343	88	43625	1401.09	ug/L	98
6) chlorodifluoromethane	4.413	51	243882	44.57	ug/L	97
7) dichlorodifluoromethane	4.413	85	301542	40.04	ug/L	97
8) chloromethane	4.695	50	288730	45.79	ug/L	99
9) 1,3-butadiene	4.983	54	216805	62.07	ug/L	97
10) vinyl chloride	4.951	62	347451	54.15	ug/L	100
11) bromomethane	5.521	94	171061	51.77	ug/L	97
12) chloroethane	5.657	64	137610	48.96	ug/L	95
13) trichlorofluoromethane	6.139	101	261948	45.33	ug/L	99
14) vinyl bromide	6.013	106	185264	62.86	ug/L	97
15) ethyl ether	6.463	74	83715	58.54	ug/L	96
16) 2-chloropropane	6.672	43	300267	48.68	ug/L	94
17) acrolein	6.646	56	30211	63.64	ug/L	89
18) freon 113	6.928	151	165939	48.92	ug/L	98
19) 1,1-dichloroethene	6.881	96	168229	52.60	ug/L	96
20) acetone	6.829	58	49485	246.13	ug/L #	84
21) acetonitrile	7.200	41	230749	544.01	ug/L	99
22) iodomethane	7.127	142	262472	52.18	ug/L	98
23) carbon disulfide	7.294	76	568574	54.53	ug/L	100
24) methylene chloride	7.530	84	179487	53.40	ug/L	98
25) methyl acetate	7.284	43	97433	54.74	ug/L	97
26) methyl tert butyl ether	7.901	73	485332	49.95	ug/L	96
27) trans-1,2-dichloroethene	7.933	96	156505	53.36	ug/L	96
28) hexane	8.304	56	114831	60.84	ug/L	99
29) di-isopropyl ether	8.487	45	564847	50.84	ug/L	98
30) 2-butanone	9.088	72	53916	226.85	ug/L	92
31) 1,1-dichloroethane	8.476	63	267726	51.28	ug/L	99
32) chloroprene	8.592	53	228061	48.91	ug/L	96
33) acrylonitrile	7.765	53	47950	58.55	ug/L	94
34) vinyl acetate	8.403	86	29879	52.20	ug/L	99
35) ethyl tert-butyl ether	8.947	59	552923	50.44	ug/L	99
36) ethyl acetate	9.125	45	19870	59.37	ug/L #	87
37) 2,2-dichloropropane	9.240	77	263975	47.13	ug/L	95
38) cis-1,2-dichloroethene	9.183	96	169790	52.91	ug/L	97
39) propionitrile	9.130	54	204991	573.64	ug/L	98
40) methyl acrylate	9.209	85	17596	50.02	ug/L #	86
41) methacrylonitrile	9.355	67	50752	54.21	ug/L	89
42) bromochloromethane	9.475	128	77972	53.85	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264313.d
Acq On : 7 May 2019 9:39 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:45:08 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)
43) tetrahydrofuran	9.517	42	36726	52.70	ug/L	98
44) chloroform	9.559	83	255885	48.52	ug/L	95
45) tert-butyl formate	9.611	59	149037	50.12	ug/L	97
47) 1,1,1-trichloroethane	9.857	97	260328	48.12	ug/L	97
48) cyclohexane	10.004	84	301615	55.43	ug/L	96
50) 1,1-dichloropropene	10.025	75	194412	48.65	ug/L	99
51) carbon tetrachloride	10.072	117	219007	47.41	ug/L	98
52) tert-amyl alcohol	10.108	73	38676	236.25	ug/L	93
53) isopropyl acetate	10.150	87	30712	49.52	ug/L	95
56) n-butyl alcohol	10.684	56	229584	2401.25	ug/L	99
57) 2,2,4-trimethylpentane	10.406	57	604378	61.58	ug/L	95
58) benzene	10.270	78	605383	50.37	ug/L	98
59) tert-amyl methyl ether	10.359	73	518367	47.27	ug/L	98
60) heptane	10.558	57	97226	60.55	ug/L	96
61) 1,2-dichloroethane	10.265	62	177611	42.03	ug/L	97
62) ethyl acrylate	10.971	55	149417	48.31	ug/L	99
63) trichloroethene	11.013	95	144898	48.53	ug/L	99
64) 2-chloroethyl vinyl ether	11.808	63	412447	263.45	ug/L	99
65) methyl methacrylate	11.254	100	34533	51.08	ug/L #	87
66) methylcyclohexane	11.358	83	297020	58.30	ug/L	100
67) 1,2-dichloropropane	11.296	63	152962	51.27	ug/L	98
68) dibromomethane	11.400	93	84957	49.26	ug/L	99
69) bromodichloromethane	11.562	83	195821	48.96	ug/L	99
70) 2-nitropropane	11.735	41	28751	46.09	ug/L	99
71) epichlorohydrin	11.887	57	75562	262.10	ug/L	98
72) cis-1,3-dichloropropene	12.054	75	240220	49.88	ug/L	94
73) 4-methyl-2-pentanone	12.148	58	214991	206.54	ug/L	91
74) isoamyl alcohol	12.138	70	90434	1108.83	ug/L	95
77) toluene	12.488	92	372557	49.36	ug/L	97
78) ethyl methacrylate	12.671	69	177993	49.79	ug/L	96
79) trans-1,3-dichloropropene	12.661	75	211929	48.32	ug/L	90
80) 1,1,2-trichloroethane	12.906	83	103068	51.21	ug/L	98
81) tetrachloroethene	13.121	164	122968	50.01	ug/L	98
82) 2-hexanone	13.084	58	190897	209.74	ug/L	95
83) 1,3-dichloropropane	13.105	76	212254	48.98	ug/L	96
84) butyl acetate	13.194	56	96093	51.85	ug/L	94
85) dibromochloromethane	13.388	129	145560	51.34	ug/L	97
86) 1,2-dibromoethane	13.565	107	139999	44.74	ug/L	99
87) n-butyl ether	14.099	57	681945	49.57	ug/L	99
88) chlorobenzene	14.120	112	414986	47.48	ug/L	98
89) 1,1,1,2-tetrachloroethane	14.188	131	162743	48.46	ug/L	99
90) ethylbenzene	14.198	91	741837	49.59	ug/L	100
91) m,p-xylene	14.334	106	575538	100.98	ug/L	97
92) o-xylene	14.784	91	624051	49.84	ug/L	99
93) styrene	14.794	104	483289	49.78	ug/L	97
94) butyl acrylate	14.585	55	299261	50.98	ug/L	98
95) n-amyl acetate	14.821	70	121964	49.08	ug/L	96
96) isopropylbenzene	15.187	105	794524	54.37	ug/L	99
97) bromoform	15.040	173	104550	51.16	ug/L	98
98) cis-1,4-dichloro-2-butene	15.187	88	61497	45.34	ug/L	95
101) 1,1,2,2-tetrachloroethane	15.464	83	181314	50.09	ug/L	99
102) trans-1,4-dichloro-2-b...	15.501	53	45419	50.13	ug/L	92
103) 1,2,3-trichloropropane	15.563	110	51719	49.57	ug/L	90
104) bromobenzene	15.610	156	200515	48.85	ug/L	97
105) n-propylbenzene	15.657	91	911310	56.18	ug/L	99
106) 2-chlorotoluene	15.804	126	189539	52.15	ug/L	99
107) 4-chlorotoluene	15.929	91	557848	52.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264313.d
Acq On : 7 May 2019 9:39 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:45:08 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

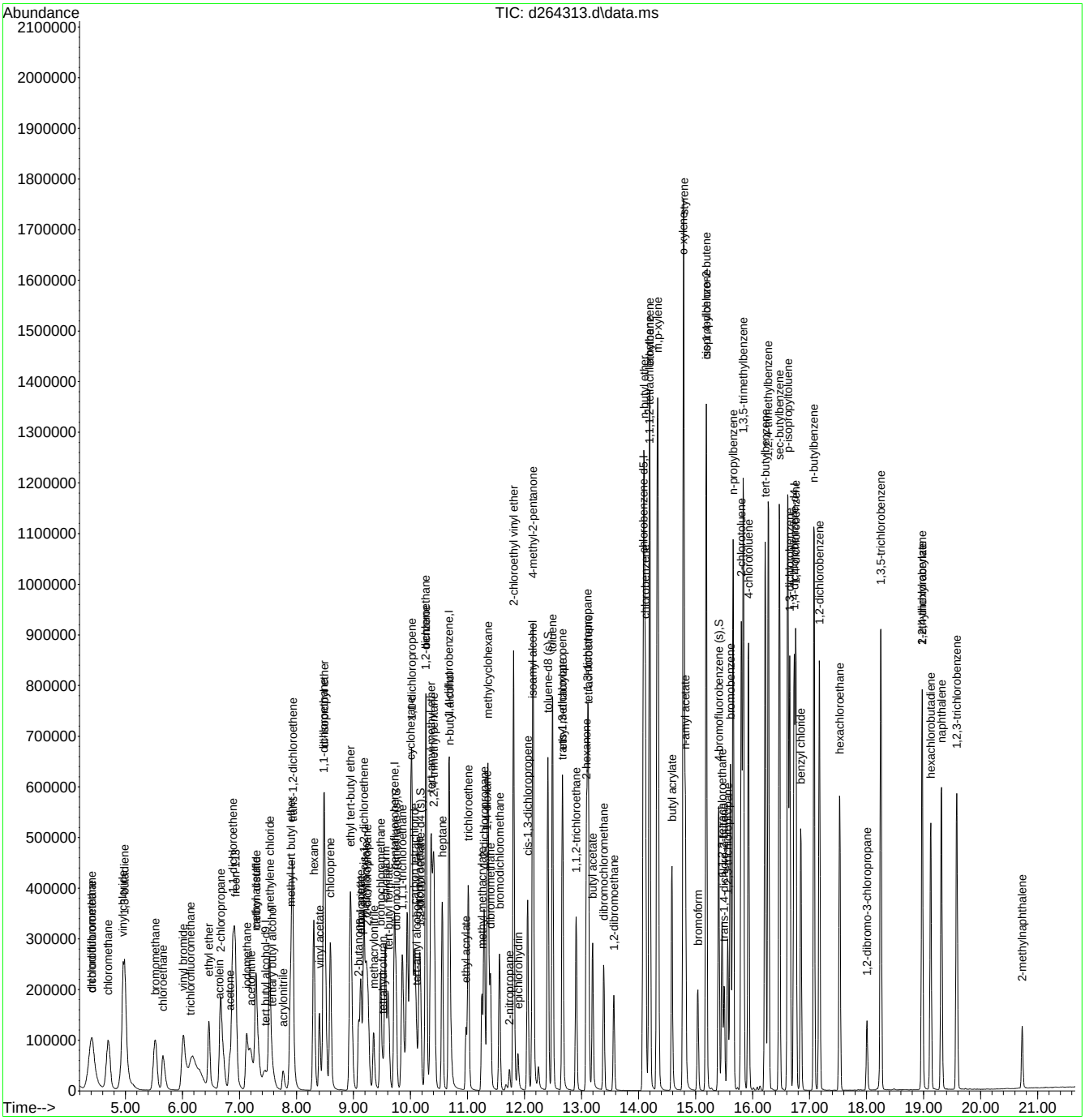
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.835	105	706430	56.99 ug/L	99
109) tert-butylbenzene	16.222	119	564562	58.71 ug/L	98
110) 1,2,4-trimethylbenzene	16.275	105	704056	56.96 ug/L	100
111) sec-butylbenzene	16.468	105	864551	61.04 ug/L	98
112) p-isopropyltoluene	16.620	119	737709	62.58 ug/L	98
113) 1,3-dichlorobenzene	16.651	146	386477	53.89 ug/L	99
114) 1,4-dichlorobenzene	16.756	146	395447	53.17 ug/L	99
115) 1,2-dichlorobenzene	17.174	146	393651	54.78 ug/L	99
116) benzyl chloride	16.845	91	404522	57.96 ug/L	99
117) n-butylbenzene	17.075	92	369314	67.07 ug/L	97
118) 2-ethylhexyl acrylate	18.973	70	17926	15.45 ug/L	87
119) hexachloroethane	17.530	201	122928	67.16 ug/L	94
120) 1,2-dibromo-3-chloropr...	18.006	75	36400	56.12 ug/L	96
121) 1,3,5-trichlorobenzene	18.252	180	327612	67.76 ug/L	99
122) 1,2,4-trichlorobenzene	18.973	180	268482	60.86 ug/L	98
123) hexachlorobutadiene	19.125	225	133153	60.42 ug/L	98
124) naphthalene	19.313	128	558902	56.94 ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	228578	58.79 ug/L	99
126) 2-methylnaphthalene	20.731	142	69790	33.35 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264313.d
Acq On : 7 May 2019 9:39 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:45:08 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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164336.d
Acq On : 7 May 2019 1:32 pm
Operator : PrashanS
Sample : BS Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:46:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.369	65	66852	500.00	ug/L	-0.01
5) pentafluorobenzene	9.602	168	225889	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	318818	50.00	ug/L	0.00
74) chlorobenzene-d5	13.655	117	252331	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	132583	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	94470	49.59	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.18%			
53) 1,2-dichloroethane-d4 (s)	10.094	65	85925	42.90	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.80%			
75) toluene-d8 (s)	12.149	98	342477	50.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%			
98) 4-bromofluorobenzene (s)	14.806	95	117675	47.28	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.56%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.484	59	44872	252.71	ug/L	97
4) 1,4-dioxane	11.249	88	22769	1404.41	ug/L	93
6) chlorodifluoromethane	3.891	51	100716	42.79	ug/L	97
7) dichlorodifluoromethane	3.859	85	143817	43.07	ug/L	97
8) chloromethane	4.278	50	112673	46.01	ug/L	99
9) vinyl chloride	4.513	62	112222	48.68	ug/L	99
10) 1,3-butadiene	4.586	54	71328	49.29	ug/L	93
11) bromomethane	5.198	94	80003	45.54	ug/L	99
12) chloroethane	5.371	64	65902	47.73	ug/L	97
13) trichlorofluoromethane	5.810	101	156316	45.48	ug/L	99
14) vinyl bromide	5.721	106	93680	69.48	ug/L	95
15) ethyl ether	6.255	74	46841	51.02	ug/L	94
16) acrolein	6.542	56	12591	53.37	ug/L	94
17) freon 113	6.615	151	73898	48.62	ug/L	98
18) 1,1-dichloroethene	6.678	96	89959	48.65	ug/L	89
19) acetone	6.751	43	103474	225.21	ug/L	93
20) acetonitrile	7.212	41	86326	450.52	ug/L	95
21) iodomethane	6.971	142	94844	45.91	ug/L	94
22) carbon disulfide	7.086	76	275078	46.05	ug/L	98
23) methylene chloride	7.421	84	96888	48.30	ug/L	94
24) methyl acetate	7.207	43	48649	43.41	ug/L	97
25) methyl tert butyl ether	7.709	73	230797	46.05	ug/L	99
26) trans-1,2-dichloroethene	7.782	96	98133	47.81	ug/L	94
27) di-isopropyl ether	8.305	45	279486	45.30	ug/L	96
28) 2-butanone	9.063	72	40260	233.11	ug/L #	74
29) 1,1-dichloroethane	8.362	63	158666	45.56	ug/L	98
30) chloroprene	8.457	53	130834	43.57	ug/L	92
31) acrylonitrile	7.766	53	24042	47.94	ug/L	95
32) hexane	8.064	57	145114	45.50	ug/L	97
33) vinyl acetate	8.341	86	14808	50.99	ug/L #	70
34) ethyl tert-butyl ether	8.765	59	271396	45.64	ug/L	98
35) ethyl acetate	9.068	45	10070	46.19	ug/L #	74
36) 2,2-dichloropropane	9.084	77	134158	43.21	ug/L	94
37) cis-1,2-dichloroethene	9.095	96	105827	47.77	ug/L	95
38) methyl acrylate	9.157	85	11614	51.06	ug/L	98
39) propionitrile	9.184	54	103334	472.22	ug/L	98
40) bromochloromethane	9.414	128	47950	49.84	ug/L	95
41) tetrahydrofuran	9.440	72	9739	47.20	ug/L	88
42) chloroform	9.466	85	107063	43.43	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164336.d
Acq On : 7 May 2019 1:32 pm
Operator : PrashanS
Sample : BS Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:46:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) t-butyl formate	9.482	59	53782	40.56	ug/L	97
45) methacrylonitrile	9.356	67	30984	49.05	ug/L	84
46) 1,1,1-trichloroethane	9.701	97	141588	44.38	ug/L	98
47) cyclohexane	9.759	84	143350	45.51	ug/L	94
48) 1,1-dichloropropene	9.884	75	125198	46.33	ug/L	97
49) iso-butyl alcohol	9.905	43	30305	425.20	ug/L	92
50) carbon tetrachloride	9.900	117	122361	43.92	ug/L	98
51) tert amyl alcohol	10.015	55	14587	219.08	ug/L	97
54) n-butyl alcohol	10.653	56	115645	2485.78	ug/L	95
55) 2,2,4-trimethylpentane	10.109	57	334360	43.68	ug/L	97
56) benzene	10.151	78	367343	46.02	ug/L	99
57) tert-amyl methyl ether	10.156	87	57498	46.22	ug/L	97
58) heptane	10.287	71	78658	45.66	ug/L	96
59) isopropyl acetate	10.057	87	16528	50.05	ug/L #	84
60) 1,2-dichloroethane	10.177	62	101727	39.20	ug/L	94
61) trichloroethene	10.862	130	101688	49.49	ug/L	98
62) ethyl acrylate	10.857	55	88847	46.07	ug/L	98
64) 2-chloroethyl vinyl ether	11.652	63	218459	230.56	ug/L	99
65) methyl methacrylate	11.124	100	19210	48.16	ug/L #	74
66) 1,2-dichloropropane	11.134	63	89634	47.16	ug/L	98
67) dibromomethane	11.302	93	52273	46.98	ug/L	96
68) methylcyclohexane	11.056	83	156741	44.24	ug/L	95
69) bromodichloromethane	11.422	83	124396	46.19	ug/L	100
70) epichlorohydrin	11.788	57	35908	235.03	ug/L	96
71) cis-1,3-dichloropropene	11.872	75	146398	47.36	ug/L	91
72) 4-methyl-2-pentanone	11.956	58	103247	187.04	ug/L	91
73) 3-methyl-1-butanol	11.982	55	65388	934.34	ug/L	95
76) toluene	12.222	92	215647	46.69	ug/L	96
77) trans-1,3-dichloropropene	12.432	75	119775	46.09	ug/L	98
78) ethyl methacrylate	12.405	69	90395	49.21	ug/L	93
79) 1,1,2-trichloroethane	12.651	83	60514	49.73	ug/L	95
80) tetrachloroethene	12.798	164	79723	49.65	ug/L	97
81) 1,3-dichloropropane	12.829	76	107128	48.01	ug/L	91
82) 2-hexanone	12.803	58	109229	217.58	ug/L	90
83) butyl acetate	12.866	56	43519	47.56	ug/L	94
84) dibromochloromethane	13.091	129	91753	50.15	ug/L	98
85) 1,2-dibromoethane	13.242	107	82422	42.64	ug/L	98
86) n-butyl ether	13.572	57	323569	46.57	ug/L	98
87) chlorobenzene	13.687	112	225856	48.20	ug/L	98
88) 1,1,1,2-tetrachloroethane	13.750	131	83106	48.77	ug/L	95
89) ethylbenzene	13.734	91	386010	45.46	ug/L	98
90) m,p-xylene	13.838	106	297417	94.29	ug/L	91
91) o-xylene	14.257	106	145555	48.34	ug/L	94
92) styrene	14.267	104	242056	48.47	ug/L	96
93) bromoform	14.550	173	58617	52.80	ug/L	99
94) butyl acrylate	14.074	55	135231	46.24	ug/L	98
95) isopropylbenzene	14.592	105	376681	46.50	ug/L	96
96) cis-1,4-dichloro-2-butene	14.681	88	29698	43.18	ug/L	95
99) bromobenzene	15.000	156	101529	48.78	ug/L	94
100) 1,1,2,2-tetrachloroethane	14.916	83	81546	49.94	ug/L	97
101) trans-1,4-dichloro-2-b...	14.958	53	19690	44.31	ug/L	85
102) 1,2,3-trichloropropane	14.994	110	20364	48.34	ug/L	98
103) n-propylbenzene	14.994	91	450848	47.09	ug/L	98
105) 2-chlorotoluene	15.151	126	92139	49.44	ug/L	97
106) 4-chlorotoluene	15.251	91	262739	44.59	ug/L	95
107) 1,3,5-trimethylbenzene	15.146	105	314989	45.60	ug/L	95
108) tert-butylbenzene	15.491	134	58235	50.30	ug/L #	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164336.d
Acq On : 7 May 2019 1:32 pm
Operator : PrashanS
Sample : BS Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:46:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
109) 1,2,4-trimethylbenzene	15.538	105	311741	45.06 ug/L	94
110) sec-butylbenzene	15.706	105	409337	47.67 ug/L	98
111) 1,3-dichlorobenzene	15.910	146	193089	48.98 ug/L	98
112) p-isopropyltoluene	15.826	119	348028	47.12 ug/L	97
113) 1,4-dichlorobenzene	15.993	146	191299	48.57 ug/L	96
114) benzyl chloride	16.119	91	169594	50.02 ug/L	99
115) 1,2-dichlorobenzene	16.401	146	184853	50.25 ug/L	97
117) n-butylbenzene	16.250	92	180083	47.97 ug/L	100
118) 1,2-dibromo-3-chloropr...	17.191	75	14668	44.88 ug/L	84
119) 1,3,5-trichlorobenzene	17.343	180	151186	49.94 ug/L	98
121) 2-ethylhexyl acrylate	17.876	70	13791	9.10 ug/L #	84
122) 1,2,4-trichlorobenzene	17.918	180	126489	51.29 ug/L	97
123) hexachlorobutadiene	18.007	225	81473	47.07 ug/L	98
124) naphthalene	18.164	128	234731	48.93 ug/L	99
125) 1,2,3-trichlorobenzene	18.373	180	116296	49.92 ug/L	99
126) hexachloroethane	16.658	201	68166	51.67 ug/L	96
127) 2-methylnaphthalene	19.121	142	77633	25.41 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

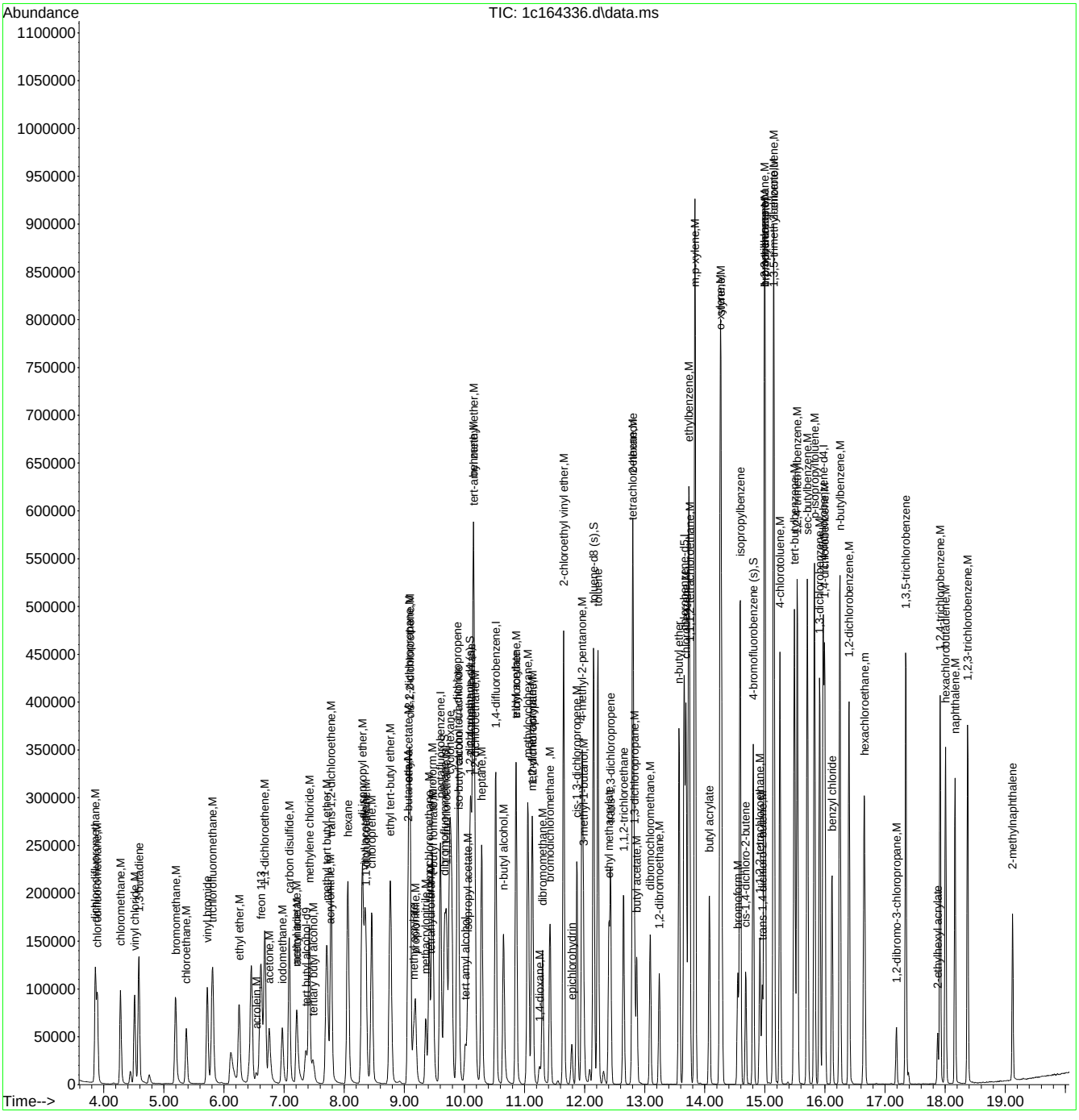
7.3.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164336.d
Acq On : 7 May 2019 1:32 pm
Operator : PrashanS
Sample : BS Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:46:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



M1CS7200.M Wed May 08 04:50:27 2019 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264359.D
Acq On : 8 May 2019 8:30 am
Operator : thienn
Sample : bs
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 10:38:21 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	7.467	65	130104	500.00	ug/L	0.00
5) pentafluorobenzene	9.716	168	250815	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.674	114	385744	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	376829	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	226971	50.00	ug/L	-0.01

System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	118382	50.02	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.04%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	128456	44.42	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 88.84%			
76) toluene-d8 (s)	12.410	98	458250	49.87	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.74%			
100) 4-bromofluorobenzene (s)	15.407	95	202807	48.22	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.44%			

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.577	59	82062	237.91	ug/L	98
4) 1,4-dioxane	11.343	88	41204	1310.28	ug/L	98
6) chlorodifluoromethane	4.403	51	209658	39.62	ug/L	96
7) dichlorodifluoromethane	4.413	85	253747	34.85	ug/L	98
8) chloromethane	4.696	50	283955	46.57	ug/L	99
9) 1,3-butadiene	4.978	54	188906	55.93	ug/L	96
10) vinyl chloride	4.952	62	321808	51.87	ug/L	99
11) bromomethane	5.517	94	153192	47.94	ug/L	95
12) chloroethane	5.663	64	125303	46.11	ug/L	97
13) trichlorofluoromethane	6.139	101	234314	41.93	ug/L	98
14) vinyl bromide	6.013	106	156358	54.86	ug/L	98
15) ethyl ether	6.463	74	75354	54.49	ug/L	93
16) 2-chloropropane	6.673	43	271211	45.47	ug/L	93
17) acrolein	6.652	56	27580	60.08	ug/L	97
18) freon 113	6.918	151	150259	45.81	ug/L	98
19) 1,1-dichloroethene	6.882	96	147601	47.72	ug/L	95
20) acetone	6.829	58	45490	233.99	ug/L	89
21) acetonitrile	7.201	41	218499	532.72	ug/L	99
22) iodomethane	7.128	142	230404	47.36	ug/L	98
23) carbon disulfide	7.290	76	490618	48.66	ug/L	99
24) methylene chloride	7.530	84	163172	50.20	ug/L	97
25) methyl acetate	7.290	43	90255	52.44	ug/L	99
26) methyl tert butyl ether	7.907	73	452696	48.18	ug/L	95
27) trans-1,2-dichloroethene	7.933	96	141357	49.84	ug/L	97
28) hexane	8.304	56	102139	55.96	ug/L	99
29) di-isopropyl ether	8.487	45	537597	50.04	ug/L	99
30) 2-butanone	9.094	72	49363	214.79	ug/L	93
31) 1,1-dichloroethane	8.477	63	246290	48.78	ug/L	99
32) chloroprene	8.592	53	209811	46.53	ug/L	96
33) acrylonitrile	7.766	53	45285	57.19	ug/L	92
34) vinyl acetate	8.404	86	28579	51.64	ug/L	93
35) ethyl tert-butyl ether	8.948	59	519652	49.02	ug/L	98
36) ethyl acetate	9.120	45	18482	57.11	ug/L #	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264359.D
Acq On : 8 May 2019 8:30 am
Operator : thienn
Sample : bs
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 10:38:21 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)
37) 2,2-dichloropropane	9.240	77	249134	46.00	ug/L		95
38) cis-1,2-dichloroethene	9.183	96	155378	50.07	ug/L		99
39) propionitrile	9.131	54	191442	554.03	ug/L		98
40) methyl acrylate	9.209	85	16086	47.38	ug/L	#	88
41) methacrylonitrile	9.356	67	47789	52.78	ug/L		93
42) bromochloromethane	9.476	128	69834	49.88	ug/L		98
43) tetrahydrofuran	9.518	42	34677	51.46	ug/L		97
44) chloroform	9.560	83	233208	45.73	ug/L		97
45) tert-butyl formate	9.607	59	139098	48.37	ug/L		94
47) 1,1,1-trichloroethane	9.858	97	238725	45.63	ug/L		98
48) cyclohexane	10.004	84	267063	50.76	ug/L		97
50) 1,1-dichloropropene	10.025	75	179068	46.34	ug/L		99
51) carbon tetrachloride	10.077	117	201675	45.15	ug/L		98
52) tert-amyl alcohol	10.103	73	38245	241.60	ug/L		93
53) isopropyl acetate	10.151	87	29079	48.48	ug/L		99
56) n-butyl alcohol	10.684	56	221496	2377.32	ug/L		96
57) 2,2,4-trimethylpentane	10.407	57	538536	56.31	ug/L		96
58) benzene	10.271	78	560066	47.82	ug/L		98
59) tert-amyl methyl ether	10.360	73	485855	45.47	ug/L		99
60) heptane	10.553	57	86777	55.46	ug/L		96
61) 1,2-dichloroethane	10.266	62	164304	39.90	ug/L		96
62) ethyl acrylate	10.972	55	138159	45.84	ug/L		99
63) trichloroethene	11.014	95	132983	45.70	ug/L		98
64) 2-chloroethyl vinyl ether	11.808	63	384106	251.77	ug/L		99
65) methyl methacrylate	11.254	100	31239	47.42	ug/L	#	84
66) methylcyclohexane	11.359	83	266360	53.65	ug/L		97
67) 1,2-dichloropropane	11.291	63	143370	49.31	ug/L		99
68) dibromomethane	11.401	93	77790	46.29	ug/L		98
69) bromodichloromethane	11.563	83	179901	46.16	ug/L		99
70) 2-nitropropane	11.735	41	26620	43.79	ug/L		96
71) epichlorohydrin	11.887	57	70656	251.50	ug/L		97
72) cis-1,3-dichloropropene	12.054	75	222221	47.35	ug/L		96
73) 4-methyl-2-pentanone	12.148	58	203025	200.15	ug/L		94
74) isoamyl alcohol	12.138	70	85744	1078.86	ug/L		96
77) toluene	12.488	92	344135	47.74	ug/L		97
78) ethyl methacrylate	12.671	69	167805	49.15	ug/L		98
79) trans-1,3-dichloropropene	12.661	75	195977	46.79	ug/L		91
80) 1,1,2-trichloroethane	12.907	83	94124	48.98	ug/L		97
81) tetrachloroethene	13.121	164	112130	47.76	ug/L		97
82) 2-hexanone	13.085	58	180655	207.85	ug/L		97
83) 1,3-dichloropropane	13.106	76	193692	46.81	ug/L		99
84) butyl acetate	13.194	56	90315	51.03	ug/L		97
85) dibromochloromethane	13.388	129	131962	48.74	ug/L		98
86) 1,2-dibromoethane	13.566	107	130540	43.69	ug/L		99
87) n-butyl ether	14.099	57	650623	49.53	ug/L		99
88) chlorobenzene	14.120	112	375436	44.98	ug/L		97
89) 1,1,1,2-tetrachloroethane	14.188	131	151182	47.14	ug/L		100
90) ethylbenzene	14.199	91	681210	47.69	ug/L		100
91) m,p-xylene	14.335	106	525883	96.62	ug/L		98
92) o-xylene	14.784	91	582800	48.74	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264359.D
Acq On : 8 May 2019 8:30 am
Operator : thienn
Sample : bs
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 10:38:21 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

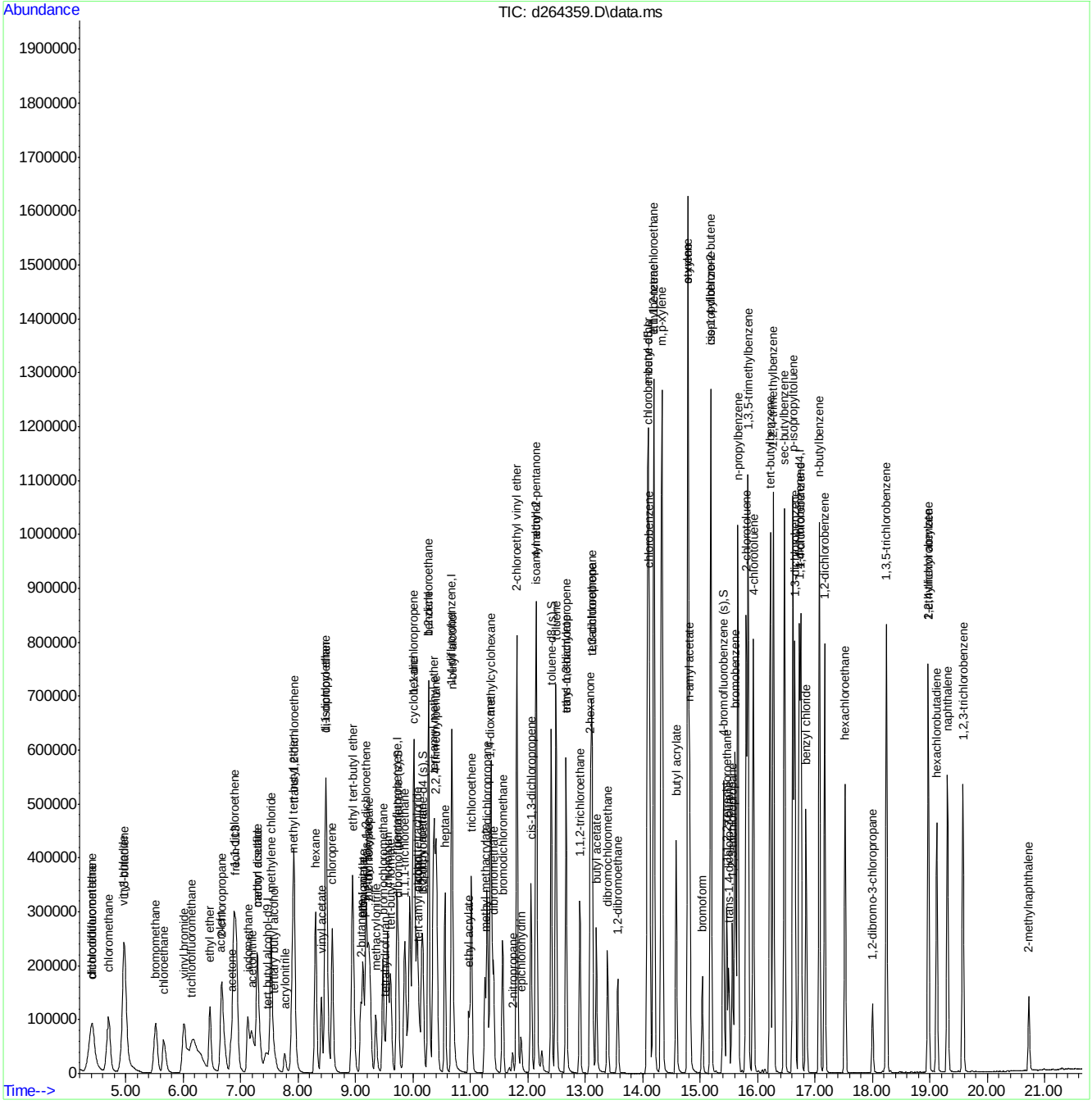
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	14.795	104	444395	47.93 ug/L	98
94) butyl acrylate	14.586	55	292923	52.26 ug/L	98
95) n-amyl acetate	14.821	70	119215	50.24 ug/L	98
96) isopropylbenzene	15.187	105	733946	52.60 ug/L	99
97) bromoform	15.041	173	93956	48.15 ug/L	99
98) cis-1,4-dichloro-2-butene	15.192	88	58404	45.09 ug/L	95
101) 1,1,2,2-tetrachloroethane	15.464	83	168262	47.97 ug/L	99
102) trans-1,4-dichloro-2-b...	15.501	53	43160	49.16 ug/L	93
103) 1,2,3-trichloropropane	15.564	110	47193	46.67 ug/L	94
104) bromobenzene	15.611	156	183297	46.08 ug/L	94
105) n-propylbenzene	15.658	91	842827	53.62 ug/L	99
106) 2-chlorotoluene	15.804	126	173472	49.25 ug/L	97
107) 4-chlorotoluene	15.930	91	518981	50.02 ug/L	99
108) 1,3,5-trimethylbenzene	15.836	105	651243	54.21 ug/L	99
109) tert-butylbenzene	16.223	119	519185	55.72 ug/L	98
110) 1,2,4-trimethylbenzene	16.275	105	653394	54.55 ug/L	99
111) sec-butylbenzene	16.469	105	792320	57.72 ug/L	97
112) p-isopropyltoluene	16.620	119	671407	58.77 ug/L	97
113) 1,3-dichlorobenzene	16.652	146	354815	51.06 ug/L	99
114) 1,4-dichlorobenzene	16.756	146	363573	50.45 ug/L	99
115) 1,2-dichlorobenzene	17.169	146	359693	51.65 ug/L	98
116) benzyl chloride	16.845	91	387734	57.32 ug/L	98
117) n-butylbenzene	17.075	92	337130	63.18 ug/L	98
118) 2-ethylhexyl acrylate	18.974	70	25994	23.12 ug/L	79
119) hexachloroethane	17.525	201	109352	61.65 ug/L	96
120) 1,2-dibromo-3-chloropr...	18.006	75	34237	54.46 ug/L	99
121) 1,3,5-trichlorobenzene	18.252	180	294522	62.86 ug/L	99
122) 1,2,4-trichlorobenzene	18.974	180	244086	57.18 ug/L	99
123) hexachlorobutadiene	19.125	225	117371	54.96 ug/L	99
124) naphthalene	19.308	128	518864	54.62 ug/L	98
125) 1,2,3-trichlorobenzene	19.580	180	208127	55.34 ug/L	99
126) 2-methylnaphthalene	20.726	142	75795	37.38 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264359.D
Acq On : 8 May 2019 8:30 am
Operator : thienn
Sample : bs
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 10:38:21 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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264405.d
Acq On : 9 May 2019 7:28 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:48:43 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	134384	500.00	ug/L	-0.02
5) pentafluorobenzene	9.721	168	245732	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.678	114	386734	50.00	ug/L	0.00
75) chlorobenzene-d5	14.083	117	378599	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	221358	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.747	113	119094	51.37	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.74%			
55) 1,2-dichloroethane-d4 (s)	10.176	65	133630	46.09	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 92.18%			
76) toluene-d8 (s)	12.410	98	464680	50.33	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.66%			
100) 4-bromofluorobenzene (s)	15.406	95	202082	49.27	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.54%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.556	59	90742	254.70	ug/L	96
4) 1,4-dioxane	11.348	88	47094	1449.89	ug/L	97
6) chlorodifluoromethane	4.407	51	257152	49.60	ug/L	97
7) dichlorodifluoromethane	4.418	85	312138	43.75	ug/L	98
8) chloromethane	4.711	50	374206	62.64	ug/L	98
9) 1,3-butadiene	4.983	54	208101	62.89	ug/L	97
10) vinyl chloride	4.967	62	348594	57.35	ug/L	99
11) bromomethane	5.527	94	169464	54.13	ug/L	98
12) chloroethane	5.663	64	144740	54.36	ug/L	97
13) trichlorofluoromethane	6.144	101	266653	48.70	ug/L	98
14) vinyl bromide	6.018	106	177873	63.70	ug/L	99
15) ethyl ether	6.468	74	82289	60.73	ug/L	93
16) 2-chloropropane	6.677	43	304309	52.07	ug/L	95
17) acrolein	6.651	56	29764	66.18	ug/L	90
18) freon 113	6.928	151	150750	46.91	ug/L	95
19) 1,1-dichloroethene	6.881	96	160181	52.86	ug/L	98
20) acetone	6.834	58	55079	289.17	ug/L #	81
21) acetonitrile	7.200	41	244376	608.14	ug/L	99
22) iodomethane	7.138	142	242212	50.82	ug/L	98
23) carbon disulfide	7.295	76	539721	54.64	ug/L	99
24) methylene chloride	7.530	84	179065	56.23	ug/L	98
25) methyl acetate	7.289	43	98547	58.44	ug/L	96
26) methyl tert butyl ether	7.906	73	480668	52.21	ug/L	96
27) trans-1,2-dichloroethene	7.933	96	151087	54.38	ug/L	98
28) hexane	8.304	56	110357	61.72	ug/L	99
29) di-isopropyl ether	8.492	45	588362	55.89	ug/L	97
30) 2-butanone	9.094	72	55485	246.42	ug/L	100
31) 1,1-dichloroethane	8.482	63	270765	54.74	ug/L	99
32) chloroprene	8.597	53	231892	52.50	ug/L	96
33) acrylonitrile	7.765	53	49155	63.36	ug/L	95
34) vinyl acetate	8.403	86	29045	53.56	ug/L #	80
35) ethyl tert-butyl ether	8.947	59	556101	53.55	ug/L	98
36) ethyl acetate	9.125	45	20744	65.43	ug/L #	76
37) 2,2-dichloropropane	9.245	77	265708	50.08	ug/L	99
38) cis-1,2-dichloroethene	9.188	96	165518	54.44	ug/L	99
39) propionitrile	9.136	54	212006	626.23	ug/L	98
40) methyl acrylate	9.214	85	17671	52.92	ug/L #	74
41) methacrylonitrile	9.355	67	51764	58.36	ug/L	95
42) bromochloromethane	9.481	128	74084	54.01	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264405.d
Acq On : 9 May 2019 7:28 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:48:43 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	38156	57.79	ug/L	93
44) chloroform	9.559	83	251363	50.30	ug/L	97
45) tert-butyl formate	9.611	59	147490	52.35	ug/L	94
47) 1,1,1-trichloroethane	9.863	97	252045	49.18	ug/L	98
48) cyclohexane	10.009	84	302541	58.69	ug/L	94
50) 1,1-dichloropropene	10.030	75	193882	51.21	ug/L	99
51) carbon tetrachloride	10.072	117	213061	48.69	ug/L	98
52) tert-amyl alcohol	10.108	73	41195	265.62	ug/L	94
53) isopropyl acetate	10.155	87	30878	52.55	ug/L	94
56) n-butyl alcohol	10.684	56	251562	2693.11	ug/L	99
57) 2,2,4-trimethylpentane	10.412	57	570165	59.47	ug/L	96
58) benzene	10.276	78	601940	51.26	ug/L	98
59) tert-amyl methyl ether	10.365	73	518397	48.39	ug/L	99
60) heptane	10.558	57	90879	57.93	ug/L	94
61) 1,2-dichloroethane	10.270	62	179127	43.38	ug/L	96
62) ethyl acrylate	10.977	55	152150	50.35	ug/L	99
63) trichloroethene	11.018	95	142384	48.81	ug/L	98
64) 2-chloroethyl vinyl ether	11.808	63	419396	274.19	ug/L	98
65) methyl methacrylate	11.254	100	33120	50.14	ug/L	94
66) methylcyclohexane	11.358	83	276543	55.56	ug/L	97
67) 1,2-dichloropropane	11.296	63	155350	53.30	ug/L	100
68) dibromomethane	11.405	93	83789	49.73	ug/L	98
69) bromodichloromethane	11.562	83	194636	49.81	ug/L	100
70) 2-nitropropane	11.735	41	29710	48.75	ug/L	94
71) epichlorohydrin	11.887	57	78214	277.69	ug/L	98
72) cis-1,3-dichloropropene	12.054	75	239968	51.00	ug/L	96
73) 4-methyl-2-pentanone	12.153	58	221544	217.85	ug/L	94
74) isoamyl alcohol	12.143	70	95071	1193.15	ug/L	94
77) toluene	12.493	92	364066	50.27	ug/L	98
78) ethyl methacrylate	12.671	69	180827	52.72	ug/L	99
79) trans-1,3-dichloropropene	12.661	75	212338	50.46	ug/L	90
80) 1,1,2-trichloroethane	12.906	83	101262	52.44	ug/L	97
81) tetrachloroethene	13.121	164	115319	48.89	ug/L	99
82) 2-hexanone	13.084	58	200879	230.03	ug/L	98
83) 1,3-dichloropropane	13.110	76	208794	50.22	ug/L	94
84) butyl acetate	13.194	56	99210	55.79	ug/L	95
85) dibromochloromethane	13.393	129	138032	50.74	ug/L	97
86) 1,2-dibromoethane	13.565	107	133589	44.50	ug/L	97
87) n-butyl ether	14.099	57	691442	52.39	ug/L	98
88) chlorobenzene	14.120	112	398729	47.54	ug/L	96
89) 1,1,1,2-tetrachloroethane	14.188	131	157411	48.85	ug/L	98
90) ethylbenzene	14.198	91	724512	50.48	ug/L	100
91) m,p-xylene	14.334	106	557199	101.90	ug/L	98
92) o-xylene	14.789	91	609497	50.74	ug/L	98
93) styrene	14.795	104	472757	50.75	ug/L	98
94) butyl acrylate	14.585	55	307213	54.55	ug/L	98
95) n-amyl acetate	14.821	70	123843	51.94	ug/L	97
96) isopropylbenzene	15.187	105	753759	53.76	ug/L	99
97) bromoform	15.040	173	96855	49.40	ug/L	99
98) cis-1,4-dichloro-2-butene	15.192	88	62639	48.13	ug/L	95
101) 1,1,2,2-tetrachloroethane	15.464	83	178371	52.14	ug/L	99
102) trans-1,4-dichloro-2-b...	15.501	53	47060	54.96	ug/L	97
103) 1,2,3-trichloropropane	15.563	110	50089	50.79	ug/L	94
104) bromobenzene	15.616	156	189225	48.77	ug/L	98
105) n-propylbenzene	15.658	91	868317	56.64	ug/L	99
106) 2-chlorotoluene	15.804	126	178734	52.03	ug/L	94
107) 4-chlorotoluene	15.929	91	541208	53.48	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264405.d
Acq On : 9 May 2019 7:28 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:48:43 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	15.835	105	660274	56.36 ug/L	99
109) tert-butylbenzene	16.222	119	513725	56.53 ug/L	99
110) 1,2,4-trimethylbenzene	16.280	105	663139	56.77 ug/L	99
111) sec-butylbenzene	16.468	105	777677	58.09 ug/L	98
112) p-isopropyltoluene	16.620	119	661534	59.37 ug/L	98
113) 1,3-dichlorobenzene	16.651	146	359097	52.98 ug/L	100
114) 1,4-dichlorobenzene	16.761	146	367984	52.35 ug/L	99
115) 1,2-dichlorobenzene	17.169	146	363105	53.46 ug/L	99
116) benzyl chloride	16.845	91	408553	61.93 ug/L	97
117) n-butylbenzene	17.080	92	330029	63.42 ug/L	99
118) 2-ethylhexyl acrylate	18.973	70	16304	14.87 ug/L	84
119) hexachloroethane	17.530	201	105356	60.90 ug/L	96
120) 1,2-dibromo-3-chloropr...	18.006	75	34762	56.70 ug/L	98
121) 1,3,5-trichlorobenzene	18.252	180	278177	60.88 ug/L	99
122) 1,2,4-trichlorobenzene	18.973	180	226377	54.45 ug/L	98
123) hexachlorobutadiene	19.125	225	110481	53.04 ug/L	99
124) naphthalene	19.313	128	497282	53.71 ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	192812	52.66 ug/L	97
126) 2-methylnaphthalene	20.731	142	57336	28.99 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

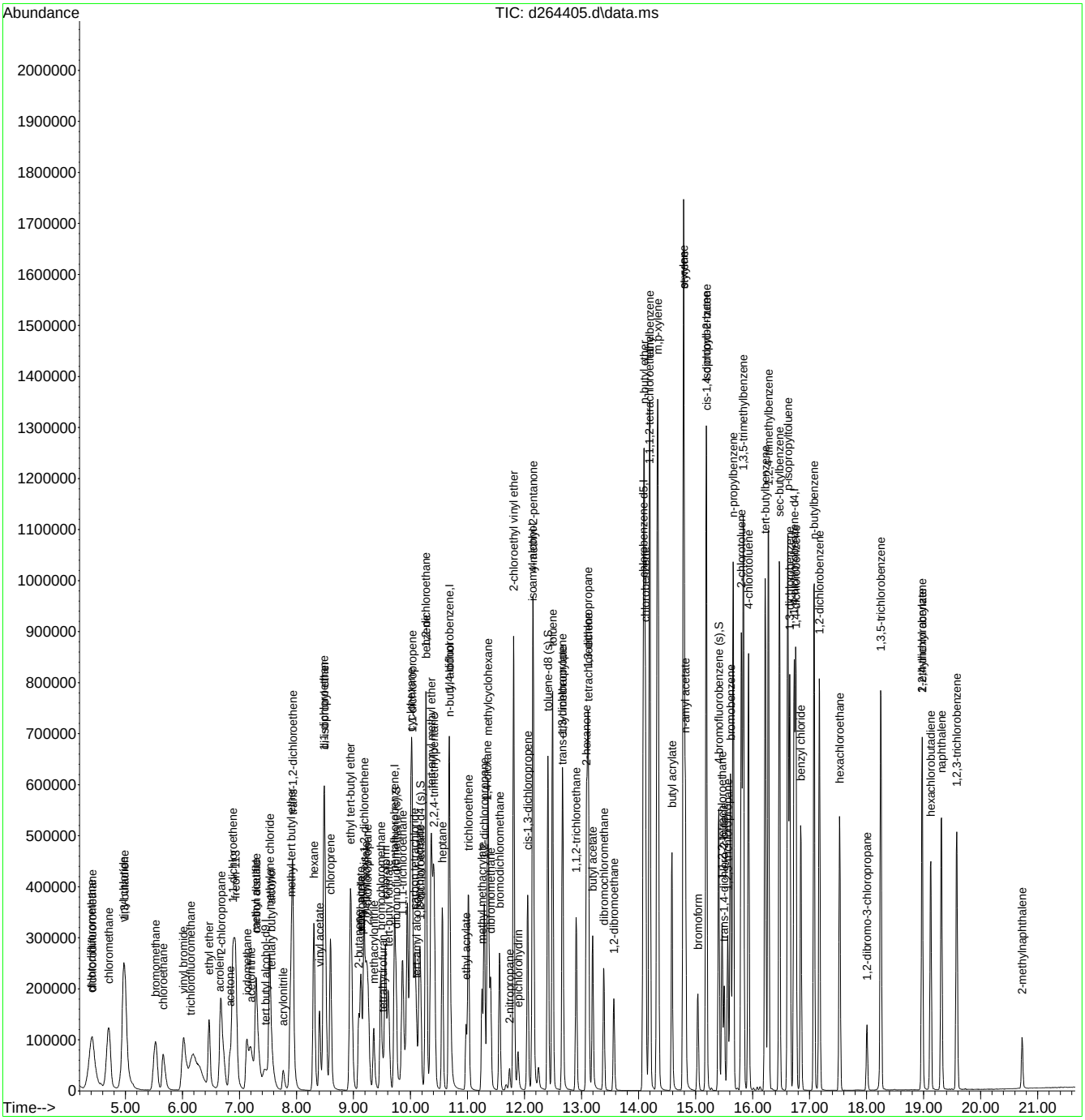
7.3.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264405.d
Acq On : 9 May 2019 7:28 am
Operator : thienn
Sample : bs Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:48:43 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\5_may\5-10-19\vd10656\
Data File : d264406.d
Acq On : 9 May 2019 7:57 am
Operator : thienn
Sample : bsd Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:49:53 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	124660	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	227931	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	362117	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	368306	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	217141	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	111248	51.73	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.46%			
55) 1,2-dichloroethane-d4 (s)	10.171	65	123467	45.48	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 90.96%			
76) toluene-d8 (s)	12.410	98	443779	49.41	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.82%			
100) 4-bromofluorobenzene (s)	15.407	95	195390	48.56	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.12%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.572	59	84687	256.25	ug/L	95
4) 1,4-dioxane	11.343	88	46514	1543.74	ug/L	95
6) chlorodifluoromethane	4.408	51	224484	46.68	ug/L	95
7) dichlorodifluoromethane	4.413	85	292632	44.22	ug/L	97
8) chloromethane	4.701	50	351619	63.46	ug/L	99
9) 1,3-butadiene	4.978	54	193543	63.06	ug/L	95
10) vinyl chloride	4.952	62	334712	59.37	ug/L	98
11) bromomethane	5.522	94	161755	55.71	ug/L	97
12) chloroethane	5.663	64	136067	55.09	ug/L	96
13) trichlorofluoromethane	6.144	101	250854	49.40	ug/L	100
14) vinyl bromide	6.019	106	166927	64.45	ug/L	99
15) ethyl ether	6.463	74	75807	60.32	ug/L	91
16) 2-chloropropane	6.667	43	277578	51.21	ug/L	95
17) acrolein	6.652	56	27306	65.46	ug/L	93
18) freon 113	6.924	151	143938	48.29	ug/L	96
19) 1,1-dichloroethene	6.882	96	144525	51.42	ug/L	96
20) acetone	6.835	58	48232	273.00	ug/L #	78
21) acetonitrile	7.196	41	228383	612.73	ug/L	99
22) iodomethane	7.128	142	222103	50.24	ug/L	98
23) carbon disulfide	7.290	76	499137	54.47	ug/L	99
24) methylene chloride	7.530	84	164752	55.78	ug/L	98
25) methyl acetate	7.290	43	90108	57.61	ug/L	98
26) methyl tert butyl ether	7.902	73	452777	53.03	ug/L	96
27) trans-1,2-dichloroethene	7.933	96	139850	54.26	ug/L	98
28) hexane	8.304	56	100365	60.51	ug/L	99
29) di-isopropyl ether	8.487	45	551964	56.53	ug/L	98
30) 2-butanone	9.089	72	50282	240.76	ug/L	94
31) 1,1-dichloroethane	8.477	63	247406	53.92	ug/L	98
32) chloroprene	8.592	53	209805	51.21	ug/L	97
33) acrylonitrile	7.766	53	45827	63.68	ug/L	98
34) vinyl acetate	8.404	86	27649	54.97	ug/L	97
35) ethyl tert-butyl ether	8.948	59	522835	54.27	ug/L	98
36) ethyl acetate	9.125	45	19393	65.94	ug/L #	92
37) 2,2-dichloropropane	9.235	77	248267	50.45	ug/L	97
38) cis-1,2-dichloroethene	9.183	96	153009	54.26	ug/L	98
39) propionitrile	9.131	54	198247	631.32	ug/L	97
40) methyl acrylate	9.209	85	16814	54.24	ug/L #	86
41) methacrylonitrile	9.356	67	47863	58.17	ug/L	93
42) bromochloromethane	9.476	128	69550	54.66	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264406.d
Acq On : 9 May 2019 7:57 am
Operator : thienn
Sample : bsd Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:49:53 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	35814	58.48	ug/L	96
44) chloroform	9.560	83	231813	50.02	ug/L	97
45) tert-butyl formate	9.612	59	139499	53.38	ug/L	94
47) 1,1,1-trichloroethane	9.858	97	237326	49.92	ug/L	99
48) cyclohexane	10.004	84	284710	59.54	ug/L	94
50) 1,1-dichloropropene	10.025	75	176491	50.26	ug/L	99
51) carbon tetrachloride	10.072	117	197832	48.74	ug/L	98
52) tert-amyl alcohol	10.109	73	39050	271.45	ug/L	92
53) isopropyl acetate	10.156	87	29212	53.60	ug/L	98
56) n-butyl alcohol	10.684	56	238276	2724.29	ug/L	99
57) 2,2,4-trimethylpentane	10.407	57	522494	58.20	ug/L	97
58) benzene	10.271	78	555406	50.51	ug/L	99
59) tert-amyl methyl ether	10.360	73	489263	48.77	ug/L	99
60) heptane	10.558	57	83706	56.98	ug/L	97
61) 1,2-dichloroethane	10.266	62	165023	42.68	ug/L	94
62) ethyl acrylate	10.972	55	144336	51.01	ug/L	99
63) trichloroethene	11.014	95	130825	47.89	ug/L	97
64) 2-chloroethyl vinyl ether	11.808	63	400041	279.32	ug/L	99
65) methyl methacrylate	11.254	100	31455	50.86	ug/L	94
66) methylcyclohexane	11.359	83	260001	55.78	ug/L	98
67) 1,2-dichloropropane	11.291	63	145327	53.25	ug/L	98
68) dibromomethane	11.406	93	78907	50.01	ug/L	98
69) bromodichloromethane	11.563	83	181606	49.63	ug/L	100
70) 2-nitropropane	11.735	41	28157	49.34	ug/L	94
71) epichlorohydrin	11.887	57	75023	284.46	ug/L	98
72) cis-1,3-dichloropropene	12.054	75	225594	51.20	ug/L	97
73) 4-methyl-2-pentanone	12.148	58	212858	223.54	ug/L	95
74) isoamyl alcohol	12.138	70	91415	1225.26	ug/L	95
77) toluene	12.494	92	345826	49.09	ug/L	98
78) ethyl methacrylate	12.671	69	173473	51.99	ug/L	98
79) trans-1,3-dichloropropene	12.661	75	201478	49.22	ug/L	90
80) 1,1,2-trichloroethane	12.907	83	97305	51.80	ug/L	98
81) tetrachloroethene	13.121	164	109828	47.86	ug/L	98
82) 2-hexanone	13.085	58	190368	224.09	ug/L	96
83) 1,3-dichloropropane	13.106	76	201672	49.87	ug/L	99
84) butyl acetate	13.194	56	94809	54.81	ug/L	94
85) dibromochloromethane	13.393	129	133203	50.34	ug/L	96
86) 1,2-dibromoethane	13.566	107	131157	44.91	ug/L	98
87) n-butyl ether	14.099	57	667604	52.00	ug/L	99
88) chlorobenzene	14.120	112	384736	47.16	ug/L	97
89) 1,1,1,2-tetrachloroethane	14.188	131	149682	47.75	ug/L	99
90) ethylbenzene	14.199	91	698700	50.04	ug/L	99
91) m,p-xylene	14.335	106	533121	100.22	ug/L	99
92) o-xylene	14.784	91	589068	50.41	ug/L	99
93) styrene	14.795	104	458583	50.60	ug/L	97
94) butyl acrylate	14.586	55	298604	54.50	ug/L	99
95) n-amyl acetate	14.821	70	122252	52.71	ug/L	98
96) isopropylbenzene	15.187	105	727967	53.38	ug/L	98
97) bromoform	15.041	173	94170	49.37	ug/L	99
98) cis-1,4-dichloro-2-butene	15.192	88	60373	47.69	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.464	83	175695	52.36	ug/L	98
102) trans-1,4-dichloro-2-b...	15.501	53	45615	54.31	ug/L	96
103) 1,2,3-trichloropropane	15.564	110	49105	50.76	ug/L #	82
104) bromobenzene	15.611	156	183815	48.30	ug/L	93
105) n-propylbenzene	15.658	91	843246	56.07	ug/L	99
106) 2-chlorotoluene	15.804	126	173933	51.61	ug/L	94
107) 4-chlorotoluene	15.930	91	526970	53.09	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264406.d
Acq On : 9 May 2019 7:57 am
Operator : thienn
Sample : bsd Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:49:53 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

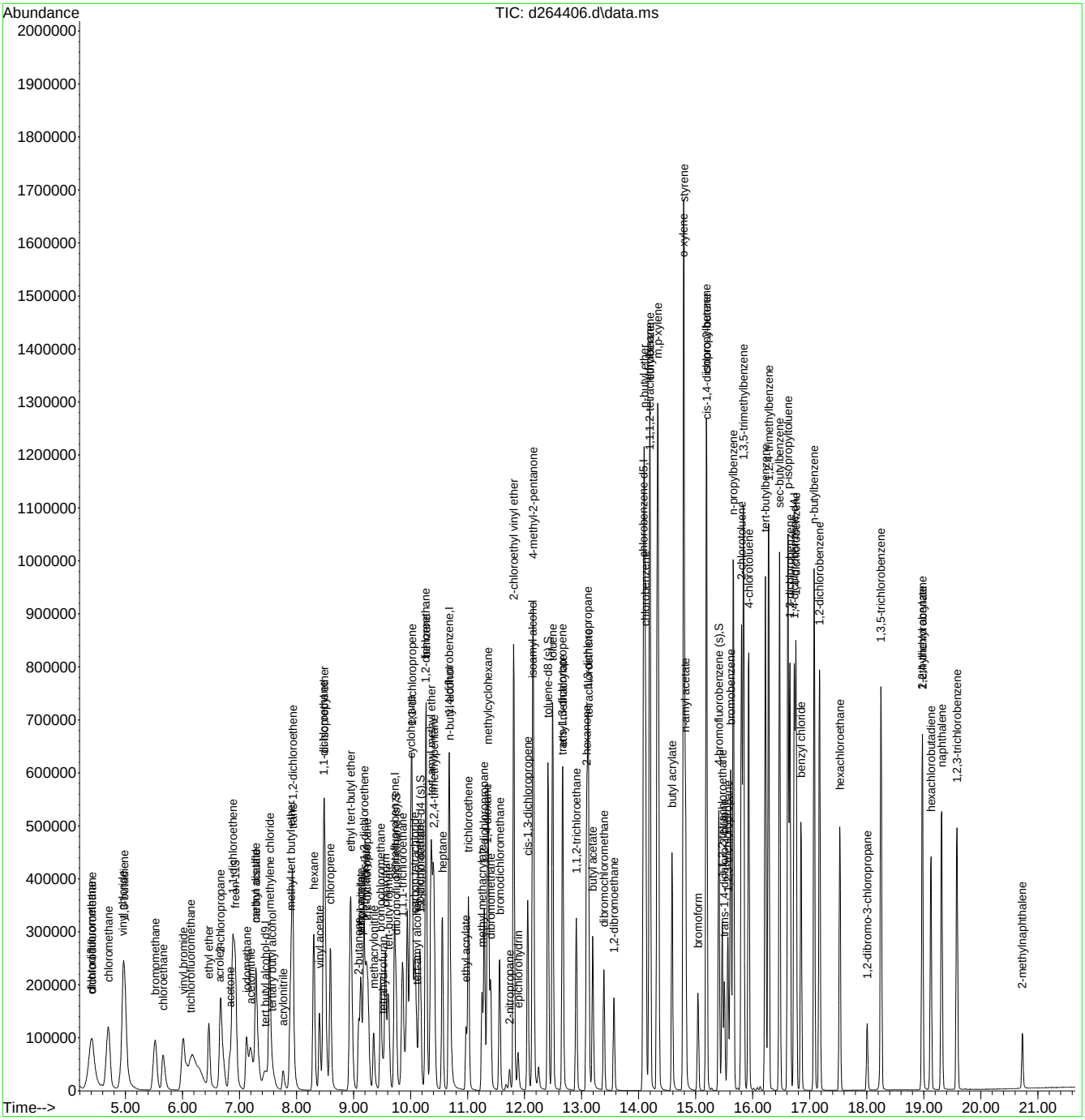
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.836	105	640622	55.74 ug/L	99
109) tert-butylbenzene	16.223	119	491673	55.15 ug/L	99
110) 1,2,4-trimethylbenzene	16.280	105	645076	56.29 ug/L	100
111) sec-butylbenzene	16.469	105	755886	57.56 ug/L	98
112) p-isopropyltoluene	16.615	119	645067	59.02 ug/L	98
113) 1,3-dichlorobenzene	16.652	146	353664	53.20 ug/L	99
114) 1,4-dichlorobenzene	16.756	146	361448	52.42 ug/L	99
115) 1,2-dichlorobenzene	17.169	146	357963	53.73 ug/L	99
116) benzyl chloride	16.845	91	398986	61.66 ug/L	98
117) n-butylbenzene	17.075	92	325252	63.71 ug/L	98
118) 2-ethylhexyl acrylate	18.974	70	15250	14.18 ug/L	86
119) hexachloroethane	17.530	201	100534	59.24 ug/L	95
120) 1,2-dibromo-3-chloropr...	18.006	75	33859	56.30 ug/L	98
121) 1,3,5-trichlorobenzene	18.247	180	271521	60.58 ug/L	99
122) 1,2,4-trichlorobenzene	18.974	180	222894	54.65 ug/L	100
123) hexachlorobutadiene	19.125	225	108282	53.00 ug/L	99
124) naphthalene	19.314	128	490184	53.96 ug/L	98
125) 1,2,3-trichlorobenzene	19.580	180	189902	52.87 ug/L	99
126) 2-methylnaphthalene	20.726	142	60612	31.24 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264406.d
Acq On : 9 May 2019 7:57 am
Operator : thienn
Sample : bsd Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:49:53 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\May-2019\5-7\v3c6821\
Data File : 3c151807.d
Acq On : 6 May 2019 11:53 am
Operator : PrashanS
Sample : JC86986-8MS Inst : MS3C
Misc : MS34303,V3C6820,5.1,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:40:17 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	35180	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	212875	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	266490	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	217747	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	95781	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	75292	48.95	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 97.90%						
53) 1,2-dichloroethane-d4 (s)	4.305	65	74472	51.43	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 102.86%						
75) toluene-d8 (s)	6.083	98	298963	55.47	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 110.94%						
98) 4-bromofluorobenzene (s)	8.390	95	94629	60.09	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 120.18%						
Target Compounds						Qvalue
3) tertiary butyl alcohol	2.637	59	19297	248.82	ug/L	97
4) 1,4-dioxane	5.289	88	12958	1370.92	ug/L	93
6) chlorodifluoromethane	1.104	51	54749	42.46	ug/L	92
7) dichlorodifluoromethane	1.078	85	96938	52.72	ug/L	99
8) chloromethane	1.225	50	67681	44.58	ug/L	96
9) 1,3-butadiene	1.319	54	37809	38.26	ug/L	96
10) vinyl chloride	1.298	62	76789	50.28	ug/L	98
11) bromomethane	1.538	94	48008	52.54	ug/L	99
12) chloroethane	1.617	64	46820	51.59	ug/L	97
13) vinyl Bromide	1.748	106	48047	36.66	ug/L	96
14) trichlorofluoromethane	1.774	101	125748	55.63	ug/L	98
15) ethyl ether	1.993	74	29902	46.46	ug/L #	81
16) 2-chloropropane	2.072	63	24391	47.46	ug/L #	82
17) acrolein	2.140	56	2228	16.83	ug/L	93
18) freon 113	2.135	151	55536	51.40	ug/L	96
19) 1,1-dichloroethene	2.161	96	60529	50.24	ug/L	97
20) acetone	2.250	58	16348	246.49	ug/L	98
21) acetonitrile	2.511	41	30901	301.91	ug/L	95
22) iodomethane	2.286	142	62546	63.32	ug/L	95
23) carbon disulfide	2.313	76	145078	42.99	ug/L	96
24) methylene chloride	2.564	84	58329	44.28	ug/L	91
25) methyl acetate	2.469	43	27166	42.77	ug/L	94
26) methyl tert butyl ether	2.710	73	151657	47.24	ug/L	96
27) trans-1,2-dichloroethene	2.731	96	64145	46.77	ug/L	99
28) hexane	2.877	57	54379	25.06	ug/L	93
29) di-isopropyl ether	3.076	45	154249	39.57	ug/L	94
30) ethyl tert-butyl ether	3.364	59	175729	45.61	ug/L	96
31) 2-butanone	3.594	72	19449	186.19	ug/L #	63
32) 1,1-dichloroethane	3.092	63	104623	46.95	ug/L	97
33) chloroprene	3.134	53	89834	45.37	ug/L	97
34) acrylonitrile	2.804	53	10117	37.36	ug/L	93
35) vinyl acetate	3.118	86	6615	27.24	ug/L #	51
36) ethyl acetate	3.610	45	4334	32.27	ug/L	84
37) 2,2-dichloropropane	3.542	77	95674	46.66	ug/L	98
38) cis-1,2-dichloroethene	3.573	96	71023	47.92	ug/L	98
39) propionitrile	3.714	54	44256	368.21	ug/L	95
40) bromochloromethane	3.782	130	40122	48.28	ug/L	87
41) tetrahydrofuran	3.782	71	4150	39.94	ug/L #	72
42) chloroform	3.845	83	115431	47.89	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151807.d
Acq On : 6 May 2019 11:53 am
Operator : PrashanS
Sample : JC86986-8MS Inst : MS3C
Misc : MS34303,V3C6820,5.1,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:40:17 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-Butyl Formate	3.850	59	28541	37.42	ug/L	85
44) isobutyl alcohol	4.263	41	39636	211.90	ug/L	94
46) methacrylonitrile	3.808	67	14628	41.01	ug/L	90
47) 1,1,1-trichloroethane	3.960	97	114119	52.47	ug/L	97
48) cyclohexane	3.939	84	90710	40.78	ug/L	92
49) 1,1-dichloropropene	4.101	110	32213	45.06	ug/L	98
50) tert-amyl alcohol	4.326	59	15176	160.27	ug/L	79
51) carbon tetrachloride	4.065	119	88026	51.20	ug/L	98
54) 2,2,4-trimethylpentane	4.263	57	106457	21.54	ug/L	96
55) tert-amyl methyl ether	4.363	87	56120	50.81	ug/L #	83
56) n-butyl alcohol	4.891	56	50569	2050.55	ug/L	98
57) benzene	4.284	78	242658	49.51	ug/L	99
58) heptane	4.452	57	20684	19.73	ug/L	93
59) isopropyl acetate	4.363	87	56120	49.62	ug/L	84
60) 1,2-dichloroethane	4.378	62	74668	47.98	ug/L	96
61) trichloroethene	4.901	95	65905	49.49	ug/L	96
62) ethyl acrylate	5.037	55	42847	39.37	ug/L	97
63) 2-nitropropane	5.754	41	14404	43.43	ug/L #	66
64) 2-chloroethyl vinyl ether	5.764	63	133574	207.21	ug/L	96
65) methyl methacrylate	5.273	100	13805	50.21	ug/L #	73
66) 1,2-dichloropropane	5.168	63	51692	44.39	ug/L	86
67) methylcyclohexane	5.001	83	83050	33.40	ug/L	98
68) dibromomethane	5.294	93	30177	47.32	ug/L	92
69) bromodichloromethane	5.445	83	79418	53.63	ug/L	99
70) epichlorohydrin	5.843	57	15923	196.88	ug/L	98
71) cis-1,3-dichloropropene	5.885	75	88917	47.99	ug/L	95
72) 4-methyl-2-pentanone	6.031	85	31303	201.83	ug/L #	75
76) toluene	6.146	92	159863	51.44	ug/L	99
77) trans-1,3-dichloropropene	6.434	75	73643	51.56	ug/L	97
78) ethyl methacrylate	6.465	69	55811	46.99	ug/L	94
79) 1,1,2-trichloroethane	6.596	83	35301	46.17	ug/L	99
80) 2-hexanone	6.800	58	49056	167.68	ug/L #	84
81) tetrachloroethene	6.617	166	76489	51.88	ug/L	98
82) 1,3-dichloropropane	6.748	76	72400	46.94	ug/L	99
83) butyl acetate	6.889	56	20774	37.77	ug/L	93
84) dibromochloromethane	6.915	129	52832	58.67	ug/L	99
85) 1,2-dibromoethane	7.014	107	58589	52.82	ug/L	98
86) n-butyl ether	7.470	57	206956	40.92	ug/L	98
87) chlorobenzene	7.417	112	154975	45.29	ug/L	99
88) 1,1,1,2-tetrachloroethane	7.501	131	61250	54.23	ug/L	97
89) ethylbenzene	7.485	91	280425	46.62	ug/L	97
90) m,p-xylene	7.595	106	216624	91.40	ug/L	100
91) o-xylene	7.930	91	219399	46.12	ug/L	97
92) styrene	7.956	104	160348	42.09	ug/L	99
93) bromoform	8.129	173	30611	46.91	ug/L	98
94) butyl acrylate	7.919	55	65435	39.61	ug/L	98
95) isopropylbenzene	8.223	105	268796	44.34	ug/L	97
96) cis-1,4-dichloro-2-butene	8.359	53	12580	37.58	ug/L #	86
99) bromobenzene	8.505	156	63002	49.62	ug/L	96
100) 1,1,2,2-tetrachloroethane	8.547	83	40537	46.95	ug/L	98
101) trans-1,4-dichloro-2-b...	8.599	88	5979	50.44	ug/L #	83
102) 1,2,3-trichloropropane	8.584	110	14545	52.95	ug/L	95
103) n-propylbenzene	8.563	91	278169	47.76	ug/L	100
104) 2-chlorotoluene	8.652	126	57395	48.19	ug/L	91
105) 4-chlorotoluene	8.751	126	56259	47.33	ug/L	96
106) 1,3,5-trimethylbenzene	8.714	105	209215	49.37	ug/L	97
107) tert-butylbenzene	8.965	119	188854	50.08	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151807.d
Acq On : 6 May 2019 11:53 am
Operator : PrashanS
Sample : JC86986-8MS Inst : MS3C
Misc : MS34303,V3C6820,5.1,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:40:17 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

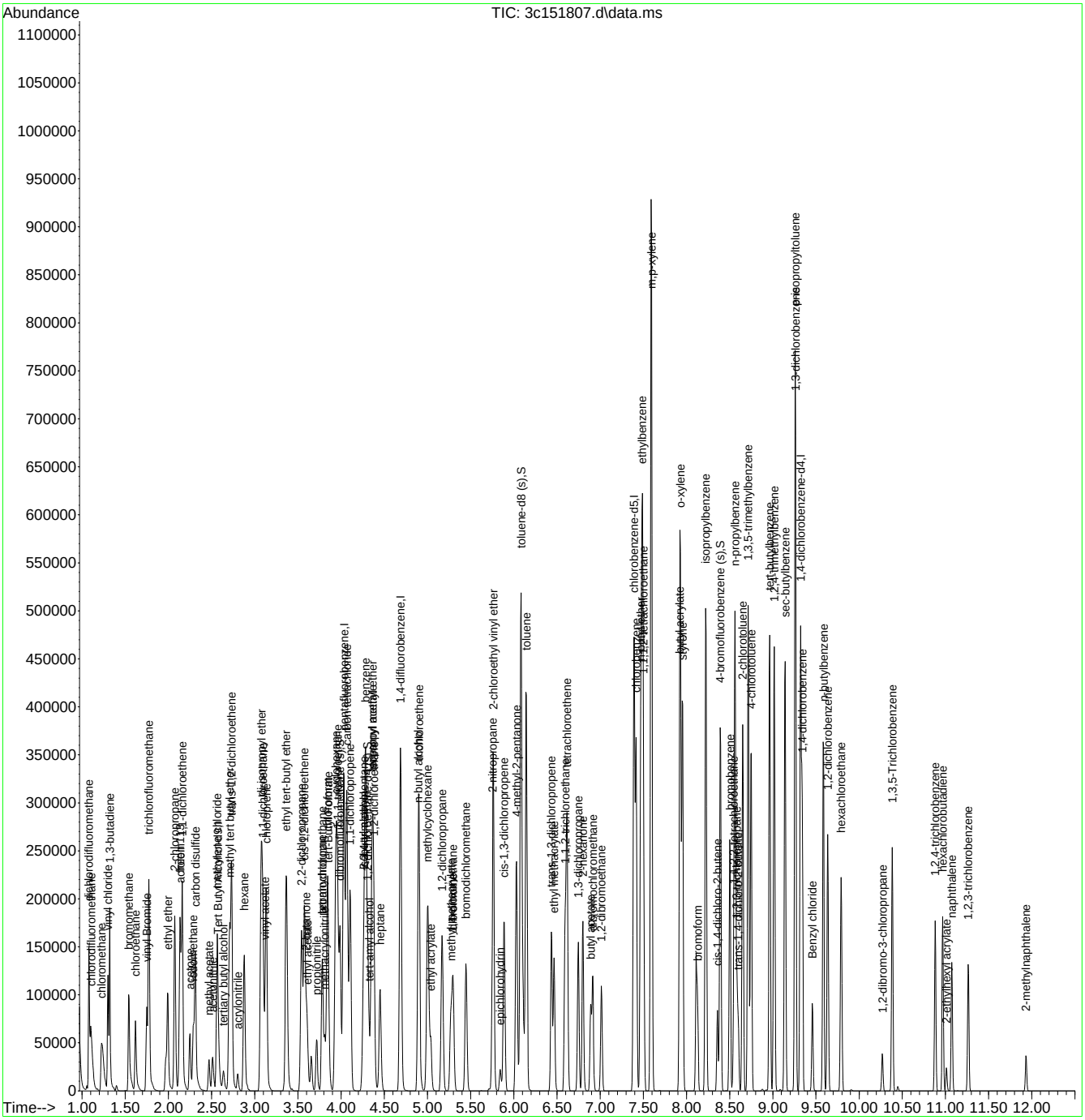
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	203313	47.14	ug/L	97
109) sec-butylbenzene	9.143	105	240099	43.80	ug/L	98
110) 1,3-dichlorobenzene	9.263	146	98780	39.60	ug/L	97
111) p-isopropyltoluene	9.258	119	211581	43.87	ug/L	99
112) 1,4-dichlorobenzene	9.342	146	99568	39.04	ug/L	99
113) 1,2-dichlorobenzene	9.635	146	86840	37.14	ug/L	98
114) n-butylbenzene	9.588	92	82549	34.63	ug/L	97
115) 1,2-dibromo-3-chloropr...	10.273	157	9826	45.94	ug/L	92
116) 1,3,5-Trichlorobenzene	10.383	180	65805	29.02	ug/L	96
117) 1,2,4-trichlorobenzene	10.880	180	44599	22.84	ug/L	96
118) hexachlorobutadiene	10.969	225	32500	26.72	ug/L	96
119) naphthalene	11.073	128	79366	23.21	ug/L	98
120) 1,2,3-trichlorobenzene	11.261	180	34658	19.14	ug/L	96
121) hexachloroethane	9.792	201	33020	45.24	ug/L	93
122) Benzyl chloride	9.457	91	49537	32.83	ug/L	98
123) 2-ethylhexyl acrylate	11.010	70	4755	5.29	ug/L	93
124) 2-methylnaphthalene	11.931	142	14556	7.11	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151807.d
Acq On : 6 May 2019 11:53 am
Operator : PrashanS
Sample : JC86986-8MS Inst : MS3C
Misc : MS34303,V3C6820,5.1,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:40:17 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151819.d
Acq On : 6 May 2019 4:30 pm
Operator : PrashanS
Sample : JC87093-7MS Inst : MS3C
Misc : MS34369,V3C6821,5.6,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:08:38 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	37898	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	241103	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	314081	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	275127	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	151664	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	86794	49.82	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.64%			
53) 1,2-dichloroethane-d4 (s)	4.311	65	85820	50.29	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.58%			
75) toluene-d8 (s)	6.084	98	353244	51.87	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.74%			
98) 4-bromofluorobenzene (s)	8.390	95	133091	53.37	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 106.74%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	2.642	59	15999	191.50	ug/L	94
4) 1,4-dioxane	5.289	88	11021	1082.37	ug/L	99
6) chlorodifluoromethane	1.104	51	46806	32.05	ug/L	91
7) dichlorodifluoromethane	1.078	85	65259	31.34	ug/L	99
8) chloromethane	1.225	50	54958	31.96	ug/L	98
9) 1,3-butadiene	1.319	54	24265	21.68	ug/L	99
10) vinyl chloride	1.298	62	56946	32.92	ug/L	99
11) bromomethane	1.538	94	37027	35.78	ug/L	94
12) chloroethane	1.617	64	38806	37.75	ug/L	98
13) vinyl Bromide	1.748	106	49583	33.40	ug/L	99
14) trichlorofluoromethane	1.774	101	97810	38.21	ug/L	99
15) ethyl ether	1.988	74	24931	34.20	ug/L	86
16) 2-chloropropane	2.072	63	18550	31.87	ug/L	94
17) acrolein	2.135	56	3353	22.37	ug/L	73
18) freon 113	2.135	151	38358	31.34	ug/L	94
19) 1,1-dichloroethene	2.161	96	44605	32.69	ug/L	97
20) acetone	2.250	58	19502	259.62	ug/L	99
21) acetonitrile	2.511	41	25737	222.02	ug/L	99
22) iodomethane	2.286	142	45583	40.74	ug/L	94
23) carbon disulfide	2.313	76	100030	26.17	ug/L	95
24) methylene chloride	2.564	84	46815	31.38	ug/L	91
25) methyl acetate	2.464	43	17853	24.81	ug/L	96
26) methyl tert butyl ether	2.710	73	121207	33.33	ug/L	99
27) trans-1,2-dichloroethene	2.731	96	46777	30.11	ug/L	97
28) hexane	2.877	57	36309	14.77	ug/L	99
29) di-isopropyl ether	3.076	45	125470	28.42	ug/L	91
30) ethyl tert-butyl ether	3.364	59	143398	32.86	ug/L	99
31) 2-butanone	3.594	72	17506	147.97	ug/L #	72
32) 1,1-dichloroethane	3.092	63	81142	32.15	ug/L	99
33) chloroprene	3.134	53	50773	22.64	ug/L	98
34) acrylonitrile	2.804	53	8124	26.49	ug/L	90
35) vinyl acetate	3.123	86	5284	19.21	ug/L #	51
36) ethyl acetate	3.615	45	3400	22.93	ug/L	80
37) 2,2-dichloropropane	3.542	77	68718	29.59	ug/L	100
38) cis-1,2-dichloroethene	3.573	96	53874	32.09	ug/L	98
39) propionitrile	3.714	54	36401	267.40	ug/L	99
40) bromochloromethane	3.782	130	31525	33.50	ug/L	88
41) tetrahydrofuran	3.782	71	3613	30.70	ug/L #	74
42) chloroform	3.840	83	87939	32.22	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151819.d
Acq On : 6 May 2019 4:30 pm
Operator : PrashanS
Sample : JC87093-7MS Inst : MS3C
Misc : MS34369,V3C6821,5.6,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:08:38 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-Butyl Formate	3.850	59	23953	27.73	ug/L		90
44)	isobutyl alcohol	4.258	41	26953	127.22	ug/L		95
46)	methacrylonitrile	3.808	67	12041	29.80	ug/L		86
47)	1,1,1-trichloroethane	3.955	97	85779	34.82	ug/L		98
48)	cyclohexane	3.939	84	67423	26.76	ug/L		92
49)	1,1-dichloropropene	4.101	110	23892	29.51	ug/L		93
50)	tert-amyl alcohol	4.326	59	12522	116.76	ug/L	#	55
51)	carbon tetrachloride	4.070	119	68715	35.29	ug/L		98
54)	2,2,4-trimethylpentane	4.258	57	68522	11.76	ug/L		93
55)	tert-amyl methyl ether	4.363	87	43673	33.55	ug/L	#	88
56)	n-butyl alcohol	4.891	56	41068	1412.95	ug/L		97
57)	benzene	4.284	78	187751	32.51	ug/L		99
58)	heptane	4.452	57	14151	11.45	ug/L		90
59)	isopropyl acetate	4.363	87	43673	32.76	ug/L		90
60)	1,2-dichloroethane	4.378	62	59896	32.65	ug/L		99
61)	trichloroethene	4.896	95	48141	30.67	ug/L		97
62)	ethyl acrylate	5.037	55	34676	27.04	ug/L		99
63)	2-nitropropane	5.749	41	9810	25.09	ug/L	#	1
64)	2-chloroethyl vinyl ether	5.759	63	79772	105.00	ug/L		96
65)	methyl methacrylate	5.268	100	9868	30.45	ug/L		88
66)	1,2-dichloropropane	5.173	63	42220	30.76	ug/L		94
67)	methylcyclohexane	5.006	83	56547	19.30	ug/L		99
68)	dibromomethane	5.294	93	23270	30.96	ug/L		96
69)	bromodichloromethane	5.445	83	61819	35.42	ug/L		98
70)	epichlorohydrin	5.848	57	13303	139.56	ug/L		84
71)	cis-1,3-dichloropropene	5.890	75	66836	30.61	ug/L		97
72)	4-methyl-2-pentanone	6.031	85	24888	136.15	ug/L	#	79
76)	toluene	6.141	92	117567	29.94	ug/L		98
77)	trans-1,3-dichloropropene	6.434	75	53599	29.70	ug/L		99
78)	ethyl methacrylate	6.465	69	42239	28.15	ug/L		93
79)	1,1,2-trichloroethane	6.596	83	27304	28.26	ug/L		96
80)	2-hexanone	6.800	58	37213	100.67	ug/L	#	85
81)	tetrachloroethene	6.617	166	54420	29.21	ug/L		98
82)	1,3-dichloropropane	6.748	76	55994	28.73	ug/L		96
83)	butyl acetate	6.889	56	14805	21.30	ug/L		96
84)	dibromochloromethane	6.915	129	39959	35.12	ug/L		98
85)	1,2-dibromoethane	7.015	107	36497	26.04	ug/L		97
86)	n-butyl ether	7.470	57	153125	23.96	ug/L		97
87)	chlorobenzene	7.417	112	113448	26.24	ug/L		99
88)	1,1,1,2-tetrachloroethane	7.501	131	47262	33.12	ug/L		96
89)	ethylbenzene	7.485	91	205463	27.04	ug/L		99
90)	m,p-xylene	7.590	106	156155	52.15	ug/L		93
91)	o-xylene	7.930	91	164210	27.32	ug/L		96
92)	styrene	7.951	104	108914	22.63	ug/L		98
93)	bromoform	8.129	173	23668	29.62	ug/L		97
94)	butyl acrylate	7.919	55	51435	24.64	ug/L		97
95)	isopropylbenzene	8.223	105	192501	25.13	ug/L		99
96)	cis-1,4-dichloro-2-butene	8.359	53	9315	22.02	ug/L	#	81
99)	bromobenzene	8.505	156	45378	22.57	ug/L		90
100)	1,1,2,2-tetrachloroethane	8.547	83	32645	23.88	ug/L		95
101)	trans-1,4-dichloro-2-b...	8.599	88	4619	25.94	ug/L		96
102)	1,2,3-trichloropropane	8.584	110	11789	27.11	ug/L		94
103)	n-propylbenzene	8.563	91	198892	21.57	ug/L		97
104)	2-chlorotoluene	8.652	126	41473	21.99	ug/L		89
105)	4-chlorotoluene	8.751	126	39733	21.11	ug/L		97
106)	1,3,5-trimethylbenzene	8.714	105	151678	22.60	ug/L		97
107)	tert-butylbenzene	8.965	119	135319	22.66	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151819.d
Acq On : 6 May 2019 4:30 pm
Operator : PrashanS
Sample : JC87093-7MS Inst : MS3C
Misc : MS34369,V3C6821,5.6,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:08:38 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

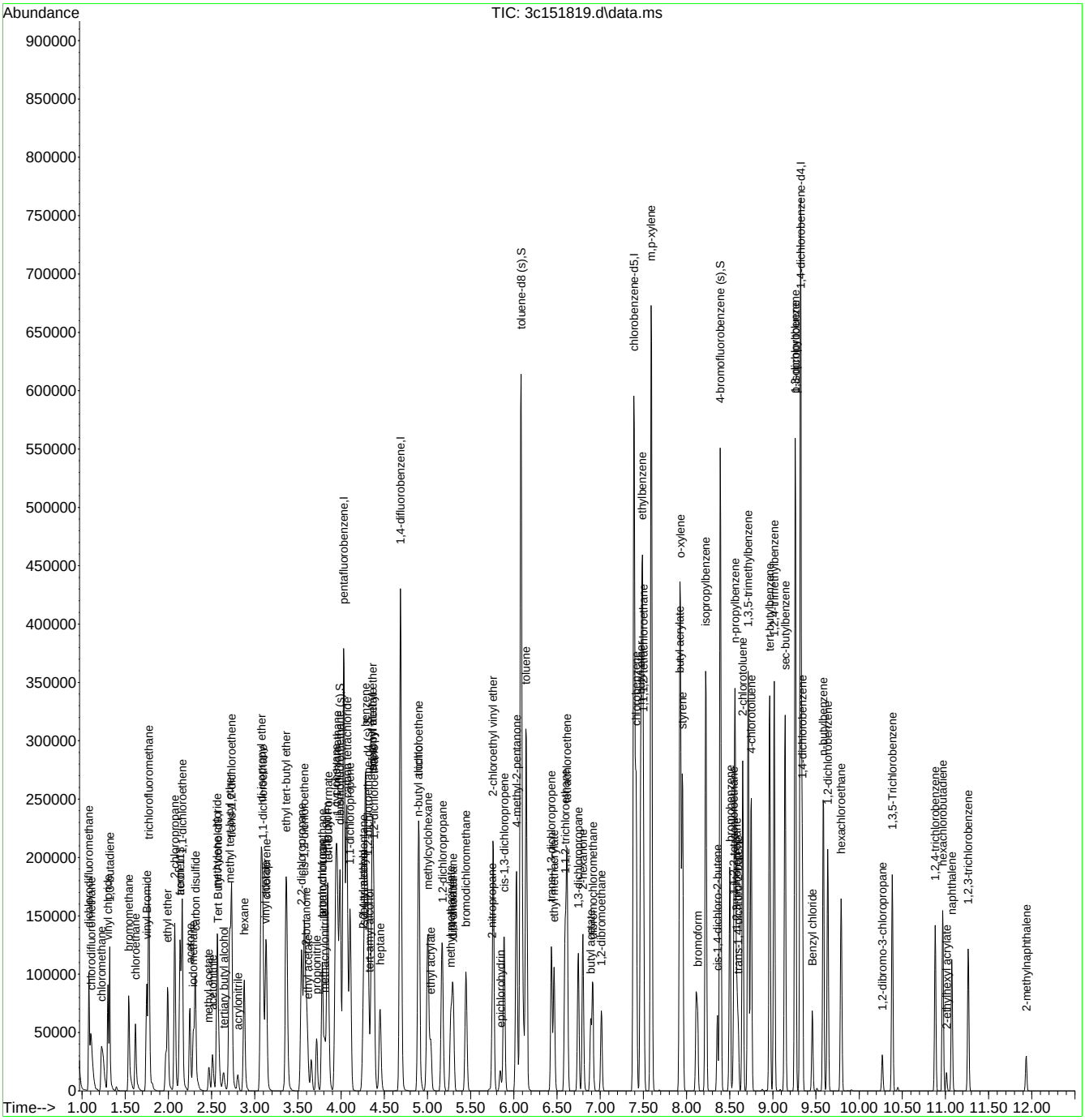
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	148810	21.79	ug/L	97
109) sec-butylbenzene	9.143	105	171197	19.72	ug/L	100
110) 1,3-dichlorobenzene	9.258	146	71260	18.04	ug/L	98
111) p-isopropyltoluene	9.258	119	153636	20.12	ug/L	98
112) 1,4-dichlorobenzene	9.342	146	72310	17.91	ug/L	99
113) 1,2-dichlorobenzene	9.635	146	66002	17.83	ug/L	96
114) n-butylbenzene	9.583	92	57821	15.32	ug/L	100
115) 1,2-dibromo-3-chloropr...	10.268	157	8126	24.69	ug/L	95
116) 1,3,5-Trichlorobenzene	10.383	180	47863	13.33	ug/L	97
117) 1,2,4-trichlorobenzene	10.880	180	37037	11.98	ug/L	96
118) hexachlorobutadiene	10.969	225	28297	14.69	ug/L	96
119) naphthalene	11.073	128	69674	12.87	ug/L	99
120) 1,2,3-trichlorobenzene	11.261	180	31074	10.84	ug/L	93
121) hexachloroethane	9.792	201	25563	23.30	ug/L	93
122) Benzyl chloride	9.457	91	37909	15.87	ug/L	98
123) 2-ethylhexyl acrylate	11.016	70	3535	2.88	ug/L	82
124) 2-methylnaphthalene	11.936	142	12207	3.76	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151819.d
Acq On : 6 May 2019 4:30 pm
Operator : PrashanS
Sample : JC87093-7MS Inst : MS3C
Misc : MS34369,V3C6821,5.6,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:08:38 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264323.d
Acq On : 7 May 2019 2:35 pm
Operator : thienn
Sample : jc87263-11MS Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:45:37 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	7.467	65	128351	500.00	ug/L	0.00
5) pentafluorobenzene	9.716	168	243278	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.673	114	367683	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.083	117	356669	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	223864	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.742	113	110939	48.33	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.66%			
55) 1,2-dichloroethane-d4 (s)	10.171	65	117897	42.77	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.54%			
76) toluene-d8 (s)	12.405	98	429239	49.35	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.70%			
100) 4-bromofluorobenzene (s)	15.407	95	193451	46.64	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 93.28%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.572	59	79468	233.54	ug/L	99
4) 1,4-dioxane	11.343	88	40487	1305.07	ug/L	96
6) chlorodifluoromethane	4.397	51	194161	37.83	ug/L	96
7) dichlorodifluoromethane	4.402	85	233226	33.02	ug/L	97
8) chloromethane	4.690	50	297848	50.36	ug/L	99
9) 1,3-butadiene	4.957	54	163633	49.95	ug/L	96
10) vinyl chloride	4.946	62	297352	49.41	ug/L	99
11) bromomethane	5.490	94	58616	18.91	ug/L	95
12) chloroethane	5.621	64	55202	20.94	ug/L	99
13) trichlorofluoromethane	6.118	101	208930	38.54	ug/L	98
14) vinyl bromide	5.992	106	144206	52.17	ug/L	97
15) ethyl ether	6.458	74	69288	51.65	ug/L	89
16) 2-chloropropane	6.657	43	236879	40.94	ug/L	95
17) acrolein	6.646	56	24953	56.04	ug/L	98
18) freon 113	6.908	151	125977	39.60	ug/L	99
19) 1,1-dichloroethene	6.871	96	148520	49.51	ug/L	91
20) acetone	6.829	58	45651	242.09	ug/L #	74
21) acetonitrile	7.201	41	202323	508.57	ug/L	97
22) iodomethane	7.127	142	234800	49.76	ug/L	96
23) carbon disulfide	7.284	76	478150	48.89	ug/L	98
24) methylene chloride	7.520	84	158028	50.13	ug/L	99
25) methyl acetate	7.284	43	87902	52.65	ug/L	96
26) methyl tert butyl ether	7.901	73	425180	46.65	ug/L	96
27) trans-1,2-dichloroethene	7.922	96	130152	47.32	ug/L	94
28) hexane	8.294	56	67660	38.22	ug/L	97
29) di-isopropyl ether	8.487	45	479547	46.02	ug/L	97
30) 2-butanone	9.094	72	50497	226.53	ug/L	91
31) 1,1-dichloroethane	8.471	63	224760	45.90	ug/L	99
32) chloroprene	8.587	53	184305	42.14	ug/L	94
33) acrylonitrile	7.765	53	43248	56.31	ug/L	96
34) vinyl acetate	8.403	86	25459	47.42	ug/L #	88
35) ethyl tert-butyl ether	8.947	59	480298	46.71	ug/L	98
36) ethyl acetate	9.125	45	17420	55.50	ug/L #	74
37) 2,2-dichloropropane	9.235	77	129239	24.60	ug/L	86
38) cis-1,2-dichloroethene	9.178	96	143040	47.52	ug/L	96
39) propionitrile	9.136	54	184512	550.51	ug/L	97
40) methyl acrylate	9.214	85	15812	47.99	ug/L #	91
41) methacrylonitrile	9.350	67	44954	51.19	ug/L	92
42) bromochloromethane	9.470	128	66570	49.02	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264323.d
Acq On : 7 May 2019 2:35 pm
Operator : thienn
Sample : jc87263-11MS Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:45:37 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	31785	48.63	ug/L		95
44)	chloroform	9.554	83	213055	43.07	ug/L		97
45)	tert-butyl formate	9.612	59	128007	45.89	ug/L		97
47)	1,1,1-trichloroethane	9.852	97	213196	42.02	ug/L		98
48)	cyclohexane	10.004	84	253657	49.70	ug/L		98
50)	1,1-dichloropropene	10.020	75	158607	42.32	ug/L		99
51)	carbon tetrachloride	10.072	117	180341	41.63	ug/L		99
52)	tert-amyl alcohol	10.114	73	36781	239.55	ug/L		98
53)	isopropyl acetate	10.156	87	28078	48.27	ug/L	#	83
56)	n-butyl alcohol	10.684	56	206380	2323.89	ug/L		96
57)	2,2,4-trimethylpentane	10.401	57	413238	45.33	ug/L		95
58)	benzene	10.265	78	516337	46.25	ug/L		98
59)	tert-amyl methyl ether	10.360	73	458210	44.98	ug/L		98
60)	heptane	10.553	57	52578	35.25	ug/L		95
61)	1,2-dichloroethane	10.265	62	148371	37.80	ug/L		96
62)	ethyl acrylate	10.971	55	129296	45.01	ug/L		99
63)	trichloroethene	11.008	95	121908	43.95	ug/L		99
64)	2-chloroethyl vinyl ether	11.808	63	353210	242.89	ug/L		100
65)	methyl methacrylate	11.254	100	30466	48.52	ug/L	#	80
66)	methylcyclohexane	11.353	83	235756	49.82	ug/L		98
67)	1,2-dichloropropane	11.291	63	130264	47.01	ug/L		98
68)	dibromomethane	11.400	93	72003	44.95	ug/L		99
69)	bromodichloromethane	11.557	83	165381	44.52	ug/L		100
70)	2-nitropropane	11.735	41	26792	46.24	ug/L		92
71)	epichlorohydrin	11.887	57	73313	273.77	ug/L		98
72)	cis-1,3-dichloropropene	12.054	75	185996	41.58	ug/L		94
73)	4-methyl-2-pentanone	12.148	58	188635	195.10	ug/L		92
74)	isoamyl alcohol	12.143	70	83619	1103.80	ug/L	#	78
77)	toluene	12.488	92	313361	45.93	ug/L		99
78)	ethyl methacrylate	12.671	69	155583	48.15	ug/L		97
79)	trans-1,3-dichloropropene	12.661	75	161146	40.65	ug/L		91
80)	1,1,2-trichloroethane	12.907	83	86797	47.72	ug/L		96
81)	tetrachloroethene	13.116	164	99976	44.99	ug/L		97
82)	2-hexanone	13.084	58	172589	209.79	ug/L		91
83)	1,3-dichloropropane	13.105	76	176083	44.96	ug/L		96
84)	butyl acetate	13.194	56	89979	53.71	ug/L		90
85)	dibromochloromethane	13.388	129	120986	47.21	ug/L		98
86)	1,2-dibromoethane	13.566	107	118358	41.85	ug/L		97
87)	n-butyl ether	14.099	57	577931	46.48	ug/L		99
88)	chlorobenzene	14.120	112	346798	43.89	ug/L		99
89)	1,1,1,2-tetrachloroethane	14.188	131	142027	46.79	ug/L		99
90)	ethylbenzene	14.198	91	620629	45.90	ug/L		99
91)	m,p-xylene	14.334	106	482671	93.70	ug/L		96
92)	o-xylene	14.784	91	531083	46.93	ug/L		98
93)	styrene	14.795	104	410341	46.76	ug/L		97
94)	butyl acrylate	14.585	55	276155	52.05	ug/L		97
95)	n-amyl acetate	14.821	70	116975	52.08	ug/L		94
96)	isopropylbenzene	15.187	105	675007	51.11	ug/L		98
97)	bromoform	15.041	173	89117	48.25	ug/L		98
98)	cis-1,4-dichloro-2-butene	15.187	88	43283	35.30	ug/L		90
101)	1,1,2,2-tetrachloroethane	15.464	83	152872	44.19	ug/L		99
102)	trans-1,4-dichloro-2-b...	15.501	53	32765	37.84	ug/L		92
103)	1,2,3-trichloropropane	15.564	110	45018	45.14	ug/L	#	82
104)	bromobenzene	15.611	156	174583	44.50	ug/L		98
105)	n-propylbenzene	15.658	91	781034	50.38	ug/L		99
106)	2-chlorotoluene	15.804	126	163766	47.14	ug/L		99
107)	4-chlorotoluene	15.930	91	470082	45.94	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264323.d
Acq On : 7 May 2019 2:35 pm
Operator : thienn
Sample : jc87263-11MS Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:45:37 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	15.835	105	616819	52.06 ug/L	99
109) tert-butylbenzene	16.223	119	502042	54.62 ug/L	97
110) 1,2,4-trimethylbenzene	16.275	105	635125	53.76 ug/L	100
111) sec-butylbenzene	16.468	105	761233	56.23 ug/L	99
112) p-isopropyltoluene	16.620	119	636665	56.50 ug/L	97
113) 1,3-dichlorobenzene	16.651	146	335006	48.88 ug/L	99
114) 1,4-dichlorobenzene	16.756	146	342730	48.21 ug/L	99
115) 1,2-dichlorobenzene	17.169	146	345011	50.23 ug/L	99
116) benzyl chloride	16.845	91	145565	21.82 ug/L	96
117) n-butylbenzene	17.075	92	332438	63.16 ug/L	99
118) 2-ethylhexyl acrylate	18.974	70	51346	46.29 ug/L #	74
119) hexachloroethane	17.530	201	112687	64.41 ug/L	95
120) 1,2-dibromo-3-chloropr...	18.006	75	32611	52.60 ug/L	91
121) 1,3,5-trichlorobenzene	18.252	180	290458	62.85 ug/L	99
122) 1,2,4-trichlorobenzene	18.974	180	248058	58.88 ug/L	99
123) hexachlorobutadiene	19.125	225	117955	56.00 ug/L	99
124) naphthalene	19.314	128	591713	62.87 ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	212671	57.27 ug/L	99
126) 2-methylnaphthalene	20.726	142	129540	64.76 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

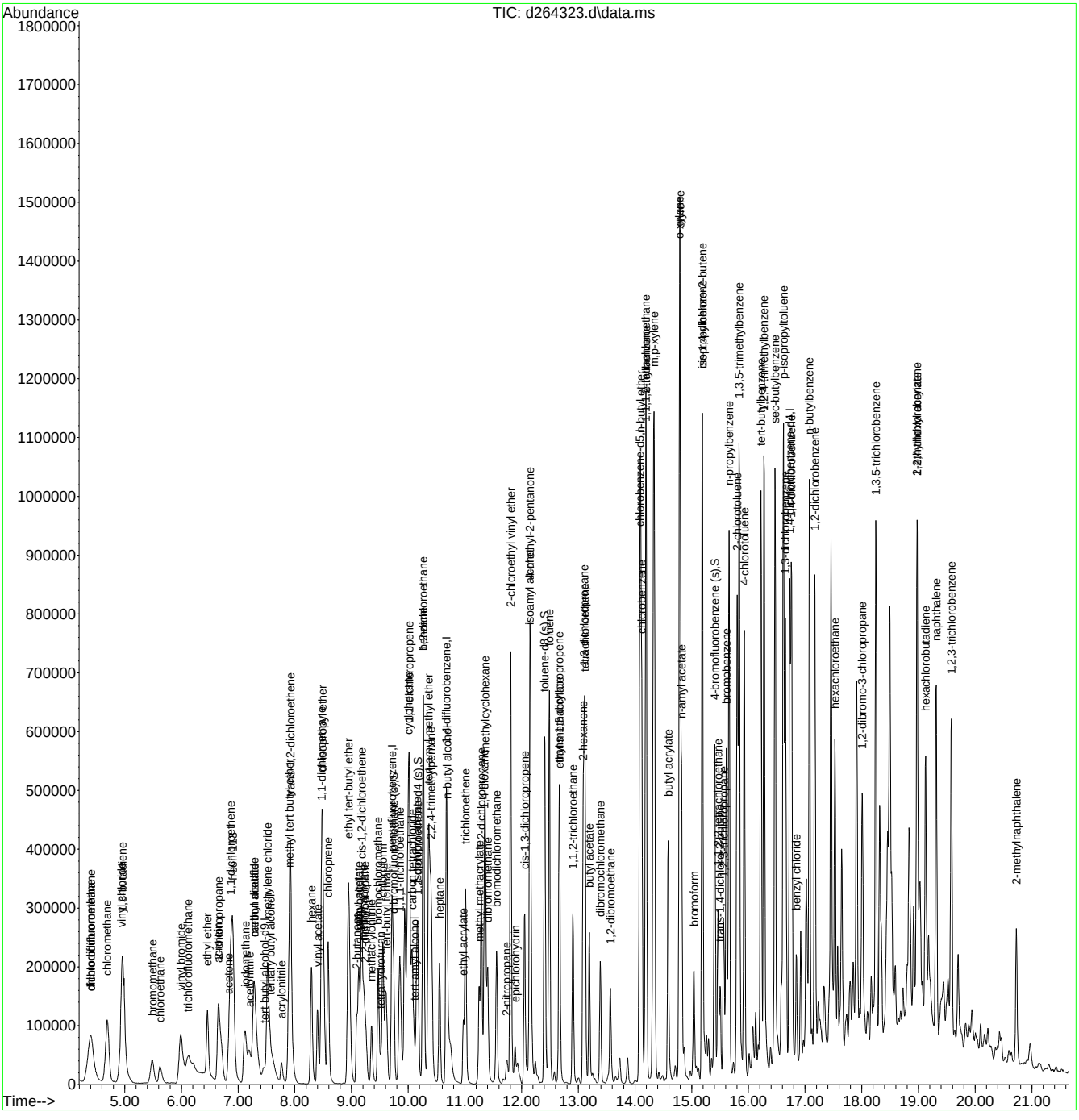
7.4.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264323.d
Acq On : 7 May 2019 2:35 pm
Operator : thienn
Sample : jc87263-11MS Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:45:37 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\5_may\5-8-19\vd10652\
Data File : d264324.d
Acq On : 7 May 2019 3:04 pm
Operator : thienn
Sample : jc87263-11MSD Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:46:57 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	7.484	65	123986	500.00	ug/L	0.01
5) pentafluorobenzene	9.717	168	250931	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	380536	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	371835	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.731	152	230782	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.743	113	114380	48.31	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.62%			
55) 1,2-dichloroethane-d4 (s)	10.172	65	121730	42.67	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.34%			
76) toluene-d8 (s)	12.410	98	444819	49.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.12%			
100) 4-bromofluorobenzene (s)	15.402	95	201165	47.04	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.588	59	79953	243.24	ug/L	98
4) 1,4-dioxane	11.344	88	43153	1439.97	ug/L	97
6) chlorodifluoromethane	4.403	51	189590	35.81	ug/L	97
7) dichlorodifluoromethane	4.408	85	228188	31.32	ug/L	99
8) chloromethane	4.701	50	294509	48.28	ug/L	99
9) 1,3-butadiene	4.973	54	150856	44.64	ug/L	97
10) vinyl chloride	4.947	62	284745	45.88	ug/L	100
11) bromomethane	5.496	94	60038	18.78	ug/L	99
12) chloroethane	5.627	64	57674	21.21	ug/L	99
13) trichlorofluoromethane	6.129	101	207329	37.08	ug/L	99
14) vinyl bromide	5.993	106	144611	50.72	ug/L	98
15) ethyl ether	6.464	74	71621	51.77	ug/L	92
16) 2-chloropropane	6.657	43	244644	41.00	ug/L	94
17) acrolein	6.642	56	25809	56.20	ug/L	99
18) freon 113	6.903	151	128563	39.18	ug/L	98
19) 1,1-dichloroethene	6.882	96	153329	49.55	ug/L	92
20) acetone	6.835	58	47112	242.22	ug/L #	71
21) acetonitrile	7.207	41	208338	507.71	ug/L	99
22) iodomethane	7.128	142	243913	50.12	ug/L	96
23) carbon disulfide	7.290	76	491390	48.71	ug/L	99
24) methylene chloride	7.526	84	165636	50.94	ug/L	99
25) methyl acetate	7.290	43	87063	50.56	ug/L	98
26) methyl tert butyl ether	7.907	73	441061	46.92	ug/L	95
27) trans-1,2-dichloroethene	7.923	96	136515	48.11	ug/L	92
28) hexane	8.294	56	71167	38.98	ug/L	97
29) di-isopropyl ether	8.493	45	497650	46.30	ug/L	97
30) 2-butanone	9.095	72	51391	223.51	ug/L	89
31) 1,1-dichloroethane	8.472	63	236685	46.86	ug/L	100
32) chloroprene	8.587	53	193674	42.94	ug/L	94
33) acrylonitrile	7.766	53	43712	55.18	ug/L	96
34) vinyl acetate	8.399	86	26390	47.66	ug/L	96
35) ethyl tert-butyl ether	8.948	59	495416	46.71	ug/L	97
36) ethyl acetate	9.126	45	17285	53.39	ug/L #	59
37) 2,2-dichloropropane	9.236	77	132336	24.42	ug/L	88
38) cis-1,2-dichloroethene	9.178	96	149478	48.15	ug/L	98
39) propionitrile	9.136	54	188741	545.96	ug/L	97
40) methyl acrylate	9.215	85	16671	49.02	ug/L	94
41) methacrylonitrile	9.356	67	45512	50.25	ug/L	95
42) bromochloromethane	9.476	128	69931	49.93	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264324.d
Acq On : 7 May 2019 3:04 pm
Operator : thienn
Sample : jc87263-11MSD Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:46:57 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	33559	49.78	ug/L	100
44) chloroform	9.555	83	222349	43.58	ug/L	97
45) tert-butyl formate	9.607	59	132213	45.96	ug/L	95
47) 1,1,1-trichloroethane	9.858	97	221387	42.30	ug/L	97
48) cyclohexane	9.999	84	257427	48.90	ug/L	94
50) 1,1-dichloropropene	10.020	75	165021	42.69	ug/L	99
51) carbon tetrachloride	10.073	117	184898	41.38	ug/L	99
52) tert-amyl alcohol	10.114	73	37083	234.15	ug/L	99
53) isopropyl acetate	10.151	87	28654	47.75	ug/L #	90
56) n-butyl alcohol	10.690	56	216452	2354.98	ug/L	98
57) 2,2,4-trimethylpentane	10.407	57	430603	45.64	ug/L	96
58) benzene	10.266	78	534809	46.29	ug/L	98
59) tert-amyl methyl ether	10.366	73	472857	44.85	ug/L	99
60) heptane	10.554	57	54878	35.55	ug/L	95
61) 1,2-dichloroethane	10.266	62	155184	38.20	ug/L	95
62) ethyl acrylate	10.972	55	134725	45.31	ug/L	99
63) trichloroethene	11.014	95	126588	44.10	ug/L	98
64) 2-chloroethyl vinyl ether	11.809	63	371036	246.53	ug/L	100
65) methyl methacrylate	11.249	100	31190	47.99	ug/L #	83
66) methylcyclohexane	11.354	83	237554	48.50	ug/L	99
67) 1,2-dichloropropane	11.291	63	134932	47.05	ug/L	100
68) dibromomethane	11.401	93	75199	45.36	ug/L	95
69) bromodichloromethane	11.558	83	170400	44.32	ug/L	99
70) 2-nitropropane	11.736	41	27336	45.58	ug/L	94
71) epichlorohydrin	11.882	57	72993	263.37	ug/L	98
72) cis-1,3-dichloropropene	12.055	75	191713	41.41	ug/L	93
73) 4-methyl-2-pentanone	12.149	58	197355	197.22	ug/L	90
74) isoamyl alcohol	12.144	70	86471	1102.90	ug/L #	83
77) toluene	12.489	92	326818	45.95	ug/L	97
78) ethyl methacrylate	12.672	69	164610	48.87	ug/L	97
79) trans-1,3-dichloropropene	12.662	75	170687	41.30	ug/L	89
80) 1,1,2-trichloroethane	12.907	83	91432	48.21	ug/L	96
81) tetrachloroethene	13.117	164	104716	45.20	ug/L	99
82) 2-hexanone	13.085	58	180228	210.14	ug/L	93
83) 1,3-dichloropropane	13.106	76	185203	45.36	ug/L	95
84) butyl acetate	13.195	56	92248	52.82	ug/L	91
85) dibromochloromethane	13.389	129	126748	47.44	ug/L	98
86) 1,2-dibromoethane	13.566	107	123538	41.90	ug/L	98
87) n-butyl ether	14.100	57	603828	46.58	ug/L	100
88) chlorobenzene	14.121	112	368905	44.79	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.189	131	145443	45.96	ug/L	99
90) ethylbenzene	14.199	91	654165	46.41	ug/L	99
91) m,p-xylene	14.335	106	505418	94.11	ug/L	98
92) o-xylene	14.785	91	555243	47.06	ug/L	98
93) styrene	14.795	104	432017	47.22	ug/L	96
94) butyl acrylate	14.586	55	290101	52.45	ug/L	98
95) n-amyl acetate	14.822	70	123745	52.85	ug/L	96
96) isopropylbenzene	15.188	105	702781	51.04	ug/L	99
97) bromoform	15.041	173	92358	47.96	ug/L	99
98) cis-1,4-dichloro-2-butene	15.188	88	46038	36.02	ug/L	95
101) 1,1,2,2-tetrachloroethane	15.465	83	159889	44.83	ug/L	99
102) trans-1,4-dichloro-2-b...	15.502	53	34847	39.03	ug/L	88
103) 1,2,3-trichloropropane	15.564	110	47615	46.31	ug/L	86
104) bromobenzene	15.611	156	181815	44.95	ug/L	99
105) n-propylbenzene	15.658	91	816533	51.09	ug/L	100
106) 2-chlorotoluene	15.805	126	170001	47.47	ug/L	98
107) 4-chlorotoluene	15.930	91	492911	46.72	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264324.d
Acq On : 7 May 2019 3:04 pm
Operator : thienn
Sample : jc87263-11MSD Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:46:57 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	640637	52.45	ug/L	99
109) tert-butylbenzene	16.223	119	521417	55.03	ug/L	96
110) 1,2,4-trimethylbenzene	16.276	105	661994	54.36	ug/L	99
111) sec-butylbenzene	16.469	105	790654	56.65	ug/L	98
112) p-isopropyltoluene	16.616	119	664687	57.22	ug/L	98
113) 1,3-dichlorobenzene	16.652	146	351277	49.71	ug/L	100
114) 1,4-dichlorobenzene	16.757	146	363261	49.57	ug/L	98
115) 1,2-dichlorobenzene	17.170	146	361021	50.98	ug/L	99
116) benzyl chloride	16.846	91	152490	22.17	ug/L	99
117) n-butylbenzene	17.076	92	349305	64.38	ug/L	99
118) 2-ethylhexyl acrylate	18.974	70	47266	41.34	ug/L #	73
119) hexachloroethane	17.531	201	114979	63.75	ug/L	95
120) 1,2-dibromo-3-chloropr...	18.007	75	33136	51.84	ug/L	93
121) 1,3,5-trichlorobenzene	18.253	180	301374	63.26	ug/L	100
122) 1,2,4-trichlorobenzene	18.974	180	251590	57.95	ug/L	98
123) hexachlorobutadiene	19.126	225	122547	56.43	ug/L	98
124) naphthalene	19.314	128	598347	61.70	ug/L	99
125) 1,2,3-trichlorobenzene	19.581	180	217706	56.88	ug/L	99
126) 2-methylnaphthalene	20.726	142	133037	64.52	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

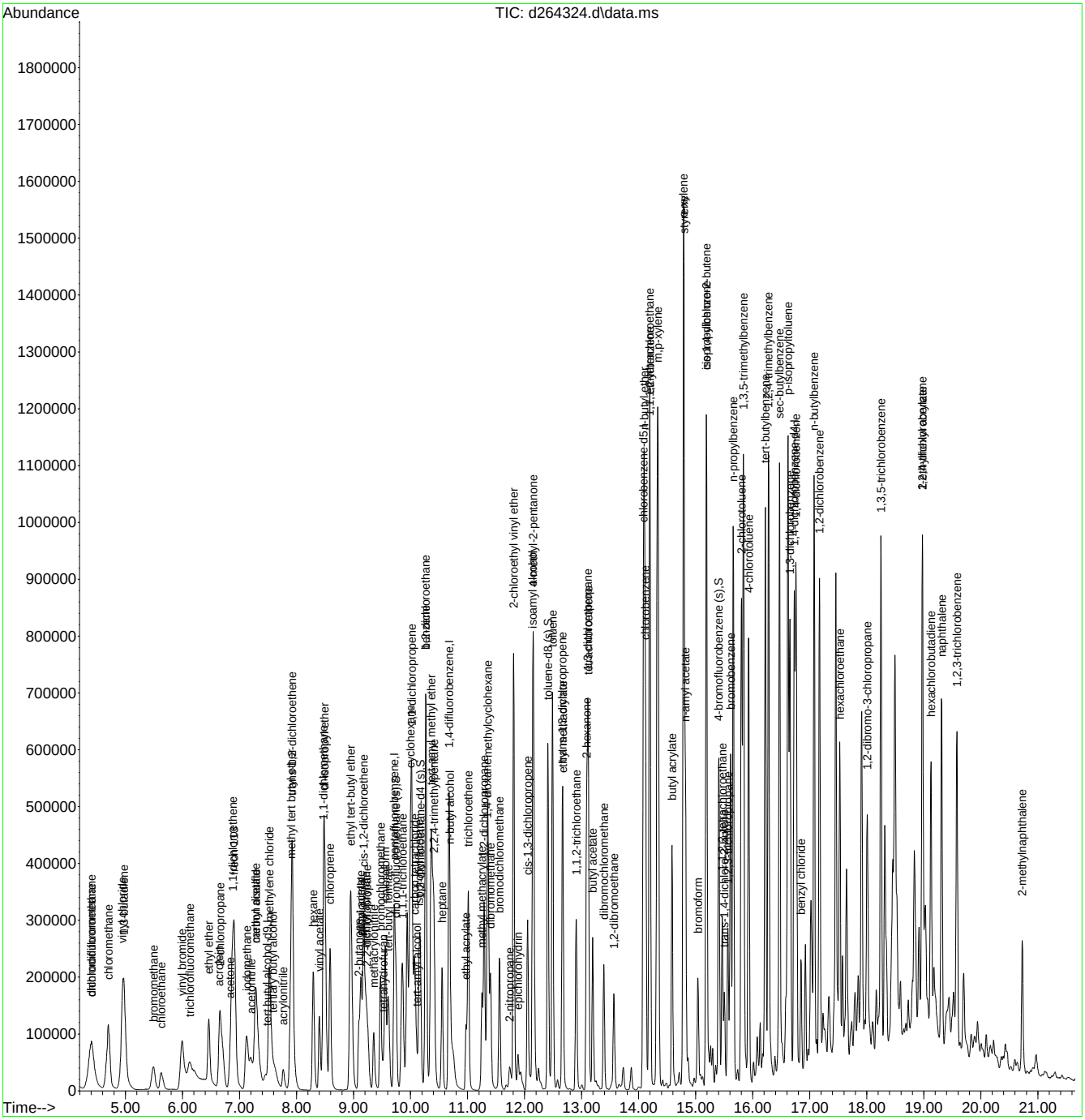
7.4.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264324.d
Acq On : 7 May 2019 3:04 pm
Operator : thienn
Sample : jc87263-11MSD Inst : MSD
Misc : ms34453,vd10652,5.6,,100,10,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 08 00:46:57 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\may 8\v1c7213-rush\
Data File : 1c164344.d
Acq On : 7 May 2019 5:11 pm
Operator : PrashanS
Sample : JC87420-2MS Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	48447	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	193081	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	276803	50.00	ug/L	0.00
74) chlorobenzene-d5	13.655	117	212176	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	104027	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	82948	50.94	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.88%			
53) 1,2-dichloroethane-d4 (s)	10.094	65	74444	42.81	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.62%			
75) toluene-d8 (s)	12.149	98	291652	51.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%			
98) 4-bromofluorobenzene (s)	14.806	95	96412	49.37	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.74%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.484	59	35020	272.15	ug/L	98
4) 1,4-dioxane	11.250	88	18568	1580.38	ug/L	99
6) chlorodifluoromethane	3.896	51	74865	37.21	ug/L	100
7) dichlorodifluoromethane	3.864	85	113507	39.77	ug/L	96
8) chloromethane	4.283	50	91322	43.63	ug/L	99
9) vinyl chloride	4.513	62	96931	49.20	ug/L	97
10) 1,3-butadiene	4.586	54	50177	40.57	ug/L	94
11) bromomethane	5.198	94	70834	47.17	ug/L	99
12) chloroethane	5.376	64	55454	46.99	ug/L	98
13) trichlorofluoromethane	5.810	101	120690	41.08	ug/L	99
14) vinyl bromide	5.726	106	55908	48.51	ug/L	97
15) ethyl ether	6.255	74	38032	48.46	ug/L	94
16) acrolein	6.542	56	4030	19.99	ug/L	97
17) freon 113	6.616	151	51056	39.30	ug/L	98
18) 1,1-dichloroethene	6.678	96	70393	44.54	ug/L	89
19) acetone	6.757	43	55588	141.55	ug/L	94
20) acetonitrile	7.207	41	67367	411.32	ug/L	95
21) iodomethane	6.971	142	69656	39.86	ug/L	94
22) carbon disulfide	7.086	76	192800	37.76	ug/L	97
23) methylene chloride	7.421	84	81883	47.76	ug/L	94
24) methyl acetate	7.207	43	90142	94.11	ug/L	96
25) methyl tert butyl ether	7.714	73	190160	44.39	ug/L	99
26) trans-1,2-dichloroethene	7.782	96	77101	43.94	ug/L	93
27) di-isopropyl ether	8.305	45	234059	44.39	ug/L	96
28) 2-butanone	9.063	72	25265	171.14	ug/L #	51
29) 1,1-dichloroethane	8.362	63	133590	44.88	ug/L	99
30) chloroprene	8.457	53	99292	38.69	ug/L	91
31) acrylonitrile	7.766	53	17963	41.90	ug/L	97
32) hexane	8.059	57	50390	18.48	ug/L	98
33) vinyl acetate	8.352	86	2030	8.18	ug/L #	37
34) ethyl tert-butyl ether	8.765	59	229484	45.15	ug/L	99
35) ethyl acetate	9.074	45	4310	23.13	ug/L #	26
36) 2,2-dichloropropane	9.084	77	96558	36.38	ug/L	91
37) cis-1,2-dichloroethene	9.100	96	89495	47.26	ug/L	90
38) methyl acrylate	9.152	85	15100	77.67	ug/L	90
39) propionitrile	9.184	54	80058	428.02	ug/L	93
40) bromochloromethane	9.414	128	40172	48.85	ug/L	95
41) tetrahydrofuran	9.445	72	7645	43.35	ug/L	87
42) chloroform	9.466	85	88978	42.23	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164344.d
Acq On : 7 May 2019 5:11 pm
Operator : PrashanS
Sample : JC87420-2MS Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	t-butyl formate	9.476	59	24160	21.32	ug/L		93
45)	methacrylonitrile	9.361	67	23458	43.45	ug/L		90
46)	1,1,1-trichloroethane	9.701	97	114208	41.88	ug/L		97
47)	cyclohexane	9.759	84	83031	30.84	ug/L		96
48)	1,1-dichloropropene	9.884	75	91272	39.51	ug/L		97
49)	iso-butyl alcohol	9.900	43	24090	395.43	ug/L		90
50)	carbon tetrachloride	9.900	117	91694	38.50	ug/L		98
51)	tert amyl alcohol	10.015	55	10968	192.71	ug/L		97
54)	n-butyl alcohol	10.653	56	90226	2233.78	ug/L		93
55)	2,2,4-trimethylpentane	10.109	57	85757	12.90	ug/L		96
56)	benzene	10.151	78	294670	42.52	ug/L		99
57)	tert-amyl methyl ether	10.156	87	48626	45.02	ug/L		96
58)	heptane	10.287	71	17474	11.68	ug/L		96
59)	isopropyl acetate	10.062	87	8569	29.89	ug/L	#	90
60)	1,2-dichloroethane	10.183	62	84152	37.35	ug/L		96
61)	trichloroethene	10.863	130	75690	42.43	ug/L		98
62)	ethyl acrylate	10.863	55	31777	18.98	ug/L		73
64)	2-chloroethyl vinyl ether	11.652	63	193606	235.35	ug/L		97
65)	methyl methacrylate	11.124	100	17973	51.90	ug/L	#	79
66)	1,2-dichloropropane	11.134	63	72728	44.07	ug/L		99
67)	dibromomethane	11.302	93	42225	43.71	ug/L		96
68)	methylcyclohexane	11.056	83	68585	22.30	ug/L		96
69)	bromodichloromethane	11.427	83	98255	42.02	ug/L		97
70)	epichlorohydrin	11.788	57	24631	185.69	ug/L		98
71)	cis-1,3-dichloropropene	11.872	75	107675	40.12	ug/L		90
72)	4-methyl-2-pentanone	11.956	58	77422	161.55	ug/L		90
73)	3-methyl-1-butanol	11.982	55	48475	797.80	ug/L		94
76)	toluene	12.222	92	157721	40.61	ug/L		98
77)	trans-1,3-dichloropropene	12.432	75	89214	40.83	ug/L		98
78)	ethyl methacrylate	12.405	69	46040	29.81	ug/L		91
79)	1,1,2-trichloroethane	12.646	83	47688	46.61	ug/L		96
80)	tetrachloroethene	12.798	164	46964	34.78	ug/L		96
81)	1,3-dichloropropane	12.829	76	83683	44.60	ug/L		89
82)	2-hexanone	12.803	58	70712	167.52	ug/L	#	88
83)	butyl acetate	12.866	56	13050	16.96	ug/L		88
84)	dibromochloromethane	13.091	129	67776	44.06	ug/L		94
85)	1,2-dibromoethane	13.242	107	73849	45.43	ug/L		96
86)	n-butyl ether	13.572	57	220296	37.71	ug/L		97
87)	chlorobenzene	13.687	112	154085	39.11	ug/L		97
88)	1,1,1,2-tetrachloroethane	13.750	131	59993	41.87	ug/L		99
89)	ethylbenzene	13.734	91	245098	34.33	ug/L		98
90)	m,p-xylene	13.839	106	187703	70.77	ug/L		91
91)	o-xylene	14.257	106	93655	36.99	ug/L		93
92)	styrene	14.267	104	152495	36.32	ug/L		97
93)	bromoform	14.550	173	39483	42.29	ug/L		98
94)	butyl acrylate	14.079	55	42488	17.28	ug/L		97
95)	isopropylbenzene	14.586	105	207534	30.47	ug/L		98
96)	cis-1,4-dichloro-2-butene	14.686	88	18581	32.13	ug/L		90
99)	bromobenzene	15.005	156	61981	37.95	ug/L	#	82
100)	1,1,2,2-tetrachloroethane	14.916	83	55867	43.61	ug/L		96
101)	trans-1,4-dichloro-2-b...	14.958	53	11769	33.76	ug/L	#	80
102)	1,2,3-trichloropropane	14.989	110	14571	44.09	ug/L		98
103)	n-propylbenzene	14.994	91	221606	29.50	ug/L		98
105)	2-chlorotoluene	15.151	126	49890	34.12	ug/L		96
106)	4-chlorotoluene	15.251	91	139226	30.12	ug/L		96
107)	1,3,5-trimethylbenzene	15.146	105	158064	29.17	ug/L		94
108)	tert-butylbenzene	15.491	134	27651	30.44	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164344.d
Acq On : 7 May 2019 5:11 pm
Operator : PrashanS
Sample : JC87420-2MS Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

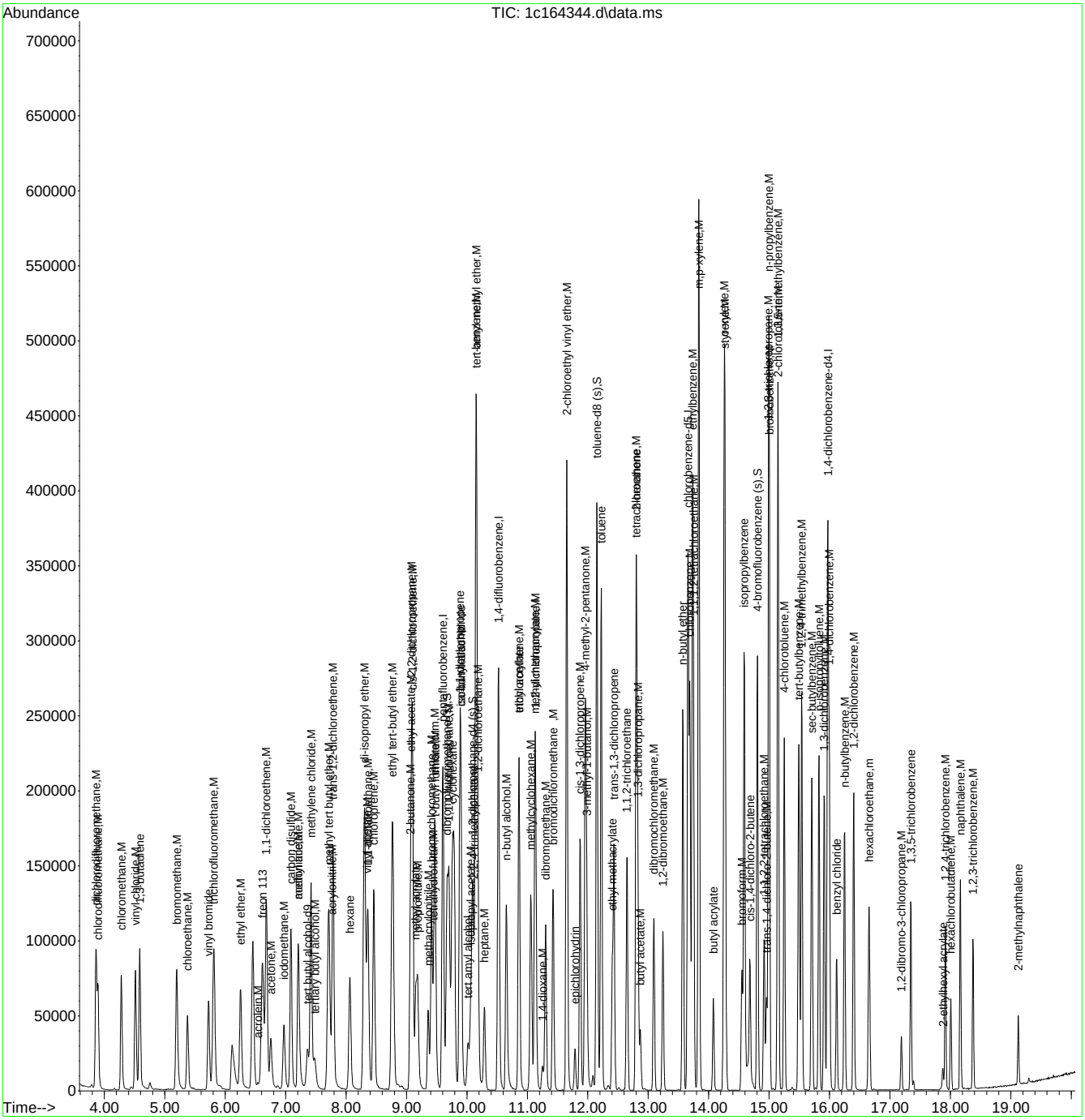
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
109) 1,2,4-trimethylbenzene	15.538	105	155852	28.71 ug/L	93
110) sec-butylbenzene	15.706	105	164214	24.37 ug/L	98
111) 1,3-dichlorobenzene	15.910	146	91490	29.58 ug/L	98
112) p-isopropyltoluene	15.826	119	140885	24.31 ug/L	97
113) 1,4-dichlorobenzene	15.993	146	93081	30.12 ug/L	96
114) benzyl chloride	16.119	91	67505	25.37 ug/L	99
115) 1,2-dichlorobenzene	16.401	146	90770	31.45 ug/L	95
117) n-butylbenzene	16.250	92	57576	19.55 ug/L	99
118) 1,2-dibromo-3-chloropr...	17.186	75	9048	35.29 ug/L	91
119) 1,3,5-trichlorobenzene	17.348	180	41955	17.66 ug/L	97
121) 2-ethylhexyl acrylate	17.881	70	3420	2.88 ug/L #	73
122) 1,2,4-trichlorobenzene	17.918	180	33566	17.35 ug/L	96
123) hexachlorobutadiene	18.007	225	13895	10.23 ug/L	99
124) naphthalene	18.164	128	104811	27.85 ug/L	98
125) 1,2,3-trichlorobenzene	18.373	180	30126	16.48 ug/L	97
126) hexachloroethane	16.652	201	27121	26.20 ug/L	98
127) 2-methylnaphthalene	19.126	142	20357	8.49 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164344.d
Acq On : 7 May 2019 5:11 pm
Operator : PrashanS
Sample : JC87420-2MS Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:26 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164345.d
Acq On : 7 May 2019 5:37 pm
Operator : PrashanS
Sample : JC87420-2MSD Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:44 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	46964	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	188711	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.522	114	269484	50.00	ug/L	0.00
74) chlorobenzene-d5	13.655	117	205150	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	93408	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	81963	51.50	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.00%			
53) 1,2-dichloroethane-d4 (s)	10.088	65	72754	42.98	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.96%			
75) toluene-d8 (s)	12.149	98	283628	51.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.64%			
98) 4-bromofluorobenzene (s)	14.806	95	89765	51.19	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.38%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.478	59	35141	281.71	ug/L	95
4) 1,4-dioxane	11.249	88	19088	1675.95	ug/L	97
6) chlorodifluoromethane	3.896	51	76187	38.74	ug/L	99
7) dichlorodifluoromethane	3.859	85	113668	40.74	ug/L	97
8) chloromethane	4.278	50	93415	45.66	ug/L	100
9) vinyl chloride	4.513	62	97885	50.83	ug/L	99
10) 1,3-butadiene	4.586	54	50867	42.08	ug/L	94
11) bromomethane	5.198	94	72397	49.33	ug/L	99
12) chloroethane	5.376	64	56090	48.63	ug/L	97
13) trichlorofluoromethane	5.810	101	120281	41.89	ug/L	98
14) vinyl bromide	5.721	106	56900	50.52	ug/L	96
15) ethyl ether	6.255	74	37880	49.39	ug/L	97
16) acrolein	6.542	56	3312	16.81	ug/L	83
17) freon 113	6.621	151	48832	38.46	ug/L	99
18) 1,1-dichloroethene	6.678	96	71444	46.25	ug/L	87
19) acetone	6.757	43	55201	143.82	ug/L	95
20) acetonitrile	7.212	41	67405	421.08	ug/L	94
21) iodomethane	6.976	142	74040	43.09	ug/L	92
22) carbon disulfide	7.086	76	192955	38.67	ug/L	98
23) methylene chloride	7.421	84	81792	48.81	ug/L	93
24) methyl acetate	7.207	43	92215	98.50	ug/L	97
25) methyl tert butyl ether	7.714	73	187923	44.89	ug/L	99
26) trans-1,2-dichloroethene	7.787	96	77200	45.02	ug/L	93
27) di-isopropyl ether	8.305	45	235964	45.78	ug/L	96
28) 2-butanone	9.058	72	24672	171.00	ug/L #	47
29) 1,1-dichloroethane	8.357	63	134078	46.08	ug/L	100
30) chloroprene	8.462	53	99192	39.54	ug/L	92
31) acrylonitrile	7.766	53	17657	42.14	ug/L	97
32) hexane	8.064	57	45126	16.94	ug/L	94
33) vinyl acetate	8.357	86	1489	6.14	ug/L #	12
34) ethyl tert-butyl ether	8.765	59	226940	45.68	ug/L	97
35) ethyl acetate	9.074	45	3718	20.41	ug/L #	1
36) 2,2-dichloropropane	9.084	77	95429	36.79	ug/L	95
37) cis-1,2-dichloroethene	9.100	96	89178	48.19	ug/L	91
38) methyl acrylate	9.152	85	16211	85.31	ug/L	95
39) propionitrile	9.184	54	78765	430.86	ug/L	90
40) bromochloromethane	9.414	128	40226	50.04	ug/L	96
41) tetrahydrofuran	9.445	72	7529	43.68	ug/L #	79
42) chloroform	9.466	85	89321	43.37	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164345.d
Acq On : 7 May 2019 5:37 pm
Operator : PrashanS
Sample : JC87420-2MSD Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:44 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	t-butyl formate	9.476	59	18426	16.64	ug/L		96
45)	methacrylonitrile	9.356	67	23312	44.18	ug/L		90
46)	1,1,1-trichloroethane	9.701	97	111510	41.84	ug/L		99
47)	cyclohexane	9.759	84	77290	29.37	ug/L		97
48)	1,1-dichloropropene	9.884	75	90314	40.00	ug/L		96
49)	iso-butyl alcohol	9.900	43	23638	397.00	ug/L		96
50)	carbon tetrachloride	9.900	117	90193	38.75	ug/L		97
51)	tert amyl alcohol	10.015	55	11265	202.52	ug/L		93
54)	n-butyl alcohol	10.653	56	87803	2232.83	ug/L		97
55)	2,2,4-trimethylpentane	10.115	57	74163	11.46	ug/L		97
56)	benzene	10.151	78	297398	44.08	ug/L		100
57)	tert-amyl methyl ether	10.156	87	48099	45.74	ug/L		97
58)	heptane	10.287	71	15306	10.51	ug/L		93
59)	isopropyl acetate	10.062	87	8137	29.15	ug/L	#	87
60)	1,2-dichloroethane	10.183	62	84675	38.60	ug/L		94
61)	trichloroethene	10.862	130	76075	43.80	ug/L		99
62)	ethyl acrylate	10.862	55	26060	15.99	ug/L		74
64)	2-chloroethyl vinyl ether	11.652	63	174419	217.78	ug/L		96
65)	methyl methacrylate	11.124	100	18071	53.60	ug/L	#	74
66)	1,2-dichloropropane	11.134	63	72432	45.08	ug/L		99
67)	dibromomethane	11.302	93	41713	44.35	ug/L		95
68)	methylcyclohexane	11.056	83	61590	20.57	ug/L		96
69)	bromodichloromethane	11.427	83	96260	42.29	ug/L		99
70)	epichlorohydrin	11.788	57	24105	186.66	ug/L		96
71)	cis-1,3-dichloropropene	11.872	75	107980	41.33	ug/L		91
72)	4-methyl-2-pentanone	11.956	58	77205	165.47	ug/L		88
73)	3-methyl-1-butanol	11.982	55	49312	833.62	ug/L		94
76)	toluene	12.222	92	154439	41.13	ug/L		99
77)	trans-1,3-dichloropropene	12.432	75	86931	41.15	ug/L		97
78)	ethyl methacrylate	12.405	69	40276	26.97	ug/L		95
79)	1,1,2-trichloroethane	12.646	83	47125	47.64	ug/L		96
80)	tetrachloroethene	12.803	164	44599	34.16	ug/L		96
81)	1,3-dichloropropane	12.829	76	82403	45.43	ug/L		92
82)	2-hexanone	12.803	58	69755	170.91	ug/L	#	88
83)	butyl acetate	12.871	56	10829	14.56	ug/L		88
84)	dibromochloromethane	13.091	129	65134	43.79	ug/L		98
85)	1,2-dibromoethane	13.242	107	73167	46.56	ug/L		97
86)	n-butyl ether	13.572	57	213058	37.72	ug/L		98
87)	chlorobenzene	13.687	112	148993	39.11	ug/L		96
88)	1,1,1,2-tetrachloroethane	13.750	131	57435	41.46	ug/L		97
89)	ethylbenzene	13.734	91	232748	33.72	ug/L		98
90)	m,p-xylene	13.838	106	178268	69.51	ug/L		90
91)	o-xylene	14.257	106	88333	36.08	ug/L		95
92)	styrene	14.267	104	147657	36.37	ug/L		95
93)	bromoform	14.550	173	37716	41.78	ug/L		100
94)	butyl acrylate	14.079	55	31764	13.36	ug/L		98
95)	isopropylbenzene	14.586	105	192067	29.16	ug/L		98
96)	cis-1,4-dichloro-2-butene	14.681	88	17361	31.05	ug/L		91
99)	bromobenzene	15.000	156	58460	39.86	ug/L		92
100)	1,1,2,2-tetrachloroethane	14.916	83	53831	46.80	ug/L		97
101)	trans-1,4-dichloro-2-b...	14.958	53	11189	35.74	ug/L		84
102)	1,2,3-trichloropropane	14.994	110	13756	46.35	ug/L		97
103)	n-propylbenzene	14.994	91	200623	29.74	ug/L		98
105)	2-chlorotoluene	15.151	126	45379	34.56	ug/L		93
106)	4-chlorotoluene	15.251	91	127840	30.80	ug/L		95
107)	1,3,5-trimethylbenzene	15.146	105	139536	28.67	ug/L		96
108)	tert-butylbenzene	15.491	134	24540	30.09	ug/L	#	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164345.d
Acq On : 7 May 2019 5:37 pm
Operator : PrashanS
Sample : JC87420-2MSD Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:44 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

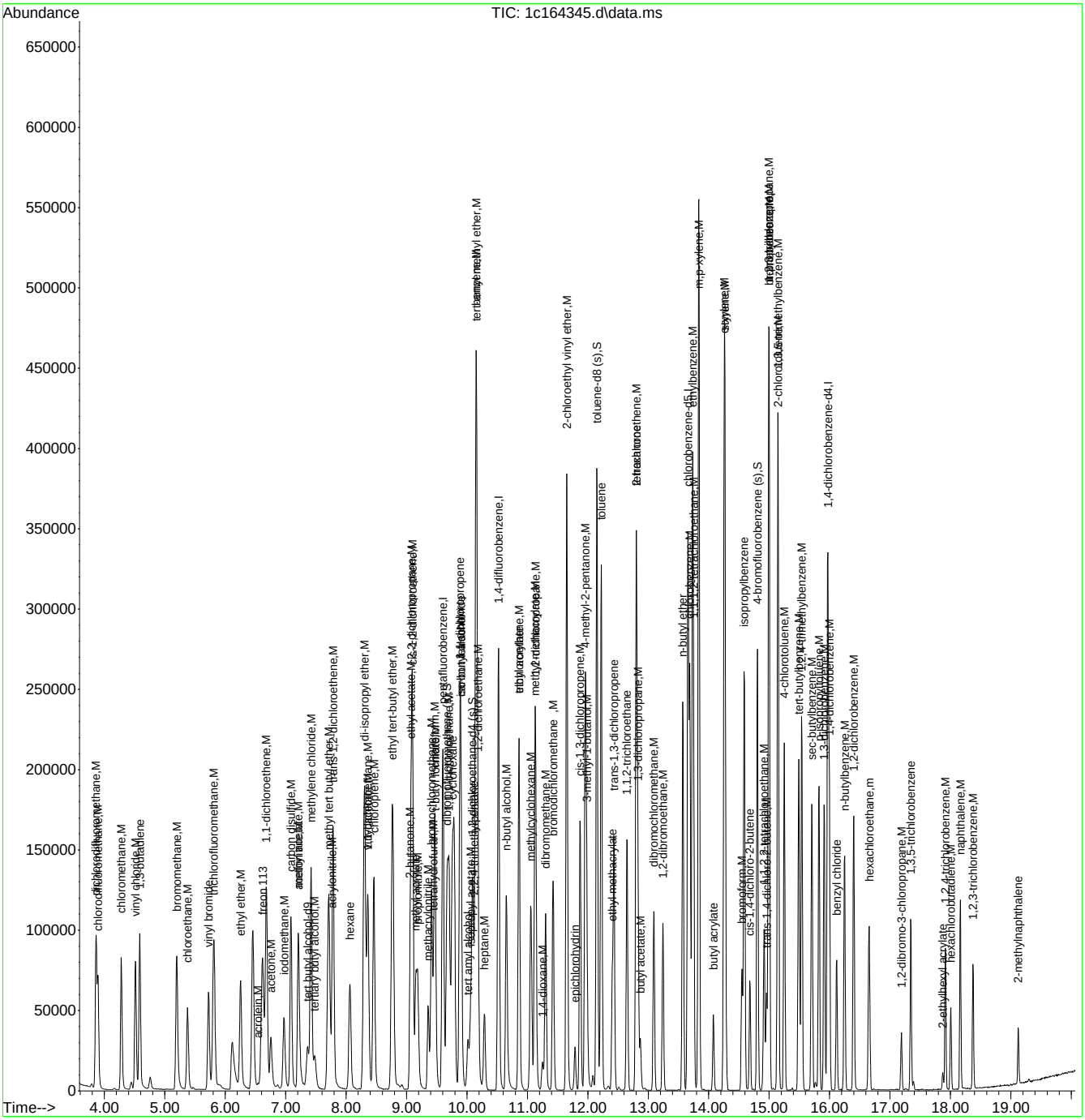
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,2,4-trimethylbenzene	15.538	105	140607	28.85	ug/L	94
110) sec-butylbenzene	15.706	105	142125	23.49	ug/L	98
111) 1,3-dichlorobenzene	15.910	146	82339	29.64	ug/L	97
112) p-isopropyltoluene	15.826	119	122827	23.60	ug/L	97
113) 1,4-dichlorobenzene	15.999	146	83099	29.95	ug/L	96
114) benzyl chloride	16.119	91	61741	25.85	ug/L	99
115) 1,2-dichlorobenzene	16.401	146	80735	31.15	ug/L	98
117) n-butylbenzene	16.250	92	48891	18.49	ug/L	99
118) 1,2-dibromo-3-chloropr...	17.191	75	8636	37.51	ug/L	78
119) 1,3,5-trichlorobenzene	17.343	180	35318	16.56	ug/L	98
121) 2-ethylhexyl acrylate	17.871	70	2756	2.58	ug/L	89
122) 1,2,4-trichlorobenzene	17.918	180	27216	15.67	ug/L	97
123) hexachlorobutadiene	18.007	225	11932	9.78	ug/L	95
124) naphthalene	18.164	128	85099	25.18	ug/L	99
125) 1,2,3-trichlorobenzene	18.373	180	24306	14.81	ug/L	99
126) hexachloroethane	16.658	201	22529	24.24	ug/L	96
127) 2-methylnaphthalene	19.121	142	15834	7.36	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164345.d
Acq On : 7 May 2019 5:37 pm
Operator : PrashanS
Sample : JC87420-2MSD Inst : GCMS1C
Misc : MS34529,V1C7213,5.6,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:31:44 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264363.D
Acq On : 8 May 2019 10:37 am
Operator : thienn
Sample : jc87652-1ms
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 11:58:19 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	7.467	65	129025	500.00	ug/L	0.00
5) pentafluorobenzene	9.716	168	236418	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.673	114	363667	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.083	117	377383	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	250157	50.00	ug/L	-0.01

System Monitoring Compounds						
46) dibromofluoromethane (s)	9.742	113	110098	49.36	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.72%			
55) 1,2-dichloroethane-d4 (s)	10.171	65	119605	43.87	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 87.74%			
76) toluene-d8 (s)	12.410	98	444857	48.34	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.68%			
100) 4-bromofluorobenzene (s)	15.407	95	225853	48.72	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.44%			

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.582	59	76262	222.95	ug/L	95
4) 1,4-dioxane	11.343	88	39354	1261.92	ug/L	95
6) chlorodifluoromethane	4.397	51	150356	30.14	ug/L	98
7) dichlorodifluoromethane	4.413	85	191870	27.95	ug/L	98
8) chloromethane	4.685	50	213917	37.22	ug/L	99
9) 1,3-butadiene	4.957	54	134891	42.37	ug/L	96
10) vinyl chloride	4.946	62	264699	45.26	ug/L	98
11) bromomethane	5.480	94	51648	17.15	ug/L	98
12) chloroethane	5.621	64	47051	18.37	ug/L	98
13) trichlorofluoromethane	6.118	101	182943	34.73	ug/L	95
14) vinyl bromide	5.987	106	118927	44.27	ug/L	98
15) ethyl ether	6.463	74	62017	47.58	ug/L	91
16) 2-chloropropane	6.657	43	216536	38.51	ug/L	94
17) acrolein	6.646	56	23665	54.69	ug/L	96
18) freon 113	6.908	151	115883	37.48	ug/L	98
19) 1,1-dichloroethene	6.866	96	127082	43.59	ug/L	93
20) acetone	6.840	58	41220	224.93	ug/L #	75
21) acetonitrile	7.206	41	195520	505.73	ug/L	99
22) iodomethane	7.117	142	200323	43.69	ug/L	97
23) carbon disulfide	7.279	76	409702	43.11	ug/L	98
24) methylene chloride	7.525	84	139781	45.63	ug/L	100
25) methyl acetate	7.284	43	80258	49.47	ug/L	99
26) methyl tert butyl ether	7.907	73	392355	44.30	ug/L	96
27) trans-1,2-dichloroethene	7.922	96	118227	44.23	ug/L	92
28) hexane	8.294	56	77219	44.89	ug/L	98
29) di-isopropyl ether	8.492	45	465443	45.96	ug/L	97
30) 2-butanone	9.094	72	47020	217.05	ug/L	94
31) 1,1-dichloroethane	8.471	63	206226	43.33	ug/L	99
32) chloroprene	8.587	53	171305	40.31	ug/L	95
33) acrylonitrile	7.771	53	39754	53.26	ug/L	91
34) vinyl acetate	8.398	86	23630	45.29	ug/L #	90
35) ethyl tert-butyl ether	8.947	59	454242	45.46	ug/L	99
36) ethyl acetate	9.125	45	16603	54.43	ug/L #	72

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264363.D
Acq On : 8 May 2019 10:37 am
Operator : thienn
Sample : jc87652-1ms
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 11:58:19 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)
37) 2,2-dichloropropane	9.240	77	197539	38.70	ug/L		93
38) cis-1,2-dichloroethene	9.178	96	129117	44.14	ug/L		97
39) propionitrile	9.136	54	176401	541.58	ug/L		98
40) methyl acrylate	9.209	85	14210	44.51	ug/L	#	72
41) methacrylonitrile	9.355	67	41132	48.20	ug/L		96
42) bromochloromethane	9.476	128	59695	45.23	ug/L		99
43) tetrahydrofuran	9.517	42	30982	48.77	ug/L		97
44) chloroform	9.554	83	193886	40.33	ug/L		97
45) tert-butyl formate	9.612	59	123363	45.51	ug/L		94
47) 1,1,1-trichloroethane	9.852	97	195353	39.62	ug/L		97
48) cyclohexane	9.999	84	236581	47.70	ug/L		91
50) 1,1-dichloropropene	10.020	75	145597	39.97	ug/L		99
51) carbon tetrachloride	10.067	117	162372	38.57	ug/L		99
52) tert-amyl alcohol	10.119	73	33924	227.35	ug/L	#	88
53) isopropyl acetate	10.150	87	26283	46.49	ug/L		96
56) n-butyl alcohol	10.684	56	203221	2313.59	ug/L		97
57) 2,2,4-trimethylpentane	10.407	57	555008	61.56	ug/L		97
58) benzene	10.271	78	468709	42.45	ug/L		98
59) tert-amyl methyl ether	10.360	73	435967	43.27	ug/L		98
60) heptane	10.553	57	84035	56.96	ug/L		97
61) 1,2-dichloroethane	10.265	62	139379	35.90	ug/L		97
62) ethyl acrylate	10.971	55	125201	44.06	ug/L		99
63) trichloroethene	11.008	95	111463	40.63	ug/L		96
64) 2-chloroethyl vinyl ether	11.808	63	348979	242.63	ug/L		99
65) methyl methacrylate	11.254	100	28839	46.43	ug/L	#	83
66) methylcyclohexane	11.353	83	246305	52.62	ug/L		99
67) 1,2-dichloropropane	11.291	63	122032	44.52	ug/L		100
68) dibromomethane	11.400	93	65328	41.23	ug/L		97
69) bromodichloromethane	11.557	83	153052	41.65	ug/L		100
70) 2-nitropropane	11.735	41	25202	43.97	ug/L		97
71) epichlorohydrin	11.887	57	111873	422.38	ug/L		99
72) cis-1,3-dichloropropene	12.054	75	191283	43.23	ug/L		96
73) 4-methyl-2-pentanone	12.153	58	189318	197.97	ug/L		89
74) isoamyl alcohol	12.143	70	83329	1112.12	ug/L	#	79
77) toluene	12.488	92	316952	43.91	ug/L		96
78) ethyl methacrylate	12.671	69	155038	45.35	ug/L		99
79) trans-1,3-dichloropropene	12.661	75	170756	40.71	ug/L		91
80) 1,1,2-trichloroethane	12.907	83	85665	44.51	ug/L		93
81) tetrachloroethene	13.121	164	95450	40.59	ug/L		98
82) 2-hexanone	13.084	58	171262	196.75	ug/L		96
83) 1,3-dichloropropane	13.105	76	171810	41.46	ug/L		95
84) butyl acetate	13.194	56	79996	45.13	ug/L		90
85) dibromochloromethane	13.388	129	116551	42.98	ug/L		97
86) 1,2-dibromoethane	13.566	107	118223	39.51	ug/L		100
87) n-butyl ether	14.099	57	586038	44.55	ug/L		99
88) chlorobenzene	14.120	112	338593	40.50	ug/L		99
89) 1,1,1,2-tetrachloroethane	14.188	131	137326	42.76	ug/L		99
90) ethylbenzene	14.198	91	765154	53.49	ug/L		99
91) m,p-xylene	14.334	106	585671	107.45	ug/L		97
92) o-xylene	14.784	91	771428	64.42	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264363.D
Acq On : 8 May 2019 10:37 am
Operator : thienn
Sample : jc87652-1ms
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 11:58:19 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

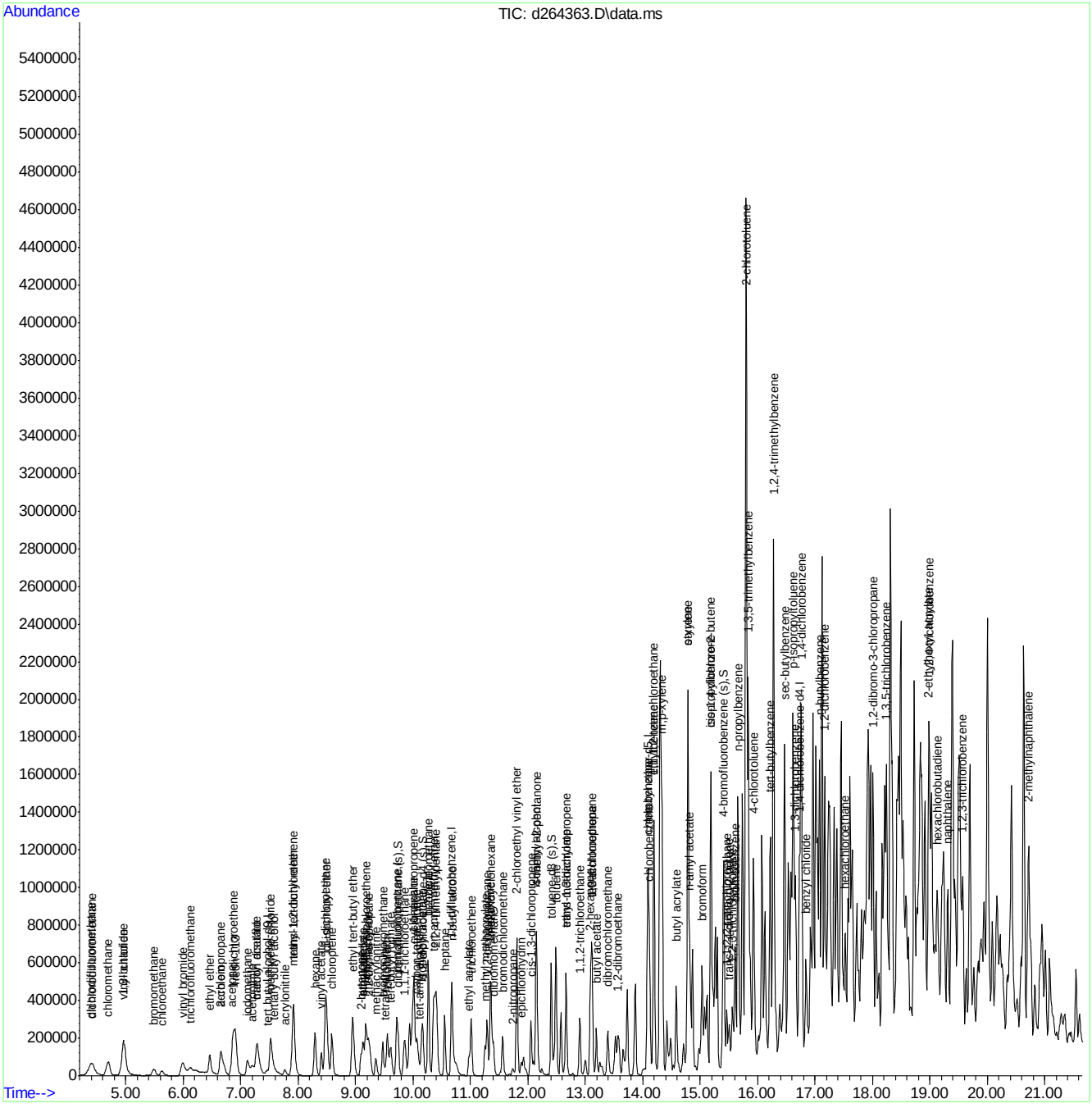
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	14.795	104	415309	44.73 ug/L	99
94) butyl acrylate	14.585	55	281117	50.08 ug/L	97
95) n-amyl acetate	14.821	70	155102	65.26 ug/L	96
96) isopropylbenzene	15.187	105	833024	59.61 ug/L	98
97) bromoform	15.041	173	87015	44.53 ug/L	99
98) cis-1,4-dichloro-2-butene	15.192	88	52179	40.22 ug/L	89
101) 1,1,2,2-tetrachloroethane	15.464	83	176175	45.57 ug/L	97
102) trans-1,4-dichloro-2-b...	15.501	53	43158	44.60 ug/L	93
103) 1,2,3-trichloropropane	15.564	110	56974	51.13 ug/L	91
104) bromobenzene	15.616	156	174410	39.78 ug/L	98
105) n-propylbenzene	15.658	91	1194916	68.97 ug/L	99
106) 2-chlorotoluene	15.804	126	162794	41.93 ug/L	94
107) 4-chlorotoluene	15.930	91	494984	43.28 ug/L	99
108) 1,3,5-trimethylbenzene	15.841	105	966858	73.03 ug/L	100
109) tert-butylbenzene	16.223	119	512309	49.88 ug/L	99
110) 1,2,4-trimethylbenzene	16.280	105	1624363	123.05 ug/L	99
111) sec-butylbenzene	16.474	105	1145895	75.75 ug/L	100
112) p-isopropyltoluene	16.620	119	828930	65.83 ug/L	98
113) 1,3-dichlorobenzene	16.651	146	343619	44.86 ug/L	99
114) 1,4-dichlorobenzene	16.761	146	348655	43.89 ug/L	96
115) 1,2-dichlorobenzene	17.174	146	340514	44.36 ug/L	96
116) benzyl chloride	16.845	91	357720	47.98 ug/L	98
117) n-butylbenzene	17.080	92	490602	83.42 ug/L	99
118) 2-ethylhexyl acrylate	18.974	70	36725	29.63 ug/L #	88
119) hexachloroethane	17.530	201	111073	56.81 ug/L	97
120) 1,2-dibromo-3-chloropr...	18.006	75	37580	54.24 ug/L	92
121) 1,3,5-trichlorobenzene	18.252	180	261947	50.73 ug/L	97
122) 1,2,4-trichlorobenzene	18.979	180	208622	44.67 ug/L	99
123) hexachlorobutadiene	19.125	225	127843	54.31 ug/L	99
124) naphthalene	19.314	128	643498	61.23 ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	186667	45.38 ug/L	98
126) 2-methylnaphthalene	20.726	142	344290	154.04 ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264363.D
Acq On : 8 May 2019 10:37 am
Operator : thienn
Sample : jc87652-1ms
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 11:58:19 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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264364.D
Acq On : 8 May 2019 11:06 am
Operator : thienn
Sample : jc87652-1msd
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 08 11:58:34 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	7.488	65	122799	500.00	ug/L	0.02
5) pentafluorobenzene	9.716	168	232156	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.673	114	350655	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.083	117	365078	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	246394	50.00	ug/L	-0.01

System Monitoring Compounds						
46) dibromofluoromethane (s)	9.742	113	106925	48.81	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.62%			
55) 1,2-dichloroethane-d4 (s)	10.171	65	114063	43.39	ug/L	-0.02
Spiked Amount 50.000	Range 75 - 130		Recovery = 86.78%			
76) toluene-d8 (s)	12.409	98	433695	48.72	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.44%			
100) 4-bromofluorobenzene (s)	15.406	95	218643	47.89	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.78%			

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.613	59	72328	222.17	ug/L	97
4) 1,4-dioxane	11.342	88	39560	1332.84	ug/L	97
6) chlorodifluoromethane	4.402	51	148610	30.34	ug/L	98
7) dichlorodifluoromethane	4.402	85	186146	27.62	ug/L	100
8) chloromethane	4.695	50	202961	35.96	ug/L	99
9) 1,3-butadiene	4.972	54	128330	41.05	ug/L	96
10) vinyl chloride	4.936	62	254196	44.27	ug/L	99
11) bromomethane	5.479	94	52206	17.65	ug/L	97
12) chloroethane	5.626	64	47383	18.84	ug/L	96
13) trichlorofluoromethane	6.128	101	179851	34.77	ug/L	98
14) vinyl bromide	5.987	106	119663	45.36	ug/L	98
15) ethyl ether	6.458	74	58464	45.67	ug/L	85
16) 2-chloropropane	6.656	43	210828	38.19	ug/L	96
17) acrolein	6.641	56	22643	53.29	ug/L	100
18) freon 113	6.913	151	113470	37.38	ug/L	97
19) 1,1-dichloroethene	6.871	96	124855	43.61	ug/L	92
20) acetone	6.834	58	38714	215.14	ug/L #	74
21) acetonitrile	7.200	41	185219	487.88	ug/L	99
22) iodomethane	7.117	142	198372	44.06	ug/L	95
23) carbon disulfide	7.279	76	404448	43.34	ug/L	99
24) methylene chloride	7.524	84	137116	45.58	ug/L	100
25) methyl acetate	7.284	43	75762	47.56	ug/L	95
26) methyl tert butyl ether	7.906	73	382063	43.93	ug/L	96
27) trans-1,2-dichloroethene	7.922	96	115232	43.90	ug/L	93
28) hexane	8.293	56	74396	44.04	ug/L	97
29) di-isopropyl ether	8.492	45	447329	44.98	ug/L	99
30) 2-butanone	9.094	72	44756	210.40	ug/L	94
31) 1,1-dichloroethane	8.471	63	200844	42.98	ug/L	99
32) chloroprene	8.586	53	165588	39.68	ug/L	95
33) acrylonitrile	7.765	53	38021	51.87	ug/L	94
34) vinyl acetate	8.403	86	23200	45.29	ug/L #	89
35) ethyl tert-butyl ether	8.952	59	442065	45.05	ug/L	98
36) ethyl acetate	9.130	45	15768	52.64	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264364.D
Acq On : 8 May 2019 11:06 am
Operator : thienn
Sample : jc87652-1msd
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 08 11:58:34 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)
37) 2,2-dichloropropane	9.235	77	195167	38.93	ug/L		93
38) cis-1,2-dichloroethene	9.177	96	127161	44.27	ug/L		98
39) propionitrile	9.135	54	166036	519.12	ug/L		97
40) methyl acrylate	9.209	85	13826	44.12	ug/L	#	84
41) methacrylonitrile	9.355	67	40046	47.79	ug/L		94
42) bromochloromethane	9.470	128	58822	45.39	ug/L		98
43) tetrahydrofuran	9.517	42	29298	46.97	ug/L		99
44) chloroform	9.554	83	189934	40.23	ug/L		97
45) tert-butyl formate	9.611	59	119938	45.06	ug/L		98
47) 1,1,1-trichloroethane	9.857	97	192367	39.73	ug/L		97
48) cyclohexane	10.004	84	234541	48.16	ug/L		96
50) 1,1-dichloropropene	10.024	75	143058	40.00	ug/L		98
51) carbon tetrachloride	10.066	117	160408	38.80	ug/L		99
52) tert-amyl alcohol	10.113	73	32890	224.47	ug/L		96
53) isopropyl acetate	10.150	87	25279	45.54	ug/L		99
56) n-butyl alcohol	10.689	56	199554	2356.15	ug/L		96
57) 2,2,4-trimethylpentane	10.406	57	537909	61.88	ug/L		96
58) benzene	10.265	78	460430	43.25	ug/L		98
59) tert-amyl methyl ether	10.364	73	429543	44.22	ug/L		98
60) heptane	10.553	57	81711	57.44	ug/L		94
61) 1,2-dichloroethane	10.265	62	134207	35.85	ug/L		96
62) ethyl acrylate	10.971	55	120973	44.15	ug/L		99
63) trichloroethene	11.013	95	108439	41.00	ug/L		97
64) 2-chloroethyl vinyl ether	11.808	63	335073	241.61	ug/L		99
65) methyl methacrylate	11.254	100	26915	44.94	ug/L	#	85
66) methylcyclohexane	11.353	83	238372	52.81	ug/L		98
67) 1,2-dichloropropane	11.290	63	118000	44.65	ug/L		98
68) dibromomethane	11.400	93	64085	41.95	ug/L		99
69) bromodichloromethane	11.557	83	149099	42.08	ug/L		97
70) 2-nitropropane	11.735	41	24341	44.05	ug/L		94
71) epichlorohydrin	11.886	57	108990	426.77	ug/L		99
72) cis-1,3-dichloropropene	12.054	75	184389	43.22	ug/L		95
73) 4-methyl-2-pentanone	12.153	58	179370	194.53	ug/L		91
74) isoamyl alcohol	12.143	70	80732	1117.44	ug/L	#	79
77) toluene	12.488	92	311243	44.57	ug/L		98
78) ethyl methacrylate	12.671	69	150508	45.51	ug/L		99
79) trans-1,3-dichloropropene	12.660	75	164433	40.52	ug/L		91
80) 1,1,2-trichloroethane	12.906	83	83291	44.73	ug/L		93
81) tetrachloroethene	13.115	164	95036	41.78	ug/L		97
82) 2-hexanone	13.084	58	162500	192.98	ug/L		94
83) 1,3-dichloropropane	13.105	76	164704	41.08	ug/L		96
84) butyl acetate	13.194	56	74338	43.36	ug/L		92
85) dibromochloromethane	13.387	129	112568	42.91	ug/L		98
86) 1,2-dibromoethane	13.565	107	113988	39.38	ug/L		99
87) n-butyl ether	14.099	57	572733	45.00	ug/L		100
88) chlorobenzene	14.120	112	331133	40.95	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.188	131	136011	43.78	ug/L		99
90) ethylbenzene	14.198	91	749735	54.18	ug/L		99
91) m,p-xylene	14.334	106	577535	109.53	ug/L		98
92) o-xylene	14.789	91	760822	65.68	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264364.D
Acq On : 8 May 2019 11:06 am
Operator : thienn
Sample : jc87652-1msd
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 08 11:58:34 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

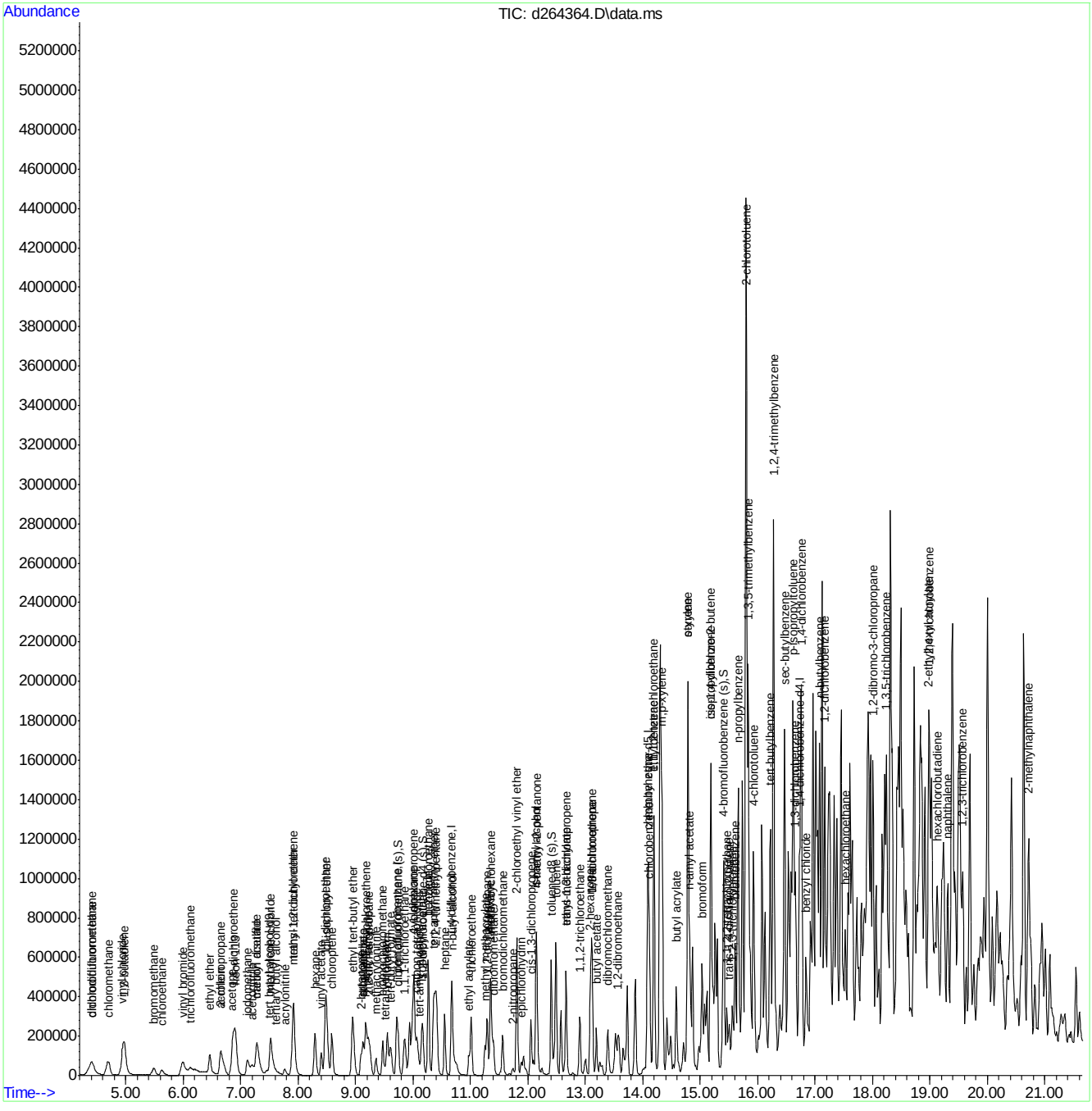
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	14.794	104	405366	45.13 ug/L	99
94) butyl acrylate	14.585	55	269428	49.61 ug/L	96
95) n-amyl acetate	14.820	70	149760	65.14 ug/L	94
96) isopropylbenzene	15.187	105	828792	61.31 ug/L	97
97) bromoform	15.040	173	84075	44.47 ug/L	99
98) cis-1,4-dichloro-2-butene	15.192	88	50027	39.87 ug/L	91
101) 1,1,2,2-tetrachloroethane	15.464	83	172339	45.26 ug/L	99
102) trans-1,4-dichloro-2-b...	15.506	53	40410	42.40 ug/L	91
103) 1,2,3-trichloropropane	15.563	110	55164	50.26 ug/L #	81
104) bromobenzene	15.615	156	170550	39.49 ug/L	97
105) n-propylbenzene	15.657	91	1178115	69.04 ug/L	99
106) 2-chlorotoluene	15.804	126	161077	42.12 ug/L	95
107) 4-chlorotoluene	15.929	91	484622	43.03 ug/L	99
108) 1,3,5-trimethylbenzene	15.840	105	960871	73.68 ug/L	99
109) tert-butylbenzene	16.222	119	508583	50.28 ug/L	98
110) 1,2,4-trimethylbenzene	16.280	105	1615592	124.25 ug/L	99
111) sec-butylbenzene	16.473	105	1143775	76.76 ug/L	99
112) p-isopropyltoluene	16.620	119	829373	66.87 ug/L	97
113) 1,3-dichlorobenzene	16.651	146	336306	44.58 ug/L	100
114) 1,4-dichlorobenzene	16.761	146	341412	43.64 ug/L	95
115) 1,2-dichlorobenzene	17.174	146	333079	44.06 ug/L	95
116) benzyl chloride	16.845	91	342143	46.60 ug/L	97
117) n-butylbenzene	17.080	92	487349	84.13 ug/L	99
118) 2-ethylhexyl acrylate	18.973	70	36892	30.22 ug/L #	80
119) hexachloroethane	17.530	201	111063	57.68 ug/L	95
120) 1,2-dibromo-3-chloropr...	18.006	75	31266	45.82 ug/L	96
121) 1,3,5-trichlorobenzene	18.251	180	263557	51.82 ug/L	99
122) 1,2,4-trichlorobenzene	18.978	180	210969	45.82 ug/L	96
123) hexachlorobutadiene	19.125	225	128769	55.54 ug/L	98
124) naphthalene	19.313	128	638195	61.65 ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	186755	46.06 ug/L	99
126) 2-methylnaphthalene	20.725	142	346388	157.34 ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264364.D
Acq On : 8 May 2019 11:06 am
Operator : thienn
Sample : jc87652-1msd
Misc : ms34579,vd10654,10.1,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 08 11:58:34 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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264416.d
Acq On : 9 May 2019 12:44 pm
Operator : thienn
Sample : JC87093-3MS Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:06:19 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	7.490	65	103908	500.00	ug/L	0.02
5) pentafluorobenzene	9.718	168	216020	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.675	114	327654	50.00	ug/L	0.00
75) chlorobenzene-d5	14.085	117	322884	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.731	152	204057	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.744	113	96730	47.46	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 94.92%			
55) 1,2-dichloroethane-d4 (s)	10.173	65	104680	42.62	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.24%			
76) toluene-d8 (s)	12.406	98	393296	49.95	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.90%			
100) 4-bromofluorobenzene (s)	15.403	95	174373	46.12	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 92.24%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.573	59	64107	232.71	ug/L	98
4) 1,4-dioxane	11.344	88	26120	1040.02	ug/L	92
6) chlorodifluoromethane	4.399	51	146556	32.16	ug/L	97
7) dichlorodifluoromethane	4.404	85	163302	26.04	ug/L	98
8) chloromethane	4.686	50	226152	43.06	ug/L	99
9) 1,3-butadiene	4.964	54	98974	34.02	ug/L	98
10) vinyl chloride	4.943	62	192626	36.05	ug/L	98
11) bromomethane	5.497	94	57939	21.05	ug/L	96
12) chloroethane	5.628	64	59612	25.47	ug/L	97
13) trichlorofluoromethane	6.130	101	164356	34.15	ug/L	99
14) vinyl bromide	5.994	106	112124	45.68	ug/L	98
15) ethyl ether	6.459	74	57545	48.31	ug/L	96
16) 2-chloropropane	6.658	43	197621	38.47	ug/L	95
17) acrolein	6.642	56	20040	50.69	ug/L	92
18) freon 113	6.909	151	103674	36.70	ug/L	98
19) 1,1-dichloroethene	6.873	96	118622	44.53	ug/L	92
20) acetone	6.836	58	37508	224.01	ug/L #	74
21) acetonitrile	7.202	41	166676	471.83	ug/L	97
22) iodomethane	7.118	142	190107	45.38	ug/L	96
23) carbon disulfide	7.281	76	390565	44.98	ug/L	98
24) methylene chloride	7.521	84	131839	47.10	ug/L	100
25) methyl acetate	7.286	43	75763	51.11	ug/L	96
26) methyl tert butyl ether	7.903	73	369295	45.63	ug/L	96
27) trans-1,2-dichloroethene	7.924	96	111295	45.57	ug/L	93
28) hexane	8.295	56	48933	31.13	ug/L	98
29) di-isopropyl ether	8.489	45	421422	45.54	ug/L	98
30) 2-butanone	9.090	72	44058	222.59	ug/L #	85
31) 1,1-dichloroethane	8.473	63	193423	44.48	ug/L	99
32) chloroprene	8.588	53	159238	41.01	ug/L	94
33) acrylonitrile	7.767	53	37160	54.49	ug/L	94
34) vinyl acetate	8.400	86	21696	45.51	ug/L	98
35) ethyl tert-butyl ether	8.949	59	420138	46.02	ug/L	99
36) ethyl acetate	9.127	45	15309	54.93	ug/L #	77
37) 2,2-dichloropropane	9.242	77	119687	25.66	ug/L	96
38) cis-1,2-dichloroethene	9.179	96	123174	46.09	ug/L	97
39) propionitrile	9.132	54	158090	531.20	ug/L	97
40) methyl acrylate	9.210	85	14195	48.50	ug/L #	92
41) methacrylonitrile	9.357	67	39046	50.07	ug/L	93
42) bromochloromethane	9.472	128	56844	47.14	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264416.d
Acq On : 9 May 2019 12:44 pm
Operator : thienn
Sample : JC87093-3MS Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:06:19 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	9.519	42	27728	47.77	ug/L	96
44) chloroform	9.556	83	182810	41.62	ug/L	97
45) tert-butyl formate	9.608	59	113214	45.71	ug/L	95
47) 1,1,1-trichloroethane	9.854	97	188538	41.84	ug/L	97
48) cyclohexane	10.005	84	196071	43.27	ug/L	98
50) 1,1-dichloropropene	10.021	75	136708	41.08	ug/L	99
51) carbon tetrachloride	10.073	117	156558	40.70	ug/L	98
52) tert-amyl alcohol	10.110	73	32118	235.57	ug/L	92
53) isopropyl acetate	10.152	87	24984	48.37	ug/L	94
56) n-butyl alcohol	10.685	56	162936	2058.84	ug/L	96
57) 2,2,4-trimethylpentane	10.403	57	268849	33.10	ug/L	97
58) benzene	10.267	78	1091829	109.75	ug/L	97
59) tert-amyl methyl ether	10.361	73	404978	44.62	ug/L	98
60) heptane	10.555	57	39401	29.64	ug/L	97
61) 1,2-dichloroethane	10.267	62	133508	38.16	ug/L	84
62) ethyl acrylate	10.973	55	119004	46.48	ug/L	98
63) trichloroethene	11.015	95	105054	42.50	ug/L	99
64) 2-chloroethyl vinyl ether	11.810	63	324155	250.14	ug/L	99
65) methyl methacrylate	11.250	100	27201	48.61	ug/L #	87
66) methylcyclohexane	11.355	83	171370	40.64	ug/L	98
67) 1,2-dichloropropane	11.292	63	114673	46.44	ug/L	99
68) dibromomethane	11.402	93	62352	43.68	ug/L	98
69) bromodichloromethane	11.559	83	144058	43.51	ug/L	99
70) 2-nitropropane	11.737	41	22201	43.00	ug/L	100
71) epichlorohydrin	11.888	57	56747	237.80	ug/L	98
72) cis-1,3-dichloropropene	12.056	75	166489	41.76	ug/L	94
73) 4-methyl-2-pentanone	12.150	58	178174	206.79	ug/L	90
74) isoamyl alcohol	12.145	70	73237	1084.86	ug/L #	80
77) toluene	12.490	92	302660	49.00	ug/L	98
78) ethyl methacrylate	12.673	69	141874	48.50	ug/L	96
79) trans-1,3-dichloropropene	12.662	75	146574	40.84	ug/L	92
80) 1,1,2-trichloroethane	12.908	83	77220	46.89	ug/L	97
81) tetrachloroethene	13.117	164	87439	43.46	ug/L	99
82) 2-hexanone	13.086	58	160257	215.18	ug/L	94
83) 1,3-dichloropropane	13.107	76	158267	44.64	ug/L	96
84) butyl acetate	13.196	56	80398	53.02	ug/L	91
85) dibromochloromethane	13.389	129	107024	46.13	ug/L	97
86) 1,2-dibromoethane	13.567	107	107471	41.98	ug/L	99
87) n-butyl ether	14.095	57	518701	46.08	ug/L	99
88) chlorobenzene	14.122	112	314870	44.02	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.190	131	126257	45.95	ug/L	100
90) ethylbenzene	14.200	91	549827	44.92	ug/L	99
91) m,p-xylene	14.336	106	426791	91.52	ug/L	99
92) o-xylene	14.786	91	478644	46.72	ug/L	99
93) styrene	14.796	104	363641	45.77	ug/L	95
94) butyl acrylate	14.582	55	258081	53.73	ug/L	99
95) n-amyl acetate	14.822	70	112008	55.09	ug/L	99
96) isopropylbenzene	15.188	105	586361	49.04	ug/L	98
97) bromoform	15.042	173	78412	46.90	ug/L	96
98) cis-1,4-dichloro-2-butene	15.188	88	39916	35.97	ug/L	93
101) 1,1,2,2-tetrachloroethane	15.466	83	141729	44.94	ug/L	100
102) trans-1,4-dichloro-2-b...	15.502	53	31466	39.86	ug/L	93
103) 1,2,3-trichloropropane	15.565	110	40928	45.02	ug/L #	82
104) bromobenzene	15.612	156	151913	42.48	ug/L	97
105) n-propylbenzene	15.659	91	649870	45.99	ug/L	99
106) 2-chlorotoluene	15.806	126	140583	44.39	ug/L	98
107) 4-chlorotoluene	15.926	91	417778	44.79	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264416.d
Acq On : 9 May 2019 12:44 pm
Operator : thienn
Sample : JC87093-3MS Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:06:19 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

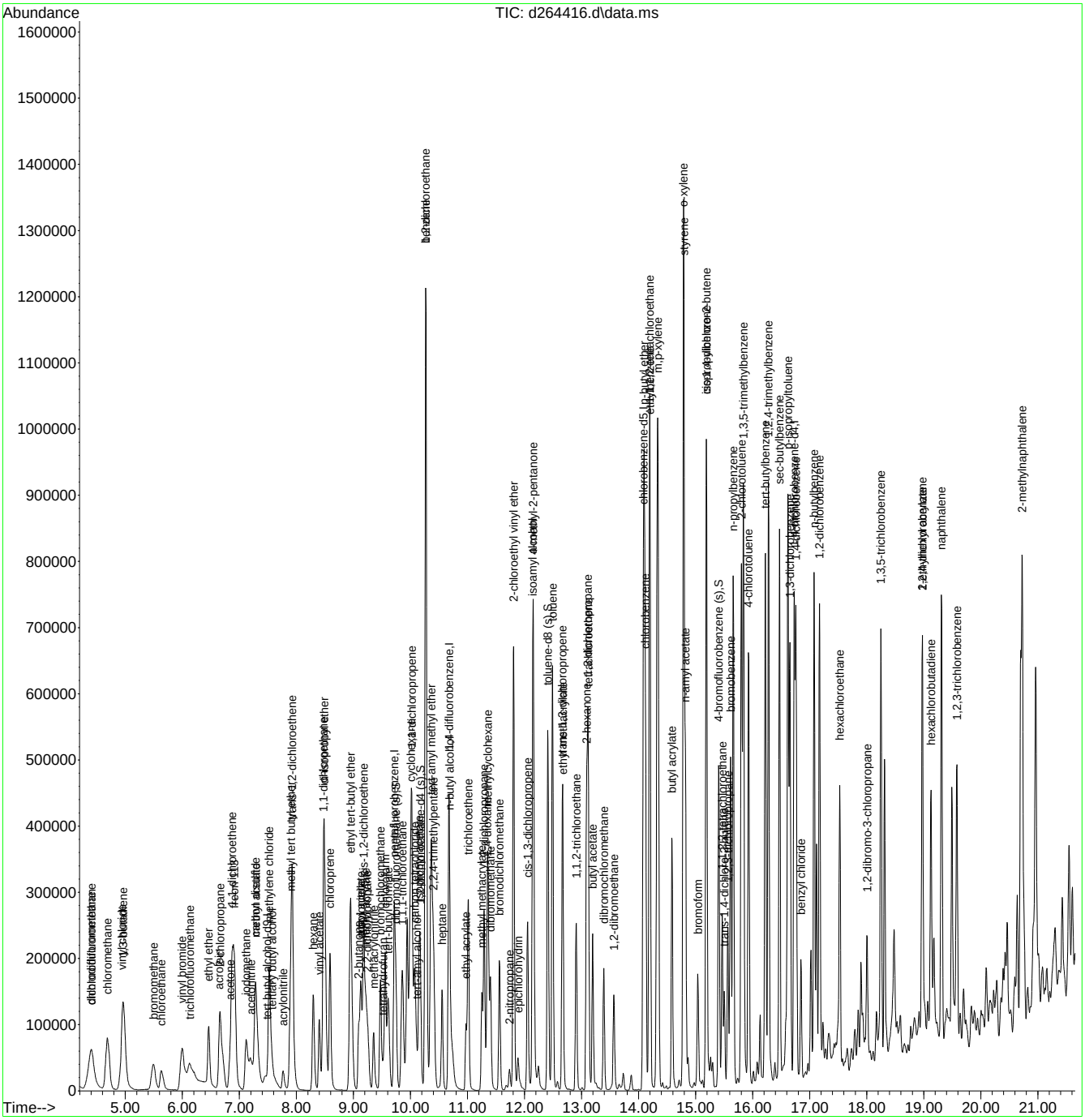
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.837	105	524401	48.56	ug/L	100
109) tert-butylbenzene	16.224	119	421413	50.30	ug/L	97
110) 1,2,4-trimethylbenzene	16.276	105	543490	50.47	ug/L	98
111) sec-butylbenzene	16.470	105	610874	49.50	ug/L	97
112) p-isopropyltoluene	16.616	119	523300	50.95	ug/L	97
113) 1,3-dichlorobenzene	16.653	146	292012	46.74	ug/L	99
114) 1,4-dichlorobenzene	16.758	146	300045	46.31	ug/L	99
115) 1,2-dichlorobenzene	17.171	146	305127	48.73	ug/L	99
116) benzyl chloride	16.846	91	142185	23.38	ug/L	99
117) n-butylbenzene	17.077	92	250398	52.19	ug/L	99
118) 2-ethylhexyl acrylate	18.975	70	37819	37.41	ug/L #	73
119) hexachloroethane	17.526	201	90607	56.82	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.008	75	29091	51.47	ug/L	93
121) 1,3,5-trichlorobenzene	18.248	180	222559	52.84	ug/L	98
122) 1,2,4-trichlorobenzene	18.975	180	189188	49.50	ug/L	99
123) hexachlorobutadiene	19.127	225	92789	48.33	ug/L	99
124) naphthalene	19.310	128	663786	76.95	ug/L	98
125) 1,2,3-trichlorobenzene	19.582	180	158487	47.16	ug/L	98
126) 2-methylnaphthalene	20.727	142	383358	210.27	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264416.d
Acq On : 9 May 2019 12:44 pm
Operator : thienn
Sample : JC87093-3MS Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:06:19 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\nizele\5_may\5-10-19\vd10656\
Data File : d264417.d
Acq On : 9 May 2019 1:13 pm
Operator : thienn
Sample : JC87093-3MSD Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:07:50 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	7.457	65	98025	500.00	ug/L	-0.02
5) pentafluorobenzene	9.716	168	223575	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.673	114	337838	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.083	117	342596	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	207791	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.747	113	101666	48.20	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.40%			
55) 1,2-dichloroethane-d4 (s)	10.176	65	108682	42.91	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.82%			
76) toluene-d8 (s)	12.409	98	411629	49.27	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.54%			
100) 4-bromofluorobenzene (s)	15.406	95	182450	47.39	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.78%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.572	59	63055	242.63	ug/L	95
4) 1,4-dioxane	11.343	88	31495	1329.29	ug/L	96
6) chlorodifluoromethane	4.407	51	153316	32.50	ug/L	99
7) dichlorodifluoromethane	4.413	85	177788	27.39	ug/L	98
8) chloromethane	4.700	50	259291	47.71	ug/L	99
9) 1,3-butadiene	4.967	54	112242	37.28	ug/L	97
10) vinyl chloride	4.946	62	209505	37.88	ug/L	99
11) bromomethane	5.490	94	57741	20.27	ug/L	98
12) chloroethane	5.631	64	61664	25.45	ug/L	99
13) trichlorofluoromethane	6.133	101	177120	35.56	ug/L	99
14) vinyl bromide	5.997	106	120134	47.29	ug/L	98
15) ethyl ether	6.463	74	61756	50.10	ug/L	91
16) 2-chloropropane	6.662	43	212259	39.92	ug/L	95
17) acrolein	6.646	56	20880	51.03	ug/L	98
18) freon 113	6.918	151	110971	37.96	ug/L	98
19) 1,1-dichloroethene	6.881	96	129143	46.84	ug/L	90
20) acetone	6.839	58	38616	222.83	ug/L #	77
21) acetonitrile	7.200	41	165999	454.03	ug/L	99
22) iodomethane	7.122	142	201628	46.50	ug/L	95
23) carbon disulfide	7.284	76	416382	46.33	ug/L	99
24) methylene chloride	7.525	84	140220	48.40	ug/L	98
25) methyl acetate	7.284	43	78834	51.38	ug/L	95
26) methyl tert butyl ether	7.906	73	378345	45.17	ug/L	96
27) trans-1,2-dichloroethene	7.927	96	119062	47.10	ug/L	96
28) hexane	8.299	56	56937	35.00	ug/L	97
29) di-isopropyl ether	8.492	45	437585	45.69	ug/L	98
30) 2-butanone	9.094	72	43711	213.37	ug/L	96
31) 1,1-dichloroethane	8.476	63	206488	45.88	ug/L	99
32) chloroprene	8.591	53	173123	43.08	ug/L	92
33) acrylonitrile	7.770	53	37494	53.12	ug/L	93
34) vinyl acetate	8.398	86	22538	45.68	ug/L	94
35) ethyl tert-butyl ether	8.947	59	431841	45.70	ug/L	99
36) ethyl acetate	9.130	45	15879	55.05	ug/L	96
37) 2,2-dichloropropane	9.240	77	122662	25.41	ug/L	91
38) cis-1,2-dichloroethene	9.182	96	132474	47.89	ug/L	98
39) propionitrile	9.135	54	158597	514.89	ug/L	98
40) methyl acrylate	9.214	85	14333	47.36	ug/L #	91
41) methacrylonitrile	9.350	67	41036	50.85	ug/L	91
42) bromochloromethane	9.475	128	60408	48.40	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264417.d
Acq On : 9 May 2019 1:13 pm
Operator : thienn
Sample : JC87093-3MSD Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:07:50 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	9.517	42	28739	47.84	ug/L	99
44) chloroform	9.554	83	196984	43.33	ug/L	96
45) tert-butyl formate	9.606	59	116951	45.62	ug/L	96
47) 1,1,1-trichloroethane	9.857	97	195521	41.93	ug/L	97
48) cyclohexane	10.004	84	209215	44.61	ug/L	97
50) 1,1-dichloropropene	10.025	75	147647	42.87	ug/L	96
51) carbon tetrachloride	10.072	117	164426	41.30	ug/L	99
52) tert-amyl alcohol	10.119	73	30385	215.33	ug/L	96
53) isopropyl acetate	10.155	87	25321	47.36	ug/L	94
56) n-butyl alcohol	10.689	56	164349	2014.10	ug/L	95
57) 2,2,4-trimethylpentane	10.401	57	318982	38.08	ug/L	97
58) benzene	10.270	78	1133200	110.47	ug/L	97
59) tert-amyl methyl ether	10.359	73	417303	44.59	ug/L	99
60) heptane	10.558	57	44621	32.56	ug/L	99
61) 1,2-dichloroethane	10.265	62	141701	39.29	ug/L	85
62) ethyl acrylate	10.971	55	125121	47.40	ug/L	99
63) trichloroethene	11.013	95	112317	44.07	ug/L	99
64) 2-chloroethyl vinyl ether	11.808	63	345413	258.51	ug/L	98
65) methyl methacrylate	11.254	100	28995	50.25	ug/L #	89
66) methylcyclohexane	11.353	83	189543	43.59	ug/L	98
67) 1,2-dichloropropane	11.290	63	120726	47.41	ug/L	98
68) dibromomethane	11.400	93	65571	44.55	ug/L	98
69) bromodichloromethane	11.557	83	151198	44.29	ug/L	99
70) 2-nitropropane	11.735	41	22502	42.27	ug/L	97
71) epichlorohydrin	11.886	57	56665	230.30	ug/L	98
72) cis-1,3-dichloropropene	12.054	75	176809	43.01	ug/L	95
73) 4-methyl-2-pentanone	12.153	58	179136	201.64	ug/L	88
74) isoamyl alcohol	12.143	70	70667	1015.24	ug/L #	77
77) toluene	12.488	92	323458	49.36	ug/L	96
78) ethyl methacrylate	12.671	69	152704	49.20	ug/L	97
79) trans-1,3-dichloropropene	12.661	75	158081	41.52	ug/L	92
80) 1,1,2-trichloroethane	12.906	83	82799	47.39	ug/L	96
81) tetrachloroethene	13.121	164	93585	43.84	ug/L	97
82) 2-hexanone	13.084	58	163919	207.43	ug/L	97
83) 1,3-dichloropropane	13.105	76	168686	44.84	ug/L	95
84) butyl acetate	13.194	56	84223	52.34	ug/L	91
85) dibromochloromethane	13.387	129	118632	48.19	ug/L	97
86) 1,2-dibromoethane	13.565	107	114730	42.23	ug/L	97
87) n-butyl ether	14.099	57	552965	46.30	ug/L	99
88) chlorobenzene	14.120	112	338373	44.59	ug/L	98
89) 1,1,1,2-tetrachloroethane	14.188	131	131529	45.11	ug/L	97
90) ethylbenzene	14.198	91	597770	46.03	ug/L	100
91) m,p-xylene	14.334	106	456507	92.26	ug/L	98
92) o-xylene	14.784	91	500639	46.05	ug/L	98
93) styrene	14.794	104	391354	46.42	ug/L	97
94) butyl acrylate	14.585	55	265777	52.15	ug/L	98
95) n-amyl acetate	14.821	70	112616	52.20	ug/L	97
96) isopropylbenzene	15.187	105	618078	48.72	ug/L	98
97) bromoform	15.040	173	82373	46.43	ug/L	99
98) cis-1,4-dichloro-2-butene	15.187	88	41894	35.58	ug/L	94
101) 1,1,2,2-tetrachloroethane	15.464	83	145182	45.21	ug/L	99
102) trans-1,4-dichloro-2-b...	15.506	53	31342	38.99	ug/L	90
103) 1,2,3-trichloropropane	15.563	110	42064	45.44	ug/L #	85
104) bromobenzene	15.616	156	162025	44.49	ug/L	96
105) n-propylbenzene	15.657	91	685418	47.63	ug/L	99
106) 2-chlorotoluene	15.804	126	148867	46.16	ug/L	97
107) 4-chlorotoluene	15.929	91	438609	46.17	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264417.d
Acq On : 9 May 2019 1:13 pm
Operator : thienn
Sample : JC87093-3MSD Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:07:50 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

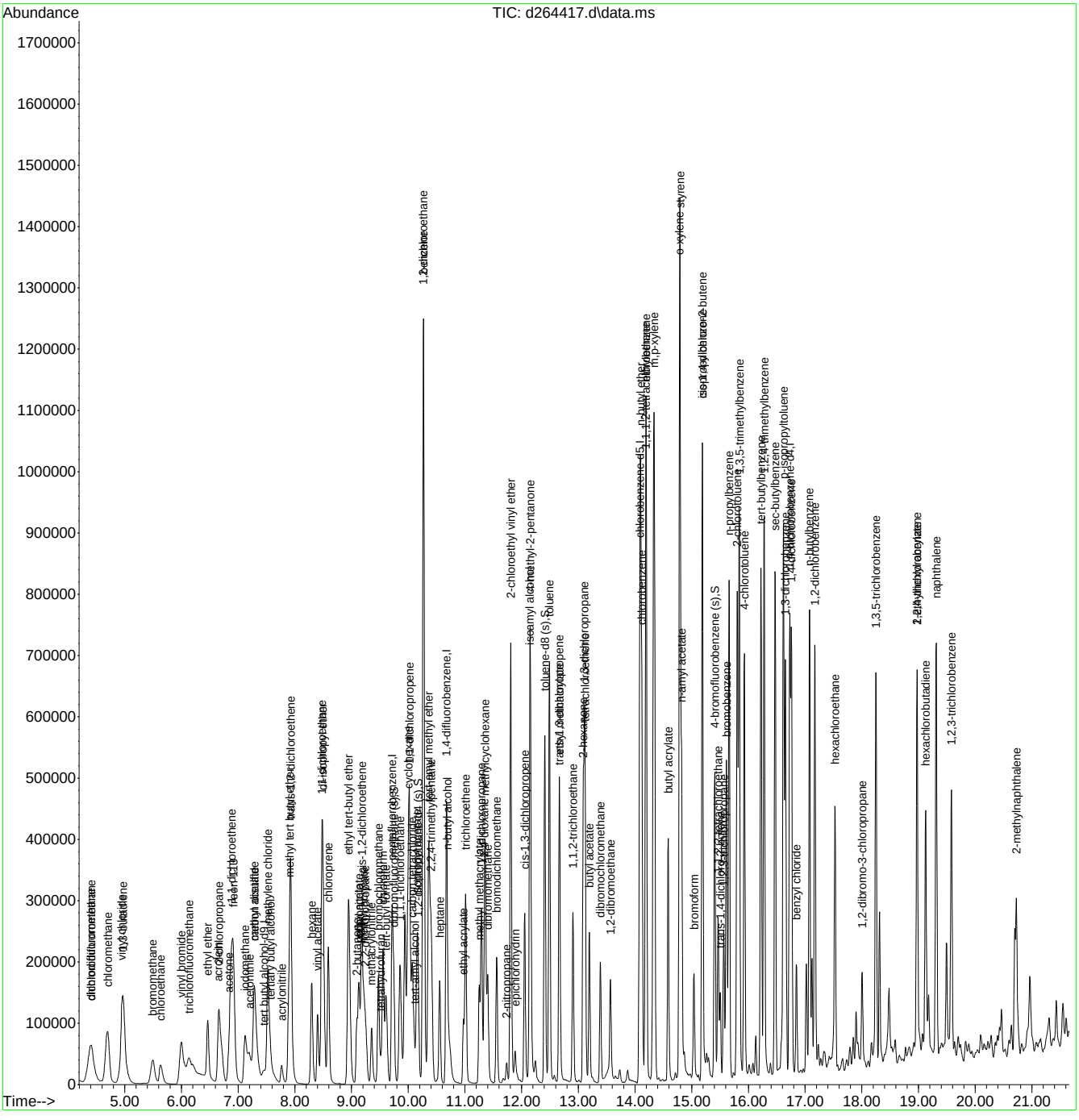
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.840	105	547417	49.78 ug/L	99
109) tert-butylbenzene	16.222	119	425740	49.91 ug/L	98
110) 1,2,4-trimethylbenzene	16.280	105	556423	50.74 ug/L	99
111) sec-butylbenzene	16.473	105	632520	50.34 ug/L	98
112) p-isopropyltoluene	16.620	119	538633	51.50 ug/L	97
113) 1,3-dichlorobenzene	16.651	146	301774	47.43 ug/L	100
114) 1,4-dichlorobenzene	16.756	146	310211	47.01 ug/L	99
115) 1,2-dichlorobenzene	17.174	146	310415	48.69 ug/L	99
116) benzyl chloride	16.845	91	142795	23.06 ug/L	98
117) n-butylbenzene	17.075	92	258667	52.95 ug/L	97
118) 2-ethylhexyl acrylate	18.973	70	35819	34.79 ug/L #	71
119) hexachloroethane	17.530	201	90291	55.60 ug/L	93
120) 1,2-dibromo-3-chloropr...	18.006	75	29072	50.52 ug/L	96
121) 1,3,5-trichlorobenzene	18.252	180	229487	53.50 ug/L	97
122) 1,2,4-trichlorobenzene	18.973	180	194421	49.94 ug/L	97
123) hexachlorobutadiene	19.125	225	98618	50.44 ug/L	99
124) naphthalene	19.313	128	654767	74.60 ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	167401	48.85 ug/L	99
126) 2-methylnaphthalene	20.725	142	140842	75.86 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264417.d
Acq On : 9 May 2019 1:13 pm
Operator : thienn
Sample : JC87093-3MSD Inst : MSD
Misc : ms34369,vd10656,4.3,,100,10,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 10 00:07:50 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\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151806.d
Acq On : 6 May 2019 11:30 am
Operator : PrashanS
Sample : JC86986-4DUP Inst : MS3C
Misc : MS34303,V3C6820,4.9,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:39:11 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

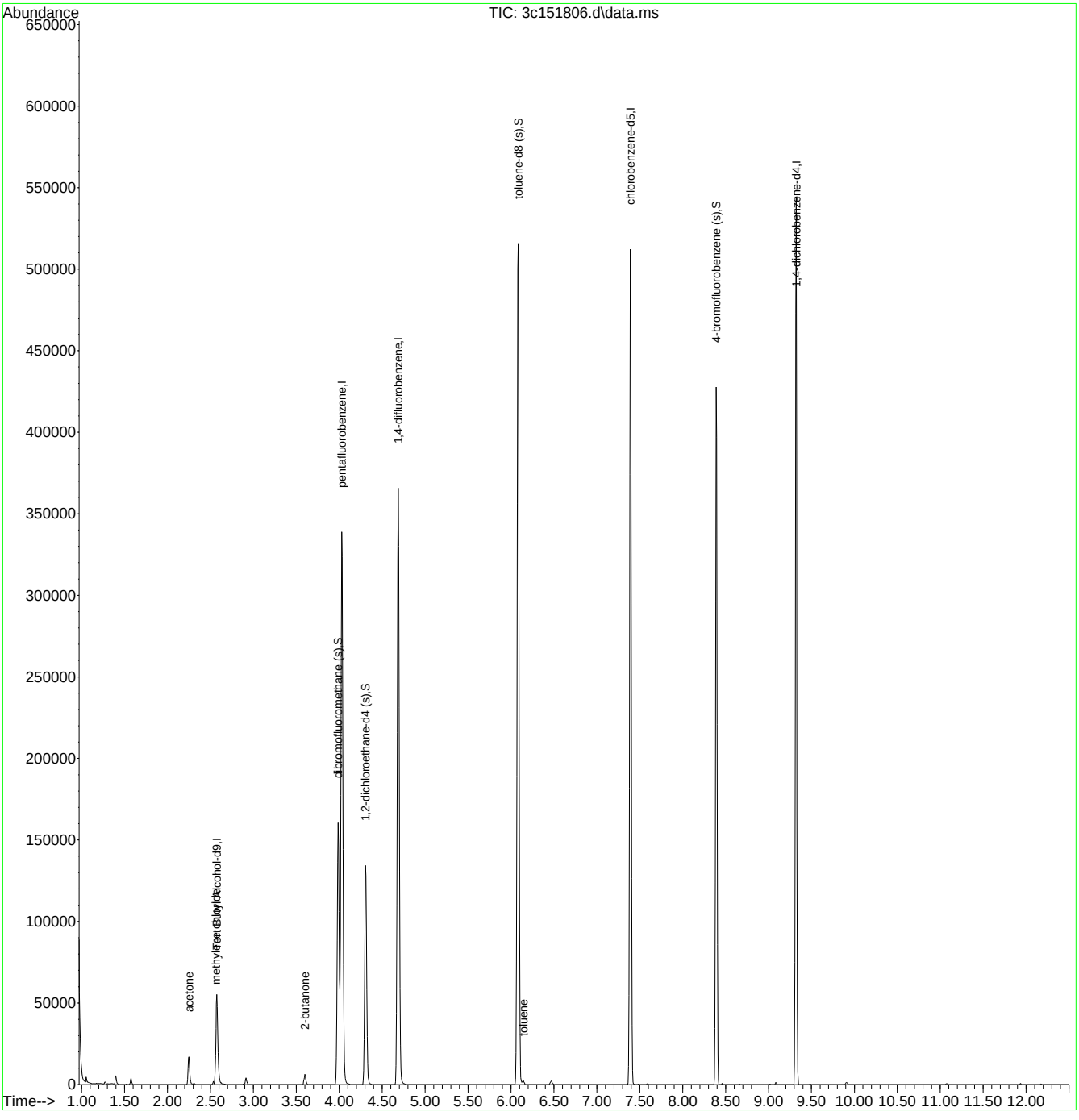
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	50741	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	215893	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	272799	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	230845	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	109786	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	78690	50.44	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.88%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	84879	57.27	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 114.54%			
75) toluene-d8 (s)	6.084	98	302381	52.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.84%			
98) 4-bromofluorobenzene (s)	8.390	95	102752	56.93	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 113.86%			
Target Compounds						Qvalue
20) acetone	2.250	58	4853	72.15	ug/L	91
24) methylene chloride	2.564	84	1344	1.01	ug/L	98
31) 2-butanone	3.599	72	1731	16.34	ug/L #	76
76) toluene	6.146	92	1191	0.36	ug/L #	80

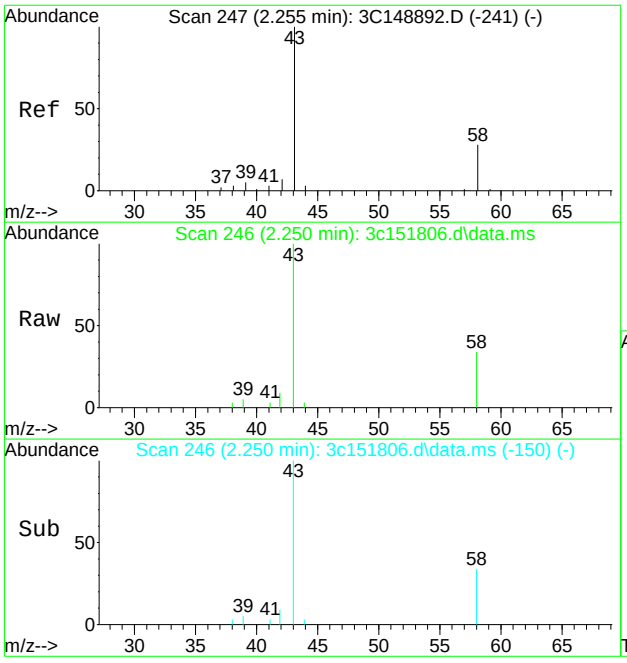
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6821\
Data File : 3c151806.d
Acq On : 6 May 2019 11:30 am
Operator : PrashanS
Sample : JC86986-4DUP Inst : MS3C
Misc : MS34303,V3C6820,4.9,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 23:39:11 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

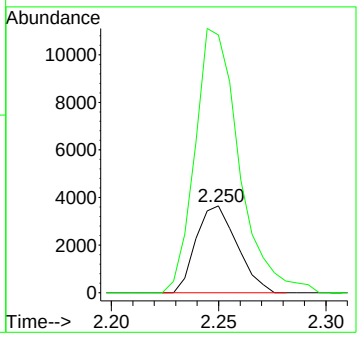


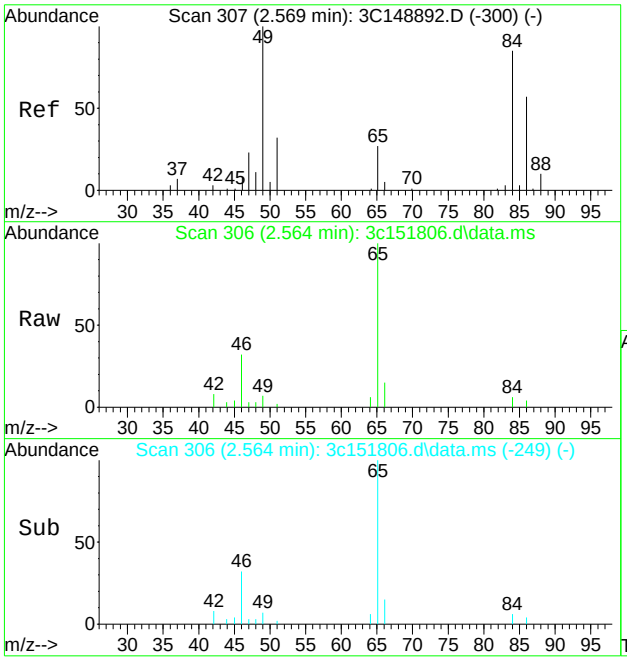


#20
acetone
Concen: 72.15 ug/L
RT: 2.250 min Scan# 246
Delta R.T. 0.000 min
Lab File: 3c151806.d
Acq: 6 May 2019 11:30 am

Tgt Ion: 58 Resp: 4853

Ion	Ratio	Lower	Upper
58	100		
43	297.1	284.5	344.5

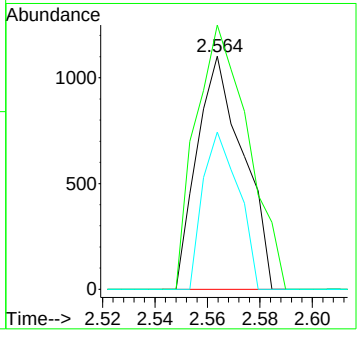


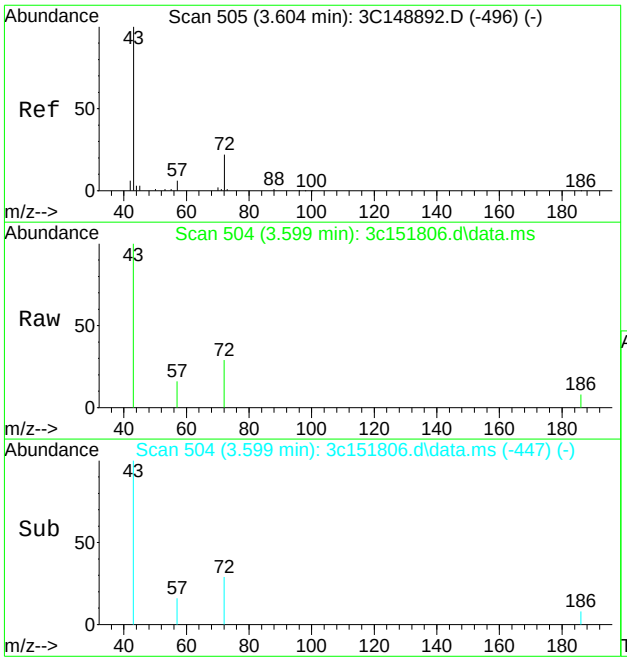


#24
methylene chloride
Concen: 1.01 ug/L
RT: 2.564 min Scan# 306
Delta R.T. 0.000 min
Lab File: 3c151806.d
Acq: 6 May 2019 11:30 am

Tgt Ion: 84 Resp: 1344

Ion	Ratio	Lower	Upper
84	100		
49	113.4	87.1	147.1
86	67.4	37.5	97.5

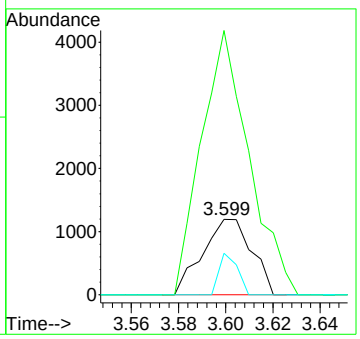


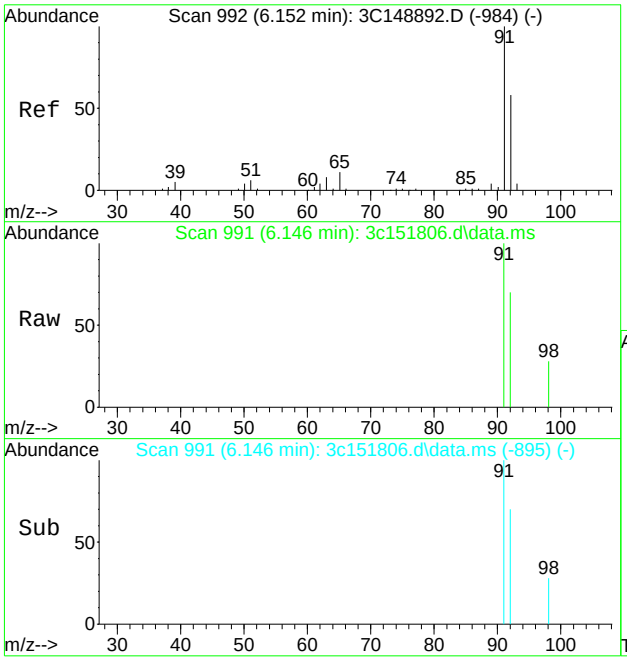


#31
2-butanone
Concen: 16.34 ug/L
RT: 3.599 min Scan# 504
Delta R.T. 0.000 min
Lab File: 3c151806.d
Acq: 6 May 2019 11:30 am

Tgt Ion: 72 Resp: 1731

Ion	Ratio	Lower	Upper
72	100		
43	350.4	372.9	432.9#
57	55.0	0.0	59.6

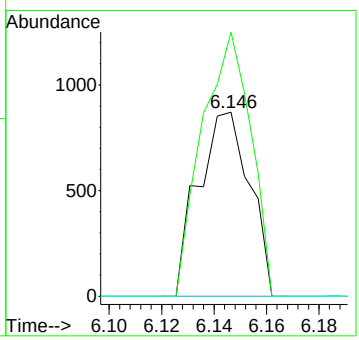




#76
toluene
Concen: 0.36 ug/L
RT: 6.146 min Scan# 991
Delta R.T. 0.000 min
Lab File: 3c151806.d
Acq: 6 May 2019 11:30 am

Tgt Ion: 92 Resp: 1191

Ion	Ratio	Lower	Upper
92	100		
91	143.6	147.5	187.5#
65	0.0	0.0	38.2



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6821\
Data File : 3c151814.d
Acq On : 6 May 2019 2:35 pm
Operator : PrashanS
Sample : JC87093-7DUP Inst : MS3C
Misc : MS34369,V3C6821,4.9,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:03:18 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	42189	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	217548	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	276749	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	216117	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	90470	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	76356	48.57	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.14%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	78972	52.52	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 105.04%			
75) toluene-d8 (s)	6.083	98	296371	55.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.80%			
98) 4-bromofluorobenzene (s)	8.390	95	92952	62.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 124.98%			
Target Compounds						Qvalue
20) acetone	2.250	58	7508	110.77	ug/L	99
23) carbon disulfide	2.312	76	1853	0.54	ug/L	69
24) methylene chloride	2.569	84	653	0.49	ug/L	93
31) 2-butanone	3.599	72	3293	30.85	ug/L #	53
119) naphthalene	11.073	128	6560	2.03	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

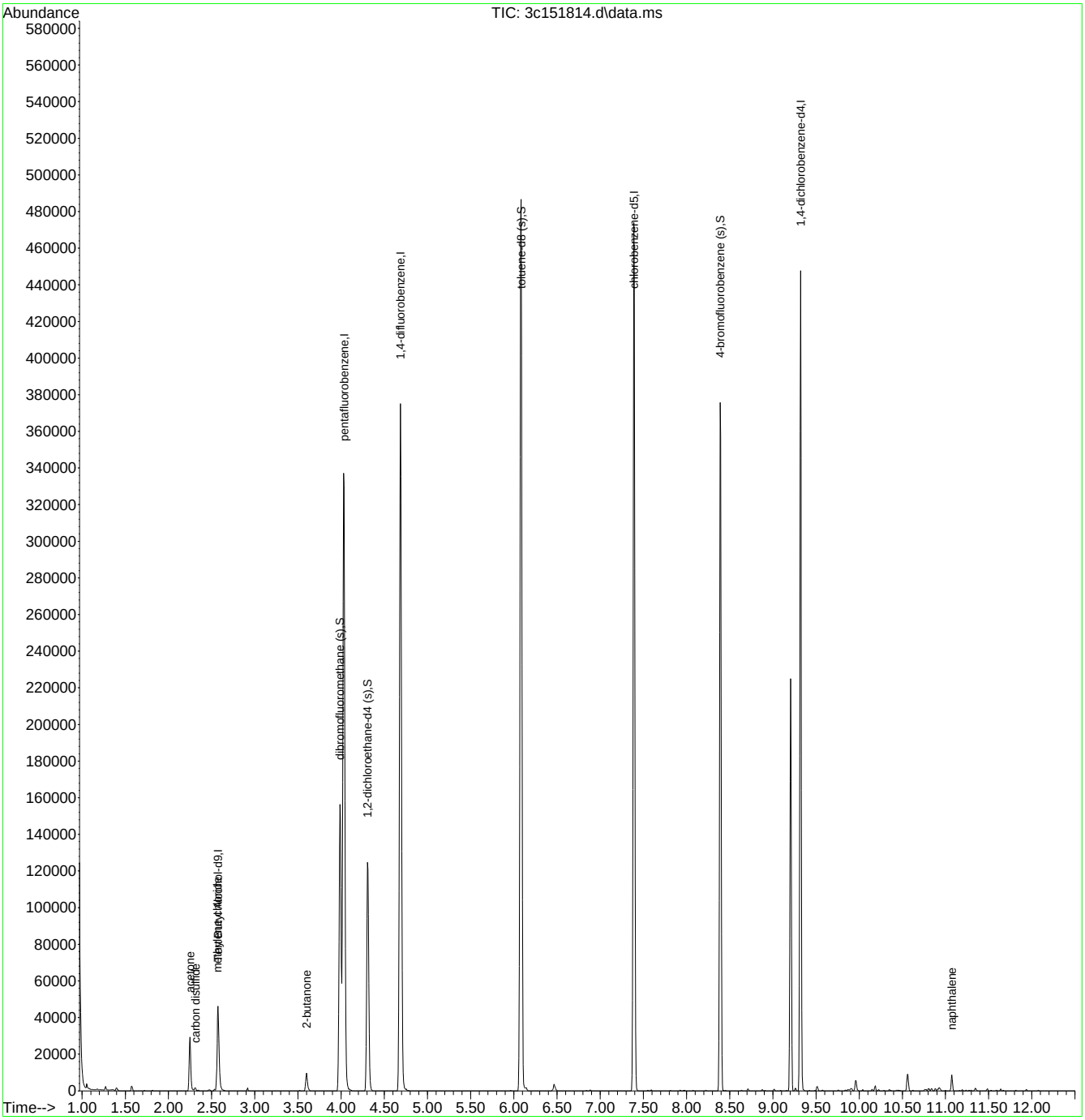
7.5.2

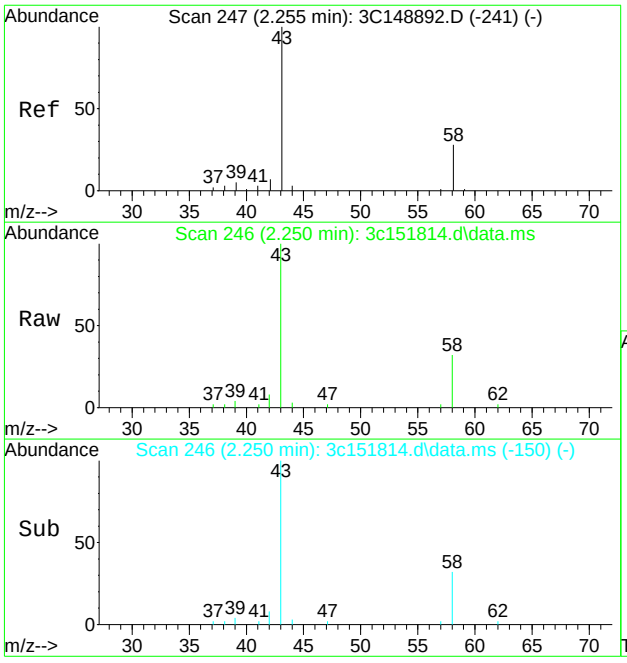
7

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6821\
Data File : 3c151814.d
Acq On : 6 May 2019 2:35 pm
Operator : PrashanS
Sample : JC87093-7DUP Inst : MS3C
Misc : MS34369,V3C6821,4.9,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 07 00:03:18 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

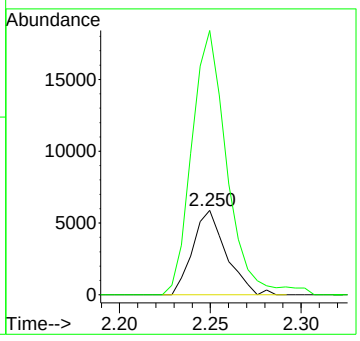


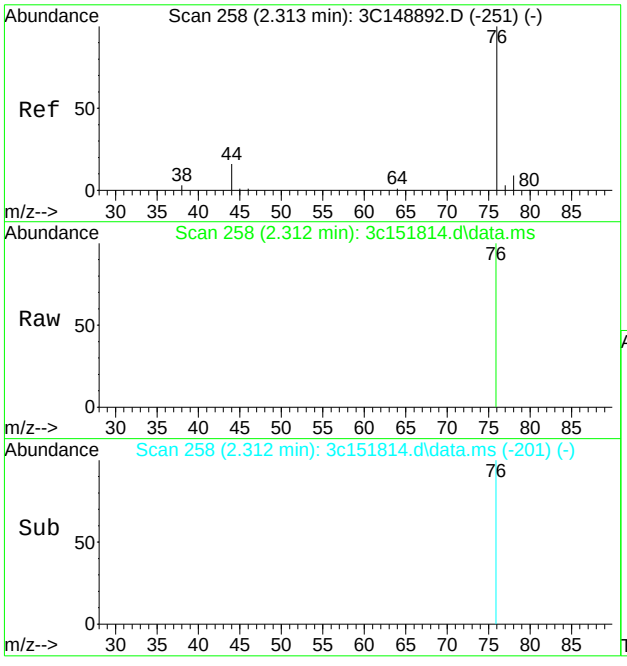


#20
acetone
Concen: 110.77 ug/L
RT: 2.250 min Scan# 246
Delta R.T. -0.000 min
Lab File: 3c151814.d
Acq: 6 May 2019 2:35 pm

Tgt Ion: 58 Resp: 7508

Ion	Ratio	Lower	Upper
58	100		
43	313.3	284.5	344.5

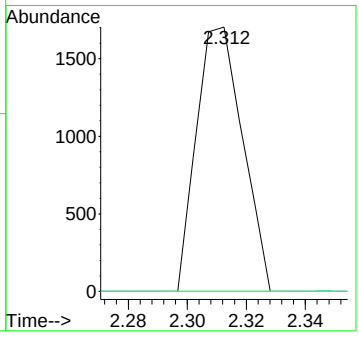


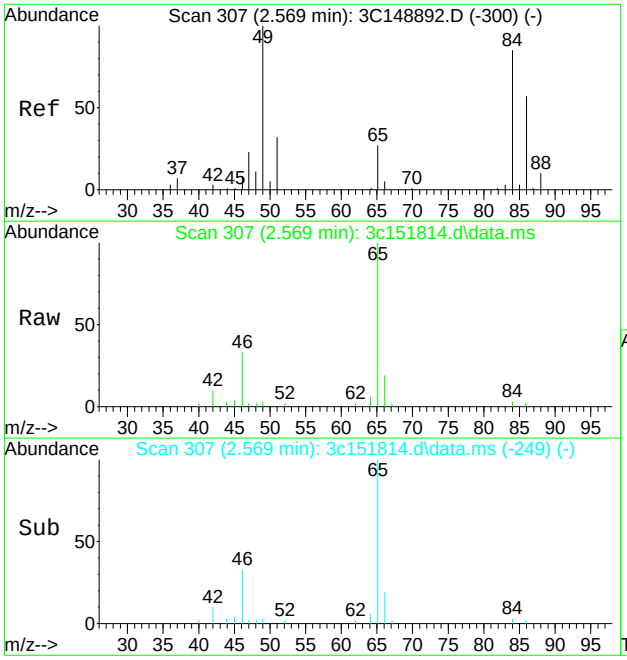


#23
carbon disulfide
Concen: 0.54 ug/L
RT: 2.312 min Scan# 258
Delta R.T. -0.000 min
Lab File: 3c151814.d
Acq: 6 May 2019 2:35 pm

Tgt Ion: 76 Resp: 1853

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
44	0.0	0.0	44.0

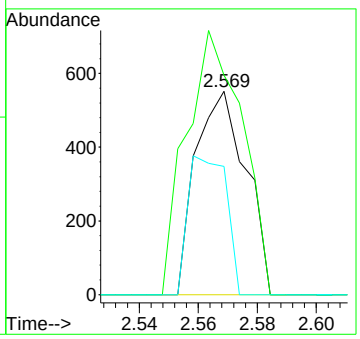


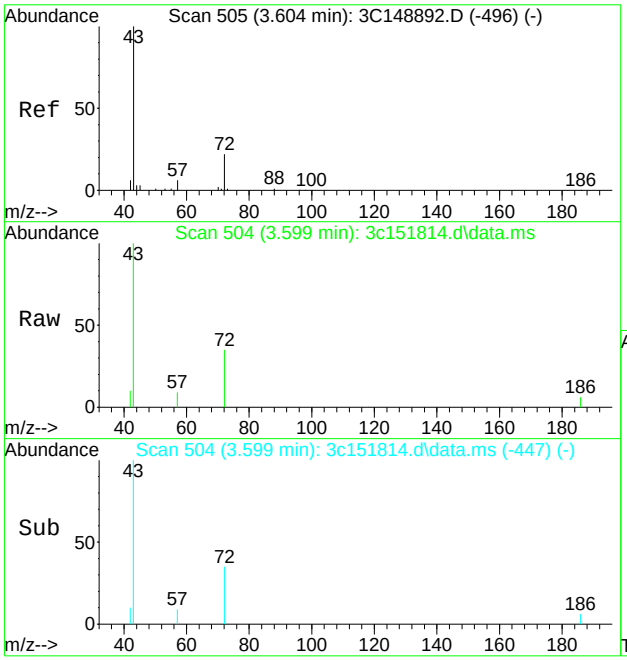


#24
methylene chloride
Concen: 0.49 ug/L
RT: 2.569 min Scan# 307
Delta R.T. 0.005 min
Lab File: 3c151814.d
Acq: 6 May 2019 2:35 pm

Tgt Ion: 84 Resp: 653

Ion	Ratio	Lower	Upper
84	100		
49	107.8	87.1	147.1
86	63.0	37.5	97.5

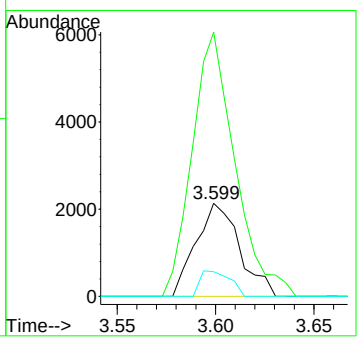


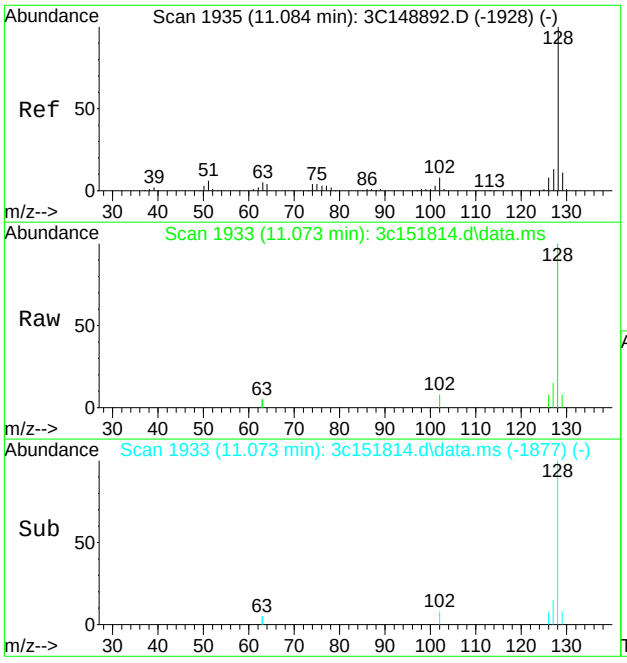


#31
2-butanone
Concen: 30.85 ug/L
RT: 3.599 min Scan# 504
Delta R.T. -0.000 min
Lab File: 3c151814.d
Acq: 6 May 2019 2:35 pm

Tgt Ion: 72 Resp: 3293

Ion	Ratio	Lower	Upper
72	100		
43	284.4	372.9	432.9#
57	26.7	0.0	59.6

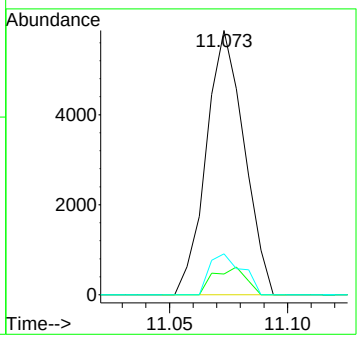




#119
naphthalene
Concen: 2.03 ug/L
RT: 11.073 min Scan# 1933
Delta R.T. -0.005 min
Lab File: 3c151814.d
Acq: 6 May 2019 2:35 pm

Tgt Ion:128 Resp: 6560

Ion	Ratio	Lower	Upper
128	100		
129	7.8	0.0	40.9
127	15.5	0.0	42.7



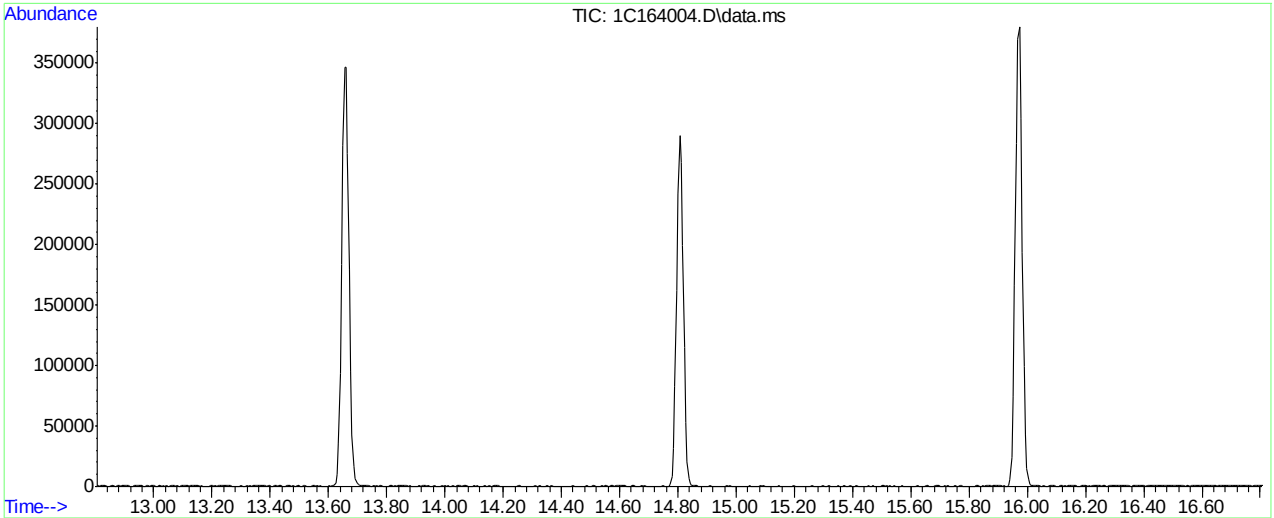
7.5.2

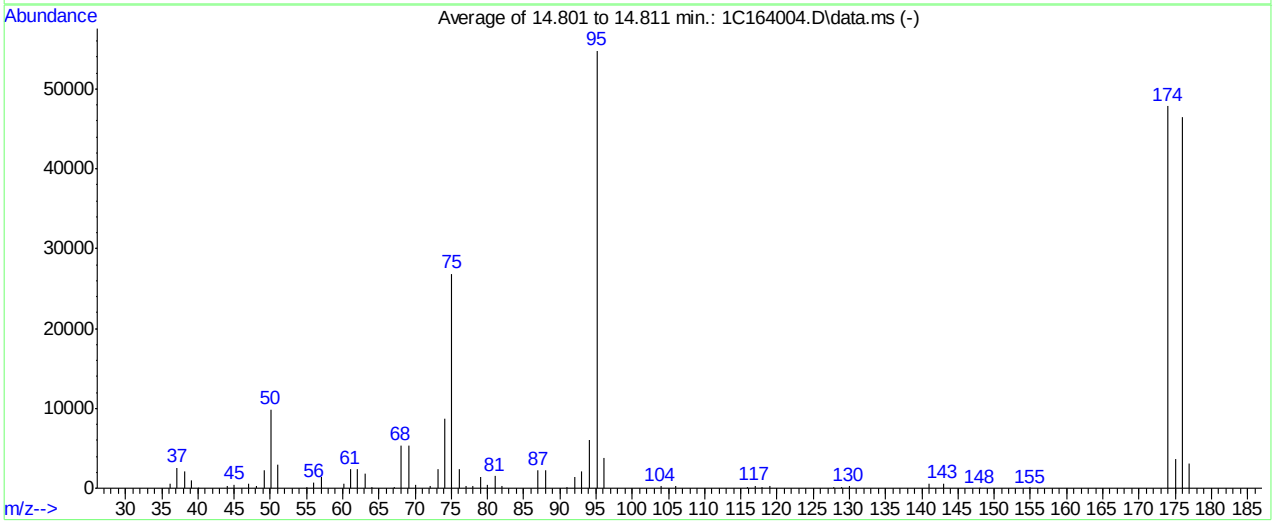
7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V1C7200\1C164004.D Vial: 2
Acq On : 24 Apr 2019 2:40 pm Operator: ROBERTS
Sample : BFB Inst : GCMS1C
Misc : MS34128,V1C7200,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um





AutoFind: Scans 2145, 2146, 2147; Background Corrected with Scan 2137

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.0	9866	PASS
75	95	30	60	49.0	26882	PASS
95	95	100	100	100.0	54821	PASS
96	95	5	9	6.8	3741	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	87.3	47850	PASS
175	174	5	9	7.7	3704	PASS
176	174	95	101	97.3	46538	PASS
177	176	5	9	6.8	3149	PASS

1C164004.D M1CS7200.M Thu Apr 25 08:08:51 2019

Average of 14.801 to 14.811 min.: 1C164004.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	544	51.10	2948	69.10	5345	81.00	1518
37.10	2561	55.10	98	70.05	372	81.95	264
38.10	2103	56.05	747	72.05	321	87.00	2269
39.10	936	57.10	1355	73.10	2372	88.00	2197
40.00	55	60.10	509	74.10	8770	90.95	209
44.10	255	61.05	2423	75.10	26882	92.10	1459
45.05	457	62.10	2371	76.10	2329	93.05	2145
47.05	626	63.10	1826	77.05	319	94.10	6042
48.10	307	64.10	101	78.05	253	95.10	54821
49.10	2240	67.10	114	79.00	1429	96.05	3741
50.10	9866	68.05	5387	80.00	468	103.95	254

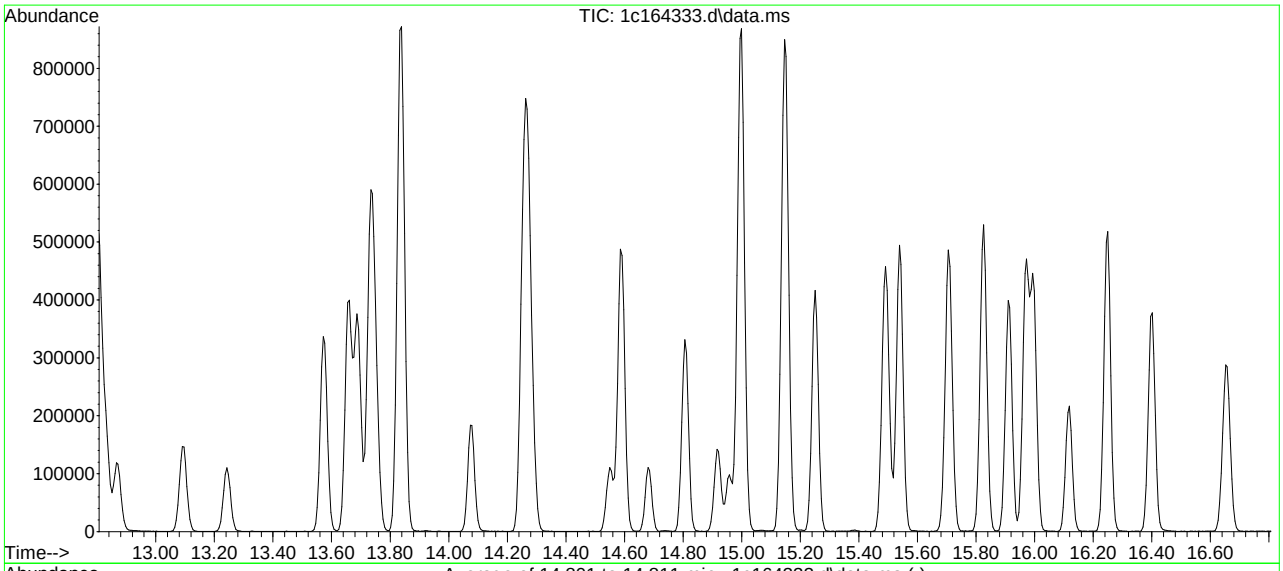
Average of 14.801 to 14.811 min.: 1C164004.D\data.ms
BFB
Modified:subtracted

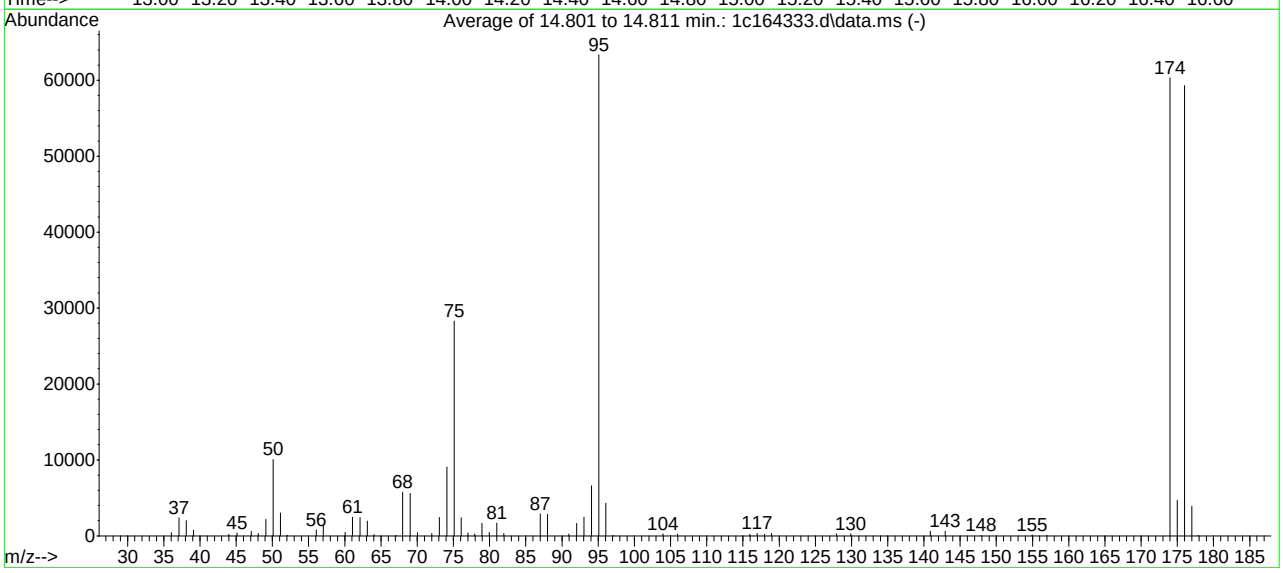
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
105.95	231	154.95	117				
115.95	210	174.00	47850				
117.00	333	175.00	3704				
117.95	212	176.00	46538				
119.00	281	177.00	3149				
127.90	120						
128.90	103						
129.95	234						
140.95	508						
142.95	581						
148.00	51						

SW-846 Method 8260

Data File : C:\msdchem\1\data\ke...c7213-rush\1c164333.d Vial: 1
Acq On : 7 May 2019 12:04 pm Operator: PrashanS
Sample : BFB Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7200.M (RTE Integrator)
Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um





AutoFind: Scans 2145, 2146, 2147; Background Corrected with Scan 2137

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	10071	PASS
75	95	30	60	44.7	28288	PASS
95	95	100	100	100.0	63347	PASS
96	95	5	9	6.8	4312	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.2	60323	PASS
175	174	5	9	7.7	4658	PASS
176	174	95	101	98.3	59304	PASS
177	176	5	9	6.6	3895	PASS

1c164333.d M1CS7200.M Wed May 08 04:48:07 2019

Average of 14.801 to 14.811 min.: 1c164333.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	433	52.05	101	70.05	422	81.95	309
37.10	2385	56.05	783	72.00	301	87.00	2901
38.10	2015	57.05	1330	73.05	2424	88.00	2832
39.10	762	60.05	474	74.10	9059	90.95	249
44.00	206	61.05	2472	75.10	28288	92.05	1638
45.10	405	62.10	2424	76.10	2379	93.05	2471
47.10	610	63.10	1953	77.00	375	94.10	6592
48.05	302	64.05	177	77.95	259	95.10	63347
49.10	2177	67.10	52	78.95	1652	96.05	4312
50.10	10071	68.00	5756	79.95	464	97.10	54
51.10	3006	69.05	5602	81.00	1685	103.95	261

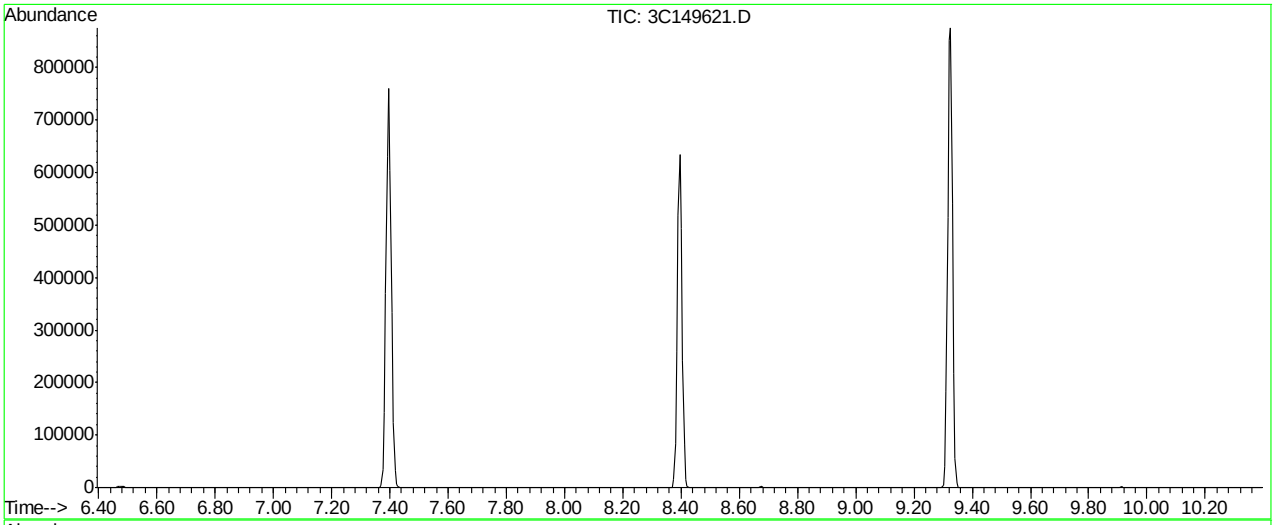
Average of 14.801 to 14.811 min.: 1c164333.d\data.ms
BFB
Modified:subtracted

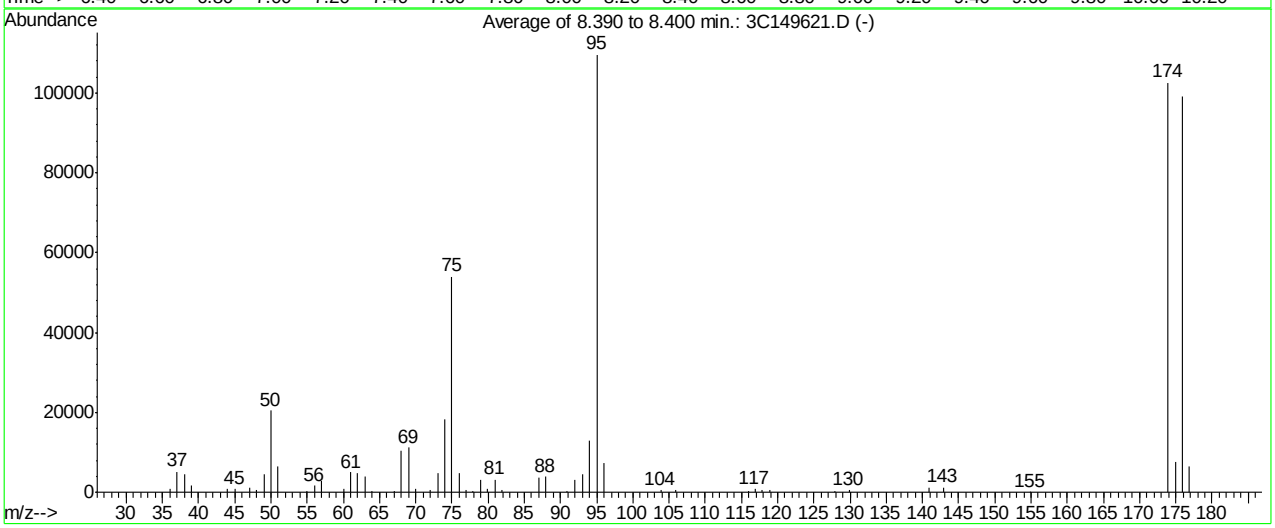
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
105.95	236	157.00	50				
115.95	215	174.00	60323				
116.95	319	175.00	4658				
117.95	195	176.00	59304				
118.95	316	177.00	3895				
127.90	260	177.90	58				
129.90	271						
140.90	597						
142.95	604						
147.90	68						
154.95	116						

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V3C6743\3C149621.D Vial: 1
Acq On : 13 Feb 2019 5:27 pm Operator: Prashans
Sample : BFB Inst : MS3C
Misc : MS32156,V3C6743,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um





AutoFind: Scans 1420, 1421, 1422; Background Corrected with Scan 1413

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	20405	PASS
75	95	30	60	49.2	53912	PASS
95	95	100	100	100.0	109629	PASS
96	95	5	9	6.8	7437	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.6	102597	PASS
175	174	5	9	7.4	7596	PASS
176	174	95	101	96.7	99168	PASS
177	176	5	9	6.4	6330	PASS

3C149621.D M3C6743.M Thu Feb 14 12:05:00 2019 MS3C

Average of 8.390 to 8.400 min.: 3C149621.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	944	55.00	222	69.95	874	81.85	580
37.00	5143	56.00	1612	72.00	606	86.95	3755
38.00	4500	57.00	2915	73.00	4818	87.90	3859
39.00	1751	60.00	972	74.00	18363	90.90	404
43.95	794	61.00	4985	75.00	53912	92.00	3069
45.00	802	62.00	4861	76.00	4816	93.00	4612
47.00	1036	63.00	3813	76.95	471	94.00	12919
47.95	634	63.95	349	77.90	385	95.00	109629
49.00	4386	67.05	358	78.90	3099	96.00	7437
50.00	20405	68.00	10382	79.95	870	103.85	450
51.00	6362	69.00	11173	80.90	3109	105.85	449

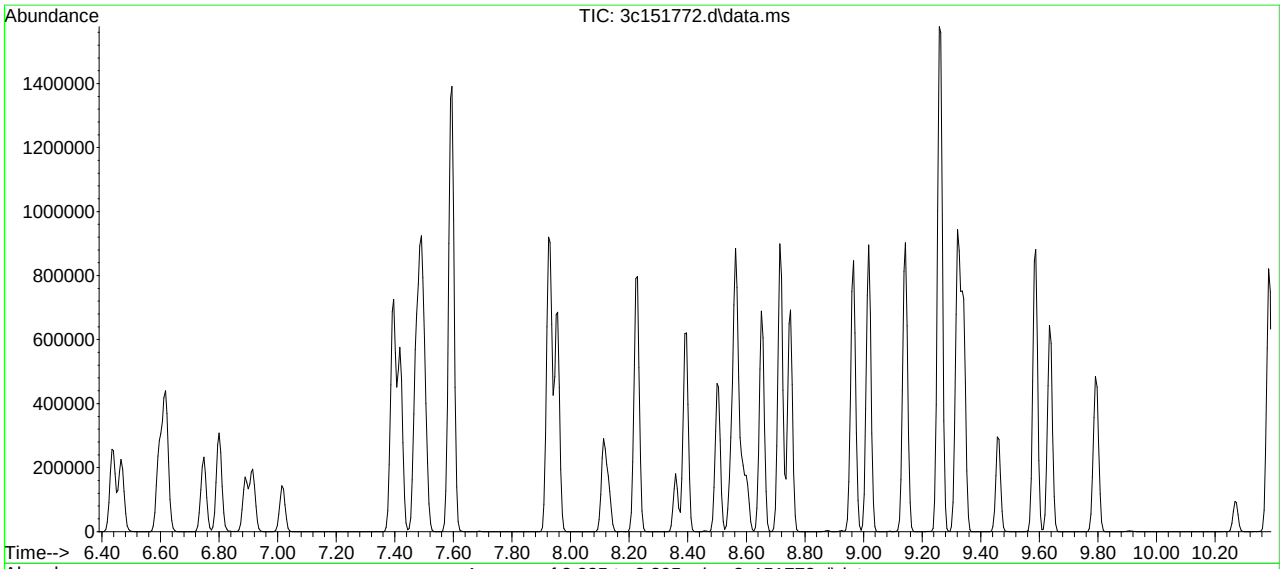
Average of 8.390 to 8.400 min.: 3C149621.D
BFB
Modified:subtracted

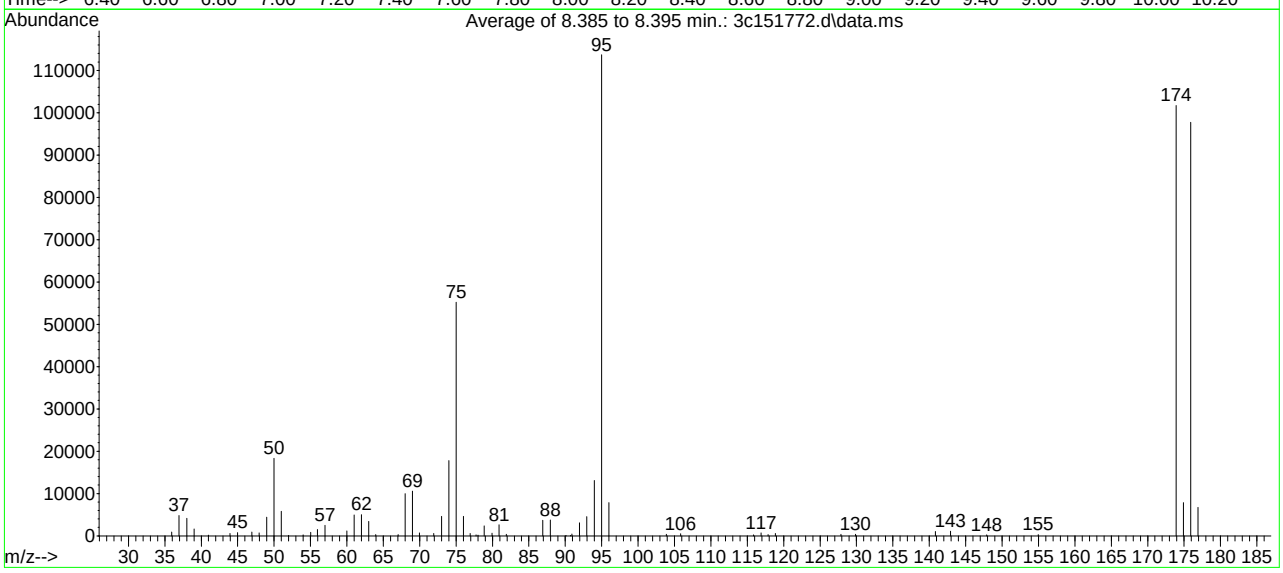
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
115.90	409	175.90	99168				
116.90	716	176.90	6330				
117.85	439						
118.90	604						
127.90	400						
129.85	441						
140.90	1180						
142.90	1210						
154.90	113						
173.90	102597						
174.90	7596						

SW-846 Method 8260

Data File : C:\msdchem\1\data\lo...-7\v3c6820\3c151772.d Vial: 2
Acq On : 5 May 2019 12:35 pm Operator: mariceld
Sample : BFB Inst : MS3C
Misc : MS34270,V3C6820,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um





Spectrum Information: Average of 8.385 to 8.395 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.1	18288	PASS
75	95	30	60	48.6	55208	PASS
95	95	100	100	100.0	113669	PASS
96	95	5	9	6.9	7830	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	89.5	101728	PASS
175	174	5	9	7.7	7858	PASS
176	174	95	101	96.1	97760	PASS
177	176	5	9	6.9	6702	PASS

3c151772.d M3C6743.M Mon May 06 19:45:16 2019

Average of 8.385 to 8.395 min.: 3c151772.d\data.ms
BFB

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	906	51.00	5807.67	67.05	295.667	78.00	149.333
36.95	4812.33	52.00	101	68.00	9977	78.85	2378
38.00	4156.33	54.00	219	69.00	10546	79.95	630.667
39.00	1628.67	55.05	841.333	69.95	697.333	80.90	2617
41.00	152	55.95	1486.67	71.95	587.333	81.90	390.333
43.95	544	57.00	2493.33	73.00	4578.33	86.90	3649.67
45.00	797.667	60.00	1157.33	74.00	17803	87.95	3766
46.95	908.333	61.00	4914	75.00	55208	90.10	122
47.95	672.333	62.00	5003.33	76.00	4587	90.70	102.667
49.00	4413.33	63.00	3409.33	76.95	571.333	90.90	415
50.00	18288	63.95	308	77.75	255.333	91.95	3100

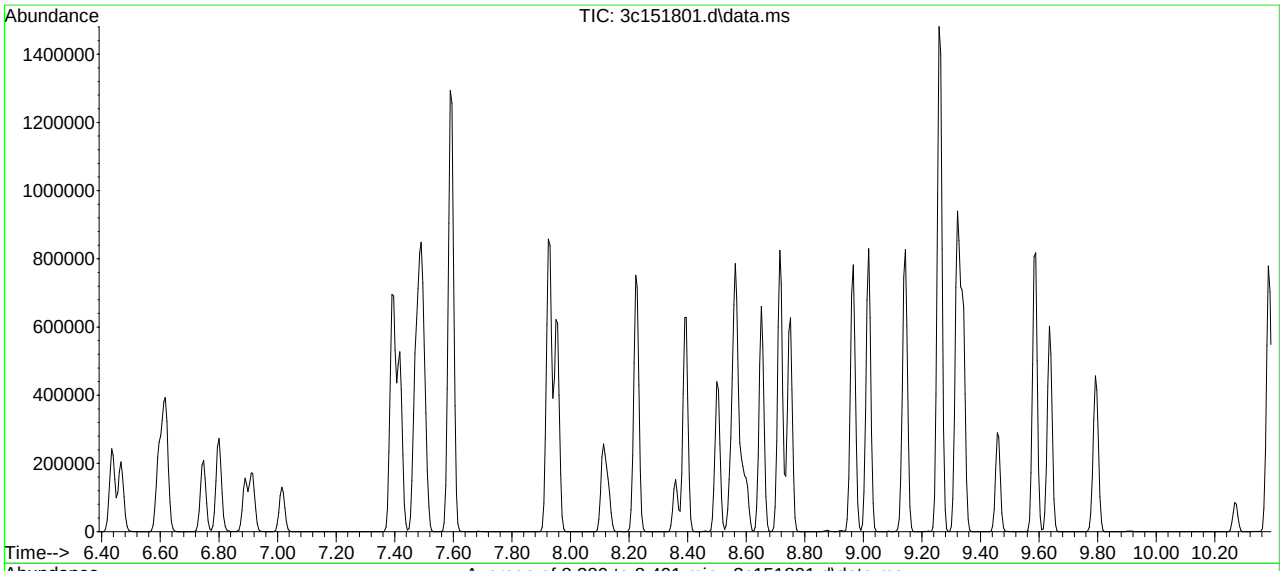
Average of 8.385 to 8.395 min.: 3c151772.d\data.ms
BFB

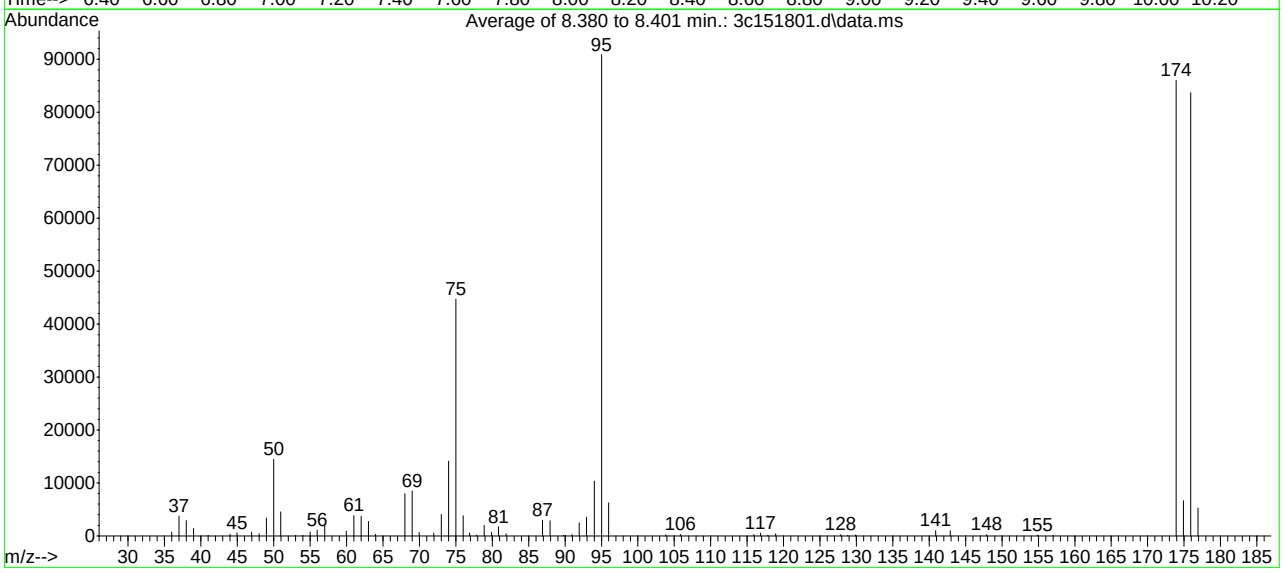
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.95	4550.33	129.85	386				
94.00	13095	140.85	1061				
95.00	113669	142.90	1079.33				
96.00	7829.67	147.90	267.333				
103.90	359.667	154.95	333				
105.85	521.333	173.90	101728				
115.85	229	174.90	7857.67				
116.90	707.667	175.90	97760				
117.85	275.667	176.90	6701.67				
118.85	536						
127.85	364.667						

SW-846 Method 8260

Data File : X:\voa-gcms\complete...sa\v3c6821\3c151801.d Vial: 1
Acq On : 6 May 2019 8:55 am Operator: PrashanS
Sample : BFB Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um





Spectrum Information: Average of 8.380 to 8.401 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.0	14503	PASS
75	95	30	60	49.2	44690	PASS
95	95	100	100	100.0	90827	PASS
96	95	5	9	6.9	6243	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	94.7	86024	PASS
175	174	5	9	7.7	6654	PASS
176	174	95	101	97.3	83682	PASS
177	176	5	9	6.3	5249	PASS

3c151801.d M3C6743.M Wed May 08 07:45:02 2019

Average of 8.380 to 8.401 min.: 3c151801.d\data.ms
BFB

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	714.6	50.95	4522.6	68.00	7953	79.90	648.8
37.00	3719.2	53.00	93.8	69.00	8472	80.85	1741.8
38.00	2910.8	54.00	60	69.95	646.4	81.90	402.2
39.00	1431.4	55.00	694.6	71.95	486.4	86.90	2950.4
41.00	94.6	55.95	1096.6	73.00	4033.4	87.95	2822
44.00	292.6	57.00	1947	74.00	14130.8	89.80	65.4
44.95	561.6	59.95	865.2	75.00	44689.6	90.00	68.6
46.95	648.4	61.00	3842.8	76.00	3792.2	90.95	239.6
48.00	385.8	62.00	3676.8	76.90	552.8	91.95	2466.6
49.00	3381.4	63.00	2718	77.80	162.2	92.95	3519.2
50.00	14502.8	63.95	268.2	78.90	1985.8	94.00	10340.4

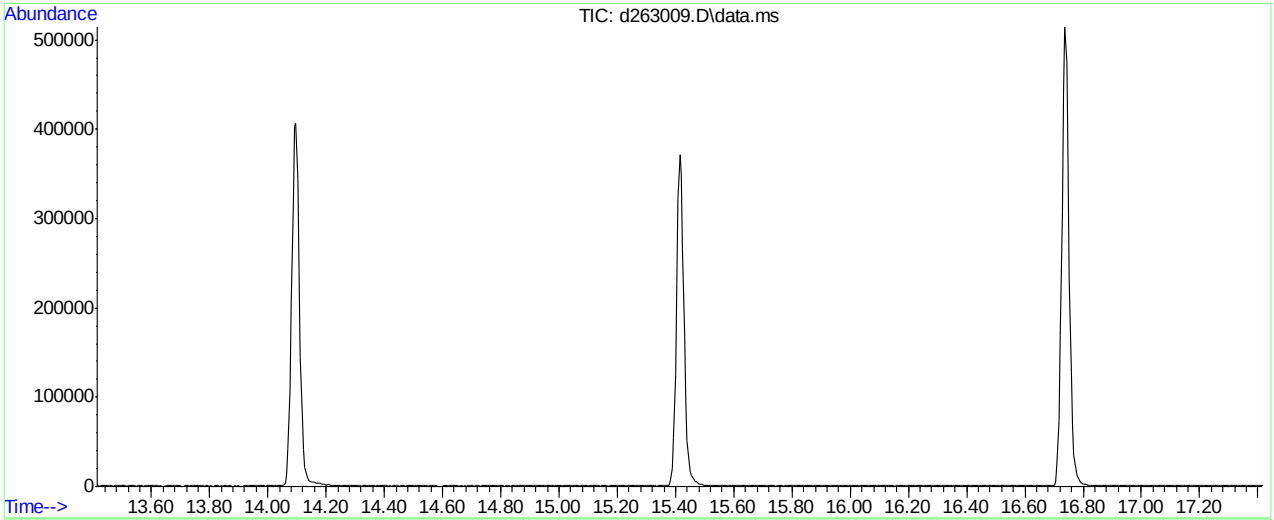
Average of 8.380 to 8.401 min.: 3c151801.d\data.ms
BFB

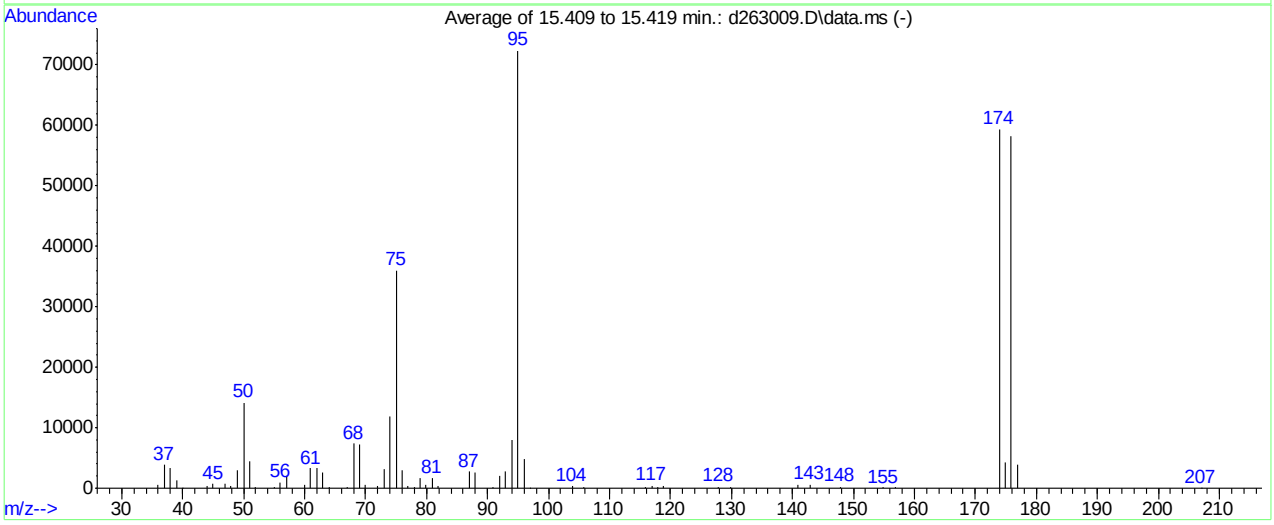
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	90827.2	140.90	968.6				
96.00	6243.4	142.90	964.6				
103.85	180.6	147.90	232.2				
105.85	291.4	154.85	158.8				
115.90	258.2	157.00	66.4				
116.85	530.6	173.90	86024				
117.85	152.4	174.90	6654				
118.90	393	175.90	83681.6				
127.85	257.2	176.90	5249				
128.80	73.4						
129.90	199.2						

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

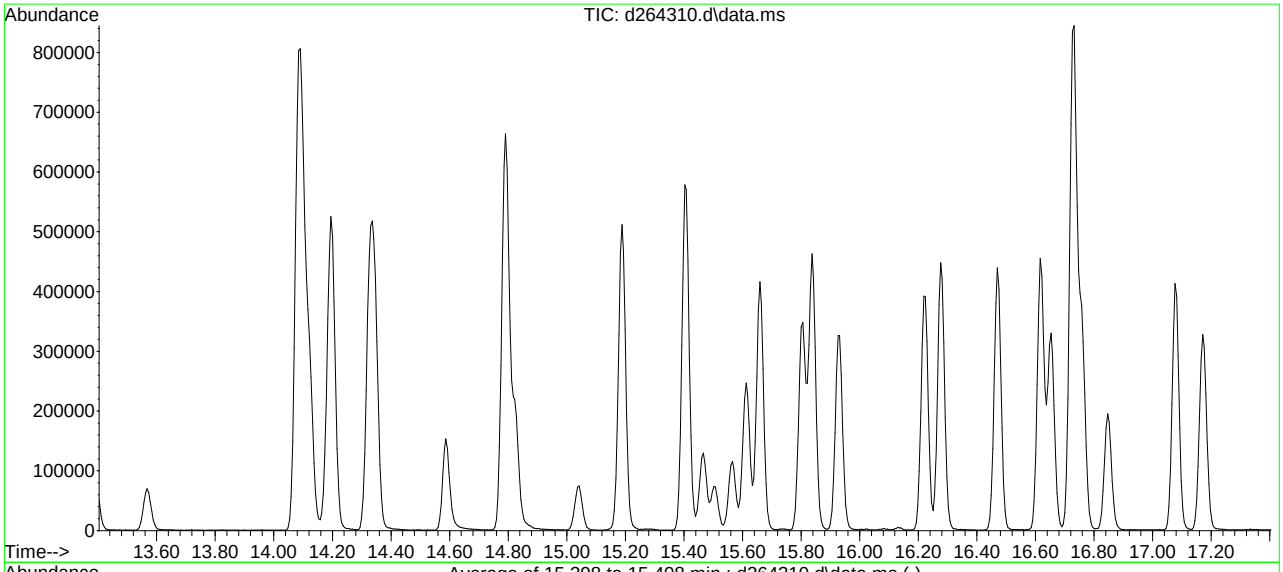
Average of 15.409 to 15.419 min.: d263009.D\data.ms
bfb
Modified:subtracted

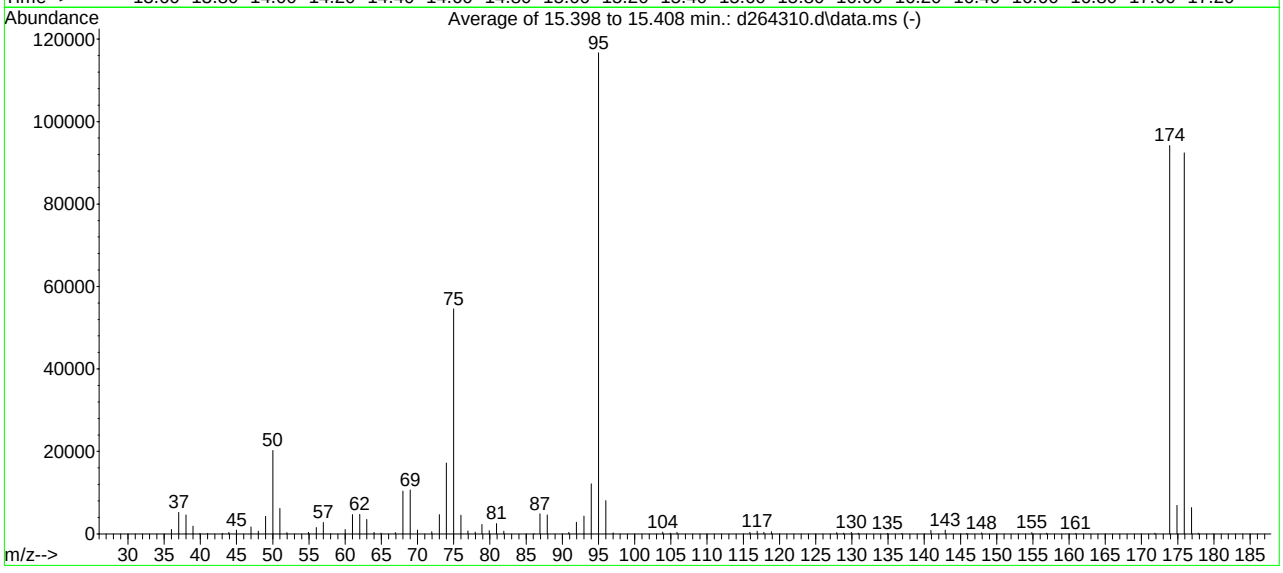
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	58	147.85	190				
103.90	324	154.90	174				
105.85	269	156.90	121				
115.85	212	173.90	59349				
116.90	399	174.90	4244				
117.85	230	175.90	58248				
118.85	306	176.90	3842				
127.90	270	207.00	5				
129.95	218						
140.90	584						
142.90	641						

SW-846 Method 8260

Data File : C:\msdchem\1\data\ni...-19\vd10652\d264310.d Vial: 4
Acq On : 7 May 2019 8:03 am Operator: thienn
Sample : bfb Inst : MSD
Misc : ms32144,vd10652,5,,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 2143, 2144, 2145; Background Corrected with Scan 2134

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	20248	PASS
75	95	30	60	46.7	54528	PASS
95	95	100	100	100.0	116675	PASS
96	95	5	9	6.9	8060	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	80.7	94181	PASS
175	174	5	9	7.3	6880	PASS
176	174	95	101	98.2	92456	PASS
177	176	5	9	6.9	6377	PASS

d264310.d MD10606.M Tue May 07 23:36:52 2019

Average of 15.398 to 15.408 min.: d264310.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1025	49.00	4241	63.00	3508	76.00	4536
37.00	5174	50.00	20248	64.00	374	76.95	692
38.00	4623	51.00	6152	64.95	141	77.95	471
39.00	1894	51.95	299	66.95	324	78.90	2299
39.90	67	54.95	344	68.00	10386	79.90	809
41.00	118	56.00	1517	69.00	10669	80.90	2462
43.10	111	57.00	2767	70.00	891	81.90	625
43.95	403	58.00	63	71.95	527	86.10	50
45.00	904	60.00	1033	73.00	4633	86.90	4893
47.00	1700	61.00	4674	74.00	17151	87.90	4574
48.00	622	62.00	4714	75.00	54528	90.90	403

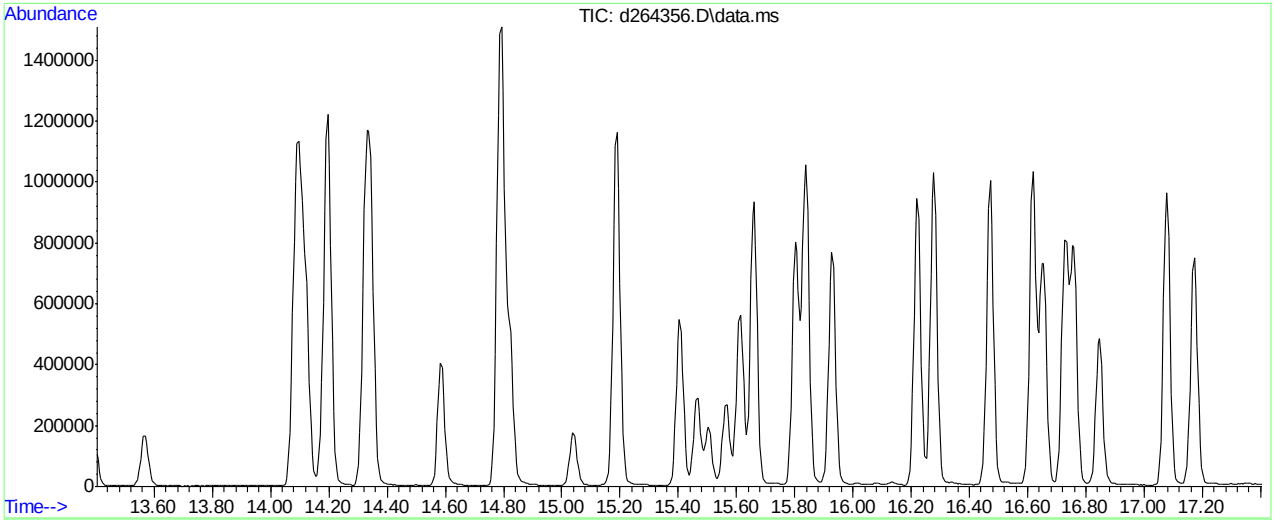
Average of 15.398 to 15.408 min.: d264310.d\data.ms
bfb
Modified:subtracted

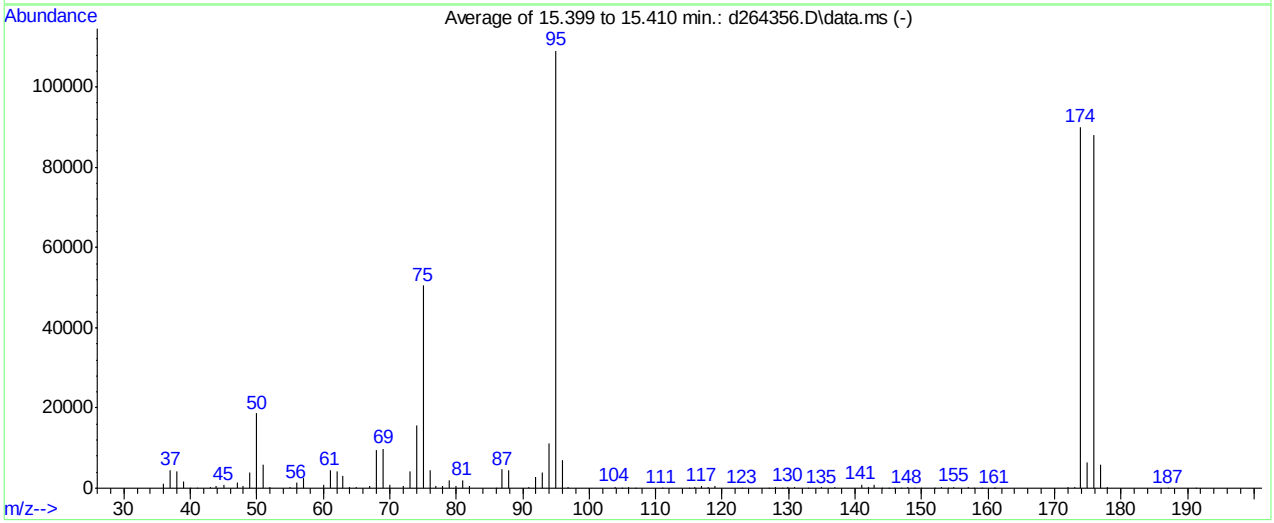
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.95	2842	117.85	352	147.90	270		
93.00	4302	118.90	485	154.85	305		
94.00	12108	127.90	339	156.90	140		
95.00	116675	128.85	159	160.90	51		
96.00	8060	129.90	381	171.85	202		
97.00	257	130.90	159	173.90	94181		
103.85	430	134.90	128	174.90	6880		
104.90	146	136.90	106	175.90	92456		
105.85	371	140.90	856	176.90	6377		
115.90	364	142.90	947	177.85	202		
116.90	637	145.85	130				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VD10654\d264356.D Vial: 1
Acq On : 8 May 2019 6:56 am Operator: thienn
Sample : bfb Inst : MSD
Misc : ms34538,vd10654,5,,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 2143, 2144, 2145; Background Corrected with Scan 2131

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	18610	PASS
75	95	30	60	46.3	50482	PASS
95	95	100	100	100.0	109115	PASS
96	95	5	9	6.5	7071	PASS
173	174	0.00	2	0.3	305	PASS
174	95	50	150	82.5	89981	PASS
175	174	5	9	7.2	6521	PASS
176	174	95	101	97.8	87973	PASS
177	176	5	9	6.7	5930	PASS

d264356.D MD10606.M Wed May 08 10:36:18 2019 RPT1

Average of 15.399 to 15.410 min.: d264356.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1009	49.00	3849	63.95	337	76.95	544
37.00	4567	50.00	18610	64.95	176	77.90	501
38.00	4109	51.00	5815	67.05	455	78.90	2062
39.00	1694	51.95	333	68.00	9579	79.90	676
40.00	75	54.95	174	69.00	9925	80.90	2039
40.95	125	56.00	1373	69.95	761	81.90	472
43.05	224	57.00	2518	72.00	549	86.00	52
43.95	433	60.00	915	73.00	4274	86.90	4621
45.00	780	61.00	4482	74.00	15692	87.90	4502
47.00	1389	62.00	4276	75.00	50482	90.95	375
47.95	568	63.00	3216	76.00	4350	92.00	2675

Average of 15.399 to 15.410 min.: d264356.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	3930	115.90	376	134.95	218	149.95	126
94.00	11303	116.90	534	136.90	190	151.95	134
95.00	109115	117.90	352	140.95	969	153.00	304
96.00	7071	118.90	496	141.95	213	153.90	51
96.90	330	123.00	59	142.90	866	154.90	368
103.90	405	127.00	55	144.00	104	156.95	263
104.95	92	127.95	270	145.00	39	157.90	59
105.85	396	128.95	132	145.90	79	159.00	119
106.95	111	129.90	387	146.95	109	160.90	59
110.90	50	130.95	312	147.90	239	161.10	53
114.95	112	132.90	53	148.90	53	171.95	336

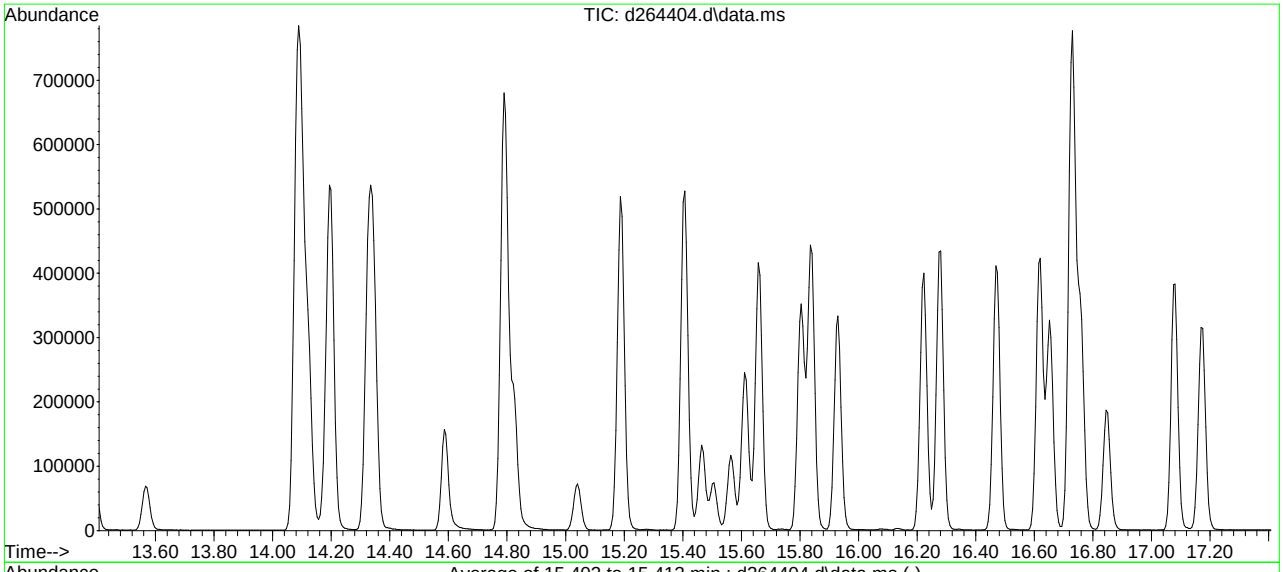
Average of 15.399 to 15.410 min.: d264356.D\data.ms
bfb
Modified:subtracted

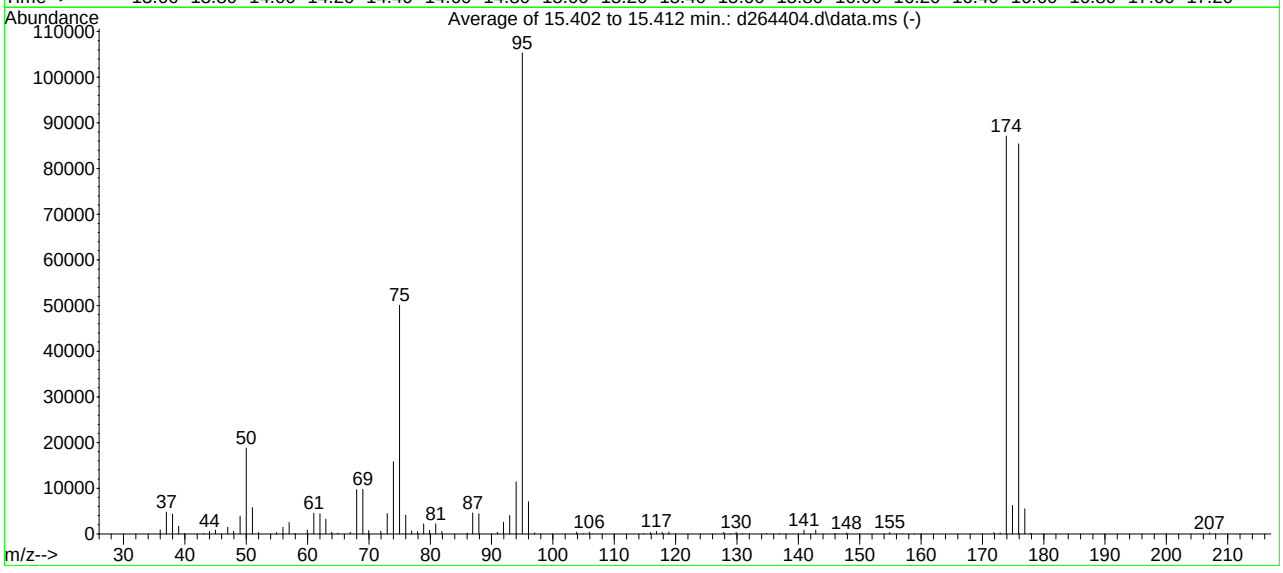
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
173.00	305						
173.90	89981						
174.90	6521						
175.90	87973						
176.90	5930						
177.95	216						
187.10	60						
191.20	58						

SW-846 Method 8260

```
Data File : C:\msdchem\1\data\ni...-19\vd10656\d264404.d Vial: 2
Acq On    :  9 May 2019   6:52 am                    Operator: thienn
Sample    : bfb                                      Inst    : MSD
Misc      : ms32144,vd10656,5,,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 2134

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	18819	PASS
75	95	30	60	47.5	50043	PASS
95	95	100	100	100.0	105339	PASS
96	95	5	9	6.7	7021	PASS
173	174	0.00	2	0.3	234	PASS
174	95	50	150	82.7	87109	PASS
175	174	5	9	7.2	6238	PASS
176	174	95	101	98.1	85440	PASS
177	176	5	9	6.4	5496	PASS

d264404.d MD10606.M Thu May 09 23:41:25 2019

Average of 15.402 to 15.412 min.: d264404.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	885	50.00	18819	63.95	330	76.95	644
37.00	4783	51.00	5728	64.95	174	77.90	439
38.00	4318	52.00	271	66.95	339	78.90	2157
39.00	1722	54.95	290	68.00	9680	79.90	744
39.90	65	56.00	1444	69.00	9744	80.90	2168
43.00	51	57.00	2512	69.95	715	81.90	545
44.00	555	57.95	116	71.95	563	86.05	163
45.00	841	59.95	824	73.00	4459	86.90	4559
47.00	1468	61.00	4486	74.00	15817	87.90	4381
47.95	584	62.00	4412	75.00	50043	90.95	342
49.00	3924	63.00	3219	76.00	4092	91.95	2576

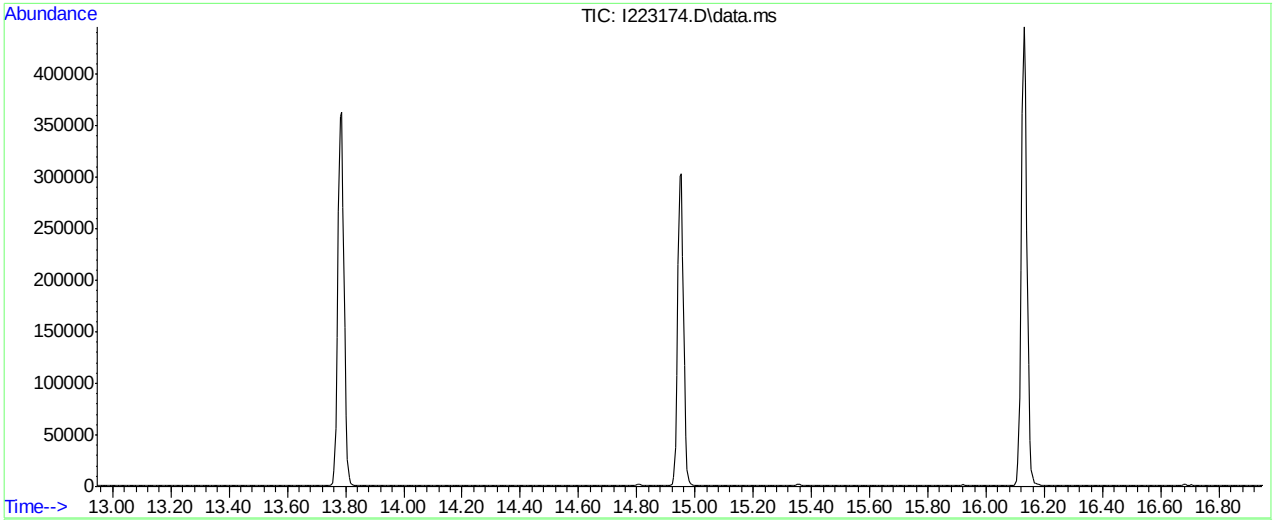
Average of 15.402 to 15.412 min.: d264404.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.95	4016	117.80	326	147.85	213	207.00	195
94.00	11370	118.90	418	154.90	266		
95.00	105339	127.85	328	156.90	57		
96.00	7021	128.90	55	158.90	51		
97.00	201	129.85	360	171.90	301		
103.85	379	130.90	51	172.90	234		
105.00	53	134.85	102	173.90	87109		
105.90	397	136.90	114	174.90	6238		
114.80	60	140.90	834	175.90	85440		
115.90	302	142.85	819	176.90	5496		
116.90	528	145.90	55	177.85	170		

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

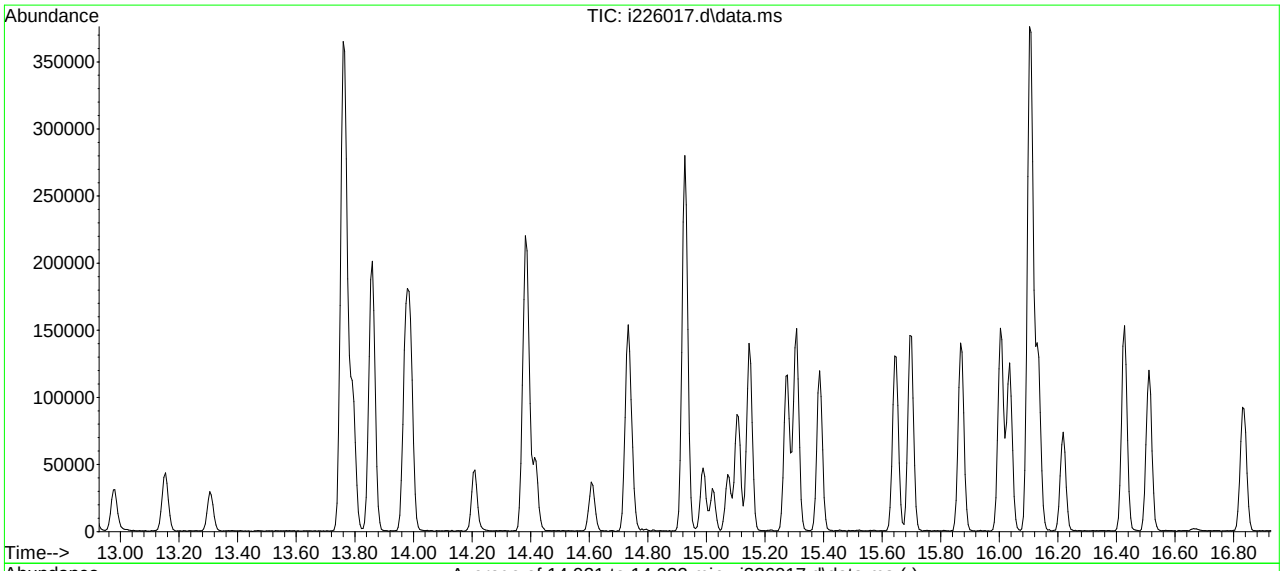
Average of 14.942 to 14.952 min.: I223174.D\data.ms
BFB
Modified:subtracted

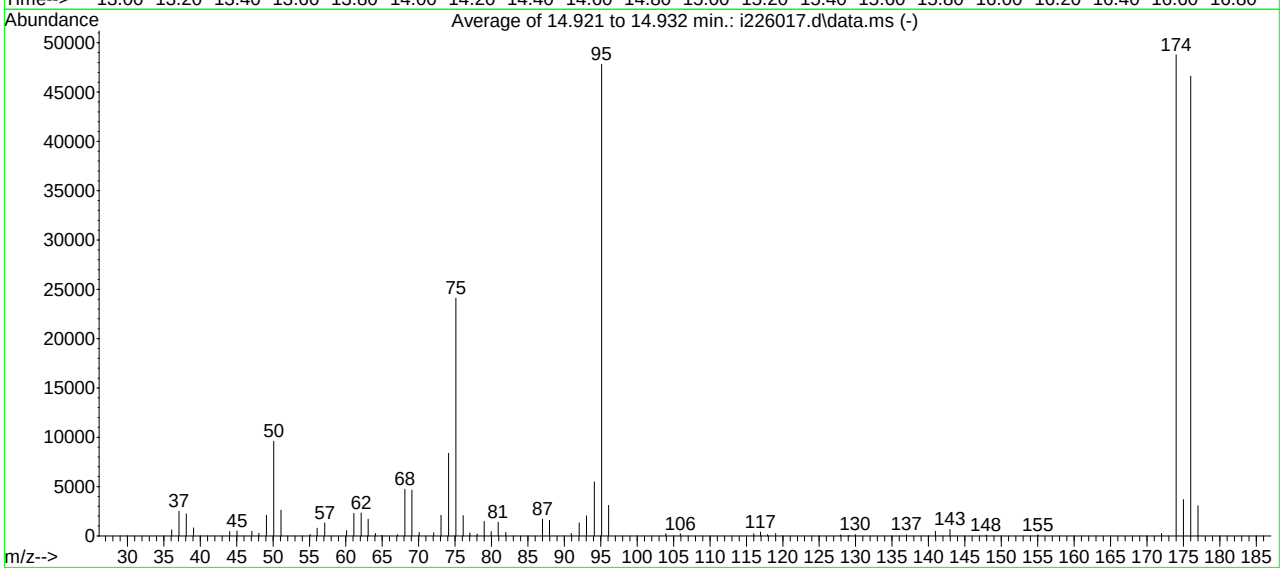
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
116.95	290	175.00	4272				
117.95	191	176.00	51597				
118.95	274	176.95	3571				
127.90	139	207.00	61				
129.90	242						
130.95	102						
137.00	51						
141.00	503						
142.90	521						
154.95	122						
174.00	52357						

SW-846 Method 8260

Data File : C:\msdchem\1\data\ke...ay 8\vi9105\i226017.d Vial: 3
Acq On : 7 May 2019 7:55 am Operator: thienn
Sample : BFB Inst : GCMSI
Misc : MS34332,VI9105,5,,100,5,1 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 2160

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.0	9580	PASS
75	95	30	60	50.4	24120	PASS
95	95	100	100	100.0	47827	PASS
96	95	5	9	6.4	3084	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	102.0	48776	PASS
175	174	5	9	7.5	3675	PASS
176	174	95	101	95.6	46635	PASS
177	176	5	9	6.6	3064	PASS

i226017.d MI8986.M Wed May 08 02:43:24 2019

Average of 14.921 to 14.932 min.: i226017.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	622	55.10	123	69.05	4657	80.90	1375
37.10	2480	56.05	792	70.05	366	81.95	346
38.10	2227	57.10	1318	72.05	329	87.00	1686
39.10	818	60.10	523	73.05	2086	87.95	1582
44.05	430	61.10	2278	74.10	8383	90.95	234
45.05	491	62.10	2329	75.10	24120	92.05	1326
47.10	476	63.05	1687	76.10	2063	93.05	2047
48.05	273	64.05	238	77.05	298	94.10	5486
49.10	2090	65.00	49	78.05	193	95.10	47827
50.10	9580	67.10	119	79.00	1465	96.10	3084
51.10	2599	68.10	4729	79.95	439	103.95	201

Average of 14.921 to 14.932 min.: i226017.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
105.95	211	147.90	68				
116.00	212	155.05	101				
116.95	378	172.00	231				
117.90	131	174.00	48776				
119.00	252	175.00	3675				
127.90	99	176.00	46635				
129.10	56	177.00	3064				
129.95	137						
137.00	114						
140.95	477						
142.95	645						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164005.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC7200-0.5
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 07:51:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.358	65	56857	500.00	ug/L	0.00
5) pentafluorobenzene	9.602	168	180407	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	247388	50.00	ug/L	0.00
74) chlorobenzene-d5	13.656	117	195319	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.973	152	101386	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	75317	49.10	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 98.20%						
53) 1,2-dichloroethane-d4 (s)	10.088	65	76558	50.42	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 100.84%						
75) toluene-d8 (s)	12.149	98	263586	50.46	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.92%						
98) 4-bromofluorobenzene (s)	14.806	95	95733	50.70	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 101.40%						
Target Compounds						Qvalue
6) chlorodifluoromethane	3.896	51	923	0.47	ug/L	65
7) dichlorodifluoromethane	3.859	85	1066	0.38	ug/L	90
8) chloromethane	4.283	50	1081	0.55	ug/L	89
9) vinyl chloride	4.508	62	808	0.42	ug/L	86
10) 1,3-butadiene	4.586	54	497	0.40	ug/L #	71
11) bromomethane	5.198	94	693	0.50	ug/L	91
13) trichlorofluoromethane	5.810	101	1237	0.43	ug/L	80
18) 1,1-dichloroethene	6.684	96	716	0.47	ug/L	90
25) methyl tert butyl ether	7.719	73	1967	0.47	ug/L	97
26) trans-1,2-dichloroethene	7.782	96	925	0.56	ug/L	91
27) di-isopropyl ether	8.300	45	2433	0.48	ug/L	94
29) 1,1-dichloroethane	8.357	63	1384	0.49	ug/L	84
30) chloroprene	8.467	53	1101	0.44	ug/L	89
32) hexane	8.070	57	1214	0.45	ug/L	91
34) ethyl tert-butyl ether	8.765	59	2305	0.46	ug/L	96
36) 2,2-dichloropropane	9.089	77	1187	0.46	ug/L	71
37) cis-1,2-dichloroethene	9.100	96	855	0.48	ug/L #	68
42) chloroform	9.466	85	1189	0.62	ug/L	91
46) 1,1,1-trichloroethane	9.696	97	1125	0.42	ug/L #	66
47) cyclohexane	9.769	84	1029	0.40	ug/L	84
48) 1,1-dichloropropene	9.879	75	1037	0.46	ug/L	97
50) carbon tetrachloride	9.895	117	989	0.42	ug/L #	66
55) 2,2,4-trimethylpentane	10.115	57	2403	0.39	ug/L	82
56) benzene	10.151	78	3489	0.58	ug/L	86
61) trichloroethene	10.863	130	715	0.43	ug/L	88
64) 2-chloroethyl vinyl ether	11.663	63	1781	2.18	ug/L	97
66) 1,2-dichloropropane	11.140	63	730	0.49	ug/L	93
69) bromodichloromethane	11.427	83	1009	0.47	ug/L	91
71) cis-1,3-dichloropropene	11.877	75	1217	0.50	ug/L	90
72) 4-methyl-2-pentanone	11.961	58	924	2.19	ug/L #	75
76) toluene	12.228	92	2011	0.58	ug/L	97
77) trans-1,3-dichloropropene	12.437	75	1024	0.49	ug/L	79

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164005.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC7200-0.5
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 07:51:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

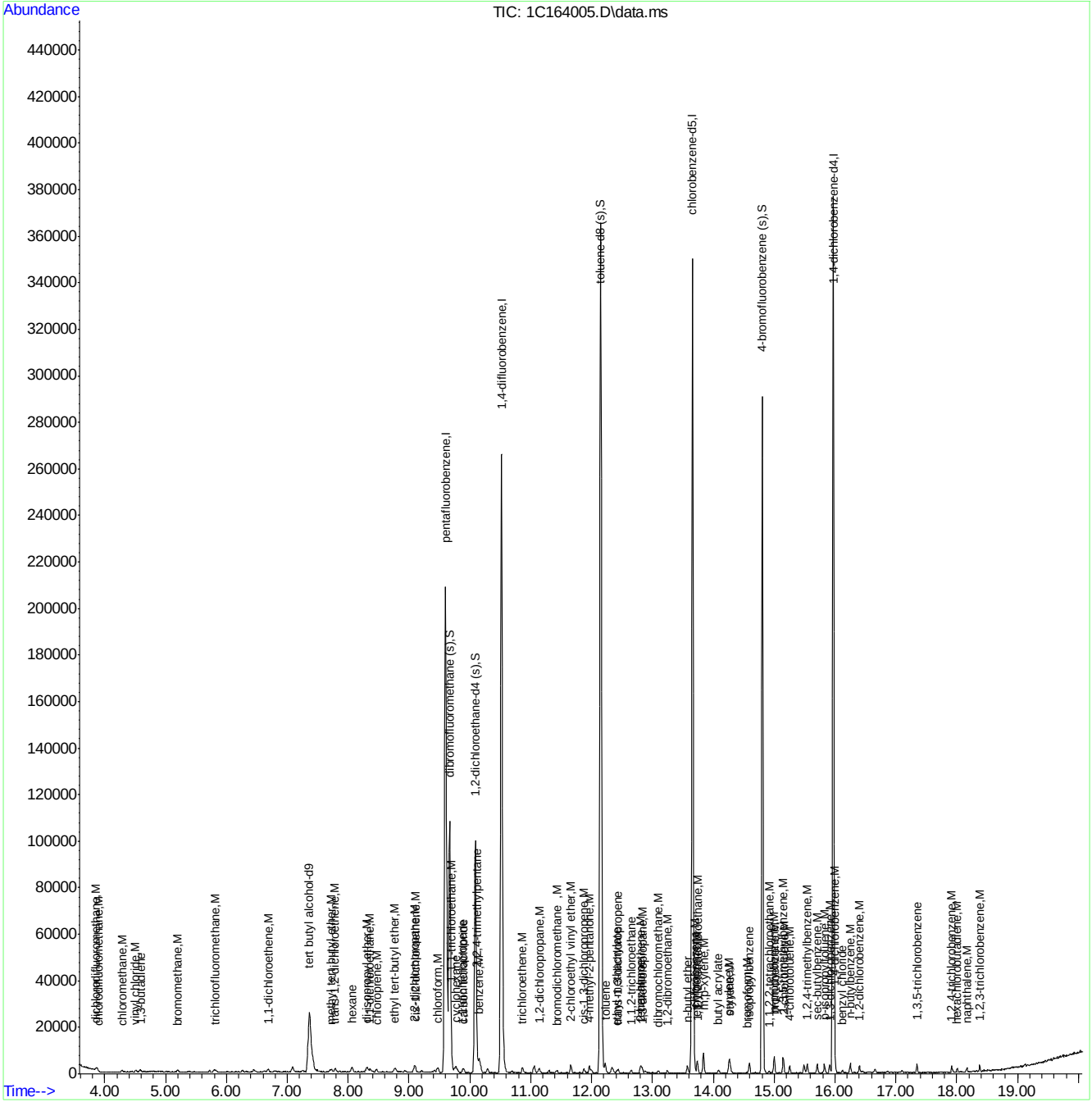
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78) ethyl methacrylate	12.411	69	629	0.42 ug/L #	75
79) 1,1,2-trichloroethane	12.651	83	441	0.44 ug/L	93
80) tetrachloroethene	12.803	164	614	0.48 ug/L	90
81) 1,3-dichloropropane	12.834	76	850	0.48 ug/L	84
82) 2-hexanone	12.813	58	726	1.85 ug/L #	78
84) dibromochloromethane	13.091	129	649	0.43 ug/L	81
85) 1,2-dibromoethane	13.242	107	647	0.41 ug/L	89
86) n-butyl ether	13.577	57	2896	0.54 ug/L	92
87) chlorobenzene	13.692	112	1925	0.54 ug/L	84
88) 1,1,1,2-tetrachloroethane	13.750	131	577	0.41 ug/L	74
89) ethylbenzene	13.734	91	3838	0.60 ug/L	91
90) m,p-xylene	13.844	106	2712	1.14 ug/L	88
91) o-xylene	14.257	106	1250	0.54 ug/L	95
92) styrene	14.273	104	1980	0.51 ug/L	97
93) bromoform	14.555	173	383	0.41 ug/L #	36
94) butyl acrylate	14.079	55	1070	0.45 ug/L	94
95) isopropylbenzene	14.586	105	3537	0.57 ug/L	91
99) bromobenzene	15.005	156	838	0.53 ug/L	88
100) 1,1,2,2-tetrachloroethane	14.916	83	603	0.47 ug/L	93
103) n-propylbenzene	15.000	91	3956	0.54 ug/L	91
105) 2-chlorotoluene	15.157	126	717	0.50 ug/L #	70
106) 4-chlorotoluene	15.256	91	2607	0.59 ug/L	94
107) 1,3,5-trimethylbenzene	15.146	105	2947	0.56 ug/L	98
109) 1,2,4-trimethylbenzene	15.544	105	2991	0.58 ug/L	96
110) sec-butylbenzene	15.706	105	3460	0.52 ug/L	93
111) 1,3-dichlorobenzene	15.915	146	1659	0.56 ug/L	96
112) p-isopropyltoluene	15.826	119	2998	0.53 ug/L	98
113) 1,4-dichlorobenzene	15.999	146	1662	0.56 ug/L	94
114) benzyl chloride	16.119	91	1405	0.53 ug/L	94
115) 1,2-dichlorobenzene	16.401	146	1520	0.53 ug/L	97
117) n-butylbenzene	16.250	92	1526	0.53 ug/L	97
119) 1,3,5-trichlorobenzene	17.348	180	1303	0.56 ug/L	95
122) 1,2,4-trichlorobenzene	17.918	180	923	0.48 ug/L	97
123) hexachlorobutadiene	18.007	225	671	0.49 ug/L	95
124) naphthalene	18.169	128	2060	0.56 ug/L	86
125) 1,2,3-trichlorobenzene	18.378	180	1012	0.56 ug/L	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164005.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC7200-0.5
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 07:51:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164006.D
Acq On : 24 Apr 2019 3:38 pm
Operator : ROBERTS
Sample : IC7200-1
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 07:53:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	55643	500.00	ug/L	0.00
5) pentafluorobenzene	9.602	168	174973	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.522	114	238846	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	190511	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	100142	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	72928	49.01	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.02%			
53) 1,2-dichloroethane-d4 (s)	10.088	65	76004	51.85	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.70%			
75) toluene-d8 (s)	12.149	98	256822	50.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.82%			
98) 4-bromofluorobenzene (s)	14.806	95	92963	49.85	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.70%			
Target Compounds						Qvalue
6) chlorodifluoromethane	3.896	51	1722	0.90	ug/L	88
7) dichlorodifluoromethane	3.864	85	2706	0.99	ug/L	94
8) chloromethane	4.278	50	1997	1.05	ug/L	95
9) vinyl chloride	4.513	62	1939	1.03	ug/L	88
10) 1,3-butadiene	4.591	54	1106	0.92	ug/L	92
11) bromomethane	5.198	94	1539	1.15	ug/L	92
12) chloroethane	5.376	64	1111	1.02	ug/L	92
13) trichlorofluoromethane	5.815	101	2623	0.93	ug/L	93
14) vinyl bromide	5.726	106	1044	0.96	ug/L	81
17) freon 113	6.615	151	1051	0.83	ug/L	88
18) 1,1-dichloroethene	6.689	96	1465	0.99	ug/L	85
22) carbon disulfide	7.086	76	5263	1.15	ug/L	94
25) methyl tert butyl ether	7.714	73	3661	0.90	ug/L	98
26) trans-1,2-dichloroethene	7.792	96	1625	1.02	ug/L	88
27) di-isopropyl ether	8.310	45	4665	0.95	ug/L	94
29) 1,1-dichloroethane	8.357	63	2624	0.96	ug/L	97
30) chloroprene	8.462	53	2335	0.96	ug/L	94
32) hexane	8.059	57	2438	0.94	ug/L	90
34) ethyl tert-butyl ether	8.776	59	4240	0.88	ug/L	98
36) 2,2-dichloropropane	9.089	77	2428	0.97	ug/L	83
37) cis-1,2-dichloroethene	9.105	96	1730	1.01	ug/L	91
39) propionitrile	9.204	54	1517	8.79	ug/L	60
40) bromochloromethane	9.419	128	664	0.85	ug/L	90
42) chloroform	9.471	85	1947	1.05	ug/L	95
46) 1,1,1-trichloroethane	9.701	97	2413	0.93	ug/L	80
47) cyclohexane	9.759	84	2685	1.07	ug/L	99
48) 1,1-dichloropropene	9.895	75	2038	0.94	ug/L	93
50) carbon tetrachloride	9.895	117	2151	0.94	ug/L	98
55) 2,2,4-trimethylpentane	10.115	57	5689	0.96	ug/L	88
56) benzene	10.151	78	6098	1.06	ug/L	98
57) tert-amyl methyl ether	10.162	87	764	0.79	ug/L #	73
58) heptane	10.292	71	1152	0.86	ug/L	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164006.D
Acq On : 24 Apr 2019 3:38 pm
Operator : ROBERTS
Sample : IC7200-1
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 07:53:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
60) 1,2-dichloroethane	10.182	62	2241	1.21 ug/L	89
61) trichloroethene	10.868	130	1518	0.95 ug/L	96
62) ethyl acrylate	10.878	55	1241	0.82 ug/L	63
64) 2-chloroethyl vinyl ether	11.657	63	3185	4.04 ug/L	99
66) 1,2-dichloropropane	11.140	63	1451	1.02 ug/L	98
67) dibromomethane	11.297	93	752	0.88 ug/L	95
68) methylcyclohexane	11.056	83	3029	1.17 ug/L	92
69) bromodichloromethane	11.433	83	1927	0.93 ug/L	96
71) cis-1,3-dichloropropene	11.877	75	2266	0.96 ug/L	98
72) 4-methyl-2-pentanone	11.961	58	1617	3.98 ug/L #	61
76) toluene	12.228	92	3578	1.06 ug/L #	85
77) trans-1,3-dichloropropene	12.437	75	1845	0.91 ug/L	94
78) ethyl methacrylate	12.416	69	1210	0.82 ug/L	86
79) 1,1,2-trichloroethane	12.646	83	832	0.86 ug/L #	77
80) tetrachloroethene	12.803	164	1154	0.92 ug/L	88
81) 1,3-dichloropropane	12.834	76	1534	0.89 ug/L	96
82) 2-hexanone	12.819	58	1377	3.59 ug/L	87
84) dibromochloromethane	13.096	129	1293	0.88 ug/L	100
85) 1,2-dibromoethane	13.247	107	1374	0.89 ug/L	97
86) n-butyl ether	13.577	57	5266	1.00 ug/L	97
87) chlorobenzene	13.692	112	3505	1.00 ug/L	83
88) 1,1,1,2-tetrachloroethane	13.750	131	1233	0.91 ug/L	94
89) ethylbenzene	13.734	91	6486	1.04 ug/L	94
90) m,p-xylene	13.838	106	4869	2.09 ug/L	92
91) o-xylene	14.257	106	2208	0.97 ug/L	100
92) styrene	14.267	104	3856	1.02 ug/L	96
93) bromoform	14.550	173	731	0.81 ug/L	86
94) butyl acrylate	14.084	55	2129	0.93 ug/L	98
95) isopropylbenzene	14.592	105	6035	1.00 ug/L	95
99) bromobenzene	15.005	156	1574	1.00 ug/L #	80
100) 1,1,2,2-tetrachloroethane	14.921	83	1070	0.84 ug/L	91
103) n-propylbenzene	15.000	91	7253	1.01 ug/L	99
105) 2-chlorotoluene	15.156	126	1425	1.01 ug/L #	85
106) 4-chlorotoluene	15.256	91	4480	1.03 ug/L	94
107) 1,3,5-trimethylbenzene	15.146	105	5192	1.00 ug/L	98
108) tert-butylbenzene	15.496	134	821	0.90 ug/L	93
109) 1,2,4-trimethylbenzene	15.543	105	5222	1.02 ug/L	95
110) sec-butylbenzene	15.706	105	6474	0.99 ug/L	97
111) 1,3-dichlorobenzene	15.915	146	2894	0.99 ug/L	87
112) p-isopropyltoluene	15.826	119	5579	1.00 ug/L	92
113) 1,4-dichlorobenzene	15.999	146	2990	1.02 ug/L	98
114) benzyl chloride	16.119	91	2382	0.91 ug/L	92
115) 1,2-dichlorobenzene	16.401	146	2644	0.94 ug/L	95
117) n-butylbenzene	16.250	92	2743	0.96 ug/L	98
119) 1,3,5-trichlorobenzene	17.348	180	2203	0.96 ug/L	92
122) 1,2,4-trichlorobenzene	17.918	180	1867	0.98 ug/L	92
123) hexachlorobutadiene	18.012	225	1263	0.94 ug/L	95
124) naphthalene	18.169	128	3436	0.94 ug/L	96
125) 1,2,3-trichlorobenzene	18.378	180	1559	0.88 ug/L	88
126) hexachloroethane	16.658	201	847	0.81 ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164006.D
Acq On : 24 Apr 2019 3:38 pm
Operator : ROBERTS
Sample : IC7200-1
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 07:53:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

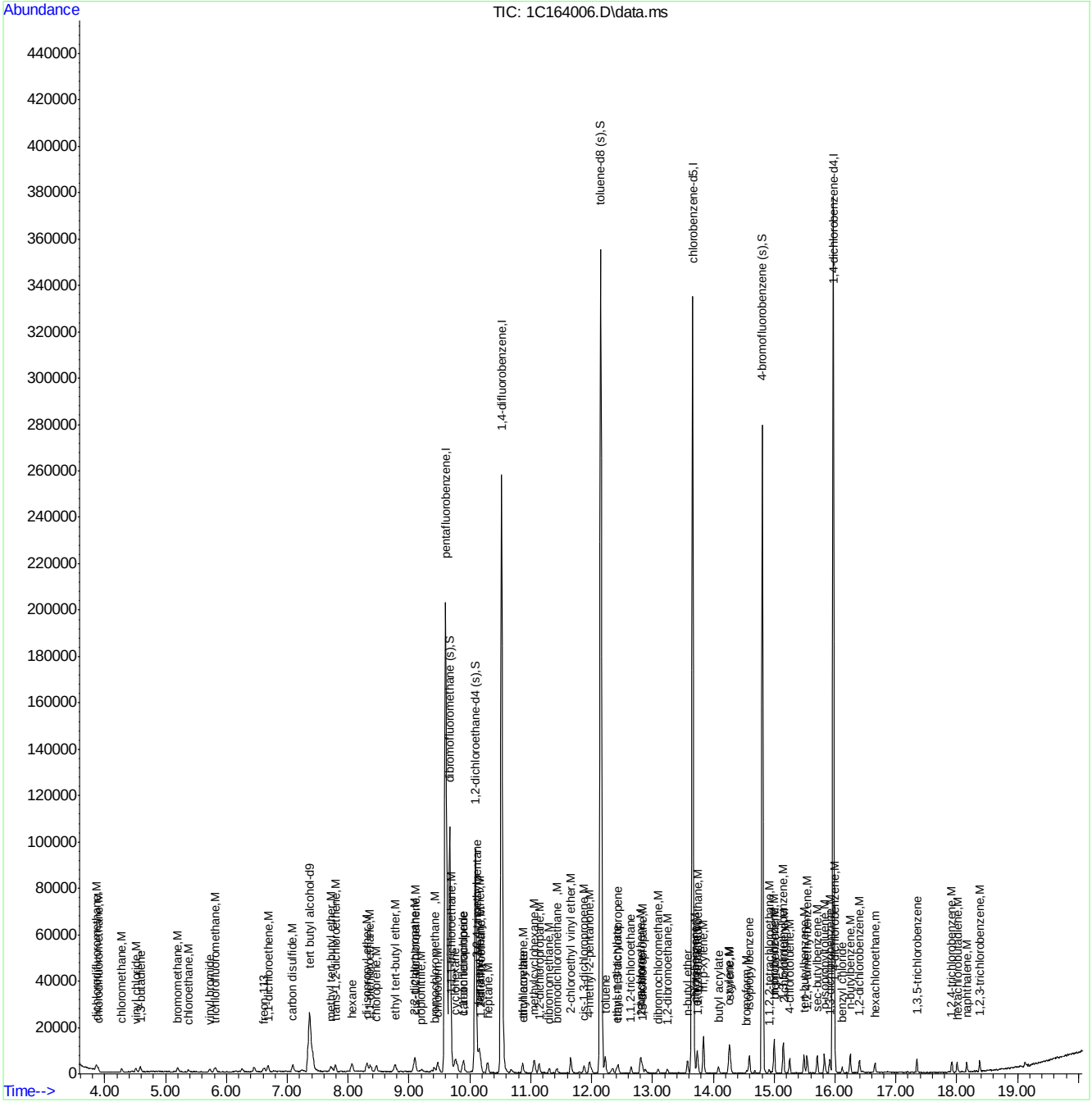
7.7.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164006.D
Acq On : 24 Apr 2019 3:38 pm
Operator : ROBERTS
Sample : IC7200-1
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 07:53:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration



M1CS7200.M Thu Apr 25 15:35:06 2019 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164007.D
Acq On : 24 Apr 2019 4:05 pm
Operator : ROBERTS
Sample : IC7200-2
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 07:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.369	65	57479	500.00	ug/L	0.00
5) pentafluorobenzene	9.602	168	175704	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	242175	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	191175	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	99385	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	73586	49.25	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.50%			
53) 1,2-dichloroethane-d4 (s)	10.094	65	76594	51.53	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.06%			
75) toluene-d8 (s)	12.149	98	262567	51.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.72%			
98) 4-bromofluorobenzene (s)	14.806	95	93274	50.40	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.80%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.489	59	1394	9.34	ug/L	67
6) chlorodifluoromethane	3.896	51	3875	2.01	ug/L	95
7) dichlorodifluoromethane	3.864	85	4940	1.81	ug/L	92
8) chloromethane	4.278	50	3691	1.93	ug/L	98
9) vinyl chloride	4.513	62	3360	1.79	ug/L	92
10) 1,3-butadiene	4.581	54	2309	1.90	ug/L	87
11) bromomethane	5.203	94	2700	2.00	ug/L	84
12) chloroethane	5.376	64	2019	1.85	ug/L	94
13) trichlorofluoromethane	5.810	101	5183	1.84	ug/L	97
14) vinyl bromide	5.737	106	1853	1.69	ug/L	81
15) ethyl ether	6.255	74	1295	1.73	ug/L #	77
17) freon 113	6.621	151	2180	1.71	ug/L	90
18) 1,1-dichloroethene	6.678	96	3099	2.09	ug/L	91
19) acetone	6.783	43	2812	8.05	ug/L	90
20) acetonitrile	7.238	41	2495	16.77	ug/L	88
22) carbon disulfide	7.086	76	10013	2.18	ug/L	99
23) methylene chloride	7.421	84	3253	2.08	ug/L	96
25) methyl tert butyl ether	7.714	73	7466	1.84	ug/L	97
26) trans-1,2-dichloroethene	7.787	96	3295	2.06	ug/L	87
27) di-isopropyl ether	8.305	45	9628	1.95	ug/L	95
28) 2-butanone	9.089	72	933	6.63	ug/L #	50
29) 1,1-dichloroethane	8.363	63	5644	2.05	ug/L	96
30) chloroprene	8.462	53	4748	1.94	ug/L	99
32) hexane	8.064	57	4949	1.90	ug/L	97
34) ethyl tert-butyl ether	8.776	59	9014	1.86	ug/L	96
36) 2,2-dichloropropane	9.084	77	5048	2.02	ug/L	98
37) cis-1,2-dichloroethene	9.100	96	3783	2.19	ug/L	94
39) propionitrile	9.205	54	3159	18.22	ug/L	95
40) bromochloromethane	9.424	128	1443	1.85	ug/L	87
42) chloroform	9.466	85	3994	2.15	ug/L	95
43) t-butyl formate	9.492	59	1811	1.55	ug/L #	79
45) methacrylonitrile	9.377	67	837	1.60	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164007.D
Acq On : 24 Apr 2019 4:05 pm
Operator : ROBERTS
Sample : IC7200-2
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 07:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) 1,1,1-trichloroethane	9.701	97	5121	1.96	ug/L		94
47) cyclohexane	9.759	84	4792	1.90	ug/L		93
48) 1,1-dichloropropene	9.884	75	4353	2.00	ug/L		95
50) carbon tetrachloride	9.900	117	4437	1.94	ug/L		96
54) n-butyl alcohol	10.669	56	2816	75.87	ug/L		94
55) 2,2,4-trimethylpentane	10.109	57	12025	2.00	ug/L		92
56) benzene	10.151	78	12677	2.17	ug/L		99
57) tert-amyl methyl ether	10.167	87	1905	1.94	ug/L	#	84
58) heptane	10.292	71	2550	1.88	ug/L		98
60) 1,2-dichloroethane	10.183	62	4071	2.16	ug/L		94
61) trichloroethene	10.863	130	3380	2.08	ug/L		93
62) ethyl acrylate	10.873	55	2808	1.83	ug/L		85
64) 2-chloroethyl vinyl ether	11.658	63	6733	8.42	ug/L		97
66) 1,2-dichloropropane	11.135	63	2862	1.98	ug/L		92
67) dibromomethane	11.302	93	1707	1.96	ug/L		78
68) methylcyclohexane	11.061	83	5770	2.19	ug/L		100
69) bromodichloromethane	11.433	83	4259	2.02	ug/L		93
70) epichlorohydrin	11.804	57	1058	8.97	ug/L		79
71) cis-1,3-dichloropropene	11.877	75	4588	1.91	ug/L		98
72) 4-methyl-2-pentanone	11.961	58	3349	8.12	ug/L		94
73) 3-methyl-1-butanol	11.987	55	1848	33.74	ug/L		95
76) toluene	12.222	92	7273	2.15	ug/L		91
77) trans-1,3-dichloropropene	12.437	75	3913	1.93	ug/L		98
78) ethyl methacrylate	12.411	69	2624	1.78	ug/L		96
79) 1,1,2-trichloroethane	12.651	83	1747	1.79	ug/L		94
80) tetrachloroethene	12.803	164	2619	2.08	ug/L		95
81) 1,3-dichloropropane	12.829	76	3478	2.01	ug/L		93
82) 2-hexanone	12.813	58	3149	8.18	ug/L	#	85
83) butyl acetate	12.881	56	1342	1.92	ug/L	#	71
84) dibromochloromethane	13.096	129	2663	1.81	ug/L		87
85) 1,2-dibromoethane	13.242	107	2860	1.85	ug/L		98
86) n-butyl ether	13.577	57	10620	2.02	ug/L		99
87) chlorobenzene	13.692	112	7371	2.09	ug/L		78
88) 1,1,1,2-tetrachloroethane	13.755	131	2556	1.87	ug/L		93
89) ethylbenzene	13.734	91	13341	2.13	ug/L		96
90) m,p-xylene	13.839	106	10131	4.34	ug/L		90
91) o-xylene	14.257	106	4690	2.06	ug/L		93
92) styrene	14.273	104	7772	2.04	ug/L		95
93) bromoform	14.555	173	1672	1.84	ug/L		91
94) butyl acrylate	14.084	55	4360	1.89	ug/L		93
95) isopropylbenzene	14.592	105	12805	2.11	ug/L		96
99) bromobenzene	15.005	156	3141	2.02	ug/L		95
100) 1,1,2,2-tetrachloroethane	14.916	83	2504	1.98	ug/L		93
103) n-propylbenzene	15.000	91	14977	2.09	ug/L		99
105) 2-chlorotoluene	15.157	126	2829	2.02	ug/L		98
106) 4-chlorotoluene	15.251	91	8946	2.08	ug/L		99
107) 1,3,5-trimethylbenzene	15.146	105	10453	2.03	ug/L		96
108) tert-butylbenzene	15.491	134	1701	1.89	ug/L	#	86
109) 1,2,4-trimethylbenzene	15.538	105	10680	2.10	ug/L		99
110) sec-butylbenzene	15.711	105	13449	2.08	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164007.D
Acq On : 24 Apr 2019 4:05 pm
Operator : ROBERTS
Sample : IC7200-2
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 07:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	15.915	146	6011	2.07	ug/L	99
112) p-isopropyltoluene	15.826	119	11090	2.00	ug/L	94
113) 1,4-dichlorobenzene	15.999	146	5982	2.05	ug/L	98
114) benzyl chloride	16.119	91	4936	1.90	ug/L	91
115) 1,2-dichlorobenzene	16.401	146	5233	1.87	ug/L	94
117) n-butylbenzene	16.250	92	5712	2.02	ug/L	100
118) 1,2-dibromo-3-chloropr...	17.191	75	425	1.70	ug/L	94
119) 1,3,5-trichlorobenzene	17.348	180	4478	1.97	ug/L	94
122) 1,2,4-trichlorobenzene	17.918	180	3531	1.86	ug/L	93
123) hexachlorobutadiene	18.012	225	2689	2.01	ug/L	91
124) naphthalene	18.164	128	6789	1.87	ug/L	96
125) 1,2,3-trichlorobenzene	18.373	180	3441	1.95	ug/L	95
126) hexachloroethane	16.652	201	1970	1.89	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

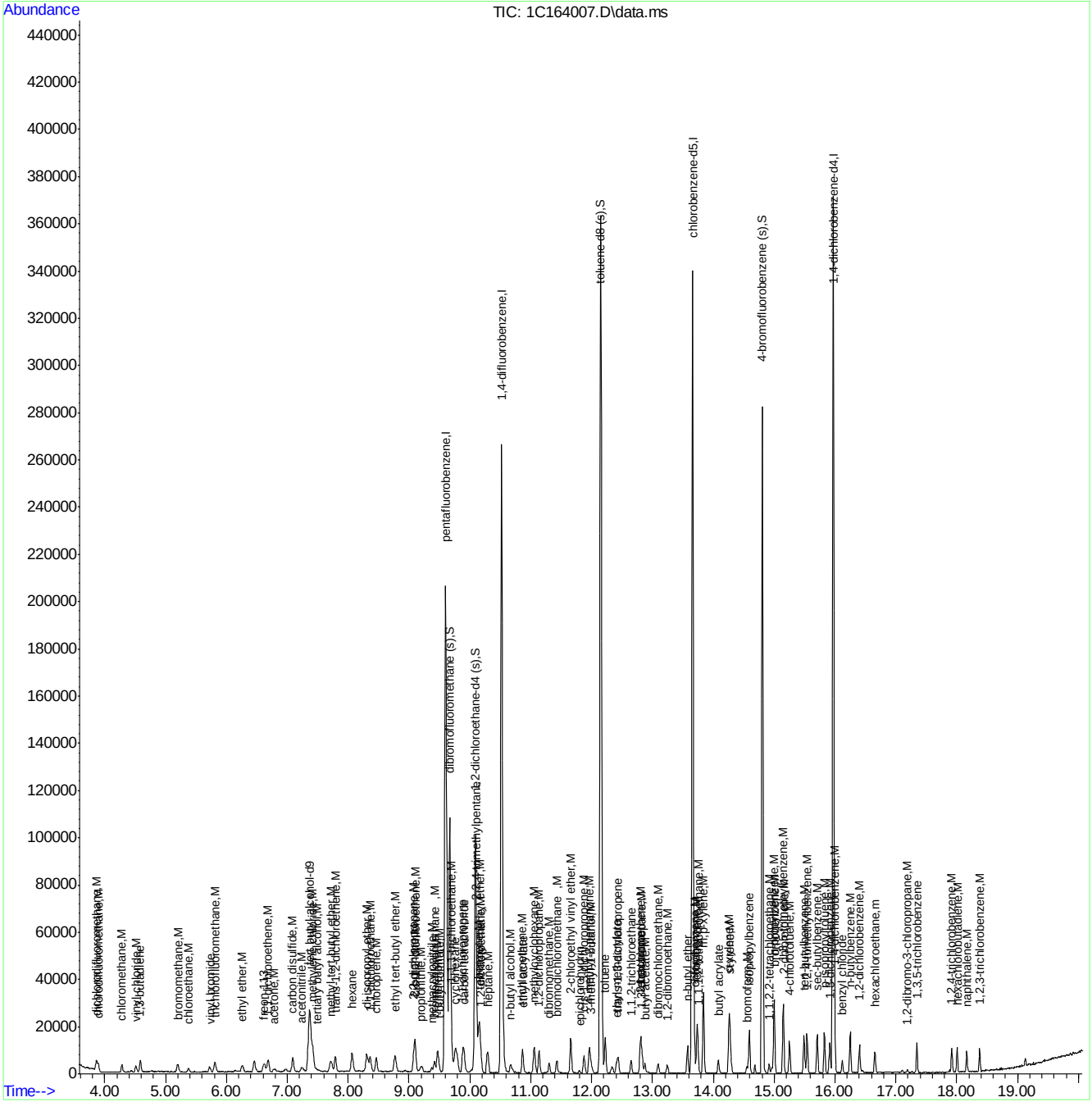
7.7.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164007.D
Acq On : 24 Apr 2019 4:05 pm
Operator : ROBERTS
Sample : IC7200-2
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 07:55:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 06:46:50 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164008.D
Acq On : 24 Apr 2019 4:31 pm
Operator : ROBERTS
Sample : IC7200-4
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 07:57:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	55724	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	170562	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.522	114	236748	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	188030	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	97716	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	71979	50.04	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 100.08%						
53) 1,2-dichloroethane-d4 (s)	10.088	65	74465	50.17	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 100.34%						
75) toluene-d8 (s)	12.149	98	252005	49.75	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.50%						
98) 4-bromofluorobenzene (s)	14.806	95	91643	49.96	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 99.92%						
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.494	59	2896	19.57	ug/L	81
4) 1,4-dioxane	11.255	88	1088	80.51	ug/L	93
6) chlorodifluoromethane	3.896	51	7059	3.97	ug/L	97
7) dichlorodifluoromethane	3.864	85	10560	4.19	ug/L	95
8) chloromethane	4.283	50	7443	4.03	ug/L	97
9) vinyl chloride	4.518	62	7128	4.10	ug/L	95
10) 1,3-butadiene	4.581	54	4443	4.07	ug/L	92
11) bromomethane	5.198	94	5451	4.11	ug/L	95
12) chloroethane	5.376	64	4209	4.11	ug/L	98
13) trichlorofluoromethane	5.810	101	10775	4.15	ug/L	94
14) vinyl bromide	5.721	106	4216	4.14	ug/L	95
15) ethyl ether	6.260	74	2653	3.83	ug/L	98
17) freon 113	6.621	151	4806	4.19	ug/L	91
18) 1,1-dichloroethene	6.684	96	5602	4.01	ug/L	97
19) acetone	6.772	43	5560	16.00	ug/L	99
20) acetonitrile	7.233	41	6090	43.30	ug/L	95
21) iodomethane	6.976	142	3328	4.96	ug/L	91
22) carbon disulfide	7.091	76	18345	4.07	ug/L	100
23) methylene chloride	7.421	84	6128	4.05	ug/L	94
24) methyl acetate	7.227	43	3092	3.67	ug/L	97
25) methyl tert butyl ether	7.714	73	15436	4.08	ug/L	99
26) trans-1,2-dichloroethene	7.787	96	6276	4.05	ug/L	95
27) di-isopropyl ether	8.310	45	18687	4.01	ug/L	96
28) 2-butanone	9.079	72	1944	14.91	ug/L #	83
29) 1,1-dichloroethane	8.362	63	11210	4.26	ug/L	97
30) chloroprene	8.462	53	9175	4.05	ug/L	96
31) acrylonitrile	7.787	53	1246	3.29	ug/L	83
32) hexane	8.064	57	10152	4.22	ug/L	97
33) vinyl acetate	8.347	86	697	3.18	ug/L #	35
34) ethyl tert-butyl ether	8.770	59	18089	4.03	ug/L	100
35) ethyl acetate	9.084	45	571	3.47	ug/L #	12
36) 2,2-dichloropropane	9.089	77	9711	4.14	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164008.D
Acq On : 24 Apr 2019 4:31 pm
Operator : ROBERTS
Sample : IC7200-4
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 07:57:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.100	96	7024	4.20	ug/L		99
38) methyl acrylate	9.168	85	463	2.70	ug/L		90
39) propionitrile	9.199	54	6583	39.84	ug/L		91
40) bromochloromethane	9.419	128	3015	4.15	ug/L		88
41) tetrahydrofuran	9.461	72	542	3.53	ug/L	#	38
42) chloroform	9.471	85	7388	3.97	ug/L		93
43) t-butyl formate	9.487	59	3693	3.69	ug/L		88
45) methacrylonitrile	9.367	67	1891	3.97	ug/L		97
46) 1,1,1-trichloroethane	9.701	97	9971	4.14	ug/L		97
47) cyclohexane	9.759	84	9917	4.17	ug/L		94
48) 1,1-dichloropropene	9.884	75	8417	4.12	ug/L		97
49) iso-butyl alcohol	9.911	43	2014	37.79	ug/L		79
50) carbon tetrachloride	9.905	117	8565	4.07	ug/L		95
51) tert amyl alcohol	10.020	55	930	18.54	ug/L	#	87
54) n-butyl alcohol	10.664	56	6366	184.30	ug/L		94
55) 2,2,4-trimethylpentane	10.115	57	25011	4.40	ug/L		92
56) benzene	10.151	78	24745	4.17	ug/L		99
57) tert-amyl methyl ether	10.156	87	3696	4.00	ug/L	#	77
58) heptane	10.287	71	5511	4.31	ug/L		99
59) isopropyl acetate	10.067	87	836	3.41	ug/L	#	45
60) 1,2-dichloroethane	10.183	62	7698	3.99	ug/L		99
61) trichloroethene	10.862	130	6137	4.02	ug/L		99
62) ethyl acrylate	10.868	55	5778	4.03	ug/L		96
64) 2-chloroethyl vinyl ether	11.652	63	13513	19.21	ug/L		99
65) methyl methacrylate	11.129	100	1086	3.67	ug/L	#	76
66) 1,2-dichloropropane	11.140	63	5869	4.16	ug/L		94
67) dibromomethane	11.297	93	3308	4.00	ug/L		94
68) methylcyclohexane	11.061	83	10856	4.13	ug/L		94
69) bromodichloromethane	11.427	83	7912	3.96	ug/L		93
70) epichlorohydrin	11.793	57	2214	19.51	ug/L		94
71) cis-1,3-dichloropropene	11.877	75	9261	4.03	ug/L		96
72) 4-methyl-2-pentanone	11.961	58	6577	16.05	ug/L		94
73) 3-methyl-1-butanol	11.987	55	3912	75.35	ug/L		95
76) toluene	12.222	92	14220	4.13	ug/L		95
77) trans-1,3-dichloropropene	12.437	75	7725	3.99	ug/L		95
78) ethyl methacrylate	12.411	69	5549	4.05	ug/L		98
79) 1,1,2-trichloroethane	12.651	83	3768	4.16	ug/L		95
80) tetrachloroethene	12.803	164	5015	4.19	ug/L		95
81) 1,3-dichloropropane	12.829	76	6867	4.13	ug/L		96
82) 2-hexanone	12.808	58	6270	16.76	ug/L		99
83) butyl acetate	12.876	56	2780	4.08	ug/L	#	81
84) dibromochloromethane	13.096	129	5314	3.90	ug/L		100
85) 1,2-dibromoethane	13.247	107	5792	4.02	ug/L		99
86) n-butyl ether	13.577	57	20791	4.02	ug/L		99
87) chlorobenzene	13.692	112	14121	4.04	ug/L		93
88) 1,1,1,2-tetrachloroethane	13.750	131	5235	4.12	ug/L		96
89) ethylbenzene	13.734	91	26240	4.15	ug/L		97
90) m,p-xylene	13.838	106	19255	8.19	ug/L		97
91) o-xylene	14.257	106	9475	4.22	ug/L		99
92) styrene	14.273	104	15435	4.15	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164008.D
Acq On : 24 Apr 2019 4:31 pm
Operator : ROBERTS
Sample : IC7200-4
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 07:57:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

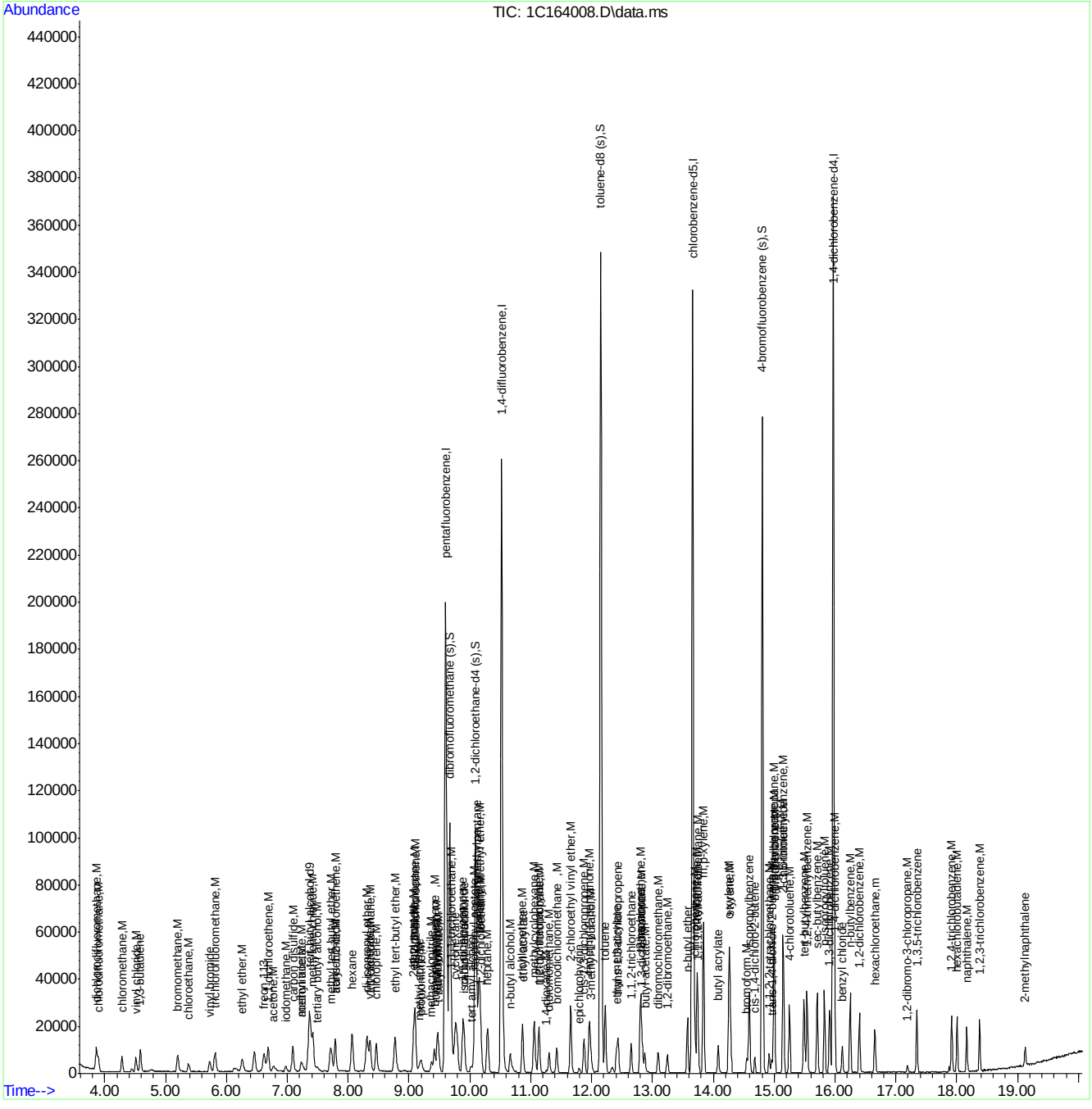
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.550	173	3131	3.78	ug/L	93
94) butyl acrylate	14.079	55	8589	3.94	ug/L	93
95) isopropylbenzene	14.592	105	24378	4.04	ug/L	98
96) cis-1,4-dichloro-2-butene	14.681	88	1836	3.58	ug/L	95
99) bromobenzene	15.005	156	6308	4.11	ug/L	92
100) 1,1,2,2-tetrachloroethane	14.921	83	4827	4.01	ug/L	96
101) trans-1,4-dichloro-2-b...	14.963	53	1217	3.68	ug/L	92
102) 1,2,3-trichloropropane	14.994	110	1191	3.84	ug/L	87
103) n-propylbenzene	14.994	91	29478	4.18	ug/L	98
105) 2-chlorotoluene	15.151	126	5821	4.24	ug/L	99
106) 4-chlorotoluene	15.251	91	17459	4.02	ug/L	94
107) 1,3,5-trimethylbenzene	15.146	105	20683	4.06	ug/L	98
108) tert-butylbenzene	15.496	134	3427	4.02	ug/L	97
109) 1,2,4-trimethylbenzene	15.538	105	20902	4.10	ug/L	99
110) sec-butylbenzene	15.706	105	25887	4.09	ug/L	98
111) 1,3-dichlorobenzene	15.910	146	12105	4.17	ug/L	95
112) p-isopropyltoluene	15.826	119	22566	4.15	ug/L	98
113) 1,4-dichlorobenzene	15.999	146	11756	4.05	ug/L	98
114) benzyl chloride	16.119	91	9571	3.83	ug/L	98
115) 1,2-dichlorobenzene	16.401	146	11146	4.11	ug/L	97
117) n-butylbenzene	16.250	92	11727	4.24	ug/L	100
118) 1,2-dibromo-3-chloropr...	17.191	75	961	3.99	ug/L	84
119) 1,3,5-trichlorobenzene	17.348	180	9054	4.06	ug/L	99
122) 1,2,4-trichlorobenzene	17.918	180	7466	4.11	ug/L	95
123) hexachlorobutadiene	18.007	225	5234	4.10	ug/L	95
124) naphthalene	18.164	128	13916	3.94	ug/L	96
125) 1,2,3-trichlorobenzene	18.378	180	7017	4.09	ug/L	98
126) hexachloroethane	16.658	201	3847	3.98	ug/L	92
127) 2-methylnaphthalene	19.126	142	3745	1.66	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164008.D
Acq On : 24 Apr 2019 4:31 pm
Operator : ROBERTS
Sample : IC7200-4
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 07:57:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164009.D
Acq On : 24 Apr 2019 4:58 pm
Operator : ROBERTS
Sample : IC7200-8
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 07:58:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	55488	500.00	ug/L	-0.02
5) pentafluorobenzene	9.607	168	165932	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.522	114	227576	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	181339	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	94471	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	70051	50.06	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.12%			
53) 1,2-dichloroethane-d4 (s)	10.094	65	73358	51.41	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.82%			
75) toluene-d8 (s)	12.149	98	246336	50.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.86%			
98) 4-bromofluorobenzene (s)	14.806	95	89360	50.39	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.78%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.499	59	6227	42.25	ug/L	98
4) 1,4-dioxane	11.249	88	2815	209.19	ug/L	92
6) chlorodifluoromethane	3.896	51	13838	8.00	ug/L	96
7) dichlorodifluoromethane	3.864	85	20050	8.17	ug/L	99
8) chloromethane	4.278	50	14407	8.01	ug/L	99
9) vinyl chloride	4.513	62	13527	7.99	ug/L	98
10) 1,3-butadiene	4.586	54	8630	8.12	ug/L	94
11) bromomethane	5.198	94	10802	8.37	ug/L	97
12) chloroethane	5.376	64	8171	8.20	ug/L	94
13) trichlorofluoromethane	5.815	101	20281	8.03	ug/L	95
14) vinyl bromide	5.721	106	7912	7.99	ug/L	96
15) ethyl ether	6.255	74	5490	8.14	ug/L	98
16) acrolein	6.547	56	1239	7.15	ug/L	90
17) freon 113	6.621	151	9138	8.18	ug/L	92
18) 1,1-dichloroethene	6.683	96	11179	8.23	ug/L	94
19) acetone	6.762	43	11532	34.10	ug/L	99
20) acetonitrile	7.222	41	12594	92.04	ug/L	93
21) iodomethane	6.976	142	7283	7.45	ug/L	93
22) carbon disulfide	7.091	76	35052	7.99	ug/L	99
23) methylene chloride	7.426	84	12333	8.37	ug/L	93
24) methyl acetate	7.222	43	7064	8.62	ug/L	98
25) methyl tert butyl ether	7.719	73	30464	8.28	ug/L	97
26) trans-1,2-dichloroethene	7.787	96	12025	7.97	ug/L	99
27) di-isopropyl ether	8.305	45	37209	8.21	ug/L	98
28) 2-butanone	9.068	72	4314	34.00	ug/L #	88
29) 1,1-dichloroethane	8.362	63	21056	8.23	ug/L	100
30) chloroprene	8.462	53	18382	8.33	ug/L	98
31) acrylonitrile	7.787	53	3077	8.35	ug/L	98
32) hexane	8.064	57	18926	8.08	ug/L	99
33) vinyl acetate	8.347	86	1723	8.08	ug/L #	42
34) ethyl tert-butyl ether	8.770	59	36452	8.35	ug/L	98
35) ethyl acetate	9.079	45	1327	8.29	ug/L #	26

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164009.D
Acq On : 24 Apr 2019 4:58 pm
Operator : ROBERTS
Sample : IC7200-8
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 07:58:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.089	77	18777	8.23	ug/L		97
37) cis-1,2-dichloroethene	9.100	96	13474	8.28	ug/L		96
38) methyl acrylate	9.163	85	1361	8.15	ug/L	#	81
39) propionitrile	9.189	54	14742	91.71	ug/L		94
40) bromochloromethane	9.414	128	5980	8.46	ug/L		95
41) tetrahydrofuran	9.455	72	1346	9.00	ug/L		91
42) chloroform	9.466	85	14473	7.99	ug/L		94
43) t-butyl formate	9.482	59	8556	8.78	ug/L		94
45) methacrylonitrile	9.367	67	3849	8.30	ug/L		93
46) 1,1,1-trichloroethane	9.701	97	19195	8.19	ug/L		93
47) cyclohexane	9.759	84	19504	8.43	ug/L		98
48) 1,1-dichloropropene	9.884	75	16602	8.36	ug/L		96
49) iso-butyl alcohol	9.905	43	4641	89.52	ug/L		95
50) carbon tetrachloride	9.900	117	16899	8.26	ug/L		97
51) tert amyl alcohol	10.020	55	2019	41.36	ug/L	#	87
54) n-butyl alcohol	10.658	56	14748	444.18	ug/L		96
55) 2,2,4-trimethylpentane	10.115	57	47326	8.66	ug/L		97
56) benzene	10.151	78	47981	8.42	ug/L		99
57) tert-amyl methyl ether	10.162	87	7928	8.93	ug/L		97
58) heptane	10.292	71	10599	8.62	ug/L		91
59) isopropyl acetate	10.067	87	1989	8.44	ug/L	#	78
60) 1,2-dichloroethane	10.182	62	15913	8.59	ug/L		96
61) trichloroethene	10.862	130	12282	8.37	ug/L		98
62) ethyl acrylate	10.868	55	12146	8.82	ug/L		94
64) 2-chloroethyl vinyl ether	11.652	63	31916	47.19	ug/L		97
65) methyl methacrylate	11.129	100	2430	8.53	ug/L	#	90
66) 1,2-dichloropropane	11.134	63	11574	8.53	ug/L		99
67) dibromomethane	11.302	93	6866	8.64	ug/L		97
68) methylcyclohexane	11.056	83	20413	8.07	ug/L		95
69) bromodichloromethane	11.427	83	15795	8.22	ug/L		98
70) epichlorohydrin	11.793	57	4702	43.11	ug/L		97
71) cis-1,3-dichloropropene	11.872	75	18480	8.38	ug/L		99
72) 4-methyl-2-pentanone	11.961	58	13774	34.96	ug/L		99
73) 3-methyl-1-butanol	11.987	55	8787	176.07	ug/L		95
76) toluene	12.228	92	27315	8.23	ug/L		100
77) trans-1,3-dichloropropene	12.437	75	15945	8.54	ug/L		97
78) ethyl methacrylate	12.411	69	11903	9.02	ug/L		96
79) 1,1,2-trichloroethane	12.651	83	7305	8.35	ug/L		94
80) tetrachloroethene	12.798	164	9158	7.94	ug/L		98
81) 1,3-dichloropropane	12.829	76	13583	8.47	ug/L		98
82) 2-hexanone	12.808	58	13004	36.04	ug/L		98
83) butyl acetate	12.871	56	5704	8.67	ug/L		90
84) dibromochloromethane	13.096	129	10788	8.20	ug/L		98
85) 1,2-dibromoethane	13.242	107	11521	8.29	ug/L		98
86) n-butyl ether	13.577	57	40932	8.20	ug/L		98
87) chlorobenzene	13.692	112	27854	8.27	ug/L		96
88) 1,1,1,2-tetrachloroethane	13.750	131	10203	8.33	ug/L		95
89) ethylbenzene	13.734	91	49501	8.11	ug/L		99
90) m,p-xylene	13.838	106	37519	16.55	ug/L		98
91) o-xylene	14.257	106	18029	8.33	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164009.D
Acq On : 24 Apr 2019 4:58 pm
Operator : ROBERTS
Sample : IC7200-8
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 07:58:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

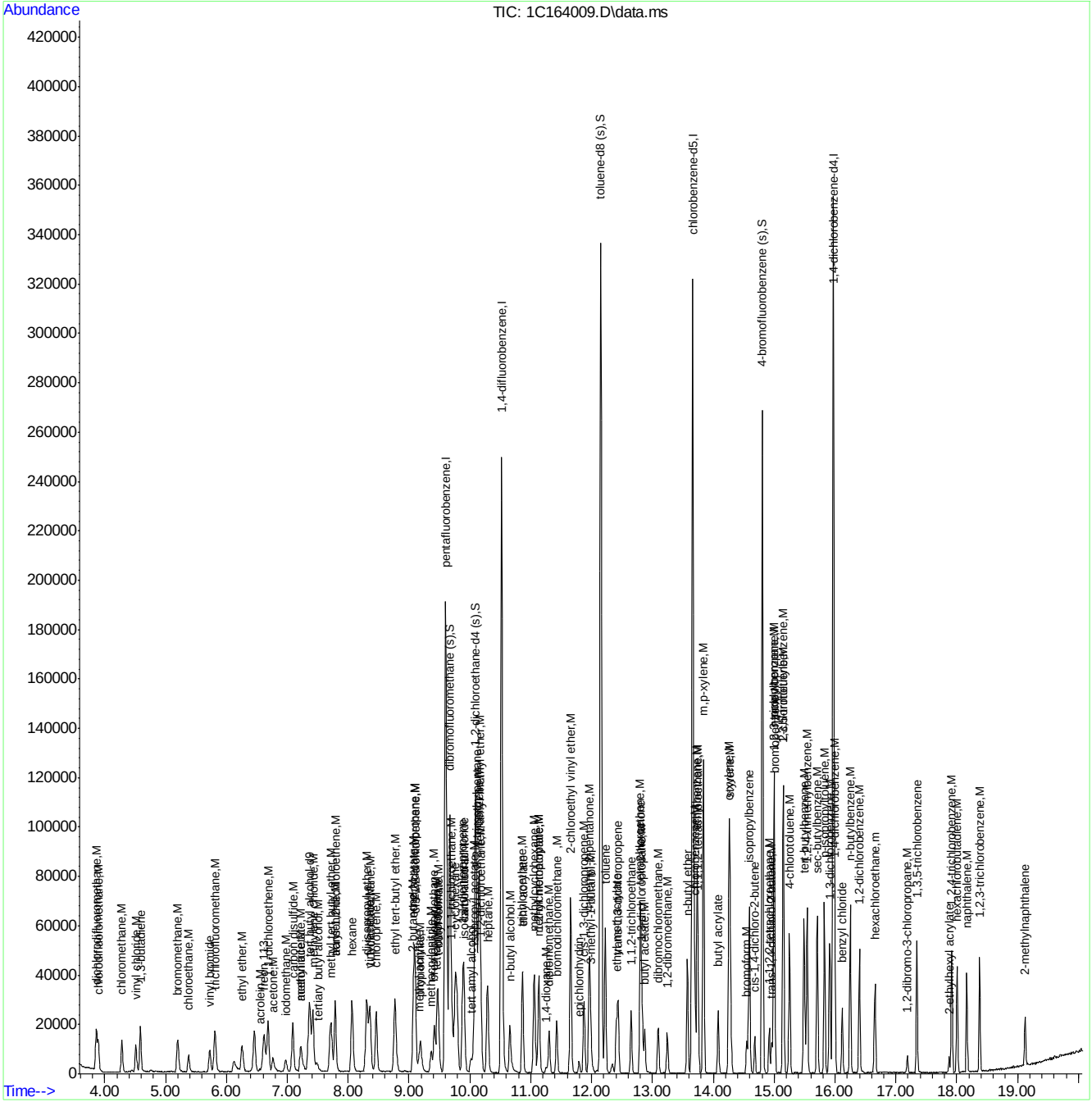
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
92)	styrene	14.273	104	30192	8.41 ug/L	95
93)	bromoform	14.550	173	6477	8.12 ug/L	98
94)	butyl acrylate	14.079	55	17800	8.47 ug/L	97
95)	isopropylbenzene	14.592	105	46854	8.05 ug/L	99
96)	cis-1,4-dichloro-2-butene	14.686	88	4022	8.14 ug/L	95
99)	bromobenzene	15.005	156	12275	8.28 ug/L	93
100)	1,1,2,2-tetrachloroethane	14.916	83	9715	8.35 ug/L	99
101)	trans-1,4-dichloro-2-b...	14.958	53	2608	8.17 ug/L	99
102)	1,2,3-trichloropropane	14.994	110	2515	8.38 ug/L	93
103)	n-propylbenzene	15.000	91	55956	8.20 ug/L	99
105)	2-chlorotoluene	15.151	126	11030	8.31 ug/L	91
106)	4-chlorotoluene	15.251	91	34145	8.13 ug/L	96
107)	1,3,5-trimethylbenzene	15.146	105	40627	8.25 ug/L	99
108)	tert-butylbenzene	15.491	134	6871	8.34 ug/L	92
109)	1,2,4-trimethylbenzene	15.543	105	39918	8.10 ug/L	97
110)	sec-butylbenzene	15.711	105	49369	8.07 ug/L	99
111)	1,3-dichlorobenzene	15.915	146	22878	8.14 ug/L	96
112)	p-isopropyltoluene	15.826	119	43136	8.20 ug/L	99
113)	1,4-dichlorobenzene	15.999	146	23150	8.25 ug/L	98
114)	benzyl chloride	16.119	91	20601	8.53 ug/L	96
115)	1,2-dichlorobenzene	16.401	146	21851	8.34 ug/L	98
117)	n-butylbenzene	16.250	92	21929	8.20 ug/L	96
118)	1,2-dibromo-3-chloropr...	17.186	75	1970	8.46 ug/L	91
119)	1,3,5-trichlorobenzene	17.348	180	17399	8.07 ug/L	98
121)	2-ethylhexyl acrylate	17.881	70	1537	1.42 ug/L	84
122)	1,2,4-trichlorobenzene	17.918	180	14615	8.32 ug/L	94
123)	hexachlorobutadiene	18.007	225	10064	8.16 ug/L	97
124)	naphthalene	18.164	128	28695	8.39 ug/L	97
125)	1,2,3-trichlorobenzene	18.378	180	13878	8.36 ug/L	99
126)	hexachloroethane	16.658	201	7461	7.97 ug/L	95
127)	2-methylnaphthalene	19.126	142	8707	4.00 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164009.D
Acq On : 24 Apr 2019 4:58 pm
Operator : ROBERTS
Sample : IC7200-8
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 07:58:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164010.D
Acq On : 24 Apr 2019 5:24 pm
Operator : ROBERTS
Sample : IC7200-20
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 07:59:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.364	65	54717	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	165339	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	229939	50.00	ug/L	0.00
74) chlorobenzene-d5	13.656	117	181832	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	94337	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	69877	50.11	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 100.22%						
53) 1,2-dichloroethane-d4 (s)	10.094	65	73480	50.97	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 101.94%						
75) toluene-d8 (s)	12.149	98	243555	49.73	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.46%						
98) 4-bromofluorobenzene (s)	14.806	95	87595	49.46	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 98.92%						
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.479	59	14659	100.86	ug/L	97
4) 1,4-dioxane	11.255	88	6632	499.79	ug/L	100
6) chlorodifluoromethane	3.896	51	33557	19.48	ug/L	98
7) dichlorodifluoromethane	3.864	85	51843	21.21	ug/L	100
8) chloromethane	4.278	50	35633	19.88	ug/L	99
9) vinyl chloride	4.513	62	35395	20.98	ug/L	99
10) 1,3-butadiene	4.586	54	21366	20.18	ug/L	98
11) bromomethane	5.198	94	25577	19.89	ug/L	97
12) chloroethane	5.376	64	20761	20.92	ug/L	97
13) trichlorofluoromethane	5.815	101	53015	21.07	ug/L	98
14) vinyl bromide	5.721	106	20519	20.79	ug/L	99
15) ethyl ether	6.260	74	13547	20.16	ug/L	96
16) acrolein	6.553	56	3446	19.96	ug/L	97
17) freon 113	6.621	151	22266	20.01	ug/L	97
18) 1,1-dichloroethene	6.684	96	26028	19.23	ug/L	97
19) acetone	6.757	43	26667	79.14	ug/L	97
20) acetonitrile	7.217	41	28821	211.38	ug/L	99
21) iodomethane	6.971	142	22193	16.69	ug/L	97
22) carbon disulfide	7.092	76	81917	18.74	ug/L	99
23) methylene chloride	7.421	84	28737	19.57	ug/L	100
24) methyl acetate	7.217	43	16682	20.44	ug/L	96
25) methyl tert butyl ether	7.714	73	73230	19.96	ug/L	100
26) trans-1,2-dichloroethene	7.787	96	29156	19.41	ug/L	98
27) di-isopropyl ether	8.305	45	90848	20.12	ug/L	100
28) 2-butanone	9.069	72	10546	83.42	ug/L	97
29) 1,1-dichloroethane	8.363	63	51871	20.35	ug/L	98
30) chloroprene	8.462	53	44580	20.28	ug/L	98
31) acrylonitrile	7.777	53	7553	20.58	ug/L	99
32) hexane	8.064	57	46056	19.73	ug/L	97
33) vinyl acetate	8.342	86	4465	21.01	ug/L #	88
34) ethyl tert-butyl ether	8.770	59	88516	20.34	ug/L	98
35) ethyl acetate	9.074	45	3349	20.99	ug/L #	78

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164010.D
Acq On : 24 Apr 2019 5:24 pm
Operator : ROBERTS
Sample : IC7200-20
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 07:59:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.084	77	44448	19.56	ug/L		99
37) cis-1,2-dichloroethene	9.100	96	32029	19.75	ug/L		96
38) methyl acrylate	9.157	85	3424	20.57	ug/L		98
39) propionitrile	9.189	54	33412	208.61	ug/L		99
40) bromochloromethane	9.414	128	14394	20.44	ug/L		93
41) tetrahydrofuran	9.450	72	3081	20.68	ug/L	#	84
42) chloroform	9.471	85	34787	19.28	ug/L		96
43) t-butyl formate	9.482	59	17760	18.30	ug/L		94
45) methacrylonitrile	9.361	67	9362	20.25	ug/L		96
46) 1,1,1-trichloroethane	9.701	97	46731	20.01	ug/L		97
47) cyclohexane	9.759	84	49405	21.43	ug/L		99
48) 1,1-dichloropropene	9.884	75	39485	19.96	ug/L		99
49) iso-butyl alcohol	9.905	43	10669	206.54	ug/L		92
50) carbon tetrachloride	9.900	117	40687	19.95	ug/L		100
51) tert amyl alcohol	10.020	55	4797	98.63	ug/L		98
54) n-butyl alcohol	10.653	56	34678	1033.71	ug/L		99
55) 2,2,4-trimethylpentane	10.115	57	112791	20.43	ug/L		99
56) benzene	10.151	78	113319	19.68	ug/L		100
57) tert-amyl methyl ether	10.156	87	18608	20.74	ug/L		99
58) heptane	10.287	71	25263	20.33	ug/L		97
59) isopropyl acetate	10.062	87	4689	19.69	ug/L	#	91
60) 1,2-dichloroethane	10.183	62	36540	19.52	ug/L		98
61) trichloroethene	10.863	130	30069	20.29	ug/L		98
62) ethyl acrylate	10.863	55	28474	20.47	ug/L		99
64) 2-chloroethyl vinyl ether	11.652	63	67512	98.79	ug/L		99
65) methyl methacrylate	11.129	100	5793	20.14	ug/L	#	88
66) 1,2-dichloropropane	11.140	63	28411	20.73	ug/L		97
67) dibromomethane	11.307	93	16186	20.17	ug/L		96
68) methylcyclohexane	11.061	83	48530	18.99	ug/L		98
69) bromodichloromethane	11.427	83	38623	19.89	ug/L		99
70) epichlorohydrin	11.799	57	11113	100.85	ug/L		92
71) cis-1,3-dichloropropene	11.877	75	44783	20.09	ug/L		97
72) 4-methyl-2-pentanone	11.961	58	31548	79.24	ug/L		99
73) 3-methyl-1-butanol	11.987	55	20910	414.68	ug/L		97
76) toluene	12.222	92	63153	18.98	ug/L		98
77) trans-1,3-dichloropropene	12.437	75	37159	19.84	ug/L		99
78) ethyl methacrylate	12.405	69	27693	20.92	ug/L		97
79) 1,1,2-trichloroethane	12.651	83	17938	20.46	ug/L		96
80) tetrachloroethene	12.803	164	22580	19.51	ug/L		96
81) 1,3-dichloropropane	12.829	76	32654	20.31	ug/L		94
82) 2-hexanone	12.803	58	30006	82.95	ug/L		94
83) butyl acetate	12.871	56	13272	20.13	ug/L		99
84) dibromochloromethane	13.096	129	26291	19.94	ug/L		98
85) 1,2-dibromoethane	13.242	107	28899	20.75	ug/L		100
86) n-butyl ether	13.572	57	97742	19.52	ug/L		100
87) chlorobenzene	13.692	112	65368	19.36	ug/L		98
88) 1,1,1,2-tetrachloroethane	13.750	131	24679	20.10	ug/L		98
89) ethylbenzene	13.734	91	115372	18.86	ug/L		100
90) m,p-xylene	13.839	106	87963	38.70	ug/L		99
91) o-xylene	14.257	106	42868	19.76	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164010.D
Acq On : 24 Apr 2019 5:24 pm
Operator : ROBERTS
Sample : IC7200-20
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 07:59:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) styrene	14.273	104	71084	19.75	ug/L	97
93) bromoform	14.550	173	15846	19.81	ug/L	95
94) butyl acrylate	14.079	55	42733	20.28	ug/L	98
95) isopropylbenzene	14.592	105	112759	19.32	ug/L	99
96) cis-1,4-dichloro-2-butene	14.686	88	9706	19.59	ug/L	99
99) bromobenzene	15.000	156	29229	19.73	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.916	83	23377	20.12	ug/L	99
101) trans-1,4-dichloro-2-b...	14.958	53	6157	19.31	ug/L	96
102) 1,2,3-trichloropropane	14.989	110	6051	20.19	ug/L	94
103) n-propylbenzene	15.000	91	131766	19.34	ug/L	99
105) 2-chlorotoluene	15.151	126	26328	19.85	ug/L	91
106) 4-chlorotoluene	15.251	91	80570	19.22	ug/L	99
107) 1,3,5-trimethylbenzene	15.146	105	94881	19.31	ug/L	99
108) tert-butylbenzene	15.491	134	16810	20.44	ug/L	91
109) 1,2,4-trimethylbenzene	15.538	105	95257	19.35	ug/L	97
110) sec-butylbenzene	15.706	105	119026	19.48	ug/L	99
111) 1,3-dichlorobenzene	15.915	146	54886	19.57	ug/L	99
112) p-isopropyltoluene	15.826	119	103841	19.76	ug/L	99
113) 1,4-dichlorobenzene	15.999	146	53986	19.26	ug/L	99
114) benzyl chloride	16.119	91	46603	19.32	ug/L	100
115) 1,2-dichlorobenzene	16.401	146	51807	19.79	ug/L	98
117) n-butylbenzene	16.250	92	52422	19.63	ug/L	98
118) 1,2-dibromo-3-chloropr...	17.186	75	4774	20.53	ug/L	95
119) 1,3,5-trichlorobenzene	17.348	180	42154	19.57	ug/L	99
121) 2-ethylhexyl acrylate	17.876	70	3815	3.54	ug/L	97
122) 1,2,4-trichlorobenzene	17.918	180	34835	19.85	ug/L	96
123) hexachlorobutadiene	18.007	225	24338	19.76	ug/L	99
124) naphthalene	18.164	128	68377	20.03	ug/L	99
125) 1,2,3-trichlorobenzene	18.378	180	31839	19.21	ug/L	99
126) hexachloroethane	16.658	201	18468	19.77	ug/L	97
127) 2-methylnaphthalene	19.126	142	21172	9.74	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

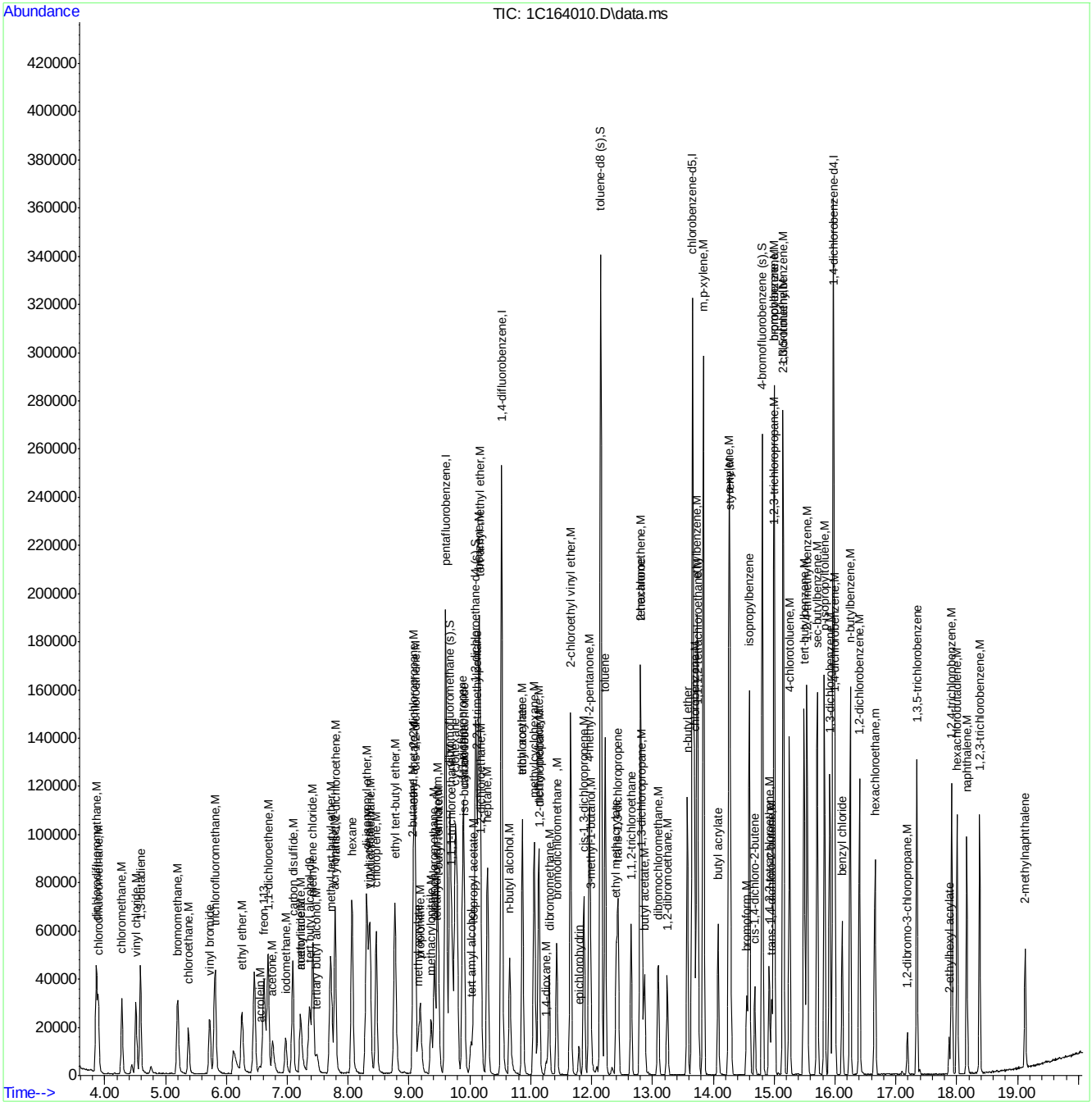
7.7.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164010.D
Acq On : 24 Apr 2019 5:24 pm
Operator : ROBERTS
Sample : IC7200-20
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 07:59:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164011.D
Acq On : 24 Apr 2019 5:51 pm
Operator : ROBERTS
Sample : ICC7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 08:00:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	56373	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	164623	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.522	114	233011	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	181991	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	95487	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	69994	50.42	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 100.84%						
53) 1,2-dichloroethane-d4 (s)	10.094	65	71506	48.95	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 97.90%						
75) toluene-d8 (s)	12.154	98	243344	49.64	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.28%						
98) 4-bromofluorobenzene (s)	14.806	95	88912	49.60	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 99.20%						
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.484	59	36614	244.53	ug/L	100
4) 1,4-dioxane	11.255	88	17321	1266.97	ug/L	100
6) chlorodifluoromethane	3.896	51	90321	52.65	ug/L	100
7) dichlorodifluoromethane	3.859	85	128184	52.67	ug/L	100
8) chloromethane	4.277	50	89458	50.13	ug/L	100
9) vinyl chloride	4.513	62	88173	52.49	ug/L	100
10) 1,3-butadiene	4.586	54	56832	53.90	ug/L	100
11) bromomethane	5.198	94	63134	49.32	ug/L	100
12) chloroethane	5.376	64	51243	51.85	ug/L	100
13) trichlorofluoromethane	5.810	101	132054	52.72	ug/L	100
14) vinyl bromide	5.721	106	51408	52.32	ug/L	100
15) ethyl ether	6.255	74	35117	52.48	ug/L	100
16) acrolein	6.537	56	8835	51.39	ug/L	100
17) freon 113	6.621	151	59753	53.94	ug/L	100
18) 1,1-dichloroethene	6.683	96	69437	51.53	ug/L	100
19) acetone	6.757	43	65472	195.15	ug/L	100
20) acetonitrile	7.212	41	69713	513.51	ug/L	100
21) iodomethane	6.971	142	71724	47.52	ug/L	100
22) carbon disulfide	7.086	76	215170	49.44	ug/L	100
23) methylene chloride	7.421	84	73348	50.18	ug/L	100
24) methyl acetate	7.206	43	41930	51.59	ug/L	100
25) methyl tert butyl ether	7.714	73	190536	52.17	ug/L	100
26) trans-1,2-dichloroethene	7.787	96	74779	49.99	ug/L	100
27) di-isopropyl ether	8.305	45	231495	51.49	ug/L	100
28) 2-butanone	9.063	72	26364	209.46	ug/L	100
29) 1,1-dichloroethane	8.362	63	129096	50.86	ug/L	100
30) chloroprene	8.456	53	114424	52.29	ug/L	100
31) acrylonitrile	7.771	53	19090	52.23	ug/L	100
32) hexane	8.064	57	122299	52.61	ug/L	100
33) vinyl acetate	8.341	86	11510	54.38	ug/L	100
34) ethyl tert-butyl ether	8.770	59	226990	52.38	ug/L	100
35) ethyl acetate	9.068	45	8334	52.45	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164011.D
Acq On : 24 Apr 2019 5:51 pm
Operator : ROBERTS
Sample : ICC7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 08:00:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) 2,2-dichloropropane	9.084	77	117154	51.77	ug/L	100
37) cis-1,2-dichloroethene	9.100	96	80856	50.08	ug/L	100
38) methyl acrylate	9.152	85	9117	55.00	ug/L	100
39) propionitrile	9.183	54	81216	509.27	ug/L	100
40) bromochloromethane	9.419	128	36596	52.19	ug/L	100
41) tetrahydrofuran	9.445	72	7683	51.78	ug/L	100
42) chloroform	9.466	85	86994	48.42	ug/L	100
43) t-butyl formate	9.482	59	54897	56.81	ug/L	100
45) methacrylonitrile	9.361	67	24468	53.15	ug/L	100
46) 1,1,1-trichloroethane	9.701	97	122706	52.78	ug/L	100
47) cyclohexane	9.759	84	117872	51.36	ug/L	100
48) 1,1-dichloropropene	9.884	75	102154	51.87	ug/L	100
49) iso-butyl alcohol	9.900	43	25743	500.52	ug/L	100
50) carbon tetrachloride	9.900	117	107353	52.87	ug/L	100
51) tert amyl alcohol	10.020	55	12393	255.92	ug/L	100
54) n-butyl alcohol	10.653	56	89284	2626.36	ug/L	100
55) 2,2,4-trimethylpentane	10.114	57	289122	51.68	ug/L	100
56) benzene	10.151	78	281491	48.25	ug/L	100
57) tert-amyl methyl ether	10.162	87	47297	52.02	ug/L	100
58) heptane	10.287	71	65199	51.79	ug/L	100
59) isopropyl acetate	10.062	87	12665	52.48	ug/L	100
60) 1,2-dichloroethane	10.182	62	90613	47.77	ug/L	100
61) trichloroethene	10.862	130	77997	51.94	ug/L	100
62) ethyl acrylate	10.862	55	73915	52.45	ug/L	100
64) 2-chloroethyl vinyl ether	11.652	63	192296	277.69	ug/L	100
65) methyl methacrylate	11.124	100	14883	51.05	ug/L	100
66) 1,2-dichloropropane	11.134	63	69478	50.01	ug/L	100
67) dibromomethane	11.302	93	41830	51.44	ug/L	100
68) methylcyclohexane	11.061	83	126577	48.88	ug/L	100
69) bromodichloromethane	11.427	83	101243	51.44	ug/L	100
70) epichlorohydrin	11.788	57	28364	254.02	ug/L	100
71) cis-1,3-dichloropropene	11.872	75	115388	51.08	ug/L	100
72) 4-methyl-2-pentanone	11.961	58	79338	196.66	ug/L	100
73) 3-methyl-1-butanol	11.982	55	52697	1031.29	ug/L	100
76) toluene	12.222	92	161091	48.36	ug/L	100
77) trans-1,3-dichloropropene	12.431	75	96510	51.49	ug/L	100
78) ethyl methacrylate	12.405	69	70204	52.99	ug/L	100
79) 1,1,2-trichloroethane	12.651	83	46466	52.95	ug/L	100
80) tetrachloroethene	12.803	164	59873	51.70	ug/L	100
81) 1,3-dichloropropane	12.829	76	82462	51.24	ug/L	100
82) 2-hexanone	12.803	58	73296	202.44	ug/L	100
83) butyl acetate	12.871	56	33189	50.29	ug/L	100
84) dibromochloromethane	13.096	129	69957	53.02	ug/L	100
85) 1,2-dibromoethane	13.242	107	73605	52.79	ug/L	100
86) n-butyl ether	13.572	57	250704	50.03	ug/L	100
87) chlorobenzene	13.687	112	167537	49.57	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.749	131	65035	52.92	ug/L	100
89) ethylbenzene	13.734	91	298727	48.78	ug/L	100
90) m,p-xylene	13.838	106	222121	97.64	ug/L	100
91) o-xylene	14.257	106	108443	49.93	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164011.D
Acq On : 24 Apr 2019 5:51 pm
Operator : ROBERTS
Sample : ICC7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 08:00:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) styrene	14.272	104	180980	50.25	ug/L	100
93) bromoform	14.550	173	43307	54.08	ug/L	100
94) butyl acrylate	14.079	55	109563	51.94	ug/L	100
95) isopropylbenzene	14.592	105	288577	49.39	ug/L	100
96) cis-1,4-dichloro-2-butene	14.680	88	25503	51.42	ug/L	100
99) bromobenzene	14.999	156	74780	49.88	ug/L	100
100) 1,1,2,2-tetrachloroethane	14.916	83	60734	51.65	ug/L	100
101) trans-1,4-dichloro-2-b...	14.958	53	16558	51.31	ug/L	100
102) 1,2,3-trichloropropane	14.994	110	15415	50.81	ug/L	100
103) n-propylbenzene	14.999	91	344035	49.89	ug/L	100
105) 2-chlorotoluene	15.156	126	67254	50.11	ug/L	100
106) 4-chlorotoluene	15.251	91	206975	48.78	ug/L	100
107) 1,3,5-trimethylbenzene	15.146	105	247192	49.69	ug/L	100
108) tert-butylbenzene	15.491	134	43315	52.04	ug/L	100
109) 1,2,4-trimethylbenzene	15.538	105	243979	48.97	ug/L	100
110) sec-butylbenzene	15.706	105	311051	50.30	ug/L	100
111) 1,3-dichlorobenzene	15.915	146	139799	49.23	ug/L	100
112) p-isopropyltoluene	15.826	119	266385	50.08	ug/L	100
113) 1,4-dichlorobenzene	15.998	146	139927	49.33	ug/L	100
114) benzyl chloride	16.119	91	125008	51.19	ug/L	100
115) 1,2-dichlorobenzene	16.401	146	134309	50.69	ug/L	100
117) n-butylbenzene	16.250	92	135625	50.17	ug/L	100
118) 1,2-dibromo-3-chloropr...	17.191	75	11999	50.98	ug/L	100
119) 1,3,5-trichlorobenzene	17.348	180	109002	49.99	ug/L	100
121) 2-ethylhexyl acrylate	17.876	70	11145	10.22	ug/L	100
122) 1,2,4-trichlorobenzene	17.918	180	90974	51.22	ug/L	100
123) hexachlorobutadiene	18.007	225	64340	51.61	ug/L	100
124) naphthalene	18.164	128	174189	50.42	ug/L	100
125) 1,2,3-trichlorobenzene	18.378	180	84916	50.61	ug/L	100
126) hexachloroethane	16.657	201	50069	52.94	ug/L	100
127) 2-methylnaphthalene	19.126	142	58392	26.54	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

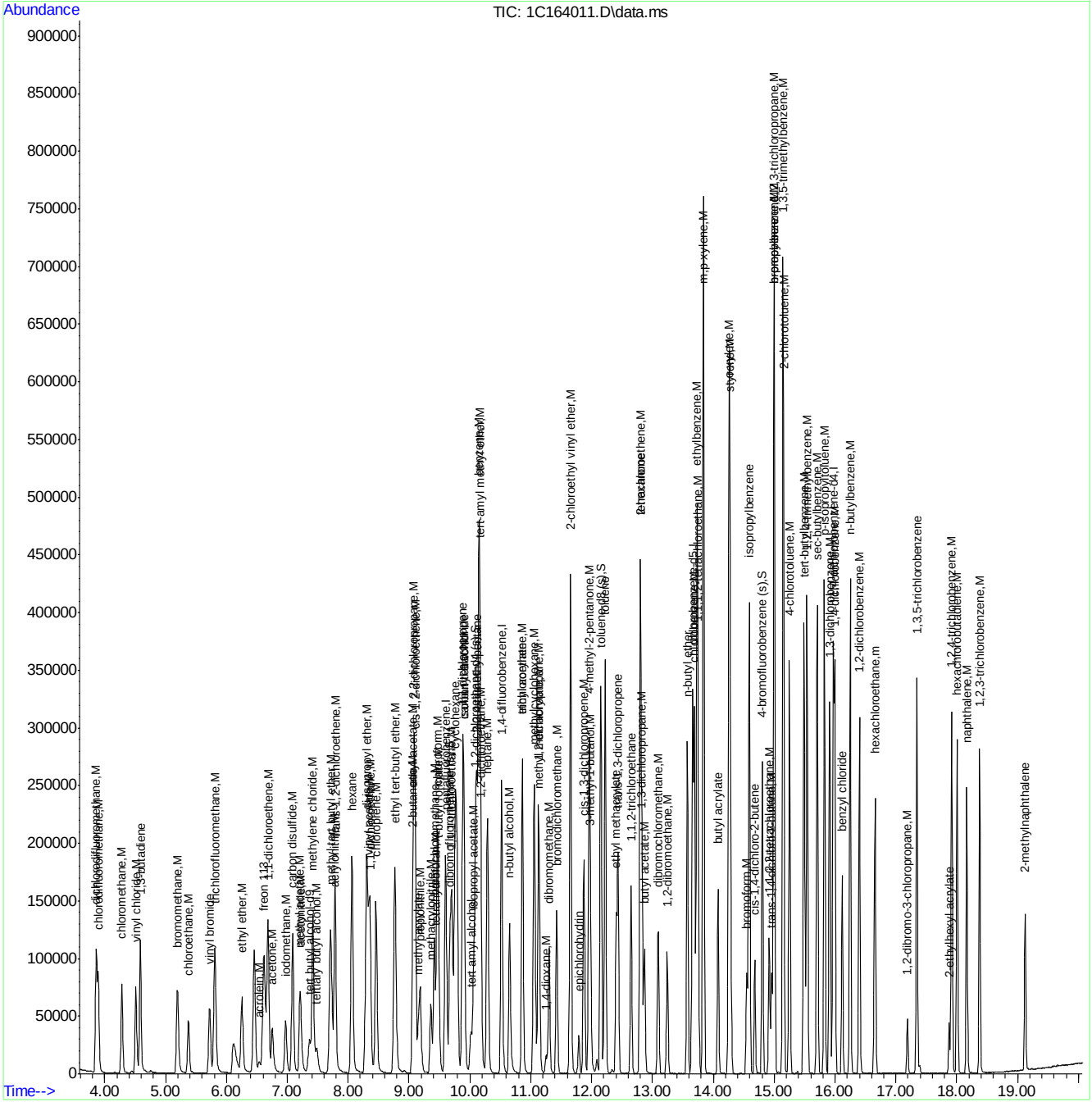
7.2.7

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164011.D
Acq On : 24 Apr 2019 5:51 pm
Operator : ROBERTS
Sample : ICC7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 08:00:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164012.D
Acq On : 24 Apr 2019 6:17 pm
Operator : ROBERTS
Sample : IC7200-100
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 08:01:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.364	65	54362	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	164574	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	234870	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	183738	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.973	152	97215	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	70392	50.72	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 101.44%						
53) 1,2-dichloroethane-d4 (s)	10.089	65	72935	49.53	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 99.06%						
75) toluene-d8 (s)	12.149	98	247436	49.99	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.98%						
98) 4-bromofluorobenzene (s)	14.806	95	91427	50.10	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 100.20%						
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.484	59	75126	520.30	ug/L	99
4) 1,4-dioxane	11.250	88	35303	2677.82	ug/L	100
6) chlorodifluoromethane	3.896	51	175905	102.58	ug/L	99
7) dichlorodifluoromethane	3.859	85	251851	103.51	ug/L	99
8) chloromethane	4.278	50	174007	97.53	ug/L	100
9) vinyl chloride	4.513	62	170167	101.32	ug/L	98
10) 1,3-butadiene	4.586	54	108887	103.30	ug/L	97
11) bromomethane	5.193	94	121094	94.62	ug/L	99
12) chloroethane	5.371	64	102265	103.50	ug/L	99
13) trichlorofluoromethane	5.810	101	257020	102.63	ug/L	98
14) vinyl bromide	5.721	106	100668	102.48	ug/L	98
15) ethyl ether	6.255	74	70390	105.23	ug/L	98
16) acrolein	6.537	56	17990	104.67	ug/L	96
17) freon 113	6.616	151	115449	104.25	ug/L	98
18) 1,1-dichloroethene	6.678	96	133249	98.91	ug/L	98
19) acetone	6.752	43	136356	406.55	ug/L	100
20) acetonitrile	7.212	41	139353	1026.78	ug/L	99
21) iodomethane	6.971	142	161754	103.49	ug/L	99
22) carbon disulfide	7.086	76	412730	94.86	ug/L	99
23) methylene chloride	7.421	84	144165	98.65	ug/L	99
24) methyl acetate	7.207	43	81159	99.90	ug/L	98
25) methyl tert butyl ether	7.714	73	378515	103.67	ug/L	99
26) trans-1,2-dichloroethene	7.787	96	142185	95.07	ug/L	99
27) di-isopropyl ether	8.305	45	456763	101.62	ug/L	98
28) 2-butanone	9.063	72	52945	420.77	ug/L	93
29) 1,1-dichloroethane	8.363	63	245160	96.62	ug/L	98
30) chloroprene	8.462	53	219477	100.33	ug/L	99
31) acrylonitrile	7.766	53	38255	104.69	ug/L	98
32) hexane	8.064	57	234975	101.12	ug/L	98
33) vinyl acetate	8.336	86	22383	105.79	ug/L #	95
34) ethyl tert-butyl ether	8.765	59	449388	103.73	ug/L	99
35) ethyl acetate	9.069	45	16246	102.27	ug/L #	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164012.D
Acq On : 24 Apr 2019 6:17 pm
Operator : ROBERTS
Sample : IC7200-100
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 08:01:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 2,2-dichloropropane	9.079	77	223523	98.81	ug/L		98
37) cis-1,2-dichloroethene	9.100	96	155780	96.52	ug/L		99
38) methyl acrylate	9.158	85	18192	109.78	ug/L	#	87
39) propionitrile	9.184	54	159700	1001.72	ug/L		98
40) bromochloromethane	9.414	128	72220	103.02	ug/L		96
41) tetrahydrofuran	9.445	72	15206	102.52	ug/L		98
42) chloroform	9.466	85	168040	93.56	ug/L		99
43) t-butyl formate	9.477	59	97174	100.60	ug/L		96
45) methacrylonitrile	9.356	67	47742	103.75	ug/L		96
46) 1,1,1-trichloroethane	9.701	97	238226	102.50	ug/L		99
47) cyclohexane	9.759	84	226538	98.73	ug/L		99
48) 1,1-dichloropropene	9.885	75	193904	98.48	ug/L		99
49) iso-butyl alcohol	9.900	43	50930	990.53	ug/L		96
50) carbon tetrachloride	9.900	117	207463	102.20	ug/L		99
51) tert amyl alcohol	10.021	55	24638	508.94	ug/L		98
54) n-butyl alcohol	10.653	56	181265	5289.84	ug/L		98
55) 2,2,4-trimethylpentane	10.115	57	561985	99.66	ug/L		99
56) benzene	10.151	78	543215	92.38	ug/L		99
57) tert-amyl methyl ether	10.157	87	93594	102.12	ug/L		98
58) heptane	10.287	71	126733	99.87	ug/L		99
59) isopropyl acetate	10.062	87	25717	105.72	ug/L	#	90
60) 1,2-dichloroethane	10.183	62	180067	94.18	ug/L		99
61) trichloroethene	10.863	130	151238	99.91	ug/L		99
62) ethyl acrylate	10.857	55	145668	102.54	ug/L		97
64) 2-chloroethyl vinyl ether	11.652	63	344534	493.59	ug/L		99
65) methyl methacrylate	11.124	100	29939	101.88	ug/L		98
66) 1,2-dichloropropane	11.135	63	135409	96.70	ug/L		99
67) dibromomethane	11.302	93	83122	101.40	ug/L		98
68) methylcyclohexane	11.056	83	244623	93.72	ug/L		99
69) bromodichloromethane	11.427	83	204356	103.01	ug/L		99
70) epichlorohydrin	11.788	57	57461	510.53	ug/L		98
71) cis-1,3-dichloropropene	11.872	75	227902	100.08	ug/L		98
72) 4-methyl-2-pentanone	11.961	58	157137	386.42	ug/L		99
73) 3-methyl-1-butanol	11.982	55	105565	2049.57	ug/L		99
76) toluene	12.222	92	319473	95.00	ug/L		100
77) trans-1,3-dichloropropene	12.432	75	191542	101.22	ug/L		98
78) ethyl methacrylate	12.406	69	142307	106.40	ug/L		99
79) 1,1,2-trichloroethane	12.651	83	93348	105.35	ug/L		98
80) tetrachloroethene	12.803	164	117586	100.56	ug/L		99
81) 1,3-dichloropropane	12.829	76	164065	100.98	ug/L		99
82) 2-hexanone	12.803	58	145768	398.77	ug/L		98
83) butyl acetate	12.871	56	65653	98.54	ug/L		99
84) dibromochloromethane	13.096	129	144481	108.45	ug/L		97
85) 1,2-dibromoethane	13.242	107	150074	106.62	ug/L		99
86) n-butyl ether	13.572	57	504362	99.69	ug/L		100
87) chlorobenzene	13.687	112	336438	98.61	ug/L		99
88) 1,1,1,2-tetrachloroethane	13.750	131	130796	105.42	ug/L		97
89) ethylbenzene	13.734	91	588190	95.14	ug/L		100
90) m,p-xylene	13.839	106	438472	190.90	ug/L		97
91) o-xylene	14.257	106	212486	96.91	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164012.D
Acq On : 24 Apr 2019 6:17 pm
Operator : ROBERTS
Sample : IC7200-100
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 08:01:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
92) styrene	14.273	104	353538	97.23 ug/L	99
93) bromoform	14.550	173	90473	111.91 ug/L	100
94) butyl acrylate	14.079	55	219935	103.27 ug/L	98
95) isopropylbenzene	14.592	105	575810	97.62 ug/L	100
96) cis-1,4-dichloro-2-butene	14.686	88	53028	105.90 ug/L	97
99) bromobenzene	15.005	156	149860	98.19 ug/L	92
100) 1,1,2,2-tetrachloroethane	14.921	83	124527	104.01 ug/L	97
101) trans-1,4-dichloro-2-b...	14.958	53	33362	101.53 ug/L	92
102) 1,2,3-trichloropropane	14.994	110	31001	100.37 ug/L	99
103) n-propylbenzene	15.000	91	675283	96.19 ug/L	99
105) 2-chlorotoluene	15.151	126	133528	97.72 ug/L	90
106) 4-chlorotoluene	15.251	91	417206	96.57 ug/L	100
107) 1,3,5-trimethylbenzene	15.146	105	492609	97.26 ug/L	99
108) tert-butylbenzene	15.491	134	86331	101.87 ug/L	95
109) 1,2,4-trimethylbenzene	15.544	105	487621	96.12 ug/L	97
110) sec-butylbenzene	15.706	105	619600	98.41 ug/L	99
111) 1,3-dichlorobenzene	15.915	146	282370	97.68 ug/L	100
112) p-isopropyltoluene	15.826	119	531211	98.09 ug/L	99
113) 1,4-dichlorobenzene	15.999	146	281197	97.37 ug/L	99
114) benzyl chloride	16.119	91	254434	102.34 ug/L	98
115) 1,2-dichlorobenzene	16.401	146	270601	100.32 ug/L	99
117) n-butylbenzene	16.250	92	269323	97.85 ug/L	99
118) 1,2-dibromo-3-chloropr...	17.191	75	24716	103.14 ug/L	97
119) 1,3,5-trichlorobenzene	17.348	180	221999	100.01 ug/L	100
121) 2-ethylhexyl acrylate	17.876	70	24771	22.30 ug/L	94
122) 1,2,4-trichlorobenzene	17.918	180	186074	102.91 ug/L	100
123) hexachlorobutadiene	18.007	225	126500	99.66 ug/L	98
124) naphthalene	18.164	128	352248	100.14 ug/L	100
125) 1,2,3-trichlorobenzene	18.378	180	172497	100.99 ug/L	100
126) hexachloroethane	16.658	201	104355	108.39 ug/L	99
127) 2-methylnaphthalene	19.126	142	122310	54.61 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

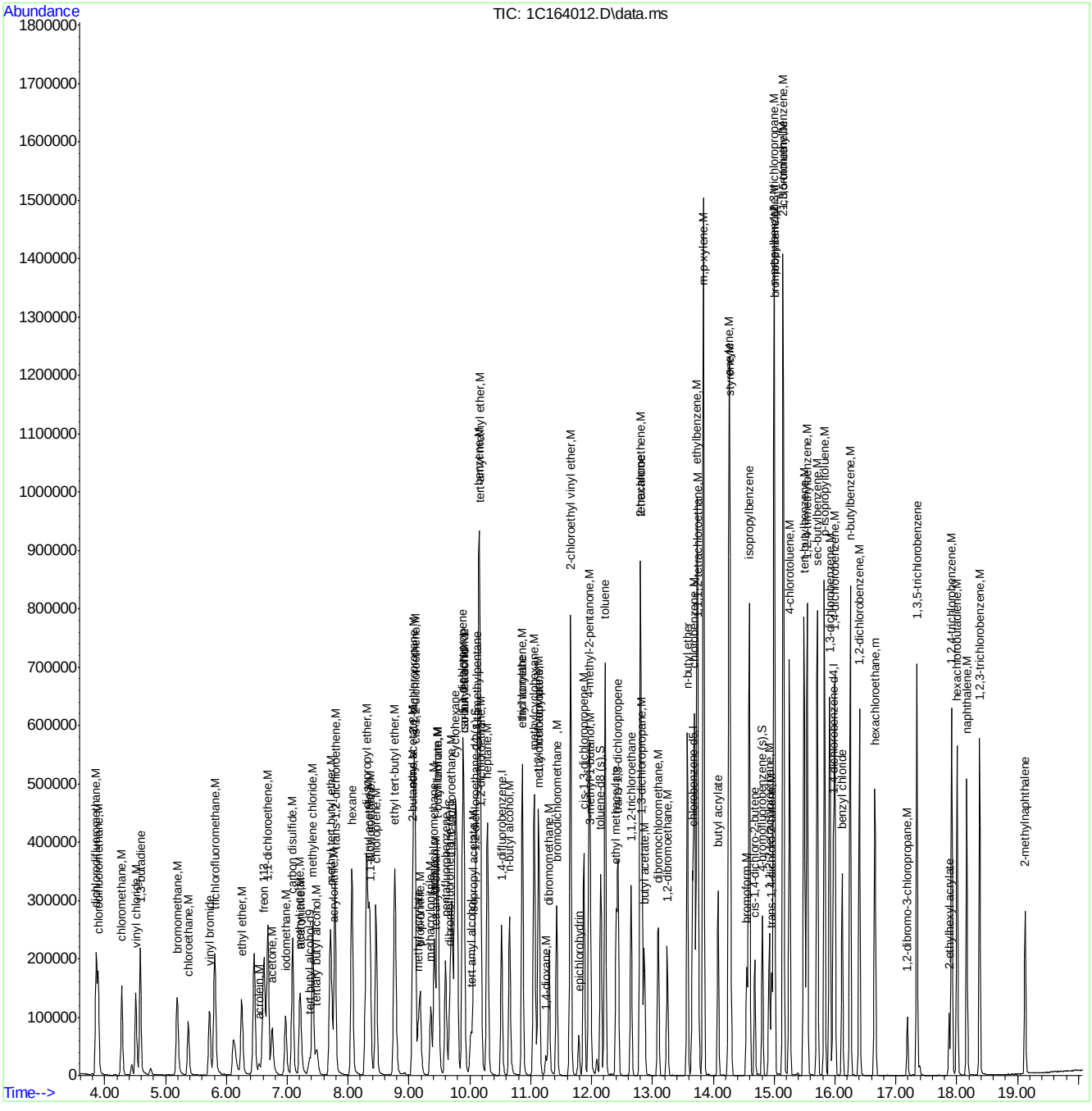
7.7.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164012.D
Acq On : 24 Apr 2019 6:17 pm
Operator : ROBERTS
Sample : IC7200-100
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 08:01:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164013.D
Acq On : 24 Apr 2019 6:44 pm
Operator : ROBERTS
Sample : IC7200-200
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 08:02:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.379	65	55377	500.00	ug/L	0.00
5) pentafluorobenzene	9.602	168	166522	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	239614	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	189631	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	97742	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	70317	50.07	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.14%			
53) 1,2-dichloroethane-d4 (s)	10.088	65	74062	49.30	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.60%			
75) toluene-d8 (s)	12.149	98	251967	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.66%			
98) 4-bromofluorobenzene (s)	14.806	95	93115	50.75	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.50%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.494	59	150758	1024.96	ug/L	87
4) 1,4-dioxane	11.250	88	71490	5323.29	ug/L	98
6) chlorodifluoromethane	3.891	51	336323	193.83	ug/L	98
7) dichlorodifluoromethane	3.859	85	485415	197.18	ug/L	99
8) chloromethane	4.278	50	322753	178.79	ug/L	99
9) vinyl chloride	4.513	62	327982	193.01	ug/L	98
10) 1,3-butadiene	4.581	54	208320	195.32	ug/L	98
11) bromomethane	5.177	94	231204	178.55	ug/L	97
12) chloroethane	5.366	64	191915	191.97	ug/L	99
13) trichlorofluoromethane	5.805	101	490566	193.60	ug/L	98
14) vinyl bromide	5.716	106	193285	194.46	ug/L	98
15) ethyl ether	6.255	74	136622	201.85	ug/L	98
16) acrolein	6.532	56	35961	206.78	ug/L	97
17) freon 113	6.616	151	222609	198.67	ug/L	98
18) 1,1-dichloroethene	6.678	96	250089	183.46	ug/L	99
19) acetone	6.752	43	260056	766.29	ug/L	98
20) acetonitrile	7.212	41	273493	1991.58	ug/L	98
21) iodomethane	6.971	142	323876	201.89	ug/L	99
22) carbon disulfide	7.086	76	788625	179.14	ug/L	100
23) methylene chloride	7.421	84	275371	186.23	ug/L	99
24) methyl acetate	7.207	43	161252	196.16	ug/L	99
25) methyl tert butyl ether	7.714	73	727040	196.79	ug/L	99
26) trans-1,2-dichloroethene	7.782	96	268674	177.55	ug/L	98
27) di-isopropyl ether	8.305	45	865623	190.34	ug/L	98
28) 2-butanone	9.063	72	101400	796.43	ug/L	99
29) 1,1-dichloroethane	8.362	63	459392	178.94	ug/L	100
30) chloroprene	8.457	53	418196	188.93	ug/L	100
31) acrylonitrile	7.766	53	74917	202.63	ug/L	96
32) hexane	8.059	57	446430	189.87	ug/L	99
33) vinyl acetate	8.342	86	42812	199.98	ug/L	95
34) ethyl tert-butyl ether	8.765	59	861092	196.44	ug/L	99
35) ethyl acetate	9.069	45	31381	195.24	ug/L #	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164013.D
Acq On : 24 Apr 2019 6:44 pm
Operator : ROBERTS
Sample : IC7200-200
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 08:02:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) 2,2-dichloropropane	9.084	77	422041	184.39 ug/L	98
37) cis-1,2-dichloroethene	9.100	96	290081	177.63 ug/L	99
38) methyl acrylate	9.152	85	36271	216.32 ug/L	96
39) propionitrile	9.189	54	313364	1942.58 ug/L	93
40) bromochloromethane	9.414	128	135320	190.78 ug/L	94
41) tetrahydrofuran	9.445	72	29417	196.01 ug/L	89
42) chloroform	9.466	85	316928	174.39 ug/L	98
43) t-butyl formate	9.482	59	204142	208.86 ug/L	95
45) methacrylonitrile	9.356	67	93768	201.38 ug/L	97
46) 1,1,1-trichloroethane	9.701	97	455508	193.69 ug/L	99
47) cyclohexane	9.759	84	427961	184.33 ug/L	99
48) 1,1-dichloropropene	9.884	75	371977	186.71 ug/L	99
49) iso-butyl alcohol	9.905	43	101063	1942.56 ug/L	96
50) carbon tetrachloride	9.900	117	396026	192.81 ug/L	99
51) tert amyl alcohol	10.020	55	50140	1023.62 ug/L	98
54) n-butyl alcohol	10.659	56	360092	10300.49 ug/L	98
55) 2,2,4-trimethylpentane	10.115	57	1069898	185.98 ug/L	99
56) benzene	10.151	78	1006338	167.75 ug/L	99
57) tert-amyl methyl ether	10.156	87	179039	191.49 ug/L	94
58) heptane	10.287	71	240032	185.41 ug/L	98
59) isopropyl acetate	10.062	87	49710	200.31 ug/L #	82
60) 1,2-dichloroethane	10.183	62	339158	173.88 ug/L	99
61) trichloroethene	10.863	130	287069	185.89 ug/L	99
62) ethyl acrylate	10.857	55	281989	194.57 ug/L	97
64) 2-chloroethyl vinyl ether	11.652	63	692395	972.30 ug/L	99
65) methyl methacrylate	11.124	100	58167	194.02 ug/L	95
66) 1,2-dichloropropane	11.134	63	254422	178.10 ug/L	100
67) dibromomethane	11.302	93	159805	191.09 ug/L	99
68) methylcyclohexane	11.056	83	469779	176.42 ug/L	100
69) bromodichloromethane	11.427	83	392194	193.77 ug/L	100
70) epichlorohydrin	11.788	57	113573	989.09 ug/L	98
71) cis-1,3-dichloropropene	11.877	75	440218	189.49 ug/L	99
72) 4-methyl-2-pentanone	11.961	58	302097	728.19 ug/L	99
73) 3-methyl-1-butanol	11.987	55	210563	4007.20 ug/L	96
76) toluene	12.222	92	612236	176.39 ug/L	98
77) trans-1,3-dichloropropene	12.432	75	370643	189.79 ug/L	99
78) ethyl methacrylate	12.405	69	273101	197.84 ug/L	98
79) 1,1,2-trichloroethane	12.651	83	181425	198.40 ug/L	98
80) tetrachloroethene	12.798	164	224199	185.78 ug/L	99
81) 1,3-dichloropropane	12.829	76	313423	186.92 ug/L	99
82) 2-hexanone	12.803	58	272460	722.19 ug/L	98
83) butyl acetate	12.871	56	127993	186.14 ug/L	95
84) dibromochloromethane	13.096	129	287305	208.96 ug/L	98
85) 1,2-dibromoethane	13.242	107	295211	203.21 ug/L	100
86) n-butyl ether	13.577	57	948549	181.67 ug/L	98
87) chlorobenzene	13.692	112	647220	183.80 ug/L	99
88) 1,1,1,2-tetrachloroethane	13.750	131	252779	197.40 ug/L	98
89) ethylbenzene	13.734	91	1100428	172.46 ug/L	100
90) m,p-xylene	13.839	106	806285	340.14 ug/L	100
91) o-xylene	14.257	106	396381	175.16 ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164013.D
Acq On : 24 Apr 2019 6:44 pm
Operator : ROBERTS
Sample : IC7200-200
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 08:02:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration

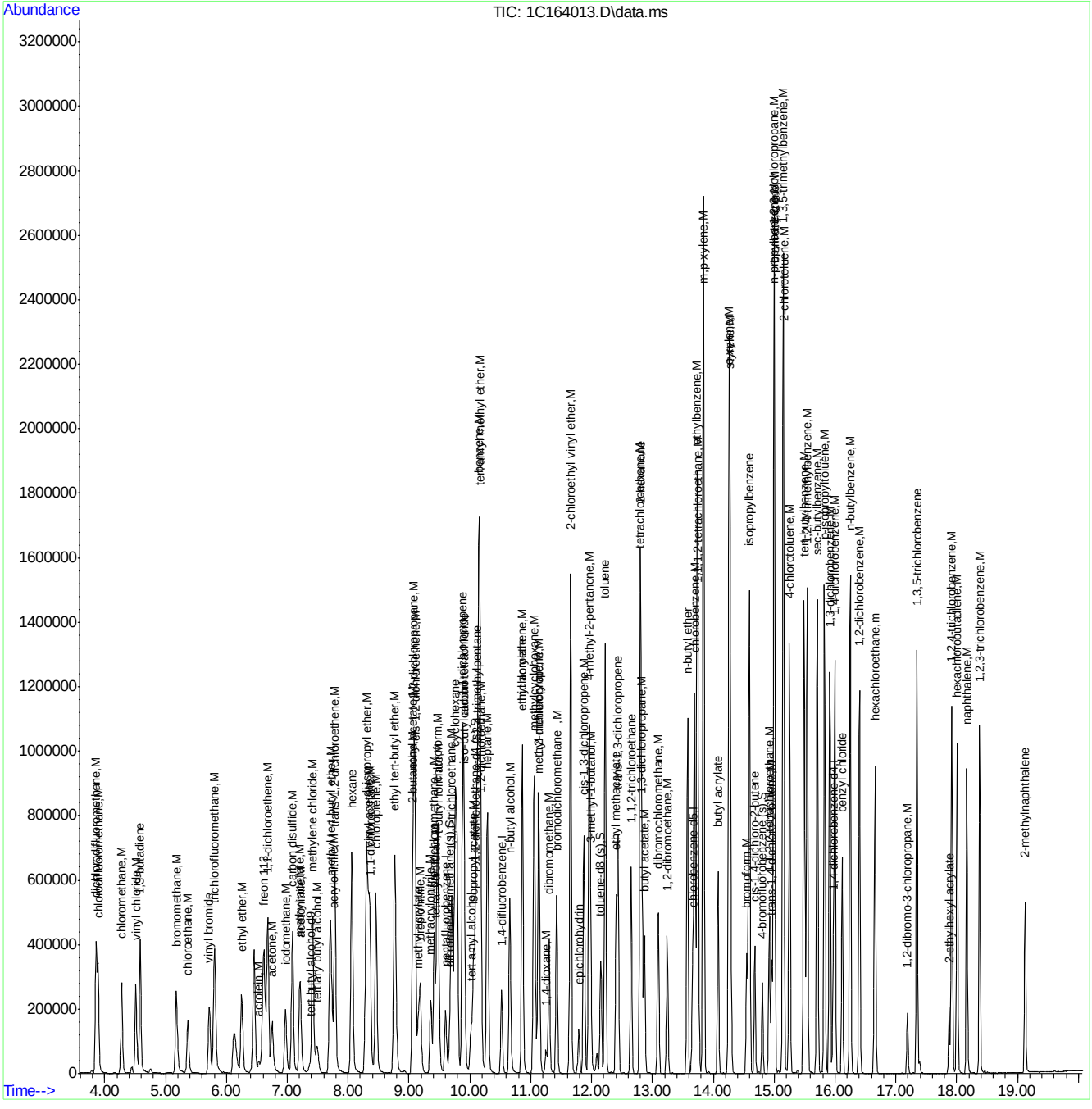
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) styrene	14.273	104	654467	174.40	ug/L	98
93) bromoform	14.550	173	182034	218.17	ug/L	99
94) butyl acrylate	14.079	55	429918	195.59	ug/L	99
95) isopropylbenzene	14.592	105	1091513	179.29	ug/L	99
96) cis-1,4-dichloro-2-butene	14.686	88	105472	204.08	ug/L	97
99) bromobenzene	15.005	156	279537	182.16	ug/L	93
100) 1,1,2,2-tetrachloroethane	14.921	83	245073	203.59	ug/L	96
101) trans-1,4-dichloro-2-b...	14.958	53	66081	200.03	ug/L	96
102) 1,2,3-trichloropropane	14.994	110	59884	192.84	ug/L	98
103) n-propylbenzene	15.000	91	1237824	175.37	ug/L	98
105) 2-chlorotoluene	15.157	126	247026	179.80	ug/L	99
106) 4-chlorotoluene	15.251	91	781379	179.89	ug/L	99
107) 1,3,5-trimethylbenzene	15.146	105	916952	180.07	ug/L	99
108) tert-butylbenzene	15.491	134	163739	192.17	ug/L	97
109) 1,2,4-trimethylbenzene	15.544	105	913444	179.09	ug/L	97
110) sec-butylbenzene	15.706	105	1149116	181.53	ug/L	99
111) 1,3-dichlorobenzene	15.915	146	529790	182.28	ug/L	99
112) p-isopropyltoluene	15.826	119	986254	181.13	ug/L	99
113) 1,4-dichlorobenzene	15.999	146	529027	182.20	ug/L	98
114) benzyl chloride	16.119	91	489153	195.69	ug/L	99
115) 1,2-dichlorobenzene	16.401	146	511068	188.45	ug/L	99
117) n-butylbenzene	16.250	92	501694	181.30	ug/L	99
118) 1,2-dibromo-3-chloropr...	17.191	75	48196	200.04	ug/L	97
119) 1,3,5-trichlorobenzene	17.348	180	412161	184.67	ug/L	99
121) 2-ethylhexyl acrylate	17.876	70	48621	43.54	ug/L	92
122) 1,2,4-trichlorobenzene	17.918	180	345690	190.15	ug/L	98
123) hexachlorobutadiene	18.007	225	235261	184.35	ug/L	98
124) naphthalene	18.164	128	664874	188.00	ug/L	100
125) 1,2,3-trichlorobenzene	18.378	180	323863	188.59	ug/L	100
126) hexachloroethane	16.658	201	205516	212.31	ug/L	98
127) 2-methylnaphthalene	19.126	142	234284	104.03	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164013.D
Acq On : 24 Apr 2019 6:44 pm
Operator : ROBERTS
Sample : IC7200-200
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 08:02:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 07:00:24 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164016.D
Acq On : 24 Apr 2019 8:03 pm
Operator : ROBERTS
Sample : ICV7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 08:05:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.363	65	57618	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	173118	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	246979	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	192341	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.972	152	100566	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	74690	51.16	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.32%			
53) 1,2-dichloroethane-d4 (s)	10.094	65	74278	47.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.74%			
75) toluene-d8 (s)	12.149	98	253579	48.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.88%			
98) 4-bromofluorobenzene (s)	14.806	95	94168	49.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.76%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.479	59	37273	243.55	ug/L	98
4) 1,4-dioxane	11.255	88	17368	1242.96	ug/L	100
6) chlorodifluoromethane	3.896	51	95602	53.00	ug/L	99
7) dichlorodifluoromethane	3.859	85	117839	46.04	ug/L	97
8) chloromethane	4.278	50	100452	53.52	ug/L	100
9) vinyl chloride	4.513	62	82812	46.88	ug/L	99
10) 1,3-butadiene	4.586	54	65370	58.95	ug/L	99
11) bromomethane	5.193	94	63779	47.37	ug/L	97
12) chloroethane	5.376	64	46561	44.00	ug/L	100
13) trichlorofluoromethane	5.810	101	127812	48.52	ug/L	98
14) vinyl bromide	5.721	106	53653	51.92	ug/L	100
15) ethyl ether	6.255	74	36720	52.19	ug/L	98
16) acrolein	6.537	56	9495	52.52	ug/L	96
17) freon 113	6.616	151	66824	57.37	ug/L	99
18) 1,1-dichloroethene	6.684	96	66876	47.19	ug/L	95
19) acetone	6.752	43	68360	194.14	ug/L	98
21) iodomethane	6.971	142	70476	44.60	ug/L	98
22) carbon disulfide	7.086	76	239679	52.36	ug/L	99
23) methylene chloride	7.421	84	74074	48.19	ug/L	99
24) methyl acetate	7.207	43	40528	47.19	ug/L	100
25) methyl tert butyl ether	7.709	73	379527	98.82	ug/L	85
26) trans-1,2-dichloroethene	7.787	96	74815	47.56	ug/L	98
27) di-isopropyl ether	8.305	45	224275	47.44	ug/L	100
28) 2-butanone	9.063	72	26988	203.90	ug/L	99
29) 1,1-dichloroethane	8.362	63	132683	49.71	ug/L	99
30) chloroprene	8.457	53	118582	51.53	ug/L	99
31) acrylonitrile	7.766	53	19600	50.99	ug/L	98
32) hexane	8.064	57	132624	54.26	ug/L	98
33) vinyl acetate	8.336	86	10807	48.56	ug/L	95
34) ethyl tert-butyl ether	8.770	59	222343	48.79	ug/L	99
35) ethyl acetate	9.068	45	8436	50.49	ug/L	99
36) 2,2-dichloropropane	9.084	77	114252	48.01	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164016.D
Acq On : 24 Apr 2019 8:03 pm
Operator : ROBERTS
Sample : ICV7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 08:05:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) cis-1,2-dichloroethene	9.100	96	80678	47.52	ug/L		98
38) methyl acrylate	9.152	85	9201	52.78	ug/L	#	88
39) propionitrile	9.184	54	84232	502.27	ug/L		99
40) bromochloromethane	9.419	128	37852	51.33	ug/L		97
41) tetrahydrofuran	9.450	72	7987	50.51	ug/L		85
42) chloroform	9.466	85	88951	47.08	ug/L		97
43) t-butyl formate	9.482	59	50004	49.21	ug/L		96
45) methacrylonitrile	9.361	67	24506	50.62	ug/L		98
46) 1,1,1-trichloroethane	9.701	97	122064	49.93	ug/L		98
47) cyclohexane	9.759	84	114307	47.35	ug/L		97
48) 1,1-dichloropropene	9.884	75	104027	50.23	ug/L		99
49) iso-butyl alcohol	9.905	43	25426	465.49	ug/L		97
50) carbon tetrachloride	9.905	117	110210	51.61	ug/L		97
51) tert amyl alcohol	10.020	55	13053	255.79	ug/L		95
54) n-butyl alcohol	10.653	56	91012	2525.32	ug/L		98
55) 2,2,4-trimethylpentane	10.115	57	287100	48.42	ug/L		100
56) benzene	10.151	78	288641	46.68	ug/L		99
57) tert-amyl methyl ether	10.156	87	46019	47.75	ug/L		96
58) heptane	10.287	71	79376	59.48	ug/L		98
59) isopropyl acetate	10.057	87	12187	47.64	ug/L		98
60) 1,2-dichloroethane	10.183	62	89943	44.74	ug/L		100
61) trichloroethene	10.862	130	80509	50.58	ug/L		99
62) ethyl acrylate	10.857	55	75474	50.52	ug/L		97
64) 2-chloroethyl vinyl ether	11.652	63	202680	276.13	ug/L		99
65) methyl methacrylate	11.124	100	15175	49.11	ug/L		95
66) 1,2-dichloropropane	11.134	63	70694	48.01	ug/L		99
67) dibromomethane	11.302	93	41413	48.04	ug/L		100
68) methylcyclohexane	11.061	83	128728	46.90	ug/L		100
69) bromodichloromethane	11.427	83	100324	48.09	ug/L		99
70) epichlorohydrin	11.788	57	30188	255.06	ug/L		97
71) cis-1,3-dichloropropene	11.872	75	117437	49.04	ug/L		99
72) 4-methyl-2-pentanone	11.956	58	80525	188.31	ug/L		96
73) 3-methyl-1-butanol	11.982	55	53502	986.87	ug/L		98
76) toluene	12.222	92	164589	46.75	ug/L		99
77) trans-1,3-dichloropropene	12.432	75	99447	50.20	ug/L		99
78) ethyl methacrylate	12.405	69	71553	51.11	ug/L		98
79) 1,1,2-trichloroethane	12.651	83	46655	50.30	ug/L		96
81) 1,3-dichloropropane	12.829	76	83998	49.39	ug/L		99
82) 2-hexanone	12.803	58	74960	195.89	ug/L		99
83) butyl acetate	12.871	56	33745	48.38	ug/L		97
84) dibromochloromethane	13.096	129	73448	52.67	ug/L		96
85) 1,2-dibromoethane	13.242	107	74074	50.27	ug/L		100
86) n-butyl ether	13.572	57	266698	50.36	ug/L		99
87) chlorobenzene	13.692	112	173070	48.46	ug/L		97
88) 1,1,1,2-tetrachloroethane	13.750	131	66339	51.08	ug/L		98
89) ethylbenzene	13.734	91	301301	46.56	ug/L		99
90) m,p-xylene	13.838	106	226680	94.28	ug/L		98
91) o-xylene	14.257	106	109148	47.55	ug/L		97
92) styrene	14.267	104	183991	48.34	ug/L		95
93) bromoform	14.550	173	46911	55.43	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164016.D
Acq On : 24 Apr 2019 8:03 pm
Operator : ROBERTS
Sample : ICV7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 08:05:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
94) butyl acrylate	14.074	55	109388	49.06 ug/L	99
95) isopropylbenzene	14.592	105	296299	47.98 ug/L	99
96) cis-1,4-dichloro-2-butene	14.686	88	25513	48.67 ug/L	98
99) bromobenzene	15.005	156	76003	48.14 ug/L	92
100) 1,1,2,2-tetrachloroethane	14.916	83	61440	49.61 ug/L	97
101) trans-1,4-dichloro-2-b...	14.958	53	18590	55.16 ug/L	98
102) 1,2,3-trichloropropane	14.994	110	15695	49.12 ug/L	99
103) n-propylbenzene	15.000	91	350472	48.26 ug/L	100
105) 2-chlorotoluene	15.151	126	68127	48.19 ug/L	91
106) 4-chlorotoluene	15.251	91	214234	47.94 ug/L	100
107) 1,3,5-trimethylbenzene	15.146	105	250029	47.72 ug/L	98
108) tert-butylbenzene	15.491	134	44771	50.99 ug/L	97
109) 1,2,4-trimethylbenzene	15.538	105	251797	47.98 ug/L	98
110) sec-butylbenzene	15.706	105	318316	48.87 ug/L	99
111) 1,3-dichlorobenzene	15.915	146	146711	49.06 ug/L	99
112) p-isopropyltoluene	15.826	119	275784	49.23 ug/L	99
113) 1,4-dichlorobenzene	15.999	146	143981	48.20 ug/L	98
114) benzyl chloride	16.119	91	161005	62.60 ug/L	99
115) 1,2-dichlorobenzene	16.401	146	138244	49.54 ug/L	99
117) n-butylbenzene	16.250	92	138955	48.80 ug/L	100
118) 1,2-dibromo-3-chloropr...	17.191	75	11975	48.31 ug/L	90
119) 1,3,5-trichlorobenzene	17.348	180	112780	49.11 ug/L	99
121) 2-ethylhexyl acrylate	17.876	70	11841	10.31 ug/L	96
122) 1,2,4-trichlorobenzene	17.918	180	89511	47.85 ug/L	95
123) hexachlorobutadiene	18.007	225	63375	48.27 ug/L	98
124) naphthalene	18.164	128	178986	49.19 ug/L	99
125) 1,2,3-trichlorobenzene	18.378	180	83182	47.08 ug/L	98
126) hexachloroethane	16.658	201	52954	52.92 ug/L	98
127) 2-methylnaphthalene	19.126	142	57911	24.99 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

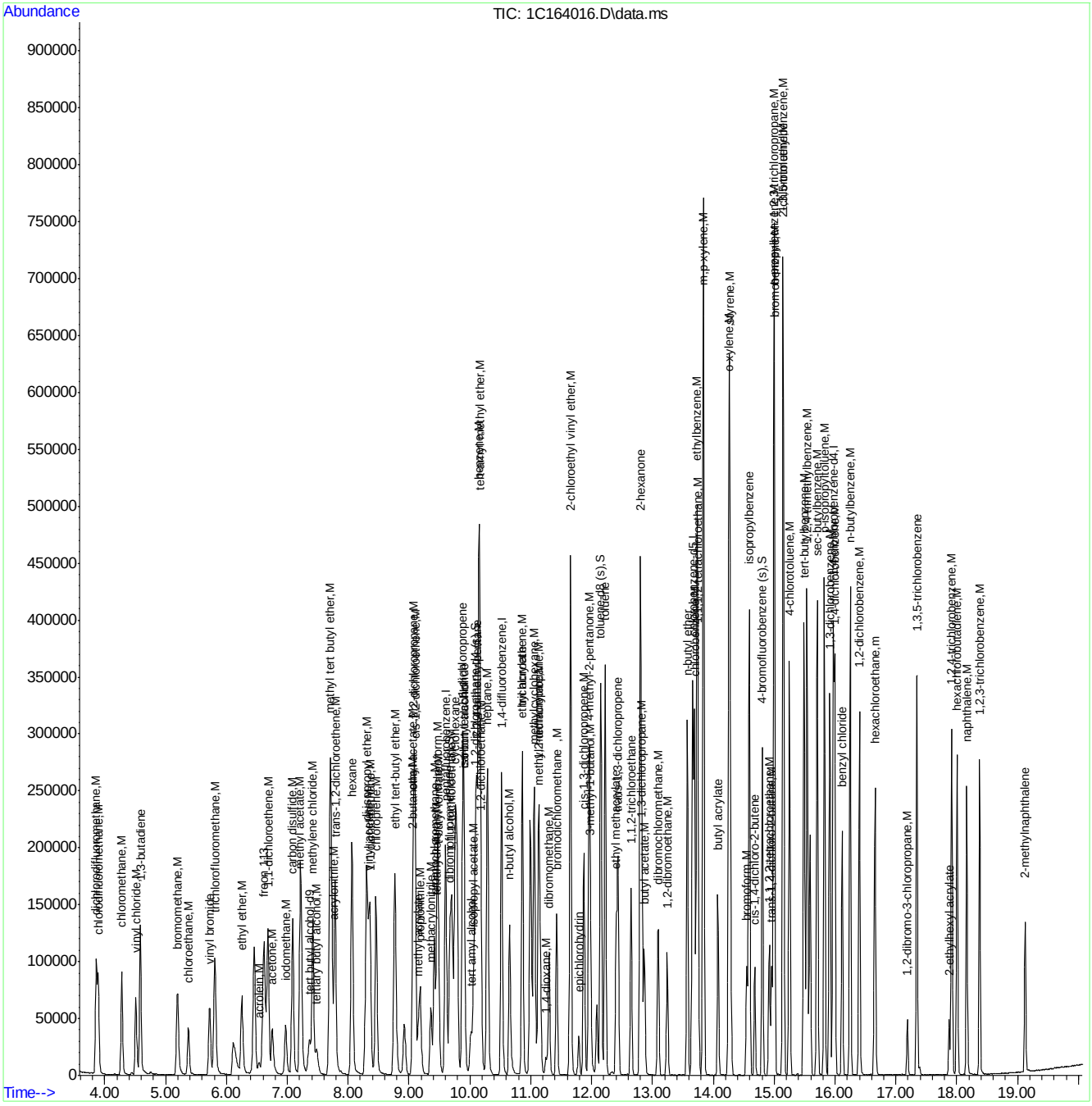
7.7.10

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164016.D
Acq On : 24 Apr 2019 8:03 pm
Operator : ROBERTS
Sample : ICV7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 08:05:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164017.D
Acq On : 24 Apr 2019 8:30 pm
Operator : ROBERTS
Sample : ICV7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 08:05:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.364	65	58834	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	176659	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	241919	50.00	ug/L	0.00
74) chlorobenzene-d5	13.661	117	195243	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.973	152	101236	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	73907	49.61	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.22%			
53) 1,2-dichloroethane-d4 (s)	10.089	65	75274	49.53	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.06%			
75) toluene-d8 (s)	12.149	98	259692	49.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.76%			
98) 4-bromofluorobenzene (s)	14.806	95	94564	49.76	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.52%			
Target Compounds						Qvalue
20) acetonitrile	7.217	41	73398	489.80	ug/L	99
80) tetrachloroethene	12.803	164	60363	48.58	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

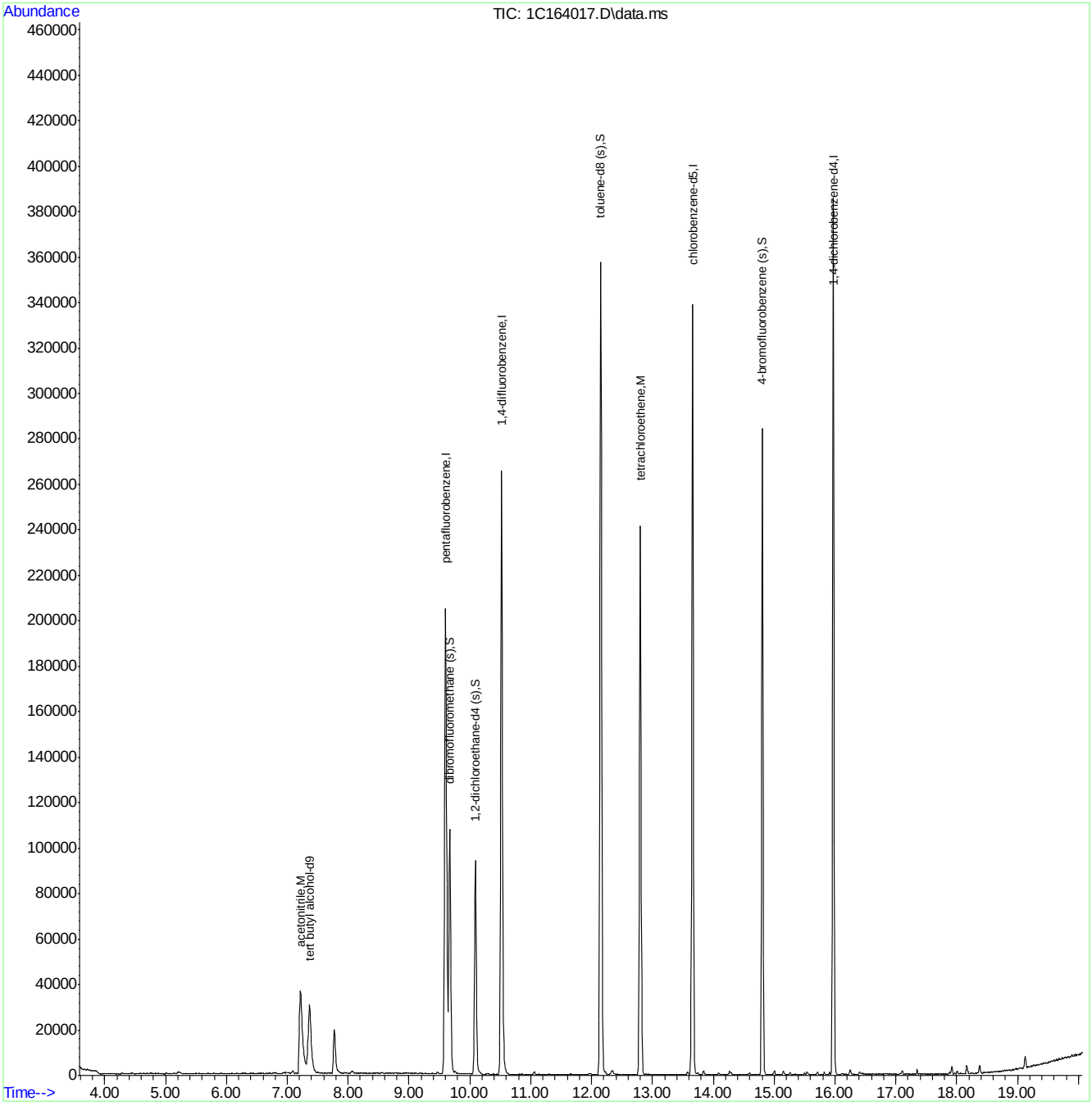
7.7.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7200\
Data File : 1C164017.D
Acq On : 24 Apr 2019 8:30 pm
Operator : ROBERTS
Sample : ICV7200-50
Misc : MS34128,V1C7200,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 08:05:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



M1CS7200.M Thu Apr 25 15:35:30 2019 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164334.d
Acq On : 7 May 2019 12:30 pm
Operator : PrashanS
Sample : CC7200-50 Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:45:45 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.364	65	66036	500.00	ug/L	-0.02
5) pentafluorobenzene	9.602	168	219580	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.523	114	311653	50.00	ug/L	0.00
74) chlorobenzene-d5	13.656	117	248742	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.973	152	128598	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.670	113	93064	50.26	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.52%			
53) 1,2-dichloroethane-d4 (s)	10.089	65	84806	43.32	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 86.64%			
75) toluene-d8 (s)	12.149	98	332666	49.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.30%			
98) 4-bromofluorobenzene (s)	14.806	95	114417	47.40	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.80%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.479	59	43203	246.31	ug/L	98
4) 1,4-dioxane	11.260	88	19602	1224.01	ug/L	95
6) chlorodifluoromethane	3.896	51	89902	39.29	ug/L	98
7) dichlorodifluoromethane	3.865	85	129045	39.75	ug/L	98
8) chloromethane	4.283	50	99430	41.77	ug/L	97
9) vinyl chloride	4.513	62	98821	44.10	ug/L	99
10) 1,3-butadiene	4.586	54	61443	43.68	ug/L	97
11) bromomethane	5.198	94	72454	42.43	ug/L	97
12) chloroethane	5.376	64	60894	45.37	ug/L	95
13) trichlorofluoromethane	5.810	101	142766	42.73	ug/L	97
14) vinyl bromide	5.727	106	85326	65.10	ug/L	98
15) ethyl ether	6.255	74	44194	49.52	ug/L	99
16) acrolein	6.537	56	12382	54.00	ug/L	94
17) freon 113	6.621	151	67673	45.80	ug/L	98
18) 1,1-dichloroethene	6.684	96	82218	45.74	ug/L	87
19) acetone	6.757	43	96035	215.03	ug/L	91
20) acetonitrile	7.217	41	81552	437.84	ug/L	98
21) iodomethane	6.971	142	86436	43.22	ug/L	92
22) carbon disulfide	7.086	76	251612	43.33	ug/L	98
23) methylene chloride	7.421	84	89791	46.05	ug/L	94
24) methyl acetate	7.212	43	48118	44.17	ug/L	97
25) methyl tert butyl ether	7.714	73	220861	45.34	ug/L	100
26) trans-1,2-dichloroethene	7.787	96	90593	45.40	ug/L	91
27) di-isopropyl ether	8.305	45	261129	43.54	ug/L	97
28) 2-butanone	9.063	72	37951	226.05	ug/L #	71
29) 1,1-dichloroethane	8.363	63	145792	43.07	ug/L	99
30) chloroprene	8.462	53	120548	41.30	ug/L	91
31) acrylonitrile	7.766	53	23392	47.98	ug/L	90
32) hexane	8.064	57	130476	42.08	ug/L	96
33) vinyl acetate	8.342	86	14340	50.80	ug/L #	73
34) ethyl tert-butyl ether	8.765	59	257915	44.62	ug/L	98
35) ethyl acetate	9.074	45	9862	46.53	ug/L #	74
36) 2,2-dichloropropane	9.084	77	125222	41.49	ug/L	95
37) cis-1,2-dichloroethene	9.100	96	99172	46.05	ug/L	95
38) methyl acrylate	9.158	85	11239	50.83	ug/L	94
39) propionitrile	9.189	54	99626	468.36	ug/L	96
40) bromochloromethane	9.414	128	45438	48.58	ug/L	94
41) tetrahydrofuran	9.450	72	9920	49.46	ug/L	83
42) chloroform	9.466	85	100267	41.84	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164334.d
Acq On : 7 May 2019 12:30 pm
Operator : PrashanS
Sample : CC7200-50 Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:45:45 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) t-butyl formate	9.477	59	58905	45.70 ug/L	97
45) methacrylonitrile	9.362	67	30186	49.16 ug/L	86
46) 1,1,1-trichloroethane	9.701	97	132228	42.64 ug/L	99
47) cyclohexane	9.759	84	131020	42.79 ug/L	94
48) 1,1-dichloropropene	9.885	75	115225	43.86 ug/L	97
49) iso-butyl alcohol	9.900	43	29716	428.91 ug/L	95
50) carbon tetrachloride	9.900	117	114195	42.16 ug/L	98
51) tert amyl alcohol	10.021	55	14202	219.42 ug/L	93
54) n-butyl alcohol	10.653	56	110722	2434.68 ug/L	95
55) 2,2,4-trimethylpentane	10.109	57	305243	40.80 ug/L	97
56) benzene	10.151	78	342877	43.94 ug/L	100
57) tert-amyl methyl ether	10.157	87	55462	45.61 ug/L	95
58) heptane	10.287	71	71272	42.33 ug/L	97
59) isopropyl acetate	10.057	87	16217	50.24 ug/L #	84
60) 1,2-dichloroethane	10.183	62	96095	37.88 ug/L	96
61) trichloroethene	10.863	130	95240	47.42 ug/L	98
62) ethyl acrylate	10.857	55	86306	45.78 ug/L	97
64) 2-chloroethyl vinyl ether	11.652	63	237806	256.75 ug/L	97
65) methyl methacrylate	11.124	100	19033	48.81 ug/L #	76
66) 1,2-dichloropropane	11.135	63	84235	45.34 ug/L	98
67) dibromomethane	11.302	93	49903	45.88 ug/L	95
68) methylcyclohexane	11.056	83	143097	41.32 ug/L	96
69) bromodichloromethane	11.427	83	116018	44.07 ug/L	97
70) epichlorohydrin	11.794	57	35133	235.24 ug/L	96
71) cis-1,3-dichloropropene	11.872	75	137173	45.40 ug/L	91
72) 4-methyl-2-pentanone	11.956	58	98622	182.77 ug/L	88
73) 3-methyl-1-butanol	11.982	55	64189	938.29 ug/L	93
76) toluene	12.222	92	199395	43.80 ug/L	98
77) trans-1,3-dichloropropene	12.432	75	113382	44.26 ug/L	96
78) ethyl methacrylate	12.406	69	85520	47.23 ug/L	92
79) 1,1,2-trichloroethane	12.651	83	59399	49.52 ug/L	95
80) tetrachloroethene	12.798	164	72781	45.98 ug/L	99
81) 1,3-dichloropropane	12.829	76	102180	46.46 ug/L	89
82) 2-hexanone	12.803	58	102652	207.43 ug/L	90
83) butyl acetate	12.866	56	41357	45.85 ug/L	91
84) dibromochloromethane	13.096	129	86980	48.23 ug/L	98
85) 1,2-dibromoethane	13.242	107	78322	41.10 ug/L	98
86) n-butyl ether	13.572	57	299435	43.72 ug/L	98
87) chlorobenzene	13.687	112	210310	45.53 ug/L	97
88) 1,1,1,2-tetrachloroethane	13.750	131	78546	46.76 ug/L	98
89) ethylbenzene	13.734	91	357075	42.66 ug/L	96
90) m,p-xylene	13.839	106	279058	89.75 ug/L	91
91) o-xylene	14.257	106	137223	46.23 ug/L	91
92) styrene	14.267	104	227060	46.13 ug/L	97
93) bromoform	14.550	173	56323	51.46 ug/L	99
94) butyl acrylate	14.079	55	128094	44.43 ug/L	98
95) isopropylbenzene	14.587	105	347466	43.51 ug/L	97
96) cis-1,4-dichloro-2-butene	14.681	88	29001	42.78 ug/L	92
99) bromobenzene	15.000	156	96290	47.69 ug/L	88
100) 1,1,2,2-tetrachloroethane	14.916	83	79963	50.49 ug/L	98
101) trans-1,4-dichloro-2-b...	14.958	53	18373	42.63 ug/L	84
102) 1,2,3-trichloropropane	14.989	110	19586	47.94 ug/L	91
103) n-propylbenzene	14.994	91	414280	44.61 ug/L	98
105) 2-chlorotoluene	15.151	126	85249	47.16 ug/L	95
106) 4-chlorotoluene	15.251	91	244279	42.74 ug/L	95
107) 1,3,5-trimethylbenzene	15.146	105	292025	43.59 ug/L	96
108) tert-butylbenzene	15.491	134	54496	48.53 ug/L #	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164334.d
Acq On : 7 May 2019 12:30 pm
Operator : PrashanS
Sample : CC7200-50 Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:45:45 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
109) 1,2,4-trimethylbenzene	15.538	105	292673	43.61 ug/L	95
110) sec-butylbenzene	15.706	105	378498	45.45 ug/L	98
111) 1,3-dichlorobenzene	15.915	146	179770	47.01 ug/L	98
112) p-isopropyltoluene	15.826	119	321921	44.94 ug/L	97
113) 1,4-dichlorobenzene	15.999	146	180166	47.16 ug/L	98
114) benzyl chloride	16.119	91	166039	50.49 ug/L	99
115) 1,2-dichlorobenzene	16.401	146	173754	48.70 ug/L	97
117) n-butylbenzene	16.250	92	165418	45.43 ug/L	98
118) 1,2-dibromo-3-chloropr...	17.186	75	14061	44.36 ug/L	95
119) 1,3,5-trichlorobenzene	17.348	180	142705	48.60 ug/L	100
121) 2-ethylhexyl acrylate	17.876	70	12865	8.76 ug/L	88
122) 1,2,4-trichlorobenzene	17.918	180	118059	49.36 ug/L	97
123) hexachlorobutadiene	18.007	225	75103	44.73 ug/L	98
124) naphthalene	18.164	128	227064	48.80 ug/L	99
125) 1,2,3-trichlorobenzene	18.373	180	110446	48.88 ug/L	100
126) hexachloroethane	16.658	201	62959	49.20 ug/L	98
127) 2-methylnaphthalene	19.121	142	76122	25.69 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

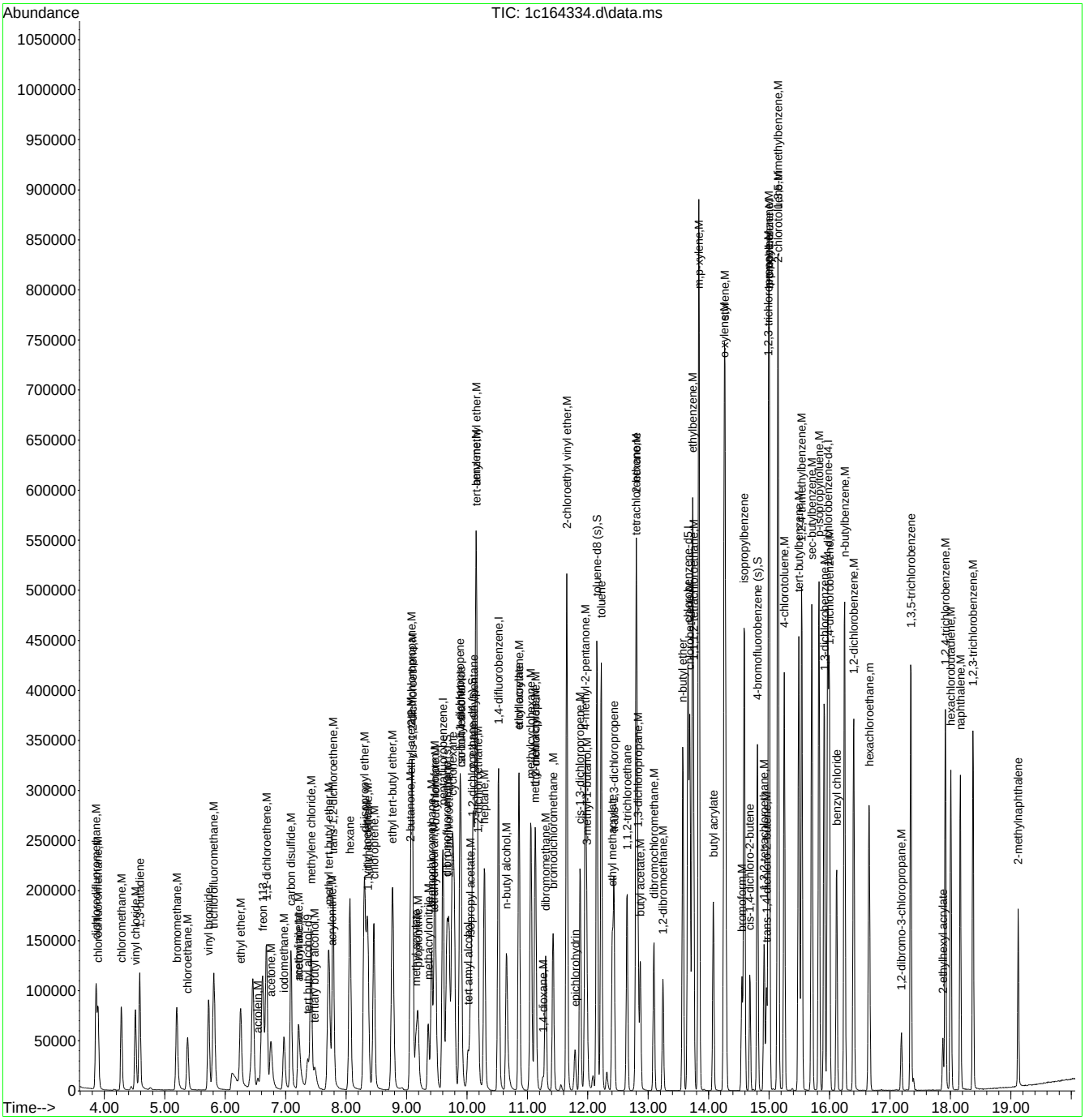
7.7.12

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\v1c7213-rush\
Data File : 1c164334.d
Acq On : 7 May 2019 12:30 pm
Operator : PrashanS
Sample : CC7200-50 Inst : GCMS1C
Misc : MS34529,V1C7213,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7200.M
Quant Results File: M1CS7200.RES
Quant Time: May 08 04:45:45 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Thu Apr 25 08:03:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149623.D
Acq On : 13 Feb 2019 6:33 pm
Operator : juntaep
Sample : IC6743-0.5
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 14 12:07:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	66046	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	269547	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	369488	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	320218	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.32	152	172617	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	96787	48.88	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.76%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	102679	51.62	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.24%			
75) toluene-d8 (s)	6.08	98	395305	49.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%			
98) 4-bromofluorobenzene (s)	8.40	95	145960	51.87	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.74%			

Target Compounds

						Qvalue
14) trichlorofluoromethane	1.77	101	1340	0.42	ug/L	86
29) di-isopropyl ether	3.08	45	2174	0.40	ug/L	90
30) ethyl tert-butyl ether	3.37	59	2070	0.39	ug/L	95
32) 1,1-dichloroethane	3.10	63	1094	0.35	ug/L #	48
33) chloroprene	3.13	53	1083	0.39	ug/L #	74
48) cyclohexane	3.94	84	1368	0.44	ug/L #	85
57) benzene	4.28	78	3096	0.43	ug/L	89
64) 2-chloroethyl vinyl ether	5.77	63	2034	2.15	ug/L	88
76) toluene	6.15	92	2107	0.44	ug/L	90
81) tetrachloroethene	6.62	166	858	0.36	ug/L	79
82) 1,3-dichloropropane	6.75	76	972	0.40	ug/L	88
86) n-butyl ether	7.47	57	3396	0.43	ug/L	97
87) chlorobenzene	7.42	112	2282	0.44	ug/L	91
89) ethylbenzene	7.49	91	4215	0.46	ug/L	97
90) m,p-xylene	7.60	106	3293	0.91	ug/L	92
91) o-xylene	7.93	91	3327	0.46	ug/L	98
92) styrene	7.96	104	2482	0.41	ug/L	98
95) isopropylbenzene	8.23	105	3951	0.42	ug/L	97
99) bromobenzene	8.51	156	1080	0.46	ug/L	93
100) 1,1,2,2-tetrachloroethane	8.55	83	744	0.46	ug/L	80
104) 2-chlorotoluene	8.66	126	922	0.41	ug/L #	80
105) 4-chlorotoluene	8.75	126	933	0.41	ug/L #	92
106) 1,3,5-trimethylbenzene	8.72	105	3466	0.43	ug/L	96
107) tert-butylbenzene	8.97	119	2977	0.41	ug/L	95
108) 1,2,4-trimethylbenzene	9.02	105	3509	0.43	ug/L	94
109) sec-butylbenzene	9.14	105	4025	0.38	ug/L	89
110) 1,3-dichlorobenzene	9.26	146	2155	0.46	ug/L	94
111) p-isopropyltoluene	9.26	119	3859	0.41	ug/L	99
112) 1,4-dichlorobenzene	9.34	146	2397	0.52	ug/L	81
113) 1,2-dichlorobenzene	9.64	146	2089	0.48	ug/L	99
114) n-butylbenzene	9.59	92	1783	0.38	ug/L	82
116) 1,3,5-Trichlorobenzene	10.39	180	1768	0.41	ug/L	92
117) 1,2,4-trichlorobenzene	10.88	180	1631	0.44	ug/L	80

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149623.D
Acq On : 13 Feb 2019 6:33 pm
Operator : juntaep
Sample : IC6743-0.5
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 14 12:07:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
119) naphthalene	11.08	128	2974	0.45	ug/L	99
120) 1,2,3-trichlorobenzene	11.27	180	1518	0.44	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

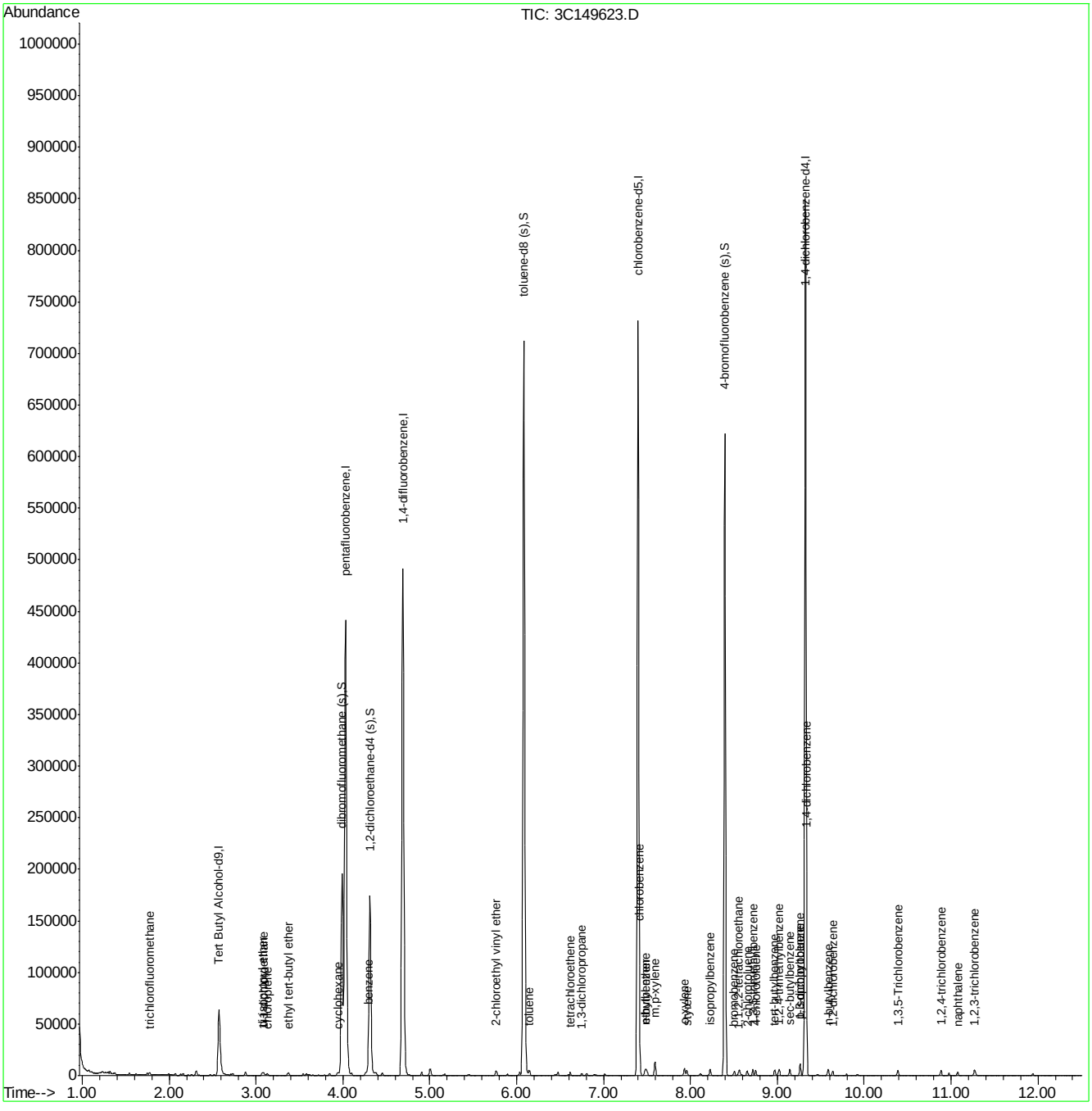
7.7.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149623.D
Acq On : 13 Feb 2019 6:33 pm
Operator : juntaep
Sample : IC6743-0.5
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 14 12:07:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149624.D
Acq On : 13 Feb 2019 6:56 pm
Operator : juntaep
Sample : IC6743-1
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 14 12:09:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	64875	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	271398	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	371367	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	322858	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	175460	50.00	ug/L	0.00

System Monitoring Compounds						
45) dibromofluoromethane (s)	3.99	113	98061	49.18	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.36%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	103697	51.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.74%			
75) toluene-d8 (s)	6.08	98	397971	49.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.40%			
98) 4-bromofluorobenzene (s)	8.40	95	144585	50.54	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.08%			

Target Compounds						Qvalue
7) dichlorodifluoromethane	1.08	85	2075	0.80	ug/L	87
8) chloromethane	1.22	50	1747	0.84	ug/L	85
9) 1,3-butadiene	1.32	54	1314	0.96	ug/L	95
10) vinyl chloride	1.30	62	1448	0.67	ug/L	76
12) chloroethane	1.62	64	849	0.66	ug/L	74
13) vinyl Bromide	1.75	106	1264	0.67	ug/L	91
14) trichlorofluoromethane	1.77	101	2584	0.81	ug/L	91
16) 2-chloropropane	2.07	63	635	0.86	ug/L #	77
18) freon 113	2.13	151	1221	0.78	ug/L	95
19) 1,1-dichloroethene	2.16	96	1491	0.88	ug/L	94
20) acetone	2.25	58	330	3.52	ug/L #	62
26) methyl tert butyl ether	2.72	73	4192	0.95	ug/L	91
27) trans-1,2-dichloroethene	2.73	96	1827	0.97	ug/L	97
28) hexane	2.88	57	2963	1.00	ug/L	94
29) di-isopropyl ether	3.08	45	5385	0.99	ug/L	95
30) ethyl tert-butyl ether	3.36	59	5327	0.99	ug/L	98
32) 1,1-dichloroethane	3.10	63	2987	0.94	ug/L	98
33) chloroprene	3.13	53	2654	0.94	ug/L	92
37) 2,2-dichloropropane	3.54	77	2688	0.93	ug/L	91
38) cis-1,2-dichloroethene	3.57	96	1848	0.89	ug/L	92
39) propionitrile	3.72	54	1681	10.35	ug/L	64
40) bromochloromethane	3.79	130	1073	0.94	ug/L	96
42) chloroform	3.84	83	3458	1.07	ug/L	99
47) 1,1,1-trichloroethane	3.96	97	2723	0.89	ug/L	98
48) cyclohexane	3.93	84	2401	0.77	ug/L	96
51) carbon tetrachloride	4.06	119	1970	0.79	ug/L #	80
54) 2,2,4-trimethylpentane	4.26	57	7237	0.98	ug/L	97
55) tert-amyl methyl ether	4.37	87	1608	0.97	ug/L #	72
57) benzene	4.29	78	7480	1.03	ug/L	94
60) 1,2-dichloroethane	4.38	62	2576	1.18	ug/L	86
61) trichloroethene	4.90	95	1886	0.95	ug/L	96
64) 2-chloroethyl vinyl ether	5.76	63	5143	5.41	ug/L	96
66) 1,2-dichloropropane	5.17	63	1849	1.07	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149624.D
Acq On : 13 Feb 2019 6:56 pm
Operator : juntaep
Sample : IC6743-1
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 14 12:09:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
68) dibromomethane	5.29	93	856	0.90 ug/L	91
69) bromodichloromethane	5.45	83	2203	0.97 ug/L	87
71) cis-1,3-dichloropropene	5.89	75	2775	0.99 ug/L	92
72) 4-methyl-2-pentanone	6.03	85	918	3.80 ug/L #	59
76) toluene	6.15	92	5193	1.07 ug/L	99
77) trans-1,3-dichloropropene	6.44	75	2103	0.87 ug/L	89
78) ethyl methacrylate	6.47	69	1997	1.04 ug/L	92
79) 1,1,2-trichloroethane	6.60	83	1316	1.11 ug/L	89
80) 2-hexanone	6.81	58	2027	4.41 ug/L	95
81) tetrachloroethene	6.62	166	2363	0.98 ug/L	98
82) 1,3-dichloropropane	6.75	76	2619	1.08 ug/L	90
84) dibromochloromethane	6.92	129	1302	0.84 ug/L	78
85) 1,2-dibromoethane	7.02	107	1738	0.97 ug/L	91
86) n-butyl ether	7.47	57	8334	1.05 ug/L	93
87) chlorobenzene	7.42	112	5941	1.13 ug/L	94
88) 1,1,1,2-tetrachloroethane	7.51	131	1731	0.91 ug/L	95
89) ethylbenzene	7.49	91	10233	1.10 ug/L	96
90) m,p-xylene	7.59	106	8013	2.19 ug/L	98
91) o-xylene	7.93	91	7760	1.06 ug/L	99
92) styrene	7.96	104	6324	1.04 ug/L	96
94) butyl acrylate	7.92	55	2725	1.01 ug/L	91
95) isopropylbenzene	8.23	105	9813	1.03 ug/L	98
99) bromobenzene	8.51	156	2722	1.13 ug/L	95
100) 1,1,2,2-tetrachloroethane	8.55	83	1833	1.11 ug/L	88
103) n-propylbenzene	8.57	91	12347	1.12 ug/L	93
104) 2-chlorotoluene	8.65	126	2484	1.08 ug/L	96
105) 4-chlorotoluene	8.75	126	2410	1.04 ug/L	87
106) 1,3,5-trimethylbenzene	8.72	105	9012	1.09 ug/L	98
107) tert-butylbenzene	8.97	119	7530	1.03 ug/L	96
108) 1,2,4-trimethylbenzene	9.02	105	9007	1.09 ug/L	97
109) sec-butylbenzene	9.15	105	11292	1.05 ug/L	95
110) 1,3-dichlorobenzene	9.26	146	5135	1.08 ug/L	93
111) p-isopropyltoluene	9.26	119	9423	0.99 ug/L	95
112) 1,4-dichlorobenzene	9.34	146	5630	1.19 ug/L	95
113) 1,2-dichlorobenzene	9.64	146	5006	1.14 ug/L	93
114) n-butylbenzene	9.59	92	4607	0.97 ug/L	97
116) 1,3,5-Trichlorobenzene	10.39	180	4685	1.06 ug/L	96
117) 1,2,4-trichlorobenzene	10.88	180	4173	1.11 ug/L	94
118) hexachlorobutadiene	10.97	225	2116	0.86 ug/L	95
119) naphthalene	11.08	128	7256	1.09 ug/L	97
120) 1,2,3-trichlorobenzene	11.27	180	3646	1.04 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

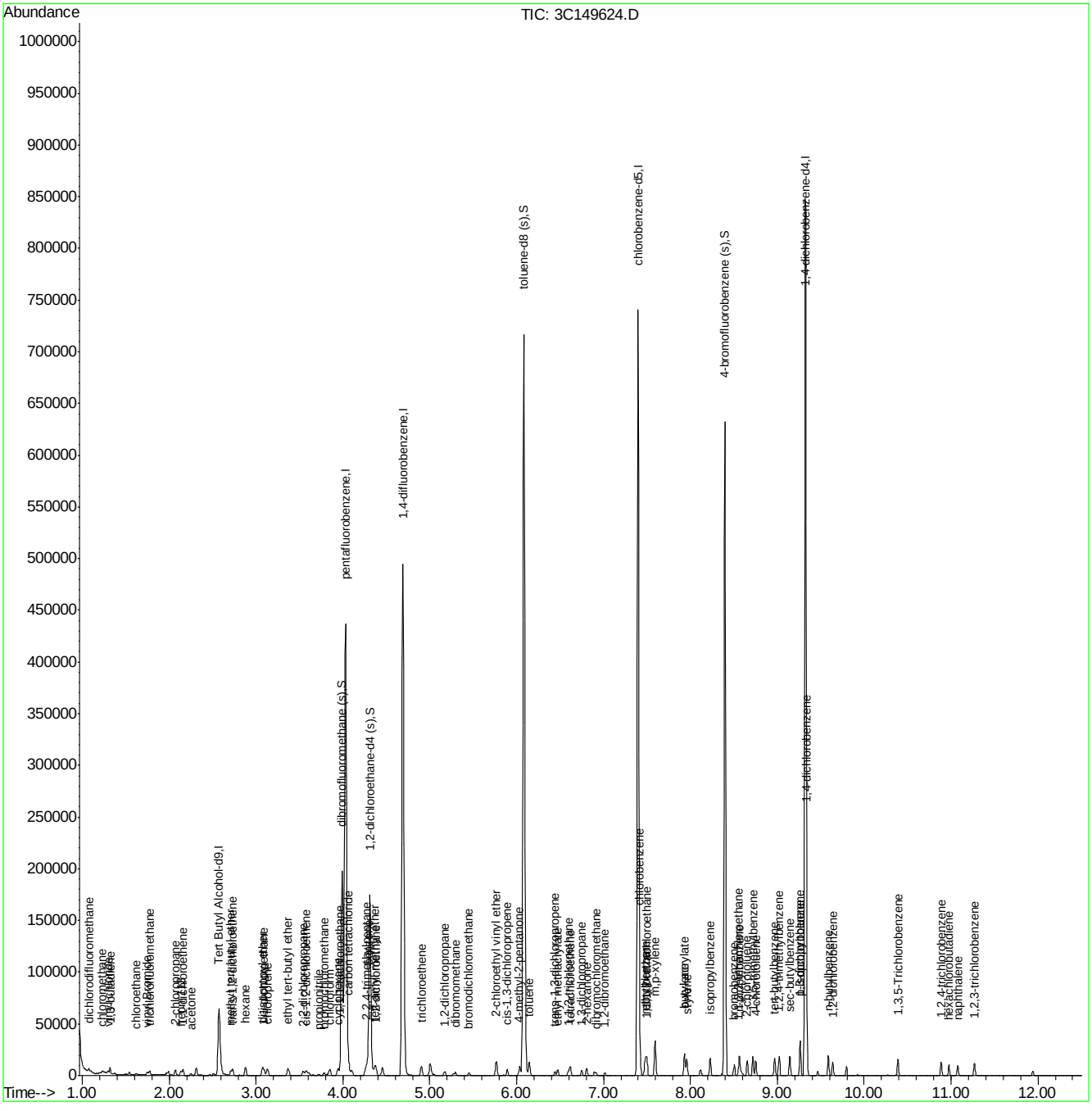
7.7.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149624.D
Acq On : 13 Feb 2019 6:56 pm
Operator : juntaep
Sample : IC6743-1
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 14 12:09:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



M3C6743.M Fri Feb 15 11:18:03 2019 MS3C

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 02/15/19 13:53

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149628.D
Acq On : 13 Feb 2019 8:29 pm
Operator : juntaep
Sample : IC6743-2
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 15 09:29:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	60494	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	271779	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	372621	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	325263	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.32	152	176611	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	97280	48.72	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.44%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	102125	50.91	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.82%			
75) toluene-d8 (s)	6.08	98	400741	49.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.36%			
98) 4-bromofluorobenzene (s)	8.40	95	146661	50.94	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.88%			

Target Compounds

						Qvalue
3) tertiary butyl alcohol	2.64	59	1260	8.95	ug/L	60
6) chlorodifluoromethane	1.09	51	3077	1.73	ug/L	87
7) dichlorodifluoromethane	1.07	85	4449	1.72	ug/L	98
8) chloromethane	1.22	50	3740	1.79	ug/L	92
9) 1,3-butadiene	1.31	54	2091	1.53	ug/L	98
10) vinyl chloride	1.29	62	3623	1.67	ug/L	99
11) bromomethane	1.54	94	2246	1.76	ug/L	90
12) chloroethane	1.62	64	2069	1.60	ug/L	89
13) vinyl Bromide	1.74	106	3009	1.60	ug/L	82
14) trichlorofluoromethane	1.77	101	5082	1.59	ug/L	95
15) ethyl ether	1.99	74	1279	1.43	ug/L	98
16) 2-chloropropane	2.07	63	1070	1.45	ug/L #	82
18) freon 113	2.13	151	1955	1.25	ug/L	95
19) 1,1-dichloroethene	2.16	96	2514	1.48	ug/L	95
20) acetone	2.25	58	573	6.10	ug/L #	69
23) carbon disulfide	2.31	76	8937	2.01	ug/L	93
24) methylene chloride	2.56	84	3366	1.96	ug/L	82
25) methyl acetate	2.47	43	1357	1.56	ug/L	89
26) methyl tert butyl ether	2.71	73	6798	1.53	ug/L	98
27) trans-1,2-dichloroethene	2.73	96	2881	1.52	ug/L	97
28) hexane	2.87	57	4563	1.54	ug/L	95
29) di-isopropyl ether	3.08	45	8377	1.54	ug/L	88
30) ethyl tert-butyl ether	3.37	59	8402	1.55	ug/L	97
31) 2-butanone	3.60	72	826	5.51	ug/L #	67
32) 1,1-dichloroethane	3.09	63	4934	1.56	ug/L	98
33) chloroprene	3.13	53	3815	1.35	ug/L	98
37) 2,2-dichloropropane	3.54	77	3971	1.37	ug/L	88
38) cis-1,2-dichloroethene	3.58	96	3078	1.49	ug/L	93
39) propionitrile	3.72	54	2591	15.92	ug/L	86
40) bromochloromethane	3.78	130	1772	1.55	ug/L	87
42) chloroform	3.85	83	5102	1.57	ug/L	99
43) tert-Butyl Formate	3.85	59	1260	1.13	ug/L	81
46) methacrylonitrile	3.82	67	683	1.34	ug/L #	51

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149628.D
Acq On : 13 Feb 2019 8:29 pm
Operator : juntaep
Sample : IC6743-2
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 15 09:29:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) 1,1,1-trichloroethane	3.95	97	4208	1.37	ug/L		95
48) cyclohexane	3.94	84	5256	1.69	ug/L		97
49) 1,1-dichloropropene	4.11	110	1334	1.32	ug/L		93
51) carbon tetrachloride	4.06	119	3131	1.26	ug/L		85
54) 2,2,4-trimethylpentane	4.26	57	10955	1.48	ug/L		93
55) tert-amyl methyl ether	4.36	87	2506	1.51	ug/L	#	82
57) benzene	4.28	78	11862	1.63	ug/L		97
58) heptane	4.45	57	2261	1.43	ug/L		87
60) 1,2-dichloroethane	4.38	62	3930	1.80	ug/L		89
61) trichloroethene	4.90	95	2941	1.47	ug/L		95
64) 2-chloroethyl vinyl ether	5.76	63	7906	8.30	ug/L		96
66) 1,2-dichloropropane	5.17	63	2586	1.49	ug/L		91
67) methylcyclohexane	5.01	83	6626	1.86	ug/L		97
68) dibromomethane	5.29	93	1552	1.63	ug/L		95
69) bromodichloromethane	5.45	83	3223	1.41	ug/L		96
71) cis-1,3-dichloropropene	5.89	75	4189	1.48	ug/L		97
72) 4-methyl-2-pentanone	6.03	85	1385	5.71	ug/L		97
76) toluene	6.15	92	8104	1.66	ug/L		95
77) trans-1,3-dichloropropene	6.44	75	3381	1.39	ug/L		95
78) ethyl methacrylate	6.47	69	3036	1.57	ug/L		95
79) 1,1,2-trichloroethane	6.60	83	1877	1.57	ug/L	#	85
80) 2-hexanone	6.80	58	2904	6.27	ug/L		95
81) tetrachloroethene	6.62	166	3676	1.52	ug/L		96
82) 1,3-dichloropropane	6.75	76	4248	1.73	ug/L		97
83) butyl acetate	6.89	56	1407	1.58	ug/L		90
84) dibromochloromethane	6.92	129	2007	1.29	ug/L		89
85) 1,2-dibromoethane	7.02	107	2629	1.45	ug/L		98
86) n-butyl ether	7.47	57	13078	1.64	ug/L		98
87) chlorobenzene	7.42	112	9164	1.73	ug/L		94
88) 1,1,1,2-tetrachloroethane	7.50	131	2621	1.37	ug/L		97
89) ethylbenzene	7.49	91	15689	1.68	ug/L		96
90) m,p-xylene	7.60	106	12484	3.39	ug/L		99
91) o-xylene	7.93	91	12686	1.71	ug/L		99
92) styrene	7.96	104	9797	1.60	ug/L		95
94) butyl acrylate	7.92	55	3946	1.46	ug/L		93
95) isopropylbenzene	8.23	105	15798	1.64	ug/L		99
99) bromobenzene	8.51	156	4197	1.73	ug/L		99
100) 1,1,2,2-tetrachloroethane	8.55	83	2856m	1.72	ug/L		
102) 1,2,3-trichloropropane	8.59	110	859	1.58	ug/L		95
103) n-propylbenzene	8.57	91	18458	1.66	ug/L		99
104) 2-chlorotoluene	8.66	126	3810	1.64	ug/L		87
105) 4-chlorotoluene	8.75	126	3762	1.61	ug/L		97
106) 1,3,5-trimethylbenzene	8.72	105	13128	1.58	ug/L		97
107) tert-butylbenzene	8.97	119	12024	1.63	ug/L		97
108) 1,2,4-trimethylbenzene	9.02	105	14417	1.73	ug/L		98
109) sec-butylbenzene	9.14	105	17796	1.65	ug/L		99
110) 1,3-dichlorobenzene	9.26	146	8219	1.72	ug/L		96
111) p-isopropyltoluene	9.26	119	15048	1.57	ug/L		97
112) 1,4-dichlorobenzene	9.34	146	8355	1.76	ug/L		97
113) 1,2-dichlorobenzene	9.64	146	7623	1.72	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149628.D
Acq On : 13 Feb 2019 8:29 pm
Operator : juntaep
Sample : IC6743-2
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 15 09:29:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

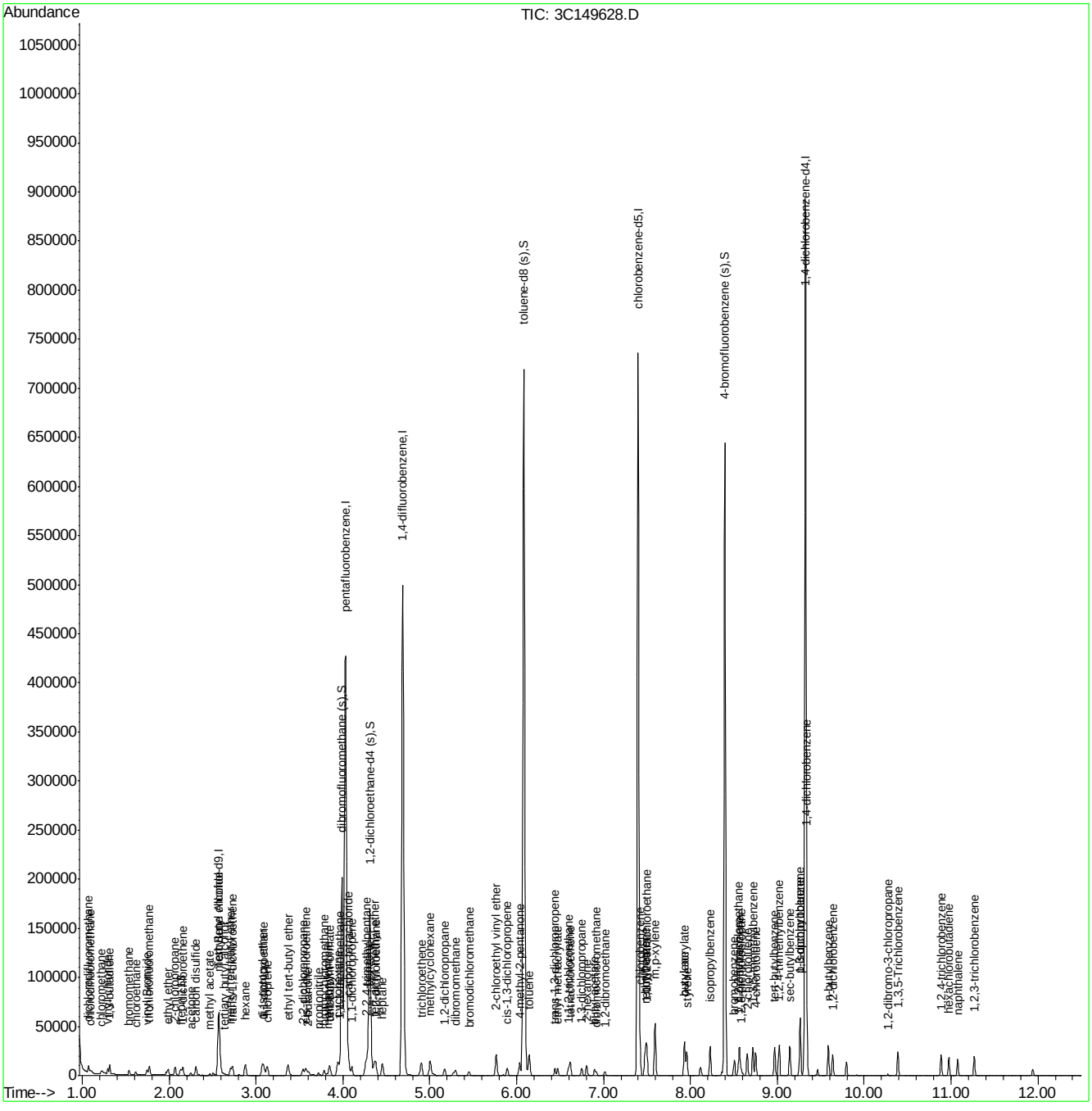
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
114) n-butylbenzene	9.59	92	7221	1.51 ug/L	91
115) 1,2-dibromo-3-chloropropan	10.27	157	369	0.91 ug/L	93
116) 1,3,5-Trichlorobenzene	10.39	180	7410	1.67 ug/L	90
117) 1,2,4-trichlorobenzene	10.88	180	6165	1.63 ug/L	96
118) hexachlorobutadiene	10.97	225	3460	1.40 ug/L	92
119) naphthalene	11.08	128	10598	1.58 ug/L	97
120) 1,2,3-trichlorobenzene	11.27	180	5860	1.65 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149628.D
Acq On : 13 Feb 2019 8:29 pm
Operator : juntaep
Sample : IC6743-2
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 15 09:29:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	V3C6743-IC6743	**Method:**	SW846 8260C
Lab FileID:	3C149628.D	**Analyst approved:**	02/15/19 11:18 Robert Szot
Injection Time:	02/13/19 20:29	**Supervisor approved:**	02/15/19 13:53 Kanya Veerawat

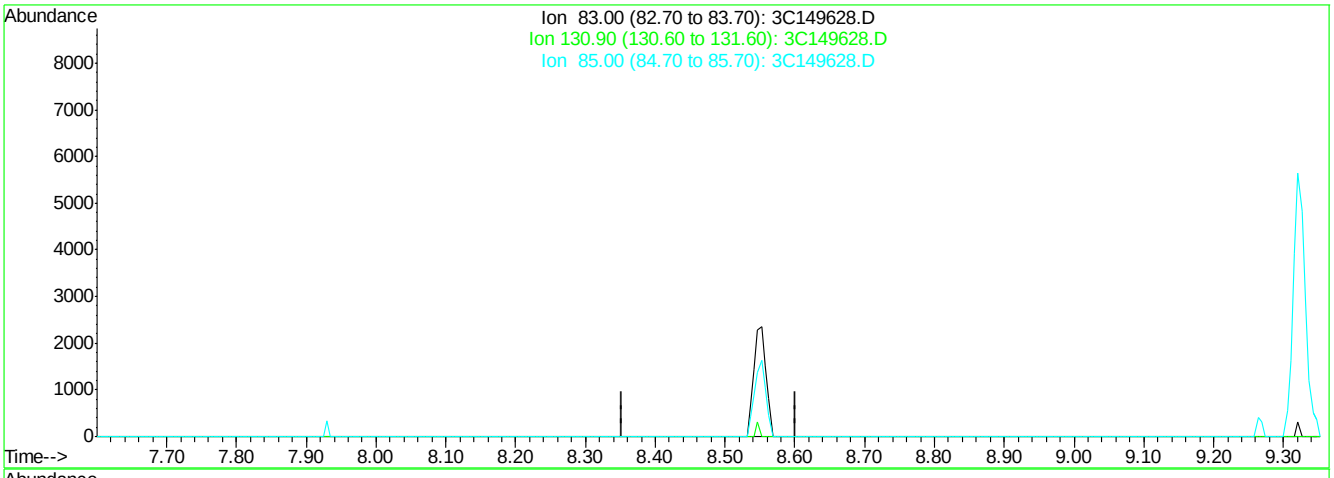
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,1,2,2-Tetrachloroethane	79-34-5		8.55	Missed peak

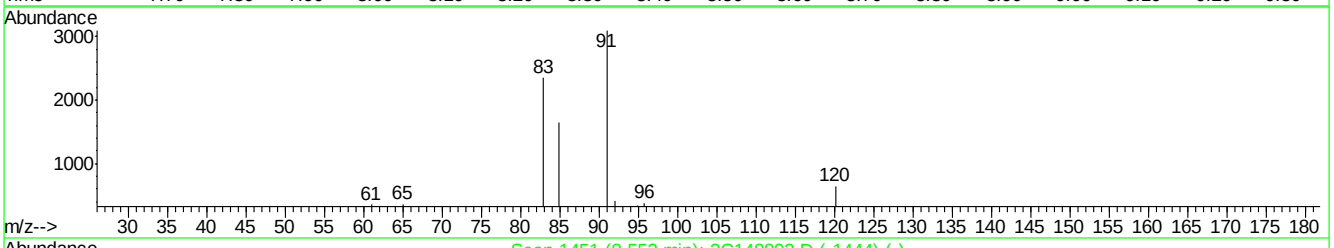
Quantitation Report (Qedit)

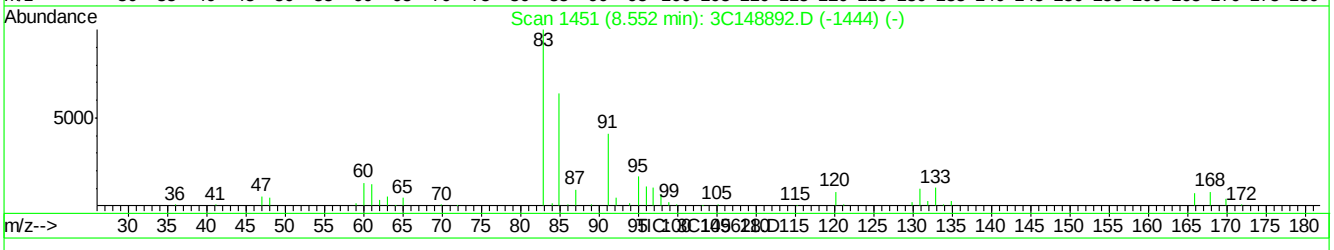
Data File : C:\MSDChem\1\DATA\V3C6743\3C149628.D Vial: 8
Acq On : 13 Feb 2019 8:29 pm Operator: juntaep
Sample : IC6743-2 Inst : MS3C
Misc : MS32156,V3C6743,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Quant Time: Feb 14 14:06:04 2019 Results File: M3C6743.RES

Method : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
Last Update : Thu Feb 14 14:08:59 2019
Response via : Multiple Level Calibration







(100) 1,1,2,2-tetrachloroethane

8.55min 0.00ug/L d

response 0

Ion	Exp%	Act%
83.00	100	0.00
130.90	11.30	0.00
85.00	64.20	0.00
0.00	0.00	0.00

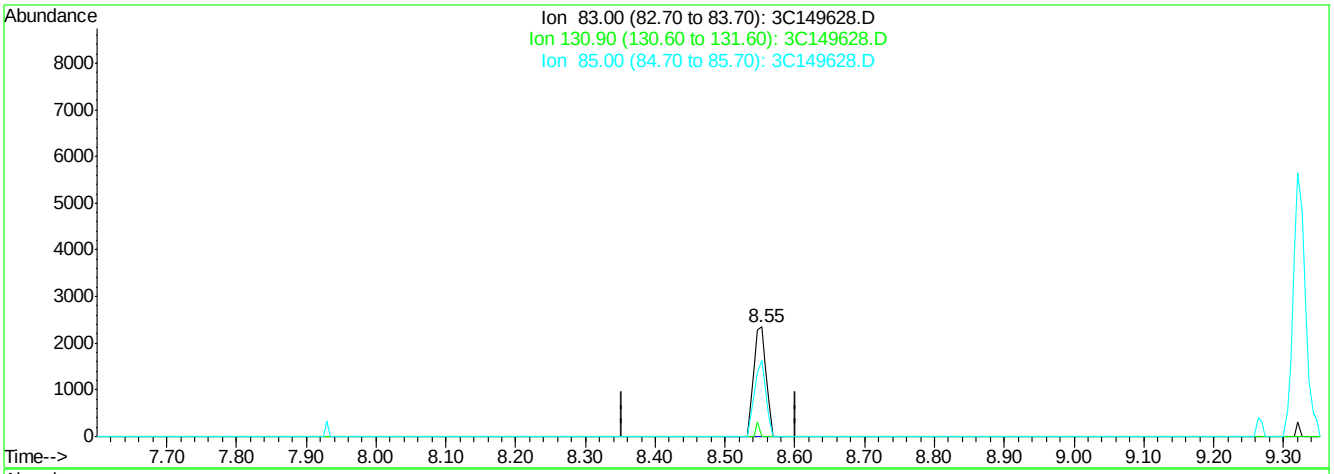
3C149628.D M3C6743.M Fri Feb 15 09:29:28 2019 MS3C

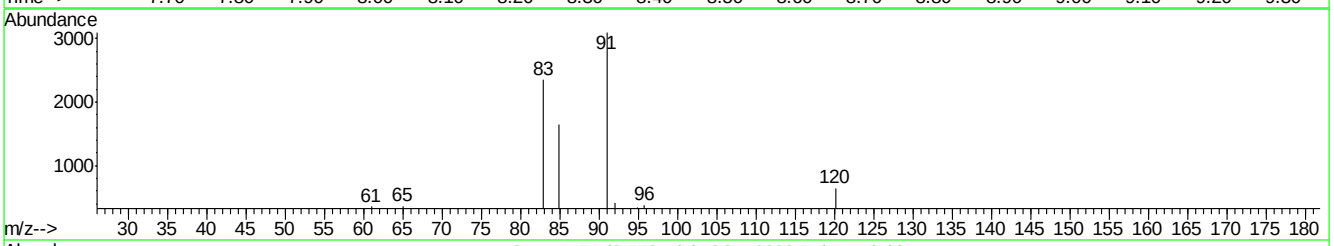
Quantitation Report (Qedit)

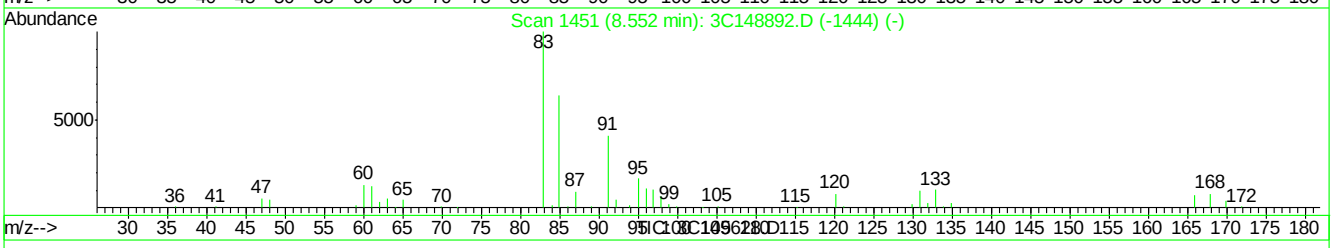
Data File : C:\MSDChem\1\DATA\V3C6743\3C149628.D Vial: 8
Acq On : 13 Feb 2019 8:29 pm Operator: juntaep
Sample : IC6743-2 Inst : MS3C
Misc : MS32156,V3C6743,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Quant Time: Feb 14 14:06:04 2019 Results File: M3C6743.RES

Method : C:\MSDCHEM\1\METHODS\M3C6743.M (RTE Integrator)
Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
Last Update : Thu Feb 14 14:08:59 2019
Response via : Multiple Level Calibration







(100) 1,1,2,2-tetrachloroethane

8.55min 1.72ug/L m

response 2856

Ion	Exp%	Act%
83.00	100	100
130.90	11.30	0.00
85.00	64.20	69.94
0.00	0.00	0.00

3C149628.D M3C6743.M Fri Feb 15 09:29:54 2019 MS3C

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149629.D
Acq On : 13 Feb 2019 8:52 pm
Operator : juntaep
Sample : IC6743-4
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 14 12:14:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	58359	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	265395	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	361985	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	316370	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	172390	50.00	ug/L	0.00

System Monitoring Compounds						
45) dibromofluoromethane (s)	3.99	113	94641	48.54	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 97.08%						
53) 1,2-dichloroethane-d4 (s)	4.31	65	98675	50.64	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 101.28%						
75) toluene-d8 (s)	6.08	98	391816	49.93	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.86%						
98) 4-bromofluorobenzene (s)	8.40	95	140867	50.12	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 100.24%						

Target Compounds						Qvalue
3) tertiary butyl alcohol	2.64	59	2465	18.15	ug/L	68
4) 1,4-dioxane	5.29	88	1532	92.35	ug/L	83
6) chlorodifluoromethane	1.10	51	6803	3.93	ug/L	98
7) dichlorodifluoromethane	1.08	85	9254	3.66	ug/L	98
8) chloromethane	1.22	50	7897	3.87	ug/L	97
9) 1,3-butadiene	1.32	54	5263	3.95	ug/L	100
10) vinyl chloride	1.30	62	8269	3.89	ug/L	99
11) bromomethane	1.54	94	5036	4.05	ug/L	96
12) chloroethane	1.62	64	4849	3.84	ug/L	98
13) vinyl Bromide	1.75	106	6714	3.65	ug/L	99
14) trichlorofluoromethane	1.77	101	11557	3.69	ug/L	96
15) ethyl ether	1.99	74	3333	3.83	ug/L	89
16) 2-chloropropane	2.08	63	2530	3.51	ug/L #	82
17) acrolein	2.13	56	485	2.55	ug/L	95
18) freon 113	2.13	151	5689	3.73	ug/L	94
19) 1,1-dichloroethene	2.16	96	6018	3.64	ug/L	86
20) acetone	2.25	58	1327	14.47	ug/L	99
21) acetonitrile	2.52	41	5673	42.53	ug/L	92
22) iodomethane	2.29	142	2292	1.32	ug/L	87
23) carbon disulfide	2.31	76	17541	4.04	ug/L	96
24) methylene chloride	2.57	84	7186	4.28	ug/L	92
25) methyl acetate	2.47	43	3292	3.87	ug/L	86
26) methyl tert butyl ether	2.72	73	16859	3.89	ug/L	99
27) trans-1,2-dichloroethene	2.73	96	7055	3.82	ug/L	99
28) hexane	2.88	57	11137	3.85	ug/L	95
29) di-isopropyl ether	3.08	45	20300	3.82	ug/L	97
30) ethyl tert-butyl ether	3.37	59	19847	3.75	ug/L	97
31) 2-butanone	3.60	72	1961	13.40	ug/L #	80
32) 1,1-dichloroethane	3.10	63	11438	3.69	ug/L	98
33) chloroprene	3.13	53	10267	3.73	ug/L	97
34) acrylonitrile	2.81	53	1315	3.58	ug/L	88
35) vinyl acetate	3.12	86	1053	3.13	ug/L #	45
36) ethyl acetate	3.62	45	234	1.22	ug/L #	70

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149629.D
Acq On : 13 Feb 2019 8:52 pm
Operator : juntaep
Sample : IC6743-4
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 14 12:14:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	3.55	77	10441	3.68	ug/L		99
38) cis-1,2-dichloroethene	3.57	96	7528	3.72	ug/L		98
39) propionitrile	3.72	54	6085	38.30	ug/L		95
40) bromochloromethane	3.79	130	4282	3.84	ug/L		88
42) chloroform	3.84	83	12462	3.93	ug/L		98
43) tert-Butyl Formate	3.85	59	3675	3.37	ug/L		89
44) isobutyl alcohol	4.26	41	9146	36.87	ug/L		90
46) methacrylonitrile	3.82	67	1697	3.41	ug/L		94
47) 1,1,1-trichloroethane	3.96	97	11014	3.67	ug/L		93
48) cyclohexane	3.94	84	11524	3.80	ug/L		96
49) 1,1-dichloropropene	4.11	110	3852	3.90	ug/L	#	84
50) tert-amyl alcohol	4.33	59	2358	19.91	ug/L		88
51) carbon tetrachloride	4.07	119	8564	3.52	ug/L		90
54) 2,2,4-trimethylpentane	4.26	57	27110	3.76	ug/L		99
55) tert-amyl methyl ether	4.37	87	6055	3.76	ug/L	#	81
56) n-butyl alcohol	4.90	56	5570	151.11	ug/L		98
57) benzene	4.28	78	27783	3.93	ug/L		99
58) heptane	4.46	57	5651	3.68	ug/L		92
59) isopropyl acetate	4.37	87	6055	3.76	ug/L		94
60) 1,2-dichloroethane	4.38	62	8844	4.17	ug/L		94
61) trichloroethene	4.90	95	7403	3.81	ug/L		100
62) ethyl acrylate	5.04	55	5799	3.71	ug/L		84
63) 2-nitropropane	5.76	41	1689	3.51	ug/L		98
64) 2-chloroethyl vinyl ether	5.76	63	17871	19.30	ug/L		98
65) methyl methacrylate	5.28	100	1207	2.89	ug/L	#	81
66) 1,2-dichloropropane	5.17	63	6229	3.71	ug/L		93
67) methylcyclohexane	5.01	83	14688	4.25	ug/L		97
68) dibromomethane	5.30	93	3533	3.82	ug/L		94
69) bromodichloromethane	5.45	83	7656	3.45	ug/L		97
70) epichlorohydrin	5.85	57	2198	18.97	ug/L		85
71) cis-1,3-dichloropropene	5.89	75	9596	3.50	ug/L		95
72) 4-methyl-2-pentanone	6.03	85	3079	13.07	ug/L		99
76) toluene	6.15	92	18779	3.96	ug/L		99
77) trans-1,3-dichloropropene	6.44	75	7807	3.31	ug/L		97
78) ethyl methacrylate	6.47	69	6421	3.41	ug/L		88
79) 1,1,2-trichloroethane	6.60	83	4482	3.86	ug/L		97
80) 2-hexanone	6.81	58	6718	14.91	ug/L		97
81) tetrachloroethene	6.62	166	8750	3.71	ug/L		95
82) 1,3-dichloropropane	6.75	76	9116	3.82	ug/L		94
83) butyl acetate	6.89	56	3233	3.74	ug/L		93
84) dibromochloromethane	6.92	129	4513	2.98	ug/L		97
85) 1,2-dibromoethane	7.02	107	6552	3.72	ug/L		96
86) n-butyl ether	7.47	57	30098	3.88	ug/L		96
87) chlorobenzene	7.42	112	20673	4.01	ug/L		96
88) 1,1,1,2-tetrachloroethane	7.50	131	6055	3.26	ug/L		97
89) ethylbenzene	7.49	91	35962	3.95	ug/L		97
90) m,p-xylene	7.59	106	28515	7.96	ug/L		99
91) o-xylene	7.93	91	29147	4.05	ug/L		99
92) styrene	7.96	104	22370	3.76	ug/L		99
93) bromoform	8.13	173	2464	2.70	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149629.D
Acq On : 13 Feb 2019 8:52 pm
Operator : juntaep
Sample : IC6743-4
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 14 12:14:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) butyl acrylate	7.92	55	8704	3.31	ug/L		99
95) isopropylbenzene	8.23	105	36885	3.93	ug/L		99
96) cis-1,4-dichloro-2-butene	8.36	53	1654	3.16	ug/L	#	77
99) bromobenzene	8.51	156	9271	3.92	ug/L		96
100) 1,1,2,2-tetrachloroethane	8.55	83	6229	3.85	ug/L		100
101) trans-1,4-dichloro-2-buten	8.60	88	456	2.05	ug/L	#	48
102) 1,2,3-trichloropropane	8.59	110	2009	3.79	ug/L		96
103) n-propylbenzene	8.57	91	43326	3.99	ug/L		98
104) 2-chlorotoluene	8.66	126	8941	3.94	ug/L		99
105) 4-chlorotoluene	8.75	126	9009	3.96	ug/L		96
106) 1,3,5-trimethylbenzene	8.72	105	31332	3.87	ug/L		98
107) tert-butylbenzene	8.97	119	28601	3.98	ug/L		97
108) 1,2,4-trimethylbenzene	9.02	105	32165	3.96	ug/L		100
109) sec-butylbenzene	9.15	105	41398	3.93	ug/L		97
110) 1,3-dichlorobenzene	9.26	146	18635	4.00	ug/L		97
111) p-isopropyltoluene	9.26	119	36312	3.89	ug/L		98
112) 1,4-dichlorobenzene	9.34	146	18220	3.92	ug/L		94
113) 1,2-dichlorobenzene	9.64	146	17065	3.94	ug/L		96
114) n-butylbenzene	9.59	92	17910	3.84	ug/L		98
115) 1,2-dibromo-3-chloropropan	10.27	157	962	2.44	ug/L		93
116) 1,3,5-Trichlorobenzene	10.39	180	17209	3.98	ug/L		93
117) 1,2,4-trichlorobenzene	10.88	180	14394	3.90	ug/L		93
118) hexachlorobutadiene	10.97	225	8881	3.68	ug/L		97
119) naphthalene	11.08	128	24785	3.80	ug/L		96
120) 1,2,3-trichlorobenzene	11.27	180	13623	3.94	ug/L		99
121) hexachloroethane	9.80	201	3272	2.54	ug/L	#	74
122) Benzyl chloride	9.46	91	8474	2.74	ug/L		95
124) 2-methylnaphthalene	11.94	142	7529	1.88	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

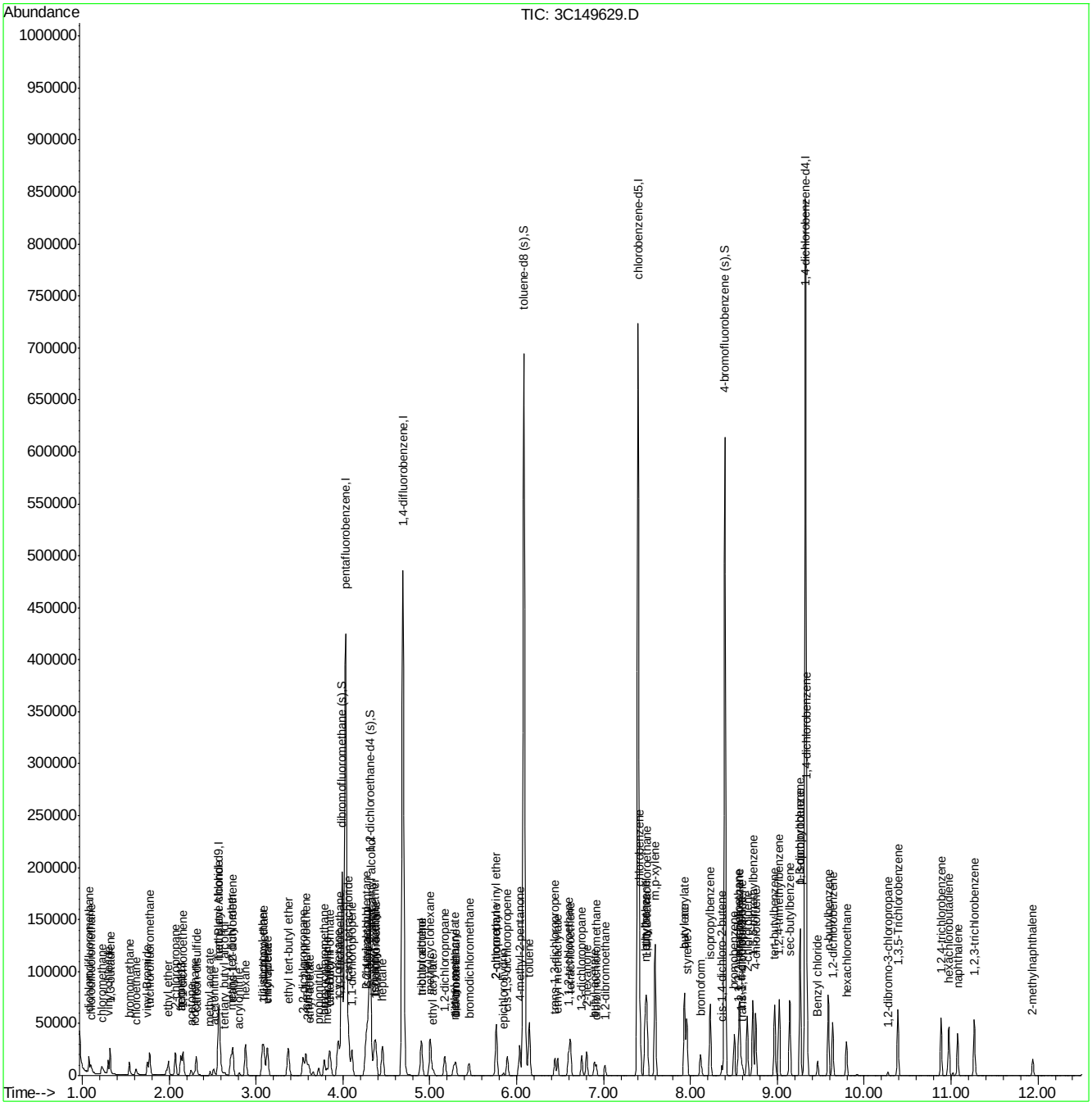
7.7.16

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149629.D
Acq On : 13 Feb 2019 8:52 pm
Operator : juntaep
Sample : IC6743-4
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 14 12:14:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149630.D
Acq On : 13 Feb 2019 9:15 pm
Operator : juntaep
Sample : IC6743-8
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 14 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	57495	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	265783	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	365228	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	313215	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	170087	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	96469	49.40	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.80%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	98968	50.34	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.68%			
75) toluene-d8 (s)	6.08	98	388948	50.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.14%			
98) 4-bromofluorobenzene (s)	8.40	95	142556	51.41	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.82%			

Target Compounds

						Qvalue
3) tertiary butyl alcohol	2.64	59	5276	39.43	ug/L	95
4) 1,4-dioxane	5.29	88	2834	173.41	ug/L	95
6) chlorodifluoromethane	1.10	51	13319	7.67	ug/L	96
7) dichlorodifluoromethane	1.08	85	19943	7.88	ug/L	98
8) chloromethane	1.22	50	16559	8.10	ug/L	96
9) 1,3-butadiene	1.32	54	10274	7.69	ug/L	98
10) vinyl chloride	1.30	62	16915	7.95	ug/L	99
11) bromomethane	1.54	94	9993	8.03	ug/L	95
12) chloroethane	1.62	64	9936	7.85	ug/L	97
13) vinyl Bromide	1.75	106	14238	7.73	ug/L	95
14) trichlorofluoromethane	1.77	101	24526	7.83	ug/L	99
15) ethyl ether	1.99	74	6631	7.60	ug/L	91
16) 2-chloropropane	2.07	63	5382	7.45	ug/L	99
17) acrolein	2.14	56	1259	6.62	ug/L	88
18) freon 113	2.13	151	11301	7.39	ug/L	97
19) 1,1-dichloroethene	2.16	96	12557	7.58	ug/L	95
20) acetone	2.26	58	2752	29.96	ug/L #	72
21) acetonitrile	2.51	41	10315	77.21	ug/L	97
22) iodomethane	2.29	142	5353	3.08	ug/L	97
23) carbon disulfide	2.31	76	34164	7.85	ug/L	96
24) methylene chloride	2.56	84	13567	8.07	ug/L	97
25) methyl acetate	2.47	43	6801	7.99	ug/L	94
26) methyl tert butyl ether	2.71	73	33140	7.64	ug/L	99
27) trans-1,2-dichloroethene	2.74	96	13871	7.49	ug/L	98
28) hexane	2.88	57	22369	7.72	ug/L	99
29) di-isopropyl ether	3.08	45	40868	7.69	ug/L	99
30) ethyl tert-butyl ether	3.37	59	39812	7.52	ug/L	99
31) 2-butanone	3.60	72	4349	29.67	ug/L	98
32) 1,1-dichloroethane	3.10	63	23493	7.57	ug/L	96
33) chloroprene	3.13	53	21031	7.62	ug/L	95
34) acrylonitrile	2.80	53	2592	7.04	ug/L	95
35) vinyl acetate	3.12	86	2198	6.53	ug/L #	74
36) ethyl acetate	3.61	45	1197	6.25	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149630.D
Acq On : 13 Feb 2019 9:15 pm
Operator : juntaep
Sample : IC6743-8
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 14 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	3.55	77	20423	7.19	ug/L		98
38) cis-1,2-dichloroethene	3.58	96	15314	7.57	ug/L		98
39) propionitrile	3.72	54	12567	78.98	ug/L		97
40) bromochloromethane	3.79	130	8687	7.77	ug/L		89
41) tetrahydrofuran	3.79	71	998	7.26	ug/L		96
42) chloroform	3.84	83	24239	7.64	ug/L		95
43) tert-Butyl Formate	3.86	59	6954	6.36	ug/L		93
44) isobutyl alcohol	4.26	41	18823	75.76	ug/L		94
46) methacrylonitrile	3.81	67	3673	7.37	ug/L		93
47) 1,1,1-trichloroethane	3.96	97	22331	7.43	ug/L		97
48) cyclohexane	3.94	84	24346	8.02	ug/L		97
49) 1,1-dichloropropene	4.11	110	7352	7.44	ug/L		96
50) tert-amyl alcohol	4.33	59	4630	39.04	ug/L	#	68
51) carbon tetrachloride	4.07	119	17652	7.24	ug/L		97
54) 2,2,4-trimethylpentane	4.27	57	55472	7.63	ug/L		98
55) tert-amyl methyl ether	4.36	87	12205	7.50	ug/L		95
56) n-butyl alcohol	4.90	56	11537	310.21	ug/L		90
57) benzene	4.28	78	55823	7.83	ug/L		98
58) heptane	4.46	57	11941	7.71	ug/L		98
59) isopropyl acetate	4.36	87	12205	7.50	ug/L		96
60) 1,2-dichloroethane	4.38	62	16793	7.85	ug/L		98
61) trichloroethene	4.90	95	15251	7.77	ug/L		99
62) ethyl acrylate	5.04	55	11594	7.36	ug/L		90
63) 2-nitropropane	5.76	41	3351	6.91	ug/L	#	53
64) 2-chloroethyl vinyl ether	5.76	63	36013	38.55	ug/L		97
65) methyl methacrylate	5.27	100	2852	6.77	ug/L		95
66) 1,2-dichloropropane	5.17	63	13217	7.80	ug/L		95
67) methylcyclohexane	5.01	83	27898	8.00	ug/L		98
68) dibromomethane	5.29	93	7019	7.52	ug/L		96
69) bromodichloromethane	5.45	83	15392	6.87	ug/L		99
70) epichlorohydrin	5.85	57	4231	36.20	ug/L		84
71) cis-1,3-dichloropropene	5.89	75	19469	7.03	ug/L		97
72) 4-methyl-2-pentanone	6.03	85	6524	27.45	ug/L		99
76) toluene	6.15	92	36744	7.82	ug/L		96
77) trans-1,3-dichloropropene	6.44	75	15862	6.78	ug/L		93
78) ethyl methacrylate	6.47	69	13424	7.19	ug/L		98
79) 1,1,2-trichloroethane	6.60	83	8824	7.69	ug/L		96
80) 2-hexanone	6.81	58	13181	29.54	ug/L		98
81) tetrachloroethene	6.62	166	17991	7.71	ug/L		97
82) 1,3-dichloropropane	6.75	76	18660	7.90	ug/L		97
83) butyl acetate	6.89	56	6446	7.53	ug/L		96
84) dibromochloromethane	6.92	129	9458	6.30	ug/L		95
85) 1,2-dibromoethane	7.02	107	13033	7.47	ug/L		98
86) n-butyl ether	7.47	57	61329	7.99	ug/L		98
87) chlorobenzene	7.42	112	40458	7.92	ug/L		97
88) 1,1,1,2-tetrachloroethane	7.51	131	12150	6.62	ug/L		98
89) ethylbenzene	7.49	91	71203	7.90	ug/L		98
90) m,p-xylene	7.60	106	57168	16.11	ug/L		97
91) o-xylene	7.93	91	56131	7.88	ug/L		100
92) styrene	7.96	104	45496	7.73	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149630.D
Acq On : 13 Feb 2019 9:15 pm
Operator : juntaep
Sample : IC6743-8
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 14 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	5194	5.74 ug/L	98
94) butyl acrylate	7.92	55	18121	6.95 ug/L	100
95) isopropylbenzene	8.23	105	72694	7.83 ug/L	99
96) cis-1,4-dichloro-2-butene	8.36	53	3492	6.73 ug/L #	80
99) bromobenzene	8.51	156	18829	8.07 ug/L	100
100) 1,1,2,2-tetrachloroethane	8.55	83	11999	7.52 ug/L	99
101) trans-1,4-dichloro-2-buten	8.60	88	1060	4.83 ug/L #	73
102) 1,2,3-trichloropropane	8.59	110	4050	7.75 ug/L	89
103) n-propylbenzene	8.57	91	87286	8.14 ug/L	97
104) 2-chlorotoluene	8.66	126	18134	8.11 ug/L	97
105) 4-chlorotoluene	8.75	126	17887	7.97 ug/L	98
106) 1,3,5-trimethylbenzene	8.72	105	63194	7.92 ug/L	99
107) tert-butylbenzene	8.97	119	56877	8.01 ug/L	99
108) 1,2,4-trimethylbenzene	9.02	105	64151	8.01 ug/L	95
109) sec-butylbenzene	9.14	105	83152	8.00 ug/L	100
110) 1,3-dichlorobenzene	9.26	146	37000	8.04 ug/L	99
111) p-isopropyltoluene	9.26	119	72840	7.92 ug/L	98
112) 1,4-dichlorobenzene	9.34	146	36688	8.01 ug/L	98
113) 1,2-dichlorobenzene	9.64	146	33584	7.86 ug/L	99
114) n-butylbenzene	9.59	92	36159	7.86 ug/L	98
115) 1,2-dibromo-3-chloropropan	10.27	157	2306	5.94 ug/L	94
116) 1,3,5-Trichlorobenzene	10.39	180	33222	7.79 ug/L	97
117) 1,2,4-trichlorobenzene	10.88	180	28699	7.88 ug/L	99
118) hexachlorobutadiene	10.97	225	17737	7.45 ug/L	98
119) naphthalene	11.08	128	48417	7.51 ug/L	98
120) 1,2,3-trichlorobenzene	11.27	180	26585	7.79 ug/L	96
121) hexachloroethane	9.80	201	7209	5.68 ug/L #	80
122) Benzyl chloride	9.46	91	17416	5.71 ug/L	98
123) 2-ethylhexyl acrylate	11.02	70	1723	0.97 ug/L	99
124) 2-methylnaphthalene	11.94	142	15111	3.82 ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

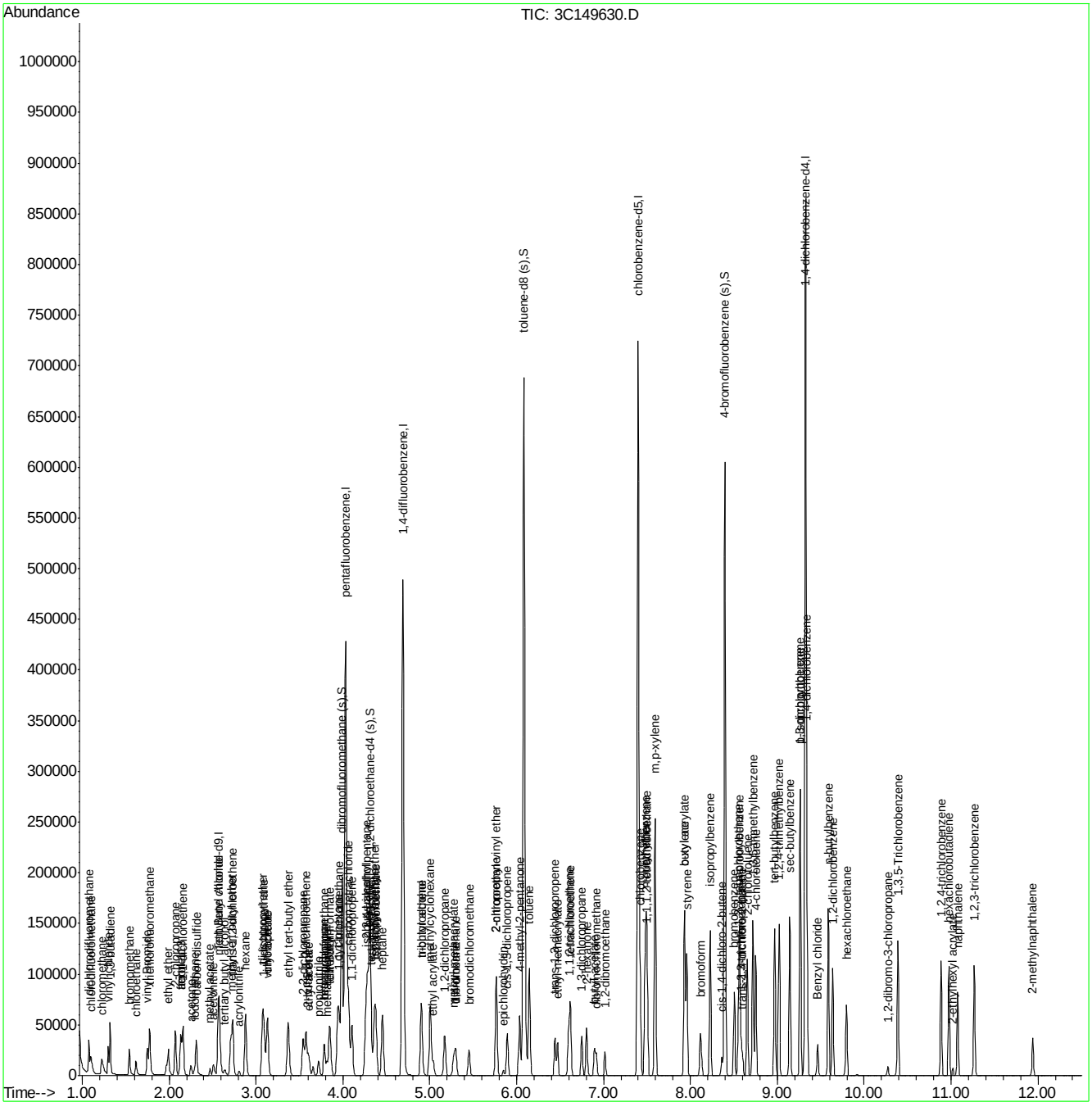
7.7.17

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149630.D
Acq On : 13 Feb 2019 9:15 pm
Operator : juntaep
Sample : IC6743-8
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 14 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149631.D
Acq On : 13 Feb 2019 9:39 pm
Operator : juntaep
Sample : IC6743-20
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 14 12:15:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	57466	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	264012	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	361189	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	312299	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	167909	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	94940	48.95	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 97.90%						
53) 1,2-dichloroethane-d4 (s)	4.31	65	97091	49.94	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 99.88%						
75) toluene-d8 (s)	6.08	98	388689	50.18	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.36%						
98) 4-bromofluorobenzene (s)	8.40	95	137896	50.37	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 100.74%						

Target Compounds						Qvalue
3) tertiary butyl alcohol	2.64	59	12948	96.81	ug/L	94
4) 1,4-dioxane	5.29	88	7780	476.28	ug/L	99
6) chlorodifluoromethane	1.10	51	33844	19.63	ug/L	99
7) dichlorodifluoromethane	1.08	85	49410	19.66	ug/L	99
8) chloromethane	1.22	50	40327	19.86	ug/L	99
9) 1,3-butadiene	1.32	54	26757	20.17	ug/L	97
10) vinyl chloride	1.30	62	41265	19.52	ug/L	100
11) bromomethane	1.54	94	25030	20.24	ug/L	99
12) chloroethane	1.62	64	24777	19.72	ug/L	99
13) vinyl Bromide	1.75	106	35894	19.62	ug/L	98
14) trichlorofluoromethane	1.77	101	60669	19.49	ug/L	99
15) ethyl ether	1.99	74	17356	20.03	ug/L	92
16) 2-chloropropane	2.07	63	13656	19.03	ug/L	93
17) acrolein	2.13	56	3504	18.55	ug/L	91
18) freon 113	2.13	151	29629	19.52	ug/L	99
19) 1,1-dichloroethene	2.16	96	32219	19.57	ug/L	98
20) acetone	2.25	58	6803	74.56	ug/L	90
21) acetonitrile	2.51	41	25699	193.66	ug/L	97
22) iodomethane	2.29	142	20186	11.71	ug/L	97
23) carbon disulfide	2.31	76	85054	19.67	ug/L	99
24) methylene chloride	2.56	84	33420	20.00	ug/L	97
25) methyl acetate	2.47	43	16379	19.37	ug/L	97
26) methyl tert butyl ether	2.71	73	82585	19.17	ug/L	99
27) trans-1,2-dichloroethene	2.73	96	36211	19.69	ug/L	95
28) hexane	2.88	57	58243	20.24	ug/L	98
29) di-isopropyl ether	3.08	45	103251	19.55	ug/L	98
30) ethyl tert-butyl ether	3.37	59	102238	19.44	ug/L	99
31) 2-butanone	3.60	72	11222	77.08	ug/L	99
32) 1,1-dichloroethane	3.10	63	60840	19.74	ug/L	97
33) chloroprene	3.13	53	53393	19.48	ug/L	99
34) acrylonitrile	2.80	53	6890	18.85	ug/L	90
35) vinyl acetate	3.12	86	6076	18.17	ug/L	96
36) ethyl acetate	3.61	45	3361	17.68	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149631.D
Acq On : 13 Feb 2019 9:39 pm
Operator : juntaep
Sample : IC6743-20
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 14 12:15:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	3.55	77	54113	19.18	ug/L		97
38) cis-1,2-dichloroethene	3.58	96	39639	19.71	ug/L		94
39) propionitrile	3.72	54	30355	192.06	ug/L		99
40) bromochloromethane	3.79	130	22152	19.96	ug/L		90
41) tetrahydrofuran	3.79	71	2452	17.96	ug/L	#	76
42) chloroform	3.84	83	61722	19.58	ug/L		99
43) tert-Butyl Formate	3.86	59	19122	17.61	ug/L		93
44) isobutyl alcohol	4.26	41	48940	198.31	ug/L		93
46) methacrylonitrile	3.81	67	9377	18.94	ug/L		96
47) 1,1,1-trichloroethane	3.96	97	58033	19.43	ug/L		99
48) cyclohexane	3.94	84	59658	19.79	ug/L		98
49) 1,1-dichloropropene	4.11	110	19165	19.52	ug/L		98
50) tert-amyl alcohol	4.33	59	11511	97.70	ug/L		93
51) carbon tetrachloride	4.07	119	45765	18.89	ug/L		99
54) 2,2,4-trimethylpentane	4.26	57	144769	20.13	ug/L		99
55) tert-amyl methyl ether	4.36	87	30664	19.06	ug/L		92
56) n-butyl alcohol	4.90	56	32127	873.50	ug/L		92
57) benzene	4.28	78	140809	19.97	ug/L		99
58) heptane	4.45	57	31190	20.36	ug/L		96
59) isopropyl acetate	4.36	87	30664	19.06	ug/L		97
60) 1,2-dichloroethane	4.38	62	42359	20.01	ug/L		99
61) trichloroethene	4.90	95	38834	20.01	ug/L		95
62) ethyl acrylate	5.04	55	29478	18.93	ug/L		99
63) 2-nitropropane	5.75	41	8905	18.56	ug/L	#	42
64) 2-chloroethyl vinyl ether	5.76	63	89470	96.85	ug/L		98
65) methyl methacrylate	5.27	100	7823	18.79	ug/L	#	88
66) 1,2-dichloropropane	5.17	63	32844	19.59	ug/L		99
67) methylcyclohexane	5.01	83	70500	20.46	ug/L		98
68) dibromomethane	5.30	93	18124	19.63	ug/L		93
69) bromodichloromethane	5.45	83	40504	18.28	ug/L		100
70) epichlorohydrin	5.85	57	10804	93.47	ug/L		95
71) cis-1,3-dichloropropene	5.89	75	51673	18.88	ug/L		98
72) 4-methyl-2-pentanone	6.04	85	17644	75.08	ug/L		97
76) toluene	6.15	92	92635	19.77	ug/L		99
77) trans-1,3-dichloropropene	6.44	75	42165	18.09	ug/L		98
78) ethyl methacrylate	6.47	69	34052	18.30	ug/L		98
79) 1,1,2-trichloroethane	6.60	83	22939	20.04	ug/L		96
80) 2-hexanone	6.81	58	33729	75.81	ug/L		92
81) tetrachloroethene	6.62	166	46003	19.76	ug/L		98
82) 1,3-dichloropropane	6.75	76	45563	19.36	ug/L		98
83) butyl acetate	6.89	56	16118	18.88	ug/L		94
84) dibromochloromethane	6.92	129	26339	17.59	ug/L		99
85) 1,2-dibromoethane	7.01	107	32911	18.91	ug/L		98
86) n-butyl ether	7.47	57	150650	19.69	ug/L		99
87) chlorobenzene	7.42	112	99389	19.52	ug/L		97
88) 1,1,1,2-tetrachloroethane	7.51	131	33098	18.08	ug/L		99
89) ethylbenzene	7.49	91	178507	19.87	ug/L		99
90) m,p-xylene	7.60	106	139272	39.36	ug/L		97
91) o-xylene	7.93	91	139910	19.70	ug/L		98
92) styrene	7.96	104	113352	19.31	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149631.D
Acq On : 13 Feb 2019 9:39 pm
Operator : juntaep
Sample : IC6743-20
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 14 12:15:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	14740	16.34 ug/L	98
94) butyl acrylate	7.92	55	47744	18.37 ug/L	98
95) isopropylbenzene	8.23	105	183774	19.85 ug/L	100
96) cis-1,4-dichloro-2-butene	8.36	53	9414	18.20 ug/L	87
99) bromobenzene	8.51	156	45663	19.82 ug/L	97
100) 1,1,2,2-tetrachloroethane	8.55	83	30769	19.53 ug/L	98
101) trans-1,4-dichloro-2-buten	8.60	88	3284	15.17 ug/L	82
102) 1,2,3-trichloropropane	8.59	110	10048	19.47 ug/L	95
103) n-propylbenzene	8.57	91	215396	20.35 ug/L	98
104) 2-chlorotoluene	8.66	126	43887	19.88 ug/L	96
105) 4-chlorotoluene	8.75	126	43955	19.84 ug/L	98
106) 1,3,5-trimethylbenzene	8.72	105	156235	19.83 ug/L	99
107) tert-butylbenzene	8.97	119	143014	20.41 ug/L	97
108) 1,2,4-trimethylbenzene	9.02	105	157128	19.88 ug/L	99
109) sec-butylbenzene	9.14	105	209430	20.41 ug/L	100
110) 1,3-dichlorobenzene	9.26	146	90092	19.84 ug/L	97
111) p-isopropyltoluene	9.26	119	182950	20.14 ug/L	99
112) 1,4-dichlorobenzene	9.34	146	89785	19.85 ug/L	98
113) 1,2-dichlorobenzene	9.64	146	83186	19.72 ug/L	98
114) n-butylbenzene	9.59	92	91096	20.06 ug/L	99
115) 1,2-dibromo-3-chloropropan	10.27	157	6426	16.76 ug/L	98
116) 1,3,5-Trichlorobenzene	10.39	180	83573	19.85 ug/L	99
117) 1,2,4-trichlorobenzene	10.88	180	70549	19.61 ug/L	99
118) hexachlorobutadiene	10.97	225	46483	19.77 ug/L	98
119) naphthalene	11.08	128	124878	19.63 ug/L	99
120) 1,2,3-trichlorobenzene	11.27	180	66669	19.79 ug/L	99
121) hexachloroethane	9.80	201	20818	16.60 ug/L #	86
122) Benzyl chloride	9.46	91	50828	16.88 ug/L	99
123) 2-ethylhexyl acrylate	11.02	70	5321	3.02 ug/L	95
124) 2-methylnaphthalene	11.94	142	38140	9.77 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

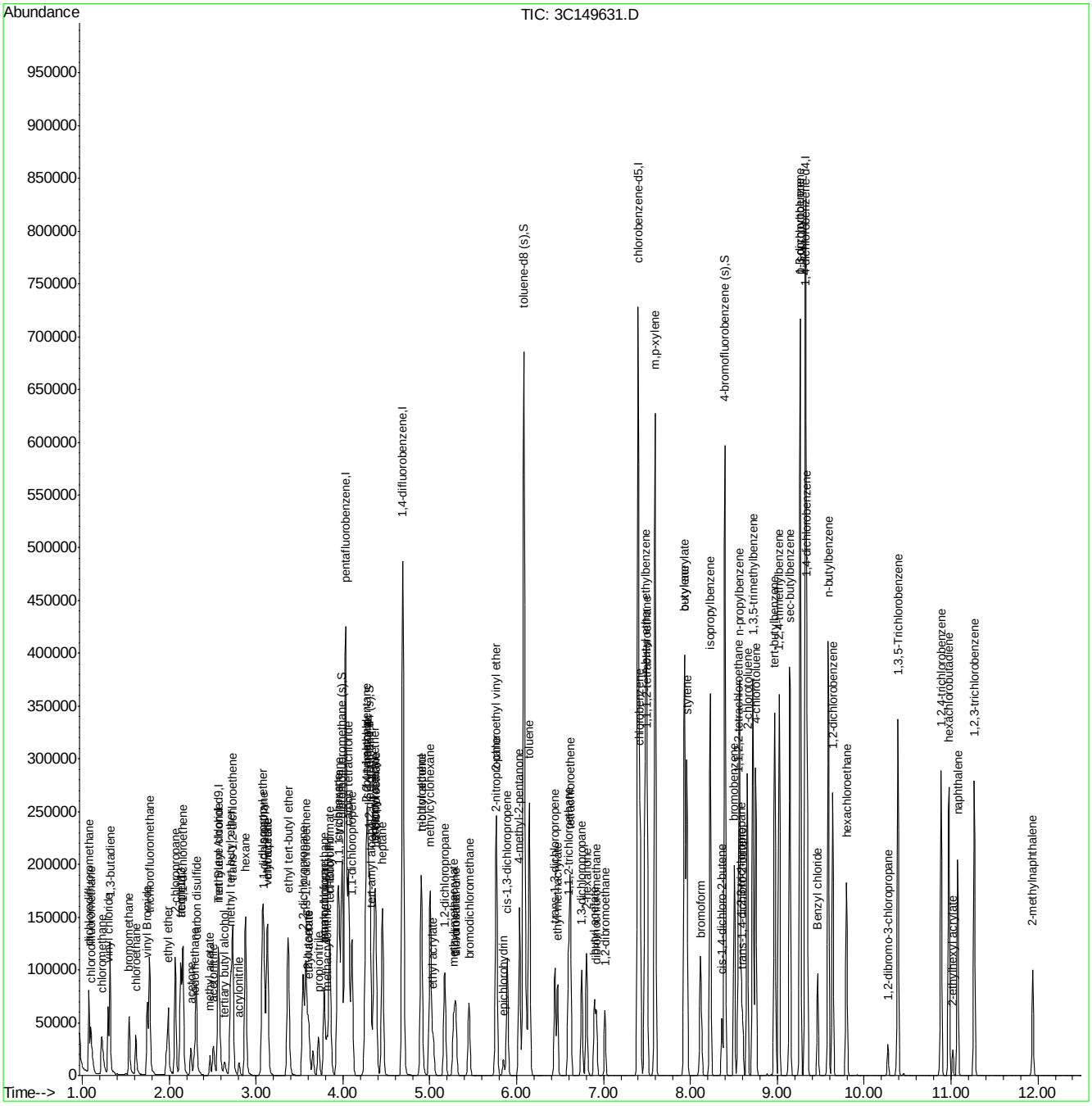
7.7.18

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149631.D
Acq On : 13 Feb 2019 9:39 pm
Operator : juntaep
Sample : IC6743-20
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 14 12:15:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



M3C6743.M Fri Feb 15 11:18:15 2019 MS3C Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149632.D
Acq On : 13 Feb 2019 10:02 pm
Operator : juntaep
Sample : ICC6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 12:16:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.58	65	59966	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	268857	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	370813	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	318032	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.32	152	175134	50.00	ug/L	0.00

System Monitoring Compounds						
45) dibromofluoromethane (s)	3.99	113	98761	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.00%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	99805	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.00%			
75) toluene-d8 (s)	6.08	98	394391	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
98) 4-bromofluorobenzene (s)	8.40	95	142762	50.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.00%			

Target Compounds						Qvalue
3) tertiary butyl alcohol	2.64	59	34892	250.00	ug/L	100
4) 1,4-dioxane	5.29	88	21307	1250.00	ug/L	100
6) chlorodifluoromethane	1.10	51	87785	50.00	ug/L	100
7) dichlorodifluoromethane	1.08	85	127951	50.00	ug/L	100
8) chloromethane	1.22	50	103403	50.00	ug/L	100
9) 1,3-butadiene	1.32	54	67537	50.00	ug/L	100
10) vinyl chloride	1.30	62	107620	50.00	ug/L	100
11) bromomethane	1.54	94	62966	50.00	ug/L	100
12) chloroethane	1.62	64	63990	50.00	ug/L	100
13) vinyl Bromide	1.75	106	93144	50.00	ug/L	100
14) trichlorofluoromethane	1.77	101	158481	50.00	ug/L	100
15) ethyl ether	1.99	74	44125	50.00	ug/L	100
16) 2-chloropropane	2.07	63	36546	50.00	ug/L	100
17) acrolein	2.14	56	9617	50.00	ug/L	100
18) freon 113	2.13	151	77299	50.00	ug/L	100
19) 1,1-dichloroethene	2.16	96	83820	50.00	ug/L	100
20) acetone	2.25	58	18583	200.00	ug/L	100
21) acetonitrile	2.51	41	67568	500.00	ug/L	100
22) iodomethane	2.29	142	87780	50.00	ug/L	100
23) carbon disulfide	2.31	76	220126	50.00	ug/L	100
24) methylene chloride	2.56	84	85075	50.00	ug/L	100
25) methyl acetate	2.47	43	43055	50.00	ug/L	100
26) methyl tert butyl ether	2.71	73	219396	50.00	ug/L	100
27) trans-1,2-dichloroethene	2.73	96	93653	50.00	ug/L	100
28) hexane	2.88	57	146491	50.00	ug/L	100
29) di-isopropyl ether	3.08	45	268940	50.00	ug/L	100
30) ethyl tert-butyl ether	3.37	59	267787	50.00	ug/L	100
31) 2-butanone	3.60	72	29653	200.00	ug/L	100
32) 1,1-dichloroethane	3.10	63	156907	50.00	ug/L	100
33) chloroprene	3.13	53	139581	50.00	ug/L	100
34) acrylonitrile	2.80	53	18609	50.00	ug/L	100
35) vinyl acetate	3.12	86	17028	50.00	ug/L	100
36) ethyl acetate	3.61	45	9681	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149632.D
Acq On : 13 Feb 2019 10:02 pm
Operator : juntaep
Sample : ICC6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 12:16:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	3.55	77	143629	50.00 ug/L	100
38) cis-1,2-dichloroethene	3.58	96	102381	50.00 ug/L	100
39) propionitrile	3.72	54	80477	500.00 ug/L	100
40) bromochloromethane	3.78	130	56512	50.00 ug/L	100
41) tetrahydrofuran	3.78	71	6950	50.00 ug/L	100
42) chloroform	3.85	83	160507	50.00 ug/L	100
43) tert-Butyl Formate	3.86	59	55274	50.00 ug/L	100
44) isobutyl alcohol	4.26	41	125660	500.00 ug/L	100
46) methacrylonitrile	3.81	67	25203	50.00 ug/L	100
47) 1,1,1-trichloroethane	3.96	97	152098	50.00 ug/L	100
48) cyclohexane	3.94	84	153487	50.00 ug/L	100
49) 1,1-dichloropropene	4.11	110	49990	50.00 ug/L	100
50) tert-amyl alcohol	4.33	59	29995	250.00 ug/L	100
51) carbon tetrachloride	4.07	119	123350	50.00 ug/L	100
54) 2,2,4-trimethylpentane	4.26	57	369079	50.00 ug/L	100
55) tert-amyl methyl ether	4.36	87	82565	50.00 ug/L	100
56) n-butyl alcohol	4.90	56	94399	2500.00 ug/L	100
57) benzene	4.28	78	361942	50.00 ug/L	100
58) heptane	4.45	57	78642	50.00 ug/L	100
59) isopropyl acetate	4.36	87	82565	50.00 ug/L	100
60) 1,2-dichloroethane	4.38	62	108654	50.00 ug/L	100
61) trichloroethene	4.90	95	99607	50.00 ug/L	100
62) ethyl acrylate	5.04	55	79953	50.00 ug/L	100
63) 2-nitropropane	5.76	41	24624	50.00 ug/L	100
64) 2-chloroethyl vinyl ether	5.76	63	237109	250.00 ug/L	100
65) methyl methacrylate	5.27	100	21376	50.00 ug/L	100
66) 1,2-dichloropropane	5.17	63	86069	50.00 ug/L	100
67) methylcyclohexane	5.01	83	176921	50.00 ug/L	100
68) dibromomethane	5.29	93	47387	50.00 ug/L	100
69) bromodichloromethane	5.45	83	113754	50.00 ug/L	100
70) epichlorohydrin	5.85	57	29668	250.00 ug/L	100
71) cis-1,3-dichloropropene	5.89	75	140522	50.00 ug/L	100
72) 4-methyl-2-pentanone	6.04	85	48254	200.00 ug/L	100
76) toluene	6.15	92	238529	50.00 ug/L	100
77) trans-1,3-dichloropropene	6.44	75	118703	50.00 ug/L	100
78) ethyl methacrylate	6.47	69	94735	50.00 ug/L	100
79) 1,1,2-trichloroethane	6.60	83	58288	50.00 ug/L	100
80) 2-hexanone	6.80	58	90614	200.00 ug/L	100
81) tetrachloroethene	6.62	166	118536	50.00 ug/L	100
82) 1,3-dichloropropane	6.75	76	119864	50.00 ug/L	100
83) butyl acetate	6.89	56	43466	50.00 ug/L	100
84) dibromochloromethane	6.92	129	76225	50.00 ug/L	100
85) 1,2-dibromoethane	7.02	107	88619	50.00 ug/L	100
86) n-butyl ether	7.47	57	389655	50.00 ug/L	100
87) chlorobenzene	7.42	112	259219	50.00 ug/L	100
88) 1,1,1,2-tetrachloroethane	7.51	131	93226	50.00 ug/L	100
89) ethylbenzene	7.49	91	457486	50.00 ug/L	100
90) m,p-xylene	7.60	106	360331	100.00 ug/L	100
91) o-xylene	7.93	91	361635	50.00 ug/L	100
92) styrene	7.96	104	298865	50.00 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149632.D
Acq On : 13 Feb 2019 10:02 pm
Operator : juntaep
Sample : ICC6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 12:16:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	45928	50.00 ug/L	100
94) butyl acrylate	7.92	55	132352	50.00 ug/L	100
95) isopropylbenzene	8.23	105	471466	50.00 ug/L	100
96) cis-1,4-dichloro-2-butene	8.36	53	26337	50.00 ug/L	100
99) bromobenzene	8.51	156	120147	50.00 ug/L	100
100) 1,1,2,2-tetrachloroethane	8.55	83	82147	50.00 ug/L	100
101) trans-1,4-dichloro-2-buten	8.60	88	11291	50.00 ug/L	100
102) 1,2,3-trichloropropane	8.59	110	26917	50.00 ug/L	100
103) n-propylbenzene	8.57	91	552084	50.00 ug/L	100
104) 2-chlorotoluene	8.66	126	115148	50.00 ug/L	100
105) 4-chlorotoluene	8.75	126	115517	50.00 ug/L	100
106) 1,3,5-trimethylbenzene	8.72	105	410786	50.00 ug/L	100
107) tert-butylbenzene	8.97	119	365432	50.00 ug/L	100
108) 1,2,4-trimethylbenzene	9.02	105	412124	50.00 ug/L	100
109) sec-butylbenzene	9.14	105	535046	50.00 ug/L	100
110) 1,3-dichlorobenzene	9.26	146	236824	50.00 ug/L	100
111) p-isopropyltoluene	9.26	119	473720	50.00 ug/L	100
112) 1,4-dichlorobenzene	9.34	146	235893	50.00 ug/L	100
113) 1,2-dichlorobenzene	9.64	146	219998	50.00 ug/L	100
114) n-butylbenzene	9.59	92	236824	50.00 ug/L	100
115) 1,2-dibromo-3-chloropropan	10.27	157	20001	50.00 ug/L	100
116) 1,3,5-Trichlorobenzene	10.39	180	219546	50.00 ug/L	100
117) 1,2,4-trichlorobenzene	10.88	180	187603	50.00 ug/L	100
118) hexachlorobutadiene	10.97	225	122641	50.00 ug/L	100
119) naphthalene	11.08	128	331729	50.00 ug/L	100
120) 1,2,3-trichlorobenzene	11.27	180	175714	50.00 ug/L	100
121) hexachloroethane	9.80	201	65397	50.00 ug/L	100
122) Benzyl chloride	9.46	91	156995	50.00 ug/L	100
123) 2-ethylhexyl acrylate	11.02	70	18355	10.00 ug/L	100
124) 2-methylnaphthalene	11.94	142	101795	25.00 ug/L	100

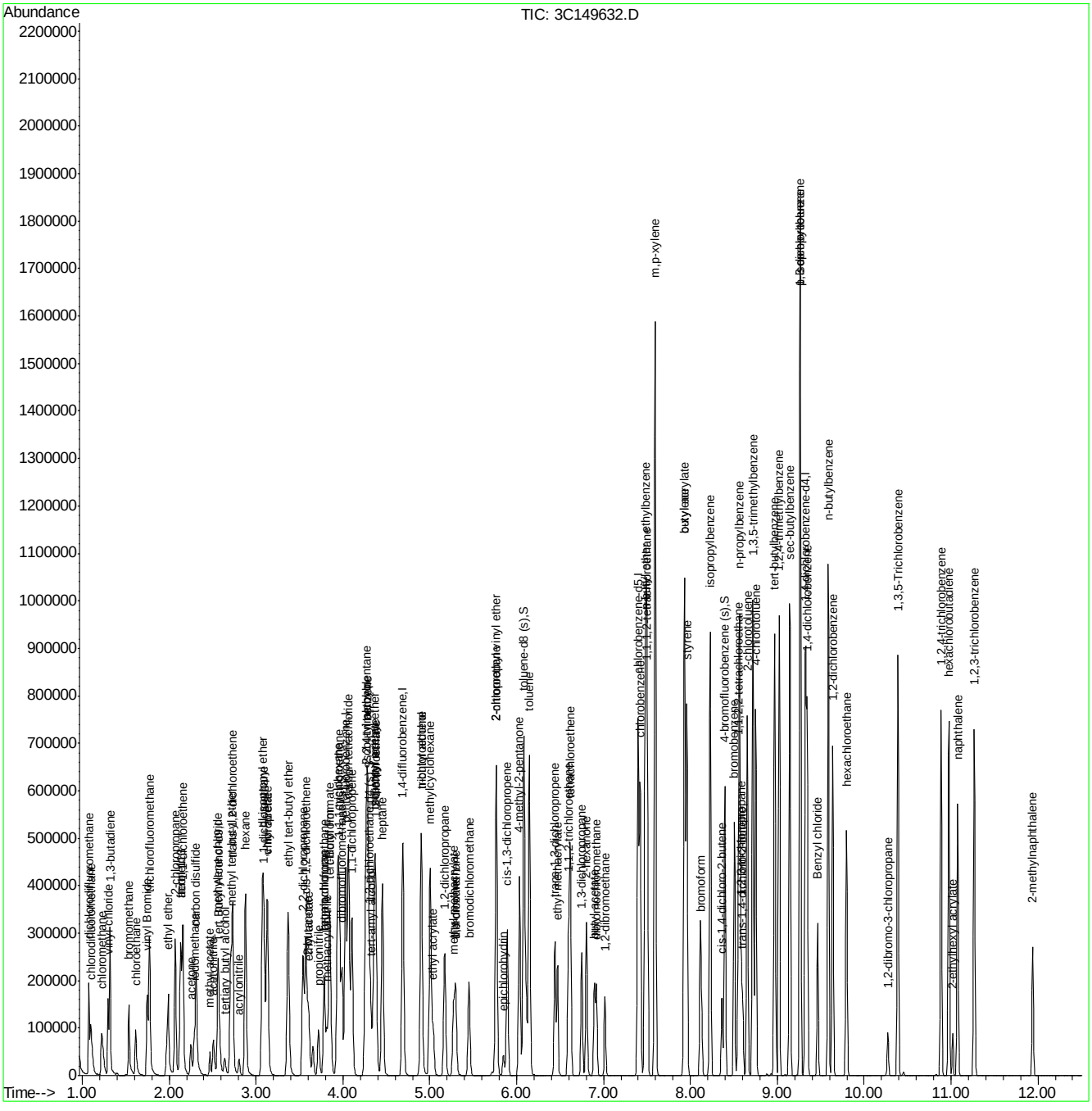
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.19
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149632.D
Acq On : 13 Feb 2019 10:02 pm
Operator : juntaep
Sample : ICC6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 12:16:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149633.D
Acq On : 13 Feb 2019 10:25 pm
Operator : juntaep
Sample : IC6743-100
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 14 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.58	65	60394	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	275607	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	373320	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	326743	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	182455	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	100426	49.60	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 99.20%						
53) 1,2-dichloroethane-d4 (s)	4.31	65	98987	49.26	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 98.52%						
75) toluene-d8 (s)	6.08	98	405055	49.98	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.96%						
98) 4-bromofluorobenzene (s)	8.40	95	147350	49.54	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 99.08%						

Target Compounds						Qvalue
3) tertiary butyl alcohol	2.64	59	67248	478.42	ug/L	98
4) 1,4-dioxane	5.29	88	42134	2454.32	ug/L	99
6) chlorodifluoromethane	1.10	51	160445	89.15	ug/L	98
7) dichlorodifluoromethane	1.08	85	235928	89.94	ug/L	98
8) chloromethane	1.22	50	188296	88.82	ug/L	99
9) 1,3-butadiene	1.32	54	123973	89.53	ug/L	99
10) vinyl chloride	1.30	62	197972	89.72	ug/L	98
11) bromomethane	1.54	94	101350	78.51	ug/L	99
12) chloroethane	1.61	64	118388	90.24	ug/L	99
13) vinyl Bromide	1.75	106	173599	90.91	ug/L	98
14) trichlorofluoromethane	1.77	101	296466	91.24	ug/L	97
15) ethyl ether	1.99	74	84923	93.87	ug/L	95
16) 2-chloropropane	2.07	63	69637	92.94	ug/L	99
17) acrolein	2.14	56	18435	93.50	ug/L	98
18) freon 113	2.13	151	148387	93.63	ug/L	100
19) 1,1-dichloroethene	2.16	96	160248	93.25	ug/L	100
20) acetone	2.25	58	35216	369.73	ug/L	88
21) acetonitrile	2.51	41	123413	890.88	ug/L	99
22) iodomethane	2.29	142	181424	100.81	ug/L	97
23) carbon disulfide	2.31	76	419428	92.94	ug/L	99
24) methylene chloride	2.56	84	159871	91.66	ug/L	98
25) methyl acetate	2.47	43	81736	92.60	ug/L	99
26) methyl tert butyl ether	2.71	73	412254	91.65	ug/L	99
27) trans-1,2-dichloroethene	2.73	96	177130	92.25	ug/L	99
28) hexane	2.88	57	274296	91.33	ug/L	99
29) di-isopropyl ether	3.08	45	502399	91.12	ug/L	100
30) ethyl tert-butyl ether	3.37	59	502895	91.60	ug/L	99
31) 2-butanone	3.60	72	55997	368.43	ug/L	96
32) 1,1-dichloroethane	3.10	63	297394	92.45	ug/L	97
33) chloroprene	3.13	53	265106	92.64	ug/L	100
34) acrylonitrile	2.80	53	34921	91.53	ug/L	98
35) vinyl acetate	3.12	86	33750	96.67	ug/L #	88
36) ethyl acetate	3.61	45	18247	91.93	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149633.D
Acq On : 13 Feb 2019 10:25 pm
Operator : juntaep
Sample : IC6743-100
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 14 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2-dichloropropane	3.54	77	274762	93.31	ug/L		98
38) cis-1,2-dichloroethene	3.58	96	195858	93.31	ug/L		98
39) propionitrile	3.72	54	151143	916.05	ug/L		99
40) bromochloromethane	3.79	130	106104	91.58	ug/L		93
41) tetrahydrofuran	3.78	71	13826	97.03	ug/L		93
42) chloroform	3.85	83	305834	92.94	ug/L		99
43) tert-Butyl Formate	3.86	59	113077	99.78	ug/L		98
44) isobutyl alcohol	4.26	41	234007	908.31	ug/L		98
46) methacrylonitrile	3.81	67	48935	94.70	ug/L		98
47) 1,1,1-trichloroethane	3.96	97	292832	93.91	ug/L		99
48) cyclohexane	3.94	84	288711	91.75	ug/L		98
49) 1,1-dichloropropene	4.11	110	93917	91.64	ug/L		99
50) tert-amyl alcohol	4.33	59	63140	513.37	ug/L	#	76
51) carbon tetrachloride	4.07	119	244227	96.57	ug/L		100
54) 2,2,4-trimethylpentane	4.26	57	701208	94.36	ug/L		98
55) tert-amyl methyl ether	4.36	87	160088	96.30	ug/L		98
56) n-butyl alcohol	4.90	56	188967	4970.87	ug/L		97
57) benzene	4.28	78	679840	93.28	ug/L		99
58) heptane	4.45	57	152499	96.31	ug/L		98
59) isopropyl acetate	4.36	87	160088	96.30	ug/L		99
60) 1,2-dichloroethane	4.38	62	208245	95.19	ug/L		98
61) trichloroethene	4.90	95	188626	94.05	ug/L		99
62) ethyl acrylate	5.04	55	153289	95.22	ug/L		99
63) 2-nitropropane	5.76	41	48586	97.99	ug/L	#	90
64) 2-chloroethyl vinyl ether	5.76	63	448344	469.54	ug/L		100
65) methyl methacrylate	5.27	100	40700	94.56	ug/L		98
66) 1,2-dichloropropane	5.17	63	163022	94.07	ug/L		99
67) methylcyclohexane	5.01	83	334901	94.01	ug/L		100
68) dibromomethane	5.29	93	91754	96.16	ug/L		96
69) bromodichloromethane	5.45	83	224669	98.09	ug/L		100
70) epichlorohydrin	5.85	57	56784	475.28	ug/L		99
71) cis-1,3-dichloropropene	5.89	75	275613	97.41	ug/L		97
72) 4-methyl-2-pentanone	6.04	85	92364	380.25	ug/L		98
76) toluene	6.15	92	460464	93.95	ug/L		98
77) trans-1,3-dichloropropene	6.44	75	232309	95.24	ug/L		99
78) ethyl methacrylate	6.47	69	181470	93.22	ug/L		99
79) 1,1,2-trichloroethane	6.60	83	112414	93.86	ug/L		96
80) 2-hexanone	6.81	58	174411	374.69	ug/L		93
81) tetrachloroethene	6.62	166	229117	94.07	ug/L		100
82) 1,3-dichloropropane	6.75	76	226603	92.00	ug/L		99
83) butyl acetate	6.89	56	83073	93.01	ug/L		93
84) dibromochloromethane	6.92	129	157399	100.49	ug/L		98
85) 1,2-dibromoethane	7.02	107	168054	92.29	ug/L		97
86) n-butyl ether	7.47	57	748347	93.47	ug/L		100
87) chlorobenzene	7.42	112	500412	93.95	ug/L		97
88) 1,1,1,2-tetrachloroethane	7.51	131	185121	96.64	ug/L		99
89) ethylbenzene	7.49	91	876490	93.24	ug/L		98
90) m,p-xylene	7.60	106	687722	185.77	ug/L		98
91) o-xylene	7.93	91	692331	93.17	ug/L		100
92) styrene	7.96	104	570486	92.90	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149633.D
Acq On : 13 Feb 2019 10:25 pm
Operator : juntaep
Sample : IC6743-100
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 14 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

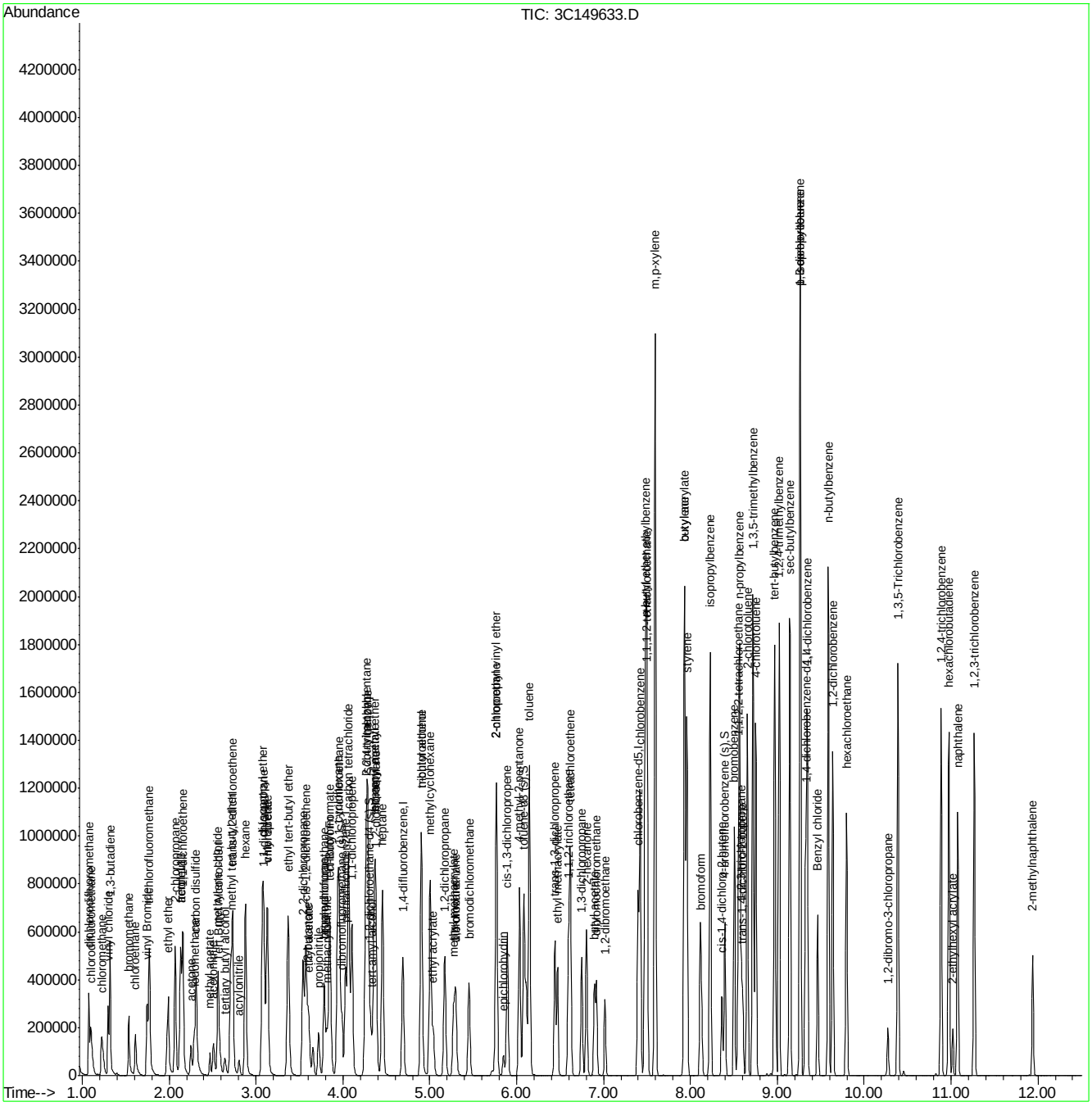
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	99246	105.16 ug/L	98
94) butyl acrylate	7.92	55	258963	95.22 ug/L	99
95) isopropylbenzene	8.23	105	898248	92.72 ug/L	99
96) cis-1,4-dichloro-2-butene	8.36	53	53468	98.80 ug/L	98
99) bromobenzene	8.51	156	232152	92.74 ug/L	98
100) 1,1,2,2-tetrachloroethane	8.55	83	161319	94.25 ug/L	97
101) trans-1,4-dichloro-2-buten	8.60	88	23007	97.79 ug/L	90
102) 1,2,3-trichloropropane	8.59	110	52668	93.91 ug/L	99
103) n-propylbenzene	8.57	91	1044640	90.81 ug/L	99
104) 2-chlorotoluene	8.66	126	223179	93.02 ug/L	100
105) 4-chlorotoluene	8.75	126	224550	93.29 ug/L	99
106) 1,3,5-trimethylbenzene	8.72	105	796332	93.04 ug/L	99
107) tert-butylbenzene	8.97	119	710023	93.25 ug/L	99
108) 1,2,4-trimethylbenzene	9.02	105	799962	93.16 ug/L	100
109) sec-butylbenzene	9.14	105	1035303	92.87 ug/L	99
110) 1,3-dichlorobenzene	9.26	146	460037	93.23 ug/L	99
111) p-isopropyltoluene	9.26	119	923668	93.58 ug/L	98
112) 1,4-dichlorobenzene	9.34	146	458306	93.24 ug/L	98
113) 1,2-dichlorobenzene	9.64	146	430167	93.84 ug/L	99
114) n-butylbenzene	9.59	92	467313	94.70 ug/L	98
115) 1,2-dibromo-3-chloropropan	10.27	157	41888	100.51 ug/L	99
116) 1,3,5-Trichlorobenzene	10.39	180	429903	93.98 ug/L	99
117) 1,2,4-trichlorobenzene	10.89	180	370252	94.72 ug/L	99
118) hexachlorobutadiene	10.97	225	246707	96.55 ug/L	99
119) naphthalene	11.08	128	655118	94.78 ug/L	99
120) 1,2,3-trichlorobenzene	11.27	180	342394	93.52 ug/L	99
121) hexachloroethane	9.80	201	143610	105.39 ug/L	94
122) Benzyl chloride	9.46	91	330384	101.00 ug/L	99
123) 2-ethylhexyl acrylate	11.02	70	39094	20.44 ug/L	99
124) 2-methylnaphthalene	11.94	142	186242	43.90 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149633.D
Acq On : 13 Feb 2019 10:25 pm
Operator : juntaep
Sample : IC6743-100
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 14 12:16:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



M3C6743.M Fri Feb 15 11:18:19 2019 MS3C Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149634.D
Acq On : 13 Feb 2019 10:48 pm
Operator : juntaep
Sample : IC6743-200
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 14 12:17:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.59	65	61507	500.00	ug/L	0.01
5) pentafluorobenzene	4.03	168	272070	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	368045	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	324670	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	189579	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	98616	49.34	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.68%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	98314	49.62	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.24%			
75) toluene-d8 (s)	6.09	98	400802	49.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%			
98) 4-bromofluorobenzene (s)	8.40	95	151536	49.03	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.06%			

Target Compounds

						Qvalue
3) tertiary butyl alcohol	2.65	59	131313	917.28	ug/L	98
4) 1,4-dioxane	5.29	88	82728	4731.74	ug/L	100
6) chlorodifluoromethane	1.10	51	288939	162.63	ug/L	97
7) dichlorodifluoromethane	1.08	85	421099	162.61	ug/L	98
8) chloromethane	1.22	50	345204	164.95	ug/L	100
9) 1,3-butadiene	1.32	54	221556	162.09	ug/L	99
10) vinyl chloride	1.30	62	361486	165.96	ug/L	99
11) bromomethane	1.54	94	183190	143.75	ug/L	98
12) chloroethane	1.61	64	227562	175.71	ug/L	98
13) vinyl Bromide	1.74	106	327399	173.67	ug/L	98
14) trichlorofluoromethane	1.77	101	560004	174.59	ug/L	100
15) ethyl ether	1.99	74	157908	176.82	ug/L	86
16) 2-chloropropane	2.07	63	122853	166.10	ug/L	96
17) acrolein	2.14	56	34469	177.09	ug/L	93
18) freon 113	2.13	151	277038	177.08	ug/L	98
19) 1,1-dichloroethene	2.16	96	295413	174.14	ug/L	96
20) acetone	2.25	58	65679	698.52	ug/L	99
21) acetonitrile	2.52	41	232982	1703.70	ug/L	100
22) iodomethane	2.29	142	338973	190.80	ug/L	98
23) carbon disulfide	2.31	76	774593	173.87	ug/L	99
24) methylene chloride	2.56	84	299861	174.15	ug/L	98
25) methyl acetate	2.47	43	153517	176.17	ug/L	98
26) methyl tert butyl ether	2.71	73	779161	175.47	ug/L	96
27) trans-1,2-dichloroethene	2.73	96	331180	174.72	ug/L	99
28) hexane	2.88	57	509325	171.79	ug/L	99
29) di-isopropyl ether	3.08	45	940037	172.70	ug/L	98
30) ethyl tert-butyl ether	3.37	59	952737	175.79	ug/L	99
31) 2-butanone	3.60	72	106886	712.40	ug/L	95
32) 1,1-dichloroethane	3.10	63	555516	174.93	ug/L	98
33) chloroprene	3.13	53	500300	177.10	ug/L	99
34) acrylonitrile	2.80	53	66331	176.12	ug/L	97
35) vinyl acetate	3.12	86	63996	185.69	ug/L #	86
36) ethyl acetate	3.61	45	34829	177.76	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149634.D
Acq On : 13 Feb 2019 10:48 pm
Operator : juntaep
Sample : IC6743-200
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 14 12:17:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	3.54	77	517381	177.98 ug/L	98
38) cis-1,2-dichloroethene	3.58	96	364957	176.13 ug/L	98
39) propionitrile	3.72	54	290956	1786.35 ug/L	94
40) bromochloromethane	3.79	130	198461	173.52 ug/L	94
41) tetrahydrofuran	3.78	71	26546	188.72 ug/L	94
42) chloroform	3.84	83	575776	177.24 ug/L	99
43) tert-Butyl Formate	3.86	59	228170	203.96 ug/L	95
44) isobutyl alcohol	4.27	41	443314	1743.11 ug/L	99
46) methacrylonitrile	3.81	67	93687	183.67 ug/L	82
47) 1,1,1-trichloroethane	3.96	97	552838	179.59 ug/L	99
48) cyclohexane	3.94	84	538034	173.20 ug/L	99
49) 1,1-dichloropropene	4.11	110	174620	172.59 ug/L	97
50) tert-amyl alcohol	4.34	59	122083	1005.51 ug/L #	31
51) carbon tetrachloride	4.07	119	463229	185.55 ug/L	99
54) 2,2,4-trimethylpentane	4.27	57	1307403	178.45 ug/L	99
55) tert-amyl methyl ether	4.37	87	303366	185.10 ug/L #	87
56) n-butyl alcohol	4.91	56	395003	10539.67 ug/L	99
57) benzene	4.28	78	1264411	175.98 ug/L	99
58) heptane	4.45	57	284998	182.56 ug/L	98
59) isopropyl acetate	4.37	87	303366	185.10 ug/L #	80
60) 1,2-dichloroethane	4.38	62	394029	182.69 ug/L	98
61) trichloroethene	4.90	95	354875	179.48 ug/L	99
62) ethyl acrylate	5.04	55	296511	186.82 ug/L	99
63) 2-nitropropane	5.75	41	95117	194.59 ug/L #	2
64) 2-chloroethyl vinyl ether	5.77	63	848884	901.77 ug/L	98
65) methyl methacrylate	5.27	100	77659	183.02 ug/L	98
66) 1,2-dichloropropane	5.17	63	304018	177.94 ug/L	99
67) methylcyclohexane	5.01	83	622295	177.19 ug/L	99
68) dibromomethane	5.30	93	175926	187.02 ug/L	94
69) bromodichloromethane	5.45	83	432949	191.73 ug/L	100
70) epichlorohydrin	5.85	57	111998	950.86 ug/L	98
71) cis-1,3-dichloropropene	5.89	75	523897	187.81 ug/L	99
72) 4-methyl-2-pentanone	6.04	85	177773	742.36 ug/L	98
76) toluene	6.15	92	864573	177.52 ug/L	98
77) trans-1,3-dichloropropene	6.44	75	450434	185.85 ug/L	100
78) ethyl methacrylate	6.47	69	349808	180.85 ug/L	99
79) 1,1,2-trichloroethane	6.60	83	213562	179.45 ug/L	95
80) 2-hexanone	6.81	58	340707	736.62 ug/L	94
81) tetrachloroethene	6.62	166	434146	179.38 ug/L	99
82) 1,3-dichloropropane	6.75	76	429951	175.68 ug/L	99
83) butyl acetate	6.89	56	164697	185.58 ug/L	97
84) dibromochloromethane	6.92	129	311472	200.13 ug/L	99
85) 1,2-dibromoethane	7.02	107	322412	178.19 ug/L	100
86) n-butyl ether	7.47	57	1437496	180.69 ug/L	99
87) chlorobenzene	7.42	112	952399	179.95 ug/L	98
88) 1,1,1,2-tetrachloroethane	7.51	131	366415	192.50 ug/L	99
89) ethylbenzene	7.49	91	1652855	176.95 ug/L	98
90) m,p-xylene	7.60	106	1297872	352.82 ug/L	91
91) o-xylene	7.94	91	1333094	180.55 ug/L	98
92) styrene	7.96	104	1107818	181.55 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149634.D
Acq On : 13 Feb 2019 10:48 pm
Operator : juntaep
Sample : IC6743-200
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 14 12:17:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration

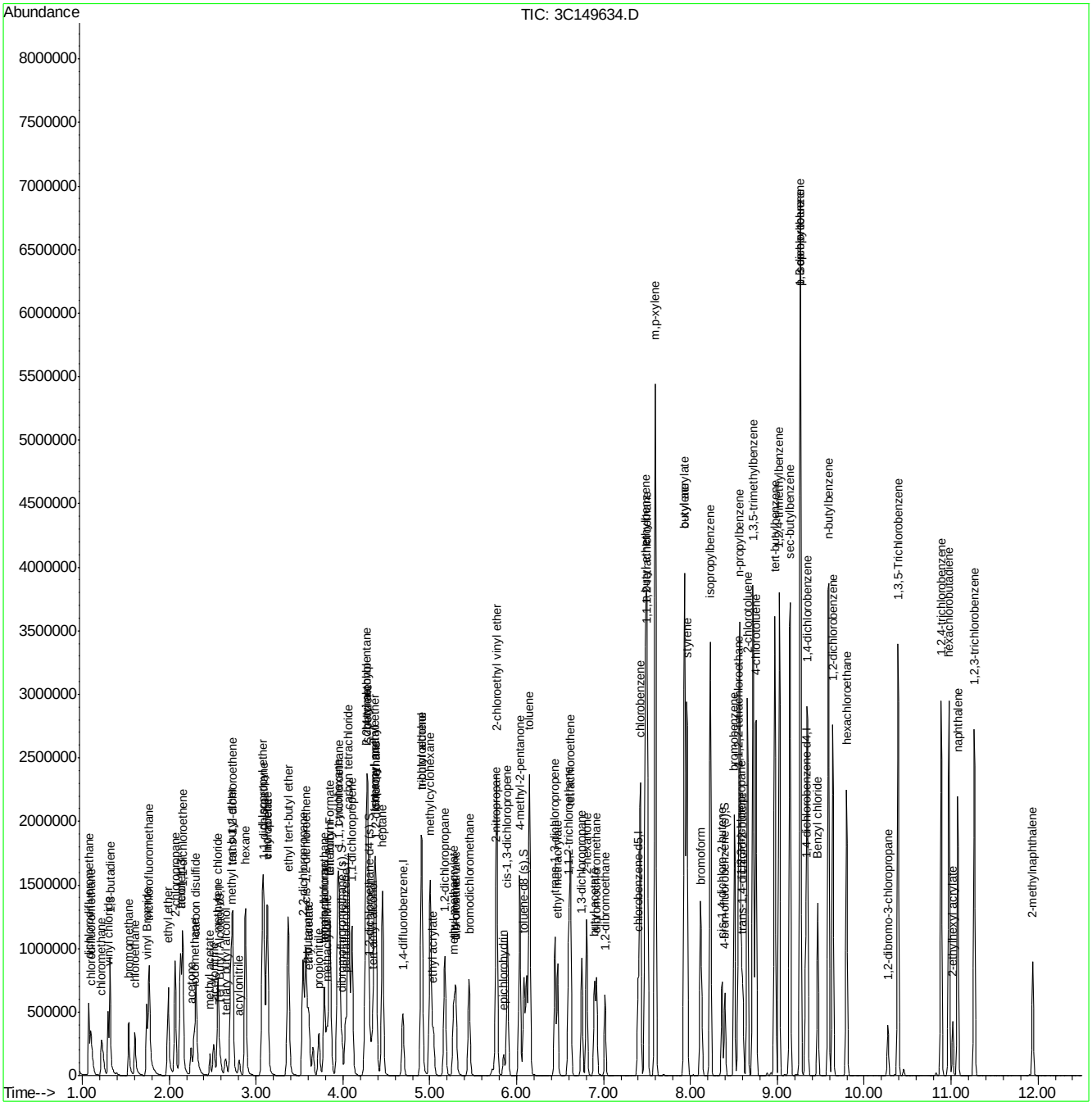
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	208139	221.96 ug/L	99
94) butyl acrylate	7.92	55	531497	196.68 ug/L	100
95) isopropylbenzene	8.23	105	1718834	178.56 ug/L	97
96) cis-1,4-dichloro-2-butene	8.36	53	111998	208.28 ug/L #	88
99) bromobenzene	8.51	156	457771	175.99 ug/L	98
100) 1,1,2,2-tetrachloroethane	8.55	83	331561	186.43 ug/L	99
101) trans-1,4-dichloro-2-buten	8.60	88	49130	200.99 ug/L	98
102) 1,2,3-trichloropropane	8.59	110	106146	182.15 ug/L	94
103) n-propylbenzene	8.57	91	1988128	166.34 ug/L	97
104) 2-chlorotoluene	8.66	126	438036	175.71 ug/L	98
105) 4-chlorotoluene	8.76	126	443432	177.31 ug/L	93
106) 1,3,5-trimethylbenzene	8.72	105	1538067	172.95 ug/L	98
107) tert-butylbenzene	8.97	119	1379043	174.31 ug/L	99
108) 1,2,4-trimethylbenzene	9.02	105	1554944	174.28 ug/L	99
109) sec-butylbenzene	9.15	105	1984321	171.31 ug/L	96
110) 1,3-dichlorobenzene	9.26	146	894986	174.56 ug/L	97
111) p-isopropyltoluene	9.27	119	1773237	172.90 ug/L	96
112) 1,4-dichlorobenzene	9.35	146	907820	177.76 ug/L	98
113) 1,2-dichlorobenzene	9.64	146	852089	178.90 ug/L	98
114) n-butylbenzene	9.59	92	920139	179.46 ug/L	94
115) 1,2-dibromo-3-chloropropan	10.27	157	86960	200.83 ug/L	99
116) 1,3,5-Trichlorobenzene	10.39	180	834116	175.49 ug/L	99
117) 1,2,4-trichlorobenzene	10.88	180	707505	174.20 ug/L	99
118) hexachlorobutadiene	10.97	225	472064	177.79 ug/L	99
119) naphthalene	11.08	128	1252498	174.40 ug/L	98
120) 1,2,3-trichlorobenzene	11.27	180	653329	171.74 ug/L	99
121) hexachloroethane	9.80	201	305354	215.67 ug/L	91
122) Benzyl chloride	9.46	91	692352	203.70 ug/L	99
123) 2-ethylhexyl acrylate	11.02	70	80368	40.45 ug/L	96
124) 2-methylnaphthalene	11.94	142	338886	76.89 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149634.D
Acq On : 13 Feb 2019 10:48 pm
Operator : juntaep
Sample : IC6743-200
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 14 12:17:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 08:04:39 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149637.D
Acq On : 13 Feb 2019 11:59 pm
Operator : juntaep
Sample : ICV6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 15 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.58	65	59225	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	264590	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	364061	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	312226	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	170861	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	3.99	113	97026	50.75	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.50%			
53) 1,2-dichloroethane-d4 (s)	4.31	65	95952	48.51	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 97.02%			
75) toluene-d8 (s)	6.08	98	387876	50.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.38%			
98) 4-bromofluorobenzene (s)	8.40	95	139779	49.76	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.52%			

Target Compounds

						Qvalue
3) tertiary butyl alcohol	2.64	59	34863	267.03	ug/L	96
4) 1,4-dioxane	5.29	88	21247	1335.25	ug/L	98
6) chlorodifluoromethane	1.10	51	83708	52.23	ug/L	98
7) dichlorodifluoromethane	1.08	85	133606	58.46	ug/L	98
8) chloromethane	1.22	50	100413	53.22	ug/L	99
9) 1,3-butadiene	1.32	54	76172	62.01	ug/L	99
10) vinyl chloride	1.30	62	106341	56.02	ug/L	99
11) bromomethane	1.54	94	67507	59.45	ug/L	99
12) chloroethane	1.62	64	63284	56.10	ug/L	99
13) vinyl Bromide	1.75	106	72736	44.65	ug/L	97
14) trichlorofluoromethane	1.77	101	157278	55.98	ug/L	100
15) ethyl ether	1.99	74	41909	52.39	ug/L	97
16) 2-chloropropane	2.07	63	34552	54.10	ug/L	93
17) acrolein	2.14	56	8122	49.37	ug/L	98
18) freon 113	2.13	151	79342	59.08	ug/L	98
19) 1,1-dichloroethene	2.16	96	76045	50.79	ug/L	100
22) iodomethane	2.29	142	75591	61.57	ug/L	99
23) carbon disulfide	2.31	76	234398	55.88	ug/L	99
24) methylene chloride	2.56	84	80606	49.24	ug/L	98
25) methyl acetate	2.47	43	39438	49.95	ug/L	97
26) methyl tert butyl ether	2.71	73	426389	106.85	ug/L	93
27) trans-1,2-dichloroethene	2.73	96	89234	52.35	ug/L	99
28) hexane	2.88	57	138834	51.47	ug/L	99
29) di-isopropyl ether	3.08	45	246440	50.87	ug/L	98
30) ethyl tert-butyl ether	3.37	59	244434	51.04	ug/L	99
31) 2-butanone	3.60	72	28417	218.87	ug/L	100
32) 1,1-dichloroethane	3.10	63	151221	54.59	ug/L	95
33) chloroprene	3.13	53	141443	57.48	ug/L	100
34) acrylonitrile	2.80	53	18073	53.69	ug/L	97
35) vinyl acetate	3.12	86	16170	53.58	ug/L #	81
36) ethyl acetate	3.61	45	8627	50.55	ug/L	87
37) 2,2-dichloropropane	3.54	77	138647	54.40	ug/L	99
38) cis-1,2-dichloroethene	3.58	96	99859	54.20	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149637.D
Acq On : 13 Feb 2019 11:59 pm
Operator : juntaep
Sample : ICV6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 15 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
39) propionitrile	3.72	54	77047	515.74	ug/L		99
40) bromochloromethane	3.78	130	54040	52.32	ug/L		96
41) tetrahydrofuran	3.78	71	6871	53.21	ug/L		91
42) chloroform	3.85	83	154911	51.71	ug/L		99
43) tert-Butyl Formate	3.86	59	38008	40.09	ug/L		93
44) isobutyl alcohol	4.26	41	119163	512.54	ug/L		97
46) methacrylonitrile	3.81	67	24117	54.39	ug/L		93
47) 1,1,1-trichloroethane	3.96	97	145407	53.78	ug/L		99
48) cyclohexane	3.94	84	154750	55.97	ug/L		99
49) 1,1-dichloropropene	4.11	110	48626	54.73	ug/L		98
50) tert-amyl alcohol	4.33	59	28867	245.27	ug/L		96
51) carbon tetrachloride	4.07	119	119527	55.94	ug/L		99
54) 2,2,4-trimethylpentane	4.26	57	348777	51.65	ug/L		99
55) tert-amyl methyl ether	4.36	87	74393	49.30	ug/L		96
56) n-butyl alcohol	4.90	56	90009	2671.64	ug/L		98
57) benzene	4.28	78	349182	52.15	ug/L		100
58) heptane	4.45	57	84054	58.68	ug/L		98
59) isopropyl acetate	4.36	87	74393	48.14	ug/L		96
60) 1,2-dichloroethane	4.38	62	104821	49.30	ug/L		99
61) trichloroethene	4.90	95	97260	53.46	ug/L		98
62) ethyl acrylate	5.04	55	75051	50.48	ug/L		97
63) 2-nitropropane	5.75	41	24303	53.63	ug/L	#	34
64) 2-chloroethyl vinyl ether	5.76	63	222659	252.84	ug/L		99
65) methyl methacrylate	5.27	100	20243	53.89	ug/L		98
66) 1,2-dichloropropane	5.17	63	81534	51.25	ug/L		98
67) methylcyclohexane	5.01	83	169230	49.82	ug/L		99
68) dibromomethane	5.30	93	46414	53.28	ug/L		95
69) bromodichloromethane	5.45	83	107576	53.18	ug/L		100
70) epichlorohydrin	5.85	57	28717	259.92	ug/L		96
71) cis-1,3-dichloropropene	5.89	75	136714	54.02	ug/L		96
72) 4-methyl-2-pentanone	6.04	85	45167	213.17	ug/L		93
76) toluene	6.15	92	233389	52.38	ug/L		99
77) trans-1,3-dichloropropene	6.44	75	107853	52.66	ug/L		99
78) ethyl methacrylate	6.47	69	85433	50.17	ug/L		98
79) 1,1,2-trichloroethane	6.60	83	56482	51.52	ug/L		96
80) 2-hexanone	6.80	58	85363	203.49	ug/L		96
82) 1,3-dichloropropane	6.75	76	116840	52.83	ug/L		99
83) butyl acetate	6.89	56	40887	51.84	ug/L		95
84) dibromochloromethane	6.92	129	76062	58.91	ug/L		99
85) 1,2-dibromoethane	7.02	107	80141	50.39	ug/L		97
86) n-butyl ether	7.47	57	366640	50.55	ug/L		99
87) chlorobenzene	7.42	112	251331	51.23	ug/L		99
88) 1,1,1,2-tetrachloroethane	7.51	131	90911	56.14	ug/L		99
89) ethylbenzene	7.49	91	450029	52.18	ug/L		100
90) m,p-xylene	7.60	106	359829	105.88	ug/L		99
91) o-xylene	7.93	91	356096	52.21	ug/L		98
92) styrene	7.96	104	288124	52.75	ug/L		99
93) bromoform	8.13	173	46903	49.96	ug/L		97
94) butyl acrylate	7.92	55	127127	53.67	ug/L		99
95) isopropylbenzene	8.23	105	466590	53.68	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149637.D
Acq On : 13 Feb 2019 11:59 pm
Operator : juntaep
Sample : ICV6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 15 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
96) cis-1,4-dichloro-2-butene	8.36	53	23586	49.13 ug/L	96
99) bromobenzene	8.51	156	114948	50.75 ug/L	96
100) 1,1,2,2-tetrachloroethane	8.55	83	76224	49.49 ug/L	100
101) trans-1,4-dichloro-2-buten	8.60	88	11776	55.41 ug/L	96
102) 1,2,3-trichloropropane	8.59	110	25244	51.52 ug/L	97
103) n-propylbenzene	8.57	91	543133	52.27 ug/L	99
104) 2-chlorotoluene	8.66	126	111998	52.71 ug/L	97
105) 4-chlorotoluene	8.75	126	113989	53.76 ug/L	98
106) 1,3,5-trimethylbenzene	8.72	105	399917	52.90 ug/L	100
107) tert-butylbenzene	8.97	119	361421	53.73 ug/L	97
108) 1,2,4-trimethylbenzene	9.02	105	409388	53.20 ug/L	95
109) sec-butylbenzene	9.14	105	534561	54.67 ug/L	100
110) 1,3-dichlorobenzene	9.26	146	228047	51.24 ug/L	99
111) p-isopropyltoluene	9.26	119	471315	54.78 ug/L	100
112) 1,4-dichlorobenzene	9.34	146	223634	49.16 ug/L	98
113) 1,2-dichlorobenzene	9.64	146	208626	50.02 ug/L	100
114) n-butylbenzene	9.59	92	233180	54.84 ug/L	99
115) 1,2-dibromo-3-chloropropan	10.27	157	18948	49.55 ug/L	97
116) 1,3,5-Trichlorobenzene	10.39	180	204501	50.56 ug/L	99
117) 1,2,4-trichlorobenzene	10.89	180	173133	49.70 ug/L	99
118) hexachlorobutadiene	10.97	225	116416	53.66 ug/L	97
119) naphthalene	11.08	128	307761	50.45 ug/L	100
120) 1,2,3-trichlorobenzene	11.27	180	158478	49.06 ug/L	99
121) hexachloroethane	9.80	201	67761	51.69 ug/L	98
122) Benzyl chloride	9.46	91	115379	42.87 ug/L	99
123) 2-ethylhexyl acrylate	11.02	70	17195	9.96 ug/L	97
124) 2-methylnaphthalene	11.94	142	98995	27.09 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149637.D
Acq On    : 13 Feb 2019  11:59 pm
Operator  : juntaep
Sample    : ICV6743-50
Misc      : MS32156,V3C6743,5.0,,,,1
ALS Vial  : 17   Sample Multiplier: 1

Quant Time: Feb 15 11:12:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title  : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration
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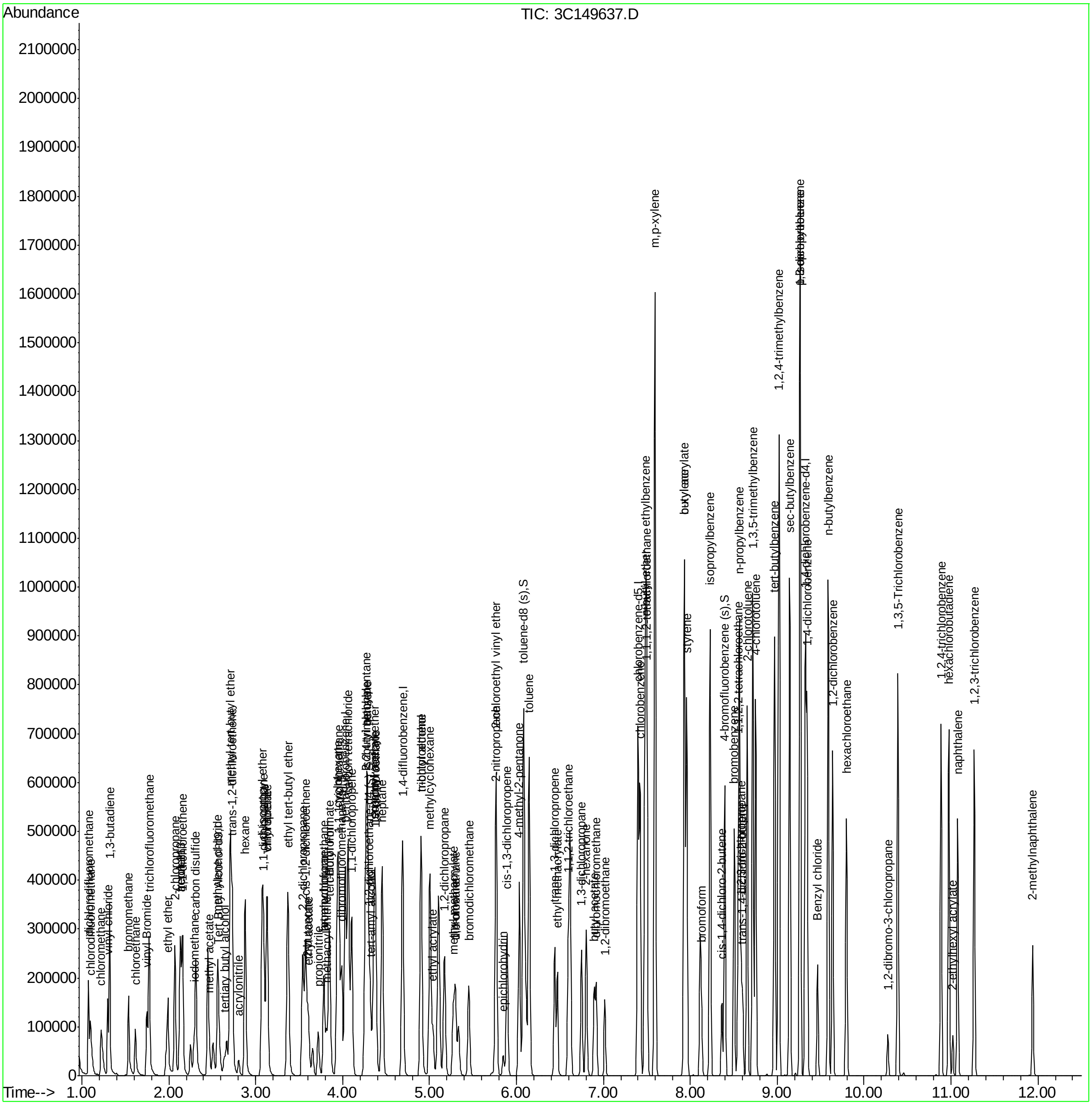


Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149638.D
Acq On : 14 Feb 2019 12:23 am
Operator : juntaep
Sample : ICV6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 14 14:11:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 14:08:59 2019
Response via : Initial Calibration

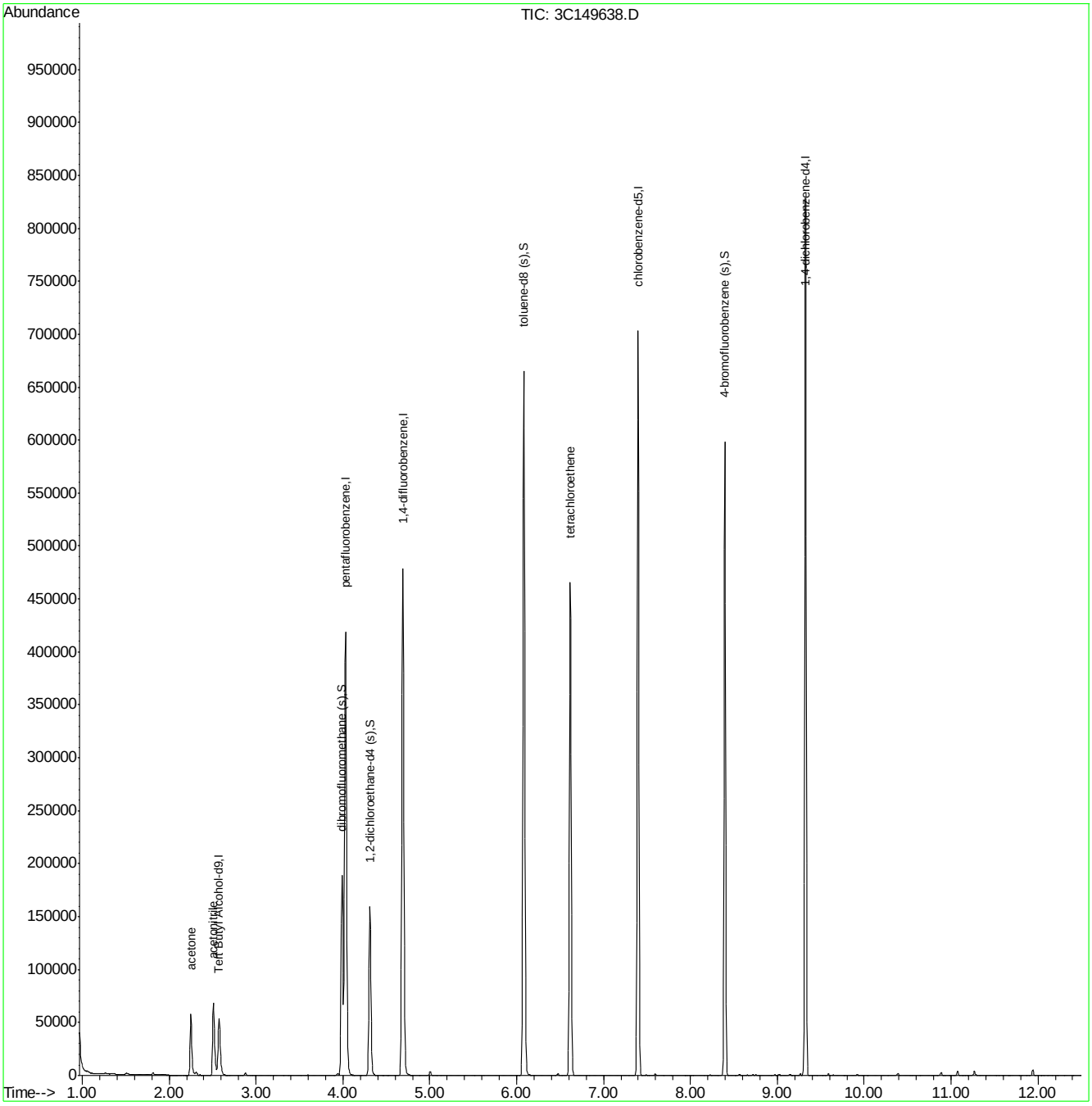
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	53978	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	262426	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	357799	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	307813	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.33	152	169030	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.99	113	93987	49.56	ug/L	0.00
Spiked Amount 50.000 Range 75 - 127 Recovery = 99.12%						
53) 1,2-dichloroethane-d4 (s)	4.31	65	94717	48.72	ug/L	0.00
Spiked Amount 50.000 Range 75 - 130 Recovery = 97.44%						
75) toluene-d8 (s)	6.08	98	380588	49.95	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.90%						
98) 4-bromofluorobenzene (s)	8.40	95	138116	49.70	ug/L	0.00
Spiked Amount 50.000 Range 79 - 127 Recovery = 99.40%						
Target Compounds						Qvalue
20) acetone	2.25	58	15773	192.91	ug/L	93
21) acetonitrile	2.51	41	60428	478.92	ug/L	97
81) tetrachloroethene	6.62	166	120064	57.61	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V3C6743\
Data File : 3C149638.D
Acq On : 14 Feb 2019 12:23 am
Operator : juntaep
Sample : ICV6743-50
Misc : MS32156,V3C6743,5.0,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 14 14:11:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Thu Feb 14 14:08:59 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151772.d
Acq On : 5 May 2019 12:35 pm
Operator : mariceld
Sample : CC6743-50 Inst : MS3C
Misc : MS34270,V3C6820,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:37:24 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.579	65	65141	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	275169	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	358902	50.00	ug/L	0.00
74) chlorobenzene-d5	7.396	117	319896	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	182529	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	99477	50.03	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.06%			
53) 1,2-dichloroethane-d4 (s)	4.311	65	105827	54.27	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 108.54%			
75) toluene-d8 (s)	6.084	98	403935	51.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.02%			
98) 4-bromofluorobenzene (s)	8.390	95	158156	52.70	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.40%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	2.642	59	33609	234.04	ug/L	94
4) 1,4-dioxane	5.294	88	21186	1210.50	ug/L	85
6) chlorodifluoromethane	1.104	51	73793	44.27	ug/L	92
7) dichlorodifluoromethane	1.078	85	100047	42.09	ug/L	98
8) chloromethane	1.225	50	75575	38.51	ug/L	98
9) 1,3-butadiene	1.319	54	58932	46.13	ug/L	98
10) vinyl chloride	1.298	62	83793	42.45	ug/L	98
11) bromomethane	1.539	94	52773	44.68	ug/L	98
12) chloroethane	1.617	64	52903	45.10	ug/L	99
13) vinyl Bromide	1.748	106	73370	43.31	ug/L	97
14) trichlorofluoromethane	1.774	101	147052	50.33	ug/L	98
15) ethyl ether	1.994	74	41588	49.99	ug/L	89
16) 2-chloropropane	2.072	63	29631	44.61	ug/L #	84
17) acrolein	2.140	56	9100	53.19	ug/L	92
18) freon 113	2.135	151	72006	51.55	ug/L	97
19) 1,1-dichloroethene	2.161	96	74667	47.95	ug/L	99
20) acetone	2.250	58	17215	200.80	ug/L	99
21) acetonitrile	2.511	41	54026	408.36	ug/L	97
22) iodomethane	2.287	142	70571	55.27	ug/L	97
23) carbon disulfide	2.313	76	199795	45.80	ug/L	97
24) methylene chloride	2.564	84	79344	46.60	ug/L	89
25) methyl acetate	2.470	43	37131	45.22	ug/L	95
26) methyl tert butyl ether	2.710	73	211635	50.99	ug/L	99
27) trans-1,2-dichloroethene	2.731	96	82335	46.44	ug/L	99
28) hexane	2.878	57	111253	39.66	ug/L	96
29) di-isopropyl ether	3.076	45	205898	40.87	ug/L	93
30) ethyl tert-butyl ether	3.364	59	238699	47.93	ug/L	98
31) 2-butanone	3.599	72	28762	213.01	ug/L #	85
32) 1,1-dichloroethane	3.092	63	132022	45.83	ug/L	99
33) chloroprene	3.134	53	124023	48.46	ug/L	97
34) acrylonitrile	2.804	53	17376	49.64	ug/L	98
35) vinyl acetate	3.123	86	16599	52.89	ug/L #	55
36) ethyl acetate	3.615	45	8281	46.80	ug/L	93
37) 2,2-dichloropropane	3.542	77	127925	48.26	ug/L	100
38) cis-1,2-dichloroethene	3.573	96	91324	47.67	ug/L	98
39) propionitrile	3.714	54	74309	478.29	ug/L	99
40) bromochloromethane	3.782	130	53598	49.90	ug/L	89
41) tetrahydrofuran	3.782	71	7507	55.90	ug/L #	73
42) chloroform	3.845	83	145919	46.84	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151772.d
Acq On : 5 May 2019 12:35 pm
Operator : mariceld
Sample : CC6743-50 Inst : MS3C
Misc : MS34270,V3C6820,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:37:24 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-Butyl Formate	3.856	59	48987	49.69	ug/L		93
44)	isobutyl alcohol	4.264	41	97524	403.34	ug/L		94
46)	methacrylonitrile	3.814	67	24397	52.91	ug/L		87
47)	1,1,1-trichloroethane	3.955	97	141452	50.31	ug/L		98
48)	cyclohexane	3.939	84	130696	45.45	ug/L		94
49)	1,1-dichloropropene	4.107	110	44564	48.23	ug/L		95
50)	tert-amyl alcohol	4.326	59	26231	214.30	ug/L		79
51)	carbon tetrachloride	4.070	119	122740	55.23	ug/L		98
54)	2,2,4-trimethylpentane	4.264	57	282986	42.51	ug/L		98
55)	tert-amyl methyl ether	4.363	87	77898	52.36	ug/L	#	89
56)	n-butyl alcohol	4.896	56	91280	2748.31	ug/L		99
57)	benzene	4.284	78	315308	47.77	ug/L		99
58)	heptane	4.452	57	54250	38.42	ug/L		93
59)	isopropyl acetate	4.363	87	77898	51.14	ug/L		95
60)	1,2-dichloroethane	4.379	62	104681	49.94	ug/L		99
61)	trichloroethene	4.902	95	89128	49.69	ug/L		97
62)	ethyl acrylate	5.038	55	77358	52.78	ug/L		97
63)	2-nitropropane	5.749	41	23963	53.64	ug/L	#	1
64)	2-chloroethyl vinyl ether	5.765	63	216240	249.08	ug/L		96
65)	methyl methacrylate	5.268	100	21209	57.27	ug/L	#	88
66)	1,2-dichloropropane	5.168	63	70253	44.79	ug/L		91
67)	methylcyclohexane	5.006	83	148981	44.49	ug/L		98
68)	dibromomethane	5.294	93	44031	51.27	ug/L		91
69)	bromodichloromethane	5.446	83	109432	54.87	ug/L		97
70)	epichlorohydrin	5.843	57	29228	268.34	ug/L		99
71)	cis-1,3-dichloropropene	5.890	75	131461	52.69	ug/L		94
72)	4-methyl-2-pentanone	6.031	85	50171	240.19	ug/L	#	77
76)	toluene	6.146	92	213529	46.77	ug/L		95
77)	trans-1,3-dichloropropene	6.434	75	114198	54.43	ug/L		99
78)	ethyl methacrylate	6.465	69	89076	51.05	ug/L		96
79)	1,1,2-trichloroethane	6.596	83	53275	47.43	ug/L		98
80)	2-hexanone	6.800	58	85855	199.75	ug/L		87
81)	tetrachloroethene	6.617	166	111897	51.66	ug/L		99
82)	1,3-dichloropropane	6.748	76	109558	48.35	ug/L		98
83)	butyl acetate	6.889	56	40407	50.00	ug/L		89
84)	dibromochloromethane	6.915	129	82320	62.23	ug/L		96
85)	1,2-dibromoethane	7.015	107	75519	46.34	ug/L		98
86)	n-butyl ether	7.470	57	301088	40.52	ug/L		99
87)	chlorobenzene	7.417	112	242834	48.31	ug/L		98
88)	1,1,1,2-tetrachloroethane	7.501	131	91267	55.01	ug/L		100
89)	ethylbenzene	7.485	91	417499	47.25	ug/L		98
90)	m,p-xylene	7.595	106	323950	93.04	ug/L		95
91)	o-xylene	7.930	91	338576	48.45	ug/L		98
92)	styrene	7.956	104	270882	48.40	ug/L		99
93)	bromoform	8.129	173	54289	56.14	ug/L		98
94)	butyl acrylate	7.925	55	119928	49.41	ug/L		98
95)	isopropylbenzene	8.228	105	426299	47.87	ug/L		99
96)	cis-1,4-dichloro-2-butene	8.359	53	26328	53.53	ug/L	#	85
99)	bromobenzene	8.505	156	113746	47.01	ug/L		95
100)	1,1,2,2-tetrachloroethane	8.547	83	77293	46.97	ug/L		99
101)	trans-1,4-dichloro-2-b...	8.605	88	12843	56.52	ug/L		89
102)	1,2,3-trichloropropane	8.584	110	26921	51.43	ug/L		93
103)	n-propylbenzene	8.563	91	487860	43.95	ug/L		98
104)	2-chlorotoluene	8.652	126	104809	46.17	ug/L		90
105)	4-chlorotoluene	8.751	126	106842	47.17	ug/L		99
106)	1,3,5-trimethylbenzene	8.714	105	376701	46.64	ug/L		98
107)	tert-butylbenzene	8.966	119	332965	46.33	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151772.d
Acq On : 5 May 2019 12:35 pm
Operator : mariceld
Sample : CC6743-50 Inst : MS3C
Misc : MS34270,V3C6820,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:37:24 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

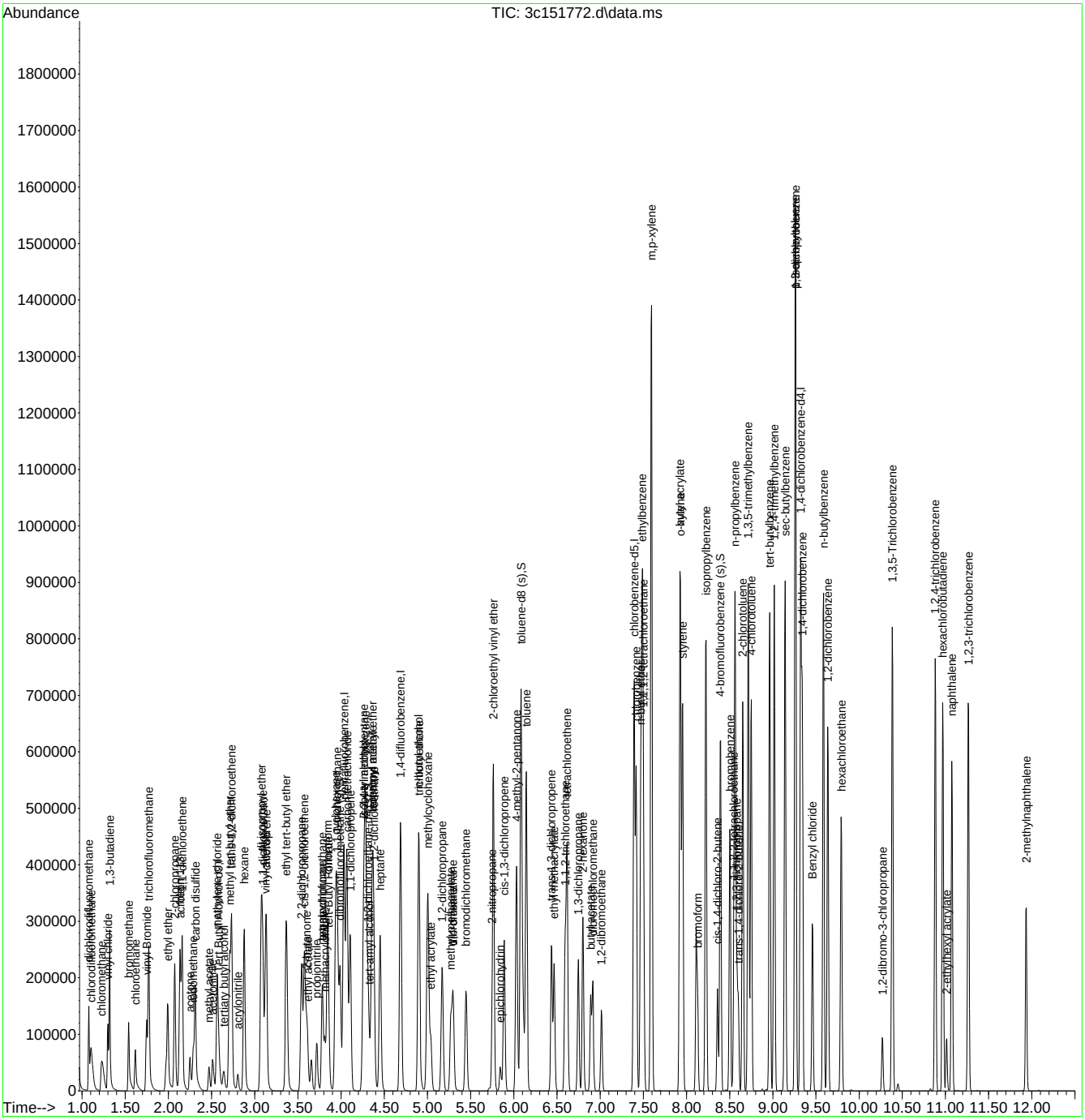
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	377933	45.98	ug/L	98
109) sec-butylbenzene	9.143	105	474838	45.46	ug/L	98
110) 1,3-dichlorobenzene	9.264	146	220758	46.44	ug/L	99
111) p-isopropyltoluene	9.258	119	431207	46.92	ug/L	99
112) 1,4-dichlorobenzene	9.342	146	223524	45.99	ug/L	99
113) 1,2-dichlorobenzene	9.635	146	207940	46.67	ug/L	98
114) n-butylbenzene	9.588	92	203473	44.80	ug/L	98
115) 1,2-dibromo-3-chloropr...	10.273	157	22951	55.98	ug/L	97
116) 1,3,5-Trichlorobenzene	10.383	180	216215	50.04	ug/L	98
117) 1,2,4-trichlorobenzene	10.880	180	190157	51.10	ug/L	99
118) hexachlorobutadiene	10.969	225	122839	53.00	ug/L	99
119) naphthalene	11.073	128	346166	53.11	ug/L	99
120) 1,2,3-trichlorobenzene	11.267	180	177896	51.55	ug/L	99
121) hexachloroethane	9.797	201	75059	53.51	ug/L #	89
122) Benzyl chloride	9.457	91	163531	56.87	ug/L	99
123) 2-ethylhexyl acrylate	11.016	70	19083	10.32	ug/L	94
124) 2-methylnaphthalene	11.936	142	119574	30.64	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-7\v3c6820\
Data File : 3c151772.d
Acq On : 5 May 2019 12:35 pm
Operator : mariceld
Sample : CC6743-50 Inst : MS3C
Misc : MS34270,V3C6820,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:37:24 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6821\
Data File : 3c151801.d
Acq On : 6 May 2019 8:55 am
Operator : PrashanS
Sample : CC6743-50 Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 08 07:45:57 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	58634	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	280510	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	358158	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	320309	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	184327	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	100522	49.59	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.18%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	103372	53.12	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.24%			
75) toluene-d8 (s)	6.084	98	408597	51.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.08%			
98) 4-bromofluorobenzene (s)	8.390	95	157352	51.92	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.84%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	2.637	59	28904	223.62	ug/L	95
4) 1,4-dioxane	5.289	88	18935	1201.95	ug/L	93
6) chlorodifluoromethane	1.104	51	68122	40.09	ug/L	92
7) dichlorodifluoromethane	1.078	85	113235	46.73	ug/L	99
8) chloromethane	1.230	50	77648	38.82	ug/L	99
9) 1,3-butadiene	1.319	54	55085	42.30	ug/L	100
10) vinyl chloride	1.298	62	84770	42.12	ug/L	99
11) bromomethane	1.539	94	53552	44.48	ug/L	97
12) chloroethane	1.617	64	51587	43.14	ug/L	99
13) vinyl Bromide	1.748	106	72765	42.13	ug/L	98
14) trichlorofluoromethane	1.774	101	142966	48.00	ug/L	99
15) ethyl ether	1.988	74	38378	45.25	ug/L	87
16) 2-chloropropane	2.072	63	27770	41.01	ug/L #	79
17) acrolein	2.140	56	8400	48.17	ug/L	93
18) freon 113	2.135	151	67503	47.41	ug/L	97
19) 1,1-dichloroethene	2.161	96	69647	43.87	ug/L	93
20) acetone	2.245	58	14912	170.63	ug/L	98
21) acetonitrile	2.511	41	48127	356.84	ug/L	98
22) iodomethane	2.286	142	67818	52.10	ug/L	99
23) carbon disulfide	2.307	76	183141	41.18	ug/L	96
24) methylene chloride	2.564	84	69981	40.32	ug/L	88
25) methyl acetate	2.470	43	31086	37.14	ug/L	91
26) methyl tert butyl ether	2.710	73	193294	45.69	ug/L	96
27) trans-1,2-dichloroethene	2.731	96	75546	41.80	ug/L	93
28) hexane	2.872	57	108233	37.84	ug/L	99
29) di-isopropyl ether	3.076	45	185229	36.06	ug/L	95
30) ethyl tert-butyl ether	3.364	59	213328	42.02	ug/L	96
31) 2-butanone	3.599	72	25496	185.23	ug/L #	86
32) 1,1-dichloroethane	3.092	63	120311	40.97	ug/L	97
33) chloroprene	3.134	53	112064	42.95	ug/L	96
34) acrylonitrile	2.804	53	15207	42.61	ug/L	93
35) vinyl acetate	3.118	86	15059	47.07	ug/L #	72
36) ethyl acetate	3.615	45	7268	40.55	ug/L	94
37) 2,2-dichloropropane	3.542	77	119525	44.24	ug/L	98
38) cis-1,2-dichloroethene	3.573	96	83623	42.82	ug/L	96
39) propionitrile	3.714	54	66426	419.41	ug/L	98
40) bromochloromethane	3.782	130	50931	46.51	ug/L	82
41) tetrahydrofuran	3.777	71	6669	48.71	ug/L #	77
42) chloroform	3.840	83	131948	41.55	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6821\
Data File : 3c151801.d
Acq On : 6 May 2019 8:55 am
Operator : PrashanS
Sample : CC6743-50 Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 08 07:45:57 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-Butyl Formate	3.850	59	41613	41.41	ug/L		93
44)	isobutyl alcohol	4.263	41	86965	352.82	ug/L		93
46)	methacrylonitrile	3.808	67	21894	46.58	ug/L		90
47)	1,1,1-trichloroethane	3.955	97	129796	45.29	ug/L		97
48)	cyclohexane	3.939	84	122345	41.74	ug/L		93
49)	1,1-dichloropropene	4.101	110	39817	42.27	ug/L		95
50)	tert-amyl alcohol	4.326	59	22794	182.68	ug/L	#	68
51)	carbon tetrachloride	4.065	119	112587	49.70	ug/L		97
54)	2,2,4-trimethylpentane	4.263	57	264493	39.81	ug/L		99
55)	tert-amyl methyl ether	4.358	87	70448	47.45	ug/L		92
56)	n-butyl alcohol	4.891	56	78021	2353.98	ug/L		100
57)	benzene	4.284	78	287561	43.66	ug/L		99
58)	heptane	4.447	57	56287	39.95	ug/L		98
59)	isopropyl acetate	4.358	87	70448	46.34	ug/L	#	80
60)	1,2-dichloroethane	4.379	62	95517	45.67	ug/L		99
61)	trichloroethene	4.902	95	81161	45.34	ug/L		96
62)	ethyl acrylate	5.038	55	65293	44.64	ug/L		97
63)	2-nitropropane	5.749	41	20820	46.70	ug/L	#	13
64)	2-chloroethyl vinyl ether	5.765	63	192508	222.20	ug/L		96
65)	methyl methacrylate	5.268	100	19110	51.71	ug/L	#	81
66)	1,2-dichloropropane	5.168	63	63119	40.33	ug/L		87
67)	methylcyclohexane	5.006	83	133647	39.99	ug/L		99
68)	dibromomethane	5.294	93	40384	47.12	ug/L		87
69)	bromodichloromethane	5.446	83	99827	50.16	ug/L		99
70)	epichlorohydrin	5.843	57	26794	246.51	ug/L		99
71)	cis-1,3-dichloropropene	5.885	75	119233	47.89	ug/L		95
72)	4-methyl-2-pentanone	6.031	85	45445	218.02	ug/L	#	77
76)	toluene	6.146	92	197279	43.16	ug/L		99
77)	trans-1,3-dichloropropene	6.434	75	105433	50.18	ug/L		99
78)	ethyl methacrylate	6.465	69	81339	46.56	ug/L		92
79)	1,1,2-trichloroethane	6.596	83	49137	43.69	ug/L		97
80)	2-hexanone	6.800	58	76895	178.67	ug/L	#	85
81)	tetrachloroethene	6.617	166	102456	47.24	ug/L		98
82)	1,3-dichloropropane	6.748	76	99112	43.68	ug/L		97
83)	butyl acetate	6.889	56	35438	43.80	ug/L		94
84)	dibromochloromethane	6.915	129	74780	56.45	ug/L		97
85)	1,2-dibromoethane	7.015	107	68446	41.95	ug/L		99
86)	n-butyl ether	7.470	57	269059	36.16	ug/L		99
87)	chlorobenzene	7.417	112	220356	43.78	ug/L		96
88)	1,1,1,2-tetrachloroethane	7.501	131	83481	50.25	ug/L		97
89)	ethylbenzene	7.491	91	379383	42.88	ug/L		100
90)	m,p-xylene	7.590	106	299669	85.95	ug/L		94
91)	o-xylene	7.930	91	310975	44.44	ug/L		96
92)	styrene	7.956	104	250977	44.79	ug/L		99
93)	bromoform	8.129	173	50938	52.75	ug/L		97
94)	butyl acrylate	7.925	55	108682	44.72	ug/L		98
95)	isopropylbenzene	8.223	105	395514	44.36	ug/L		99
96)	cis-1,4-dichloro-2-butene	8.359	53	23500	47.72	ug/L	#	86
99)	bromobenzene	8.505	156	106266	43.49	ug/L		92
100)	1,1,2,2-tetrachloroethane	8.547	83	69849	42.04	ug/L		98
101)	trans-1,4-dichloro-2-b...	8.605	88	11593	50.80	ug/L	#	86
102)	1,2,3-trichloropropane	8.584	110	23844	45.11	ug/L		97
103)	n-propylbenzene	8.563	91	448376	40.00	ug/L		99
104)	2-chlorotoluene	8.652	126	96565	42.13	ug/L		97
105)	4-chlorotoluene	8.751	126	97446	42.60	ug/L		99
106)	1,3,5-trimethylbenzene	8.714	105	352883	43.27	ug/L		96
107)	tert-butylbenzene	8.965	119	306105	42.18	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6821\
Data File : 3c151801.d
Acq On : 6 May 2019 8:55 am
Operator : PrashanS
Sample : CC6743-50 Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 08 07:45:57 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 2019
Response via : Initial Calibration

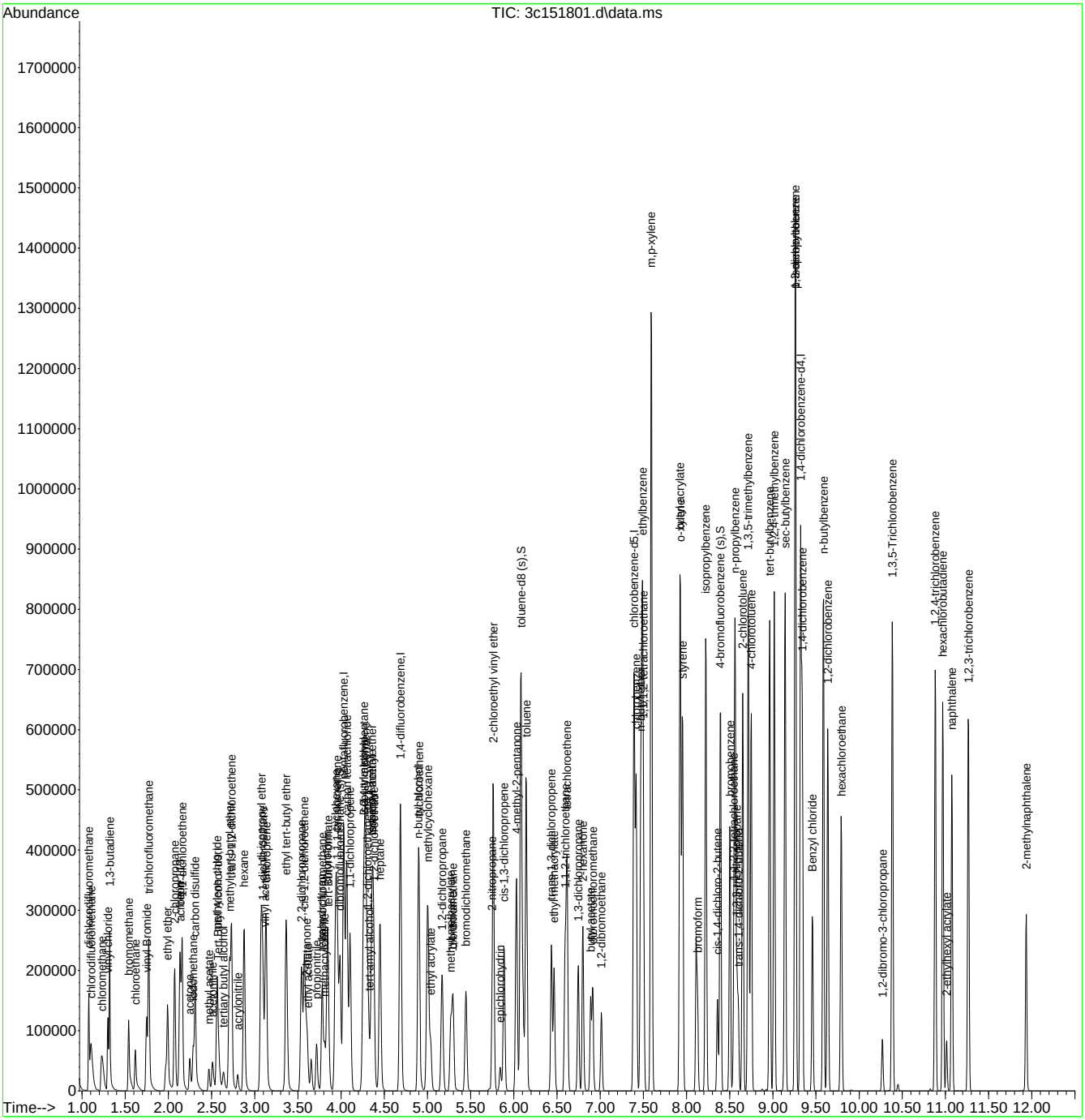
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	348879	42.03	ug/L	96
109) sec-butylbenzene	9.143	105	437552	41.48	ug/L	99
110) 1,3-dichlorobenzene	9.258	146	206509	43.01	ug/L	97
111) p-isopropyltoluene	9.258	119	399222	43.01	ug/L	97
112) 1,4-dichlorobenzene	9.342	146	207111	42.20	ug/L	100
113) 1,2-dichlorobenzene	9.635	146	192111	42.70	ug/L	98
114) n-butylbenzene	9.588	92	192151	41.89	ug/L	98
115) 1,2-dibromo-3-chloropr...	10.273	157	21235	51.41	ug/L	93
116) 1,3,5-Trichlorobenzene	10.383	180	201922	46.27	ug/L	98
117) 1,2,4-trichlorobenzene	10.880	180	178096	47.39	ug/L	100
118) hexachlorobutadiene	10.969	225	117064	50.01	ug/L	98
119) naphthalene	11.073	128	313041	47.56	ug/L	99
120) 1,2,3-trichlorobenzene	11.267	180	164804	47.29	ug/L	98
121) hexachloroethane	9.797	201	69742	49.42	ug/L	90
122) Benzyl chloride	9.457	91	157172	54.13	ug/L	100
123) 2-ethylhexyl acrylate	11.016	70	16805	9.09	ug/L	95
124) 2-methylnaphthalene	11.936	142	108837	27.61	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-7-2019\lotusa\v3c6821\
Data File : 3c151801.d
Acq On : 6 May 2019 8:55 am
Operator : PrashanS
Sample : CC6743-50 Inst : MS3C
Misc : MS34371,V3C6821,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 08 07:45:57 2019
Quant Title : Method SW846 8260C, Rxi624 20m x 0.18mm x 1.0um
QLast Update : Fri Feb 15 09:30:13 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

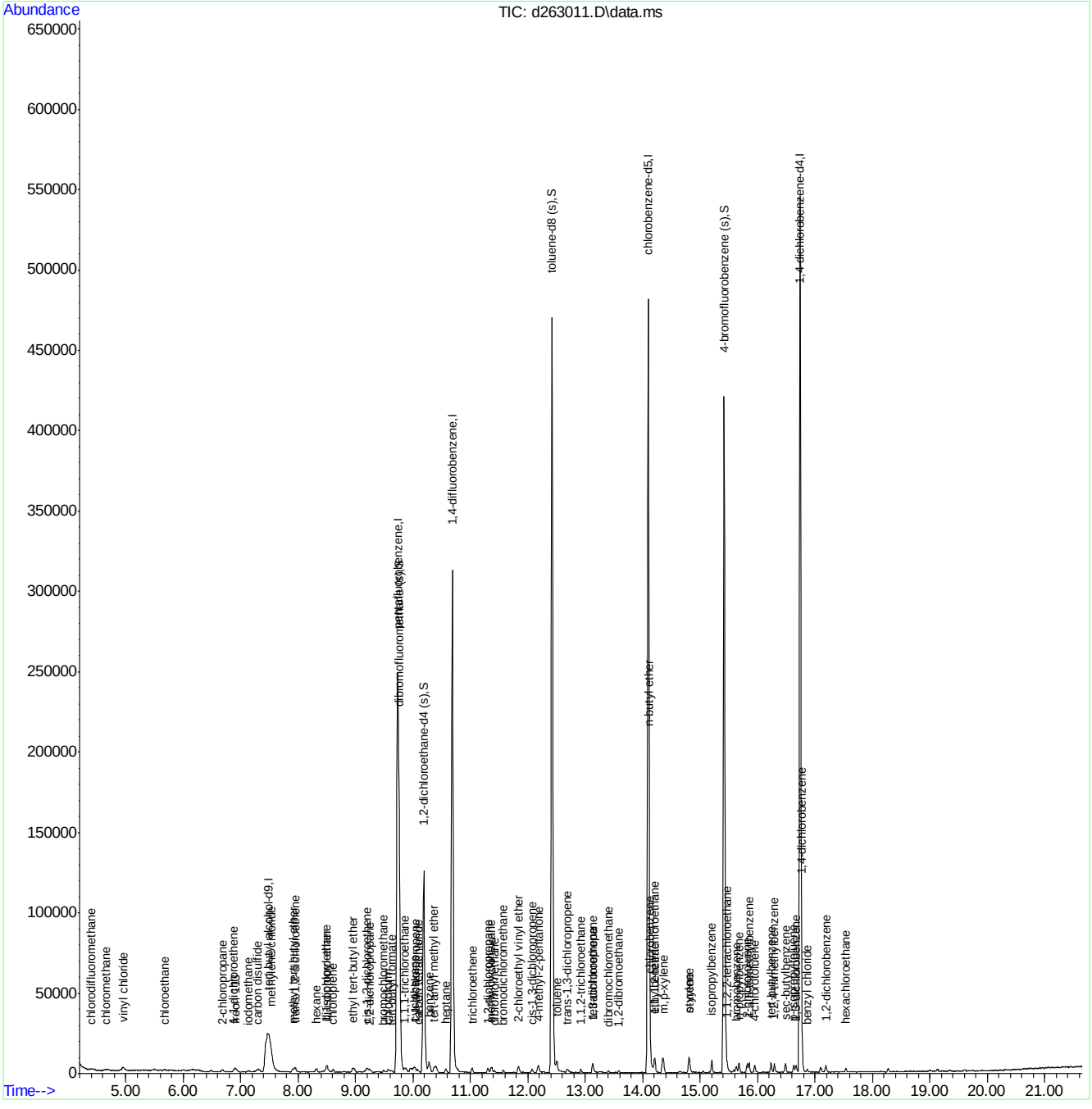
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
68) dibromomethane	11.417	93	539	0.43 ug/L	90
69) bromodichloromethane	11.574	83	1357	0.47 ug/L	96
72) cis-1,3-dichloropropene	12.071	75	1692	0.49 ug/L	98
73) 4-methyl-2-pentanone	12.181	58	1344	1.79 ug/L #	72
77) toluene	12.505	92	2892	0.52 ug/L #	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



MD10606.M Mon Mar 18 15:28:29 2019 RPT1 Page: 3

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

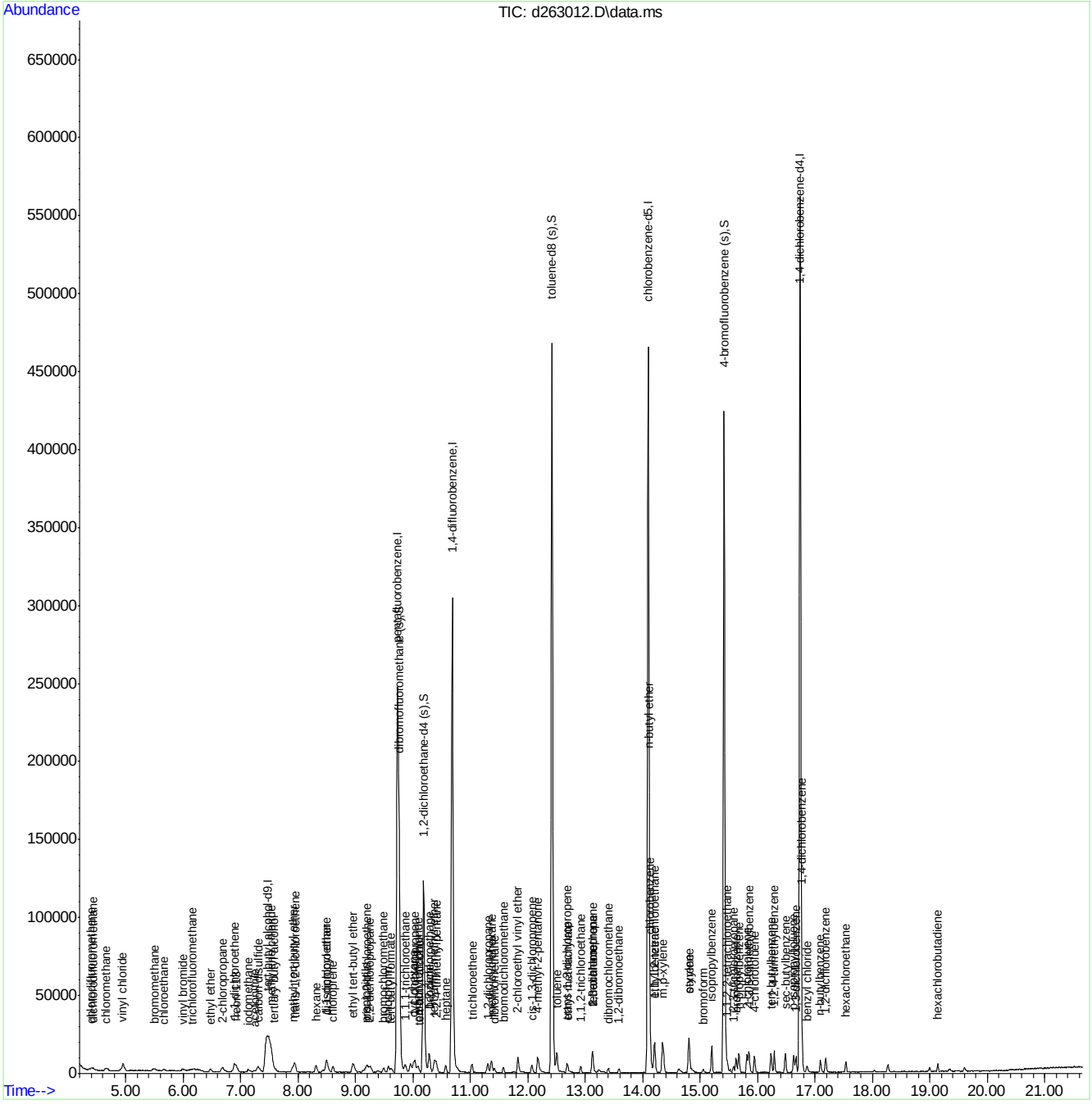
7.7.27

7

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

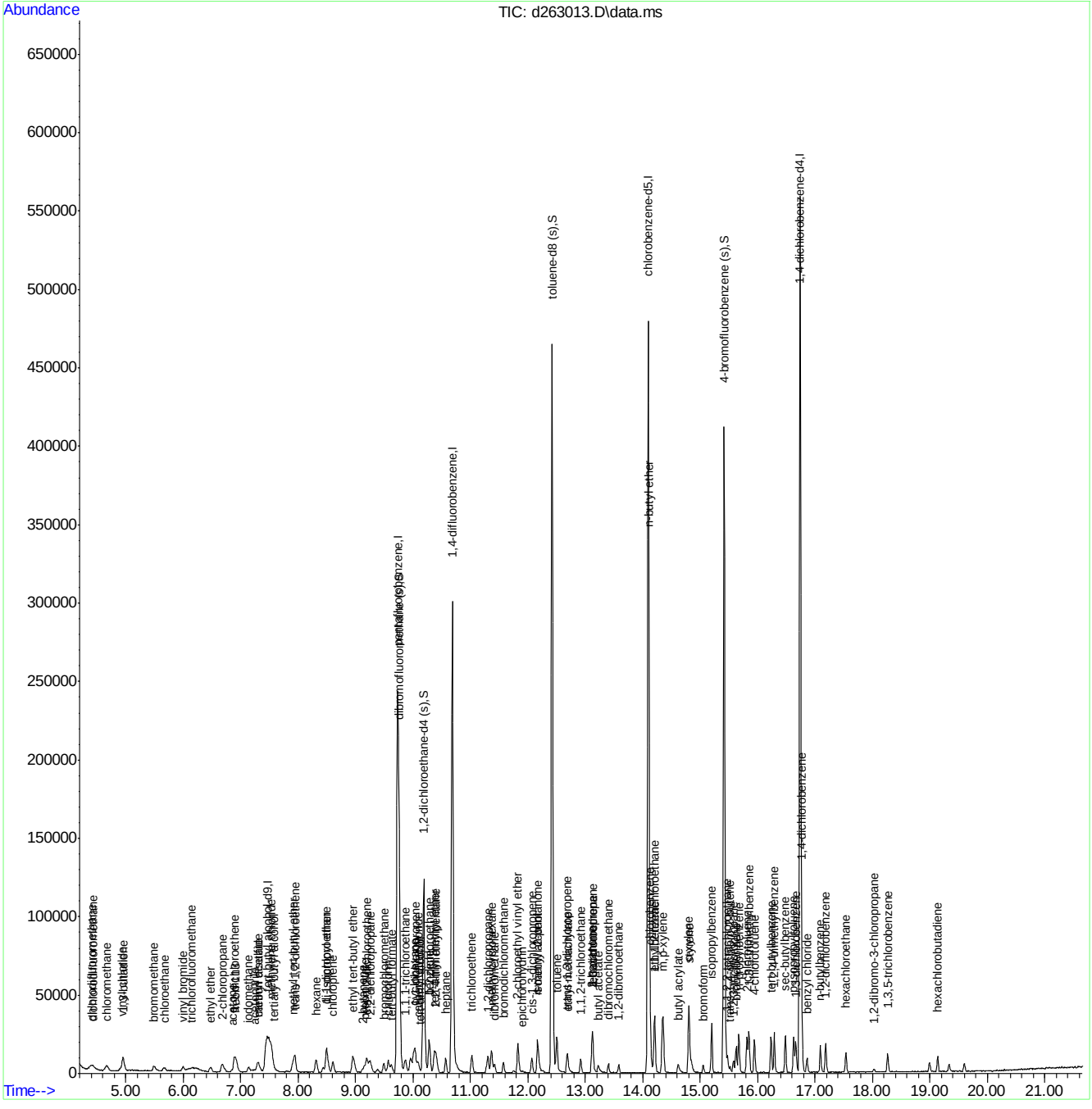
7.7.28

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

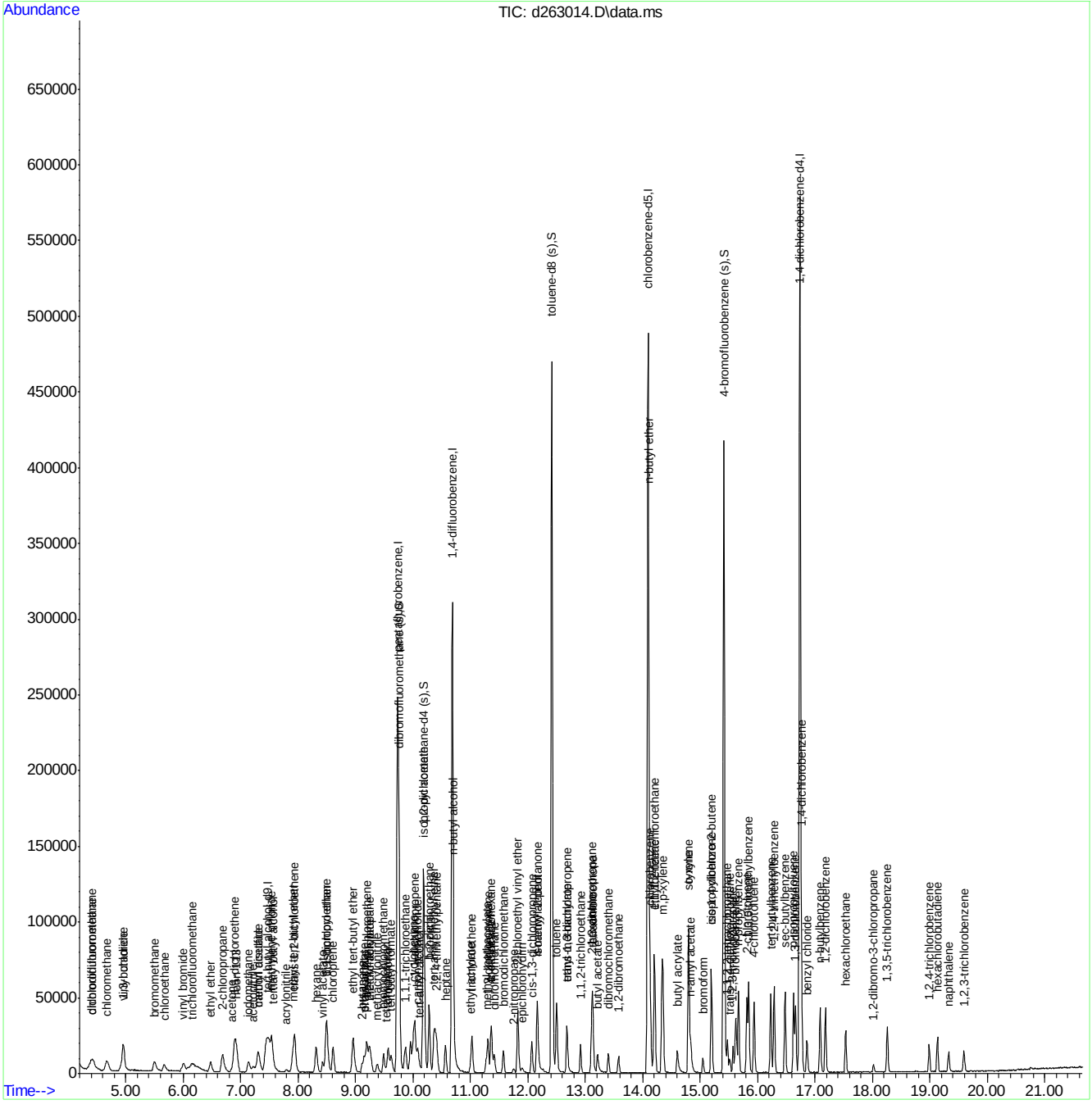
7.7.29

7

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

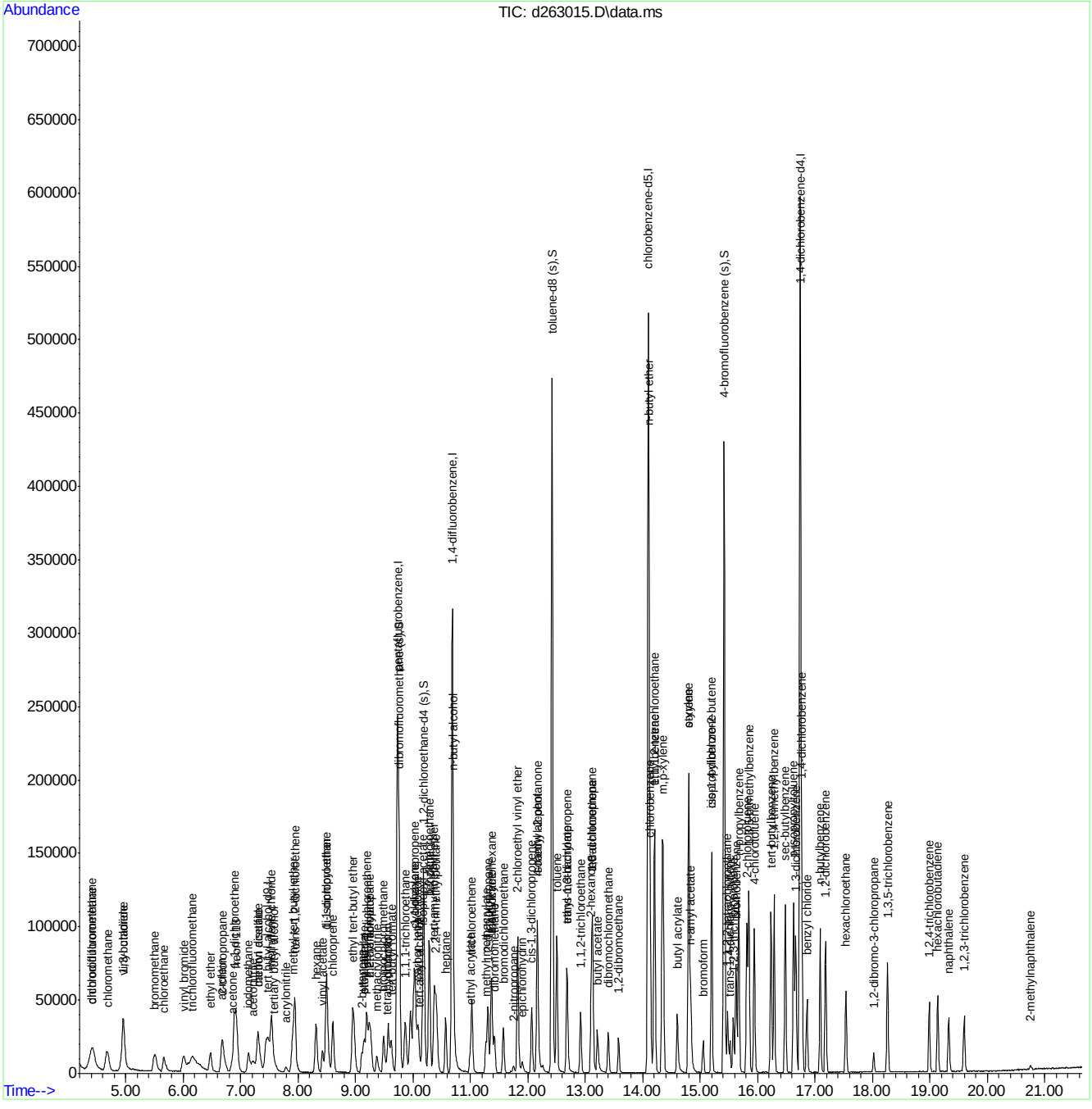
7.7.30

7

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

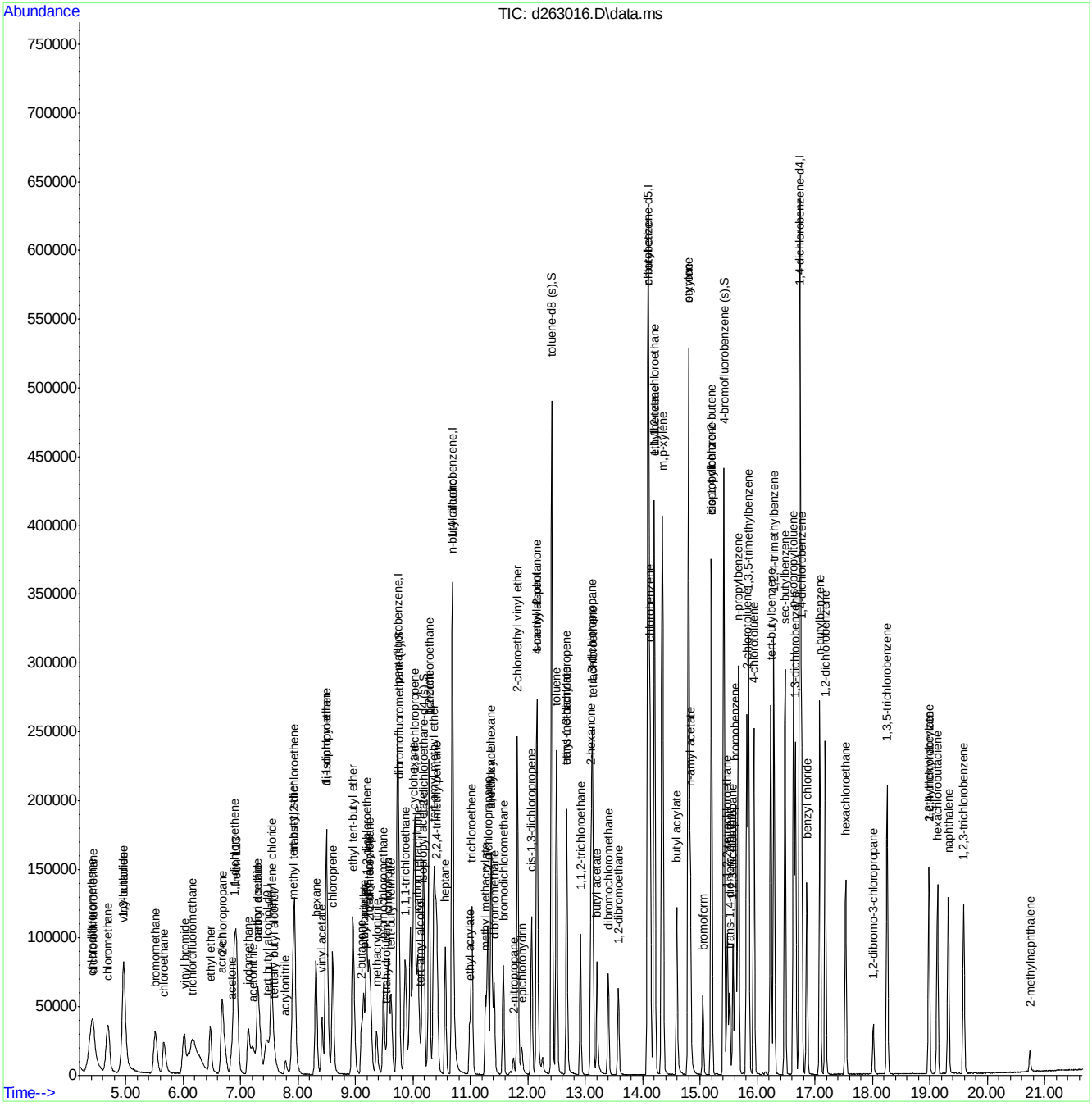
7.7.31

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

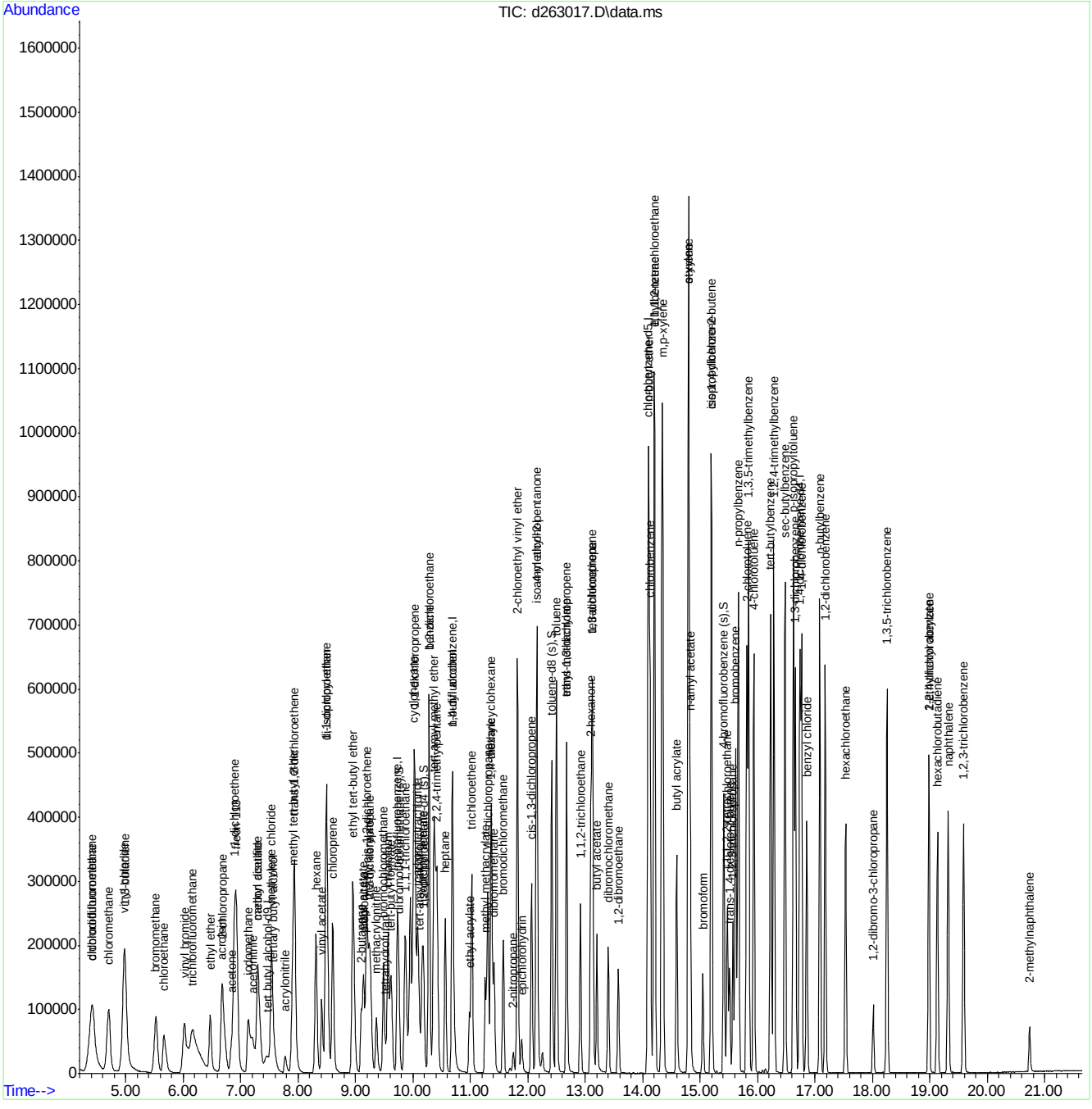
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	14.805	104	369612	50.00 ug/L	100
94) butyl acrylate	14.591	55	234870	50.00 ug/L	100
95) n-amyl acetate	14.831	70	95299	50.00 ug/L	100
96) isopropylbenzene	15.197	105	546136	50.00 ug/L	100
97) bromoform	15.051	173	79428	50.00 ug/L	100
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

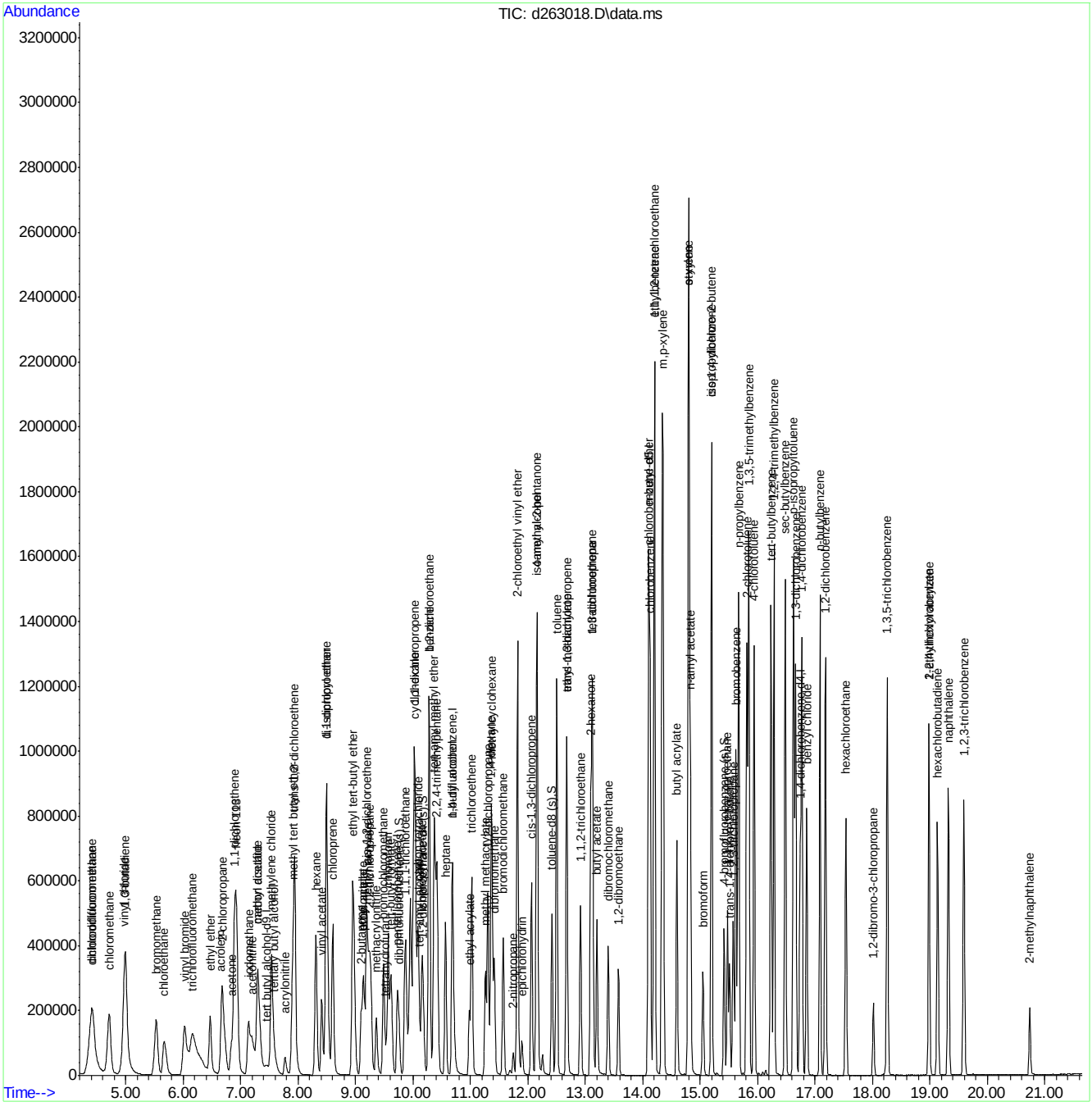
7.7.33

7

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

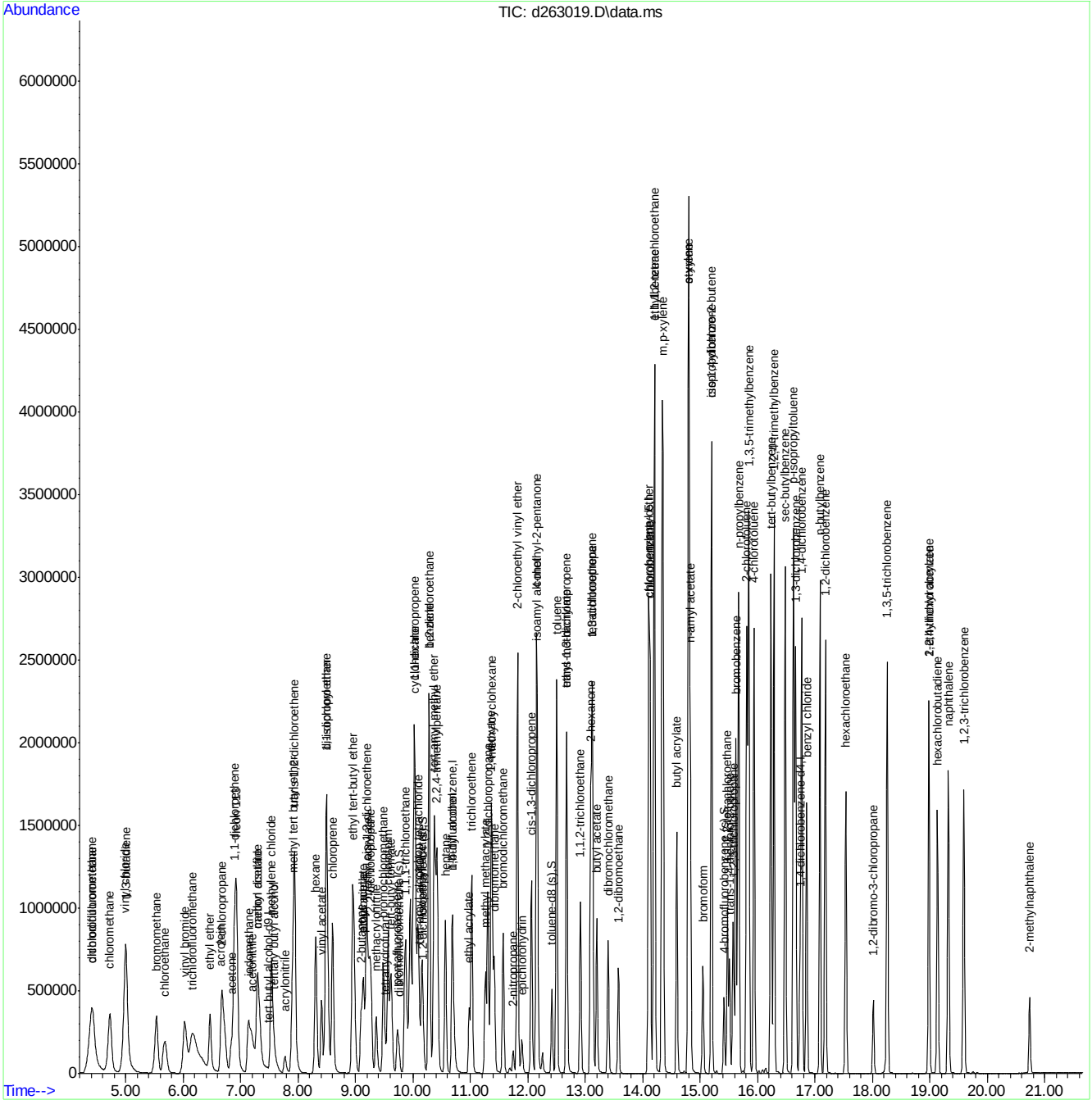
7.7.34

7

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

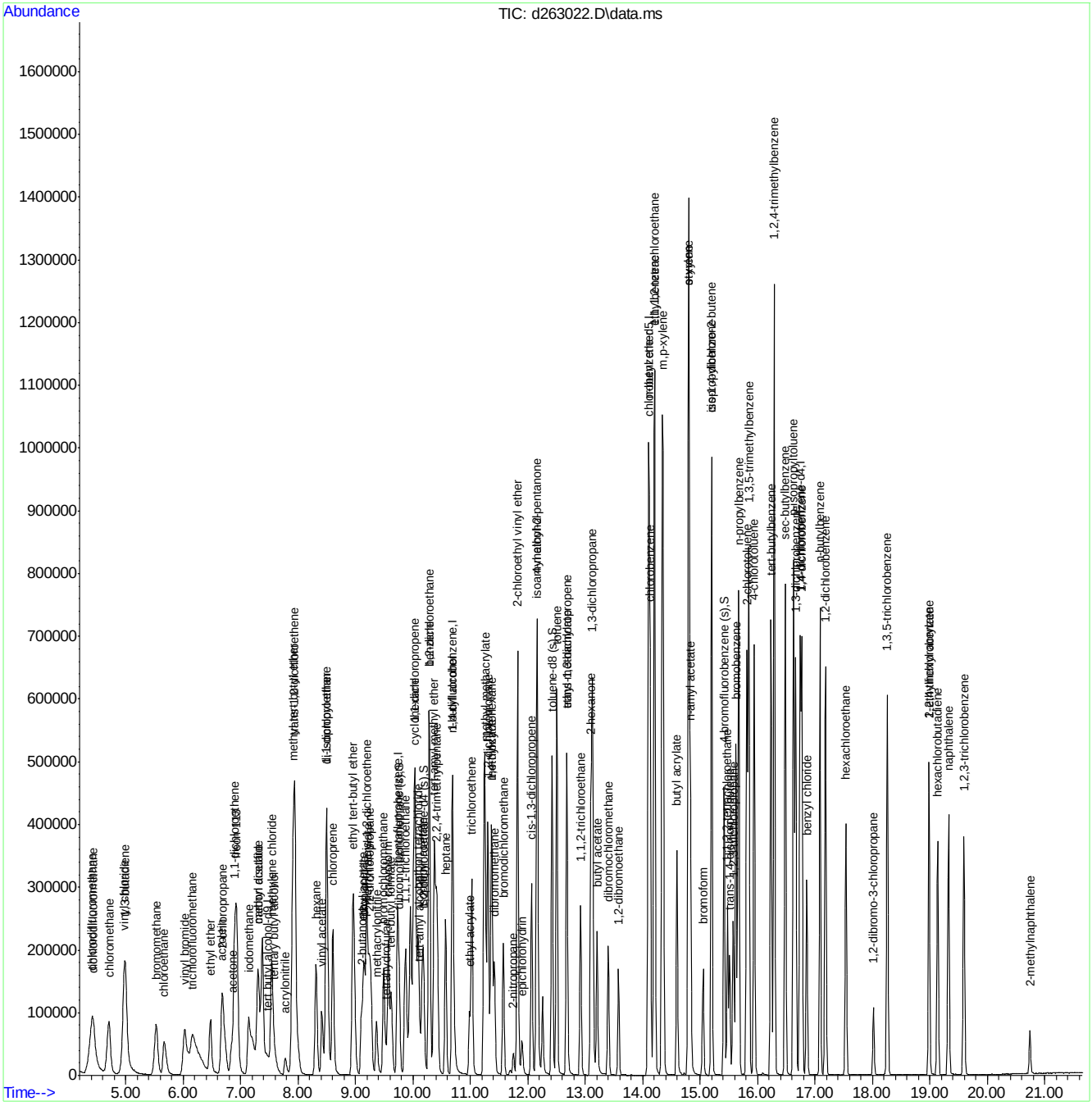
7.7.35

7

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

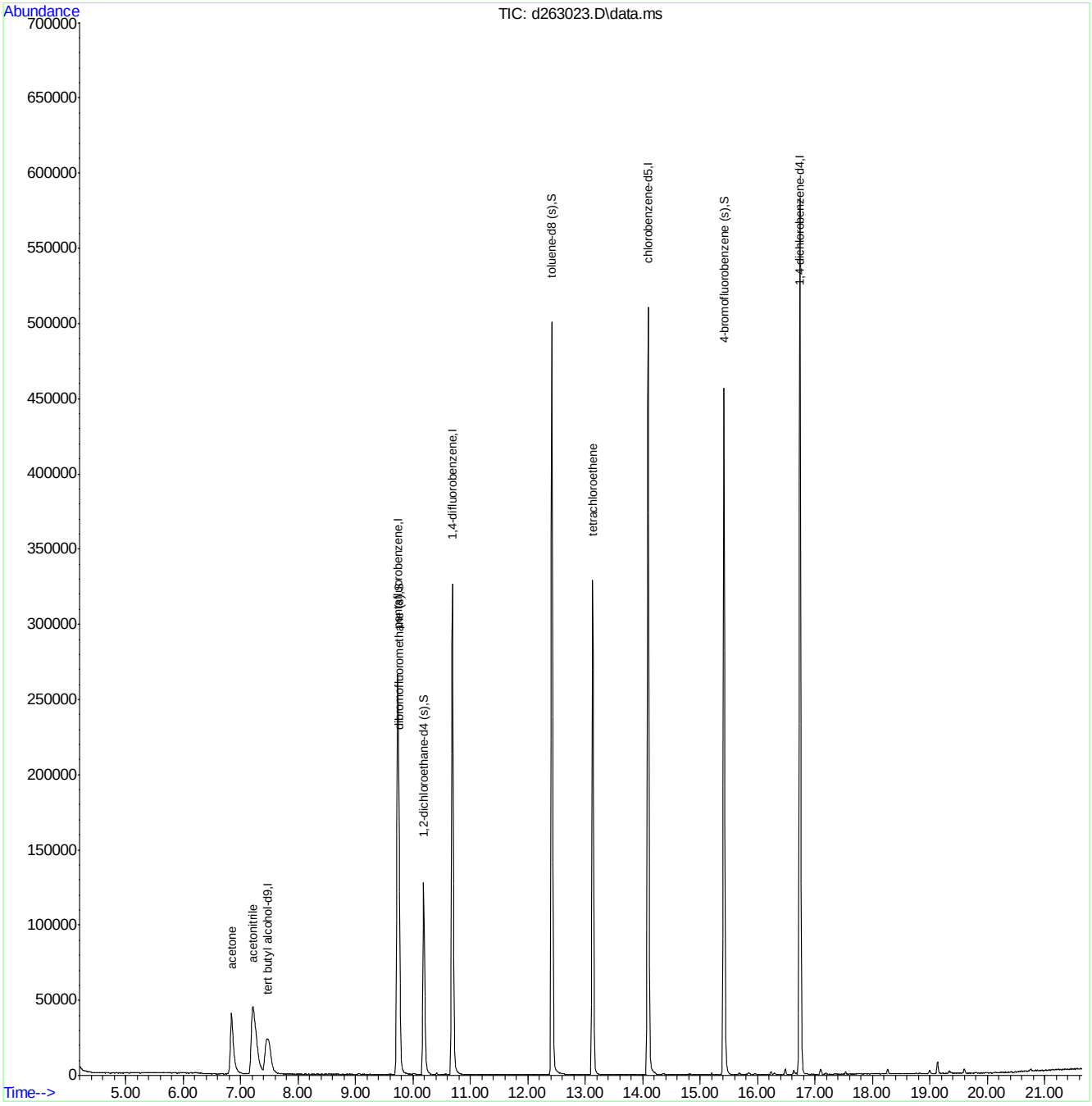
7.7.36

7

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



MD10606.M Mon Mar 18 15:28:44 2019 RPT1 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264310.d
Acq On : 7 May 2019 8:03 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:38:46 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

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.458	65	132700	500.00	ug/L	-0.01
5) pentafluorobenzene	9.718	168	269925	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.675	114	408955	50.00	ug/L	0.00
75) chlorobenzene-d5	14.085	117	406076	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.731	152	240126	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.749	113	124072	48.72	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.44%			
55) 1,2-dichloroethane-d4 (s)	10.173	65	141425	46.13	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 92.26%			
76) toluene-d8 (s)	12.411	98	482255	48.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.40%			
100) 4-bromofluorobenzene (s)	15.403	95	215842	48.51	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.02%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.584	59	32863	93.41	ug/L	96
4) 1,4-dioxane	11.350	88	16082	501.40	ug/L	93
6) chlorodifluoromethane	4.404	51	88585	15.56	ug/L	95
7) dichlorodifluoromethane	4.409	85	119025	15.19	ug/L	97
8) chloromethane	4.692	50	109945	16.76	ug/L	97
9) 1,3-butadiene	4.958	54	69988	19.25	ug/L	96
10) vinyl chloride	4.948	62	139565	20.90	ug/L	99
11) bromomethane	5.513	94	65135	18.94	ug/L	99
12) chloroethane	5.659	64	53946	18.44	ug/L	97
13) trichlorofluoromethane	6.135	101	103621	17.23	ug/L	94
14) vinyl bromide	6.004	106	71229	23.22	ug/L	98
15) ethyl ether	6.470	74	30860	20.74	ug/L	98
16) 2-chloropropane	6.674	43	108443	16.89	ug/L	93
17) acrolein	6.648	56	10901	22.07	ug/L	97
18) freon 113	6.920	151	61513	17.43	ug/L	99
19) 1,1-dichloroethene	6.883	96	60504	18.18	ug/L	94
20) acetone	6.836	58	22603	108.03	ug/L #	70
21) acetonitrile	7.197	41	87455	198.13	ug/L	96
22) iodomethane	7.124	142	95874	18.31	ug/L	98
23) carbon disulfide	7.291	76	208132	19.18	ug/L	99
24) methylene chloride	7.526	84	66618	19.05	ug/L	99
25) methyl acetate	7.286	43	36891	19.92	ug/L	93
26) methyl tert butyl ether	7.903	73	180733	17.87	ug/L	96
27) trans-1,2-dichloroethene	7.929	96	58748	19.25	ug/L	94
28) hexane	8.306	56	42149	21.46	ug/L	94
29) di-isopropyl ether	8.494	45	212313	18.36	ug/L	97
30) 2-butanone	9.090	72	22185	89.70	ug/L #	84
31) 1,1-dichloroethane	8.478	63	101910	18.76	ug/L	99
32) chloroprene	8.593	53	82593	17.02	ug/L	96
33) acrylonitrile	7.767	53	17646	20.71	ug/L	90
34) vinyl acetate	8.410	86	10640	17.86	ug/L #	90
35) ethyl tert-butyl ether	8.949	59	205263	17.99	ug/L	99
36) ethyl acetate	9.127	45	7205	20.69	ug/L #	72
37) 2,2-dichloropropane	9.242	77	103097	17.69	ug/L	94
38) cis-1,2-dichloroethene	9.184	96	63513	19.02	ug/L	100
39) propionitrile	9.137	54	77487	208.37	ug/L	97
40) methyl acrylate	9.216	85	6281	18.27	ug/L #	85
41) methacrylonitrile	9.357	67	18251	18.73	ug/L	94
42) bromochloromethane	9.477	128	29201	19.38	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264310.d
Acq On : 7 May 2019 8:03 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:38:46 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

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tetrahydrofuran	9.519	42	13528	18.65	ug/L		88
44)	chloroform	9.561	83	95451	17.39	ug/L		97
45)	tert-butyl formate	9.608	59	52941	17.11	ug/L		94
47)	1,1,1-trichloroethane	9.859	97	95923	17.04	ug/L		96
48)	cyclohexane	10.006	84	120588	21.30	ug/L		98
50)	1,1-dichloropropene	10.026	75	72534	17.44	ug/L		100
51)	carbon tetrachloride	10.074	117	81154	16.88	ug/L		99
52)	tert-amyl alcohol	10.105	73	15425	90.54	ug/L		94
53)	isopropyl acetate	10.152	87	11372	17.62	ug/L		94
56)	n-butyl alcohol	10.685	56	90807	919.32	ug/L		93
57)	2,2,4-trimethylpentane	10.403	57	203773	20.10	ug/L		97
58)	benzene	10.272	78	228976	18.44	ug/L		97
59)	tert-amyl methyl ether	10.361	73	193126	17.05	ug/L		99
60)	heptane	10.560	57	36428	21.96	ug/L		93
61)	1,2-dichloroethane	10.267	62	68074	15.59	ug/L		97
62)	ethyl acrylate	10.978	55	54217	16.97	ug/L		98
63)	trichloroethene	11.015	95	54238	17.58	ug/L		98
64)	2-chloroethyl vinyl ether	11.810	63	151810	93.86	ug/L		100
65)	methyl methacrylate	11.261	100	11733	16.80	ug/L	#	82
66)	methylcyclohexane	11.355	83	106738	20.28	ug/L		98
67)	1,2-dichloropropane	11.292	63	57663	18.71	ug/L		98
68)	dibromomethane	11.402	93	32158	18.05	ug/L		96
69)	bromodichloromethane	11.564	83	73203	17.72	ug/L		99
70)	2-nitropropane	11.737	41	10994	17.06	ug/L		96
71)	epichlorohydrin	11.888	57	28135	94.46	ug/L		99
72)	cis-1,3-dichloropropene	12.056	75	90360	18.16	ug/L		95
73)	4-methyl-2-pentanone	12.150	58	82154	76.39	ug/L		94
74)	isoamyl alcohol	12.145	70	32846	389.82	ug/L	#	90
77)	toluene	12.490	92	140496	18.09	ug/L		99
78)	ethyl methacrylate	12.673	69	64913	17.65	ug/L		98
79)	trans-1,3-dichloropropene	12.662	75	81231	18.00	ug/L		88
80)	1,1,2-trichloroethane	12.908	83	38246	18.47	ug/L		97
81)	tetrachloroethene	13.123	164	46608	18.42	ug/L		97
82)	2-hexanone	13.086	58	78039	83.32	ug/L		98
83)	1,3-dichloropropane	13.107	76	80075	17.96	ug/L		97
84)	butyl acetate	13.196	56	36077	18.92	ug/L		96
85)	dibromochloromethane	13.395	129	53464	18.32	ug/L		94
86)	1,2-dibromoethane	13.567	107	52430	16.28	ug/L		97
87)	n-butyl ether	14.101	57	261551	18.48	ug/L		99
88)	chlorobenzene	14.122	112	158237	17.59	ug/L		99
89)	1,1,1,2-tetrachloroethane	14.190	131	61239	17.72	ug/L		96
90)	ethylbenzene	14.200	91	281928	18.32	ug/L		99
91)	m,p-xylene	14.336	106	217811	37.14	ug/L		99
92)	o-xylene	14.786	91	239071	18.55	ug/L		98
93)	styrene	14.796	104	181256	18.14	ug/L		97
94)	butyl acrylate	14.587	55	107548	17.80	ug/L		97
95)	n-amyl acetate	14.822	70	46260	18.09	ug/L		99
96)	isopropylbenzene	15.189	105	300851	20.01	ug/L		98
97)	bromoform	15.042	173	38412	18.27	ug/L		97
98)	cis-1,4-dichloro-2-butene	15.194	88	23128	16.57	ug/L		96
101)	1,1,2,2-tetrachloroethane	15.466	83	69830	18.82	ug/L		100
102)	trans-1,4-dichloro-2-b...	15.502	53	16998	18.30	ug/L		99
103)	1,2,3-trichloropropane	15.565	110	19913	18.62	ug/L		97
104)	bromobenzene	15.612	156	76204	18.11	ug/L		99
105)	n-propylbenzene	15.659	91	347651	20.91	ug/L		98
106)	2-chlorotoluene	15.806	126	72148	19.36	ug/L		99
107)	4-chlorotoluene	15.931	91	214863	19.57	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264310.d
Acq On : 7 May 2019 8:03 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:38:46 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

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.837	105	265299	20.88	ug/L	99
109) tert-butylbenzene	16.224	119	206408	20.94	ug/L	99
110) 1,2,4-trimethylbenzene	16.276	105	268267	21.17	ug/L	99
111) sec-butylbenzene	16.470	105	321638	22.15	ug/L	99
112) p-isopropyltoluene	16.616	119	274420	22.70	ug/L	97
113) 1,3-dichlorobenzene	16.653	146	149112	20.28	ug/L	100
114) 1,4-dichlorobenzene	16.758	146	150656	19.76	ug/L	99
115) 1,2-dichlorobenzene	17.171	146	149808	20.33	ug/L	98
116) benzyl chloride	16.847	91	156735	21.90	ug/L	100
117) n-butylbenzene	17.077	92	133627	23.67	ug/L	97
118) 2-ethylhexyl acrylate	18.975	70	5633	4.73	ug/L	96
119) hexachloroethane	17.526	201	43466	23.16	ug/L	95
120) 1,2-dibromo-3-chloropr...	18.008	75	13090	19.68	ug/L	95
121) 1,3,5-trichlorobenzene	18.248	180	121239	24.46	ug/L	99
122) 1,2,4-trichlorobenzene	18.975	180	92685	21.45	ug/L	97
123) hexachlorobutadiene	19.127	225	48108	21.29	ug/L	96
124) naphthalene	19.315	128	188655	19.97	ug/L	99
125) 1,2,3-trichlorobenzene	19.582	180	80414	21.37	ug/L	99
126) 2-methylnaphthalene	20.733	142	21637	10.09	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

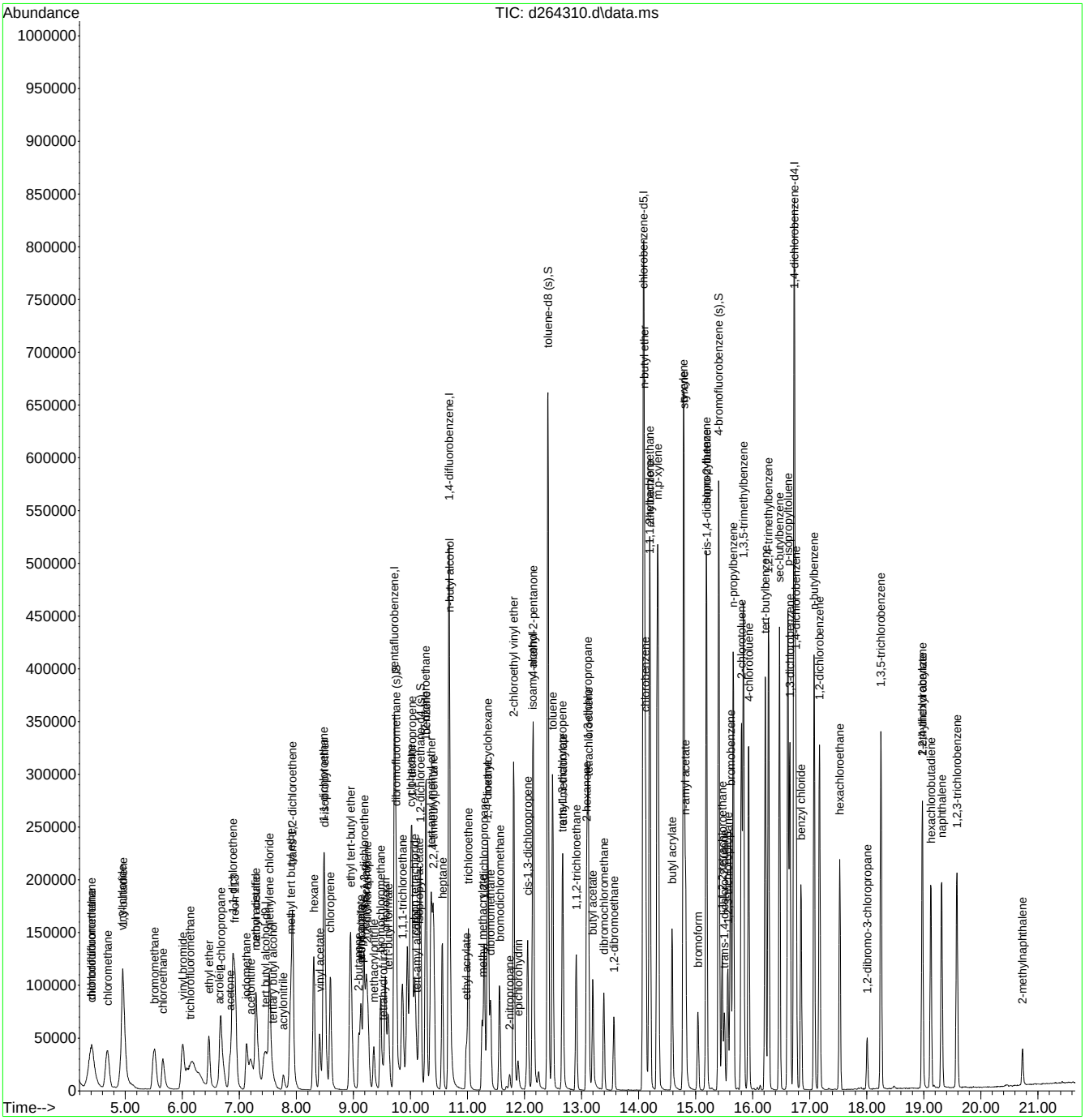
7.7.37

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-8-19\vd10652\
Data File : d264310.d
Acq On : 7 May 2019 8:03 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10652,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 07 23:38:46 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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264356.D
Acq On : 8 May 2019 6:56 am
Operator : thienn
Sample : cc10606-50
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:37:18 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	7.460	65	128871	500.00	ug/L	-0.01
5) pentafluorobenzene	9.719	168	250397	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.676	114	384549	50.00	ug/L	0.00
75) chlorobenzene-d5	14.086	117	378251	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.727	152	223810	50.00	ug/L	-0.01

System Monitoring Compounds						
46) dibromofluoromethane (s)	9.745	113	116664	49.38	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.76%			
55) 1,2-dichloroethane-d4 (s)	10.174	65	124351	43.14	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 86.28%			
76) toluene-d8 (s)	12.407	98	459033	49.77	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.54%			
100) 4-bromofluorobenzene (s)	15.404	95	199558	48.12	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.24%			

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.575	59	76486	223.87	ug/L	98
4) 1,4-dioxane	11.346	88	35479	1139.02	ug/L	98
6) chlorodifluoromethane	4.411	51	185731	35.16	ug/L	98
7) dichlorodifluoromethane	4.411	85	241837	33.27	ug/L	99
8) chloromethane	4.698	50	273031	44.85	ug/L	98
9) 1,3-butadiene	4.975	54	136436	40.46	ug/L	93
10) vinyl chloride	4.944	62	273350	44.13	ug/L	98
11) bromomethane	5.519	94	151161	47.39	ug/L	99
12) chloroethane	5.655	64	120784	44.52	ug/L	96
13) trichlorofluoromethane	6.136	101	226951	40.68	ug/L	97
14) vinyl bromide	6.011	106	154063	54.15	ug/L	96
15) ethyl ether	6.466	74	71556	51.83	ug/L	92
16) 2-chloropropane	6.675	43	250811	42.12	ug/L	94
17) acrolein	6.644	56	25980	56.69	ug/L	93
18) freon 113	6.921	151	137660	42.04	ug/L	97
19) 1,1-dichloroethene	6.879	96	139571	45.20	ug/L	94
20) acetone	6.832	58	53757	276.97	ug/L #	81
21) acetonitrile	7.198	41	200918	490.68	ug/L	97
22) iodomethane	7.125	142	218310	44.95	ug/L	97
23) carbon disulfide	7.292	76	455877	45.29	ug/L	99
24) methylene chloride	7.528	84	153346	47.26	ug/L	99
25) methyl acetate	7.287	43	83169	48.40	ug/L	96
26) methyl tert butyl ether	7.904	73	424869	45.29	ug/L	97
27) trans-1,2-dichloroethene	7.930	96	131820	46.56	ug/L	94
28) hexane	8.302	56	93497	51.31	ug/L	98
29) di-isopropyl ether	8.490	45	497249	46.36	ug/L	97
30) 2-butanone	9.097	72	51361	223.86	ug/L	90
31) 1,1-dichloroethane	8.480	63	230379	45.71	ug/L	99
32) chloroprene	8.595	53	194130	43.13	ug/L	95
33) acrylonitrile	7.768	53	42610	53.90	ug/L	93
34) vinyl acetate	8.406	86	26086	47.21	ug/L #	87
35) ethyl tert-butyl ether	8.950	59	485607	45.89	ug/L	98
36) ethyl acetate	9.128	45	17205	53.25	ug/L #	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264356.D
Acq On : 8 May 2019 6:56 am
Operator : thienn
Sample : cc10606-50
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:37:18 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)
37) 2,2-dichloropropane	9.238	77	235450	43.55	ug/L		94
38) cis-1,2-dichloroethene	9.186	96	145542	46.98	ug/L		97
39) propionitrile	9.133	54	179567	520.53	ug/L		99
40) methyl acrylate	9.217	85	15651	46.22	ug/L	#	88
41) methacrylonitrile	9.353	67	45371	50.20	ug/L		97
42) bromochloromethane	9.479	128	67144	48.04	ug/L		98
43) tetrahydrofuran	9.515	42	32334	48.06	ug/L		98
44) chloroform	9.557	83	218014	42.82	ug/L		97
45) tert-butyl formate	9.609	59	131339	45.75	ug/L		96
47) 1,1,1-trichloroethane	9.860	97	221582	42.43	ug/L		96
48) cyclohexane	10.007	84	263990	50.26	ug/L		96
50) 1,1-dichloropropene	10.028	75	165278	42.84	ug/L		98
51) carbon tetrachloride	10.075	117	184298	41.33	ug/L		98
52) tert-amyl alcohol	10.106	73	36334	229.91	ug/L		97
53) isopropyl acetate	10.153	87	28358	47.36	ug/L	#	88
56) n-butyl alcohol	10.681	56	202855	2184.02	ug/L		96
57) 2,2,4-trimethylpentane	10.404	57	483351	50.70	ug/L		96
58) benzene	10.274	78	523703	44.85	ug/L		98
59) tert-amyl methyl ether	10.362	73	462457	43.41	ug/L		99
60) heptane	10.556	57	79345	50.86	ug/L		96
61) 1,2-dichloroethane	10.268	62	152990	37.26	ug/L		96
62) ethyl acrylate	10.974	55	135210	45.00	ug/L		99
63) trichloroethene	11.011	95	126420	43.58	ug/L		96
64) 2-chloroethyl vinyl ether	11.811	63	366842	241.20	ug/L		99
65) methyl methacrylate	11.252	100	31022	47.23	ug/L		87
66) methylcyclohexane	11.356	83	246138	49.73	ug/L		97
67) 1,2-dichloropropane	11.293	63	134895	46.54	ug/L		98
68) dibromomethane	11.403	93	74256	44.32	ug/L		96
69) bromodichloromethane	11.560	83	169908	43.73	ug/L		98
70) 2-nitropropane	11.738	41	24423	40.30	ug/L		95
71) epichlorohydrin	11.884	57	67413	240.70	ug/L		96
72) cis-1,3-dichloropropene	12.057	75	212387	45.39	ug/L		93
73) 4-methyl-2-pentanone	12.151	58	194232	192.08	ug/L		90
74) isoamyl alcohol	12.141	70	81215	1025.05	ug/L		98
77) toluene	12.491	92	326795	45.17	ug/L		98
78) ethyl methacrylate	12.669	69	159314	46.49	ug/L		97
79) trans-1,3-dichloropropene	12.664	75	186386	44.34	ug/L		93
80) 1,1,2-trichloroethane	12.904	83	88458	45.85	ug/L		97
81) tetrachloroethene	13.119	164	106627	45.24	ug/L		99
82) 2-hexanone	13.087	58	183950	210.84	ug/L		96
83) 1,3-dichloropropane	13.108	76	181946	43.81	ug/L		95
84) butyl acetate	13.197	56	87209	49.09	ug/L		93
85) dibromochloromethane	13.391	129	126160	46.42	ug/L		98
86) 1,2-dibromoethane	13.569	107	126247	42.09	ug/L		98
87) n-butyl ether	14.097	57	605577	45.93	ug/L		98
88) chlorobenzene	14.123	112	356132	42.50	ug/L		98
89) 1,1,1,2-tetrachloroethane	14.191	131	143066	44.44	ug/L		99
90) ethylbenzene	14.196	91	642273	44.79	ug/L		100
91) m,p-xylene	14.337	106	497346	91.04	ug/L		97
92) o-xylene	14.787	91	544178	45.34	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264356.D
Acq On : 8 May 2019 6:56 am
Operator : thienn
Sample : cc10606-50
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:37:18 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

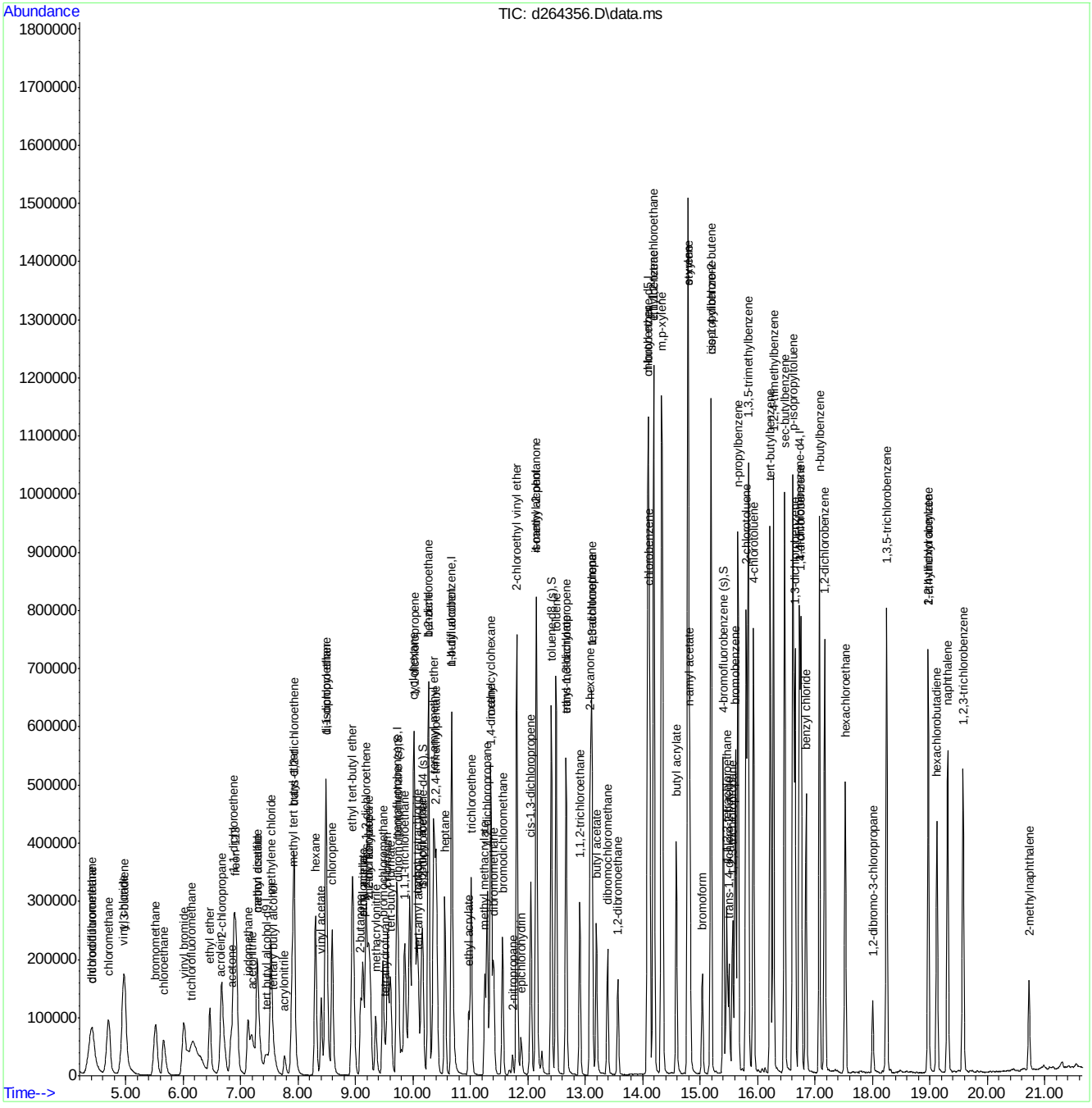
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) styrene	14.792	104	421421	45.28 ug/L	98
94) butyl acrylate	14.583	55	277050	49.24 ug/L	99
95) n-amyl acetate	14.824	70	112312	47.15 ug/L	94
96) isopropylbenzene	15.190	105	687332	49.07 ug/L	98
97) bromoform	15.038	173	90748	46.33 ug/L	99
98) cis-1,4-dichloro-2-butene	15.190	88	55094	42.37 ug/L	95
101) 1,1,2,2-tetrachloroethane	15.467	83	159366	46.08 ug/L	99
102) trans-1,4-dichloro-2-b...	15.504	53	40830	47.16 ug/L	90
103) 1,2,3-trichloropropane	15.566	110	45265	45.40 ug/L	93
104) bromobenzene	15.613	156	173000	44.10 ug/L	98
105) n-propylbenzene	15.661	91	783314	50.54 ug/L	99
106) 2-chlorotoluene	15.802	126	163828	47.17 ug/L	94
107) 4-chlorotoluene	15.927	91	483510	47.26 ug/L	99
108) 1,3,5-trimethylbenzene	15.838	105	608656	51.38 ug/L	99
109) tert-butylbenzene	16.220	119	489534	53.28 ug/L	98
110) 1,2,4-trimethylbenzene	16.278	105	608743	51.54 ug/L	100
111) sec-butylbenzene	16.471	105	734656	54.28 ug/L	99
112) p-isopropyltoluene	16.618	119	629105	55.84 ug/L	98
113) 1,3-dichlorobenzene	16.654	146	333562	48.68 ug/L	99
114) 1,4-dichlorobenzene	16.759	146	340909	47.97 ug/L	100
115) 1,2-dichlorobenzene	17.172	146	340612	49.60 ug/L	99
116) benzyl chloride	16.848	91	378542	56.76 ug/L	99
117) n-butylbenzene	17.078	92	311583	59.22 ug/L	99
118) 2-ethylhexyl acrylate	18.976	70	30841	27.81 ug/L #	73
119) hexachloroethane	17.528	201	103242	59.03 ug/L	95
120) 1,2-dibromo-3-chloropr...	18.004	75	32279	52.07 ug/L	98
121) 1,3,5-trichlorobenzene	18.249	180	280541	60.72 ug/L	99
122) 1,2,4-trichlorobenzene	18.976	180	236025	56.10 ug/L	97
123) hexachlorobutadiene	19.123	225	108663	51.60 ug/L	100
124) naphthalene	19.311	128	514451	54.91 ug/L	99
125) 1,2,3-trichlorobenzene	19.578	180	202436	54.62 ug/L	99
126) 2-methylnaphthalene	20.729	142	87919	43.97 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10654\
Data File : d264356.D
Acq On : 8 May 2019 6:56 am
Operator : thienn
Sample : cc10606-50
Misc : ms34538,vd10654,5,,100,5,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:37:18 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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264404.d
Acq On : 9 May 2019 6:52 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:42:24 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	7.452	65	124042	500.00	ug/L	-0.02
5) pentafluorobenzene	9.722	168	241817	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	384420	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.084	117	372425	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.730	152	214027	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.748	113	116158	50.91	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.82%			
55) 1,2-dichloroethane-d4 (s)	10.177	65	137444	47.69	ug/L	-0.01
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.38%			
76) toluene-d8 (s)	12.410	98	464641	51.16	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.32%			
100) 4-bromofluorobenzene (s)	15.407	95	194774	49.11	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.22%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.562	59	32741	99.56	ug/L	91
4) 1,4-dioxane	11.348	88	16626	554.54	ug/L	91
6) chlorodifluoromethane	4.403	51	94972	18.62	ug/L	96
7) dichlorodifluoromethane	4.413	85	123533	17.60	ug/L	95
8) chloromethane	4.690	50	138818	23.61	ug/L	99
9) 1,3-butadiene	4.962	54	71693	22.02	ug/L	97
10) vinyl chloride	4.947	62	136186	22.77	ug/L	96
11) bromomethane	5.511	94	65677	21.32	ug/L	99
12) chloroethane	5.658	64	56533	21.58	ug/L	97
13) trichlorofluoromethane	6.139	101	103231	19.16	ug/L	99
14) vinyl bromide	6.014	106	67456	24.55	ug/L	96
15) ethyl ether	6.469	74	31177	23.38	ug/L	94
16) 2-chloropropane	6.673	43	119935	20.86	ug/L	94
17) acrolein	6.657	56	11803	26.67	ug/L	89
18) freon 113	6.929	151	59353	18.77	ug/L	98
19) 1,1-dichloroethene	6.882	96	60649	20.34	ug/L	95
20) acetone	6.830	58	21491	114.66	ug/L #	72
21) acetonitrile	7.206	41	93734	237.04	ug/L	97
22) iodomethane	7.128	142	91765	19.57	ug/L	99
23) carbon disulfide	7.295	76	210718	21.68	ug/L	99
24) methylene chloride	7.530	84	69100	22.05	ug/L	99
25) methyl acetate	7.290	43	38758	23.36	ug/L	95
26) methyl tert butyl ether	7.907	73	181572	20.04	ug/L	98
27) trans-1,2-dichloroethene	7.933	96	60235	22.03	ug/L	98
28) hexane	8.304	56	42425	24.11	ug/L	98
29) di-isopropyl ether	8.493	45	226936	21.91	ug/L	97
30) 2-butanone	9.094	72	21233	95.83	ug/L #	87
31) 1,1-dichloroethane	8.482	63	108253	22.24	ug/L	98
32) chloroprene	8.597	53	88709	20.41	ug/L	94
33) acrylonitrile	7.771	53	18225	23.87	ug/L	98
34) vinyl acetate	8.409	86	11067	20.74	ug/L	94
35) ethyl tert-butyl ether	8.948	59	210083	20.56	ug/L	99
36) ethyl acetate	9.126	45	8011	25.68	ug/L #	82
37) 2,2-dichloropropane	9.241	77	105672	20.24	ug/L	98
38) cis-1,2-dichloroethene	9.183	96	66165	22.12	ug/L	99
39) propionitrile	9.136	54	81457	244.50	ug/L	99
40) methyl acrylate	9.220	85	6308	20.27	ug/L #	83
41) methacrylonitrile	9.356	67	19056	21.83	ug/L	95
42) bromochloromethane	9.476	128	29621	21.94	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264404.d
Acq On : 9 May 2019 6:52 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:42:24 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)
43) tetrahydrofuran	9.523	42	14374	22.12 ug/L	94
44) chloroform	9.560	83	99474	20.23 ug/L	98
45) tert-butyl formate	9.607	59	54163	19.54 ug/L	89
47) 1,1,1-trichloroethane	9.858	97	98422	19.51 ug/L	99
48) cyclohexane	10.009	84	115021	22.67 ug/L	95
50) 1,1-dichloropropene	10.025	75	76393	20.51 ug/L	100
51) carbon tetrachloride	10.072	117	82085	19.06 ug/L	99
52) tert-amyl alcohol	10.114	73	15223	99.74 ug/L	94
53) isopropyl acetate	10.156	87	11527	19.93 ug/L #	88
56) n-butyl alcohol	10.689	56	97261	1047.50 ug/L	95
57) 2,2,4-trimethylpentane	10.402	57	200630	21.05 ug/L	97
58) benzene	10.276	78	239338	20.50 ug/L	98
59) tert-amyl methyl ether	10.365	73	194567	18.27 ug/L	97
60) heptane	10.559	57	35306	22.64 ug/L	94
61) 1,2-dichloroethane	10.271	62	72169	17.58 ug/L	95
62) ethyl acrylate	10.977	55	55275	18.40 ug/L	99
63) trichloroethene	11.014	95	56676	19.54 ug/L	97
64) 2-chloroethyl vinyl ether	11.809	63	157291	103.45 ug/L	98
65) methyl methacrylate	11.254	100	11891	18.11 ug/L	95
66) methylcyclohexane	11.359	83	104357	21.09 ug/L	96
67) 1,2-dichloropropane	11.296	63	61655	21.28 ug/L	99
68) dibromomethane	11.406	93	33023	19.72 ug/L	97
69) bromodichloromethane	11.563	83	77137	19.86 ug/L	99
70) 2-nitropropane	11.741	41	11287	18.63 ug/L	100
71) epichlorohydrin	11.887	57	30350	108.40 ug/L	96
72) cis-1,3-dichloropropene	12.054	75	94635	20.23 ug/L	96
73) 4-methyl-2-pentanone	12.154	58	84746	83.83 ug/L	90
74) isoamyl alcohol	12.143	70	33891	427.90 ug/L	90
77) toluene	12.494	92	146197	20.52 ug/L	99
78) ethyl methacrylate	12.672	69	66338	19.66 ug/L	97
79) trans-1,3-dichloropropene	12.661	75	83674	20.21 ug/L	88
80) 1,1,2-trichloroethane	12.907	83	39617	20.86 ug/L	98
81) tetrachloroethene	13.121	164	47020	20.26 ug/L	99
82) 2-hexanone	13.090	58	74748	87.02 ug/L	98
83) 1,3-dichloropropane	13.111	76	83262	20.36 ug/L	97
84) butyl acetate	13.195	56	36997	21.15 ug/L	96
85) dibromochloromethane	13.388	129	53748	20.09 ug/L	98
86) 1,2-dibromoethane	13.566	107	52009	17.61 ug/L	100
87) n-butyl ether	14.099	57	272664	21.00 ug/L	99
88) chlorobenzene	14.120	112	160483	19.45 ug/L	97
89) 1,1,1,2-tetrachloroethane	14.188	131	62198	19.62 ug/L	99
90) ethylbenzene	14.199	91	288150	20.41 ug/L	99
91) m,p-xylene	14.335	106	219832	40.87 ug/L	100
92) o-xylene	14.790	91	242882	20.55 ug/L	99
93) styrene	14.795	104	183079	19.98 ug/L	98
94) butyl acrylate	14.586	55	109779	19.82 ug/L	98
95) n-amyl acetate	14.821	70	47250	20.15 ug/L	99
96) isopropylbenzene	15.187	105	296369	21.49 ug/L	98
97) bromoform	15.041	173	37154	19.26 ug/L	97
98) cis-1,4-dichloro-2-butene	15.192	88	23061	18.01 ug/L	97
101) 1,1,2,2-tetrachloroethane	15.464	83	69946	21.15 ug/L	99
102) trans-1,4-dichloro-2-b...	15.506	53	17487	21.12 ug/L	96
103) 1,2,3-trichloropropane	15.569	110	19131	20.07 ug/L	97
104) bromobenzene	15.611	156	74396	19.83 ug/L	93
105) n-propylbenzene	15.658	91	346528	23.38 ug/L	98
106) 2-chlorotoluene	15.804	126	70656	21.27 ug/L	96
107) 4-chlorotoluene	15.930	91	213065	21.78 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264404.d
Acq On : 9 May 2019 6:52 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:42:24 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)
108) 1,3,5-trimethylbenzene	15.836	105	260390	22.99	ug/L	99
109) tert-butylbenzene	16.223	119	199496	22.70	ug/L	97
110) 1,2,4-trimethylbenzene	16.280	105	262548	23.25	ug/L	99
111) sec-butylbenzene	16.469	105	303578	23.45	ug/L	98
112) p-isopropyltoluene	16.620	119	258042	23.95	ug/L	96
113) 1,3-dichlorobenzene	16.652	146	142987	21.82	ug/L	99
114) 1,4-dichlorobenzene	16.762	146	144394	21.25	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	144407	21.99	ug/L	99
116) benzyl chloride	16.845	91	150440	23.59	ug/L	97
117) n-butylbenzene	17.081	92	124916	24.83	ug/L	97
118) 2-ethylhexyl acrylate	18.979	70	3699	3.49	ug/L	92
119) hexachloroethane	17.530	201	40577	24.26	ug/L	98
120) 1,2-dibromo-3-chloropr...	18.006	75	12664	21.36	ug/L	87
121) 1,3,5-trichlorobenzene	18.252	180	104096	23.56	ug/L	98
122) 1,2,4-trichlorobenzene	18.974	180	78658	20.50	ug/L	99
123) hexachlorobutadiene	19.126	225	42521	21.11	ug/L	99
124) naphthalene	19.314	128	162764	19.39	ug/L	98
125) 1,2,3-trichlorobenzene	19.581	180	66152	19.87	ug/L	98
126) 2-methylnaphthalene	20.731	142	14236	7.44	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.39

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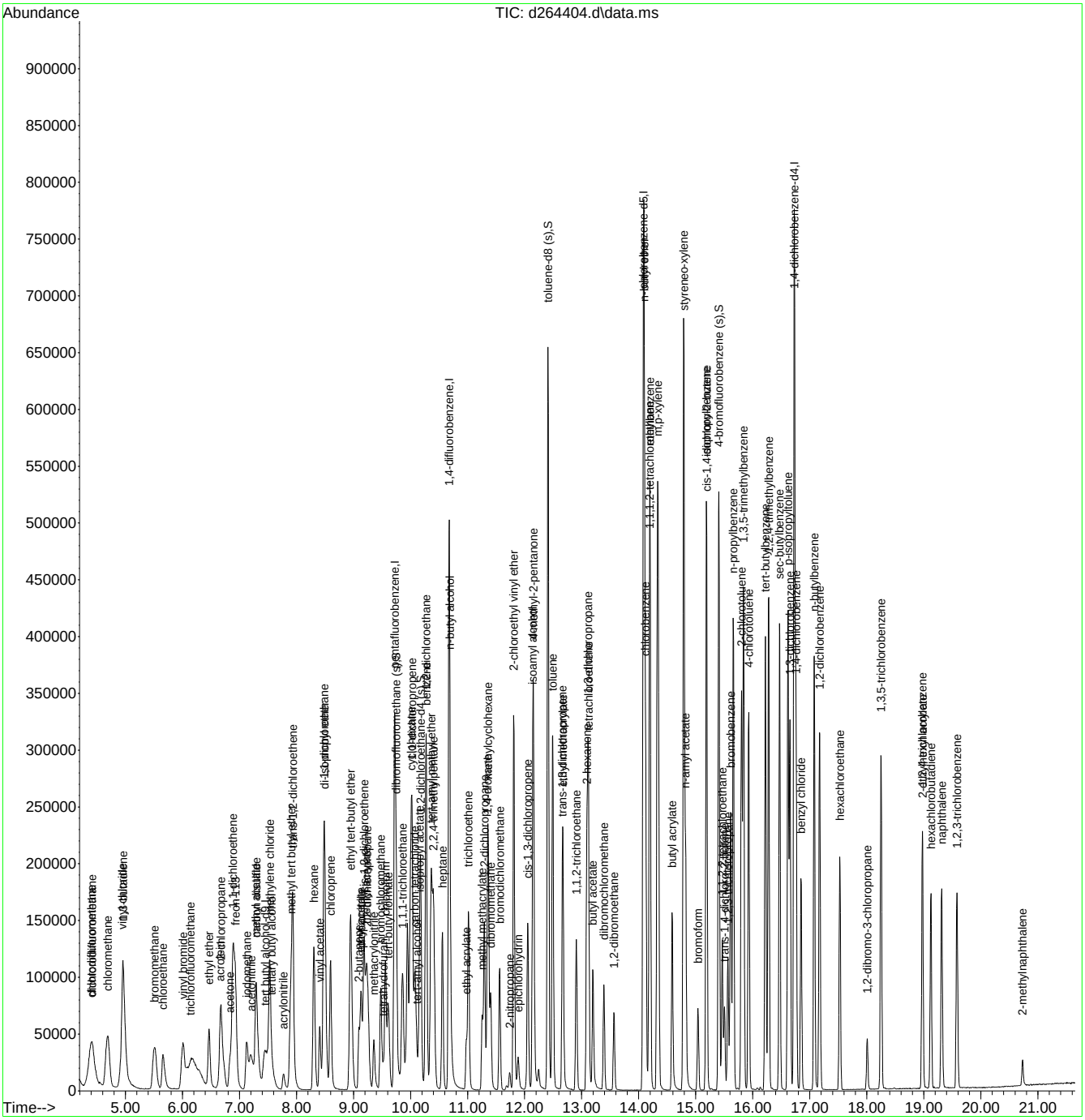
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-10-19\vd10656\
Data File : d264404.d
Acq On : 9 May 2019 6:52 am
Operator : thienn
Sample : cc10606-20 Inst : MSD
Misc : ms32144,vd10656,5,,100,5,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10606.M
Quant Results File: MD10606.RES
Quant Time: May 09 23:42:24 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



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

7.7.40

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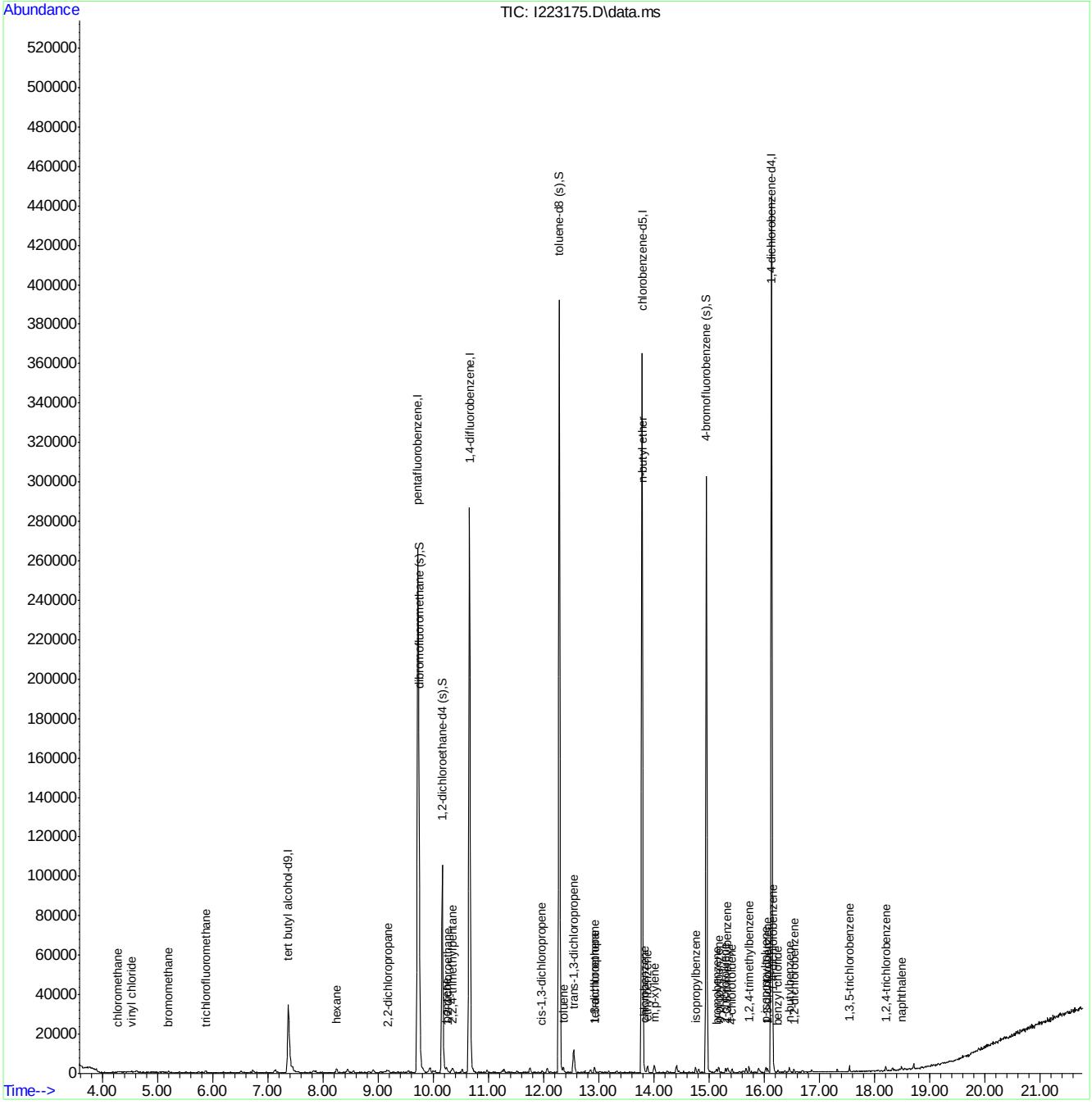
Quantitation Report (QT Reviewed)

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

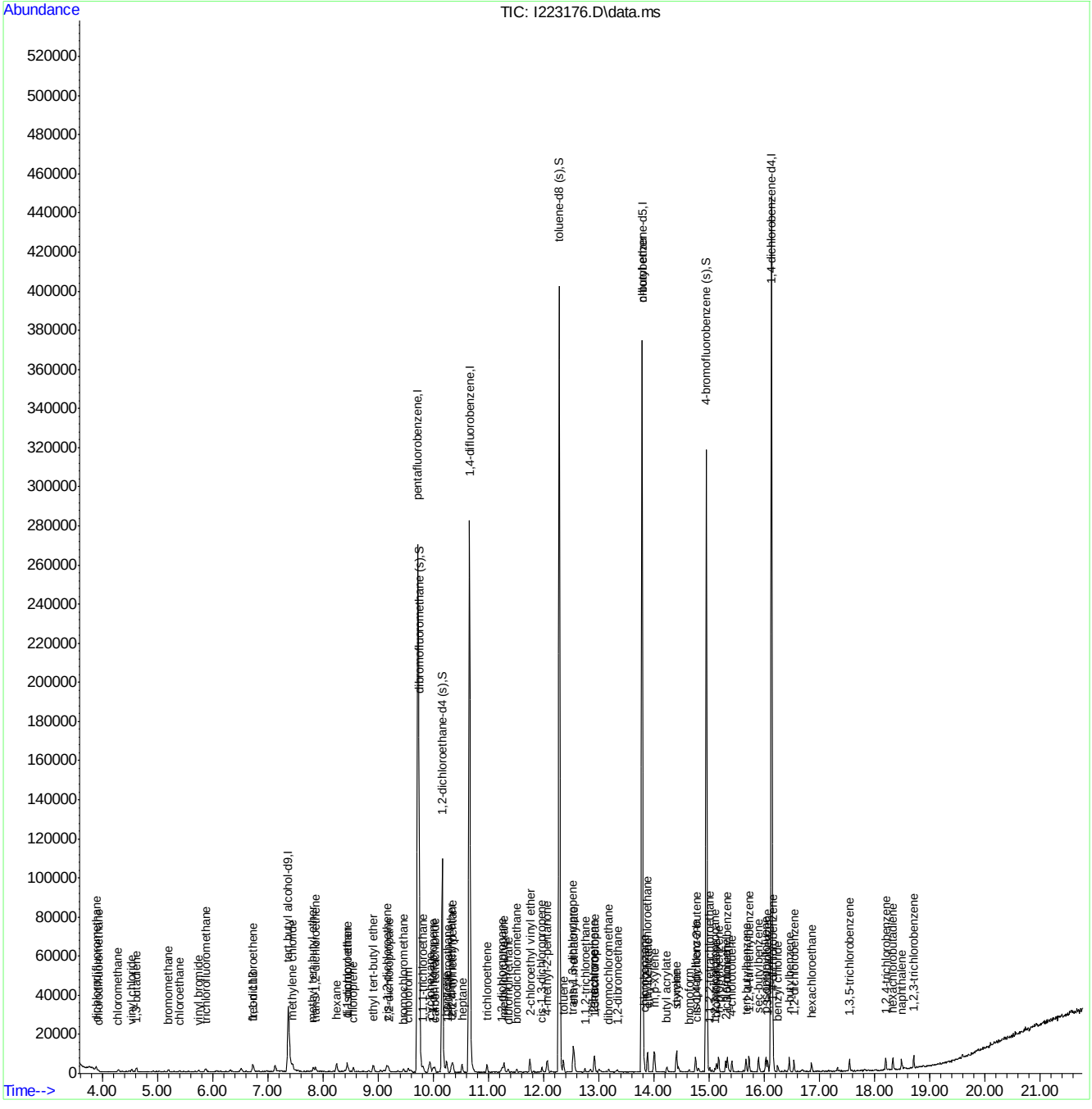
7.7.41

7

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

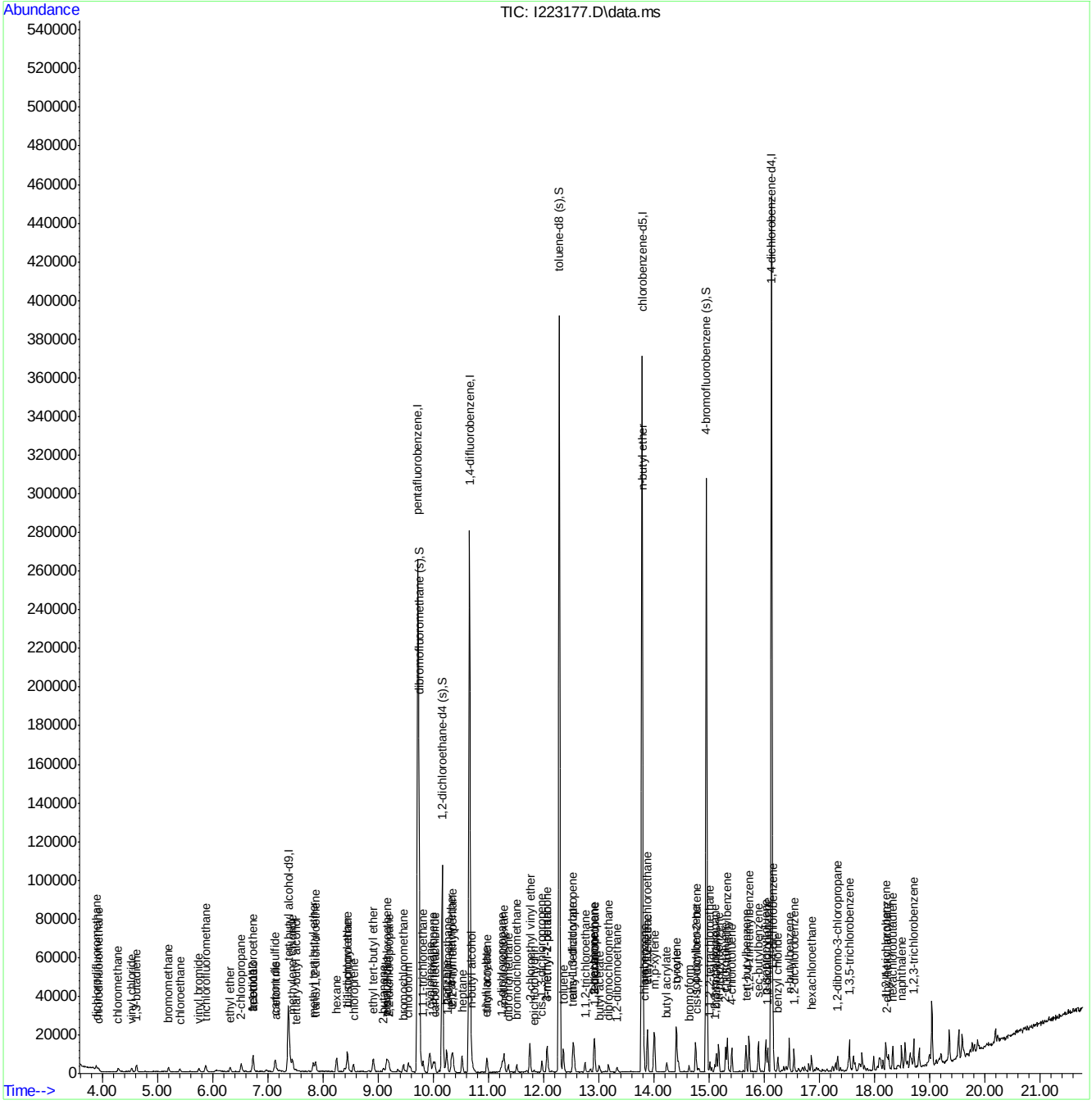
7.7.42

7

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

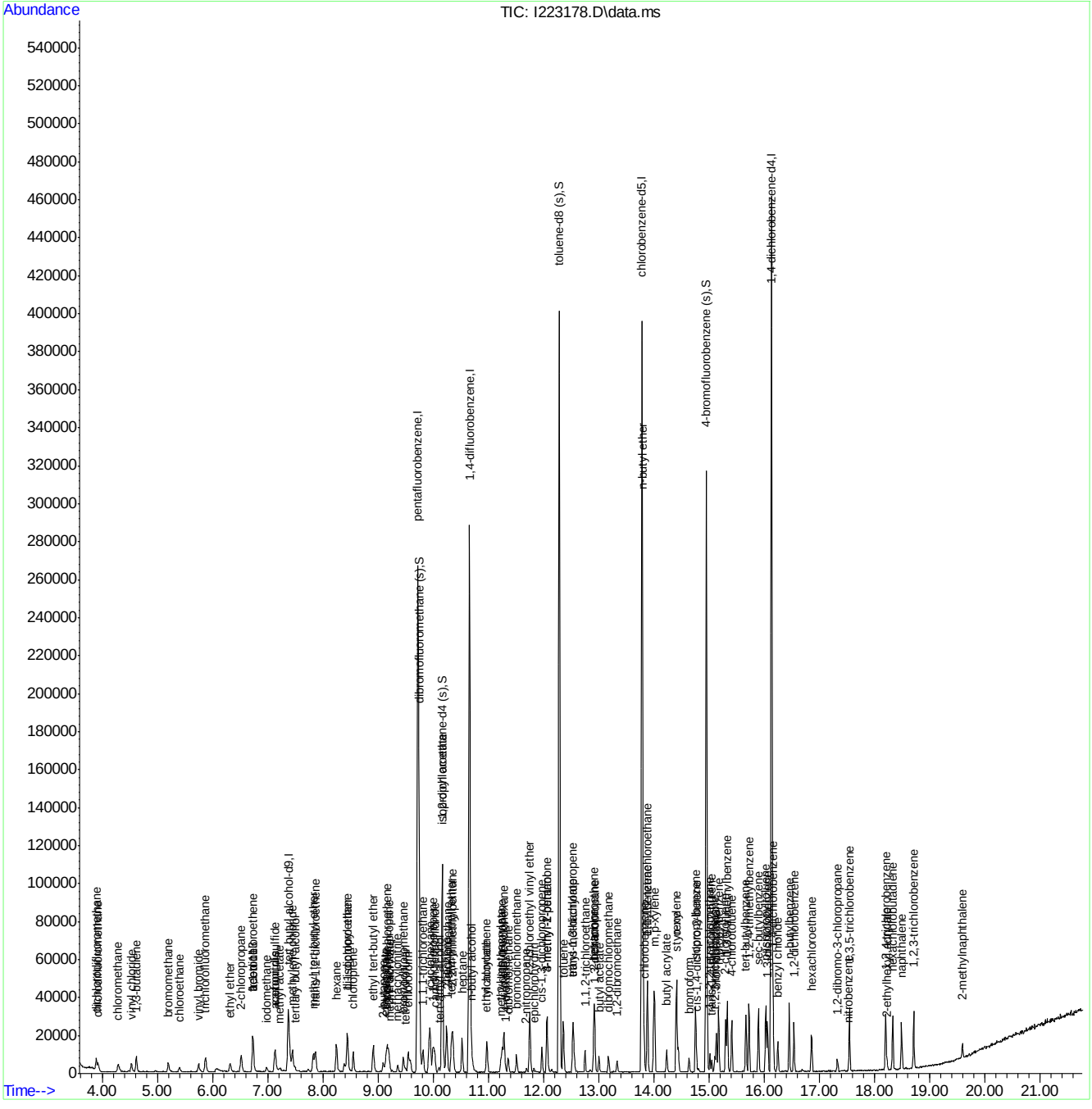
7.7.43

7

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

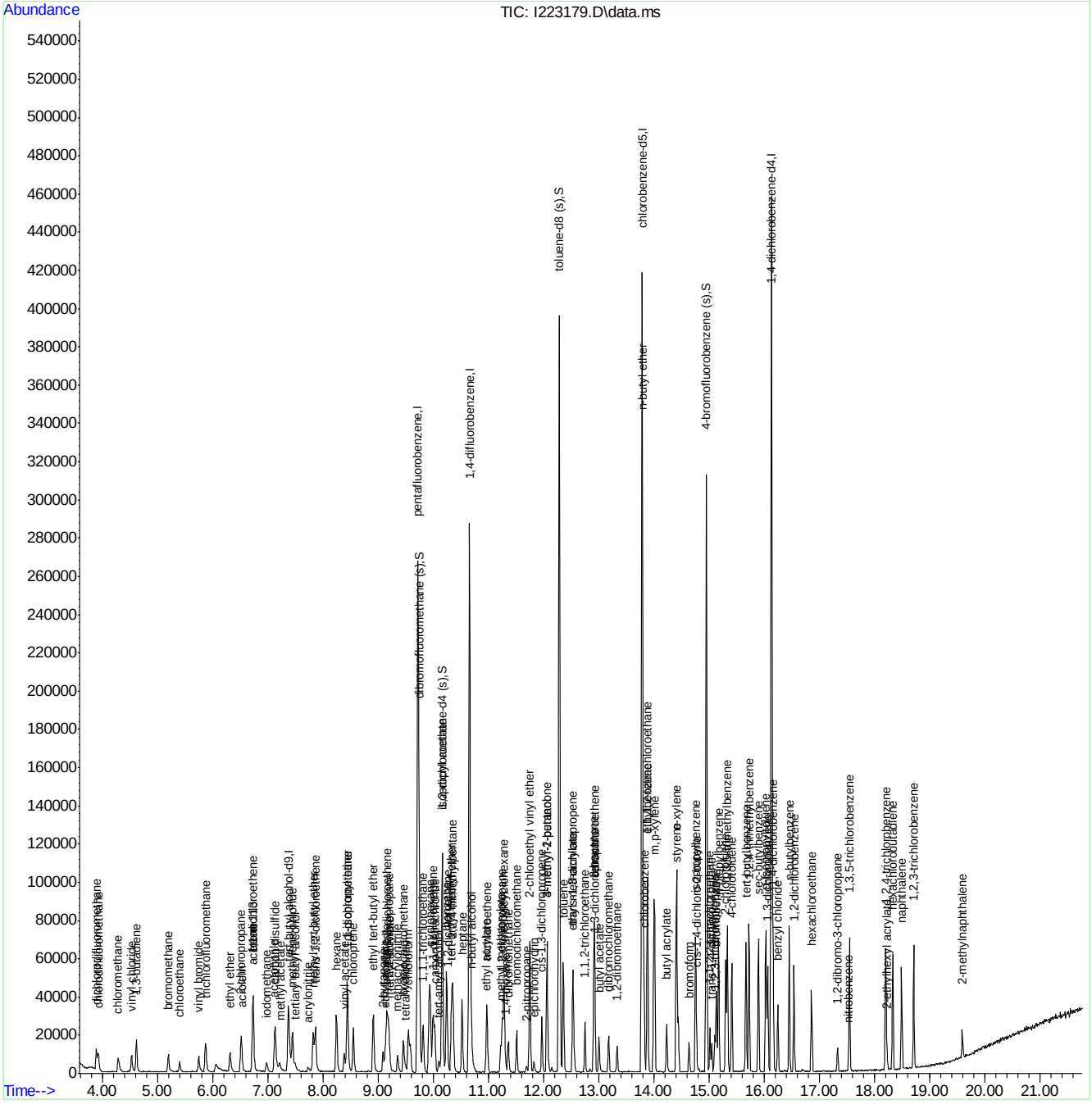
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.414	104	27074	8.72	ug/L	99
92)	butyl acrylate	14.231	55	14603	8.33	ug/L	99
93)	cis-1,4-dichloro-2-butene	14.770	88	3954	8.42	ug/L	94
94)	bromoform	14.634	173	6780	8.45	ug/L	98
95)	isopropylbenzene	14.754	105	41159	8.57	ug/L	99
98)	1,1,2,2-tetrachloroethane	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

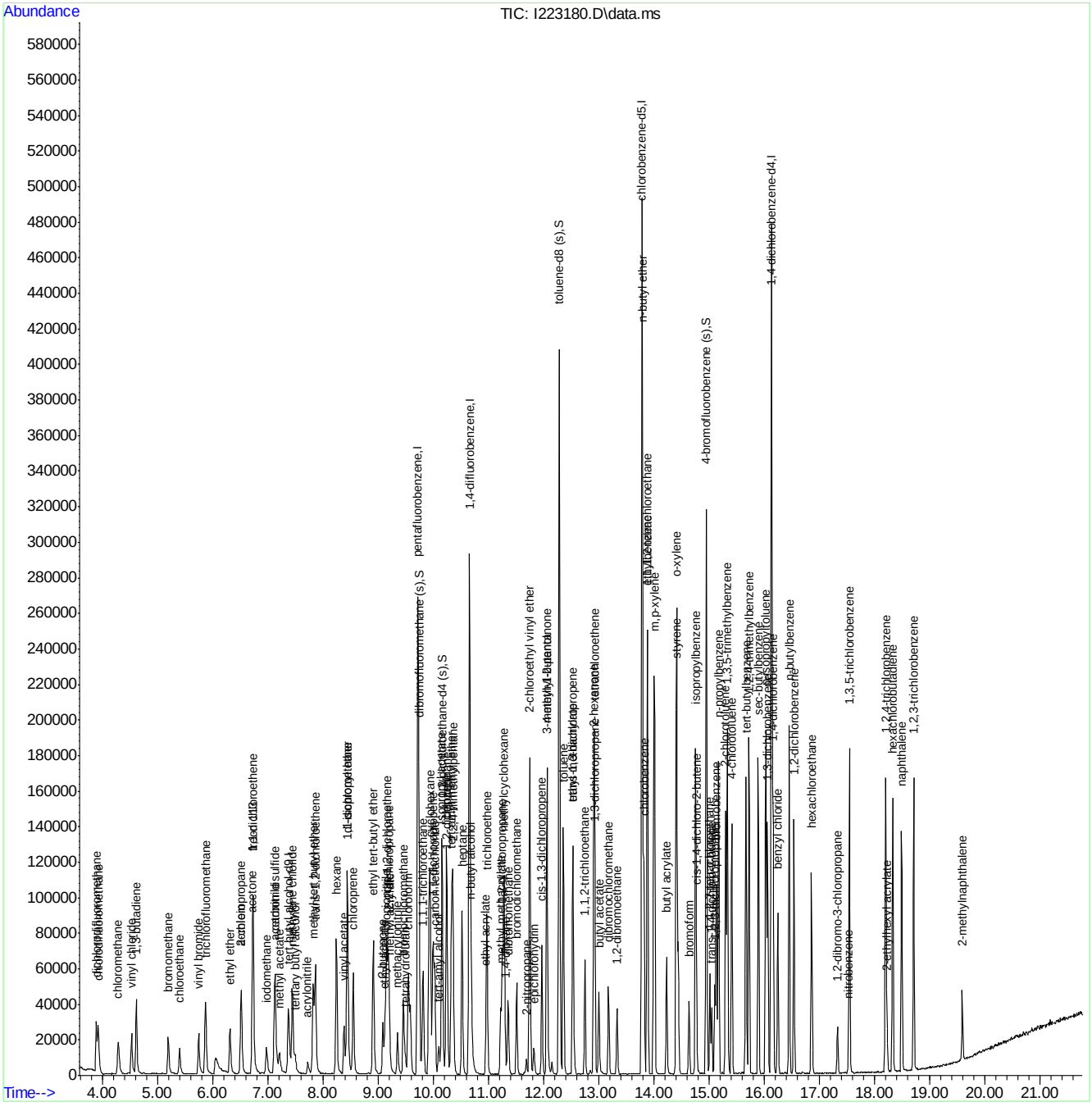
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.414	104	66528	21.04	ug/L	98
92)	butyl acrylate	14.231	55	38824	21.75	ug/L	99
93)	cis-1,4-dichloro-2-butene	14.769	88	10054	21.03	ug/L	97
94)	bromoform	14.633	173	17668	21.64	ug/L	98
95)	isopropylbenzene	14.754	105	103238	21.12	ug/L	99
98)	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

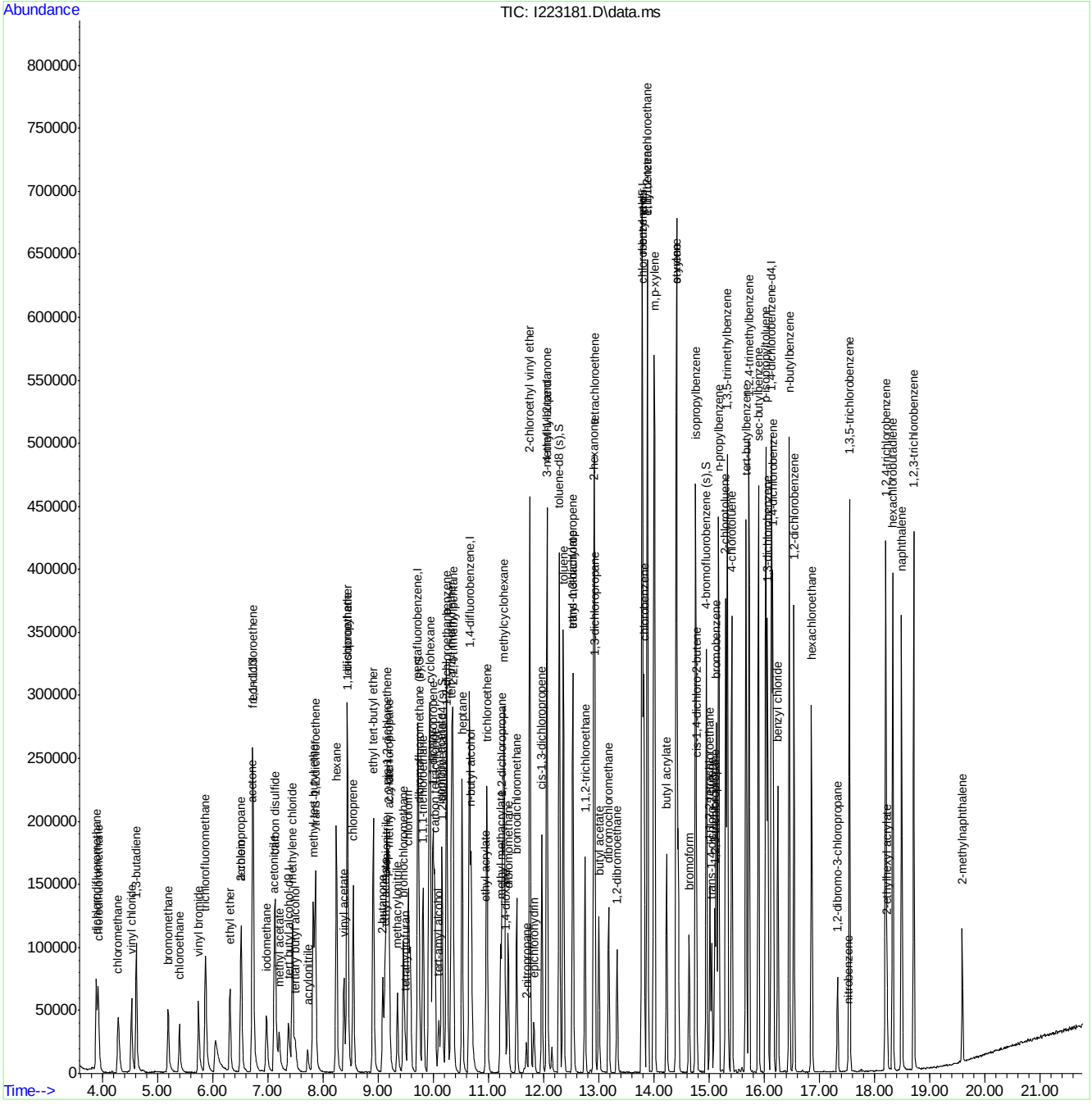
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.408	104	172884	52.80	ug/L	100
92)	butyl acrylate	14.231	55	100199	54.20	ug/L	100
93)	cis-1,4-dichloro-2-butene	14.769	88	25823	52.16	ug/L	100
94)	bromoform	14.633	173	47214	55.83	ug/L	100
95)	isopropylbenzene	14.754	105	263065	51.96	ug/L	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

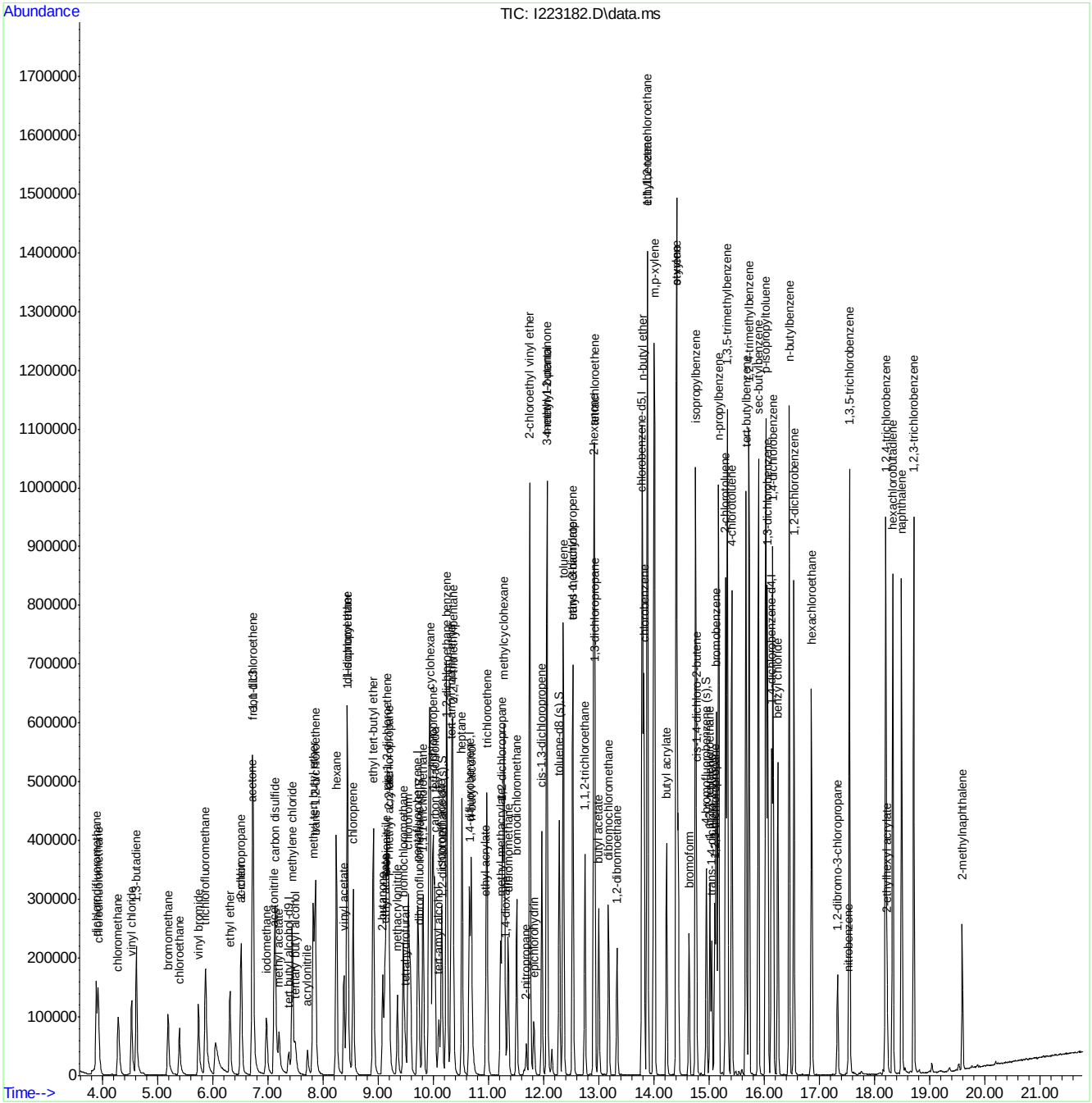
7.7.47

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

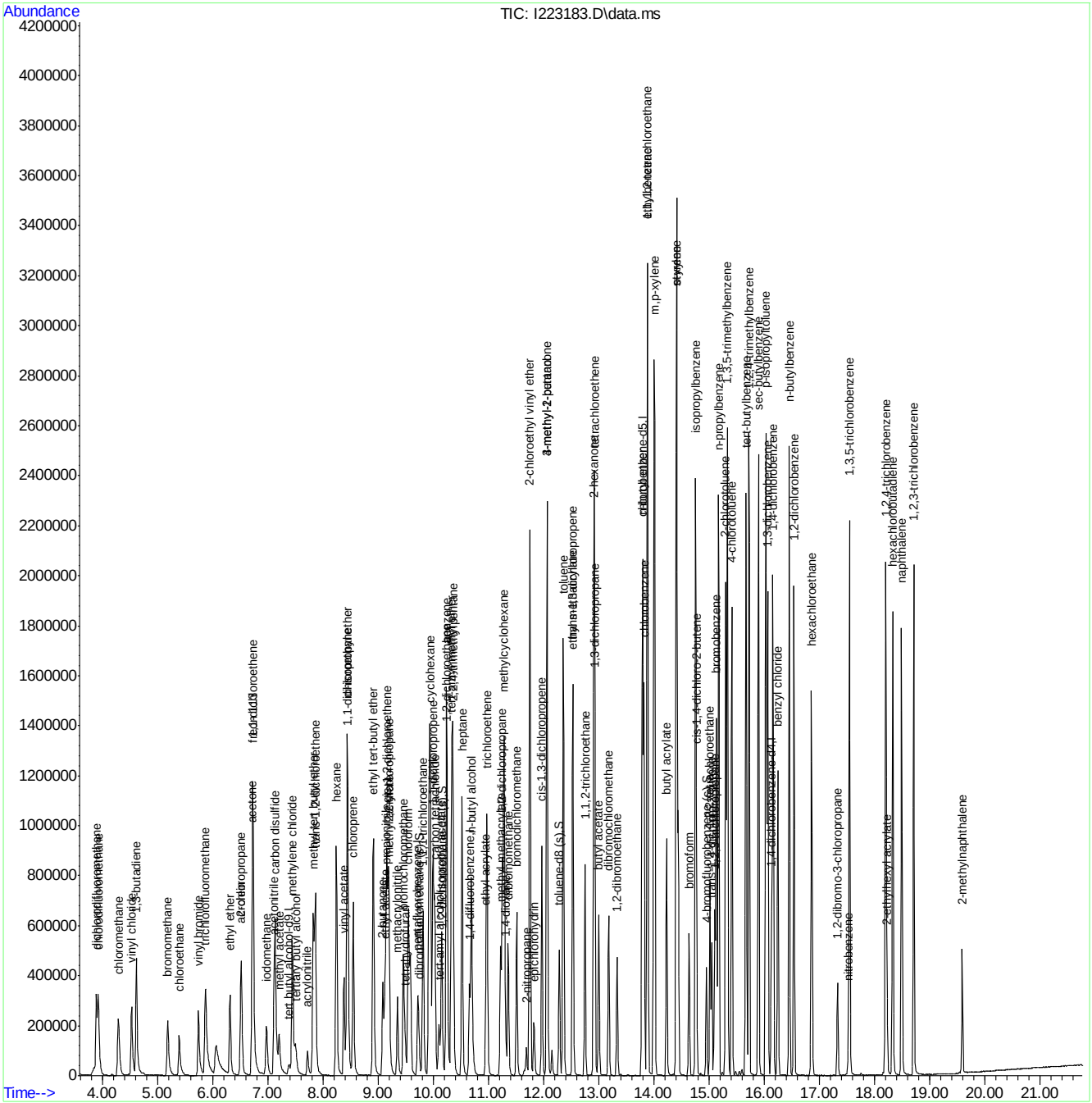
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.414	104	895966	218.22	ug/L	99
92)	butyl acrylate	14.231	55	540635	233.25	ug/L	98
93)	cis-1,4-dichloro-2-butene	14.770	88	132493	213.44	ug/L	95
94)	bromoform	14.634	173	242477	228.66	ug/L	100
95)	isopropylbenzene	14.754	105	1355411	213.53	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

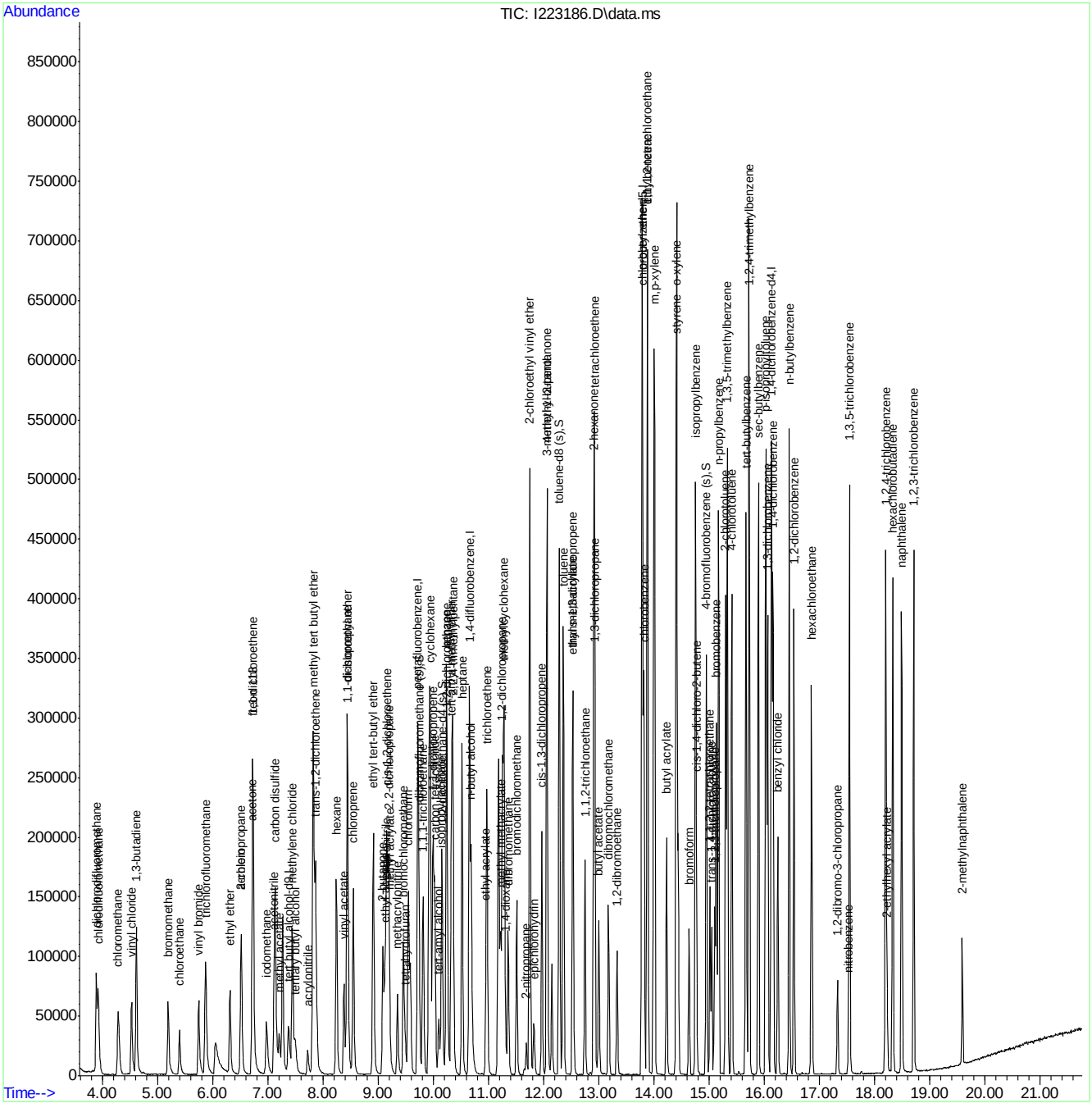
7.7.49

7

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

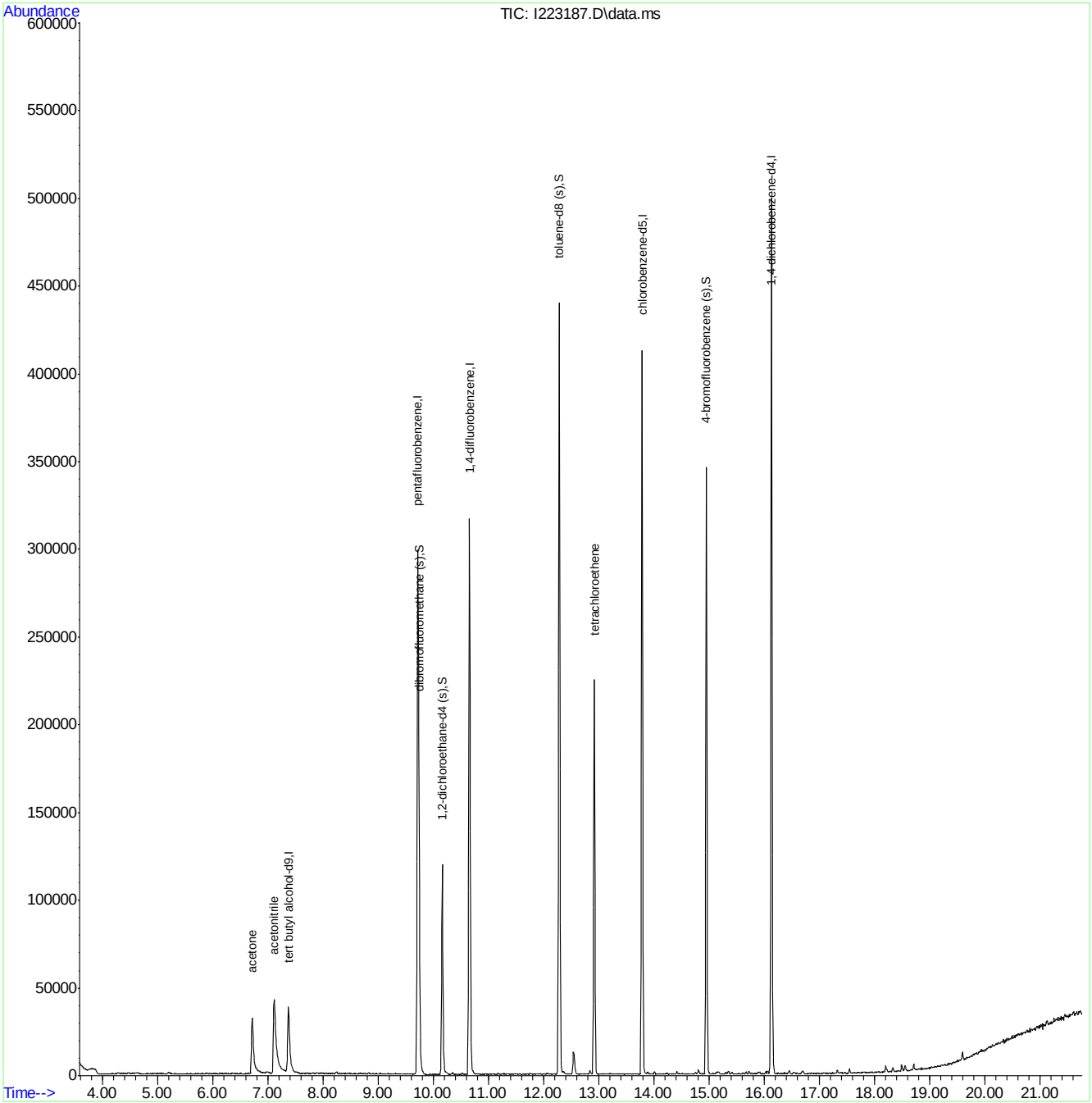
7.7.50

7

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\kenrickb\may 8\vi9105\
Data File : i226017.d
Acq On : 7 May 2019 7:55 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34332,VI9105,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 08 02:45:33 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	41451	500.00	ug/L	-0.03
4) pentafluorobenzene	9.691	168	143931	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.632	114	186928	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	153982	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	89532	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	59670	52.76	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 105.52%			
52) 1,2-dichloroethane-d4 (s)	10.130	65	68950	59.09	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 118.18%			
74) toluene-d8 (s)	12.259	98	196250	49.71	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.42%			
97) 4-bromofluorobenzene (s)	14.926	95	72469	53.08	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 106.16%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.468	59	9661	112.61	ug/L	88
3) 1,4-dioxane	11.276	88	5397	561.30	ug/L	99
5) dichlorodifluoromethane	3.885	85	34146	27.16	ug/L	96
6) chlorodifluoromethane	3.917	51	25241	21.26	ug/L	92
7) chloromethane	4.278	50	24040	20.65	ug/L	98
8) vinyl chloride	4.518	62	21319	21.74	ug/L	98
9) 1,3-butadiene	4.607	54	13182	19.25	ug/L	95
10) bromomethane	5.182	94	14512	22.21	ug/L	97
11) chloroethane	5.386	64	11875	20.02	ug/L	94
12) vinyl bromide	5.732	106	17791	23.47	ug/L	98
13) trichlorofluoromethane	5.857	101	35541	23.69	ug/L	98
14) ethyl ether	6.296	74	7586	17.85	ug/L	91
15) 2-chloropropane	6.495	63	6899	19.91	ug/L #	88
16) acrolein	6.490	56	2690	19.42	ug/L	82
17) freon 113	6.710	151	15482	21.06	ug/L	96
18) 1,1-dichloroethene	6.710	61	26980	20.14	ug/L	97
19) acetone	6.694	43	18904	77.95	ug/L	88
20) iodomethane	6.955	142	16197	16.06	ug/L	92
21) carbon disulfide	7.112	76	49375	17.11	ug/L	97
22) acetonitrile	7.091	41	18999	156.88	ug/L	89
23) methyl acetate	7.191	74	2050	16.15	ug/L #	89
24) methylene chloride	7.421	84	18397	18.54	ug/L	94
25) acrylonitrile	7.698	53	4674	16.38	ug/L	97
26) methyl tert butyl ether	7.803	73	47295	20.11	ug/L	94
27) trans-1,2-dichloroethene	7.839	61	25820	20.22	ug/L	97
28) hexane	8.221	57	22939	14.89	ug/L	96
29) 1,1-dichloroethane	8.409	63	32114	19.69	ug/L	98
30) vinyl acetate	8.357	86	2689	17.32	ug/L #	70
31) di-isopropyl ether	8.425	45	49262	17.05	ug/L	93
32) chloroprene	8.525	53	28004	20.36	ug/L	95
33) ethyl tert-butyl ether	8.891	59	52183	18.71	ug/L	99
34) 2-butanone	9.058	72	6541	71.96	ug/L #	87
35) 2,2-dichloropropane	9.163	77	32915	23.28	ug/L	98
36) ethyl acetate	9.100	45	1773	14.82	ug/L #	72
37) cis-1,2-dichloroethene	9.131	96	20444	19.46	ug/L	94
38) propionitrile	9.110	54	23919	179.41	ug/L	95
39) methyl acrylate	9.178	85	2111	16.89	ug/L #	66
40) methacrylonitrile	9.320	67	5992	17.81	ug/L	97
41) bromochloromethane	9.435	128	9890	20.94	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\vi9105\
Data File : i226017.d
Acq On : 7 May 2019 7:55 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34332,VI9105,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 08 02:45:33 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	2063	19.70 ug/L	82
43) chloroform	9.518	83	35899	21.28 ug/L	98
44) carbon tetrachloride	9.999	117	31209	22.65 ug/L	98
45) 1,1-dichloropropene	9.968	75	25395	20.00 ug/L	97
48) 1,1,1-trichloroethane	9.790	97	34814	23.12 ug/L	99
49) cyclohexane	9.921	84	24853	18.75 ug/L	92
50) tert-amyl alcohol	10.073	55	3607	98.83 ug/L #	68
53) isopropyl acetate	10.125	87	3033	17.91 ug/L #	94
54) 1,2-dichloroethane	10.224	62	29177	23.76 ug/L	97
55) benzene	10.214	78	71681	19.63 ug/L	99
56) 2,2,4-trimethylpentane	10.329	57	59945	16.03 ug/L	91
57) tert-amyl methyl ether	10.308	87	12725	20.42 ug/L #	79
58) heptane	10.502	57	11497	14.73 ug/L	91
59) n-butyl alcohol	10.664	56	28492	933.89 ug/L	95
60) trichloroethene	10.946	95	19617	20.05 ug/L	99
61) ethyl acrylate	10.930	55	17838	17.25 ug/L	96
62) methylcyclohexane	11.260	83	27491	16.59 ug/L	96
63) 1,2-dichloropropane	11.223	63	16216	17.34 ug/L	76
64) methyl methacrylate	11.192	100	3984	18.11 ug/L #	89
65) dibromomethane	11.328	93	11038	20.27 ug/L	94
66) bromodichloromethane	11.485	83	28172	21.75 ug/L	99
67) 2-nitropropane	11.663	41	5031	22.44 ug/L	85
68) 2-chloroethyl vinyl ether	11.720	63	49977	91.36 ug/L	97
69) epichlorohydrin	11.793	57	8479	92.81 ug/L	95
70) cis-1,3-dichloropropene	11.945	75	28869	19.74 ug/L	93
71) 4-methyl-2-pentanone	12.034	58	21029	72.29 ug/L	99
72) 3-methyl-1-butanol	12.029	70	8649	342.30 ug/L	93
75) toluene	12.332	92	43665	20.49 ug/L	96
76) trans-1,3-dichloropropene	12.505	75	28044	21.87 ug/L	98
77) ethyl methacrylate	12.510	69	17538	18.14 ug/L	98
78) 1,1,2-trichloroethane	12.719	83	11899	19.03 ug/L	97
79) 1,3-dichloropropane	12.902	76	22629	19.88 ug/L	96
80) tetrachloroethene	12.897	166	23459	21.92 ug/L	98
81) 2-hexanone	12.887	58	19804	70.88 ug/L	96
82) butyl acetate	12.981	56	8212	16.89 ug/L	99
83) n-butyl ether	13.770	57	53511	15.20 ug/L	90
84) dibromochloromethane	13.153	129	21086	21.58 ug/L	93
85) 1,2-dibromoethane	13.305	107	17453	20.52 ug/L	96
86) chlorobenzene	13.791	112	48317	21.28 ug/L	98
87) 1,1,1,2-tetrachloroethane	13.854	131	19309	21.42 ug/L	98
88) ethylbenzene	13.859	91	79633	20.06 ug/L	98
89) m,p-xylene	13.980	106	63377	40.59 ug/L	99
90) o-xylene	14.382	106	30789	19.81 ug/L	95
91) styrene	14.388	104	52297	20.03 ug/L	93
92) butyl acrylate	14.210	55	25882	17.38 ug/L	97
93) cis-1,4-dichloro-2-butene	14.749	88	9110	23.81 ug/L #	84
94) bromoform	14.607	173	15305	22.30 ug/L	98
95) isopropylbenzene	14.733	105	77401	19.78 ug/L	99
98) 1,1,2,2-tetrachloroethane	14.989	83	17853	19.28 ug/L	99
99) trans-1,4-dichloro-2-b...	15.021	53	5275	21.86 ug/L	84
100) 1,2,3-trichloropropane	15.078	110	5263	22.07 ug/L	88
101) bromobenzene	15.109	156	24018	21.73 ug/L	91
102) n-propylbenzene	15.146	91	90667	19.76 ug/L	99
103) 2-chlorotoluene	15.277	126	19838	20.58 ug/L	93
104) 4-chlorotoluene	15.387	91	59221	21.59 ug/L	97
105) 1,3,5-trimethylbenzene	15.308	105	71227	20.63 ug/L	97
106) tert-butylbenzene	15.648	134	12411	19.40 ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\vi9105\
Data File : i226017.d
Acq On : 7 May 2019 7:55 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34332,VI9105,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 08 02:45:33 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	15.695	105	72085	20.38	ug/L	95
108) sec-butylbenzene	15.868	105	84496	18.99	ug/L	97
109) p-isopropyltoluene	16.004	119	76618	19.84	ug/l	96
110) benzyl chloride	16.218	91	45171	20.85	ug/L	98
111) 1,3-dichlorobenzene	16.035	146	46222	21.92	ug/L	99
112) 1,4-dichlorobenzene	16.129	146	47103	21.87	ug/L	98
113) 1,2-dichlorobenzene	16.511	146	44180	21.40	ug/L	98
114) n-butylbenzene	16.427	92	39613	19.72	ug/L	97
115) hexachloroethane	16.835	201	17530	22.76	ug/L	86
116) 1,2-dibromo-3-chloropr...	17.301	157	5773	20.10	ug/L	94
117) nitrobenzene	17.489	77	1856	18.81	ug/L	91
118) 1,3,5-trichlorobenzene	17.515	180	45746	21.82	ug/L	100
119) 1,2,4-trichlorobenzene	18.174	180	39628	21.01	ug/L	100
120) 2-ethylhexyl acrylate	18.195	55	5645	3.67	ug/L	96
121) hexachlorobutadiene	18.305	225	27431	22.09	ug/L	96
122) naphthalene	18.462	128	75064	20.58	ug/L	99
123) 1,2,3-trichlorobenzene	18.682	180	37114	20.00	ug/L	99
124) 2-methylnaphthalene	19.560	142	18187	13.99	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

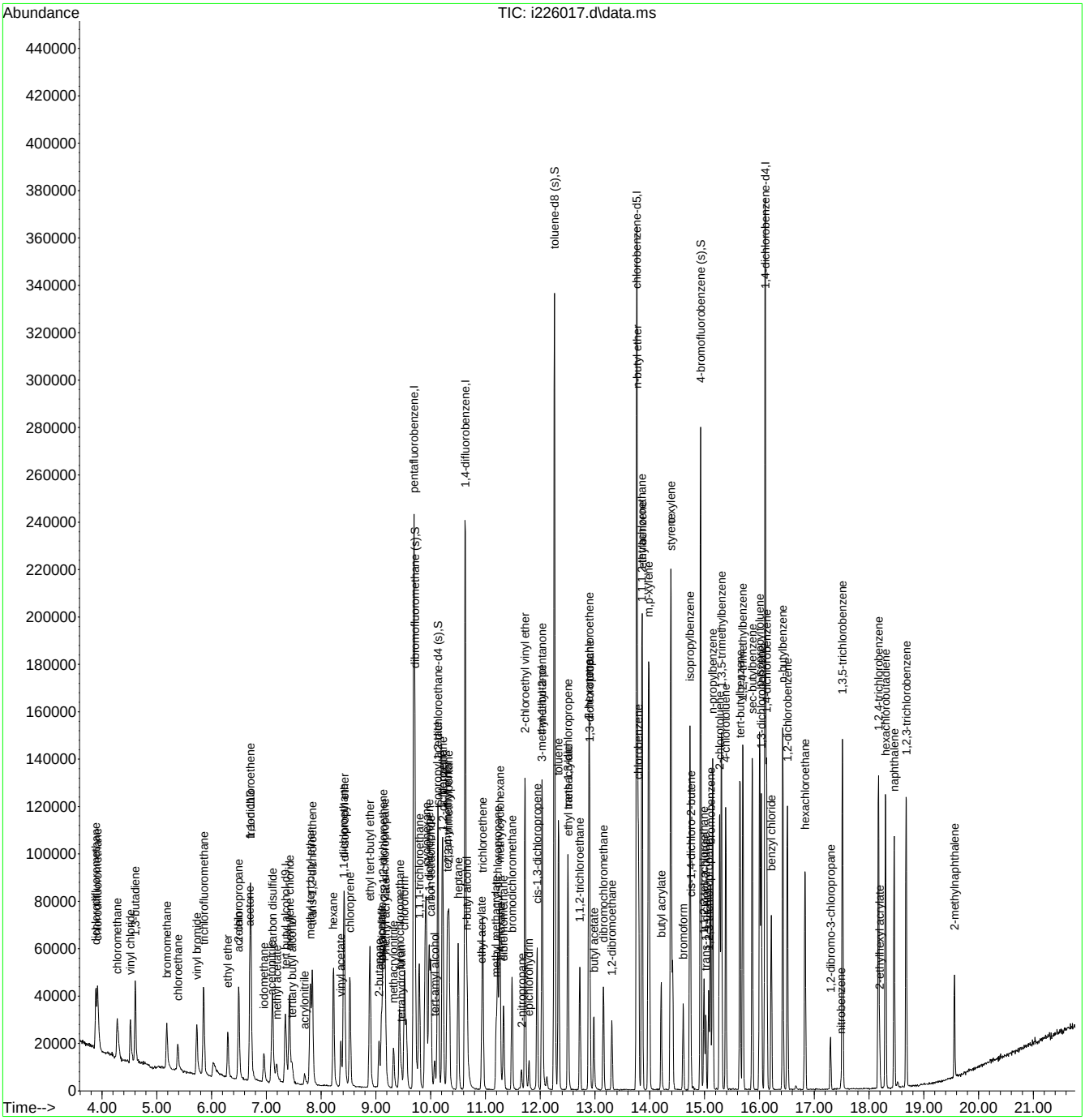
7.7.51

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\may 8\vi9105\
Data File : i226017.d
Acq On : 7 May 2019 7:55 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34332,VI9105,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 08 02:45:33 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



GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V019-2648-72.23	EC: V019-2648-80.11	Acrolein V019-2648-54.40	
Standard Concentrations	100-10,000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-64			
I/S Concentration	50/500 PPM			
Standard	ABK: V019-2648-52.7	Ext EC: V019-2648-76.5	Ext Acrolein: V019-2648-42.5	Ext PA: V019-2648-79.1
Standard Concentrations	100-10000 PPM	100 PPM	100 PPM	100/1000 PPM
Rough reviewed by				

Standard / Reagents			
GCMS1C	Instrument ID:	Sequence loaded by	Robert Szot
Analysis Date	4/19/1942	Data processed by	Robert Szot
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	V1C7200
Method	V8260C	Matrix	SO
Init Calib Date	4/24/19	Approved By:	KANYAV
Init Calib Quant Method	M1CS7200	Approved Date:	4/25/2019 4:27:41 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
1C	164004	BFB		NA			5	5		1	ok	2:40 pm
1C	164005	IC7200-0.5		NA		8260 initial calibration	5	5		2	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
1C	164006	IC7200-1		NA		8260 initial calibration	5	5		3	ok	2 uL ABK, EC, Acrolein / 200 mL DI H2O
1C	164007	IC7200-2		NA		8260 initial calibration	5	5		4	ok	4 uL ABK, EC, Acrolein / 200 mL DI H2O
1C	164008	IC7200-4		NA		8260 initial calibration	5	5		5	ok	2 uL ABK, EC, Acrolein / 50 mL DI H2O
1C	164009	IC7200-8		NA		8260 initial calibration	5	5		6	ok	4 uL ABK, EC, Acrolein / 50 mL DI H2O

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
1C	164010	IC7200-20		NA		8260 initial calibration	5	5		7	ok	10 uL ABK, EC, Acrolein / 50 mL DI H2O
1C	164011	IC7200-50		NA		8260 initial calibration	5	5		8	ok	25 uL ABK, EC, Acrolein / 50 mL DI H2O
1C	164012	IC7200-100		NA		8260 initial calibration	5	5		9	ok	50 uL ABK, EC, Acrolein / 50 mL DI H2O
1C	164013	IC7200-200		NA		8260 initial calibration	5	5		10	ok	100 uL ABK, EC, Acrolein / 50 mL DI H2O
1C	164014	IB		NA			5	5		11	ok	
1C	164015	IB		NA			5	5		12	ok	
1C	164016	ICV7200-50		NA		8260 initial calibration	5	5		13	ok	25 uL Ext ABK, Ext EC, Ext Acrolein / 100 mL DI H2O
1C	164017	ICV7200-50		NA		8260 initial calibration	5	5		14	ok	25 uL Ext PA / 100 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V019-2648-72.63	EC: V019-2648-98.5	Acrolein: V019-2648-88.33	
Standard Concentrations	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-97			
I/S Concentration	50/500ppm			
Rough reviewed by	Prashant B. Shukla			

Standard / Reagents			
GCMS1C	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	5/7/2019	Data processed by	kenrickb/janellec
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	V1C7213
Method	V8260C	Matrix	SO
Init Calib Date	4/24/19	Approved By:	MOHUI
Init Calib Quant Method	M1CS7200	Approved Date:	5/8/2019 12:19:01 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
1C	164329	CC7200-20		NA			5.0	5		1	NG	10uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C	164330	IB		NA			5.0	5		2	OK	
1C	164331	CC7200-20		NA			5.0	5		3	NG	10uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C	164332	IB		NA			5.0	5		4	OK	
1C	164333	BFB/CC7200-50		NA			5.0	5		1	ok/ok	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, # 60 low, 12:04 PM
1C	164334	CC7200-50		NA			5.0	5		2	ok	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, # 7,60 low

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
1C	164335	CC7200-1		NA			5.0	5		3	ok	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O, for # 7 & 60
1C	164336	BS		NA			5.0	5		4	ok	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C	164337	IB		NA			5.0	5		5	OK	
1C	164338	MB		NA			5.0	5		6	ok	
1C	164339	JC87420-2	18	NA	MS34529	V8260TCL20+	5.8	5		7	ok	
1C	164340	JC87420-1	8	NA	MS34529	V8260TCL20+	5.8	5		8	ok	
1C	164341	JC87420-3	8	NA	MS34529	V8260TCL20+	4.8	5		9	ok	
1C	164342	JC87420-4	8	NA	MS34529	V8260TCL20+	5.1	5		10	ok	
1C	164343	JC87429-2	4	NA	MS34529	V8260TCL20	5.4	5		11	RR	One Surr. Low, RR LL for CFS
1C	164344	JC87420-2MS	19	NA	MS34529	V8260TCL20+	5.6	5		12	ok	2.5uL Std.A/B/K,EC,Acrolein in sample
1C	164345	JC87420-2MSD	20	NA	MS34529	V8260TCL20+	5.8	5		13	ok	2.5uL Std.A/B/K,EC,Acrolein in sample
1C	164346	IB		NA			5.0	5		14	OK	
1C	164347	JC80589B-5D		NA	MS33758	V8260SL	5.0	5		15	ok	5uL Std.A/B/K,EC,Acrolein in 100mL DI H2O (5 PPB)
1C	164348	JC80589B-5C		NA	MS33758	V8260SL	5.0	5		16	ok	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O (1 PPB)
1C	164349	JC87093-4	5	NA	MS34369	V8260TCL20	4.04	5		17	ok	
1C	164350	JC86926-13	6	NA	MS34290	V8260NHF	6.32	5		18	ok	
1C	164351	JC86926-14	6	NA	MS34290	V8260NHF	5.48	5		19	ok	
1C	164352	JC86926-15	6	NA	MS34290	V8260NHF	5.09	5		20	ok	
1C	164353	JC86926-16	6	NA	MS34290	V8260NHF	5.81	5		21	ok	
1C	164354	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
1C	164355	JC87525-1	4	NA	MS34529	V8260PPTCL20+	7.73	5		23	ok	1112T,TBA
1C	164356	JC87525-8	4	NA	MS34529	V8260PPTCL20+	7.22	5		24	ok	1112T,TBA
1C	164357	JC87525-11	4	NA	MS34529	V8260PPTCL20+	7.5	5		25	ok	1112T,TBA
1C	164358	JC87465-1	4	NA	MS34529	V8260TCL20+	5.78	5		26	ok	11:20 PM
1C	164359	IB		NA			5.0	5		27	OK	
1C	164360	IB		NA			5.0	5		28	OK	5/8/19
1C	164361	IB		NA			5.0	5		29	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V018-2645-111.36	EC: V018-2645-129.11	Acrolein: V018-2645-85.7	Acetone 3sd source:V018-2645-120.3
Standard Concentrations	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V018-2645-126			
I/S Concentration	50/500ppm			
Ext Standard	Ext ABK: V018-2645-109.5	Ext EC: V018-2645-123.3	Ext Acrolein: V018-2645-98.4	Ext PA: V018-2645-130.3
Standard Concentrations	100-10,000ppm	100ppm	100ppm	100/1000ppm
Initial Calibration Method	M3C6743			

Standard / Reagents			
GCMS3C	Instrument ID:	Sequence loaded by	Austin Park
Analysis Date	2/13/2019	Data processed by	Robert Szot
Column	Rxi-624(20mx0.18mmx1.0um)	Batch ID	V3C6743
Method	V8260C	Matrix	SO
Init Calib Date	2/13/2019	Approved By:	KANYAV
Init Calib Quant Method	M3C6743	Approved Date:	2/15/2019 1:47:07 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
3C	149621	BFB		NA		V8260 SO Init. Cal.		5		1	ok	5:27 pm
3C	149622	IC6743-0.2		NA		V8260 SO Init. Cal.		5		2	ok	0.2ul ABK,EC,Acrolein/100ml
3C	149623	IC6743-0.5		NA		V8260 SO Init. Cal.		5		3	ok	0.5ul ABK,EC,Acrolein/100ml
3C	149624	IC6743-1		NA		V8260 SO Init. Cal.		5		4	ok	1ul ABK,EC,Acrolein/100ml
3C	149625	IC6743-0.2		NA		V8260 SO Init. Cal.		5		2	NG	Purged wrong position by accident
3C	149626	IC6743-0.5		NA		V8260 SO Init. Cal.		5		3	NG	Purged wrong position by accident

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3C	149627	IC6743-1		NA		V8260 SO Init. Cal.		5		4	NG	Purged wrong position by accident
3C	149628	IC6743-2		NA		V8260 SO Init. Cal.		5		5	ok	2ul ABK,EC,Acrolein/100ml
3C	149629	IC6743-4		NA		V8260 SO Init. Cal.		5		6	ok	4ul ABK,EC,Acrolein/100ml
3C	149630	IC6743-8		NA		V8260 SO Init. Cal.		5		7	ok	8ul ABK,EC,Acrolein/100ml
3C	149631	IC6743-20		NA		V8260 SO Init. Cal.		5		8	ok	20ul ABK,EC,Acrolein/100ml
3C	149632	ICC6743-50		NA		V8260 SO Init. Cal.		5		9	ok	50ul ABK,EC,Acrolein/100ml
3C	149633	IC6743-100		NA		V8260 SO Init. Cal.		5		10	ok	100ul ABK,EC,Acrolein/100ml
3C	149634	IC6743-200		NA		V8260 SO Init. Cal.		5		11	ok	200ul ABK,EC,Acrolein/100ml
3C	149635	IB		NA		V8260 SO Init. Cal.		5		12	ok	
3C	149636	IB		NA		V8260 SO Init. Cal.		5		13	ok	
3C	149637	ICV6743-50		NA		V8260 SO Init. Cal.		5		14	ok	50ul Ext. ABK,EC,Acrolein/100ml
3C	149638	ICV6743-50		NA		V8260 SO Init. Cal.		5		15	ok	50ul Acetone 3rd, Ext. PA/100ml

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V019-2648-72.63	EC: V019-2648-98.5	Acrolein: V019-2648-88.33	
Standard Concentrations	100-10,000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-97			
I/S Concentration	50/500 PPM			
Rough reviewed by	Prashant B. Shukla			

Standard / Reagents			
GCMS3C	Instrument ID:	Sequence loaded by	Maricela Delgadillo
Analysis Date	5/5/2019	Data processed by	Lotusa
Column	Rxi-624(20mx0.18mmx1.0um)	Batch ID	V3C6820
Method	V8260C	Matrix	SO
Init Calib Date	2/13/2019	Approved By:	KANYAV
Init Calib Quant Method	M3C6743	Approved Date:	5/8/2019 3:42:33 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
3C	151771	IB		NA			5.0	5		1	OK	
3C	151772	BFB/CC6743-50		NA			5.0	5		2	OK/OK	50ul ABK, EC, Acrolein/100L 12:35PM LOW #8, HIGH #72,84
3C	151773	CC6743-4		NA			5.0	5		3	OK	4ul ABK, EC, ACROLEIN/100ML FOR #8
3C	151774	BS		NA			5.0	5		4	OK	
3C	151775	IB		NA			5.0	5		5	OK	
3C	151776	MB		NA			5.0	5		6	OK	

OR049-01
Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3C	151777	JC87093-7	10	NA	MS34369	V8260TCL20	5.43	5		7	ok/rr	NG
3C	151778	JC87093-2	4	NA	MS34369	V8260TCL20	4.83	5		8	OK	
3C	151779	JC87093-7MS	12	NA	MS34369	V8260TCL20	5.4	5		9	not used	2.5ul ABK, EC, ACROLEIN IN SAMPLE
3C	151780	JC87093-7MSD	11	NA	MS34369	V8260TCL20	4.25	5		10	not used	2.5ul ABK, EC, ACROLEIN IN SAMPLE
3C	151781	IB		NA			5.0	5		11	OK	
3C	151782	JC86986-4	4	NA	MS34303	V8260TCL20	5.53	5		12	OK	
3C	151783	JC86986-5	4	NA	MS34303	V8260TCL20	6.07	5		13	ok/RR	Bad purged
3C	151784	JC86986-7	5	NA	MS34303	V8260TCL20	3.58	5		14	OK	
3C	151785	JC86986-8	4	NA	MS34303	V8260TCL20	4.65	5		15	OK	
3C	151786	JC86986-10	4	NA	MS34303	V8260TCL20	5.57	5		16	OK	
3C	151787	JC86986-12	5	NA	MS34303	V8260TCL20	5.0	5		17	OK	
3C	151788	JC86986-13	4	NA	MS34303	V8260TCL20	5.85	5		18	OK	
3C	151789	JC87093-5	4	NA	MS34369	V8260TCL20	4.23	5		19	ok/RR	Bad purged
3C	151790	JC87093-9	4	NA	MS34369	V8260TCL20	5.41	5		20	OK	
3C	151791	JC87093-10	4	NA	MS34369	V8260TCL20	4.09	5		21	ok/RR	Bad purged
3C	151792	JC87093-11	4	NA	MS34369	V8260TCL20	4.95	5		22	OK	
3C	151793	JC87093-12	4	NA	MS34369	V8260TCL20	4.67	5		23	ok/RR	Bad purged
3C	151794	JC87123-1	4	NA	MS34371	V8260STD	4.7	5		24	OK	
3C	151795	JC87123-2	4	NA	MS34371	V8260STD	6.6	5		25	OK	
3C	151796	JC87123-3	4	NA	MS34371	V8260STD	3.3	5		26	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3C	151797	JC87123-4	4	NA	MS34371	V8260STD	6.4	5		27	OK	
3C	151798	JC87123-5	4	NA	MS34371	V8260STD	4.5	5		28	OK	11:58 PM
3C	151799	IB		NA			5.0	5		29	OK	
3C	151800	IB		NA			5.0	5		30	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V019-2648-72.39	EC: V019-2648-98.5	Acrolein: V019-2648-88.33	
Standard Concentrations	100-10,000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-97			
I/S Concentration	50/500 PPM			
Rough reviewed by	Prashant B. Shukla			

Standard / Reagents			
GCMS3C	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	5/6/2019	Data processed by	Lotusa
Column	Rxi-624(20mx0.18mmx1.0um)	Batch ID	V3C6821
Method	V8260C	Matrix	SO
Init Calib Date	2/13/2019	Approved By:	KANYAV
Init Calib Quant Method	M3C6743	Approved Date:	5/9/2019 5:02:47 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
3C	151801	BFB/CC6743-50		NA			5.0	5		1	OK	25uL Std.ABK,EC,Acrolein in 50mL DI H2O, # 8,25 low, 8:55 AM Ave. of 8.380 to 8.401
3C	151802	CC6743-4		NA			5.0	5		2	OK	2uL Std.ABK,EC,Acrolein in 50mL DI H2O, for # 8 & 25
3C	151803	BS		NA			5.0	5		3	OK	25uL Std.ABK,EC,Acrolein in 50mL DI H2O
3C	151804	IB		NA			5.0	5		4	OK	
3C	151805	MB/JC80307E-6A		NA	MS32143	V8260SL	5.0	5		5	OK	
3C	151806	JC86986-4DUP	5	NA	MS34303	V8260TCL20	4.88	5		6	OK	V3C6820

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3C	151807	JC86986-8MS	5	NA	MS34303	V8260TCL20	5.08	5		7	OK	2.5uL Std.ABK,EC,Acrolein in sample
3C	151808	IB		NA			5.0	5		8	OK	
3C	151809	JC87093-7	13	NA	MS34369	V8260TCL20	5.18	5		9	ok/RR	One Int. low
3C	151810	JC87123-6	4	NA	MS34371	V8260STD	5.1	5		10	OK	
3C	151811	JC87123-7DUP	4	NA	MS34371	V8260STD	4.3	5		11	OK	
3C	151812	JC87123-8	4	NA	MS34371	V8260STD	7.4	5		12	OK	
3C	151813	JC87123-9	4	NA	MS34371	V8260STD	5.3	5		13	OK	
3C	151814	JC87093-7DUP	15	NA	MS34369	V8260TCL20	4.87	5		14	ok/RR	One Int. low, RR SME, no sample for LL
3C	151815	JC87123-10	4	NA	MS34371	V8260STD	5.0	5		15	OK	
3C	151816	JC87123-11	4	NA	MS34371	V8260STD	5.8	5		16	OK	
3C	151817	JC87123-13	4	NA	MS34371	V8260STD	4.8	5		17	OK	
3C	151818	JC87123-14	6	NA	MS34371	V8260STD	5.6	5		18	OK	
3C	151819	JC87093-7MS	14	NA	MS34369	V8260TCL20	5.62	5		19	OK	2.5uL Std.ABK,EC,Acrolein in sample
3C	151820	JC87093-7MSD	3	NA	MS34369	V8260TCL20	4.7	5		20	not used	2.5uL Std.ABK,EC,Acrolein in sample, prep from intact soil
3C	151821	JC87123-6MS	5	NA	MS34371	V8260STD	5.4	5		21	OK	2.5uL Std.ABK,EC,Acrolein in sample
3C	151822	JC87123-7	5	NA	MS34371	V8260STD	4.8	5		22	OK	
3C	151823	JC87123-12	2	NA	MS34371	V8260STD	5.0	5		23	OK	
3C	151824	JC86986-5	5	NA	MS34303	V8260TCL20	6.98	5		24	OK	
3C	151825	JC86916-8	5	NA	MS34270	V8260TCL20	4.33	5		25	OK	
3C	151826	JC87093-5	5	NA	MS34369	V8260TCL20	4.01	5		26	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3C	151827	JC87093-10	5	NA	MS34369	V8260TCL20	3.79	5		27	OK	
3C	151828	JC87093-12	5	NA	MS34369	V8260TCL20	4.13	5		28	OK/rr	surr out
3C	151829	JC86916-9	4	NA	MS34270	V8260TCL20	5.25	5		29	OK	
3C	151830	JC86916-10	5	NA	MS34270	V8260TCL20	4.71	5		30	OK	8:45pm
3C	151831	IB		NA			5.0	5		31	OK	
3C	151832	IB		NA			5.0	5		32	OK	5/7/19
3C	151833	IB		NA			5.0	5		33	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 Concentration	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

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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: V019-2648-98.2	Acrolein: V019-2648-88.7	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-96			
I/S Concentration	250/2500ppm			
Method	v8260c			
Init Calib Quant Method	md10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	thienn
Analysis Date	5/7/2019	Data processed by	nizele
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10652
		Matrix	SO
		Approved By:	KANYAV
		Approved Date:	5/8/2019 2:02:25 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	X	IB		NA				5		1	ok	
D	264308	IB		NA				5		2	ok	
D	264309	IB		NA				5		3	ok	
D	264310	BFB/CC10606-20		NA			5	5	100	4	ok/ok	8:03am,ABK, EC, ACROLEIN, 10ul/50ml DI water
D	264311	CC10606-1		NA			5	5	100	5	ok	for # 61, ABK, EC, ACROLEIN, 1ul/100ml DI water
D	264312	CC10606-4		NA			5	5	100	6	ok	for # 7, ABK, EC, ACROLEIN, 2ul/50ml DI water

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264313	BS		NA			5	5	100	7	ok	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264314	IB		NA				5		8	ok	
D	264315	MB/JC80308E-7A		NA	MS32144	V8260SL	5	5	100	9	ok	Daily blank disp #55 MeOH lot # 178026, Fisher Chemical
D	264316	JC87290-1	1	125,000X	MS34437	V8260TCL,VLS-SL,HEPT	1	10	50	10	ok/DL	Merck sample, SPECIAL LISTS. Report Acetone from I core. 0.4mL of 1000X into 50mL DI water=125,000X
D	264317	JC87290-1	1	1,250,000X	MS34437	V8260TCL,VLS-SL,HEPT	1	10	50	11	ok	+D264313, 40uL of 1000X into 50mL DI water=1,250,000X
D	264318	JC87263-11	3	NA	MS34453	V8260PALGTMB,MTBE	5.63	10	100	12	ok	Dilution due to non targets high.
D	264319	JC87263-12	3	NA	MS34453	V8260PALGTMB,MTBE	6.44	10	100	13	ok	Dilution due to non targets high.
D	264320	JC87263-1	3	NA	MS34453	V8260PALGTMB,MTBE	5.67	10	100	14	ok	
D	264321	JC87263-2	3	NA	MS34453	V8260PALGTMB,MTBE	5.88	10	100	15	ok	
D	264322	JC87263-2CFS	3	NA	MS34453	V8260PALGTMB,MTBE	5.88	10	20	16	ok	
D	264323	JC87263-11MS	3	NA	MS34453	V8260PALGTMB,MTBE	5.63	10	100	17	ok	ABK, EC, ACROLEIN, 25ul/50ml SAMPLE
D	264324	JC87263-11MSD	3	NA	MS34453	V8260PALGTMB,MTBE	5.63	10	100	18	ok	ABK, EC, ACROLEIN, 25ul/50ml SAMPLE
D	264325	IB		NA				5		19	OK	
D	264326	JC87143-1	2	NA	MS34375	V8260PPTCL42+	9.22	10	10	20	ok	
D	264327	JC87143-1	2	NA	MS34375	V8260PPTCL42+	9.22	10	100	21	ok	
D	264328	IB		NA				5		22	OK	
D	264329	JC87419-2	6	NA	MS34474	V8260TCL20+	5.2	5	5	23	ok	
D	264330	JC87419-2	6	NA	MS34474	V8260TCL20+	5.2	5	100	24	ok	
D	264331	IB		NA				5		25	OK	
D	264332	JC87093-8	3	NA	MS34369	V8260TCL20	3.22	10	100	26	ok	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264333	JC87093-3	3	NA	MS34369	V8260TCL20	4.27	10	100	27	ok	
D	264334	JC87093-1	3	NA	MS34369	V8260TCL20	5.4	10	10	28	ok	7:56 pm
D	264335	JC87093-6	3	NA	MS34369	V8260TCL20	4.93	10	10	29	rr	out of bfb
D	264336	IB		NA				5		30	ok	
D	264337	IB		NA				5		31	ok	
D	264338	IB		NA				5		32	ok	
D	264339	IB		NA				5		33	ok	
D	264340	IB		NA				5		34	ok	
D	264341	IB		NA				5		35	ok	
D	264342	IB		NA				5		36	ok	
D	264343	IB		NA				5		37	ok	
D	264344	IB		NA				5		38	ok	
D	264345	IB		NA				5		39	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK:V019-2648-72.24	EC: V019-2648-98.2	Acrolein: V019-2648-88.7	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-96			
I/S Concentration	250/2500ppm			
Method	v8260c			
Init Calib Quant Method	md10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	thienn
Analysis Date	5/8/5019	Data processed by	Lotusa
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10654
		Matrix	SO
		Approved By:	MOHUI
		Approved Date:	5/9/2019 10:26:06 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	264356	BFB/CC10606-50		NA				5		1	ok/ok	6.56am, ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264357	CC10606-1		NA				5		2	ok	for # 61, ABK, EC, ACROLEIN, 1ul/100ml DI water
D	264358	CC10606-4		NA				5		3	OK	for # 7, ABK, EC, ACROLEIN, 2ul/50ml DI water
D	264359	BS		NA				5		4	OK	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264360	IB		NA				5		5	ok	
D	264361	MB/JC80308E-8A		NA	MS32144	V8260SL	5	5	100	6	OK	Daily blank disp #55 MeOH lot # 178026, Fisher Chemical

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264362	JC87652-1	4	NA	MS34579	V8260TCL20+	10.1	10	100	7	OK	QC sample, Dilution due to non targets high.
D	264363	JC87652-1MS	4	NA	MS34579	V8260TCL20+	10.1	10	100	8	OK	ABK, EC, ACROLEIN, 25ul/50ml sample
D	264364	JC87652-1MSD	4	NA	MS34579	V8260TCL20+	10.1	10	100	9	OK	ABK, EC, ACROLEIN, 25ul/50ml sample
D	264365	IB		NA				5		10	ok	
D	264366	JC80308E-8B		NA	MS32144	V8260SL	5	5	100	11	ng	c/o. Daily blank disp #54 MeOH lot # 178026, Fisher Chemical
D	264367	JC87516-1	2	NA	MS34538	V8260PADFTMBMTBE	5.01	10	100	12	OK	
D	264368	JC80308E-8B		NA	MS32144	V8260SL	5		100	13	OK	Daily blank disp #54 MeOH lot # 178026, Fisher Chemical
D	264369	JC87523-1	2	NA	MS34538	V8260PADFTMBMTBE	4.76	10	100	14	ok	
D	264370	JC87523-2	2	NA	MS34538	V8260PADFTMBMTBE	4.9	10	100	15	ok	
D	264371	JC87517-1	2	NA	MS34538	V8260PADFTMBMTBE	5.04	10	100	16	OK	
D	264372	JC87523-3	2	NA	MS34538	V8260PADFTMBMTBE	4.84	10	10	17	OK/rr	rr 2x
D	264373	JC87523-4	2	NA	MS34538	V8260PADFTMBMTBE	5.04	10	10	18	OK/rr	rr 5x
D	264374	JC87093-3	3	NA	MS34369	V8260TCL20	4.27	10	100	19	rr	c/o, rr
D	264375	JC87093-8	3	NA	MS34369	V8260TCL20	3.22	10	100	20	OK	
D	264376	JC87093-6	3	NA	MS34369	V8260TCL20	4.93	10	20	21	OK	
D	264377	JC86986-11	3	NA	MS34303	V8260TCL20	4.11	10	50	22	OK	
D	264378	JC86986-3	3	NA	MS34303	V8260TCL20	3.36	10	20	23	OK	
D	264379	JC86986-9	3	NA	MS34303	V8260TCL20	3.73	10	5	24	OK	6:18pm
D	264380	IB		NA				5		25	OK	
D	264381	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	264382	IB		NA				5		27	OK	
D	264383	IB		NA				5		28	OK	
D	264384	IB		NA				5		29	OK	
D	264385	IB		NA				5		30	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK:V019-2648-72.24	EC: V019-2648-101.2	Acrolein: V019-2648-88.7	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-96			
I/S Concentration	250/2500ppm			
Method	v8260c			
Init Calib Quant Method	md10606			

Standard / Reagents			
GCMSD	Instrument ID:	Sequence loaded by	thienn
Analysis Date	5/9/2019	Data processed by	nizele
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10656
		Matrix	SO
		Approved By:	ROBERTS
		Approved Date:	5/10/2019 7:38:25 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	264403	IB		NA				5		1	OK	
D	264404	BFB/CC10606-20		NA			5	5	100	2	ok/ok	6:52AM, ABK, EC, ACROLEIN, 10ul/50ml DI water
D	264405	BS		NA			5	5	100	3	ok	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264406	BSD		NA			5	5	100	4	ok	ABK, EC, ACROLEIN, 25ul/50ml DI water
D	264407	IB		NA				5		5	OK	
D	264408	MB/JC80308E-9A		NA	MS32144	V8260SL	5	5	100	6	ok	Daily blank disp #55 MeOH lot # 178026, Fisher Chemical

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Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264409	JC80308E-9B		NA	MS32144	V8260SL	5	5	100	7	ok	Daily blank disp #54 MeOH lot # 178026, Fisher Chemical
D	264410	JC80306A-18		NA	MS31659	V8260SL	5	5	100	8	ok	R14-4/30/2019
D	264411	JC87093-3	3	NA	MS34369	V8260TCL20	4.27	10	100	9	ok	Dilution due to targets high.
D	264412	JC87536-6	4	NA	MS34537	V8260TCL20+,TBA	6.1	5	100	10	ok/dl	rr 10X
D	264413	JC87536-7	3	NA	MS34537	V8260TCL20+,TBA	6.2	5	100	11	ok/dl	rr 20X
D	264414	JC87523-4	2	NA	MS34538	V8260PADFTMBMTBE	5.04	10	20	12	ng	c/o
D	264415	JC87523-3	2	NA	MS34538	V8260PADFTMBMTBE	4.84	10	50	13	ng	c/o
D	264416	JC87093-3MS	3	NA	MS34369	V8260TCL20	4.27	10	100	14	ok	ABK, EC, ACROLEIN, 25ul/50ml SAMPLE
D	264417	JC87093-3MSD	3	NA	MS34369	V8260TCL20	4.27	10	100	15	ok	ABK, EC, ACROLEIN, 25ul/50ml SAMPLE
D	264418	IB		NA				5		16	OK	
D	264419	JC87536-6	4	NA	MS34537	V8260TCL20+,TBA	6.1	5	10	17	ok	+D
D	264420	JC87536-7	3	NA	MS34537	V8260TCL20+,TBA	6.2	5	5	18	ok	+D
D	264421	JC87523-4	2	NA	MS34538	V8260PADFTMBMTBE	5.04	10	20	19	ok	
D	264422	JC87523-3	2	NA	MS34538	V8260PADFTMBMTBE	4.84	10	50	20	ok	
D	264423	IB		NA				5		21	ok	
D	264423	IB		NA				5		21	ok	
D	264425	JC87183-3	2	NA	MS34413	V8260SL	3.31	10	10	23	ng	c/o, rr LL
D	264426	JC87183-2	2	NA	MS34413	V8260SL	4.28	10	0.5	24	ng	c/o, rr 200x
D	264427	JC87183-5	2	NA	MS34413	V8260SL	5.7	10	0.1	25	ng	c/o, rr 1000x
D	264428	JC87183-4	2	NA	MS34413	V8260SL	5.63	10	0.1	26	ok/rr	combine with 2C, 6:29 pm

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
D	264429	IB		NA				5		27	ok	
D	264430	IB		NA				5		28	ok	
D	264431	IB		NA				5		29	ok	
D	264432	IB		NA				5		30	ok	
D	264433	IB		NA				5		31	ok	
D	264434	IB		NA				5		32	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

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Rev Date: 12/18/2017

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: V019-2645-72.65	EC: V019-2648-98.2	Acrolein: V019-2648-88.27	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-97			
I/S Concentration	50/500ppm			
Method	v8260c			
Init Calib Quant Method	mi8986			

Standard / Reagents			
GCMSI	Instrument ID:	Sequence loaded by	THIENN
Analysis Date	5/7/2019	Data processed by	kenrickb
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VI9105
		Matrix	SO
		Approved By:	KANYAV
		Approved Date:	5/8/2019 2:13:14 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	226015	IB		NA				5		1	OK	
I	226016	IB		NA				5		2	OK	
I	226017	BFB/CC8986-20		NA				5		3	ok/ok	7:55 AM,ABK,EC, Acrolein 10ul/50ml DI water
I	226018	CC8986-4		NA				5		4	ok	FOR # 28,36,58,ABK,EC, Acrolein 2ul/50ml DI water
I	226019	CC9886-8		NA				5		5	ok	FOR # 22, ABK,EC, Acrolein 4ul/50ml DI water
I	226020	BS		NA				5		6	ok	ABK,EC, Acrolein 25ul/50ml DI water

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	226021	IB		NA				5		7	OK	
I	226022	MB/JC80308E-7B		NA	MS32144	V8260SL	5	5	100	8	ok/ok	Daily blank disp #54 MeOH lot # 187026, Fisher Chemical
I	226023	JC87038-6CFS	3	NA	MS34332	V8260NHF	9.14	10	20	9	ok	+I
I	226024	JC87467-3	2	NA	MS34506	V8260TCL20	4.58	10	100	10	no need	+Y
I	226025	JC87093-7	7	NA	MS34369	V8260TCL20	5.32	10	100	11	ok	+3C
I	226026	JC87290-1	1	125,000X	MS34437	V8260TCL,VLS-SL,HEPT	1	10	50	12	ok	merck sample, Report Acetone only, combine with D core. 0.4 mL of 1000X into 50ml DI water =125,000X
I	226027	JC87038-13	3	NA	MS34332	V8260NHF	10.35	10	5	13	ok	+I
I	226028	JC87045-6	3	NA	MS34367	V8260CTAROM	11.89	10	10	14	ok	rr 100x
I	226029	JC86994-23	3	NA	MS34308	V8260STD	5.07	10	10	15	ok	rr 100x
I	226030	JC86994-25	3	NA	MS34308	V8260STD	4.67	10	10	16	ok	
I	226031	JC87045-6MS	3	NA	MS34367	V8260CTAROM	11.89	10	10	17	ok	ABK,EC, Acrolein 25ul/50ml sample
I	226032	JC87045-6MSD	3	NA	MS34367	V8260CTAROM	11.89	10	10	18	ok	ABK,EC, Acrolein 25ul/50ml sample
I	226033	IB		NA				5		19	ok	
I	226034	JC87620-8	3	NA	MS34573	V8260CP51G	3.6	5	100	20	rr	SLL
I	226035	JC86994-23	3	NA	MS34308	V8260STD	5.07	10	1	21	ok	+I
I	226036	JC86994-25	3	NA	MS34308	V8260STD	4.67	10	1	22	ok	+I
I	226037	JC87045-6	3	NA	MS34367	V8260CTAROM	11.89	10	1	23	ok	+I
I	226038	JC86986-2	7	NA	MS34303	V8260TCL20	4.28	10	100	24	rr	SLL
I	226039	JC86986-11	3	NA	MS34303	V8260TCL20	4.11	10	10	25	ok	
I	226040	JC86986-3	3	NA	MS34303	V8260TCL20	3.36	10	10	26	ok	7 May 2019 7:42 pm

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	226041	JC86986-9	3	NA	MS34303	V8260TCL20	3.73	10	10	27	NR	
I	226042	IB		NA				5		28	ok	
I	226043	IB		NA				5		29	ok	
I	226044	IB		NA				5		30	ok	
I	226045	IB		NA				5		31	ok	
I	226046	IB		NA				5		32	ok	
I	226047	IB		NA				5		33	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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MB	P129369.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MB	P129369.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MB	P129369.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	78%	23-115%
4165-62-2	Phenol-d5	79%	27-114%
118-79-6	2,4,6-Tribromophenol	72%	19-152%
4165-60-0	Nitrobenzene-d5	83%	26-134%
321-60-8	2-Fluorobiphenyl	86%	39-124%
1718-51-0	Terphenyl-d14	79%	36-134%

Method Blank Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MB	6P481789.D	1	05/10/19	AR	05/06/19	OP20110	E6P2588

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MB	6P481789.D	1	05/10/19	AR	05/06/19	OP20110	E6P2588

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MB	6P481789.D	1	05/10/19	AR	05/06/19	OP20110	E6P2588

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	81%	23-115%
4165-62-2	Phenol-d5	83%	27-114%
118-79-6	2,4,6-Tribromophenol	65%	19-152%
4165-60-0	Nitrobenzene-d5	89%	26-134%
321-60-8	2-Fluorobiphenyl	80%	39-124%
1718-51-0	Terphenyl-d14	79%	36-134%

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-BS	P129370.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	1320	79	44-122
59-50-7	4-Chloro-3-methyl phenol	1670	1450	87	50-123
120-83-2	2,4-Dichlorophenol	1670	1470	88	48-122
105-67-9	2,4-Dimethylphenol	1670	1750	105	48-124
51-28-5	2,4-Dinitrophenol	3330	2290	69	34-146
534-52-1	4,6-Dinitro-o-cresol	1670	1230	74	49-140
95-48-7	2-Methylphenol	1670	1360	82	40-126
	3&4-Methylphenol	1670	1410	85	40-127
88-75-5	2-Nitrophenol	1670	1520	91	44-133
100-02-7	4-Nitrophenol	1670	1530	92	35-153
87-86-5	Pentachlorophenol	1670	1310	79	15-149
108-95-2	Phenol	1670	1340	80	50-109
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1400	84	44-132
95-95-4	2,4,5-Trichlorophenol	1670	1560	94	45-124
88-06-2	2,4,6-Trichlorophenol	1670	1560	94	57-122
83-32-9	Acenaphthene	1670	1470	88	53-119
208-96-8	Acenaphthylene	1670	1440	86	41-125
98-86-2	Acetophenone	1670	1270	76	52-112
120-12-7	Anthracene	1670	1410	85	51-120
1912-24-9	Atrazine	1670	1490	89	49-139
56-55-3	Benzo(a)anthracene	1670	1240	74	54-118
50-32-8	Benzo(a)pyrene	1670	1430	86	55-121
205-99-2	Benzo(b)fluoranthene	1670	1360	82	57-116
191-24-2	Benzo(g,h,i)perylene	1670	1470	88	40-124
207-08-9	Benzo(k)fluoranthene	1670	1470	88	59-116
101-55-3	4-Bromophenyl phenyl ether	1670	1380	83	60-122
85-68-7	Butyl benzyl phthalate	1670	1370	82	51-134
92-52-4	1,1'-Biphenyl	1670	1520	91	46-122
100-52-7	Benzaldehyde	1670	1200	72	14-139
91-58-7	2-Chloronaphthalene	1670	1510	91	49-120
106-47-8	4-Chloroaniline	1670	772	46	10-115
86-74-8	Carbazole	1670	1330	80	52-124
105-60-2	Caprolactam	1670	1520	91	16-139
218-01-9	Chrysene	1670	1280	77	51-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1520	91	36-131
111-44-4	bis(2-Chloroethyl)ether	1670	1320	79	41-131

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-BS	P129370.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1480	89	22-134
7005-72-3	4-Chlorophenyl phenyl ether	1670	1400	84	56-118
121-14-2	2,4-Dinitrotoluene	1670	1390	83	57-131
606-20-2	2,6-Dinitrotoluene	1670	1430	86	57-132
91-94-1	3,3'-Dichlorobenzidine	3330	2080	62	10-129
123-91-1	1,4-Dioxane	1670	1130	68	10-110
53-70-3	Dibenzo(a,h)anthracene	1670	1360	82	48-121
132-64-9	Dibenzofuran	1670	1390	83	51-119
84-74-2	Di-n-butyl phthalate	1670	1380	83	59-125
117-84-0	Di-n-octyl phthalate	1670	1560	94	47-147
84-66-2	Diethyl phthalate	1670	1420	85	57-116
131-11-3	Dimethyl phthalate	1670	1390	83	56-116
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1380	83	53-133
206-44-0	Fluoranthene	1670	1370	82	58-117
86-73-7	Fluorene	1670	1480	89	56-114
118-74-1	Hexachlorobenzene	1670	1330	80	50-128
87-68-3	Hexachlorobutadiene	1670	1480	89	43-129
77-47-4	Hexachlorocyclopentadiene	3330	3490	105	15-140
67-72-1	Hexachloroethane	1670	1270	76	43-123
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1430	86	49-124
78-59-1	Isophorone	1670	1530	92	38-128
91-57-6	2-Methylnaphthalene	1670	1450	87	37-124
88-74-4	2-Nitroaniline	1670	1420	85	45-144
99-09-2	3-Nitroaniline	1670	829	50	10-134
100-01-6	4-Nitroaniline	1670	1270	76	41-130
91-20-3	Naphthalene	1670	1500	90	44-116
98-95-3	Nitrobenzene	1670	1410	85	36-132
621-64-7	N-Nitroso-di-n-propylamine	1670	1270	76	38-125
86-30-6	N-Nitrosodiphenylamine	1670	1380	83	51-122
85-01-8	Phenanthrene	1670	1400	84	53-119
129-00-0	Pyrene	1670	1340	80	54-124
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1510	91	45-128

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-BS	P129370.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	91%	23-115%
4165-62-2	Phenol-d5	89%	27-114%
118-79-6	2,4,6-Tribromophenol	79%	19-152%
4165-60-0	Nitrobenzene-d5	87%	26-134%
321-60-8	2-Fluorobiphenyl	89%	39-124%
1718-51-0	Terphenyl-d14	85%	36-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MS	P129374.D	1	05/07/19	CC	05/06/19	OP20110	EP5856
OP20110-MSD	P129375.D	1	05/07/19	CC	05/06/19	OP20110	EP5856
JC87093-7	P129376.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Compound	JC87093-7 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		2790	1660	59	2720	1680	62	1	10-137/34
59-50-7	4-Chloro-3-methyl phenol	ND		2790	2080	74	2720	1970	72	5	11-147/35
120-83-2	2,4-Dichlorophenol	ND		2790	2050	73	2720	1920	71	7	15-140/34
105-67-9	2,4-Dimethylphenol	ND		2790	2380	85	2720	2280	84	4	10-151/34
51-28-5	2,4-Dinitrophenol	ND		5580	2360	42	5440	2290	42	3	10-148/49
534-52-1	4,6-Dinitro-o-cresol	ND		2790	1460	52	2720	1370	50	6	10-150/48
95-48-7	2-Methylphenol	ND		2790	1710	61	2720	1710	63	0	10-138/33
	3&4-Methylphenol	ND		2790	1850	66	2720	1810	67	2	10-143/33
88-75-5	2-Nitrophenol	ND		2790	2000	72	2720	2000	74	0	10-150/39
100-02-7	4-Nitrophenol	ND		2790	1960	70	2720	1880	69	4	10-163/38
87-86-5	Pentachlorophenol	ND		2790	1840	66	2720	1760	65	4	10-148/39
108-95-2	Phenol	ND		2790	1640	59	2720	1620	60	1	24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	ND		2790	2050	73	2720	1860	68	10	14-140/38
95-95-4	2,4,5-Trichlorophenol	ND		2790	2230	80	2720	2010	74	10	10-146/36
88-06-2	2,4,6-Trichlorophenol	ND		2790	2300	82	2720	2150	79	7	16-148/36
83-32-9	Acenaphthene	23.1	J	2790	2410	85	2720	2230	81	8	21-136/34
208-96-8	Acenaphthylene	ND		2790	2440	87	2720	2290	84	6	10-143/36
98-86-2	Acetophenone	ND		2790	1870	67	2720	1890	69	1	24-127/31
120-12-7	Anthracene	ND		2790	2330	83	2720	2160	79	8	10-147/39
1912-24-9	Atrazine	ND		2790	2310	83	2720	2130	78	8	10-161/38
56-55-3	Benzo(a)anthracene	35.1	J	2790	2040	72	2720	1890	68	8	10-151/41
50-32-8	Benzo(a)pyrene	32.2	J	2790	2350	83	2720	2200	80	7	10-149/40
205-99-2	Benzo(b)fluoranthene	33.2	J	2790	2180	77	2720	2040	74	7	10-147/42
191-24-2	Benzo(g,h,i)perylene	ND		2790	2490	89	2720	2340	86	6	10-150/41
207-08-9	Benzo(k)fluoranthene	ND		2790	2330	83	2720	2190	80	6	12-142/41
101-55-3	4-Bromophenyl phenyl ether	ND		2790	2230	80	2720	2120	78	5	26-138/37
85-68-7	Butyl benzyl phthalate	ND		2790	2270	81	2720	2100	77	8	24-143/36
92-52-4	1,1'-Biphenyl	10.3	J	2790	2480	88	2720	2270	83	9	18-138/32
100-52-7	Benzaldehyde	ND		2790	1790	64	2720	1820	67	2	10-149/37
91-58-7	2-Chloronaphthalene	ND		2790	2440	87	2720	2250	83	8	24-130/31
106-47-8	4-Chloroaniline	ND		2790	1430	51	2720	1360	50	5	10-111/52
86-74-8	Carbazole	8.5	J	2790	2240	80	2720	2050	75	9	12-146/39
105-60-2	Caprolactam	ND		2790	2320	83	2720	2120	78	9	10-147/40
218-01-9	Chrysene	45.5	J	2790	2160	76	2720	1980	71	9	10-151/41
111-91-1	bis(2-Chloroethoxy)methane	ND		2790	2280	82	2720	2220	82	3	10-144/35
111-44-4	bis(2-Chloroethyl)ether	ND		2790	1910	68	2720	1910	70	0	12-142/35

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MS	P129374.D	1	05/07/19	CC	05/06/19	OP20110	EP5856
OP20110-MSD	P129375.D	1	05/07/19	CC	05/06/19	OP20110	EP5856
JC87093-7	P129376.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Compound	JC87093-7 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		2790	2100	75	2720	2200	81	5	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	ND		2790	2390	86	2720	2130	78	12	21-136/35
121-14-2	2,4-Dinitrotoluene	ND		2790	2390	86	2720	2140	79	11	14-148/41
606-20-2	2,6-Dinitrotoluene	ND		2790	2450	88	2720	2280	84	7	14-152/40
91-94-1	3,3'-Dichlorobenzidine	ND		5580	4010	72	5440	3700	68	8	10-137/47
123-91-1	1,4-Dioxane	ND		2790	1520	54	2720	1610	59	6	10-110/40
53-70-3	Dibenzo(a,h)anthracene	ND		2790	2280	82	2720	2110	78	8	10-152/38
132-64-9	Dibenzofuran	ND		2790	2400	86	2720	2160	79	11	17-141/36
84-74-2	Di-n-butyl phthalate	ND		2790	2250	81	2720	2090	77	7	26-137/35
117-84-0	Di-n-octyl phthalate	ND		2790	2410	86	2720	2280	84	6	23-145/36
84-66-2	Diethyl phthalate	ND		2790	2370	85	2720	2180	80	8	25-133/35
131-11-3	Dimethyl phthalate	ND		2790	2380	85	2720	2130	78	11	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2790	2280	82	2720	2090	77	9	26-144/39
206-44-0	Fluoranthene	57.7		2790	2120	74	2720	1920	68	10	10-151/44
86-73-7	Fluorene	31.5	J	2790	2490	88	2720	2270	82	9	19-133/36
118-74-1	Hexachlorobenzene	ND		2790	2120	76	2720	1960	72	8	18-142/37
87-68-3	Hexachlorobutadiene	ND		2790	2070	74	2720	2110	78	2	16-137/32
77-47-4	Hexachlorocyclopentadiene	ND		5580	3980	71	5440	3520	65	12	10-150/50
67-72-1	Hexachloroethane	ND		2790	1710	61	2720	1750	64	2	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	ND		2790	2420	87	2720	2240	82	8	10-148/41
78-59-1	Isophorone	ND		2790	2330	83	2720	2280	84	2	11-142/33
91-57-6	2-Methylnaphthalene	30.0	J	2790	2240	79	2720	2170	79	3	10-141/35
88-74-4	2-Nitroaniline	ND		2790	2510	90	2720	2290	84	9	14-156/38
99-09-2	3-Nitroaniline	ND		2790	1850	66	2720	1560	57	17	10-144/45
100-01-6	4-Nitroaniline	ND		2790	2230	80	2720	1970	72	12	10-156/44
91-20-3	Naphthalene	156		2790	2350	79	2720	2350	81	0	10-136/36
98-95-3	Nitrobenzene	ND		2790	2090	75	2720	2050	75	2	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	ND		2790	1830	66	2720	1840	68	1	10-142/31
86-30-6	N-Nitrosodiphenylamine	ND		2790	2320	83	2720	2160	79	7	10-156/37
85-01-8	Phenanthrene	62.5		2790	2370	83	2720	2210	79	7	11-145/45
129-00-0	Pyrene	65.4		2790	2330	81	2720	2140	76	9	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		2790	2380	85	2720	2250	83	6	23-136/32

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20110-MS	P129374.D	1	05/07/19	CC	05/06/19	OP20110	EP5856
OP20110-MSD	P129375.D	1	05/07/19	CC	05/06/19	OP20110	EP5856
JC87093-7	P129376.D	1	05/07/19	CC	05/06/19	OP20110	EP5856

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

CAS No.	Surrogate Recoveries	MS	MSD	JC87093-7	Limits
367-12-4	2-Fluorophenol	77%	80%	67%	23-115%
4165-62-2	Phenol-d5	79%	80%	67%	27-114%
118-79-6	2,4,6-Tribromophenol	80%	75%	69%	19-152%
4165-60-0	Nitrobenzene-d5	79%	81%	74%	26-134%
321-60-8	2-Fluorobiphenyl	88%	83%	83%	39-124%
1718-51-0	Terphenyl-d14	85%	81%	77%	36-134%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2562-DFTPP
Lab File ID: 6P481126.D
Instrument ID: GCMS6P
Injection Date: 04/16/19
Injection Time: 09:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	133701	36.3		Pass
68	Less than 2.0% of mass 69	2251	0.61	(1.65) [a]	Pass
69	Mass 69 relative abundance	136031	36.9		Pass
70	Less than 2.0% of mass 69	671	0.18	(0.49) [a]	Pass
127	40.0 - 60.0% of mass 198	189621	51.5		Pass
197	Less than 1.0% of mass 198	428	0.12		Pass
198	Base peak, 100% relative abundance	368448	100.0		Pass
199	5.0 - 9.0% of mass 198	24693	6.70		Pass
275	10.0 - 30.0% of mass 198	103277	28.0		Pass
365	1.0 - 100.0% of mass 198	14732	4.00		Pass
441	Present, but less than mass 443	39477	10.7	(81.7) [b]	Pass
442	40.0 - 100.0% of mass 198	250821	68.1		Pass
443	17.0 - 23.0% of mass 442	48343	13.1	(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
E6P2562-IC2562	6P481127.D	04/16/19	09:55	00:21	Initial cal 100
E6P2562-IC2562	6P481128.D	04/16/19	10:18	00:44	Initial cal 80
E6P2562-ICC2562	6P481129.D	04/16/19	10:42	01:08	Initial cal 50
E6P2562-IC2562	6P481130.D	04/16/19	11:06	01:32	Initial cal 25
E6P2562-IC2562	6P481131.D	04/16/19	11:30	01:56	Initial cal 10
E6P2562-IC2562	6P481132.D	04/16/19	11:54	02:20	Initial cal 5
E6P2562-IC2562	6P481133.D	04/16/19	12:18	02:44	Initial cal 2
E6P2562-IC2562	6P481134.D	04/16/19	12:42	03:08	Initial cal 1
E6P2562-ICV2562	6P481135.D	04/16/19	13:06	03:32	Initial cal verification 50
E6P2562-ICV2562	6P481136.D	04/16/19	13:29	03:55	Initial cal verification 50
E6P2562-ICV2562	6P481137.D	04/16/19	13:53	04:19	Initial cal verification 50
E6P2562-ICV2562	6P481138.D	04/16/19	14:18	04:44	Initial cal verification 50
E6P2562-ICV2562	6P481139.D	04/16/19	14:42	05:08	Initial cal verification 50
E6P2562-ICV2562	6P481140.D	04/16/19	15:06	05:32	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2563-DFTPP
Lab File ID: 6P481141.D
Instrument ID: GCMS6P
Injection Date: 04/16/19
Injection Time: 15:25

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	129768	35.7		Pass
68	Less than 2.0% of mass 69	2510	0.69	(1.85) [a]	Pass
69	Mass 69 relative abundance	135637	37.3		Pass
70	Less than 2.0% of mass 69	674	0.19	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	184520	50.8		Pass
197	Less than 1.0% of mass 198	403	0.11		Pass
198	Base peak, 100% relative abundance	363402	100.0		Pass
199	5.0 - 9.0% of mass 198	24236	6.67		Pass
275	10.0 - 30.0% of mass 198	102661	28.2		Pass
365	1.0 - 100.0% of mass 198	14598	4.02		Pass
441	Present, but less than mass 443	39268	10.8	(85.7) [b]	Pass
442	40.0 - 100.0% of mass 198	236114	65.0		Pass
443	17.0 - 23.0% of mass 442	45838	12.6	(19.4) [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
E6P2563-IC2563	6P481142.D	04/16/19	15:39	00:14	Initial cal 100
E6P2563-IC2563	6P481143.D	04/16/19	16:03	00:38	Initial cal 80
E6P2563-ICC2563	6P481144.D	04/16/19	16:27	01:02	Initial cal 50
E6P2563-IC2563	6P481145.D	04/16/19	16:51	01:26	Initial cal 25
E6P2563-IC2563	6P481146.D	04/16/19	17:15	01:50	Initial cal 10
E6P2563-IC2563	6P481147.D	04/16/19	17:39	02:14	Initial cal 5
E6P2563-IC2563	6P481148.D	04/16/19	18:03	02:38	Initial cal 2
E6P2563-IC2563	6P481149.D	04/16/19	18:28	03:03	Initial cal 1
E6P2563-ICV2563	6P481150.D	04/16/19	18:52	03:27	Initial cal verification 50
E6P2563-ICV2563	6P481151.D	04/16/19	19:16	03:51	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2588-DFTPP
Lab File ID: 6P481782.D
Instrument ID: GCMS6P
Injection Date: 05/10/19
Injection Time: 08:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	93631	35.3		Pass
68	Less than 2.0% of mass 69	1210	0.46	(1.20) [a]	Pass
69	Mass 69 relative abundance	100922	38.1		Pass
70	Less than 2.0% of mass 69	379	0.14	(0.38) [a]	Pass
127	40.0 - 60.0% of mass 198	145813	55.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	264920	100.0		Pass
199	5.0 - 9.0% of mass 198	18114	6.84		Pass
275	10.0 - 30.0% of mass 198	74194	28.0		Pass
365	1.0 - 100.0% of mass 198	12288	4.64		Pass
441	Present, but less than mass 443	35856	13.5	(75.7) [b]	Pass
442	40.0 - 100.0% of mass 198	250069	94.4		Pass
443	17.0 - 23.0% of mass 442	47370	17.9	(18.9) [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
E6P2588-CC2562	6P481783.D	05/10/19	09:11	00:12	Continuing cal 50
E6P2588-CC2563	6P481784.D	05/10/19	09:35	00:36	Continuing cal 50
OP20135-MB2	6P481786.D	05/10/19	10:24	01:25	Method Blank
OP20233-MB	6P481786.D	05/10/19	10:24	01:25	Method Blank
OP20233-LB21	6P481787.D	05/10/19	10:48	01:49	Leachate Blank
OP20233-BS	6P481788.D	05/10/19	11:12	02:13	Blank Spike
OP20135-BS2	6P481788.D	05/10/19	11:12	02:13	Blank Spike
OP20110-MB	6P481789.D	05/10/19	11:37	02:38	Method Blank
JC87093-1	6P481790.D	05/10/19	12:01	03:02	S-155 (10-12)
JC87093-6	6P481791.D	05/10/19	12:25	03:26	S-158 (11-13)
JC87093-1	6P481792.D	05/10/19	12:50	03:51	S-155 (10-12)
ZZZZZZ	6P481793.D	05/10/19	13:14	04:15	(unrelated sample)
JC87093-6	6P481794.D	05/10/19	13:38	04:39	S-158 (11-13)
ZZZZZZ	6P481795.D	05/10/19	14:03	05:04	(unrelated sample)
ZZZZZZ	6P481796.D	05/10/19	14:27	05:28	(unrelated sample)
ZZZZZZ	6P481797.D	05/10/19	14:52	05:53	(unrelated sample)
OP20233-MS	6P481798.D	05/10/19	15:16	06:17	Matrix Spike
OP20233-LS13	6P481798.D	05/10/19	15:16	06:17	Leachate Spike
OP20233-MSD	6P481799.D	05/10/19	15:41	06:42	Matrix Spike Duplicate

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2588-DFTPP
Lab File ID: 6P481782.D
Instrument ID: GCMS6P
Injection Date: 05/10/19
Injection Time: 08:59

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
OP20315-MB1	6P481803.D	05/10/19	16:05	07:06	Method Blank
OP20315-BS1	6P481804.D	05/10/19	16:30	07:31	Blank Spike
JC87814-1	6P481805.D	05/10/19	16:54	07:55	(used for QC only; not part of job JC87093)
JC87814-1	6P481809.D	05/10/19	17:19	08:20	(used for QC only; not part of job JC87093)
OP20315-MS	6P481806.D	05/10/19	19:26	10:27	Matrix Spike
OP20315-MSD	6P481807.D	05/10/19	19:50	10:51	Matrix Spike Duplicate
ZZZZZZ	6P481800.D	05/10/19	20:14	11:15	(unrelated sample)
ZZZZZZ	6P481801.D	05/10/19	20:39	11:40	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5844-DFTPP
Lab File ID: P129140.D
Instrument ID: GCMSP
Injection Date: 04/23/19
Injection Time: 22:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	56915	32.1		Pass
68	Less than 2.0% of mass 69	179	0.10	(0.25) [a]	Pass
69	Mass 69 relative abundance	71554	40.4		Pass
70	Less than 2.0% of mass 69	52	0.03	(0.07) [a]	Pass
127	40.0 - 60.0% of mass 198	85866	48.5		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	177125	100.0		Pass
199	5.0 - 9.0% of mass 198	12424	7.01		Pass
275	10.0 - 30.0% of mass 198	43450	24.5		Pass
365	1.0 - 100.0% of mass 198	6536	3.69		Pass
441	Present, but less than mass 443	13691	7.73	(72.9) [b]	Pass
442	40.0 - 100.0% of mass 198	94040	53.1		Pass
443	17.0 - 23.0% of mass 442	18788	10.6	(20.0) [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
EP5844-IC5844	P129141A.D	04/24/19	02:03	03:05	Initial cal 100
EP5844-IC5844	P129142A.D	04/24/19	02:30	03:32	Initial cal 80
EP5844-ICC5844	P129143A.D	04/24/19	02:57	03:59	Initial cal 50
EP5844-IC5844	P129144A.D	04/24/19	03:24	04:26	Initial cal 25
EP5844-IC5844	P129145A.D	04/24/19	03:51	04:53	Initial cal 10
EP5844-IC5844	P129146A.D	04/24/19	04:18	05:20	Initial cal 5
EP5844-IC5844	P129147.D	04/24/19	04:45	05:47	Initial cal 2
EP5844-IC5844	P129148.D	04/24/19	05:12	06:14	Initial cal 1
EP5844-ICV5844	P129149.D	04/24/19	05:39	06:41	Initial cal verification 50
EP5844-ICV5844	P129150.D	04/24/19	06:06	07:08	Initial cal verification 50
EP5844-ICV5844	P129151.D	04/24/19	06:33	07:35	Initial cal verification 50
EP5844-ICV5844	P129152.D	04/24/19	07:00	08:02	Initial cal verification 50
EP5844-ICV5844	P129153.D	04/24/19	07:27	08:29	Initial cal verification 50
EP5844-ICV5844	P129154.D	04/24/19	07:54	08:56	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5845-DFTPP
Lab File ID: P129155.D
Instrument ID: GCMSP
Injection Date: 04/24/19
Injection Time: 08:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	44871	36.9		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	55085	45.3		Pass
70	Less than 2.0% of mass 69	231	0.19	(0.42) [a]	Pass
127	40.0 - 60.0% of mass 198	62498	51.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	121520	100.0		Pass
199	5.0 - 9.0% of mass 198	7568	6.23		Pass
275	10.0 - 30.0% of mass 198	30287	24.9		Pass
365	1.0 - 100.0% of mass 198	5190	4.27		Pass
441	Present, but less than mass 443	9479	7.80	(86.3) [b]	Pass
442	40.0 - 100.0% of mass 198	61008	50.2		Pass
443	17.0 - 23.0% of mass 442	10978	9.03	(18.0) [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
EP5845-IC5845	P129156.D	04/24/19	08:30	00:13	Initial cal 100
EP5845-IC5845	P129157.D	04/24/19	08:57	00:40	Initial cal 80
EP5845-ICC5845	P129158.D	04/24/19	09:24	01:07	Initial cal 50
EP5845-IC5845	P129159.D	04/24/19	09:51	01:34	Initial cal 25
EP5845-IC5845	P129160.D	04/24/19	10:18	02:01	Initial cal 10
EP5845-IC5845	P129161.D	04/24/19	10:45	02:28	Initial cal 5
EP5845-IC5845	P129162.D	04/24/19	11:12	02:55	Initial cal 2
EP5845-IC5845	P129163.D	04/24/19	11:39	03:22	Initial cal 1
EP5845-ICV5845	P129164.D	04/24/19	12:07	03:50	Initial cal verification 50
EP5845-ICV5845	P129165.D	04/24/19	12:34	04:17	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5846-DFTPP
Lab File ID: P129171.D
Instrument ID: GCMSP
Injection Date: 04/24/19
Injection Time: 15:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	52650	40.1		Pass
68	Less than 2.0% of mass 69	1163	0.89	(1.85) [a]	Pass
69	Mass 69 relative abundance	62917	47.9		Pass
70	Less than 2.0% of mass 69	336	0.26	(0.53) [a]	Pass
127	40.0 - 60.0% of mass 198	73506	56.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	131282	100.0		Pass
199	5.0 - 9.0% of mass 198	9203	7.01		Pass
275	10.0 - 30.0% of mass 198	32757	25.0		Pass
365	1.0 - 100.0% of mass 198	5447	4.15		Pass
441	Present, but less than mass 443	9758	7.43	(83.0) [b]	Pass
442	40.0 - 100.0% of mass 198	61629	46.9		Pass
443	17.0 - 23.0% of mass 442	11757	8.96	(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
EP5846-IC5846	P129172.D	04/24/19	16:08	01:08	Initial cal 100
EP5846-IC5846	P129173.D	04/24/19	16:35	01:35	Initial cal 80
EP5846-ICC5846	P129174.D	04/24/19	17:02	02:02	Initial cal 50
EP5846-IC5846	P129175.D	04/24/19	17:29	02:29	Initial cal 25
EP5846-IC5846	P129176.D	04/24/19	17:56	02:56	Initial cal 10
EP5846-IC5846	P129177.D	04/24/19	18:23	03:23	Initial cal 5
EP5846-IC5846	P129178.D	04/24/19	18:50	03:50	Initial cal 2
EP5846-ICV5846	P129180.D	04/24/19	19:44	04:44	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5856-DFTPP
Lab File ID: P129365.D
Instrument ID: GCMSP
Injection Date: 05/07/19
Injection Time: 12:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	48117	41.6		Pass
68	Less than 2.0% of mass 69	747	0.65	(1.26) [a]	Pass
69	Mass 69 relative abundance	59428	51.4		Pass
70	Less than 2.0% of mass 69	406	0.35	(0.68) [a]	Pass
127	40.0 - 60.0% of mass 198	64885	56.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	115658	100.0		Pass
199	5.0 - 9.0% of mass 198	7801	6.74		Pass
275	10.0 - 30.0% of mass 198	27192	23.5		Pass
365	1.0 - 100.0% of mass 198	4550	3.93		Pass
441	Present, but less than mass 443	7276	6.29	(77.0) [b]	Pass
442	40.0 - 100.0% of mass 198	48488	41.9		Pass
443	17.0 - 23.0% of mass 442	9454	8.17	(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
EP5856-CC5844	P129366.D	05/07/19	12:44	00:12	Continuing cal 25
EP5856-CC5845	P129367.D	05/07/19	13:11	00:39	Continuing cal 25
OP20145-MB1	P129368.D	05/07/19	13:38	01:06	Method Blank
OP20110-MB	P129369.D	05/07/19	14:13	01:41	Method Blank
OP20110-BS	P129370.D	05/07/19	14:40	02:08	Blank Spike
ZZZZZZ	P129371.D	05/07/19	15:07	02:35	(unrelated sample)
ZZZZZZ	P129372.D	05/07/19	15:34	03:02	(unrelated sample)
OP20110-MS	P129374.D	05/07/19	16:28	03:56	Matrix Spike
OP20110-MSD	P129375.D	05/07/19	16:56	04:24	Matrix Spike Duplicate
JC87093-7	P129376.D	05/07/19	17:23	04:51	S-158 (18-20)
ZZZZZZ	P129377.D	05/07/19	17:50	05:18	(unrelated sample)
JC87093-9	P129378.D	05/07/19	18:17	05:45	S-159 (18-20)
JC87093-10	P129379.D	05/07/19	18:44	06:12	S-153 (7-9)
JC87093-8	P129380.D	05/07/19	19:12	06:40	S-159 (11-13)
JC87093-2	P129381.D	05/07/19	19:39	07:07	S-155 (13-15)
JC87093-11	P129382.D	05/07/19	20:06	07:34	S-153 (13.5-15)
JC87093-12	P129383.D	05/07/19	20:33	08:01	SO-DUP2-0426
ZZZZZZ	P129384.D	05/07/19	21:01	08:29	(unrelated sample)
ZZZZZZ	P129385.D	05/07/19	21:28	08:56	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EP5856-DFTPP	**Injection Date:**	05/07/19
Lab File ID:	P129365.D	**Injection Time:**	12:32
Instrument ID:	GCMSP		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	P129386.D	05/07/19	21:55	09:23	(unrelated sample)
ZZZZZZ	P129387.D	05/07/19	22:22	09:50	(unrelated sample)
ZZZZZZ	P129388.D	05/07/19	22:49	10:17	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5857-DFTPP
Lab File ID: P129392.D
Instrument ID: GCMSP
Injection Date: 05/08/19
Injection Time: 08:57

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	41709	41.6		Pass
68	Less than 2.0% of mass 69	548	0.55	(1.07) [a]	Pass
69	Mass 69 relative abundance	51424	51.3		Pass
70	Less than 2.0% of mass 69	343	0.34	(0.67) [a]	Pass
127	40.0 - 60.0% of mass 198	55240	55.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	100338	100.0		Pass
199	5.0 - 9.0% of mass 198	7234	7.21		Pass
275	10.0 - 30.0% of mass 198	23328	23.2		Pass
365	1.0 - 100.0% of mass 198	3766	3.75		Pass
441	Present, but less than mass 443	6539	6.52	(76.1) [b]	Pass
442	40.0 - 100.0% of mass 198	44069	43.9		Pass
443	17.0 - 23.0% of mass 442	8589	8.56	(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
EP5857-CC5844	P129393.D	05/08/19	09:12	00:15	Continuing cal 50
EP5857-CC5845	P129394.D	05/08/19	09:39	00:42	Continuing cal 50
EP5857-CC5846	P129395.D	05/08/19	10:06	01:09	Continuing cal 50
OP19637-MB3	P129396.D	05/08/19	10:33	01:36	Method Blank
ZZZZZZ	P129397.D	05/08/19	11:00	02:03	(unrelated sample)
ZZZZZZ	P129398.D	05/08/19	11:27	02:30	(unrelated sample)
ZZZZZZ	P129399.D	05/08/19	11:54	02:57	(unrelated sample)
OP20230-MB1	P129400.D	05/08/19	12:21	03:24	Method Blank
OP20230-BS1	P129401.D	05/08/19	12:48	03:51	Blank Spike
OP20067-MB	P129402.D	05/08/19	13:15	04:18	Method Blank
ZZZZZZ	P129403.D	05/08/19	13:42	04:45	(unrelated sample)
ZZZZZZ	P129404.D	05/08/19	14:10	05:13	(unrelated sample)
ZZZZZZ	P129405.D	05/08/19	14:37	05:40	(unrelated sample)
JC87449-1	P129406.D	05/08/19	15:04	06:07	(used for QC only; not part of job JC87093)
ZZZZZZ	P129407.D	05/08/19	15:31	06:34	(unrelated sample)
ZZZZZZ	P129408.D	05/08/19	15:58	07:01	(unrelated sample)
ZZZZZZ	P129409.D	05/08/19	16:25	07:28	(unrelated sample)
ZZZZZZ	P129410.D	05/08/19	16:52	07:55	(unrelated sample)
JC87093-10	P129411.D	05/08/19	17:20	08:23	S-153 (7-9)

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5857-DFTPP
Lab File ID: P129392.D
Instrument ID: GCMSP
Injection Date: 05/08/19
Injection Time: 08:57

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JC87093-8	P129412.D	05/08/19	18:47	09:50	S-159 (11-13)
OP20230-MS	P129413.D	05/08/19	19:14	10:17	Matrix Spike
OP20230-MSD	P129414.D	05/08/19	19:41	10:44	Matrix Spike Duplicate
JC87093-3	P129415.D	05/08/19	20:08	11:11	S-154 (9-11)
JC87093-4	P129416.D	05/08/19	20:35	11:38	S-154 (12-14)

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5858-DFTPP
Lab File ID: P129418.D
Instrument ID: GCMSP
Injection Date: 05/09/19
Injection Time: 09:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	39859	38.1		Pass
68	Less than 2.0% of mass 69	543	0.52	(1.10) [a]	Pass
69	Mass 69 relative abundance	49347	47.2		Pass
70	Less than 2.0% of mass 69	238	0.23	(0.48) [a]	Pass
127	40.0 - 60.0% of mass 198	54496	52.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	104493	100.0		Pass
199	5.0 - 9.0% of mass 198	7300	6.99		Pass
275	10.0 - 30.0% of mass 198	24337	23.3		Pass
365	1.0 - 100.0% of mass 198	3594	3.44		Pass
441	Present, but less than mass 443	7304	6.99	(77.2) [b]	Pass
442	40.0 - 100.0% of mass 198	46642	44.6		Pass
443	17.0 - 23.0% of mass 442	9459	9.05	(20.3) [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
EP5858-CC5844	P129419.D	05/09/19	09:23	00:11	Continuing cal 25
EP5858-CC5845	P129420.D	05/09/19	09:50	00:38	Continuing cal 25
EP5858-CC5846	P129421.D	05/09/19	10:17	01:05	Continuing cal 25
OP20228-MB1	P129422.D	05/09/19	10:44	01:32	Method Blank
OP20228-BS1	P129423.D	05/09/19	11:11	01:59	Blank Spike
ZZZZZZ	P129424.D	05/09/19	11:38	02:26	(unrelated sample)
ZZZZZZ	P129425.D	05/09/19	12:05	02:53	(unrelated sample)
JC87093-8	P129426.D	05/09/19	12:32	03:20	S-159 (11-13)
ZZZZZZ	P129427.D	05/09/19	13:00	03:48	(unrelated sample)
JC87093-3	P129428.D	05/09/19	13:27	04:15	S-154 (9-11)
OP20228-MS	P129434.D	05/09/19	13:54	04:42	Matrix Spike
OP20228-MSD	P129435.D	05/09/19	14:21	05:09	Matrix Spike Duplicate
OP20210-MB	P129447.D	05/09/19	14:48	05:36	Method Blank
ZZZZZZ	P129448.D	05/09/19	15:15	06:03	(unrelated sample)
ZZZZZZ	P129449.D	05/09/19	15:42	06:30	(unrelated sample)
ZZZZZZ	P129450.D	05/09/19	16:10	06:58	(unrelated sample)
ZZZZZZ	P129451.D	05/09/19	16:37	07:25	(unrelated sample)
ZZZZZZ	P129452.D	05/09/19	17:04	07:52	(unrelated sample)
ZZZZZZ	P129429A.D	05/09/19	18:00	08:48	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5858-DFTPP
Lab File ID: P129418.D
Instrument ID: GCMSP
Injection Date: 05/09/19
Injection Time: 09:12

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	P129430.D	05/09/19	18:28	09:16	(unrelated sample)
JC87093-5	P129431.D	05/09/19	18:55	09:43	SO-DUP-0426-1
JC87093-6	P129432.D	05/09/19	19:22	10:10	S-158 (11-13)
JC87093-1	P129433.D	05/09/19	19:49	10:37	S-155 (10-12)
JC87521-8	P129441.D	05/09/19	20:43	11:31	(used for QC only; not part of job JC87093)
ZZZZZZ	P129445.D	05/09/19	21:10	11:58	(unrelated sample)

Internal Standard Area Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E6P2588-CC2562	**Injection Date:**	05/10/19
Lab File ID:	6P481783.D	**Injection Time:**	09:11
Instrument ID:	GCMS6P	**Method:**	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	553833	4.21	2315101	5.19	1363428	6.86	2439898	8.53	2093121	11.69	2208009	13.29
Upper Limit [a]	1107666	4.71	4630202	5.69	2726856	7.36	4879796	9.03	4186242	12.19	4416018	13.79
Lower Limit [b]	276917	3.71	1157551	4.69	681714	6.36	1219949	8.03	1046561	11.19	1104005	12.79

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
OP20135-MB2	472124	4.21	1808049	5.18	991365	6.85	1893948	8.52	1744796	11.68	1792086	13.28
OP20233-MB	472124	4.21	1808049	5.18	991365	6.85	1893948	8.52	1744796	11.68	1792086	13.28
OP20233-LB21	490193	4.21	1850877	5.18	1016909	6.85	1930495	8.52	1783618	11.68	1838320	13.28
OP20233-BS	513601	4.21	1924014	5.18	1043946	6.85	1910543	8.52	1768507	11.69	1720538	13.28
OP20135-BS2	513601	4.21	1924014	5.18	1043946	6.85	1910543	8.52	1768507	11.69	1720538	13.28
OP20110-MB	510409	4.21	1876568	5.18	987686	6.85	1786422	8.51	1561293	11.68	1489418	13.28
JC87093-1	508403	4.21	1965771	5.18	1077959	6.85	2033682	8.51	1903514	11.68	1979968	13.28
JC87093-6	489460	4.21	1882365	5.18	1027714	6.85	1992558	8.52	1936958	11.68	1928942	13.28
JC87093-1	511455	4.21	1958665	5.18	1083460	6.85	2041956	8.52	1997388	11.69	2034813	13.29
ZZZZZZ	475059	4.21	1725055	5.18	898626	6.85	1720200	8.51	1328346	11.68	1293463	13.28
JC87093-6	531020	4.21	2106986	5.19	1191377	6.86	2162959	8.53	2107959	11.70	1954323	13.30
ZZZZZZ	495399	4.21	1909390	5.18	984501	6.85	1866442	8.51	1724189	11.68	1713730	13.28
ZZZZZZ	518380	4.21	1969950	5.18	1062532	6.85	2040228	8.52	1875909	11.68	1657946	13.29
ZZZZZZ	508075	4.21	2016204	5.18	1254843	6.86	2177542	8.53	1875022	11.68	1923434	13.28
OP20233-MS	465707	4.21	1752362	5.18	1001183	6.85	1750147	8.52	1688033	11.69	1506875	13.29
OP20233-LS13	465707	4.21	1752362	5.18	1001183	6.85	1750147	8.52	1688033	11.69	1506875	13.29
OP20233-MSD	430337	4.21	1647432	5.18	893574	6.85	1676933	8.52	1580837	11.68	1380623	13.29
OP20315-MB1	482477	4.21	1835189	5.18	988650	6.85	1852359	8.52	1764636	11.68	1752416	13.28
OP20315-BS1	467326	4.21	1730621	5.18	925548	6.85	1687734	8.52	1485850	11.68	1517668	13.28
JC87814-1	487579	4.21	1841307	5.18	1105389	6.86	2355973	8.56	2060817	11.72	1621794	13.29
JC87814-1	435535	4.21	1655569	5.18	880997	6.85	2098141	8.53	1338585	11.68	1368970	13.28
OP20315-MS	421945	4.21	1637417	5.18	944693	6.86	2411637	8.56	1615031	11.71	1189654	13.29
OP20315-MSD	519310	4.21	1979287	5.18	1132494	6.86	2523590	8.56	1938140	11.71	1351834	13.29
ZZZZZZ	474015	4.21	1842114	5.18	1049881	6.85	1948948	8.52	1625297	11.68	1653259	13.28
ZZZZZZ	501282	4.21	1926127	5.18	1047548	6.85	2066756	8.51	1810396	11.68	1811266	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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EP5856-CC5844	**Injection Date:**	05/07/19
Lab File ID:	P129366.D	**Injection Time:**	12:44
Instrument ID:	GCMSP	**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	177681	3.76	616625	4.70	374206	5.94	627554	7.33	558176	11.97	580998	14.90
Upper Limit [a]	355362	4.26	1233250	5.20	748412	6.44	1255108	7.83	1116352	12.47	1161996	15.40
Lower Limit [b]	88841	3.26	308313	4.20	187103	5.44	313777	6.83	279088	11.47	290499	14.40

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
OP20145-MB1	200282	3.76	688120	4.69	375507	5.94	671849	7.33	584458	11.96	563334	14.89
OP20110-MB	192020	3.76	659405	4.69	353720	5.94	618727	7.33	530688	11.96	503785	14.89
OP20110-BS	164210	3.76	524726	4.70	297525	5.94	521331	7.33	492289	11.97	453527	14.89
ZZZZZZ	165890	3.76	564566	4.70	305381	5.94	544816	7.33	493341	11.96	484916	14.89
ZZZZZZ	172627	3.76	585098	4.70	306813	5.94	543874	7.33	483603	11.96	474298	14.90
OP20110-MS	153344	3.76	484634	4.70	266878	5.94	475598	7.34	434661	11.97	431476	14.90
OP20110-MSD	157674	3.76	501689	4.70	282104	5.94	487087	7.34	445894	11.97	426745	14.90
JC87093-7	179257	3.76	590135	4.70	298917	5.94	521492	7.33	440447	11.97	439326	14.90
ZZZZZZ	182123	3.76	598085	4.70	308301	5.94	541790	7.33	466700	11.96	446714	14.90
JC87093-9	177461	3.76	595967	4.70	304572	5.94	500461	7.33	459532	11.97	448510	14.90
JC87093-10	172256	3.76	568145	4.70	264804	5.94	455599	7.36	434077	12.00	456260	14.91
JC87093-8	158807	3.76	439103	4.71	182781*	5.97	386669	7.40	417353	11.99	440354	14.91
JC87093-2	187257	3.76	610208	4.70	306726	5.94	525191	7.34	460693	11.98	461011	14.92
JC87093-11	169434	3.76	551922	4.70	276306	5.94	469217	7.34	426467	11.99	441169	14.92
JC87093-12	169094	3.76	536654	4.70	267912	5.94	471682	7.34	425992	11.99	442162	14.92
ZZZZZZ	176903	3.76	602639	4.70	308108	5.94	539550	7.33	462838	11.97	452902	14.91
ZZZZZZ	182292	3.76	603755	4.70	315110	5.94	540466	7.33	467635	11.98	477266	14.91
ZZZZZZ	185700	3.76	601560	4.70	313854	5.94	533507	7.33	449580	11.99	478587	14.93
ZZZZZZ	193972	3.76	613712	4.70	291741	5.94	531545	7.34	458621	12.01	491974	14.96
ZZZZZZ	177812	3.76	591347	4.70	303841	5.94	519622	7.34	460837	12.01	488912	14.94

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EP5857-CC5844	**Injection Date:**	05/08/19
Lab File ID:	P129393.D	**Injection Time:**	09:12
Instrument ID:	GCMSP	**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	143485	3.75	497061	4.69	310643	5.93	511788	7.32	474180	11.96	503346	14.89
Upper Limit [a]	286970	4.25	994122	5.19	621286	6.43	1023576	7.82	948360	12.46	1006692	15.39
Lower Limit [b]	71743	3.25	248531	4.19	155322	5.43	255894	6.82	237090	11.46	251673	14.39

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
OP19637-MB3	156456	3.75	547339	4.68	310996	5.93	513549	7.31	432390	11.94	470806	14.86
ZZZZZZ	159011	3.75	577720	4.68	319120	5.93	532389	7.31	429293	11.94	461758	14.87
ZZZZZZ	149540	3.75	548005	4.68	300177	5.93	497003	7.31	410383	11.94	445542	14.87
ZZZZZZ	147334	3.75	528763	4.68	298534	5.93	492797	7.31	389418	11.94	421049	14.86
OP20230-MB1	160856	3.75	547899	4.68	301744	5.93	548726	7.31	490986	11.94	477783	14.87
OP20230-BS1	156952	3.75	536324	4.68	302530	5.93	556338	7.31	511082	11.94	486594	14.87
OP20067-MB	180997	3.75	630146	4.68	344584	5.93	622248	7.31	544375	11.94	518609	14.87
ZZZZZZ	150094	3.75	532144	4.68	286891	5.93	533766	7.31	458035	11.94	451022	14.86
ZZZZZZ	148510	3.75	507288	4.68	278688	5.93	509490	7.31	442838	11.94	420314	14.86
ZZZZZZ	136250	3.75	463080	4.68	257498	5.93	464217	7.31	407020	11.94	399261	14.86
JC87449-1	113774	3.77	340808	4.69	267222	5.93	475746	7.31	470225	11.94	467436	15.00
ZZZZZZ	78683	3.76	407586	4.71	270391	5.93	519421	7.31	478827	11.94	446626	15.00
ZZZZZZ	112582	3.77	384417	4.71	281040	5.93	543574	7.31	488010	11.94	461846	14.87
ZZZZZZ	176619	3.75	592743	4.68	305437	5.93	556569	7.32	471875	11.96	477197	14.89
ZZZZZZ	174647	3.75	589441	4.69	315029	5.93	560228	7.32	475855	11.96	462864	14.89
JC87093-10	169902	3.75	565817	4.69	296428	5.93	479255	7.33	472877	11.95	486949	14.88
JC87093-8	176296	3.75	539981	4.69	251428	5.94	466780	7.34	475372	11.95	488168	14.88
OP20230-MS	115885	3.77	346007	4.70	277574	5.93	526914	7.32	473024	11.95	465350	14.93
OP20230-MSD	117234	3.77	347277	4.70	274041	5.93	515860	7.32	472889	11.95	463027	14.98
JC87093-3	169013	3.75	564424	4.69	290846	5.93	522061	7.32	469115	11.97	500315	14.93
JC87093-4	177079	3.75	597795	4.69	308487	5.93	540875	7.33	475996	11.99	476359	14.92

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EP5858-CC5844	**Injection Date:**	05/09/19
Lab File ID:	P129419.D	**Injection Time:**	09:23
Instrument ID:	GCMSP	**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	183114	3.74	638658	4.68	392900	5.92	646551	7.31	570278	11.94	595124	14.87
Upper Limit [a]	366228	4.24	1277316	5.18	785800	6.42	1293102	7.81	1140556	12.44	1190248	15.37
Lower Limit [b]	91557	3.24	319329	4.18	196450	5.42	323276	6.81	285139	11.44	297562	14.37

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
OP20228-MB1	159153	3.74	555518	4.68	303683	5.92	555222	7.30	502499	11.93	500939	14.85
OP20228-BS1	150033	3.74	488255	4.68	280596	5.92	491247	7.31	472411	11.93	544578	14.86
ZZZZZZ	154962	3.74	529598	4.68	287767	5.92	519405	7.30	475320	11.92	463879	14.85
ZZZZZZ	147532	3.74	519694	4.68	297438	5.92	562086	7.30	503941	11.92	510649	14.85
JC87093-8	156078	3.74	521086	4.68	252146	5.92	481361	7.31	502106	11.92	513059	14.85
ZZZZZZ	126899	3.74	448353	4.68	273983	5.92	509706	7.30	472275	11.92	465740	14.85
JC87093-3	159894	3.74	548356	4.68	283127	5.92	511318	7.30	458625	11.93	480218	14.86
OP20228-MS	145342	3.74	475804	4.68	272868	5.92	474791	7.31	454386	11.93	434292	14.86
OP20228-MSD	139610	3.74	476707	4.68	260566	5.92	480449	7.31	463947	11.93	446678	14.86
OP20210-MB	184386	3.74	639140	4.68	346224	5.92	625281	7.30	542800	11.92	512192	14.85
ZZZZZZ	180089	3.74	597386	4.68	307932	5.92	518631	7.31	468140	11.94	473486	14.88
ZZZZZZ	200661	3.74	678273	4.68	368555	5.92	665028	7.31	623556	11.94	612589	14.87
ZZZZZZ	110016	3.74	346890	4.68	211656	5.93	374525	7.32	332948	11.94	327411	14.88
ZZZZZZ	149314	3.74	488875	4.68	247348	5.92	442726	7.31	411159	11.94	415219	14.86
ZZZZZZ	147343	3.74	501240	4.68	263770	5.92	494546	7.31	463847	11.93	450207	14.86
ZZZZZZ	165466	3.74	556160	4.68	270710	5.92	463117	7.31	409882	11.95	428276	14.90
ZZZZZZ	185662	3.75	628983	4.68	321369	5.92	544853	7.32	514349	11.96	551846	14.93
JC87093-5	171364	3.75	579519	4.69	300944	5.93	532688	7.33	471721	12.00	482344	14.95
JC87093-6 [c]	139208	3.76	309028*	4.73	247754	5.94	437951	7.36	444685	12.09	438399	15.00
JC87093-1 [c]	163549	3.75	547660	4.69	282399	5.94	447119	7.39	457080	12.10	455168	15.03
JC87521-8	126304	3.75	441035	4.69	244601	5.93	453347	7.32	423796	11.97	408194	14.91
ZZZZZZ	124406	3.75	455349	4.69	250215	5.93	461580	7.32	418405	11.97	430743	14.91

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) Dilution required due to viscosity of the extract matrix.

Surrogate Recovery Summary

Job Number: JC87093
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
JC87093-1	6P481790.D	0* [a]	0* [a]	0* [a]	0* [a]	77	0* [a]
JC87093-1	6P481792.D	59	56	60	77	80	82
JC87093-1	P129433.D	71	75	76	79	88	77
JC87093-2	P129381.D	61	60	66	67	80	72
JC87093-3	P129428.D	67	73	63	74	84	75
JC87093-3	P129415.D	70	70	74	71	87	74
JC87093-4	P129416.D	65	63	67	67	79	77
JC87093-5	P129431.D	67	68	68	70	85	77
JC87093-6	6P481791.D	82	57	64	94	87	83
JC87093-6	6P481794.D	80	88	62	85	77	76
JC87093-6	P129432.D	85	77	71	105	81	71
JC87093-7	P129376.D	67	67	69	74	83	77
JC87093-8	P129412.D	61	64	72	79	83	68
JC87093-8	P129426.D	64	70	69	83	91	76
JC87093-8	P129380.D	66	72	90	89	104	76
JC87093-9	P129378.D	73	73	76	80	86	79
JC87093-10	P129411.D	60	63	71	69	82	71
JC87093-10	P129379.D	64	65	74	69	83	76
JC87093-11	P129382.D	65	67	74	70	84	81
JC87093-12	P129383.D	62	62	61	68	77	69
OP20110-BS	P129370.D	91	89	79	87	89	85
OP20110-MB	P129369.D	78	79	72	83	86	79
OP20110-MB	6P481789.D	81	83	65	89	80	79
OP20110-MS	P129374.D	77	79	80	79	88	85
OP20110-MSD	P129375.D	80	80	75	81	83	81

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	23-115%
S2 = Phenol-d5	27-114%
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.

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2562-ICC2562
Lab FileID: 6P481129.D

Response Factor Report MS6P

Method : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
Last Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration

Calibration Files
2 =6p481133.D 5 =6p481132.D 25 =6p481130.D 80 =6p481128.D
100 =6p481127.D 50 =6p481129.D 1 =6p481134.D 10 =6p481131.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.507	0.517	0.531	0.535	0.516	0.545	0.522	0.540	0.527	2.50
3) Pyridine	0.956	1.065	1.279	1.285	1.239	1.288		1.272	1.198	11.09
4) N-Nitrosodim	0.665	0.691	0.766	0.742	0.723	0.748	0.499	0.751	0.698	12.47
5) 2-Fluorophen	0.975	1.137	1.280	1.294	1.267	1.326	0.856	1.226	1.170	14.52
6) Indene	2.226	2.253	2.221	2.064	1.997	2.189	2.143	2.257	2.169	4.35
7) Cumene	3.240	3.194	3.159	2.901	2.782	3.095	3.218	3.268	3.107	5.63
8) Phenol-d5	1.361	1.468	1.510	1.418	1.379	1.483	1.299	1.512	1.429	5.42
9) Phenol	1.713	1.778	1.823	1.681	1.632	1.796	1.694	1.835	1.744	4.24
10) Aniline	1.610	1.766	1.558	1.420	1.307	1.491		1.742	1.556	10.69
11) bis(2-Chloro	1.258	1.218	1.241	1.185	1.174	1.221	1.127	1.241	1.208	3.60
12) 2-Chlorophen	1.308	1.414	1.431	1.390	1.353	1.454	1.263	1.451	1.383	5.03
13) Decane	1.155	1.114	1.077	0.953	0.902	1.028	1.136	1.127	1.061	8.71
14) 1,3-Dichloro	1.584	1.588	1.594	1.533	1.475	1.588	1.620	1.631	1.577	3.19
15) 1,4-Dichloro	1.620	1.613	1.621	1.536	1.493	1.622	1.755	1.650	1.614	4.80
16) Benzyl alcoh	0.676	0.713	0.796	0.758	0.753	0.807		0.754	0.751	6.02
17) 1,2-Dichloro	1.486	1.497	1.526	1.399	1.367	1.492	1.526	1.567	1.482	4.52
18) Acetophenone	1.854	1.904	1.917	1.806	1.795	1.905	1.744	1.948	1.859	3.84
19) 2-Methylphen	1.144	1.191	1.239	1.170	1.149	1.224	1.026	1.248	1.174	6.11
20) 2,2'-oxybis(	0.417	0.432	0.438	0.435	0.427	0.442	0.418	0.439	0.431	2.21
21) 3&4-Methylph	1.166	1.217	1.340	1.262	1.242	1.320	1.011	1.316	1.234	8.71
22) n-Nitroso-di	0.819	0.846	0.864	0.799	0.791	0.843	0.808	0.883	0.832	3.93
23) Hexachloroet	0.519	0.553	0.571	0.586	0.581	0.587	0.535	0.574	0.563	4.48
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.337	0.344	0.344	0.324	0.313	0.342	0.307	0.352	0.333	4.88
26) Nitrobenzene	0.343	0.360	0.354	0.325	0.311	0.343	0.312	0.362	0.339	6.06
27) Quinoline	0.676	0.741	0.754	0.744	0.728	0.767	0.632	0.763	0.726	6.54
28) Isophorone	0.587	0.612	0.600	0.545	0.523	0.581	0.560	0.622	0.579	5.86
29) 2-Nitropheno	0.177	0.205	0.214	0.200	0.189	0.215	0.168	0.216	0.198	9.29
30) 2,4-Dimethyl		0.247	0.316	0.322	0.317	0.331		0.281	0.302	10.54
31) Benzoic acid			0.304	0.325	0.315	0.326		0.257	0.305	9.36
32) bis(2-Chloro	0.374	0.388	0.372	0.347	0.332	0.369	0.340	0.387	0.364	5.88
33) 2,4-Dichloro	0.268	0.308	0.316	0.305	0.293	0.319	0.262	0.319	0.299	7.49
34) 2,6-Dichloro	0.283	0.303	0.308	0.294	0.287	0.309	0.273	0.310	0.296	4.63
35) 1,3,5-Trichl	0.359	0.366	0.364	0.338	0.319	0.355	0.365	0.367	0.354	4.87
36) 1,2,4-Trichl	0.348	0.347	0.345	0.335	0.324	0.347	0.344	0.348	0.342	2.49
37) 1,2,3-Trichl	0.335	0.347	0.348	0.336	0.327	0.346	0.340	0.346	0.340	2.20
38) Naphthalene	1.086	1.111	1.056	0.946	0.891	1.022	1.116	1.106	1.042	8.01
39) 4-Chloroanil	0.434	0.452	0.426	0.384	0.374	0.411	0.419	0.457	0.420	7.05
40) 2,3-Dichloro	0.372	0.381	0.392	0.380	0.364	0.391	0.365	0.389	0.379	2.93
41) Caprolactam	0.109	0.129	0.138	0.134	0.138	0.139	0.099	0.137	0.128	11.86
42) Hexachlorobu	0.184	0.195	0.197	0.197	0.191	0.200	0.194	0.198	0.195	2.54
43) 4-Chloro-3-m	0.279	0.305	0.324	0.315	0.313	0.328	0.265	0.325	0.307	7.53
44) 2-Methylnaph	0.590	0.614	0.602	0.554	0.535	0.590	0.604	0.624	0.589	5.12
45) 1-Methylnaph	0.697	0.702	0.671	0.611	0.587	0.649	0.656	0.693	0.658	6.34

Initial Calibration Summary

Job Number: JC87093 **Sample:** E6P2562-ICC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481129.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
46) Dimethylnaph 0.678 0.727 0.719 0.670 0.651 0.708 0.726 0.724 0.700   4.23

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy       0.128 0.233 0.299 0.298 0.280       0.179 0.236  29.77
         ----- Quadratic regression -----                Coefficient =  0.9993
              Response Ratio = -0.05520 + 0.29029 *A + 0.00428 *A^2

49) 2,4,6-Trichl 0.338 0.363 0.390 0.398 0.400 0.398 0.308 0.390 0.373   9.08
50) 2,4,5-Trichl 0.349 0.377 0.419 0.431 0.429 0.431 0.331 0.409 0.397  10.02
51) 2-Fluorobiph 1.464 1.454 1.426 1.331 1.300 1.400 1.463 1.467 1.413   4.60
52) 2-Chloronaph 1.198 1.208 1.194 1.133 1.095 1.185 1.202 1.222 1.180   3.67
53) Biphenyl     1.589 1.575 1.567 1.441 1.384 1.517 1.569 1.597 1.530   5.08
54) 2-Nitroanili 0.273 0.312 0.336 0.320 0.311 0.335 0.236 0.332 0.307  11.47
55) Dimethylphth 1.364 1.396 1.387 1.331 1.320 1.390 1.360 1.414 1.370   2.39
56) Acenaphthyle 1.825 1.873 1.881 1.741 1.687 1.842 1.795 1.918 1.820   4.21
57) 2,6-Dinitrot 0.269 0.303 0.329 0.339 0.334 0.342 0.236 0.328 0.310  12.38
58) 3-Nitroanili 0.297 0.338 0.358 0.365 0.357 0.373 0.244 0.363 0.337  13.17
59) Acenaphthene 1.236 1.251 1.234 1.146 1.110 1.214 1.216 1.261 1.208   4.40
60) 2,4-Dinitrop 0.066 0.119 0.197 0.221 0.225 0.220       0.165 0.173  35.24
         ----- Quadratic regression -----                Coefficient =  0.9998
              Response Ratio = -0.02391 + 0.22118 *A + 0.00178 *A^2

61) 4-Nitropheno       0.155 0.176 0.177 0.175 0.184       0.169 0.173   5.84
62) Dibenzofuran 1.738 1.744 1.709 1.574 1.544 1.665 1.728 1.759 1.683   4.85
63) 2,4-Dinitrot 0.370 0.434 0.462 0.460 0.461 0.469 0.320 0.466 0.430  12.84
64) 2,3,4,6-Tetr 0.289 0.307 0.341 0.362 0.367 0.358 0.246 0.328 0.325  12.99
65) Diethylphtha 1.329 1.382 1.388 1.322 1.293 1.369 1.308 1.416 1.351   3.23
66) Fluorene     1.383 1.400 1.393 1.303 1.259 1.372 1.363 1.454 1.366   4.40
67) 4-Chlorophen 0.688 0.702 0.695 0.692 0.678 0.704 0.671 0.711 0.693   1.97
68) 4-Nitroanili       0.323 0.358 0.368 0.365 0.372       0.353 0.357   4.98

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro-       0.114 0.158 0.169 0.169 0.169       0.148 0.154  14.05
71) n-Nitrosodip 0.546 0.558 0.570 0.545 0.531 0.562 0.531 0.577 0.553   3.11
72) 1,2-Diphenyl 0.624 0.660 0.659 0.591 0.563 0.636 0.599 0.676 0.626   6.29
73) 2,4,6-Tribro       0.108 0.125 0.139 0.145 0.135       0.119 0.129  10.80
74) 4-Bromopheny 0.200 0.209 0.223 0.226 0.224 0.227 0.194 0.217 0.215   5.84
75) Hexachlorobe 0.233 0.243 0.257 0.270 0.268 0.263 0.235 0.252 0.252   5.69
76) Pentachlorop 0.093 0.115 0.155 0.177 0.178 0.169       0.140 0.147  22.23
         ----- Quadratic regression -----                Coefficient =  0.9998
              Response Ratio = -0.01244 + 0.16584 *A + 0.00311 *A^2

77) Phenanthrene 1.111 1.089 1.071 1.026 0.984 1.062 1.127 1.121 1.074   4.62
78) Anthracene   1.054 1.116 1.121 1.047 1.010 1.088 1.039 1.142 1.077   4.32
79) Carbazole    1.010 1.048 1.059 0.999 0.950 1.050 0.955 1.086 1.020   4.85
80) Di-n-butylph 1.122 1.223 1.279 1.178 1.132 1.264 1.017 1.312 1.191   8.23
81) Fluoranthene 1.117 1.188 1.209 1.146 1.122 1.215 1.099 1.240 1.167   4.52
82) Octadecane   0.366 0.384 0.381 0.331 0.312 0.360 0.353 0.393 0.360   7.66

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.329 1.346 1.379 1.305 1.265 1.353 1.308 1.376 1.333   2.91
85) Terphenyl-d1 0.891 0.914 0.946 0.972 0.947 0.965 0.889 0.930 0.932   3.39
86) Butylbenzylp 0.508 0.580 0.635 0.612 0.589 0.630 0.425 0.617 0.574  12.67
87) Benzo[a]anth 1.235 1.250 1.303 1.276 1.230 1.321 1.279 1.298 1.274   2.61
88) 3,3'-Dichlor 0.407 0.451 0.519 0.534 0.511 0.541 0.371 0.496 0.479  13.08
89) Chrysene     1.251 1.270 1.255 1.252 1.228 1.285 1.209 1.245 1.249   1.86
90) bis(2-Ethylh 0.678 0.807 0.883 0.841 0.817 0.876 0.587 0.863 0.794  13.34

91) I   Perylene-d12          ----------------ISTD---------------------
92) Di-n-octylph 0.906 1.138 1.329 1.228 1.163 1.307       1.270 1.192  12.11
```

8.7.1

8

Initial Calibration Summary

Job Number: JC87093 **Sample:** E6P2562-ICC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481129.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
 93) Benzo[b]fluo 1.077 1.098 1.280 1.410 1.426 1.310 0.966 1.205 1.222  13.50
 94) Benzo[k]fluo 1.026 1.122 1.101 1.055 0.970 1.187 1.077 1.113 1.082   6.10
 95) Benzo[a]pyre 0.888 0.962 1.057 1.087 1.080 1.099 0.838 1.019 1.004   9.78
 96) Indeno[1,2,3 1.167 1.241 1.398 1.489 1.466 1.499 1.124 1.337 1.340  11.05
 97) Dibenz(a,h)a 0.832 0.915 1.039 1.110 1.098 1.110 0.774 0.997 0.984  13.31
 98) Dibenz[a,h]a 1.039 1.103 1.224 1.337 1.295 1.343 1.001 1.161 1.188  11.22
 99) 7,12-Dimethy       0.319 0.514 0.588 0.586 0.583       0.416 0.501  22.28
          ----- Quadratic regression -----                Coefficient =  0.9997
               Response Ratio = -0.04819 + 0.62160 *A + -0.00574 *A^2

100) Benzo[g,h,i] 0.950 0.978 1.077 1.141 1.134 1.145 0.902 1.035 1.045   9.01


 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M6P2562.M         Tue Apr 16 16:13:42 2019   ACLIMS
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8.7.1

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2562-ICV2562
Lab FileID: 6P481135.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2562\6p481135.D Vial: 10
Acq On : 16 Apr 2019 1:06 pm Operator: angelar
Sample : icv2562-50 Inst : MS6P
Misc : op17006,e6p2562,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
Last Update : Tue Apr 16 15:28:32 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	81	0.00	4.32
4	t	N-Nitrosodimethylamine	0.698	0.724	-3.7	78	0.02	2.10
11	t	bis(2-Chloroethyl)ether	1.208	1.199	0.7	79	0.00	4.14
14	t	1,3-Dichlorobenzene	1.577	1.503	4.7	76	0.00	4.28
15	t	1,4-Dichlorobenzene	1.614	1.583	1.9	79	0.00	4.33
17	t	1,2-Dichlorobenzene	1.482	1.468	0.9	79	0.00	4.45
20	t	2,2'-oxybis(1-Chloropropa	0.431	0.501	-16.2	92	0.00	4.53
22	t	n-Nitroso-di-n-propylamin	0.832	0.847	-1.8	81	-0.01	4.63
23	t	Hexachloroethane	0.563	0.552	2.0	76	0.00	4.69
24	I	Naphthalene-d8	1.000	1.000	0.0	79	0.00	5.31
26	t	Nitrobenzene	0.339	0.325	4.1	75	0.00	4.75
28	t	Isophorone	0.579	0.579	0.0	79	-0.01	4.93
32	t	bis(2-Chloroethoxy)methan	0.364	0.358	1.6	77	0.00	5.12
36	t	1,2,4-Trichlorobenzene	0.342	0.330	3.5	75	0.00	5.27
38	t	Naphthalene	1.042	1.012	2.9	78	0.00	5.33
42	t	Hexachlorobutadiene	0.195	0.191	2.1	76	0.00	5.44
47	I	Acenaphthene-d10	1.000	1.000	0.0	78	0.00	6.99
52	t	2-Chloronaphthalene	1.180	1.102	6.6	72	0.00	6.42
55	t	Dimethylphthalate	1.370	1.268	7.4	71	0.00	6.74
56	t	Acenaphthylene	1.820	1.753	3.7	74	0.00	6.84
57	t	2,6-Dinitrotoluene	0.310	0.292	5.8	66	0.00	6.79
59	t	Acenaphthene	1.208	1.111	8.0	71	0.00	7.03
63	t	2,4-Dinitrotoluene	0.430	0.394	8.4	65	0.00	7.24
65	t	Diethylphthalate	1.351	1.241	8.1	70	0.00	7.51
66	t	Fluorene	1.366	1.286	5.9	73	0.00	7.60
67	t	4-Chlorophenyl-phenylethe	0.693	0.653	5.8	72	0.00	7.61
69	I	Phenanthrene-d10	1.000	1.000	0.0	75	0.00	8.67
71	t	n-Nitrosodiphenylamine	0.553	0.502	9.2	67	-0.01	7.75
72	t	1,2-Diphenylhydrazine	0.626	0.619	1.1	73	0.00	7.79
74	t	4-Bromophenyl-phenylether	0.215	0.215	0.0	71	0.00	8.16
75	t	Hexachlorobenzene	0.252	0.240	4.8	68	0.00	8.23
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.074	1.008	6.1	71	0.00	8.69

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2562-ICV2562
Lab FileID: 6P481135.D

78	t	Anthracene	1.077	1.052	2.3	72	0.00	8.75
80	t	Di-n-butylphthalate	1.191	1.150	3.4	68	0.00	9.42
81	t	Fluoranthene	1.167	1.118	4.2	69	0.00	10.10
83	I	Chrysene-d12	1.000	1.000	0.0	68	0.00	11.82
84	t	Pyrene	1.333	1.349	-1.2	68	0.00	10.36
86	t	Butylbenzylphthalate	0.574	0.594	-3.5	64	0.00	11.21
87	t	Benzo[a]anthracene	1.274	1.217	4.5	63	0.00	11.81
89	t	Chrysene	1.249	1.211	3.0	64	0.00	11.85
90	t	bis(2-Ethylhexyl)phthalat	0.794	0.833	-4.9	65	0.00	11.92
91	I	Perylene-d12	1.000	1.000	0.0	67	0.00	13.42
92	t	Di-n-octylphthalate	1.192	1.224	-2.7	63	0.00	12.66
93	t	Benzo[b]fluoranthene	1.222	1.062	13.1	54	-0.01	13.03
94	t	Benzo[k]fluoranthene	1.082	1.121	-3.6	63	-0.01	13.05
95	t	Benzo[a]pyrene	1.004	1.013	-0.9	62	0.00	13.36
96	t	Indeno[1,2,3-cd]pyrene	1.340	1.278	4.6	57	0.00	14.46
98	t	Dibenz[a,h]anthracene	1.188	1.097	7.7	55	0.00	14.47

			AvgRF	CCRF	% Dev			
100	t	Benzo[g,h,i]perylene	1.045	1.037	0.8	61	0.00	14.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481129.D M6P2562.M Tue Apr 16 15:43:13 2019 ACLIMS

8.7.2

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2562-ICV2562
Lab FileID: 6P481136.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2562\6p481136.D         Vial: 11
Acq On    : 16 Apr 2019   1:29 pm                    Operator: angelar
Sample    : icv2562-50                               Inst    : MS6P
Misc      : op17006,e6p2562,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
Last Update  : Tue Apr 16 15:28:32 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	79	0.00	4.32
2	t	1,4-Dioxane	0.527	0.493	6.5	71	0.02	1.79
6	t	Indene	2.169	2.230	-2.8	80	0.00	4.51
7	t	Cumene	3.107	2.885	7.1	74	0.00	3.72
13	t	Decane	1.061	0.953	10.2	73	0.00	4.22
18	t	Acetophenone	1.859	1.737	6.6	72	0.00	4.62
24	I	Naphthalene-d8	1.000	1.000	0.0	75	0.00	5.31
27	t	Quinoline	0.726	0.680	6.3	67	-0.03	5.62
40	t	2,3-Dichloroaniline	0.379	0.326	14.0	63	0.00	6.22
41	t	Caprolactam	0.128	0.113	11.7	61	-0.04	5.69
45	t	1-Methylnaphthalene	0.658	0.588	10.6	68	0.00	6.04
46	t	Dimethylnaphthalene	0.700	0.653	6.7	69	0.00	6.56
47	I	Acenaphthene-d10	1.000	1.000	0.0	72	0.00	6.99
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	44.526	10.9	61	0.00	6.10
53	t	Biphenyl	1.530	1.464	4.3	70	0.00	6.40
69	I	Phenanthrene-d10	1.000	1.000	0.0	68	0.00	8.66
82	t	Octadecane	0.360	0.348	3.3	66	0.00	8.62
83	I	Chrysene-d12	1.000	1.000	0.0	62	-0.01	11.82
91	I	Perylene-d12	1.000	1.000	0.0	56	0.00	13.42
		----------	True	Calc.	% Drift	----------		
99	t	7,12-Dimethylbenz(a)anthr	50.000	42.786	14.4	47	-0.01	13.01

```
---------------------------------------------------------------------------
---------------------------------------------------------------------------

   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    6p481129.D M6P2562.M        Tue Apr 16 15:43:15 2019   ACLIMS
```

8.7.3

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2562-ICV2562
Lab FileID: 6P481137.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2562\6p481137.D Vial: 12
Acq On : 16 Apr 2019 1:53 pm Operator: angelar
Sample : icv2562-50 Inst : MS6P
Misc : op17006,e6p2562,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
Last Update : Tue Apr 16 15:28:32 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	77	0.00	4.32
5	S	2-Fluorophenol	1.170	1.167	0.3	68	0.00	3.36
8	S	Phenol-d5	1.429	1.402	1.9	73	0.00	4.09
24	I	Naphthalene-d8	1.000	1.000	0.0	72	0.00	5.31
25	S	Nitrobenzene-d5	0.333	0.292	12.3	62	0.00	4.74
47	I	Acenaphthene-d10	1.000	1.000	0.0	67	0.00	6.99
51	S	2-Fluorobiphenyl	1.413	1.357	4.0	65	0.00	6.30
69	I	Phenanthrene-d10	1.000	1.000	0.0	65	0.00	8.66
73	S	2,4,6-Tribromophenol	0.129	0.115	10.9	55	-0.01	7.87
83	I	Chrysene-d12	1.000	1.000	0.0	55	-0.01	11.82
85	S	Terphenyl-d14	0.932	1.021	-9.5	59	0.00	10.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481129.D M6P2562.M Tue Apr 16 15:44:54 2019 ACLIMS

8.7.4
8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2562-ICV2562
Lab FileID: 6P481138.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2562\6p481138.D         Vial: 13
Acq On    : 16 Apr 2019   2:18 pm                    Operator: angelar
Sample    : icv2562-50                               Inst    : MS6P
Misc      : op17006,e6p2562,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
Last Update  : Tue Apr 16 16:05:20 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	68	0.00	4.32
3 t	Pyridine	1.198	1.186	1.0	63	0.14	2.25
10	Aniline	1.556	1.927	-23.8	88	0.00	4.09
16 t	Benzyl alcohol	0.751	0.880	-17.2	74	0.00	4.45
24 I	Naphthalene-d8	1.000	1.000	0.0	69	0.00	5.31
39 t	4-Chloroaniline	0.420	0.416	1.0	69	0.00	5.38
44 t	2-Methylnaphthalene	0.589	0.581	1.4	67	0.00	5.94
47 I	Acenaphthene-d10	1.000	1.000	0.0	70	0.00	6.99
54 t	2-Nitroaniline	0.307	0.264	14.0	55	-0.01	6.54
58 t	3-Nitroaniline	0.337	0.321	4.7	60	0.00	6.98
62 t	Dibenzofuran	1.683	1.629	3.2	68	0.00	7.22
68 t	4-Nitroaniline	0.357	0.316	11.5	59	-0.02	7.65
69 I	Phenanthrene-d10	1.000	1.000	0.0	67	0.00	8.67
79 t	Carbazole	1.020	0.935	8.3	60	0.00	8.97

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 6p481129.D M6P2562.M        Tue Apr 16 16:12:00 2019   ACLIMS
```

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2562-ICV2562
Lab FileID: 6P481139.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2562\6p481139.D         Vial: 14
Acq On    : 16 Apr 2019   2:42 pm                    Operator: angelar
Sample    : icv2562-50                               Inst    : MS6P
Misc      : op17006,e6p2562,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
Last Update  : Tue Apr 16 16:05:20 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	72	0.00	4.32
9	t	Phenol	1.744	1.634	6.3	66	0.00	4.10
12	t	2-Chlorophenol	1.383	1.457	-5.4	72	0.00	4.18
19	t	2-Methylphenol	1.174	1.221	-4.0	72	-0.01	4.53
21	t	3&4-Methylphenol	1.234	1.292	-4.7	71	0.00	4.65
24	I	Naphthalene-d8	1.000	1.000	0.0	70	0.00	5.31
29	t	2-Nitrophenol	0.198	0.216	-9.1	70	0.00	5.00
30	t	2,4-Dimethylphenol	0.302	0.348	-15.2	73	0.00	5.05
31	t	Benzoic acid	0.305	0.235	23.0	50	-0.02	5.20
33	t	2,4-Dichlorophenol	0.299	0.318	-6.4	70	0.00	5.21
34	t	2,6-Dichlorophenol	0.296	0.323	-9.1	73	0.00	5.39
43	t	4-Chloro-3-methylphenol	0.307	0.312	-1.6	66	-0.02	5.83
47	I	Acenaphthene-d10	1.000	1.000	0.0	64	0.00	6.99
		----------	AvgRF	CCRF	% Dev		----------	
49	t	2,4,6-Trichlorophenol	0.373	0.425	-13.9	69	0.00	6.23
50	t	2,4,5-Trichlorophenol	0.397	0.448	-12.8	67	-0.02	6.27
		----------	True	Calc.	% Drift		----------	
60	t	2,4-Dinitrophenol	50.000	44.876	10.2	54	0.00	7.10
		----------	AvgRF	CCRF	% Dev		----------	
61	t	4-Nitrophenol	0.173	0.163	5.8	57	-0.02	7.21
64		2,3,4,6-Tetrachlorophenol	0.325	0.343	-5.5	62	0.00	7.37
69	I	Phenanthrene-d10	1.000	1.000	0.0	63	0.00	8.67
70	t	4,6-Dinitro-2-methylpheno	0.154	0.151	1.9	57	-0.01	7.69
		----------	True	Calc.	% Drift		----------	
76	t	Pentachlorophenol	50.000	52.246	-4.5	63	0.00	8.47

```
--------------------------------------------------------------------------
--------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    6p481129.D M6P2562.M        Tue Apr 16 16:12:02 2019   ACLIMS
```

8.7.6

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2562-ICV2562
Lab FileID: 6P481140.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2562\6p481140.D         Vial: 15
Acq On    : 16 Apr 2019   3:06 pm                    Operator: angelar
Sample    : icv2562-50                               Inst    : MS6P
Misc      : op17006,e6p2562,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
Last Update  : Tue Apr 16 16:05:20 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	116	0.00	11.82
88 t	3,3'-Dichlorobenzidine	0.479	0.487	-1.7	104	0.00	11.81

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481129.D M6P2562.M Tue Apr 16 16:13:30 2019 ACLIMS

8.7.7

8

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2563-ICC2563
Lab FileID: 6P481144.D

```
                          Response Factor Report  MS6P

  Method       : C:\MSDCHEM\1\METHODS\M6P2563.M (RTE Integrator)
  Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
  Last Update  : Wed Apr 17 09:00:59 2019
  Response via : Initial Calibration

  Calibration Files
  2   =6p481148.D  5   =6p481147.D  25  =6p481145.D  80  =6p481143.D
  100 =6p481142.D  50  =6p481144.D  1   =6p481149.D  10  =6p481146.D

   Compound         2     5     25    80    100   50    1     10    Avg %RSD
  ---------------------------------------------------------------------------


101)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
102) Benzaldehyde 0.939 0.911 1.115 1.020 1.017 1.074 0.883 0.983 0.993   8.04

103)     Acenaphthene-d10a     ----------------ISTD---------------------
104) 1,2,4,5-Tetr 0.510 0.526 0.568 0.540 0.544 0.549 0.503 0.530 0.534   3.98

105)     Phenanthrene-d10a     ----------------ISTD---------------------
106) 1-chloroocta 0.200 0.232 0.283 0.267 0.234 0.265 0.183 0.248 0.239  14.37
107) o-terphenyl  0.539 0.560 0.622 0.637 0.594 0.612 0.546 0.558 0.584   6.43
108) Atrazine     0.072 0.091 0.115 0.119 0.117 0.117 0.072 0.099 0.100  20.08
          ----- Quadratic regression -----                Coefficient =  0.9998
               Response Ratio = -0.00312 + 0.12068 *A + -0.00070 *A^2


111) I   Naphthalene-d8a       ----------------ISTD---------------------
112) Hydroquinone             0.310 0.331 0.328 0.336       0.231 0.307  14.27

113)     Phenanthrene-d10b     ----------------ISTD---------------------
114) Pentachloron       0.039 0.052 0.055 0.054 0.052       0.042 0.049# 13.84

 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M6P2562.M         Wed Apr 17 09:04:49 2019   ACLIMS
```

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2563-ICV2563
Lab FileID: 6P481150.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2562\6p481150.D         Vial: 24
Acq On    : 16 Apr 2019   6:52 pm                    Operator: angelar
Sample    : icv2563-50                               Inst    : MS6P
Misc      : op17006,e6p2563,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
Last Update  : Wed Apr 17 09:00:59 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	103	0.00	4.32
102	Benzaldehyde	0.993	1.075	-8.3	103	-0.03	4.00
103	Acenaphthene-d10a	1.000	1.000	0.0	106	0.00	6.99
104	1,2,4,5-Tetrachlorobenzen	0.534	0.524	1.9	101	0.00	6.11
105	Phenanthrene-d10a	1.000	1.000	0.0	107	0.00	8.67
	----------	True	Calc.	% Drift	----------		
108	Atrazine	50.000	49.867	0.3	107	0.01	8.40
	----------	AvgRF	CCRF	% Dev	----------		
113	Phenanthrene-d10b	1.000	1.000	0.0	107	0.00	8.67
114	Pentachloronitrobenzene	0.049	0.042#	14.3	86	0.00	8.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481144a.D M6P2562.M Wed Apr 17 09:07:17 2019 ACLIMS

8.7.9

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: E6P2563-ICV2563
Lab FileID: 6P481151.D

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\E6P2562\6p481151.D         Vial: 25
  Acq On    : 16 Apr 2019   7:16 pm                    Operator: angelar
  Sample    : icv2563-50                               Inst    : MS6P
  Misc      : op17006,e6p2563,1000,,,1,1               Multiplr: 1.00
  MS Integration Params: rteint.p

  Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
  Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
  Last Update  : Wed Apr 17 09:00:59 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	96	0.00	5.31
112 T	Hydroquinone	0.307	0.322	-4.9	92	-0.04	5.71

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481144a.D M6P2562.M Wed Apr 17 09:07:19 2019 ACLIMS

8.7.10

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** E6P2588-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481783.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2588\6p481783.D         Vial: 2
Acq On    : 10 May 2019   9:11 am                    Operator: angelar
Sample    : cc2562-50                                Inst    : MS6P
Misc      : op17006,e6p2588,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
Last Update  : Mon May 06 09:58:38 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	84	-0.04	4.21
2	t	1,4-Dioxane	0.527	0.614	-16.5	95	-0.12	1.62
3	t	Pyridine	1.198	1.461	-22.0#	95	0.03	1.94
4	t	N-Nitrosodimethylamine	0.698	0.824	-18.1	93	0.04	1.91
5	S	2-Fluorophenol	1.170	1.341	-14.6	85	0.00	3.24
6	t	Indene	2.169	2.420	-11.6	93	-0.04	4.40
7	t	Cumene	3.107	3.546	-14.1	96	-0.06	3.60
8	S	Phenol-d5	1.429	1.678	-17.4	95	-0.04	3.99
9	t	Phenol	1.744	1.846	-5.8	86	-0.04	4.00
10		Aniline	1.556	1.809	-16.3	102	-0.05	3.97
11	t	bis(2-Chloroethyl)ether	1.208	1.321	-9.4	91	-0.04	4.03
12	t	2-Chlorophenol	1.383	1.479	-6.9	85	-0.04	4.07
13	t	Decane	1.061	1.209	-13.9	99	-0.04	4.10
14	t	1,3-Dichlorobenzene	1.577	1.621	-2.8	86	-0.04	4.17
15	t	1,4-Dichlorobenzene	1.614	1.653	-2.4	86	-0.04	4.22
16	t	Benzyl alcohol	0.751	0.931	-24.0#	97	-0.03	4.34
17	t	1,2-Dichlorobenzene	1.482	1.571	-6.0	88	-0.04	4.33
18	t	Acetophenone	1.859	2.153	-15.8	95	-0.03	4.52
19	t	2-Methylphenol	1.174	1.359	-15.8	93	-0.03	4.44
20	t	2,2'-oxybis(1-Chloropropa	0.431	0.468	-8.6	89	-0.03	4.42
21	t	3&4-Methylphenol	1.234	1.435	-16.3	91	-0.03	4.55
22	t	n-Nitroso-di-n-propylamin	0.832	0.976	-17.3	97	-0.03	4.53
23	t	Hexachloroethane	0.563	0.543	3.6	78	-0.04	4.57
24	I	Naphthalene-d8	1.000	1.000	0.0	87	-0.04	5.19
25	S	Nitrobenzene-d5	0.333	0.383	-15.0	97	-0.03	4.63
26	t	Nitrobenzene	0.339	0.383	-13.0	97	-0.04	4.64
27	t	Quinoline	0.726	0.754	-3.9	85	-0.05	5.51
28	t	Isophorone	0.579	0.649	-12.1	97	-0.04	4.83
29	t	2-Nitrophenol	0.198	0.218	-10.1	88	-0.04	4.89
30	t	2,4-Dimethylphenol	0.302	0.389	-28.8#	102	-0.03	4.95
31	t	Benzoic acid	0.305	0.316	-3.6	84	-0.02	5.12
32	t	bis(2-Chloroethoxy)methan	0.364	0.421	-15.7	99	-0.04	5.00
33	t	2,4-Dichlorophenol	0.299	0.299	0.0	82	-0.03	5.10
34	t	2,6-Dichlorophenol	0.296	0.300	-1.4	84	-0.04	5.27
35		1,3,5-Trichlorobenzene	0.354	0.333	5.9	82	-0.04	4.89
36	t	1,2,4-Trichlorobenzene	0.342	0.310	9.4	78	-0.04	5.15
37		1,2,3-Trichlorobenzene	0.340	0.314	7.6	79	-0.04	5.33
38	t	Naphthalene	1.042	1.077	-3.4	91	-0.04	5.20
39	t	4-Chloroaniline	0.420	0.437	-4.0	92	-0.04	5.27
40	t	2,3-Dichloroaniline	0.379	0.372	1.8	83	-0.03	6.10
41	t	Caprolactam	0.128	0.149	-16.4	93	-0.02	5.62

Continuing Calibration Summary

Job Number: JC87093 **Sample:** E6P2588-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481783.D
Project: National Grid, Philly Coke, Philadelphia, PA

42	t	Hexachlorobutadiene	0.195	0.177	9.2	77	-0.05	5.31
43	t	4-Chloro-3-methylphenol	0.307	0.349	-13.7	92	-0.03	5.73
44	t	2-Methylnaphthalene	0.589	0.606	-2.9	89	-0.04	5.81
45	t	1-Methylnaphthalene	0.658	0.688	-4.6	92	-0.04	5.90
46	t	Dimethylnaphthalene	0.700	0.700	0.0	86	-0.03	6.43
47	I	Acenaphthene-d10	1.000	1.000	0.0	83	-0.05	6.86
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	100.000	74.819	25.2#	60	-0.06	5.97
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.373	0.364	2.4	76	-0.05	6.11
50	t	2,4,5-Trichlorophenol	0.397	0.394	0.8	76	-0.04	6.17
51	S	2-Fluorobiphenyl	1.413	1.435	-1.6	85	-0.05	6.17
52	t	2-Chloronaphthalene	1.180	1.166	1.2	82	-0.06	6.29
53	t	Biphenyl	1.530	1.608	-5.1	88	-0.05	6.27
54	t	2-Nitroaniline	0.307	0.380	-23.8#	95	-0.05	6.42
55	t	Dimethylphthalate	1.370	1.392	-1.6	83	-0.05	6.61
56	t	Acenaphthylene	1.820	1.972	-8.4	89	-0.06	6.71
57	t	2,6-Dinitrotoluene	0.310	0.339	-9.4	83	-0.04	6.68
58	t	3-Nitroaniline	0.337	0.376	-11.6	84	-0.04	6.86
59	t	Acenaphthene	1.208	1.276	-5.6	88	-0.05	6.89
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	89.120	10.9	72	-0.03	6.99
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.173	0.195	-12.7	88	-0.05	7.11
62	t	Dibenzofuran	1.683	1.703	-1.2	85	-0.05	7.08
63	t	2,4-Dinitrotoluene	0.430	0.458	-6.5	81	-0.03	7.12
64		2,3,4,6-Tetrachlorophenol	0.325	0.303	6.8	71	-0.04	7.25
65	t	Diethylphthalate	1.351	1.420	-5.1	86	-0.04	7.38
66	t	Fluorene	1.366	1.417	-3.7	86	-0.05	7.46
67	t	4-Chlorophenyl-phenylethe	0.693	0.664	4.2	79	-0.04	7.47
68	t	4-Nitroaniline	0.357	0.346	3.1	77	-0.03	7.54
69	I	Phenanthrene-d10	1.000	1.000	0.0	81	-0.05	8.53
70	t	4,6-Dinitro-2-methylpheno	0.154	0.150	2.6	72	-0.04	7.59
71	t	n-Nitrosodiphenylamine	0.553	0.567	-2.5	82	-0.06	7.62
72	t	1,2-Diphenylhydrazine	0.626	0.761	-21.6#	97	-0.06	7.65
73	S	2,4,6-Tribromophenol	0.129	0.117	9.3	70	-0.04	7.74
74	t	4-Bromophenyl-phenylether	0.215	0.204	5.1	73	-0.06	8.02
75	t	Hexachlorobenzene	0.252	0.239	5.2	73	-0.05	8.10
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	100.000	86.440	13.6	69	-0.04	8.35
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.074	1.137	-5.9	87	-0.05	8.56
78	t	Anthracene	1.077	1.169	-8.5	87	-0.05	8.62
79	t	Carbazole	1.020	1.081	-6.0	83	-0.05	8.83
80	t	Di-n-butylphthalate	1.191	1.495	-25.5#	96	-0.04	9.29
81	t	Fluoranthene	1.167	1.193	-2.2	79	-0.04	9.96
82	t	Octadecane	0.360	0.505	-40.3#	113	-0.05	8.48
83	I	Chrysene-d12	1.000	1.000	0.0	73	-0.04	11.69
84	t	Pyrene	1.333	1.465	-9.9	79	-0.03	10.23
85	S	Terphenyl-d14	0.932	0.959	-2.9	73	-0.03	10.45
86	t	Butylbenzylphthalate	0.574	0.778	-35.5#	90	-0.05	11.07

Continuing Calibration Summary

Job Number: JC87093 **Sample:** E6P2588-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481783.D
Project: National Grid, Philly Coke, Philadelphia, PA

87	t	Benzo[a]anthracene	1.274	1.397	-9.7	77	-0.05	11.68
88	t	3,3'-Dichlorobenzidine	0.479	0.567	-18.4	77	-0.05	11.68
89	t	Chrysene	1.249	1.263	-1.1	72	-0.04	11.72
90	t	bis(2-Ethylhexyl)phthalat	0.794	1.118	-40.8#	93	-0.07	11.79
91	I	Perylene-d12	1.000	1.000	0.0	67	-0.04	13.29
92	t	Di-n-octylphthalate	1.192	1.818	-52.5#	93	-0.05	12.53
93	t	Benzo[b]fluoranthene	1.222	1.353	-10.7	69	-0.03	12.91
94	t	Benzo[k]fluoranthene	1.082	1.234	-14.0	70	-0.03	12.93
95	t	Benzo[a]pyrene	1.004	1.118	-11.4	68	-0.03	13.24
96	t	Indeno[1,2,3-cd]pyrene	1.340	1.582	-18.1	71	-0.02	14.33
97	t	Dibenz(a,h)acridine	0.984	1.138	-15.7	69	-0.24	14.10
98	t	Dibenz[a,h]anthracene	1.188	1.473	-24.0#	74	-0.03	14.33
		----------	True	Calc.	% Drift	----------		
99	t	7,12-Dimethylbenz(a)anthr	50.000	50.868	-1.7	67	-0.23	12.88
		----------	AvgRF	CCRF	% Dev	----------		
100	t	Benzo[g,h,i]perylene	1.045	1.135	-8.6	67	-0.02	14.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481200a.D M6P2562.M Fri May 10 10:35:57 2019 ACLIMS

8.7.11

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** E6P2588-CC2563
Account: BBLNYS Arcadis **Lab FileID:** 6P481784.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E6P2588\6p481784.D         Vial: 3
Acq On    : 10 May 2019   9:35 am                    Operator: angelar
Sample    : cc2563-50                                Inst    : MS6P
Misc      : op17006,e6p2588,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M6P2562.M (RTE Integrator)
Title        : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
Last Update  : Mon May 06 09:58:38 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	95	-0.04	4.21
102	Benzaldehyde	0.993	1.213	-22.2#	107	-0.08	3.88
103	Acenaphthene-d10a	1.000	1.000	0.0	93	-0.06	6.85
104	1,2,4,5-Tetrachlorobenzen	0.534	0.506	5.2	85	-0.06	5.98
105	Phenanthrene-d10a	1.000	1.000	0.0	93	-0.06	8.52
106 S	1-chlorooctadecane	0.239	0.315	-31.8#	111	-0.04	9.90
107 S	o-terphenyl	0.584	0.604	-3.4	92	-0.05	9.00
	----------	True	Calc.	% Drift	----------		
108	Atrazine	50.000	49.727	0.5	93	-0.04	8.26
111 I	Naphthalene-d8a	1.000	1.000	0.0	97	-0.05	5.18
112 T	Hydroquinone	0.307	0.398	-29.6#	114	-0.06	5.61
113	Phenanthrene-d10b	1.000	1.000	0.0	93	-0.06	8.52
114	Pentachloronitrobenzene	0.049	0.047#	4.1	83	-0.06	8.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481200a.D M6P2562.M Fri May 10 10:35:59 2019 ACLIMS

8.7.12

8

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICC5844
Lab FileID: P129143A.D

Response Factor Report MSVOAMSP

Method : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Calibration Files
2 =p129147.D 5 =p129146a.D 25 =p129144a.D 80 =p129142a.D
100 =p129141a.D 50 =p129143a.D 10 =p129145a.D 1 =p129148.D

Compound	2	5	25	80	100	50	10	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.609	0.573	0.660	0.694	0.677	0.670	0.642	0.664	0.649	6.12
3) Pyridine	1.136	1.435	1.179	1.211	1.399	1.142	1.412	0.920	1.229	14.40
4) N-Nitrosodim	0.521	0.576	0.727	0.697	0.731	0.700	0.689	0.591	0.654	12.16
5) 2-Fluorophen	1.018	1.118	1.405	1.523	1.546	1.512	1.260	0.900	1.285	19.48
6) Indene	2.063	2.085	2.134	2.048	1.992	2.226	2.127	2.081	2.095	3.32
7) Cumene	3.265	3.366	3.597	3.389	3.209	3.640	3.523	3.365	3.419	4.50
8) Phenol-d5	1.436	1.593	1.747	1.684	1.688	1.854	1.713	1.341	1.632	10.35
9) Phenol	1.668	1.721	1.881	1.790	1.748	1.975	1.840	1.603	1.778	6.74
10) Aniline	1.804	1.907	0.842	0.983	1.020	0.699	1.771	1.844	1.359	37.97
---- Quadratic regression ---- Coefficient = 0.9863										
Response Ratio = 0.13877 + 0.43487 *A + 0.21626 *A^2										
11) bis(2-Chloro	1.321	1.280	1.566	1.380	1.351	1.623	1.461	1.291	1.409	9.13
12) 2-Chlorophen	1.314	1.298	1.366	1.357	1.380	1.437	1.355	1.216	1.340	4.88
13) Decane	1.104	1.038	1.011	0.870	0.807	0.952	1.023	1.098	0.988	10.65
14) 1,3-Dichloro	1.570	1.637	1.614	1.534	1.475	1.614	1.619	1.548	1.576	3.49
15) 1,4-Dichloro	1.500	1.513	1.529	1.502	1.446	1.601	1.532	1.593	1.527	3.32
16) Benzyl alcoh	0.533	0.634	0.690	0.764	0.792	0.756	0.724	0.336	0.653	23.43
---- Quadratic regression ---- Coefficient = 0.9998										
Response Ratio = -0.00771 + 0.70401 *A + 0.03537 *A^2										
17) 1,2-Dichloro	1.536	1.466	1.571	1.541	1.488	1.590	1.525	1.489	1.526	2.81
18) Acetophenone	2.002	1.982	1.942	1.901	1.946	2.029	1.997	1.884	1.960	2.59
19) 2-Methylphen	1.141	1.146	1.277	1.242	1.269	1.300	1.281	1.293	1.244	5.17
20) 2,2'-oxybis(	0.301	0.319	0.331	0.331	0.330	0.341	0.345	0.324	0.328	4.17
21) 3&4-Methylph	1.233	1.172	1.227	1.229	1.262	1.299	1.317	1.002	1.218	8.05
22) n-Nitroso-di	0.970	0.960	0.898	0.862	0.875	0.940	0.961	0.984	0.931	5.01
23) Hexachloroet	0.638	0.616	0.631	0.622	0.598	0.648	0.635	0.611	0.625	2.56
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.434	0.436	0.428	0.415	0.407	0.442	0.452	0.425	0.430	3.38
26) Nitrobenzene	0.463	0.463	0.428	0.394	0.391	0.427	0.452	0.461	0.435	6.89
27) Quinoline	0.650	0.686	0.727	0.778	0.794	0.780	0.712	0.674	0.725	7.46
28) Isophorone	0.741	0.744	0.767	0.721	0.704	0.768	0.774	0.752	0.747	3.28
29) 2-Nitropheno	0.167	0.206	0.218	0.195	0.192	0.223	0.207	0.167	0.197	10.76
30) 2,4-Dimethyl		0.248	0.371	0.391	0.382	0.402	0.301		0.349	17.52
31) Benzoic acid		0.104	0.279	0.301	0.301	0.305	0.169		0.243	35.19
---- Quadratic regression ---- Coefficient = 0.9997										
Response Ratio = -0.03614 + 0.34636 *A + -0.01255 *A^2										
32) bis(2-Chloro	0.407	0.439	0.437	0.438	0.414	0.456	0.450	0.417	0.432	4.08
33) 2,4-Dichloro	0.254	0.318	0.346	0.367	0.367	0.366	0.336	0.279	0.329	13.00
34) 2,6-Dichloro	0.302	0.314	0.337	0.327	0.326	0.351	0.321	0.292	0.321	5.85
35) 1,3,5-Trichl	0.361	0.377	0.408	0.387	0.360	0.415	0.393	0.397	0.387	5.20
36) 1,2,4-Trichl	0.357	0.361	0.386	0.371	0.364	0.392	0.379	0.348	0.370	4.10

Initial Calibration Summary

Job Number: JC87093 **Sample:** EP5844-ICC5844
Account: BBLNYS Arcadis **Lab FileID:** P129143A.D
Project: National Grid, Philly Coke, Philadelphia, PA

37)	1,2,3-Trichl	0.342	0.360	0.364	0.346	0.322	0.370	0.358	0.332	0.349	4.70
38)	Naphthalene	0.970	0.925	0.962	0.944	0.918	1.031	0.964	0.926	0.955	3.84
39)	4-Chloroanil	0.369	0.410	0.359	0.355	0.334	0.367	0.406	0.375	0.372	6.84
40)	2,3-Dichloro	0.387	0.411	0.416	0.427	0.433	0.446	0.417	0.379	0.414	5.42
41)	Caprolactam	0.146	0.157	0.154	0.143	0.122	0.161	0.160	0.111	0.144	12.81
42)	Hexachlorobu	0.228	0.225	0.240	0.219	0.209	0.245	0.234	0.230	0.229	4.99
43)	4-Chloro-3-m	0.326	0.337	0.361	0.363	0.357	0.384	0.352	0.289	0.346	8.34
44)	2-Methylnaph	0.545	0.556	0.571	0.535	0.510	0.583	0.555	0.526	0.548	4.36
45)	1-Methylnaph	0.689	0.707	0.736	0.708	0.688	0.750	0.714	0.683	0.709	3.35
46)	Dimethylnaph	0.609	0.632	0.651	0.621	0.623	0.686	0.651	0.600	0.634	4.37
47)	I Acenaphthene-d10	----------ISTD----------									
48)	Hexachlorocy		0.204	0.346	0.346	0.314	0.352	0.272		0.306	19.01
49)	2,4,6-Trichl	0.373	0.390	0.422	0.410	0.392	0.414	0.404	0.365	0.396	5.09
50)	2,4,5-Trichl	0.381	0.370	0.447	0.402	0.374	0.436	0.423	0.308	0.393	11.35
51)	2-Fluorobiph	1.310	1.323	1.364	1.146	1.054	1.293	1.369	1.281	1.267	8.73
52)	2-Chloronaph	1.128	1.146	1.143	1.011	0.894	1.118	1.152	1.083	1.084	8.28
53)	Biphenyl	1.372	1.363	1.470	1.207	1.110	1.405	1.431	1.429	1.348	9.25
54)	2-Nitroanili	0.411	0.394	0.375	0.291	0.270	0.355	0.408	0.355	0.357	14.63
55)	Dimethylphth	1.378	1.389	1.438	1.398	1.326	1.445	1.445	1.363	1.398	3.07
56)	Acenaphthyle	1.728	1.758	1.763	1.593	1.569	1.737	1.809	1.734	1.711	4.94
57)	2,6-Dinitrot	0.278	0.288	0.302	0.302	0.292	0.317	0.302	0.262	0.293	5.89
58)	3-Nitroanili	0.309	0.299	0.327	0.310	0.306	0.324	0.339	0.240	0.307	9.83
59)	Acenaphthene	1.056	1.057	1.083	1.043	0.932	1.099	1.091	1.055	1.052	4.96
60)	2,4-Dinitrop	0.036	0.102	0.176	0.210	0.209	0.195	0.138		0.152	42.51
	---- Quadratic regression ---- Coefficient = 0.9995										
	Response Ratio = -0.02450 + 0.19639 *A + 0.00395 *A^2										
61)	4-Nitropheno	0.196	0.184	0.229	0.233	0.229	0.239	0.225		0.220	9.44
62)	Dibenzofuran	1.544	1.572	1.671	1.591	1.533	1.659	1.662	1.530	1.595	3.79
63)	2,4-Dinitrot	0.361	0.408	0.406	0.402	0.402	0.410	0.424	0.306	0.390	9.87
64)	2,3,4,6-Tetr	0.303	0.316	0.369	0.394	0.396	0.394	0.360	0.221	0.344	17.74
65)	Diethylphtha	1.395	1.462	1.463	1.378	1.322	1.456	1.512	1.394	1.423	4.28
66)	Fluorene	1.275	1.302	1.355	1.221	1.124	1.343	1.367	1.240	1.279	6.41
67)	4-Chlorophen	0.628	0.644	0.671	0.621	0.577	0.665	0.656	0.597	0.632	5.26
68)	4-Nitroanili	0.246	0.296	0.297	0.308	0.310	0.317	0.317	0.253	0.293	9.55
69)	I Phenanthrene-d10	----------ISTD----------									
70)	4,6-Dinitro-		0.120	0.150	0.166	0.169	0.161	0.132		0.150	13.26
71)	n-Nitrosodip	0.480	0.490	0.534	0.549	0.535	0.551	0.506	0.503	0.518	5.28
72)	1,2-Diphenyl	0.842	0.818	0.793	0.781	0.731	0.793	0.842	0.882	0.810	5.72
73)	2,4,6-Tribro	0.100	0.110	0.137	0.157	0.158	0.144	0.126		0.133	16.88
74)	4-Bromopheny	0.204	0.215	0.252	0.282	0.270	0.270	0.235	0.216	0.243	12.13
75)	Hexachlorobe	0.255	0.250	0.283	0.305	0.300	0.300	0.270	0.255	0.277	8.18
76)	Pentachlorop	0.075	0.115	0.172	0.198	0.199	0.190	0.137		0.155	30.69
	---- Quadratic regression ---- Coefficient = 0.9997										
	Response Ratio = -0.02002 + 0.19009 *A + 0.00271 *A^2										
77)	Phenanthrene	0.995	0.981	1.054	1.097	1.068	1.114	1.026	1.004	1.042	4.67
78)	Anthracene	1.040	1.052	1.108	1.136	1.114	1.144	1.069	1.051	1.089	3.78
79)	Carbazole	0.978	1.021	1.067	1.094	1.105	1.111	1.054	0.983	1.052	5.02
80)	Di-n-butylph	1.370	1.442	1.567	1.561	1.513	1.615	1.513	1.358	1.492	6.30
81)	Fluoranthene	1.163	1.212	1.333	1.386	1.384	1.404	1.308	1.096	1.286	8.96
82)	Octadecane	0.416	0.404	0.420	0.382	0.349	0.412	0.425	0.455	0.408	7.73
83)	I Chrysene-d12	----------ISTD----------									
84)	Pyrene	1.333	1.321	1.447	1.441	1.353	1.467	1.362	1.354	1.385	4.14
85)	Terphenyl-d1	0.800	0.822	0.950	1.024	0.968	0.974	0.876	0.835	0.906	9.17
86)	Butylbenzylp	0.649	0.677	0.754	0.745	0.692	0.756	0.726	0.700	0.712	5.46
87)	Benzo[a]anth	1.254	1.266	1.318	1.358	1.348	1.364	1.274	1.367	1.319	3.60

Initial Calibration Summary

Job Number: JC87093 **Sample:** EP5844-ICC5844
Account: BBLNYS Arcadis **Lab FileID:** P129143A.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
 88) 3,3'-Dichlor 0.366 0.406 0.466 0.496 0.495 0.492 0.434 0.313 0.434  15.57
 89) Chrysene     1.074 1.109 1.203 1.235 1.197 1.239 1.131 1.103 1.161   5.56
 90) bis(2-Ethylh 0.847 0.921 1.027 1.025 0.947 1.035 0.964 0.857 0.953   7.84

 91) I   Perylene-d12          ----------------ISTD---------------------
 92) Di-n-octylph 1.289 1.451 1.750 1.756 1.525 1.773 1.590 1.237 1.546  13.61
 93) Benzo[b]fluo 1.030 1.063 1.240 1.467 1.466 1.365 1.175 0.947 1.219  16.42
 94) Benzo[k]fluo 0.999 1.046 1.122 0.991 0.908 1.073 1.052 1.016 1.026   6.20
 95) Benzo[a]pyre 0.942 0.966 1.072 1.128 1.110 1.129 1.013 0.888 1.031   8.96
 96) Indeno[1,2,3 0.809 0.900 0.989 1.035 1.099 1.043 0.958 0.706 0.942  13.95
 97) Dibenz(a,h)a 0.777 0.825 0.968 1.028 1.054 1.023 0.919 0.673 0.908  15.13
 98) Dibenz[a,h]a 0.856 0.914 0.996 1.064 1.140 1.053 0.943 0.720 0.961  13.82
 99) 7,12-Dimethy 0.263 0.286 0.492 0.580 0.552 0.558 0.375 0.249 0.419  33.84
             ---- Quadratic regression ----  Coefficient =  0.9981
               Response Ratio = -0.03113 + 0.58812 *A + -0.00582 *A^2

100) Benzo[g,h,i] 0.873 0.923 0.983 0.996 1.074 1.022 0.962 0.767 0.950  10.07


 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MP5844.M          Fri Apr 26 12:00:18 2019   ACLIMS
```

8.7.13

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICV5844
Lab FileID: P129149.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129149.D          Vial: 10
Acq On    : 24 Apr 2019   5:39 am                   Operator: chriss2
Sample    : icv5844-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5844,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 11:57:54 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	114	0.00	3.84
4	t	N-Nitrosodimethylamine	0.654	0.653	0.2	107	0.04	1.47
		----------	AvgRF	CCRF	% Dev	----------		
11	t	bis(2-Chloroethyl)ether	1.409	1.360	3.5	96	0.00	3.66
14	t	1,3-Dichlorobenzene	1.576	1.601	-1.6	113	0.00	3.80
15	t	1,4-Dichlorobenzene	1.527	1.527	0.0	109	0.00	3.85
		----------	AvgRF	CCRF	% Dev	----------		
17	t	1,2-Dichlorobenzene	1.526	1.458	4.5	105	0.00	3.97
20	t	2,2'-oxybis(1-Chloropropa	0.328	0.370	-12.8	124	0.00	4.07
22		n-Nitroso-di-n-propylamin	0.931	0.909	2.4	111	-0.01	4.17
23	t	Hexachloroethane	0.625	0.587	6.1	104	0.00	4.21
24	I	Naphthalene-d8	1.000	1.000	0.0	108	0.00	4.77
26	t	Nitrobenzene	0.435	0.412	5.3	104	0.00	4.28
28	t	Isophorone	0.747	0.754	-0.9	106	-0.01	4.45
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.432	0.458	-6.0	109	0.00	4.63
36	t	1,2,4-Trichlorobenzene	0.370	0.385	-4.1	106	0.00	4.74
38	t	Naphthalene	0.955	0.975	-2.1	102	0.00	4.79
42	t	Hexachlorobutadiene	0.229	0.242	-5.7	107	0.00	4.89
47	I	Acenaphthene-d10	1.000	1.000	0.0	98	0.00	6.02
48	t	Hexachlorocyclopentadiene	0.306	0.348	-13.7	75	0.00	5.40

Initial Calibration Verification

Job Number: JC87093 **Sample:** EP5844-ICV5844
Account: BBLNYS Arcadis **Lab FileID:** P129149.D
Project: National Grid, Philly Coke, Philadelphia, PA

52	t	2-Chloronaphthalene	1.084	1.204	-11.1	105	0.00	5.63
55	t	Dimethylphthalate	1.398	1.363	2.5	92	0.00	5.85
56	t	Acenaphthylene	1.711	1.697	0.8	96	0.00	5.92
57	t	2,6-Dinitrotoluene	0.293	0.279	4.8	86	0.00	5.89
59	t	Acenaphthene	1.052	1.029	2.2	92	0.00	6.04
63	t	2,4-Dinitrotoluene	0.390	0.376	3.6	90	0.00	6.19
65	t	Diethylphthalate	1.423	1.382	2.9	93	0.00	6.40
66	t	Fluorene	1.279	1.272	0.5	93	0.00	6.47
67	t	4-Chlorophenyl-phenylethe	0.632	0.605	4.3	89	0.00	6.48
69	I	Phenanthrene-d10	1.000	1.000	0.0	103	-0.01	7.45
71	t	n-Nitrosodiphenylamine	0.518	0.469	9.5	87	0.00	6.59
72	t	1,2-Diphenylhydrazine	0.810	0.727	10.2	94	0.00	6.63
74	t	4-Bromophenyl-phenylether	0.243	0.229	5.8	87	0.00	6.96
75	t	Hexachlorobenzene	0.277	0.246	11.2	84	0.00	7.02
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.042	0.974	6.5	90	-0.01	7.49
78	t	Anthracene	1.089	0.990	9.1	89	0.00	7.56
80	t	Di-n-butylphthalate	1.492	1.313	12.0	84	0.00	8.42
81	t	Fluoranthene	1.286	1.161	9.7	85	0.00	9.30
83	I	Chrysene-d12	1.000	1.000	0.0	85	0.00	12.17
84	t	Pyrene	1.385	1.381	0.3	80	0.00	9.69
86	t	Butylbenzylphthalate	0.712	0.720	-1.1	81	0.00	11.26
87	t	Benzo[a]anthracene	1.319	1.254	4.9	78	0.00	12.15
89	t	Chrysene	1.161	1.147	1.2	79	-0.01	12.22
90	t	bis(2-Ethylhexyl)phthalat	0.953	0.959	-0.6	79	0.00	12.65
91	I	Perylene-d12	1.000	1.000	0.0	83	-0.01	15.10
92	t	Di-n-octylphthalate	1.546	1.626	-5.2	76	-0.01	14.06
93	t	Benzo[b]fluoranthene	1.219	1.107	9.2	68	-0.02	14.38
94	t	Benzo[k]fluoranthene	1.026	1.051	-2.4	82	-0.02	14.44
95	t	Benzo[a]pyrene	1.031	1.052	-2.0	78	-0.01	14.99
96	t	Indeno[1,2,3-cd]pyrene	0.942	0.966	-2.5	77	-0.02	17.02
98	t	Dibenz[a,h]anthracene	0.961	0.917	4.6	73	-0.01	17.09
		----------	AvgRF	CCRF	% Dev	----------		
100	t	Benzo[g,h,i]perylene	0.950	0.963	-1.4	78	-0.01	17.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0

8.7.14

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5844-ICV5844
Lab FileID: P129149.D

p129143a.D MP5844.M Fri Apr 26 12:15:51 2019 ACLIMS

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICV5844
Lab FileID: P129150.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EP5844\p129150.D Vial: 11
Acq On : 24 Apr 2019 6:06 am Operator: chriss2
Sample : icv5844-50 Inst : MSVOAMSP
Misc : op13894,ep5844,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Apr 26 11:57:54 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	115	0.00	3.84
2	t	1,4-Dioxane	0.649	0.596	8.2	102	0.04	1.25
6	t	Indene	2.095	2.265	-8.1	117	0.00	4.03
7	t	Cumene	3.419	3.267	4.4	103	0.00	3.21
13	t	Decane	0.988	0.946	4.3	114	0.00	3.75
18	t	Acetophenone	1.960	1.831	6.6	104	0.00	4.15
24	I	Naphthalene-d8	1.000	1.000	0.0	120	0.00	4.77
27	t	Quinoline	0.725	0.632	12.8	97	-0.03	5.03
40	t	2,3-Dichloroaniline	0.414	0.316	23.7	85	0.00	5.49
41	t	Caprolactam	0.144	0.120	16.7	89	-0.04	5.11
45	t	1-Methylnaphthalene	0.709	0.621	12.4	99	0.00	5.36
46	t	Dimethylnaphthalene	0.634	0.569	10.3	99	0.00	5.73
47	I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00	6.02
53	t	Biphenyl	1.348	1.360	-0.9	98	0.00	5.62
69	I	Phenanthrene-d10	1.000	1.000	0.0	100	-0.01	7.46
82	t	Octadecane	0.408	0.393	3.7	95	0.00	7.44
83	I	Chrysene-d12	1.000	1.000	0.0	94	-0.02	12.15
91	I	Perylene-d12	1.000	1.000	0.0	90	-0.02	15.09
			True	Calc.	% Drift			
99	t	7,12-Dimethylbenz(a)anthr	50.000	38.460	23.1	68	-0.03	14.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129143a.D MP5844.M Fri Apr 26 12:27:58 2019 ACLIMS

8.7.15

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICV5844
Lab FileID: P129151.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129151.D          Vial: 12
Acq On    : 24 Apr 2019   6:33 am                   Operator: chriss2
Sample    : icv5844-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5844,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 11:57:54 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	79	0.00	3.84
3	t	Pyridine	1.229	1.202	2.2	83	0.14	1.62
		----------	True	Calc.	% Drift	----------		
10	t	Aniline	50.000	75.169	-50.3#	156	0.00	3.62
		----------	AvgRF	CCRF	% Dev	----------		
		----------	True	Calc.	% Drift	----------		
16	t	Benzyl alcohol	50.000	62.800	-25.6	99	0.00	3.99
24	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00	4.77
39	t	4-Chloroaniline	0.372	0.349	6.2	87	0.00	4.85
44	t	2-Methylnaphthalene	0.548	0.548	0.0	85	0.00	5.29
47	I	Acenaphthene-d10	1.000	1.000	0.0	85	0.00	6.02
54	t	2-Nitroaniline	0.357	0.379	-6.2	91	0.00	5.72
58	t	3-Nitroaniline	0.307	0.321	-4.6	85	0.00	6.01
62	t	Dibenzofuran	1.595	1.579	1.0	81	0.00	6.18
68	t	4-Nitroaniline	0.293	0.329	-12.3	89	-0.02	6.52
69	I	Phenanthrene-d10	1.000	1.000	0.0	94	-0.01	7.46
79	t	Carbazole	1.052	1.023	2.8	86	0.00	7.81

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 p129143a.D MP5844.M          Fri Apr 26 12:15:55 2019   ACLIMS
```

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICV5844
Lab FileID: P129152.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129152.D          Vial: 13
Acq On    : 24 Apr 2019   7:00 am                   Operator: chriss2
Sample    : icv5844-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5844,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 11:57:54 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	113	0.00	3.84
9	t	Phenol	1.778	1.866	-4.9	107	0.00	3.66
12	t	2-Chlorophenol	1.340	1.408	-5.1	111	0.00	3.70
19	t	2-Methylphenol	1.244	1.339	-7.6	117	-0.02	4.09
21	t	3&4-Methylphenol	1.218	1.351	-10.9	118	0.00	4.21
24	I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	4.77
29	t	2-Nitrophenol	0.197	0.237	-20.3	109	0.00	4.51
30	t	2,4-Dimethylphenol	0.349	0.419	-20.1	107	0.00	4.58
		----------	True	Calc.	% Drift	----------		
31	t	Benzoic acid	50.000	47.288	5.4	95	0.00	4.75
33	t	2,4-Dichlorophenol	0.329	0.367	-11.6	102	-0.01	4.70
34		2,6-Dichlorophenol	0.321	0.359	-11.8	105	0.00	4.85
43	t	4-Chloro-3-methylphenol	0.346	0.381	-10.1	102	-0.02	5.23
47	I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00	6.02
49	t	2,4,6-Trichlorophenol	0.396	0.474	-19.7	113	0.00	5.51
50	t	2,4,5-Trichlorophenol	0.393	0.444	-13.0	101	-0.02	5.54
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	47.748	4.5	74	0.00	6.09
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.220	0.236	-7.3	98	-0.01	6.20
64		2,3,4,6-Tetrachlorophenol	0.344	0.368	-7.0	92	-0.01	6.30

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EP5844-ICV5844
Lab FileID: P129152.D

69	I	Phenanthrene-d10	1.000	1.000	0.0	99	-0.01	7.46
70	t	4,6-Dinitro-2-methylpheno	0.150	0.157	-4.7	96	-0.02	6.54

			True	Calc.	% Drift			
76	t	Pentachlorophenol	50.000	55.000	-10.0	84	0.00	7.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129143a.D MP5844.M Fri Apr 26 12:15:57 2019 ACLIMS

8.7.17

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICV5844
Lab FileID: P129153.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129153.D          Vial: 14
Acq On    : 24 Apr 2019   7:27 am                   Operator: chriss2
Sample    : icv5844-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5844,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 11:57:54 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	118	0.00	3.84
5	S	2-Fluorophenol	1.285	1.286	-0.1	100	0.00	2.84
8	S	Phenol-d5	1.632	1.598	2.1	102	0.00	3.65
24	I	Naphthalene-d8	1.000	1.000	0.0	120	0.00	4.77
25	S	Nitrobenzene-d5	0.430	0.419	2.6	113	0.00	4.26
47	I	Acenaphthene-d10	1.000	1.000	0.0	102	0.00	6.02
51	S	2-Fluorobiphenyl	1.267	1.329	-4.9	105	0.00	5.55
69	I	Phenanthrene-d10	1.000	1.000	0.0	102	-0.01	7.45
73	S	2,4,6-Tribromophenol	0.133	0.125	6.0	89	-0.01	6.70
83	I	Chrysene-d12	1.000	1.000	0.0	85	-0.02	12.15
85	S	Terphenyl-d14	0.906	1.017	-12.3	88	0.00	10.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129143a.D MP5844.M Fri Apr 26 12:15:59 2019 ACLIMS

8.7.18

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5844-ICV5844
Lab FileID: P129154.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129154.D          Vial: 15
Acq On    : 24 Apr 2019   7:54 am                   Operator: chriss2
Sample    : icv5844-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5844,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 11:57:54 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	164	-0.01	12.16
88	t	3,3'-Dichlorobenzidine	0.434	0.459	-5.8	153	0.00	12.24

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129143a.D MP5844.M Fri Apr 26 12:16:01 2019 ACLIMS

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5845-ICC5845
Lab FileID: P129158.D

```
                          Response Factor Report  MSVOAMSP

  Method       : C:\MSDCHEM\1\METHODS\MP5845.M (RTE Integrator)
  Title        : Semi Volatile Extractables by GC/MS
  Last Update  : Wed Apr 24 13:36:52 2019
  Response via : Initial Calibration

  Calibration Files
  2   =p129162.D  5   =p129161.D  25  =p129159.D  80  =p129157.D
  100 =p129156.D  50  =p129158.D  10  =p129160.D  1   =p129163.D

   Compound         2     5     25    80    100   50    10    1     Avg %RSD
  ---------------------------------------------------------------------------

  1
157) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
158) Benzaldehyde 0.928 1.060 1.189 1.118 1.086 1.117 1.053 0.803 1.044  11.78

159) I   Phenanthrene-d10b     ----------------ISTD---------------------
160) Atrazine     0.194 0.205 0.234 0.237 0.230 0.224 0.208 0.188 0.215   8.74


163) I   Naphthalene-d8b       ----------------ISTD---------------------
164) Hydroquinone             0.265 0.309 0.282 0.270 0.208       0.267  13.90

165) I   Acenaphthene-d10b     ----------------ISTD---------------------
166) 1,2,4,5-Tetr 0.554 0.574 0.614 0.614 0.626 0.635 0.570 0.519 0.588   6.90


 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MP5844.M          Wed Apr 24 13:41:34 2019   ACLIMS
```

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5845-ICV5845
Lab FileID: P129164.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129164.D          Vial: 24
Acq On    : 24 Apr 2019  12:07 pm                   Operator: chriss2
Sample    : icv5845-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5845,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Wed Apr 24 13:36:52 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.
157	I	1,4-Dichlorobenzene-d4b	1.000	1.000	0.0	84	0.00	3.84
158		Benzaldehyde	1.044	1.188	-13.8	89	-0.02	3.50
159	I	Phenanthrene-d10b	1.000	1.000	0.0	93	0.01	7.46
160		Atrazine	0.215	0.238	-10.7	99	0.02	7.20
165	I	Acenaphthene-d10b	1.000	1.000	0.0	90	0.00	6.02
166		1,2,4,5-Tetrachlorobenzen	0.588	0.615	-4.6	87	0.00	5.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129158a.D MP5844.M Wed Apr 24 13:48:19 2019 ACLIMS

8.7.21

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5845-ICV5845
Lab FileID: P129165.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129165.D          Vial: 25
Acq On    : 24 Apr 2019  12:34 pm                   Operator: chriss2
Sample    : icv5845-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5845,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Wed Apr 24 13:36:52 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.
163 I	Naphthalene-d8b	1.000	1.000	0.0	106	0.00	4.77
164	Hydroquinone	0.267	0.321	-20.2	126	-0.04	5.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129158a.D MP5844.M Wed Apr 24 13:48:21 2019 ACLIMS

Initial Calibration Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5846-ICC5846
Lab FileID: P129174.D

```
                          Response Factor Report  MSVOAMSP

  Method       : C:\MSDCHEM\1\METHODS\MP5846.M (RTE Integrator)
  Title        : Semi Volatile Extractables by GC/MS
  Last Update  : Thu Apr 25 08:18:41 2019
  Response via : Initial Calibration

  Calibration Files
  2   =p129178.D  5   =p129177.D  25  =p129175.D  80  =p129173.D
  100 =p129172.D  50  =p129174.D   10  =p129176.D  1  =

   Compound         2     5     25    80    100   50    10    1     Avg %RSD
  ---------------------------------------------------------------------------



161) I   Chrysene-d12b         ----------------ISTD---------------------
162) Benzidine                0.766 0.942 0.935 0.880 0.635       0.832  15.73


 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MP5844.M          Thu Apr 25 08:20:02 2019   ACLIMS
```

8.7.23

8

Initial Calibration Verification

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Sample: EP5846-ICV5846
Lab FileID: P129180.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5844\p129180.D          Vial: 34
Acq On    : 24 Apr 2019   7:44 pm                   Operator: chriss2
Sample    : icv5846-50                              Inst    : MSVOAMSP
Misc      : op13894,ep5846,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Thu Apr 25 08:18:41 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.
161 I	Chrysene-d12b	1.000	1.000	0.0	105	0.00	12.15
162	Benzidine	0.832	0.734	11.8	88	0.00	9.65

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129174.D MP5844.M Thu Apr 25 08:20:28 2019 ACLIMS

8.7.24

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5856-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129366.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5856\p129366.D          Vial: 2
Acq On    :  7 May 2019  12:44 pm                   Operator: christc2
Sample    : cc5844-25                               Inst    : MSVOAMSP
Misc      : op13894,ep5856,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 12:50:52 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	73	-0.08	3.76
2	t	1,4-Dioxane	0.649	0.838	-29.1#	92	-0.06	1.15
3	t	Pyridine	1.229	1.973	-60.5#	122	-0.12	1.36
4	t	N-Nitrosodimethylamine	0.654	0.844	-29.1#	84	-0.07	1.35
5	S	2-Fluorophenol	1.285	1.572	-22.3#	81	-0.05	2.80
6	t	Indene	2.095	2.232	-6.5	76	-0.08	3.95
7	t	Cumene	3.419	3.947	-15.4	80	-0.09	3.12
8	S	Phenol-d5	1.632	2.039	-24.9#	85	-0.03	3.62
9	t	Phenol	1.778	1.963	-10.4	76	-0.03	3.64
		----------	True	Calc.	% Drift	----------		
10	t	Aniline	25.000	55.414	-121.7#	160	-0.09	3.53
		----------	AvgRF	CCRF	% Dev	----------		
11	t	bis(2-Chloroethyl)ether	1.409	1.527	-8.4	71	-0.07	3.59
12	t	2-Chlorophenol	1.340	1.454	-8.5	77	-0.06	3.65
13	t	Decane	0.988	1.137	-15.1	82	-0.08	3.67
14	t	1,3-Dichlorobenzene	1.576	1.608	-2.0	72	-0.08	3.72
15	t	1,4-Dichlorobenzene	1.527	1.571	-2.9	75	-0.08	3.77
		----------	True	Calc.	% Drift	----------		
16	t	Benzyl alcohol	25.000	29.268	-17.1	89	-0.07	3.91
		----------	AvgRF	CCRF	% Dev	----------		
17	t	1,2-Dichlorobenzene	1.526	1.627	-6.6	75	-0.08	3.89
18	t	Acetophenone	1.960	2.005	-2.3	75	-0.08	4.08
19	t	2-Methylphenol	1.244	1.321	-6.2	75	-0.05	4.05
20	t	2,2'-oxybis(1-Chloropropa	0.328	0.334	-1.8	73	-0.07	4.00
21	t	3&4-Methylphenol	1.218	1.372	-12.6	81	-0.04	4.17
22		n-Nitroso-di-n-propylamin	0.931	0.951	-2.1	77	-0.09	4.09
23	t	Hexachloroethane	0.625	0.625	0.0	72	-0.08	4.13
24	I	Naphthalene-d8	1.000	1.000	0.0	70	-0.08	4.70
25	S	Nitrobenzene-d5	0.430	0.471	-9.5	77	-0.08	4.19
26	t	Nitrobenzene	0.435	0.497	-14.3	82	-0.08	4.20
27	t	Quinoline	0.725	0.735	-1.4	71	-0.10	4.96
28	t	Isophorone	0.747	0.832	-11.4	76	-0.08	4.38
29	t	2-Nitrophenol	0.197	0.227	-15.2	73	-0.07	4.44
30	t	2,4-Dimethylphenol	0.349	0.409	-17.2	78	-0.05	4.53
		----------	True	Calc.	% Drift	----------		
31	t	Benzoic acid	25.000	28.634	-14.5	83	-0.08	4.68

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5856-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129366.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
32	t	bis(2-Chloroethoxy)methan	0.432	0.478	-10.6	77	-0.08	4.55
33	t	2,4-Dichlorophenol	0.329	0.363	-10.3	74	-0.06	4.66
34		2,6-Dichlorophenol	0.321	0.349	-8.7	73	-0.07	4.79
35		1,3,5-Trichlorobenzene	0.387	0.420	-8.5	72	-0.08	4.44
36	t	1,2,4-Trichlorobenzene	0.370	0.392	-5.9	71	-0.07	4.67
37		1,2,3-Trichlorobenzene	0.349	0.371	-6.3	72	-0.08	4.82
38	t	Naphthalene	0.955	1.042	-9.1	76	-0.08	4.71
39	t	4-Chloroaniline	0.372	0.434	-16.7	85	-0.07	4.78
40	t	2,3-Dichloroaniline	0.414	0.424	-2.4	72	-0.07	5.42
41	t	Caprolactam	0.144	0.175	-21.5#	80	-0.10	5.05
42	t	Hexachlorobutadiene	0.229	0.236	-3.1	69	-0.08	4.82
43	t	4-Chloro-3-methylphenol	0.346	0.386	-11.6	75	-0.06	5.19
44	t	2-Methylnaphthalene	0.548	0.606	-10.6	75	-0.08	5.21
45	t	1-Methylnaphthalene	0.709	0.732	-3.2	70	-0.08	5.28
46	t	Dimethylnaphthalene	0.634	0.621	2.1	67	-0.08	5.65
47	I	Acenaphthene-d10	1.000	1.000	0.0	68	-0.09	5.94
48	t	Hexachlorocyclopentadiene	0.306	0.352	-15.0	69	-0.07	5.33
49	t	2,4,6-Trichlorophenol	0.396	0.424	-7.1	68	-0.07	5.44
50	t	2,4,5-Trichlorophenol	0.393	0.430	-9.4	66	-0.06	5.49
51	S	2-Fluorobiphenyl	1.267	1.365	-7.7	68	-0.07	5.48
52	t	2-Chloronaphthalene	1.084	1.190	-9.8	71	-0.08	5.55
53	t	Biphenyl	1.348	1.478	-9.6	69	-0.08	5.54
54	t	2-Nitroaniline	0.357	0.402	-12.6	73	-0.07	5.65
55	t	Dimethylphthalate	1.398	1.400	-0.1	66	-0.07	5.78
56	t	Acenaphthylene	1.711	1.845	-7.8	71	-0.08	5.84
57	t	2,6-Dinitrotoluene	0.293	0.305	-4.1	69	-0.08	5.81
58	t	3-Nitroaniline	0.307	0.311	-1.3	65	-0.07	5.94
59	t	Acenaphthene	1.052	1.112	-5.7	70	-0.09	5.96
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	50.000	42.292	15.4	58	-0.09	6.02
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.220	0.239	-8.6	71	-0.04	6.17
62	t	Dibenzofuran	1.595	1.676	-5.1	68	-0.09	6.09
63	t	2,4-Dinitrotoluene	0.390	0.395	-1.3	67	-0.09	6.11
64		2,3,4,6-Tetrachlorophenol	0.344	0.363	-5.5	67	-0.09	6.22
65	t	Diethylphthalate	1.423	1.457	-2.4	68	-0.10	6.31
66	t	Fluorene	1.279	1.337	-4.5	67	-0.10	6.37
67	t	4-Chlorophenyl-phenylethe	0.632	0.639	-1.1	65	-0.10	6.38
68	t	4-Nitroaniline	0.293	0.302	-3.1	69	-0.10	6.44
69	I	Phenanthrene-d10	1.000	1.000	0.0	65	-0.13	7.33
70	t	4,6-Dinitro-2-methylpheno	0.150	0.142	5.3	61	-0.10	6.46
71	t	n-Nitrosodiphenylamine	0.518	0.534	-3.1	65	-0.10	6.50
72	t	1,2-Diphenylhydrazine	0.810	1.019	-25.8#	84	-0.11	6.53
73	S	2,4,6-Tribromophenol	0.133	0.131	1.5	62	-0.11	6.60
74	t	4-Bromophenyl-phenylether	0.243	0.242	0.4	63	-0.12	6.85
75	t	Hexachlorobenzene	0.277	0.276	0.4	64	-0.12	6.90
			True	Calc.	% Drift			
76	t	Pentachlorophenol	50.000	47.118	5.8	63	-0.12	7.16
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.042	1.083	-3.9	67	-0.14	7.36
78	t	Anthracene	1.089	1.141	-4.8	67	-0.14	7.42
79	t	Carbazole	1.052	1.081	-2.8	66	-0.13	7.68

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5856-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129366.D
Project: National Grid, Philly Coke, Philadelphia, PA

80	t	Di-n-butylphthalate	1.492	1.592	-6.7	66	-0.15	8.28
81	t	Fluoranthene	1.286	1.320	-2.6	65	-0.18	9.13
82	t	Octadecane	0.408	0.476	-16.7	74	-0.13	7.32
83	I	Chrysene-d12	1.000	1.000	0.0	62	-0.20	11.97
84	t	Pyrene	1.385	1.543	-11.4	66	-0.19	9.51
85	S	Terphenyl-d14	0.906	0.937	-3.4	61	-0.18	9.94
86	t	Butylbenzylphthalate	0.712	0.806	-13.2	66	-0.18	11.08
87	t	Benzo[a]anthracene	1.319	1.372	-4.0	64	-0.20	11.95
88	t	3,3'-Dichlorobenzidine	0.434	0.446	-2.8	59	-0.19	12.05
89	t	Chrysene	1.161	1.210	-4.2	62	-0.21	12.02
90	t	bis(2-Ethylhexyl)phthalat	0.953	1.083	-13.6	65	-0.19	12.47
91	I	Perylene-d12	1.000	1.000	0.0	62	-0.21	14.90
92	t	Di-n-octylphthalate	1.546	1.830	-18.4	65	-0.19	13.88
93	t	Benzo[b]fluoranthene	1.219	1.265	-3.8	64	-0.22	14.18
94	t	Benzo[k]fluoranthene	1.026	1.126	-9.7	63	-0.23	14.23
95	t	Benzo[a]pyrene	1.031	1.117	-8.3	65	-0.22	14.77
96	t	Indeno[1,2,3-cd]pyrene	0.942	1.059	-12.4	67	-0.23	16.80
97	t	Dibenz(a,h)acridine	0.908	1.001	-10.2	64	-0.22	16.47
98	t	Dibenz[a,h]anthracene	0.961	1.056	-9.9	66	-0.22	16.87
		----------	True	Calc.	% Drift	----------		
99	t	7,12-Dimethylbenz(a)anthr	25.000	24.870	0.5	67	-0.22	14.20
		----------	AvgRF	CCRF	% Dev	----------		
100	t	Benzo[g,h,i]perylene	0.950	1.067	-12.3	68	-0.24	17.21

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129175a.D MP5844.M Tue May 07 14:48:51 2019 ACLIMS

8.7.25

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5856-CC5845
Account: BBLNYS Arcadis **Lab FileID:** P129367.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5856\p129367.D          Vial: 3
Acq On    :  7 May 2019   1:11 pm                   Operator: christc2
Sample    : cc5845-25                               Inst    : MSVOAMSP
Misc      : op13894,ep5856,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Apr 26 12:50:52 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-d4b	1.000	1.000	0.0	102	-0.08	3.76
102		Benzaldehyde	1.044	1.197	-14.7	103	-0.10	3.42
103	I	Phenanthrene-d10b	1.000	1.000	0.0	84	-0.12	7.33
104		Atrazine	0.215	0.243	-13.0	87	-0.10	7.09
107	I	Naphthalene-d8b	1.000	1.000	0.0	99	-0.08	4.69
108		Hydroquinone	0.267	0.359	-34.5#	134	-0.05	5.12
109	I	Acenaphthene-d10b	1.000	1.000	0.0	89	-0.08	5.94
110		1,2,4,5-Tetrachlorobenzen	0.588	0.643	-9.4	93	-0.08	5.33

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129175a.D MP5844.M Tue May 07 14:48:53 2019 ACLIMS

8.7.26

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5857-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129393.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5857\p129393.D          Vial: 2
Acq On    :  8 May 2019   9:12 am                   Operator: angelar
Sample    : cc5844-50                               Inst    : MSVOAMSP
Misc      : op13894,ep5857,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Wed May 08 13:02:27 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	83	-0.09	3.75
2	t	1,4-Dioxane	0.649	0.838	-29.1#	104	-0.09	1.12
3	t	Pyridine	1.229	1.952	-58.8#	142	-0.14	1.34
4	t	N-Nitrosodimethylamine	0.654	0.758	-15.9	90	-0.10	1.32
5	S	2-Fluorophenol	1.285	1.522	-18.4	84	-0.08	2.77
6	t	Indene	2.095	2.162	-3.2	81	-0.09	3.94
7	t	Cumene	3.419	3.688	-7.9	84	-0.10	3.11
8	S	Phenol-d5	1.632	1.918	-17.5	86	-0.05	3.60
9	t	Phenol	1.778	1.885	-6.0	79	-0.05	3.61
		----------	True	Calc.	% Drift	----------		
10	t	Aniline	50.000	89.260	-78.5#	208	-0.10	3.52
		----------	AvgRF	CCRF	% Dev	----------		
11	t	bis(2-Chloroethyl)ether	1.409	1.444	-2.5	74	-0.09	3.57
12	t	2-Chlorophenol	1.340	1.365	-1.9	79	-0.08	3.62
13	t	Decane	0.988	1.040	-5.3	91	-0.09	3.66
14	t	1,3-Dichlorobenzene	1.576	1.601	-1.6	82	-0.09	3.70
15	t	1,4-Dichlorobenzene	1.527	1.586	-3.9	82	-0.09	3.76
		----------	True	Calc.	% Drift	----------		
16	t	Benzyl alcohol	50.000	55.360	-10.7	91	-0.08	3.90
		----------	AvgRF	CCRF	% Dev	----------		
17	t	1,2-Dichlorobenzene	1.526	1.592	-4.3	83	-0.09	3.88
18	t	Acetophenone	1.960	1.929	1.6	79	-0.09	4.07
19	t	2-Methylphenol	1.244	1.284	-3.2	82	-0.06	4.04
20	t	2,2'-oxybis(1-Chloropropa	0.328	0.322	1.8	78	-0.09	3.99
21	t	3&4-Methylphenol	1.218	1.329	-9.1	85	-0.06	4.15
22		n-Nitroso-di-n-propylamin	0.931	0.920	1.2	81	-0.09	4.09
23	t	Hexachloroethane	0.625	0.628	-0.5	81	-0.09	4.12
24	I	Naphthalene-d8	1.000	1.000	0.0	79	-0.09	4.69
25	S	Nitrobenzene-d5	0.430	0.459	-6.7	82	-0.09	4.17
26	t	Nitrobenzene	0.435	0.453	-4.1	84	-0.09	4.19
27	t	Quinoline	0.725	0.739	-1.9	75	-0.11	4.95
28	t	Isophorone	0.747	0.795	-6.4	82	-0.09	4.37
29	t	2-Nitrophenol	0.197	0.226	-14.7	80	-0.09	4.43
30	t	2,4-Dimethylphenol	0.349	0.408	-16.9	80	-0.07	4.52
		----------	True	Calc.	% Drift	----------		
31	t	Benzoic acid	50.000	52.445	-4.9	82	-0.08	4.68

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5857-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129393.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
32	t	bis(2-Chloroethoxy)methan	0.432	0.461	-6.7	80	-0.09	4.55
33	t	2,4-Dichlorophenol	0.329	0.363	-10.3	79	-0.07	4.64
34		2,6-Dichlorophenol	0.321	0.344	-7.2	78	-0.08	4.78
35		1,3,5-Trichlorobenzene	0.387	0.422	-9.0	81	-0.09	4.43
36	t	1,2,4-Trichlorobenzene	0.370	0.381	-3.0	77	-0.09	4.66
37		1,2,3-Trichlorobenzene	0.349	0.377	-8.0	81	-0.09	4.81
38	t	Naphthalene	0.955	1.008	-5.5	78	-0.09	4.70
39	t	4-Chloroaniline	0.372	0.407	-9.4	88	-0.09	4.77
40	t	2,3-Dichloroaniline	0.414	0.419	-1.2	75	-0.08	5.41
41	t	Caprolactam	0.144	0.173	-20.1#	85	-0.09	5.06
42	t	Hexachlorobutadiene	0.229	0.236	-3.1	77	-0.09	4.81
43	t	4-Chloro-3-methylphenol	0.346	0.379	-9.5	78	-0.07	5.18
44	t	2-Methylnaphthalene	0.548	0.596	-8.8	81	-0.09	5.20
45	t	1-Methylnaphthalene	0.709	0.737	-3.9	78	-0.09	5.26
46	t	Dimethylnaphthalene	0.634	0.624	1.6	72	-0.09	5.64
47	I	Acenaphthene-d10	1.000	1.000	0.0	74	-0.10	5.93
48	t	Hexachlorocyclopentadiene	0.306	0.348	-13.7	73	-0.09	5.32
49	t	2,4,6-Trichlorophenol	0.396	0.424	-7.1	76	-0.08	5.43
50	t	2,4,5-Trichlorophenol	0.393	0.429	-9.2	73	-0.07	5.48
51	S	2-Fluorobiphenyl	1.267	1.344	-6.1	77	-0.09	5.47
52	t	2-Chloronaphthalene	1.084	1.148	-5.9	76	-0.09	5.54
53	t	Biphenyl	1.348	1.428	-5.9	75	-0.09	5.54
54	t	2-Nitroaniline	0.357	0.359	-0.6	75	-0.09	5.64
55	t	Dimethylphthalate	1.398	1.403	-0.4	72	-0.08	5.77
56	t	Acenaphthylene	1.711	1.801	-5.3	77	-0.09	5.83
57	t	2,6-Dinitrotoluene	0.293	0.300	-2.4	70	-0.09	5.81
58	t	3-Nitroaniline	0.307	0.329	-7.2	75	-0.09	5.93
59	t	Acenaphthene	1.052	1.106	-5.1	75	-0.09	5.95
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	100.000	89.069	10.9	66	-0.09	6.01
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.220	0.243	-10.5	75	-0.06	6.15
62	t	Dibenzofuran	1.595	1.655	-3.8	74	-0.10	6.09
63	t	2,4-Dinitrotoluene	0.390	0.405	-3.8	73	-0.10	6.10
64		2,3,4,6-Tetrachlorophenol	0.344	0.367	-6.7	69	-0.10	6.21
65	t	Diethylphthalate	1.423	1.416	0.5	72	-0.10	6.31
66	t	Fluorene	1.279	1.317	-3.0	73	-0.11	6.37
67	t	4-Chlorophenyl-phenylethe	0.632	0.629	0.5	70	-0.11	6.38
68	t	4-Nitroaniline	0.293	0.300	-2.4	70	-0.10	6.43
69	I	Phenanthrene-d10	1.000	1.000	0.0	72	0.00	7.32
70	t	4,6-Dinitro-2-methylpheno	0.150	0.153	-2.0	68	-0.11	6.45
71	t	n-Nitrosodiphenylamine	0.518	0.541	-4.4	70	-0.11	6.49
72	t	1,2-Diphenylhydrazine	0.810	0.958	-18.3	86	-0.12	6.51
73	S	2,4,6-Tribromophenol	0.133	0.136	-2.3	68	-0.11	6.59
74	t	4-Bromophenyl-phenylether	0.243	0.255	-4.9	67	-0.12	6.84
75	t	Hexachlorobenzene	0.277	0.286	-3.2	68	-0.13	6.89
			True	Calc.	% Drift			
76	t	Pentachlorophenol	100.000	97.222	2.8	69	-0.13	7.15
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.042	1.120	-7.5	72	0.00	7.35
78	t	Anthracene	1.089	1.152	-5.8	72	-0.15	7.41
79	t	Carbazole	1.052	1.103	-4.8	71	0.00	7.67

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5857-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129393.D
Project: National Grid, Philly Coke, Philadelphia, PA

80	t	Di-n-butylphthalate	1.492	1.591	-6.6	71	-0.16	8.27
81	t	Fluoranthene	1.286	1.364	-6.1	70	0.00	9.12
82	t	Octadecane	0.408	0.458	-12.3	79	-0.14	7.31
83	I	Chrysene-d12	1.000	1.000	0.0	67	0.00	11.96
84	t	Pyrene	1.385	1.527	-10.3	70	0.00	9.50
85	S	Terphenyl-d14	0.906	0.962	-6.2	67	-0.19	9.93
86	t	Butylbenzylphthalate	0.712	0.798	-12.1	71	-0.19	11.07
87	t	Benzo[a]anthracene	1.319	1.377	-4.4	68	0.00	11.94
88	t	3,3'-Dichlorobenzidine	0.434	0.481	-10.8	66	-0.20	12.04
89	t	Chrysene	1.161	1.257	-8.3	68	0.00	12.01
90	t	bis(2-Ethylhexyl)phthalat	0.953	1.059	-11.1	69	-0.20	12.46
91	I	Perylene-d12	1.000	1.000	0.0	69	-0.22	14.89
92	t	Di-n-octylphthalate	1.546	1.780	-15.1	69	-0.21	13.86
93	t	Benzo[b]fluoranthene	1.219	1.340	-9.9	67	0.02	14.18
94	t	Benzo[k]fluoranthene	1.026	1.093	-6.5	70	-0.23	14.23
95	t	Benzo[a]pyrene	1.031	1.138	-10.4	69	-0.22	14.77
96	t	Indeno[1,2,3-cd]pyrene	0.942	1.085	-15.2	71	-0.23	16.80
97	t	Dibenz(a,h)acridine	0.908	1.022	-12.6	69	-0.22	16.46
98	t	Dibenz[a,h]anthracene	0.961	1.076	-12.0	70	-0.22	16.87
		----------	True	Calc.	% Drift	----------		
99	t	7,12-Dimethylbenz(a)anthr	50.000	49.850	0.3	68	-0.22	14.20
		----------	AvgRF	CCRF	% Dev	----------		
100	t	Benzo[g,h,i]perylene	0.950	1.075	-13.2	72	-0.23	17.22

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129174a.D MP5844.M Wed May 08 13:04:16 2019 ACLIMS

8.7.27

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5857-CC5845
Account: BBLNYS Arcadis **Lab FileID:** P129394.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5857\p129394.D          Vial: 3
Acq On    :  8 May 2019   9:39 am                   Operator: angelar
Sample    : cc5845-50                               Inst    : MSVOAMSP
Misc      : op13894,ep5857,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Wed May 08 13:07:05 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-d4b	1.000	1.000	0.0	109	-0.09	3.75
102	Benzaldehyde	1.044	1.160	-11.1	113	-0.11	3.41
103 I	Phenanthrene-d10b	1.000	1.000	0.0	107	-0.13	7.32
104	Atrazine	0.215	0.228	-6.0	110	-0.10	7.08
107 I	Naphthalene-d8b	1.000	1.000	0.0	108	-0.09	4.68
108	Hydroquinone	0.267	0.345	-29.2#	138	-0.06	5.10
109 I	Acenaphthene-d10b	1.000	1.000	0.0	107	-0.09	5.93
110	1,2,4,5-Tetrachlorobenzen	0.588	0.637	-8.3	108	-0.09	5.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129174a.D MP5844.M Wed May 08 13:07:58 2019 ACLIMS

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5857-CC5846
Account: BBLNYS Arcadis **Lab FileID:** P129395.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5857\p129395.D          Vial: 4
Acq On    :  8 May 2019  10:06 am                   Operator: angelar
Sample    : cc5846-50                               Inst    : MSVOAMSP
Misc      : op13894,ep5857,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Wed May 08 13:07:05 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.
105 I	Chrysene-d12b	1.000	1.000	0.0	86	-0.20	11.94
106	Benzidine	0.832	0.863	-3.7	85	-0.17	9.47

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129174a.D MP5844.M Wed May 08 13:08:46 2019 ACLIMS

8.7.29

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5858-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129419.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5858\p129419.D          Vial: 2
Acq On    :  9 May 2019   9:23 am                   Operator: angelar
Sample    : cc5844-25                               Inst    : MSVOAMSP
Misc      : op13894,ep5858,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Thu May 09 10:12:58 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	75	-0.10	3.74
2	t	1,4-Dioxane	0.649	0.829	-27.7#	94	-0.09	1.12
3	t	Pyridine	1.229	1.956	-59.2#	124	-0.15	1.33
4	t	N-Nitrosodimethylamine	0.654	0.794	-21.4#	82	-0.10	1.32
5	S	2-Fluorophenol	1.285	1.505	-17.1	80	-0.07	2.78
6	t	Indene	2.095	2.246	-7.2	79	-0.10	3.93
7	t	Cumene	3.419	3.804	-11.3	79	-0.11	3.10
8	S	Phenol-d5	1.632	2.007	-23.0#	86	-0.04	3.61
9	t	Phenol	1.778	1.935	-8.8	77	-0.04	3.62
		----------	True	Calc.	% Drift	----------		
10	t	Aniline	25.000	53.032	-112.1#	156	-0.11	3.51
		----------	AvgRF	CCRF	% Dev	----------		
11	t	bis(2-Chloroethyl)ether	1.409	1.460	-3.6	70	-0.10	3.57
12	t	2-Chlorophenol	1.340	1.444	-7.8	79	-0.08	3.62
13	t	Decane	0.988	1.095	-10.8	81	-0.10	3.65
14	t	1,3-Dichlorobenzene	1.576	1.646	-4.4	76	-0.10	3.69
15	t	1,4-Dichlorobenzene	1.527	1.608	-5.3	79	-0.10	3.76
		----------	True	Calc.	% Drift	----------		
16	t	Benzyl alcohol	25.000	30.406	-21.6#	95	-0.08	3.90
		----------	AvgRF	CCRF	% Dev	----------		
17	t	1,2-Dichlorobenzene	1.526	1.605	-5.2	77	-0.10	3.87
18	t	Acetophenone	1.960	2.019	-3.0	78	-0.10	4.06
19	t	2-Methylphenol	1.244	1.340	-7.7	79	-0.06	4.04
20	t	2,2'-oxybis(1-Chloropropa	0.328	0.331	-0.9	75	-0.09	3.98
21	t	3&4-Methylphenol	1.218	1.342	-10.2	82	-0.05	4.16
22		n-Nitroso-di-n-propylamin	0.931	0.942	-1.2	79	-0.10	4.08
23	t	Hexachloroethane	0.625	0.636	-1.8	76	-0.10	4.12
24	I	Naphthalene-d8	1.000	1.000	0.0	73	-0.10	4.68
25	S	Nitrobenzene-d5	0.430	0.470	-9.3	80	-0.10	4.17
26	t	Nitrobenzene	0.435	0.615	-41.4#	105	-0.10	4.19
27	t	Quinoline	0.725	0.732	-1.0	73	-0.12	4.94
28	t	Isophorone	0.747	0.812	-8.7	77	-0.09	4.37
29	t	2-Nitrophenol	0.197	0.225	-14.2	75	-0.09	4.42
30	t	2,4-Dimethylphenol	0.349	0.393	-12.6	77	-0.07	4.52
		----------	True	Calc.	% Drift	----------		
31	t	Benzoic acid	25.000	28.568	-14.3	85	-0.08	4.68

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5858-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129419.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
32	t	bis(2-Chloroethoxy)methan	0.432	0.478	-10.6	80	-0.10	4.54
33	t	2,4-Dichlorophenol	0.329	0.364	-10.6	77	-0.07	4.64
34		2,6-Dichlorophenol	0.321	0.335	-4.4	72	-0.09	4.77
35		1,3,5-Trichlorobenzene	0.387	0.424	-9.6	76	-0.10	4.42
36	t	1,2,4-Trichlorobenzene	0.370	0.402	-8.6	76	-0.09	4.65
37		1,2,3-Trichlorobenzene	0.349	0.371	-6.3	74	-0.10	4.81
38	t	Naphthalene	0.955	1.005	-5.2	76	-0.10	4.70
39	t	4-Chloroaniline	0.372	0.377	-1.3	77	-0.09	4.77
40	t	2,3-Dichloroaniline	0.414	0.409	1.2	72	-0.09	5.41
41	t	Caprolactam	0.144	0.165	-14.6	78	-0.12	5.03
42	t	Hexachlorobutadiene	0.229	0.234	-2.2	71	-0.10	4.80
43	t	4-Chloro-3-methylphenol	0.346	0.381	-10.1	77	-0.07	5.18
44	t	2-Methylnaphthalene	0.548	0.598	-9.1	76	-0.10	5.19
45	t	1-Methylnaphthalene	0.709	0.736	-3.8	73	-0.10	5.26
46	t	Dimethylnaphthalene	0.634	0.624	1.6	70	-0.09	5.64
47	I	Acenaphthene-d10	1.000	1.000	0.0	72	-0.10	5.92
48	t	Hexachlorocyclopentadiene	0.306	0.333	-8.8	69	-0.10	5.31
49	t	2,4,6-Trichlorophenol	0.396	0.426	-7.6	72	-0.09	5.43
50	t	2,4,5-Trichlorophenol	0.393	0.437	-11.2	70	-0.07	5.48
51	S	2-Fluorobiphenyl	1.267	1.349	-6.5	71	-0.09	5.46
52	t	2-Chloronaphthalene	1.084	1.173	-8.2	74	-0.10	5.53
53	t	Biphenyl	1.348	1.426	-5.8	70	-0.10	5.53
54	t	2-Nitroaniline	0.357	0.368	-3.1	70	-0.09	5.63
55	t	Dimethylphthalate	1.398	1.395	0.2	70	-0.09	5.76
56	t	Acenaphthylene	1.711	1.784	-4.3	73	-0.10	5.82
57	t	2,6-Dinitrotoluene	0.293	0.305	-4.1	72	-0.09	5.80
58	t	3-Nitroaniline	0.307	0.297	3.3	65	-0.09	5.93
59	t	Acenaphthene	1.052	1.094	-4.0	72	-0.10	5.94
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	50.000	44.294	11.4	64	-0.10	6.01
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.220	0.249	-13.2	78	-0.05	6.16
62	t	Dibenzofuran	1.595	1.625	-1.9	70	-0.11	6.08
63	t	2,4-Dinitrotoluene	0.390	0.396	-1.5	70	-0.10	6.10
64		2,3,4,6-Tetrachlorophenol	0.344	0.367	-6.7	71	-0.10	6.21
65	t	Diethylphthalate	1.423	1.392	2.2	68	-0.12	6.29
66	t	Fluorene	1.279	1.295	-1.3	68	-0.12	6.35
67	t	4-Chlorophenyl-phenylethe	0.632	0.622	1.6	67	-0.12	6.37
68	t	4-Nitroaniline	0.293	0.252	14.0	61	-0.12	6.42
69	I	Phenanthrene-d10	1.000	1.000	0.0	67	-0.02	7.31
70	t	4,6-Dinitro-2-methylpheno	0.150	0.141	6.0	63	-0.12	6.44
71	t	n-Nitrosodiphenylamine	0.518	0.529	-2.1	67	-0.12	6.48
72	t	1,2-Diphenylhydrazine	0.810	1.006	-24.2#	85	-0.13	6.50
73	S	2,4,6-Tribromophenol	0.133	0.132	0.8	65	-0.12	6.58
74	t	4-Bromophenyl-phenylether	0.243	0.240	1.2	64	-0.14	6.82
75	t	Hexachlorobenzene	0.277	0.274	1.1	65	-0.14	6.88
			True	Calc.	% Drift			
76	t	Pentachlorophenol	50.000	47.017	6.0	65	-0.14	7.14
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.042	1.089	-4.5	69	0.00	7.34
78	t	Anthracene	1.089	1.138	-4.5	69	-0.16	7.40
79	t	Carbazole	1.052	1.038	1.3	65	0.00	7.66

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5858-CC5844
Account: BBLNYS Arcadis **Lab FileID:** P129419.D
Project: National Grid, Philly Coke, Philadelphia, PA

80	t	Di-n-butylphthalate	1.492	1.543	-3.4	66	-0.18	8.25
81	t	Fluoranthene	1.286	1.299	-1.0	65	-0.03	9.10
82	t	Octadecane	0.408	0.465	-14.0	74	-0.15	7.29
83	I	Chrysene-d12	1.000	1.000	0.0	63	-0.02	11.94
84	t	Pyrene	1.385	1.538	-11.0	67	-0.03	9.48
85	S	Terphenyl-d14	0.906	0.938	-3.5	62	-0.21	9.92
86	t	Butylbenzylphthalate	0.712	0.786	-10.4	66	-0.21	11.05
87	t	Benzo[a]anthracene	1.319	1.350	-2.4	65	-0.03	11.92
88	t	3,3'-Dichlorobenzidine	0.434	0.419	3.5	57	-0.22	12.02
89	t	Chrysene	1.161	1.212	-4.4	64	-0.02	11.99
90	t	bis(2-Ethylhexyl)phthalat	0.953	1.058	-11.0	65	-0.22	12.44
91	I	Perylene-d12	1.000	1.000	0.0	64	-0.24	14.87
92	t	Di-n-octylphthalate	1.546	1.782	-15.3	65	-0.22	13.84
93	t	Benzo[b]fluoranthene	1.219	1.290	-5.8	66	-0.02	14.15
94	t	Benzo[k]fluoranthene	1.026	1.080	-5.3	62	-0.26	14.21
95	t	Benzo[a]pyrene	1.031	1.093	-6.0	65	-0.25	14.75
96	t	Indeno[1,2,3-cd]pyrene	0.942	1.002	-6.4	65	-0.26	16.78
97	t	Dibenz(a,h)acridine	0.908	0.948	-4.4	63	-0.25	16.44
98	t	Dibenz[a,h]anthracene	0.961	1.030	-7.2	66	-0.25	16.85
		----------	True	Calc.	% Drift	----------		
99	t	7,12-Dimethylbenz(a)anthr	25.000	24.722	1.1	69	-0.25	14.17
		----------	AvgRF	CCRF	% Dev	----------		
100	t	Benzo[g,h,i]perylene	0.950	1.010	-6.3	66	-0.26	17.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129175a.D MP5844.M Thu May 09 10:14:31 2019 ACLIMS

8.7.30

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5858-CC5845
Account: BBLNYS Arcadis **Lab FileID:** P129420.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EP5858\p129420.D          Vial: 3
Acq On    :  9 May 2019   9:50 am                   Operator: angelar
Sample    : cc5845-25                               Inst    : MSVOAMSP
Misc      : op13894,ep5858,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Thu May 09 10:12:58 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-d4b	1.000	1.000	0.0	106	-0.10	3.74
102		Benzaldehyde	1.044	1.178	-12.8	105	-0.12	3.40
103	I	Phenanthrene-d10b	1.000	1.000	0.0	89	-0.14	7.31
104		Atrazine	0.215	0.236	-9.8	90	-0.12	7.06
107	I	Naphthalene-d8b	1.000	1.000	0.0	102	-0.10	4.68
108		Hydroquinone	0.267	0.381	-42.7#	147	-0.06	5.11
109	I	Acenaphthene-d10b	1.000	1.000	0.0	93	-0.10	5.92
110		1,2,4,5-Tetrachlorobenzen	0.588	0.647	-10.0	97	-0.10	5.31

(#) = Out of Range SPCC's out = 0 CCC's out = 0
p129175a.D MP5844.M Thu May 09 10:15:58 2019 ACLIMS

8.7.31

8

Continuing Calibration Summary

Job Number: JC87093 **Sample:** EP5858-CC5846
Account: BBLNYS Arcadis **Lab FileID:** P129421.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
                    Evaluate Continuing Calibration Report

  Data File : C:\msdchem\1\data\da...meel\ep5858\p129421.d Vial: 4
  Acq On    :  9 May 2019  10:17 am                    Operator: angelar
  Sample    : cc5846-25                                Inst    : MSVOAMSP
  Misc      : op13894,ep5858,1000,,,1,1                Multiplr: 1.00
  MS Integration Params: rteint.p

  Method       : C:\MSDCHEM\1\METHODS\MP5844.M (RTE Integrator)
  Title        : Semi Volatile Extractables by GC/MS
  Last Update  : Thu May 09 15:26:31 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.
  ---------------------------------------------------------------------------

105 I   Chrysene-d12b               1.000   1.000      0.0  174   -0.01   11.93
106     Benzidine                   0.832   0.722     13.2  164   -0.02    9.46

 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     p129419.d  MP5844.M         Thu May 09 15:31:01 2019
```

MS Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/10/19 17:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481790.D
Acq On : 10 May 2019 12:01 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,500
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 10 12:29:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	508403	40.00	ppm	-0.04
24) Naphthalene-d8	5.177	136	1965771	40.00	ppm	-0.05
47) Acenaphthene-d10	6.852	164	1077959	40.00	ppm	-0.06
69) Phenanthrene-d10	8.515	188	2033682	40.00	ppm	-0.06
83) Chrysene-d12	11.676	240	1903514	40.00	ppm	-0.06
91) Perylene-d12	13.281	264	1979968	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.209	152	508403	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.852	164	1077959	40.00	ppm	-0.06
105) Phenanthrene-d10a	8.515	188	2033682	40.00	ppm	-0.06
109) Chrysene-d12a	11.676	240	1903514	40.00	ppm	-0.06
111) Naphthalene-d8a	5.177	136	1965771	40.00	ppm	-0.05
113) Phenanthrene-d10b	8.515	188	2033682	40.00	ppm	-0.06
115) Chrysene-d12b	11.676	240	1903514	40.00	ppm	-0.06
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	6.172	172	2941	0.08	ppm	-0.05
Spiked Amount 50.000			Recovery	=	0.16%	
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%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
38) Naphthalene	5.199	128	282988	5.53	ppm	98
44) 2-Methylnaphthalene	5.814	141	33016	1.14	ppm	99
53) Biphenyl	6.269	154	33714	0.82	ppm	99
56) Acenaphthylene	6.702	152	45826	0.93	ppm	94
59) Acenaphthene	6.884	153	242992	7.46	ppm	99
62) Dibenzofuran	7.076	168	195625	4.31	ppm	90
66) Fluorene	7.451	166	264516	7.18	ppm	99
77) Phenanthrene	8.542	178	1099931	20.14	ppm	99
78) Anthracene	8.601	178	364849	6.66	ppm	99
79) Carbazole	8.820	167	124157	2.40	ppm	98
81) Fluoranthene	9.948	202	774760	13.06	ppm	95
84) Pyrene	10.211	202	548161	8.64	ppm	97
87) Benzo[a]anthracene	11.665	228	272526	4.49	ppm	91
89) Chrysene	11.703	228	238615	4.01	ppm	99
93) Benzo[b]fluoranthene	12.885	252	234963m	3.89	ppm	
94) Benzo[k]fluoranthene	12.912	252	81480m	1.52	ppm	
95) Benzo[a]pyrene	13.216	252	179755	3.62	ppm	97
96) Indeno[1,2,3-cd]pyrene	14.308	276	96873	1.46	ppm	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481790.D
Acq On : 10 May 2019 12:01 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,500
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 10 12:29:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.313	278	29377	0.50 ppm	72
100) Benzo[g,h,i]perylene	14.570	276	87372	1.69 ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

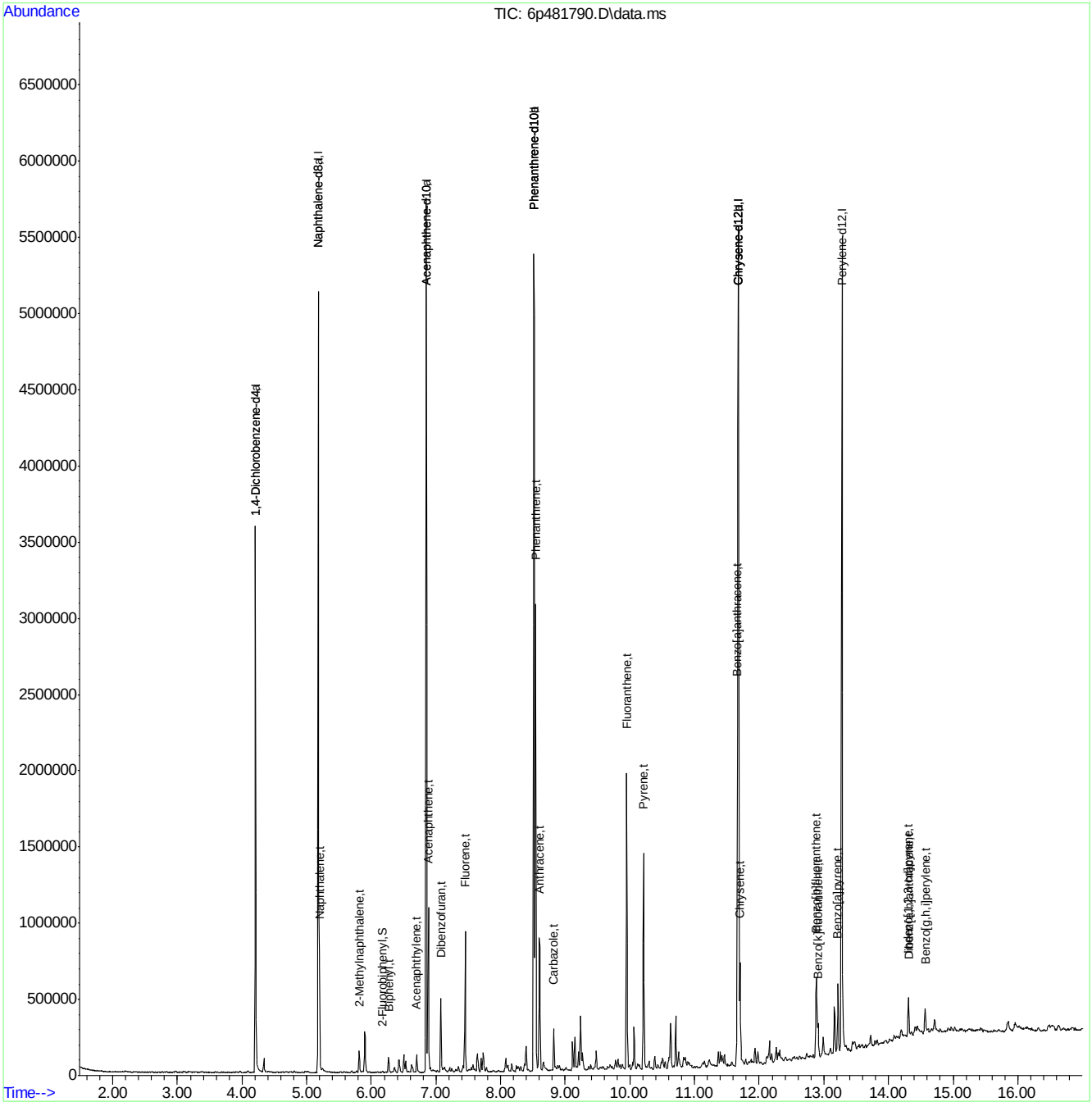
9.1.1

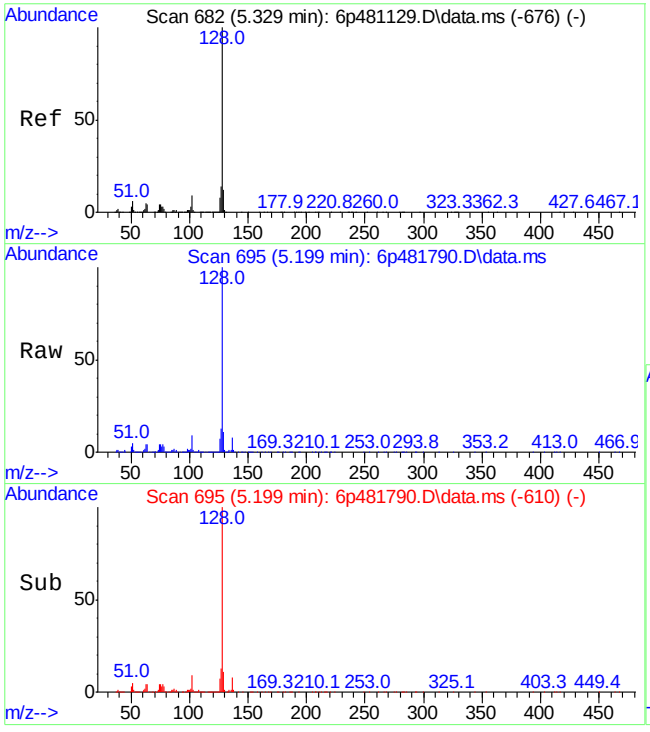
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481790.D
Acq On : 10 May 2019 12:01 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,500
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 10 12:29:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

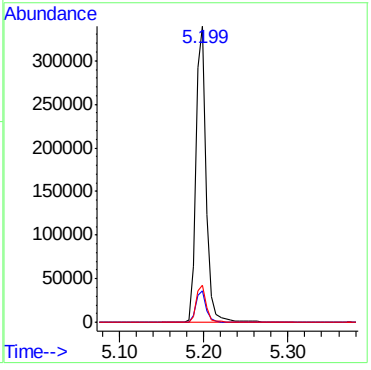


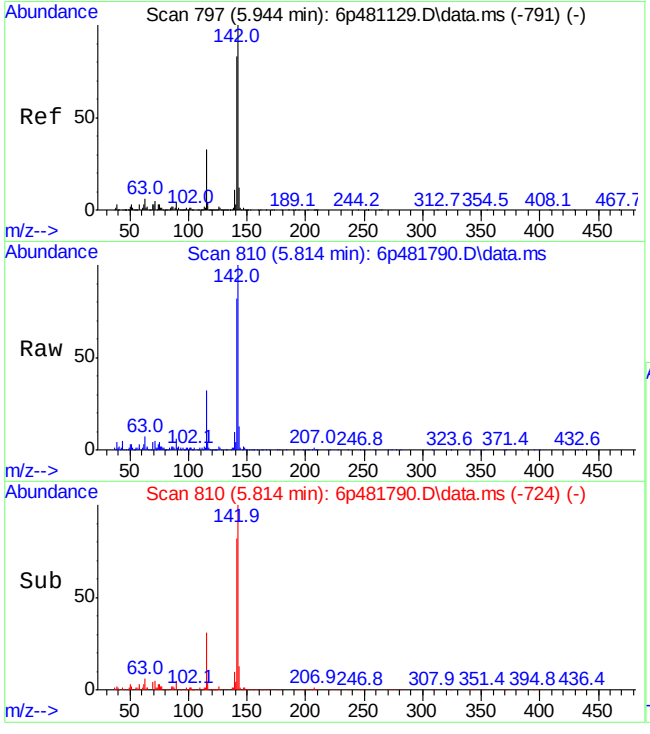


#38
Naphthalene
Concen: 5.53 ppm
RT: 5.199 min Scan# 695
Delta R.T. -0.048 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:128 Resp: 282988

Ion	Ratio	Lower	Upper
128	100		
129	10.7	0.0	41.5
127	12.5	0.0	43.5

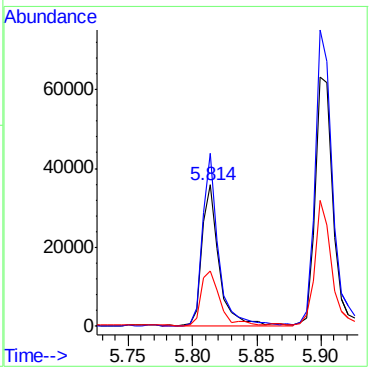




#44
2-Methylnaphthalene
Concen: 1.14 ppm
RT: 5.814 min Scan# 810
Delta R.T. -0.038 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

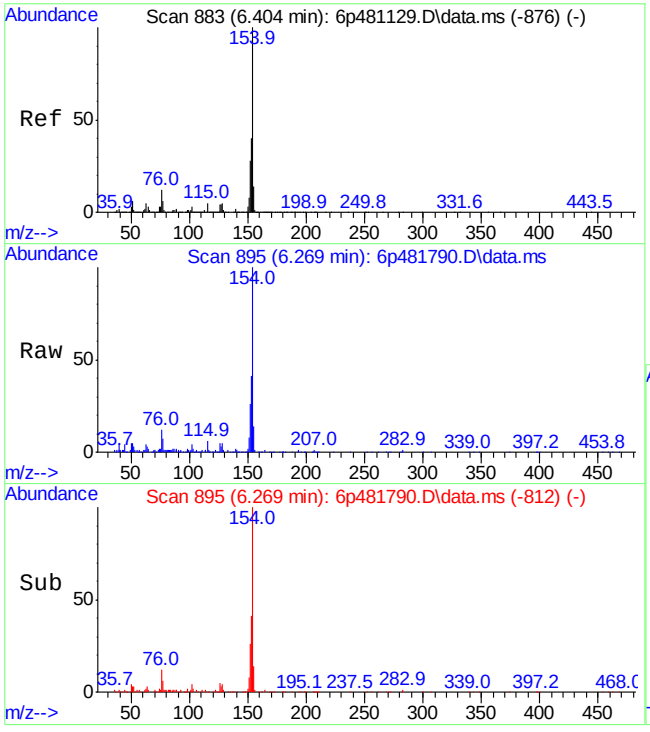
Tgt Ion:141 Resp: 33016

Ion	Ratio	Lower	Upper
141	100		
142	122.0	91.1	151.1
115	38.3	10.5	70.5



9.1.1

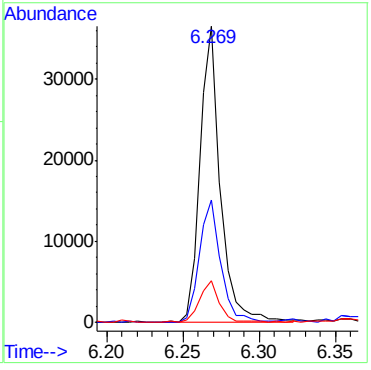
9

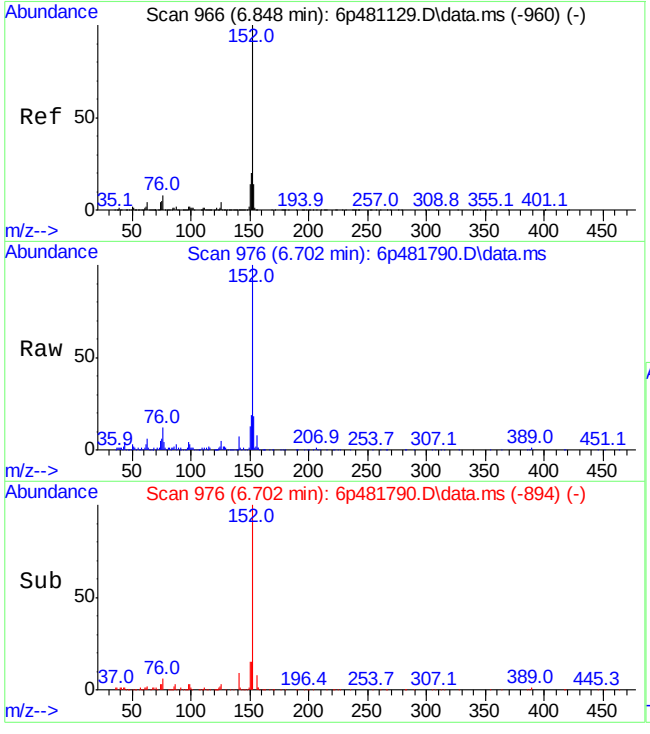


#53
Biphenyl
Concen: 0.82 ppm
RT: 6.269 min Scan# 895
Delta R.T. -0.056 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:154 Resp: 33714

Ion	Ratio	Lower	Upper
154	100		
153	41.0	10.2	70.2
155	13.8	0.0	43.5

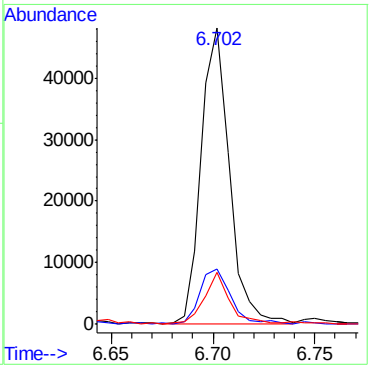


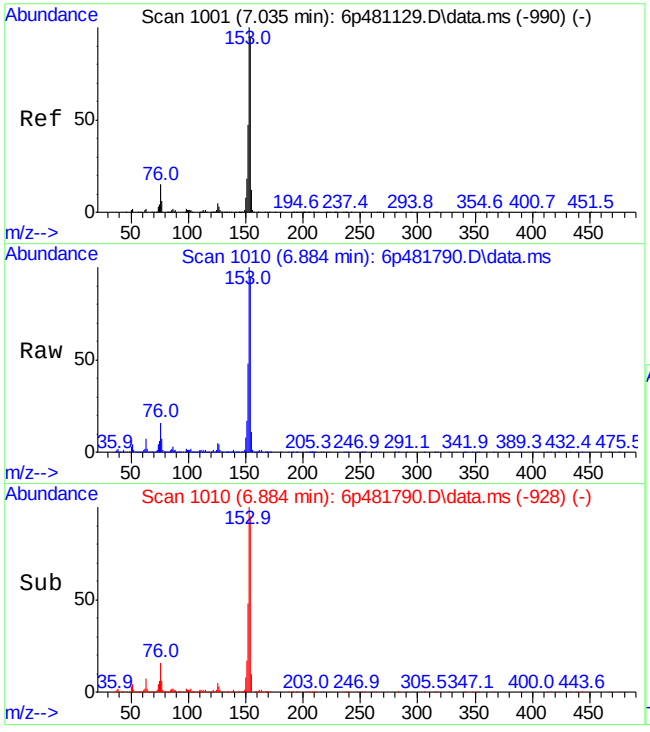


#56
Acenaphthylene
Concen: 0.93 ppm
RT: 6.702 min Scan# 976
Delta R.T. -0.061 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:152 Resp: 45826

Ion	Ratio	Lower	Upper
152	100		
151	18.4	0.0	50.3
153	17.3	0.0	43.6

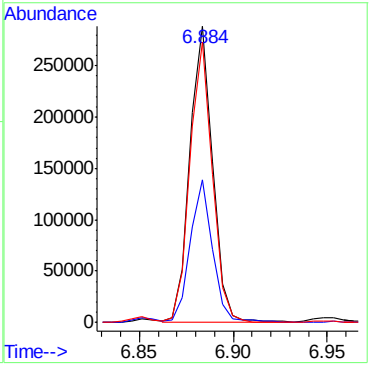


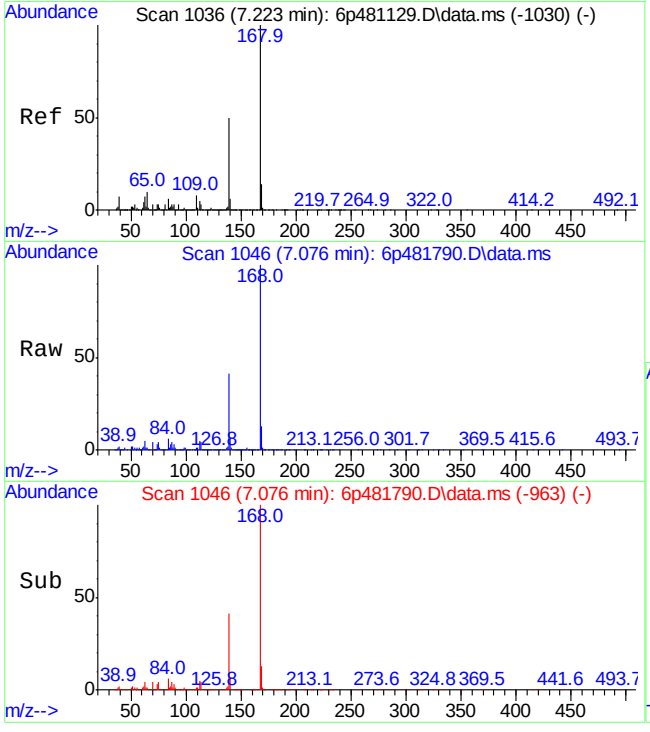


#59
Acenaphthene
Concen: 7.46 ppm
RT: 6.884 min Scan# 1010
Delta R.T. -0.064 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:153 Resp: 242992

Ion	Ratio	Lower	Upper
153	100		
152	48.0	16.9	76.9
154	94.8	65.0	125.0

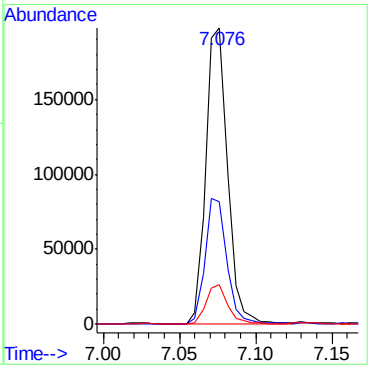


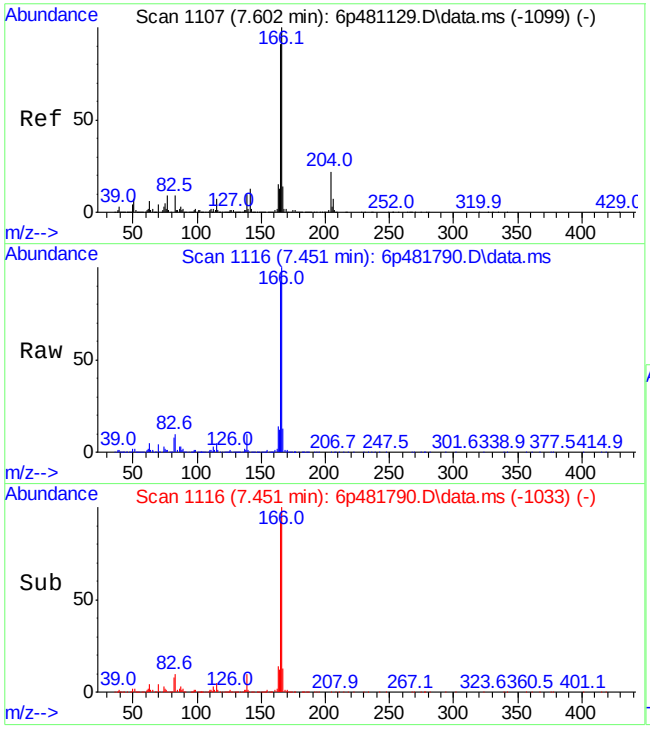


#62
Dibenzofuran
Concen: 4.31 ppm
RT: 7.076 min Scan# 1046
Delta R.T. -0.056 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:168 Resp: 195625

Ion	Ratio	Lower	Upper
168	100		
139	41.1	19.5	79.5
169	13.2	0.0	43.8

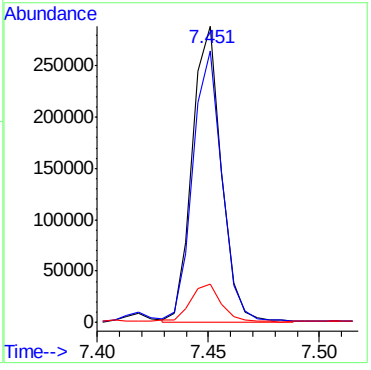


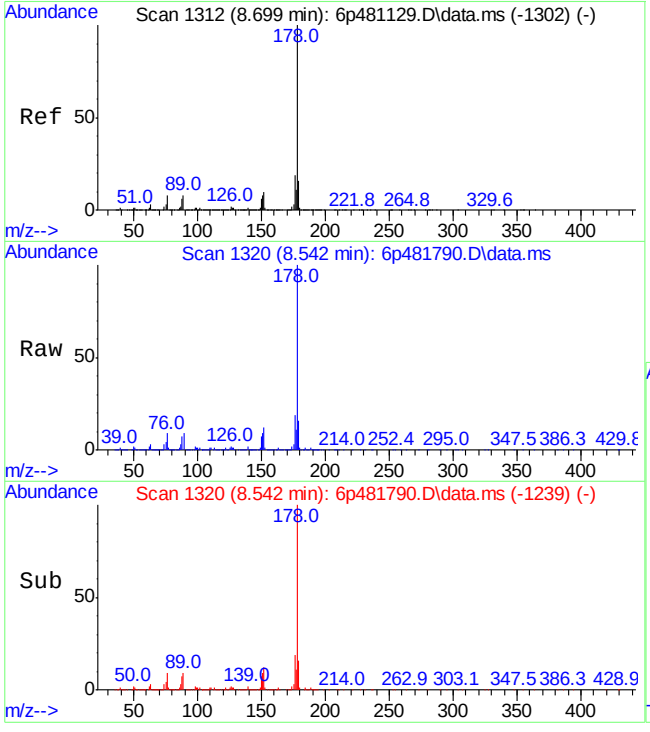


#66
Fluorene
Concen: 7.18 ppm
RT: 7.451 min Scan# 1116
Delta R.T. -0.057 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:166 Resp: 264516

Ion	Ratio	Lower	Upper
166	100		
165	91.5	61.0	121.0
167	12.5	0.0	43.5

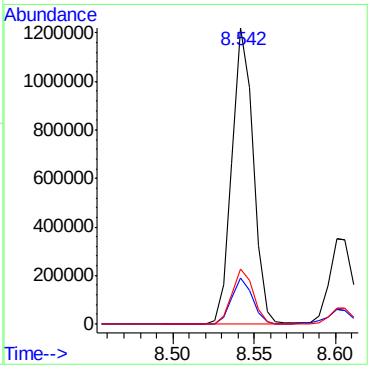


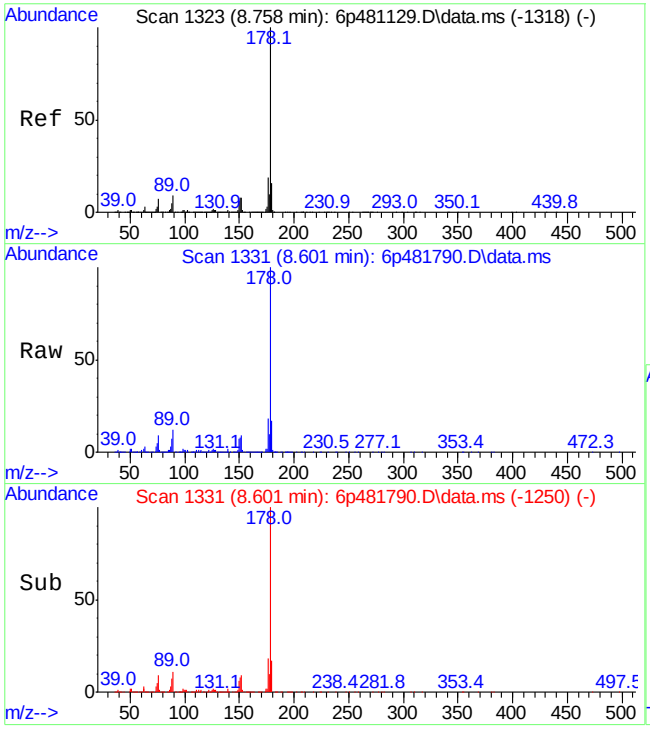


#77
Phenanthrene
Concen: 20.14 ppm
RT: 8.542 min Scan# 1320
Delta R.T. -0.069 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:178 Resp: 1099931

Ion	Ratio	Lower	Upper
178	100		
179	15.7	0.0	46.1
176	18.6	0.0	49.3

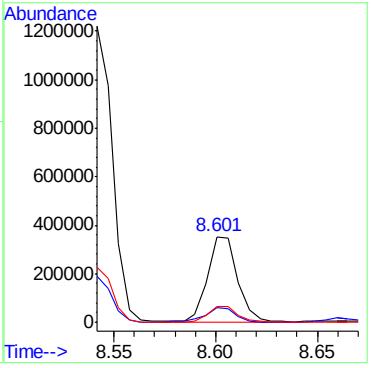


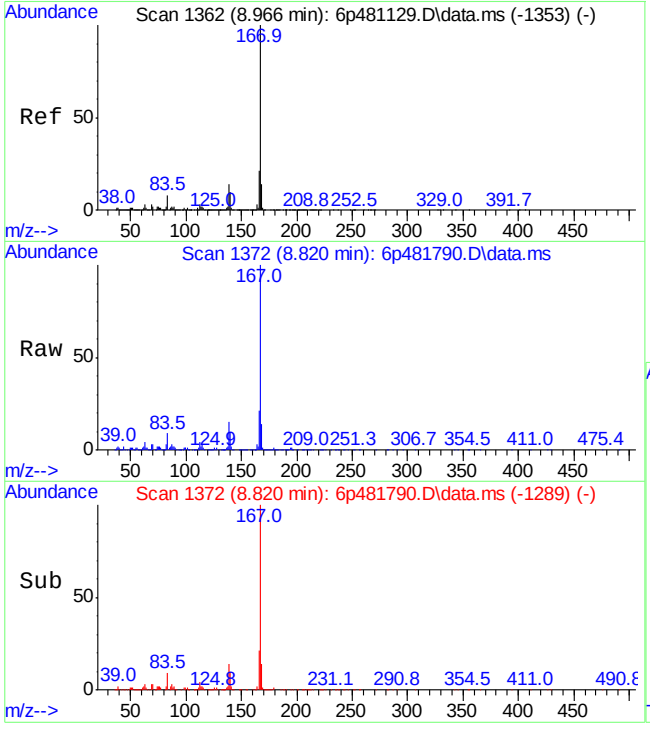


#78
Anthracene
Concen: 6.66 ppm
RT: 8.601 min Scan# 1331
Delta R.T. -0.069 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:178 Resp: 364849

Ion	Ratio	Lower	Upper
178	100		
179	17.0	0.0	46.3
176	18.3	0.0	48.6

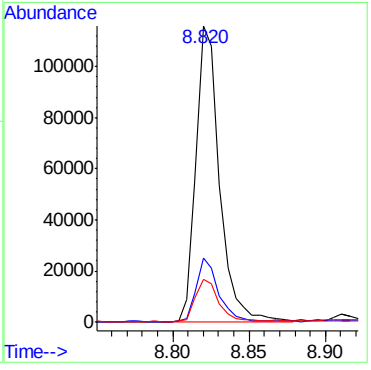




#79
Carbazole
Concen: 2.40 ppm
RT: 8.820 min Scan# 1372
Delta R.T. -0.056 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

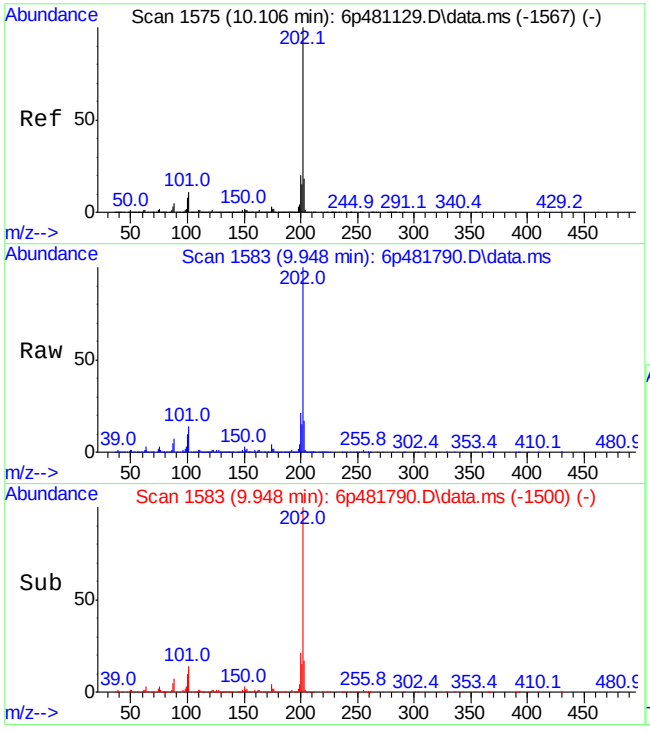
Tgt Ion:167 Resp: 124157

Ion	Ratio	Lower	Upper
167	100		
166	21.3	0.0	50.7
139	14.5	0.0	43.6



9.1.1

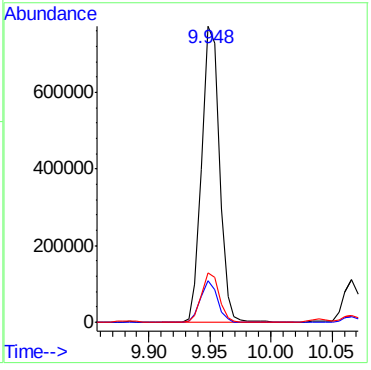
9

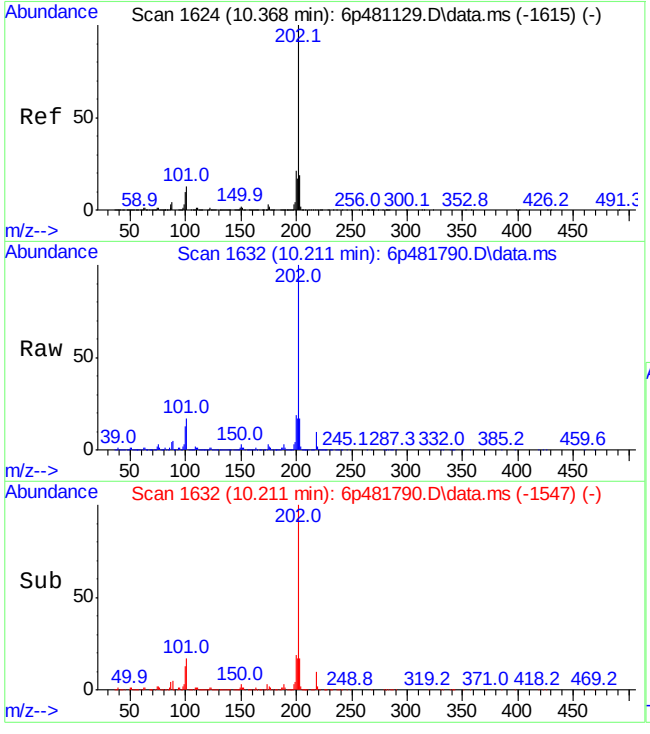


#81
Fluoranthene
Concen: 13.06 ppm
RT: 9.948 min Scan# 1583
Delta R.T. -0.055 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:202 Resp: 774760

Ion	Ratio	Lower	Upper
202	100		
101	14.0	0.0	40.6
203	16.6	0.0	47.8

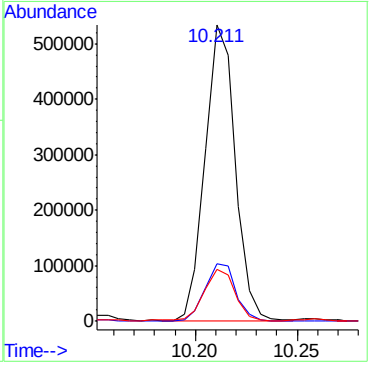




#84
Pyrene
Concen: 8.64 ppm
RT: 10.211 min Scan# 1632
Delta R.T. -0.047 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:202 Resp: 548161

Ion	Ratio	Lower	Upper
202	100		
200	19.2	0.0	51.3
203	17.1	0.0	46.8



9.1.1

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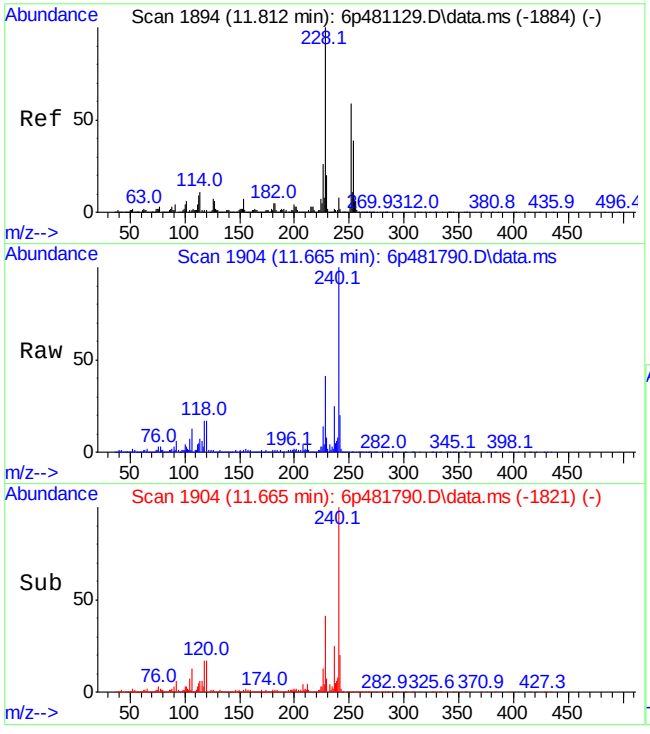
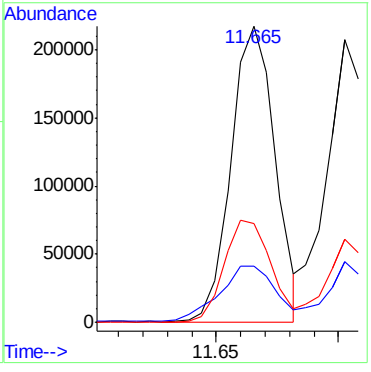
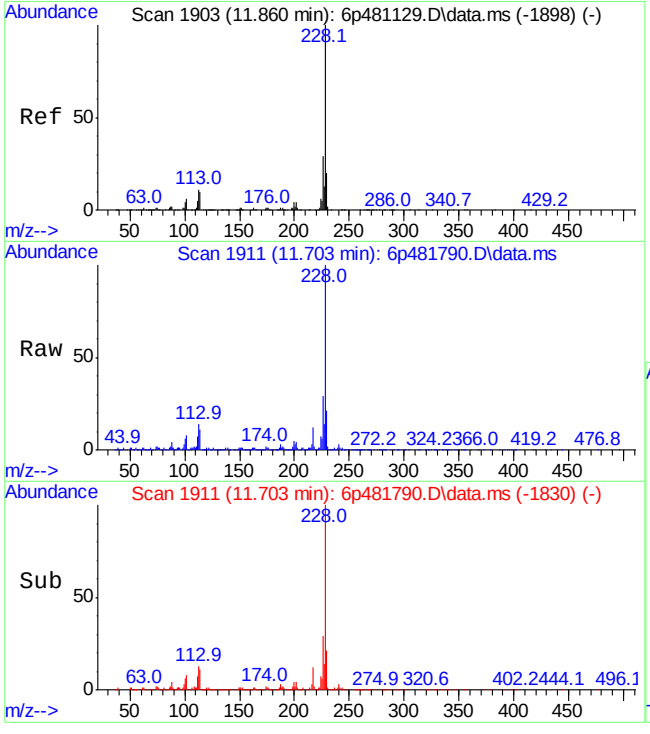


#87
Benzo[a]anthracene
Concen: 4.49 ppm
RT: 11.665 min Scan# 1904
Delta R.T. -0.059 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:228 Resp: 272526

Ion	Ratio	Lower	Upper
228	100		
229	18.1	0.0	49.8
226	33.9	0.0	57.5

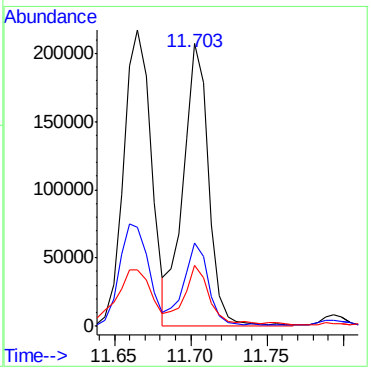




#89
Chrysene
Concen: 4.01 ppm
RT: 11.703 min Scan# 1911
Delta R.T. -0.065 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:228 Resp: 238615

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	59.3
229	20.7	0.0	50.0



9.1.1

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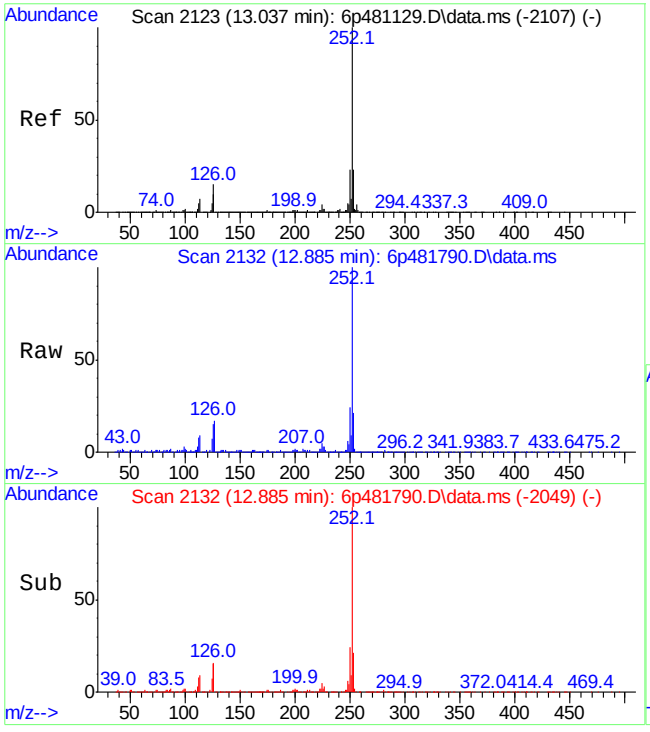
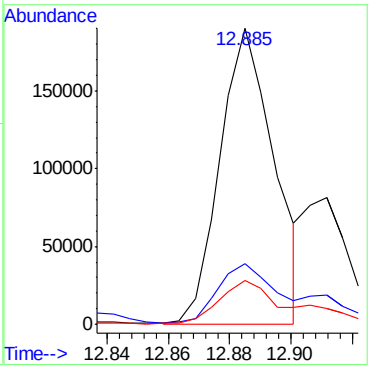
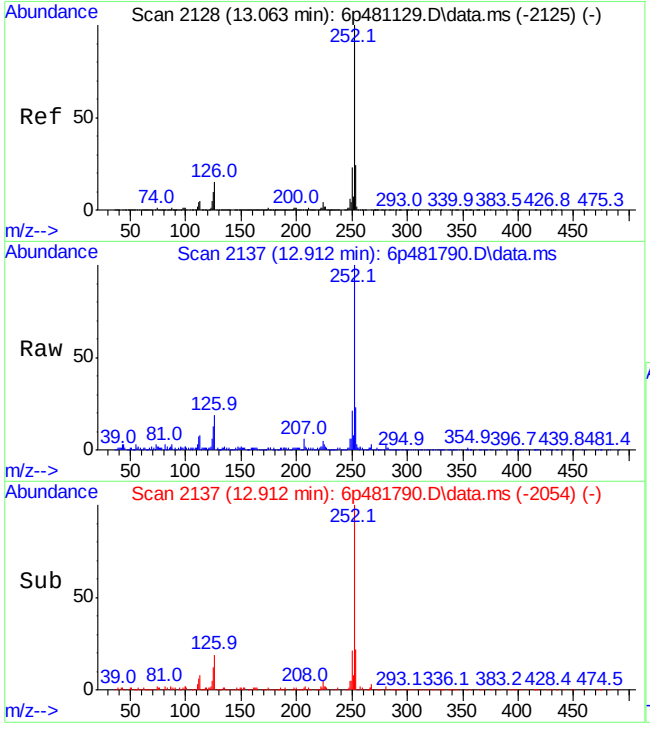


#93
Benzo[b]fluoranthene
Concen: 3.89 ppm m
RT: 12.885 min Scan# 2132
Delta R.T. -0.053 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:252 Resp: 234963

Ion	Ratio	Lower	Upper
252	100		
253	20.6	0.0	52.9
125	14.9	0.0	43.3

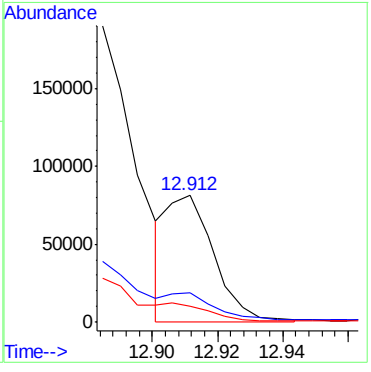




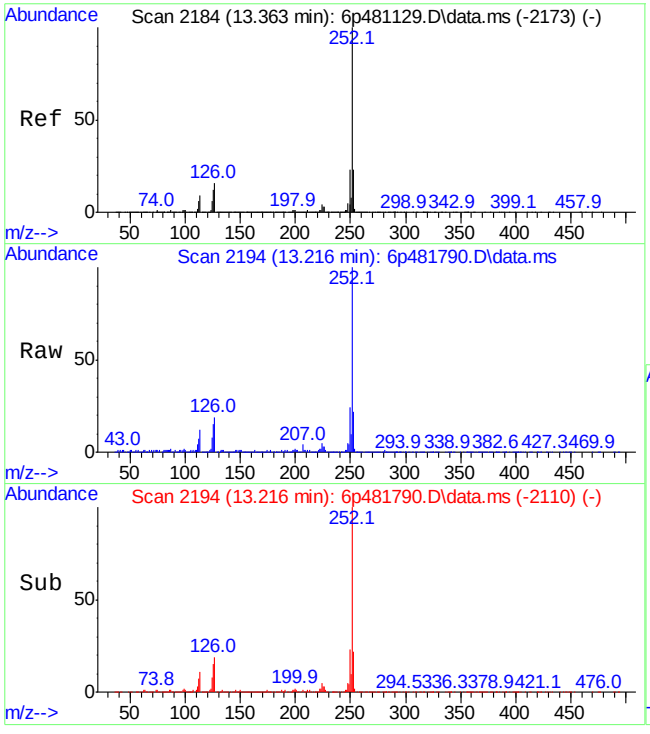
#94
Benzo[k]fluoranthene
Concen: 1.52 ppm m
RT: 12.912 min Scan# 2137
Delta R.T. -0.054 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:252 Resp: 81480

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.4
125	12.8	0.0	43.1



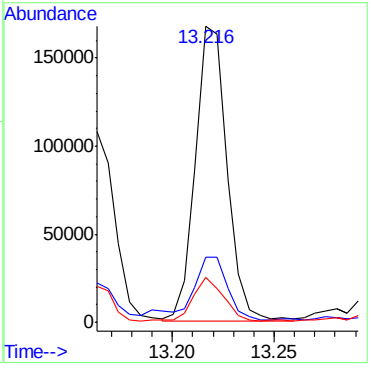
9.1.1
9

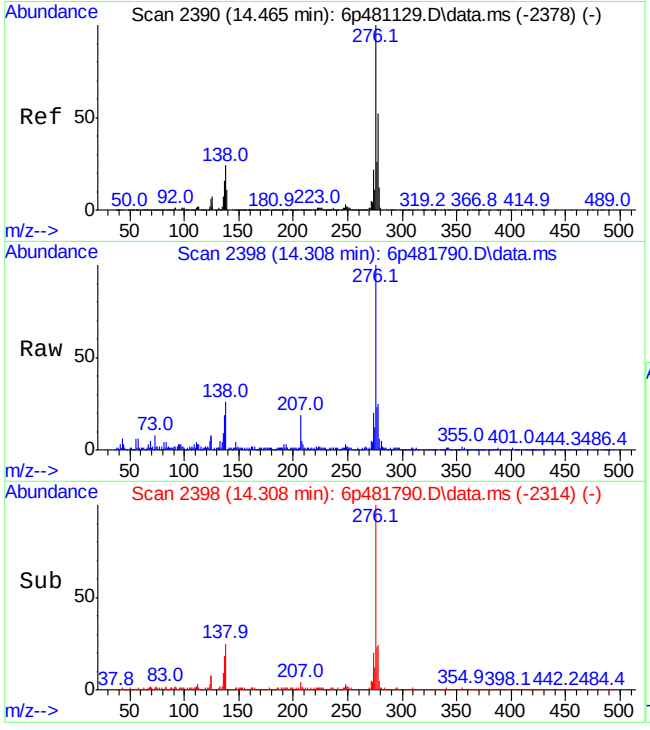


#95
Benzo[a]pyrene
Concen: 3.62 ppm
RT: 13.216 min Scan# 2194
Delta R.T. -0.053 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:252 Resp: 179755

Ion	Ratio	Lower	Upper
252	100		
253	19.9	0.0	52.1
125	14.6	0.0	45.1

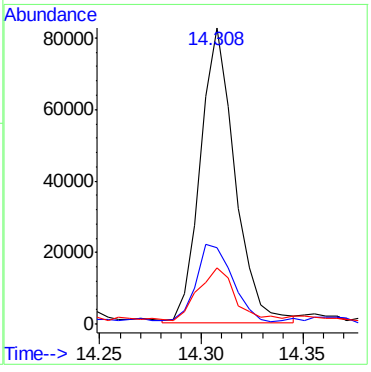




#96
Indeno[1,2,3-cd]pyrene
Concen: 1.46 ppm
RT: 14.308 min Scan# 2398
Delta R.T. -0.051 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

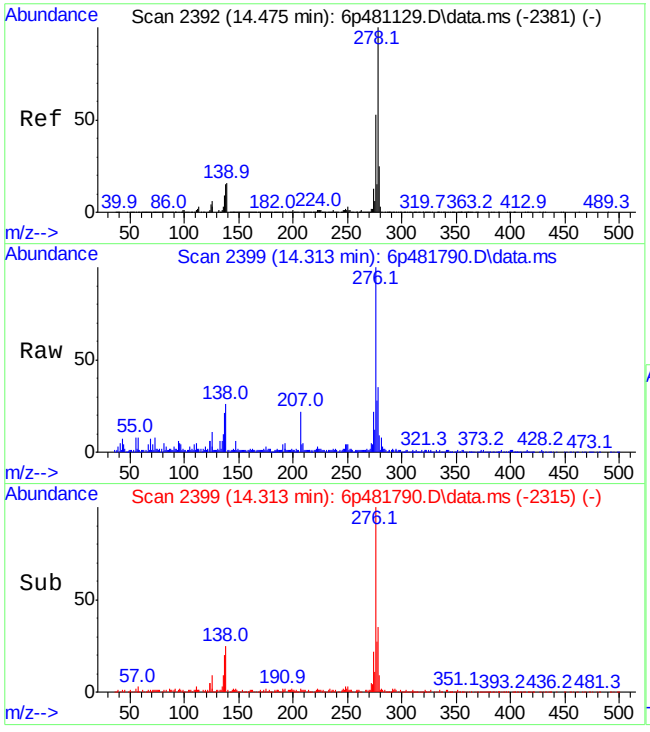
Tgt Ion:276 Resp: 96873

Ion	Ratio	Lower	Upper
276	100		
138	24.8	0.0	60.0
137	17.4	0.0	49.6



9.1.1

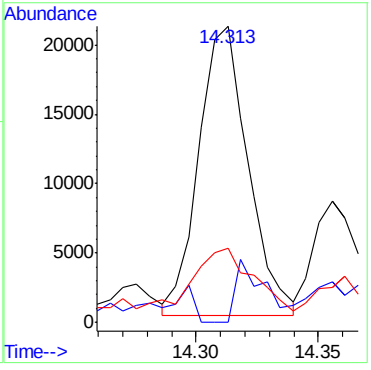
9

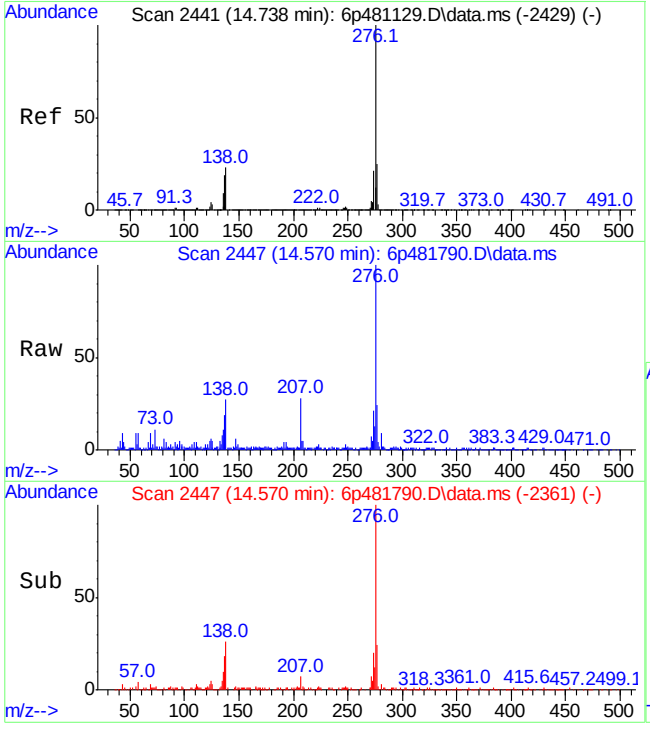


#98
Dibenz[a,h]anthracene
Concen: 0.50 ppm
RT: 14.313 min Scan# 2399
Delta R.T. -0.051 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:278 Resp: 29377

Ion	Ratio	Lower	Upper
278	100		
139	0.0	0.0	51.8
279	18.7	0.0	54.3

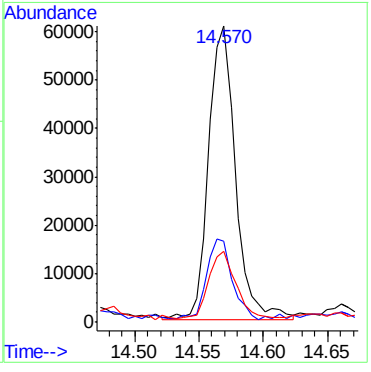




#100
Benzo[g,h,i]perylene
Concen: 1.69 ppm
RT: 14.570 min Scan# 2447
Delta R.T. -0.039 min
Lab File: 6p481790.D
Acq: 10 May 2019 12:01 pm

Tgt Ion:276 Resp: 87372

Ion	Ratio	Lower	Upper
276	100		
138	25.8	0.0	54.9
277	22.1	0.0	53.8



Manual Integration Approval Summary

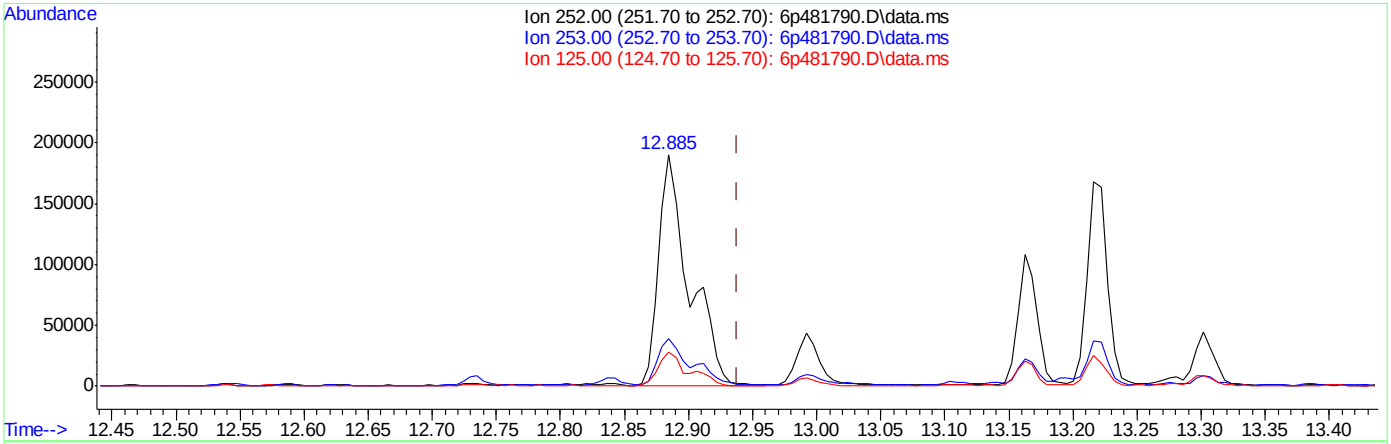
Sample Number:	JC87093-1	**Method:**	SW846 8270D
Lab FileID:	6P481790.D	**Analyst approved:**	05/10/19 13:17 Ying Li
Injection Time:	05/10/19 12:01	**Supervisor approved:**	05/10/19 17:55 Nancy Ma

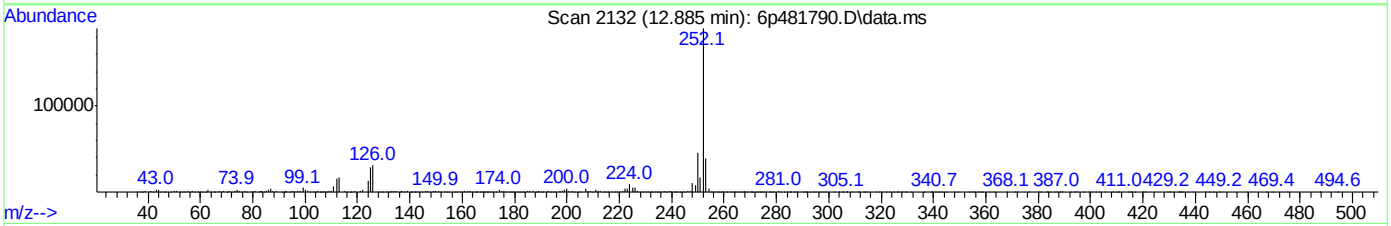
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		12.88	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.91	Overlapping peak

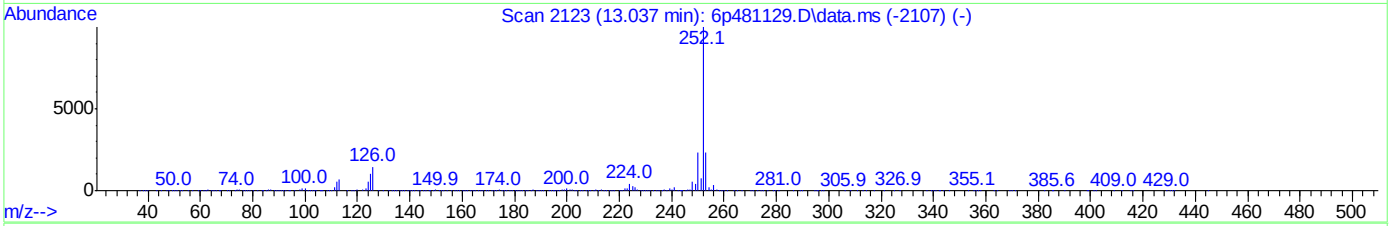
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481790.D
Acq On : 10 May 2019 12:01 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,500
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 10 12:18:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481790.D\data.ms

(93) Benzo[b]fluoranthene (t)

12.885min (-0.053) 5.19ppm

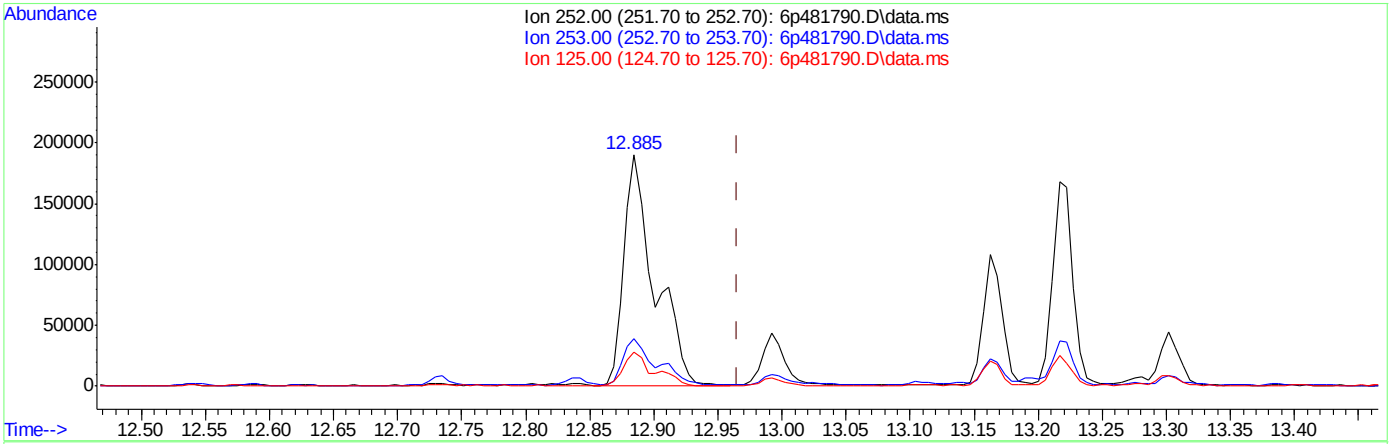
response 314028

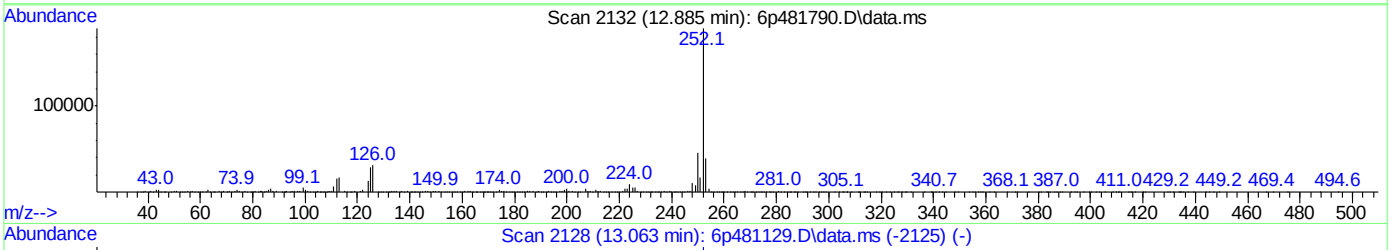
Ion	Exp%	Act%
252.00	100	100
253.00	22.90	19.67
125.00	13.30	14.72
0.00	0.00	0.00

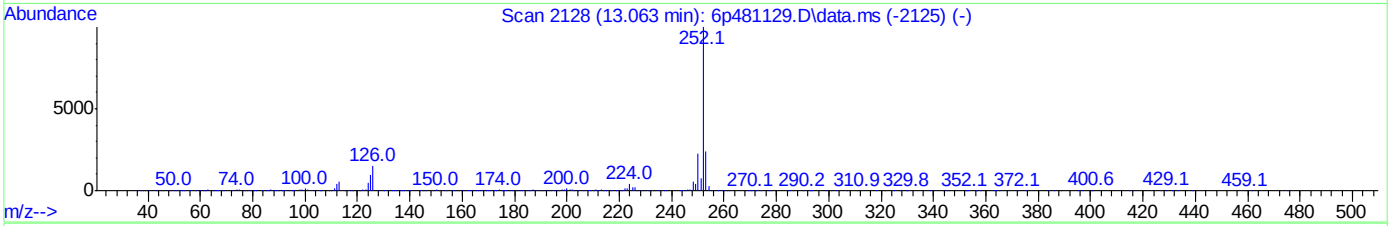
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481790.D
Acq On : 10 May 2019 12:01 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,500
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 10 12:18:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481790.D\data.ms

(94) Benzo[k]fluoranthene (t)

12.885min (-0.081) 5.87ppm

response 314028

Ion	Exp%	Act%
252.00	100	100
253.00	22.40	19.67
125.00	13.10	14.72
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/10/19 17:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481792.D
Acq On : 10 May 2019 12:50 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,50
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 10 13:15:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	511455	40.00	ppm	-0.04
24) Naphthalene-d8	5.183	136	1958665	40.00	ppm	-0.05
47) Acenaphthene-d10	6.852	164	1083460	40.00	ppm	-0.06
69) Phenanthrene-d10	8.520	188	2041956	40.00	ppm	-0.06
83) Chrysene-d12	11.687	240	1997388	40.00	ppm	-0.05
91) Perylene-d12	13.286	264	2034813	40.00	ppm	-0.04
101) 1,4-Dichlorobenzene-d4a	4.209	152	511455	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.852	164	1083460	40.00	ppm	-0.06
105) Phenanthrene-d10a	8.520	188	2041956	40.00	ppm	-0.06
109) Chrysene-d12a	11.687	240	1997388	40.00	ppm	-0.05
111) Naphthalene-d8a	5.183	136	1958665	40.00	ppm	-0.05
113) Phenanthrene-d10b	8.520	188	2041956	40.00	ppm	-0.06
115) Chrysene-d12b	11.687	240	1997388	40.00	ppm	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol	3.268	112	8850	0.59	ppm	0.02
Spiked Amount 50.000			Recovery	=	1.18%	
8) Phenol-d5	4.033	99	10306	0.56	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.12%	
25) Nitrobenzene-d5	4.643	82	12489	0.77	ppm	-0.02
Spiked Amount 50.000			Recovery	=	1.54%	
51) 2-Fluorobiphenyl	6.167	172	30480	0.80	ppm	-0.05
Spiked Amount 50.000			Recovery	=	1.60%	
73) 2,4,6-Tribromophenol	7.739	330	3932	0.60	ppm	-0.04
Spiked Amount 50.000			Recovery	=	1.20%	
85) Terphenyl-d14	10.441	244	38011	0.82	ppm	-0.04
Spiked Amount 50.000			Recovery	=	1.64%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
38) Naphthalene	5.199	128	2745125	53.81	ppm	99
44) 2-Methylnaphthalene	5.809	141	335122	11.61	ppm	97
53) Biphenyl	6.263	154	357328	8.62	ppm	99
56) Acenaphthylene	6.702	152	474856	9.63	ppm	98
59) Acenaphthene	6.889	153	2416954	73.84	ppm	100
62) Dibenzofuran	7.076	168	1992291	43.71	ppm	92
66) Fluorene	7.456	166	2672864	72.23	ppm	99
77) Phenanthrene	8.563	178	10683762	194.87	ppm	95
78) Anthracene	8.611	178	3799433	69.10	ppm	99
79) Carbazole	8.820	167	1272275	24.44	ppm	98
81) Fluoranthene	9.970	202	8121065	136.34	ppm	98
84) Pyrene	10.227	202	5978362	89.84	ppm	98
87) Benzo[a]anthracene	11.676	228	2875991	45.21	ppm	99
89) Chrysene	11.714	228	2424931	38.87	ppm	99
93) Benzo[b]fluoranthene	12.896	252	2563014m	41.24	ppm	
94) Benzo[k]fluoranthene	12.917	252	943116m	17.14	ppm	
95) Benzo[a]pyrene	13.227	252	2005473	39.28	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.313	276	1138242	16.69	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481792.D
Acq On : 10 May 2019 12:50 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,50
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 10 13:15:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.313	278	354800	5.87 ppm	99
100) Benzo[g,h,i]perylene	14.570	276	1008225	18.96 ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

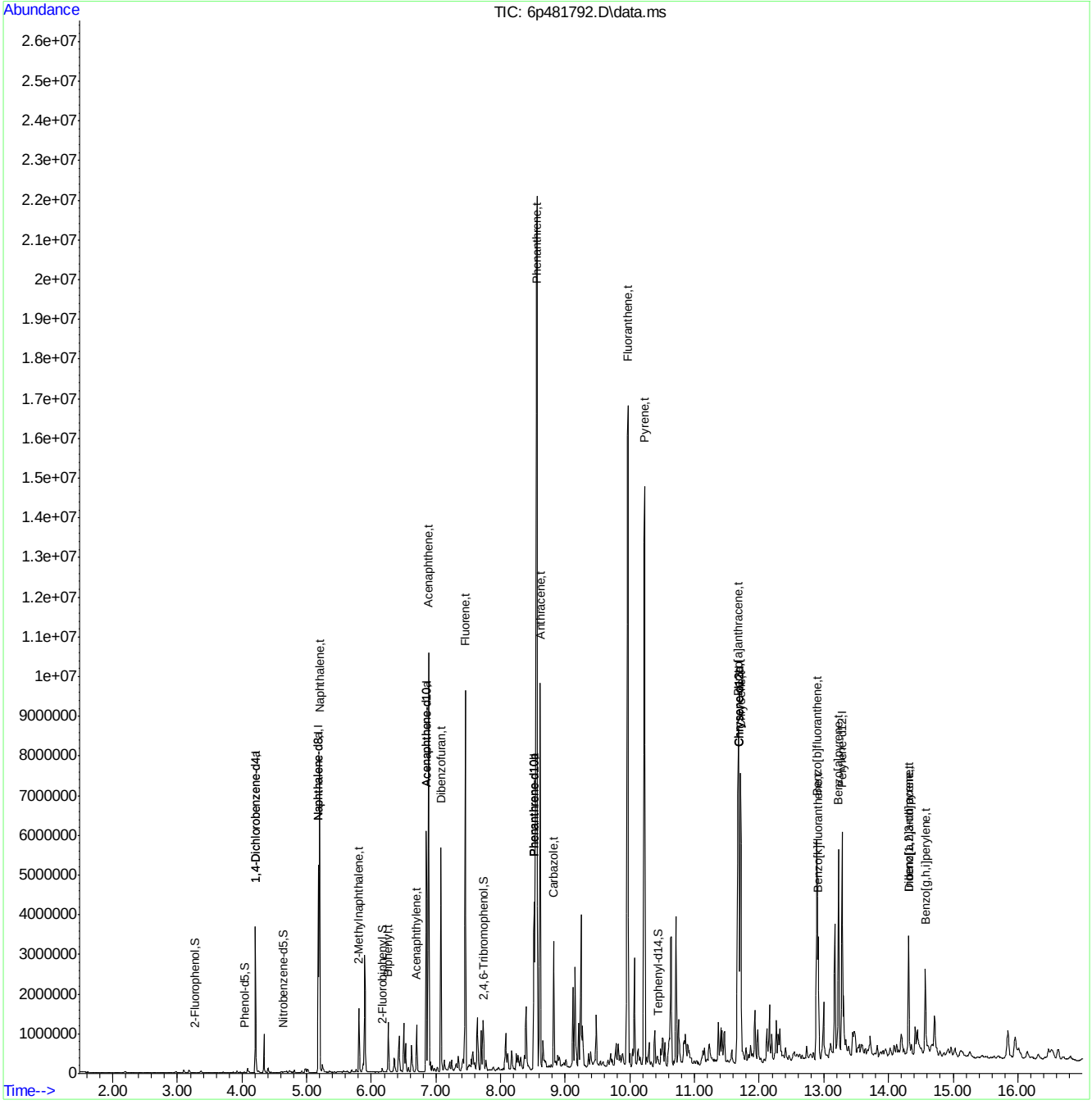
9.1.2

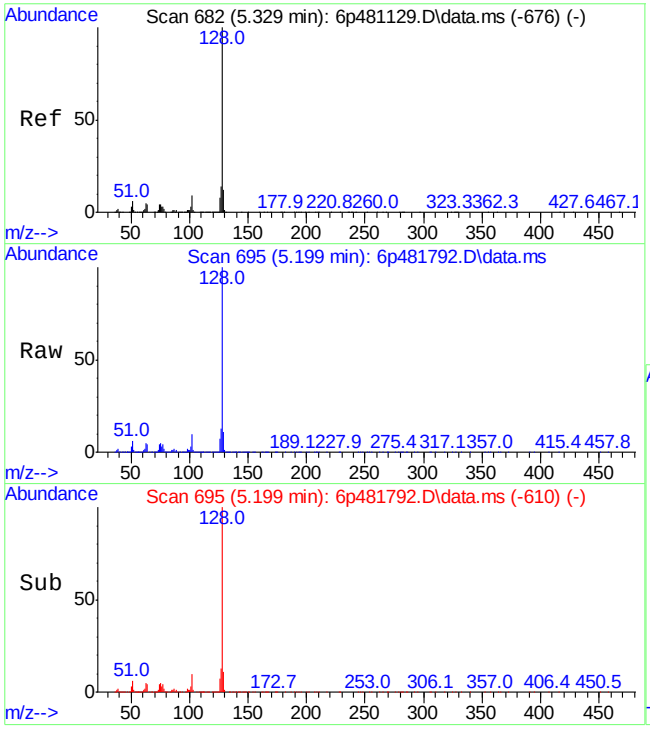
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481792.D
Acq On : 10 May 2019 12:50 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,50
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 10 13:15:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

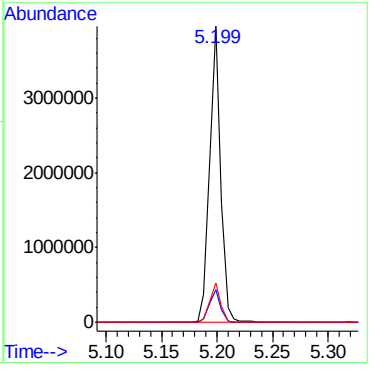


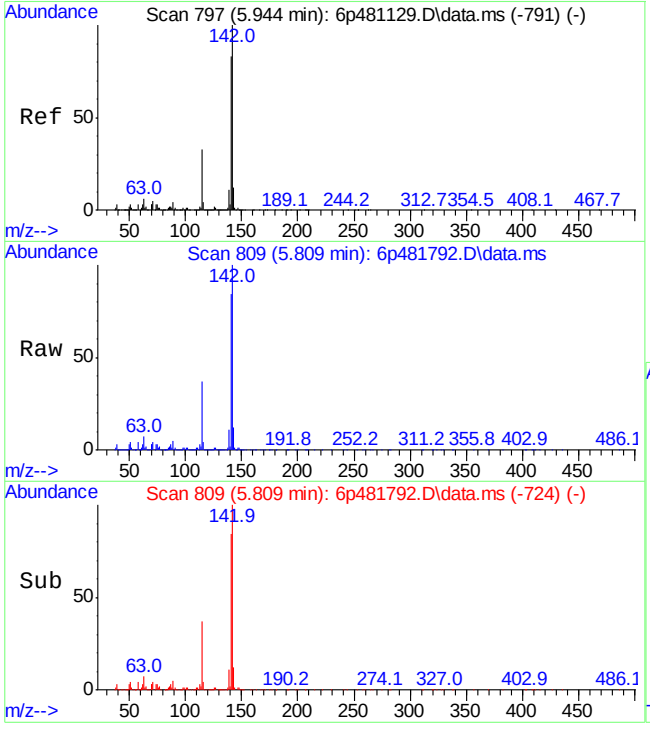


#38
Naphthalene
Concen: 53.81 ppm
RT: 5.199 min Scan# 695
Delta R.T. -0.048 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:128 Resp: 2745125

Ion	Ratio	Lower	Upper
128	100		
129	11.1	0.0	41.5
127	13.2	0.0	43.5

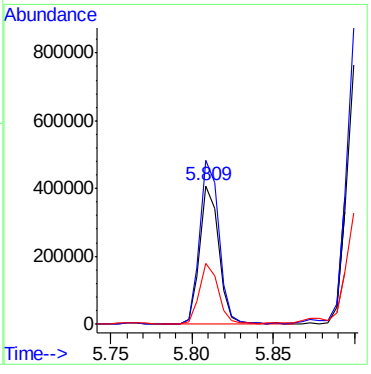


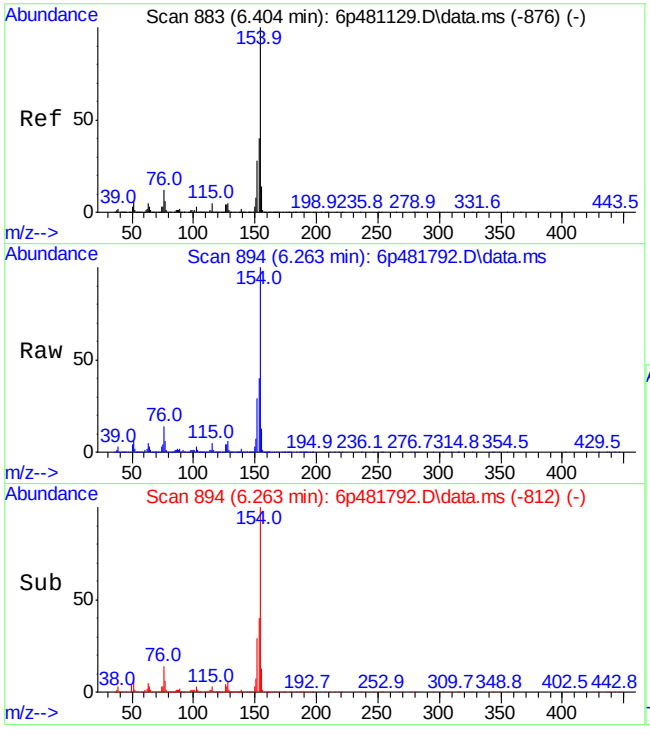


#44
2-Methylnaphthalene
Concen: 11.61 ppm
RT: 5.809 min Scan# 809
Delta R.T. -0.044 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:141 Resp: 335122

Ion	Ratio	Lower	Upper
141	100		
142	118.5	91.1	151.1
115	43.3	10.5	70.5

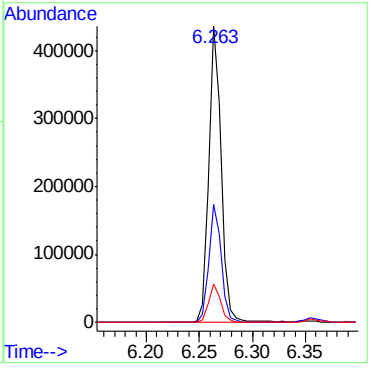


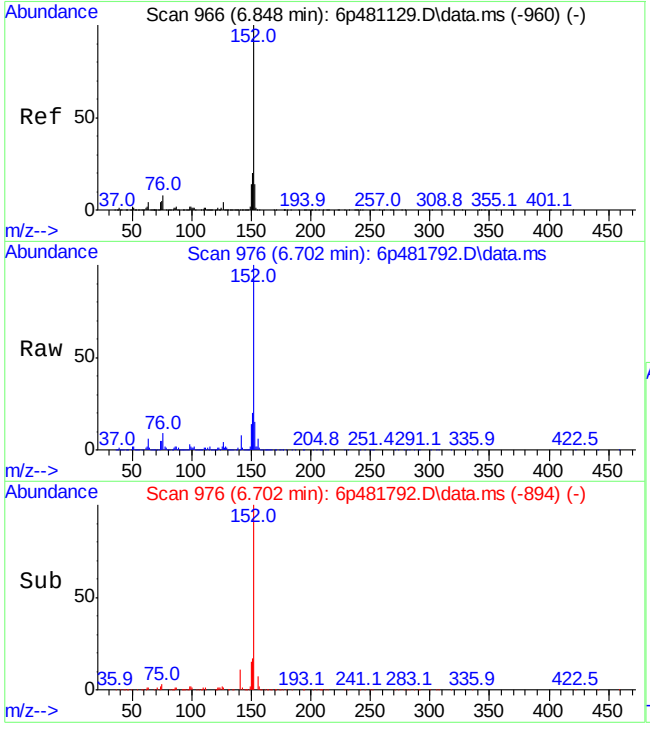


#53
Biphenyl
Concen: 8.62 ppm
RT: 6.263 min Scan# 894
Delta R.T. -0.061 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:154 Resp: 357328

Ion	Ratio	Lower	Upper
154	100		
153	39.8	10.2	70.2
155	12.9	0.0	43.5

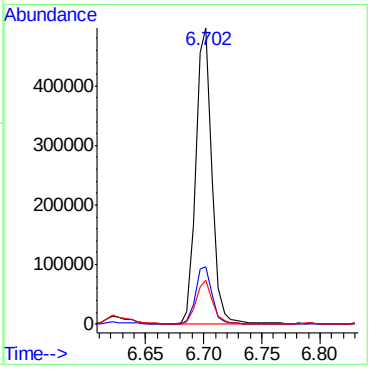


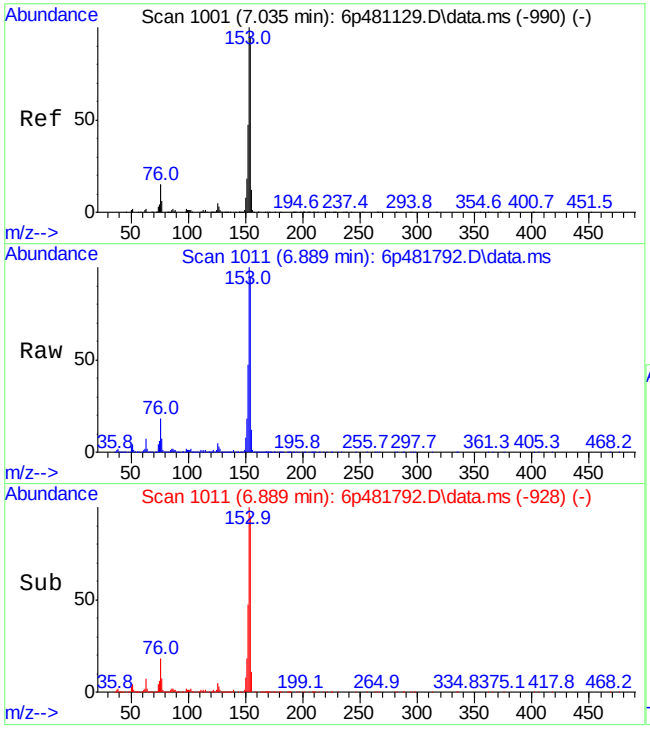


#56
Acenaphthylene
Concen: 9.63 ppm
RT: 6.702 min Scan# 976
Delta R.T. -0.061 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:152 Resp: 474856

Ion	Ratio	Lower	Upper
152	100		
151	19.5	0.0	50.3
153	14.6	0.0	43.6

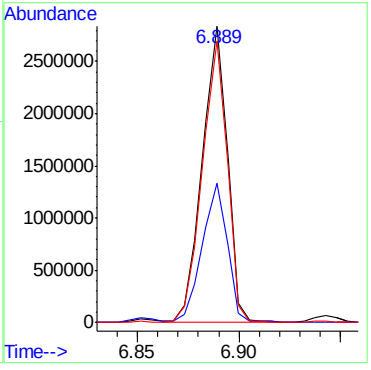


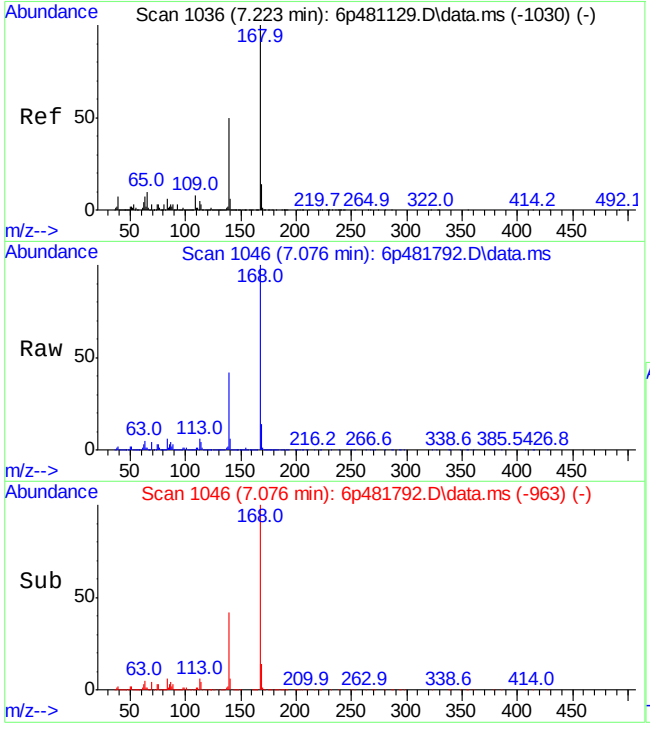


#59
Acenaphthene
Concen: 73.84 ppm
RT: 6.889 min Scan# 1011
Delta R.T. -0.058 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:153 Resp: 2416954

Ion	Ratio	Lower	Upper
153	100		
152	46.9	16.9	76.9
154	95.1	65.0	125.0

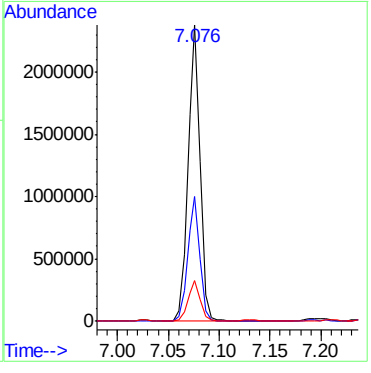


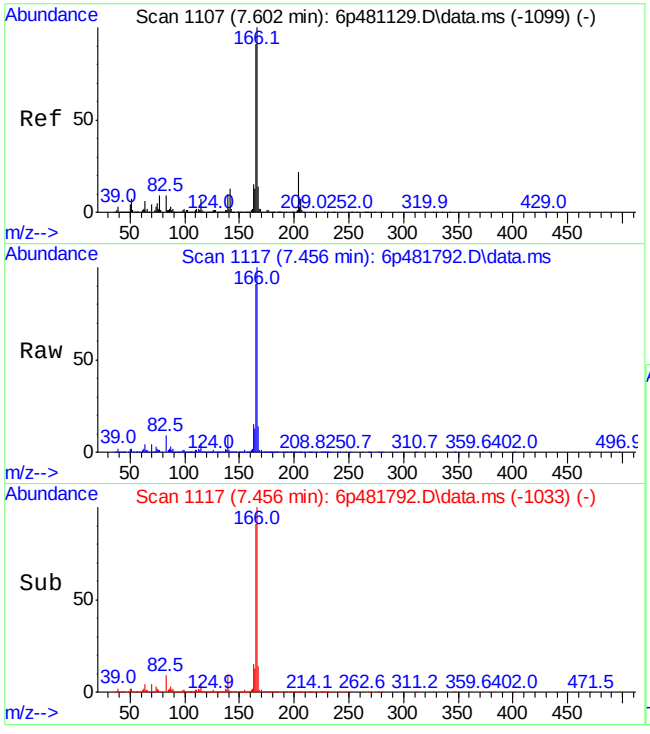


#62
Dibenzofuran
Concen: 43.71 ppm
RT: 7.076 min Scan# 1046
Delta R.T. -0.056 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:168 Resp: 1992291

Ion	Ratio	Lower	Upper
168	100		
139	42.2	19.5	79.5
169	13.8	0.0	43.8

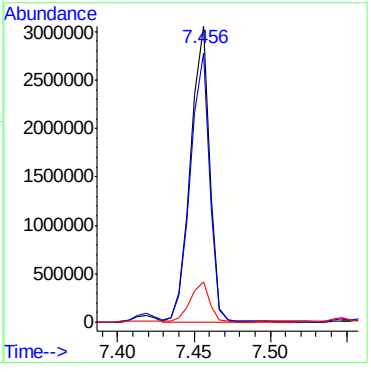


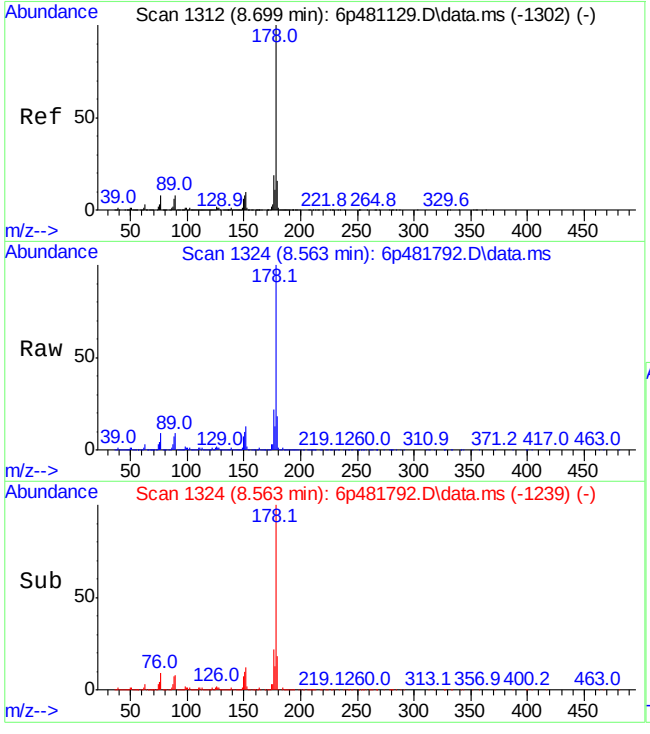


#66
Fluorene
Concen: 72.23 ppm
RT: 7.456 min Scan# 1117
Delta R.T. -0.051 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:166 Resp: 2672864

Ion	Ratio	Lower	Upper
166	100		
165	90.5	61.0	121.0
167	13.1	0.0	43.5

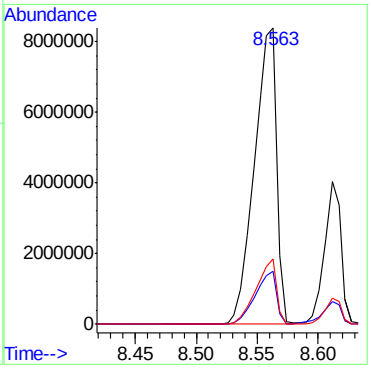




#77
Phenanthrene
Concen: 194.87 ppm
RT: 8.563 min Scan# 1324
Delta R.T. -0.048 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

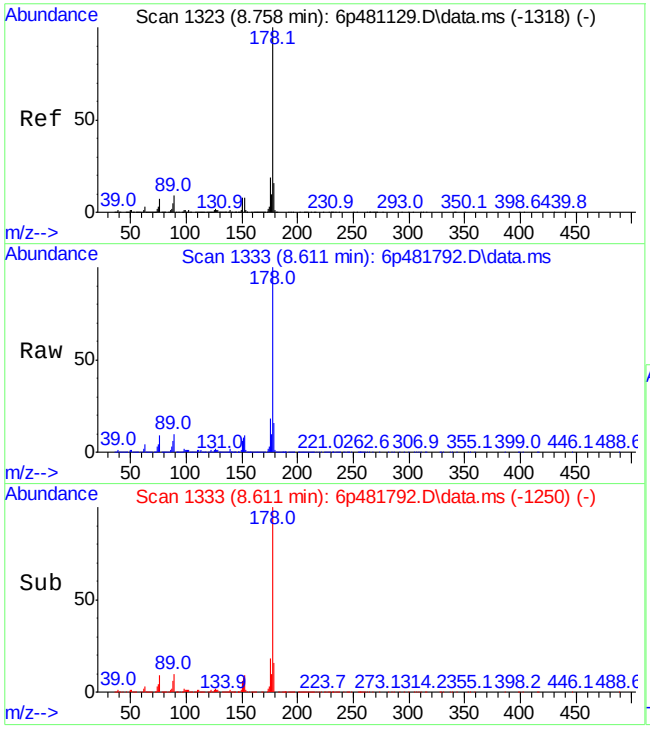
Tgt Ion:178 Resp:10683762

Ion	Ratio	Lower	Upper
178	100		
179	17.9	0.0	46.1
176	21.9	0.0	49.3



9.1.2

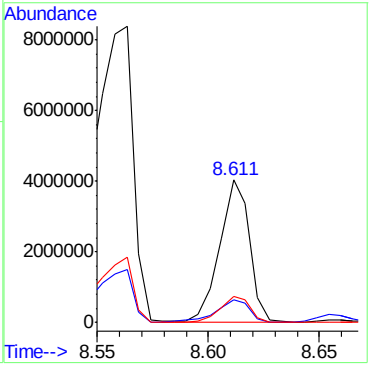
9

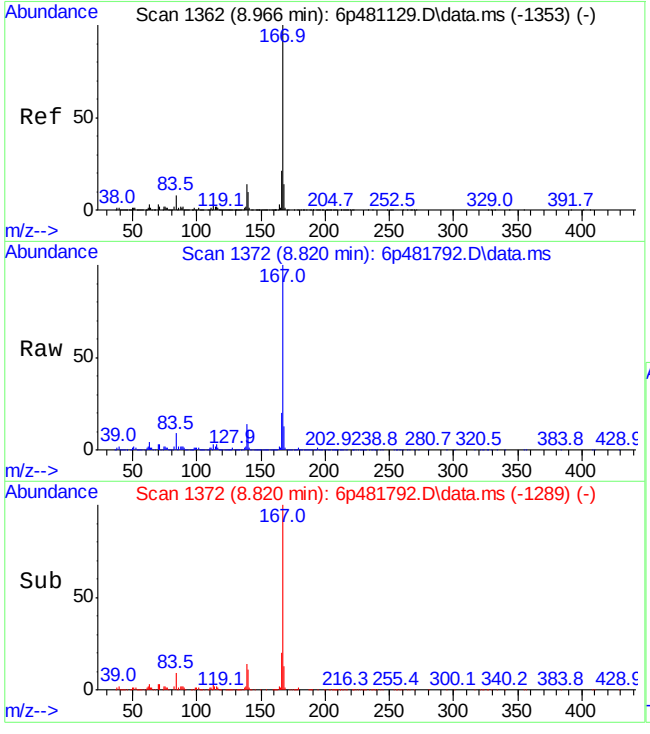


#78
Anthracene
Concen: 69.10 ppm
RT: 8.611 min Scan# 1333
Delta R.T. -0.058 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:178 Resp: 3799433

Ion	Ratio	Lower	Upper
178	100		
179	15.9	0.0	46.3
176	18.2	0.0	48.6

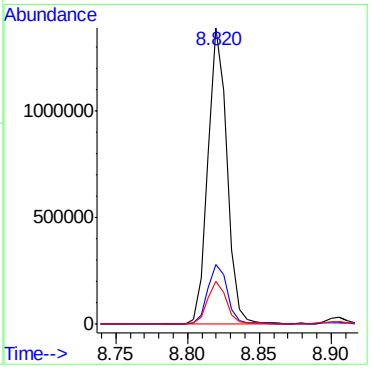


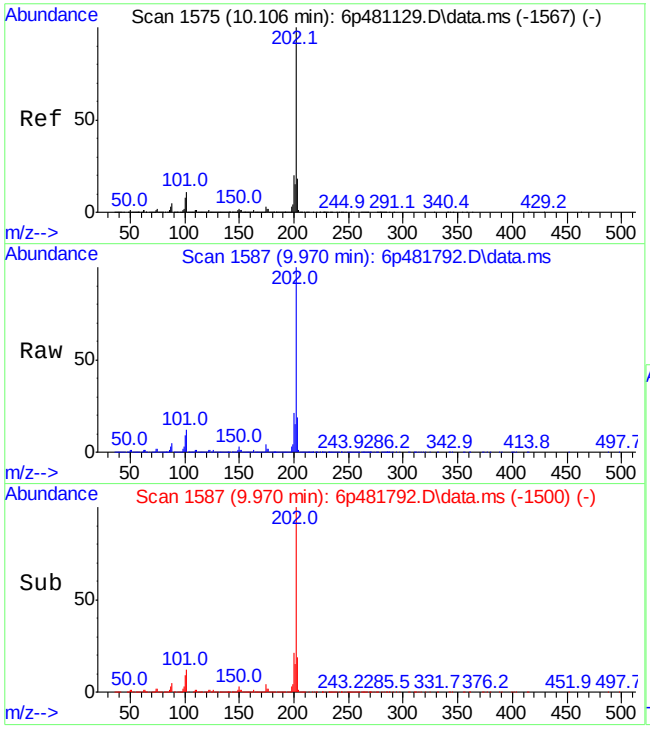


#79
Carbazole
Concen: 24.44 ppm
RT: 8.820 min Scan# 1372
Delta R.T. -0.056 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:167 Resp: 1272275

Ion	Ratio	Lower	Upper
167	100		
166	20.1	0.0	50.7
139	14.3	0.0	43.6

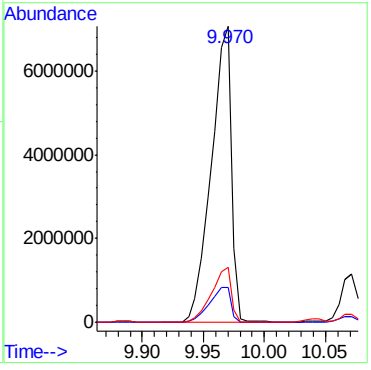


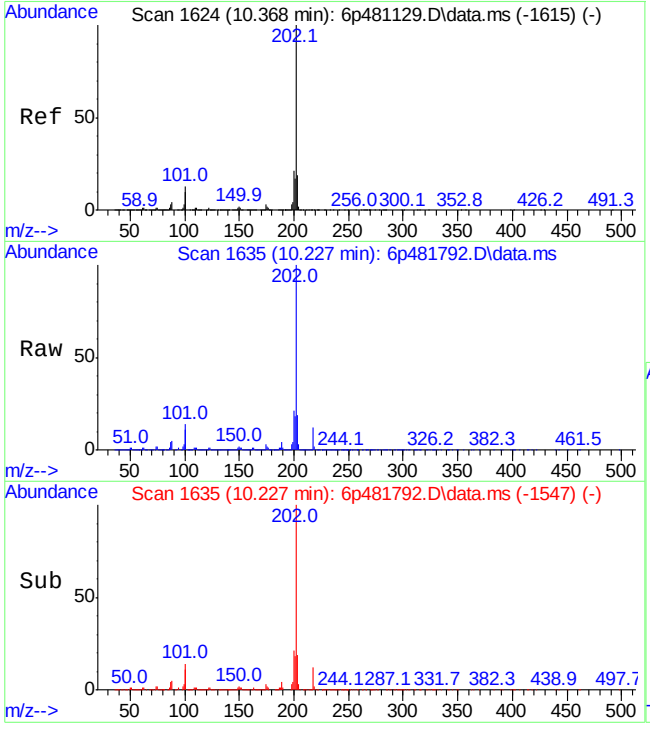


#81
Fluoranthene
Concen: 136.34 ppm
RT: 9.970 min Scan# 1587
Delta R.T. -0.033 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:202 Resp: 8121065

Ion	Ratio	Lower	Upper
202	100		
101	11.7	0.0	40.6
203	18.7	0.0	47.8

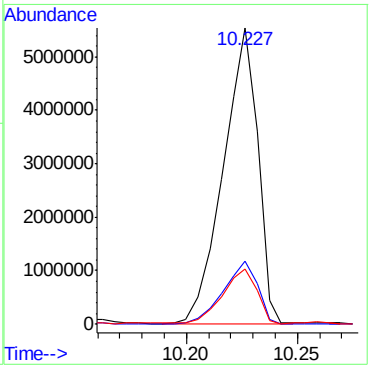


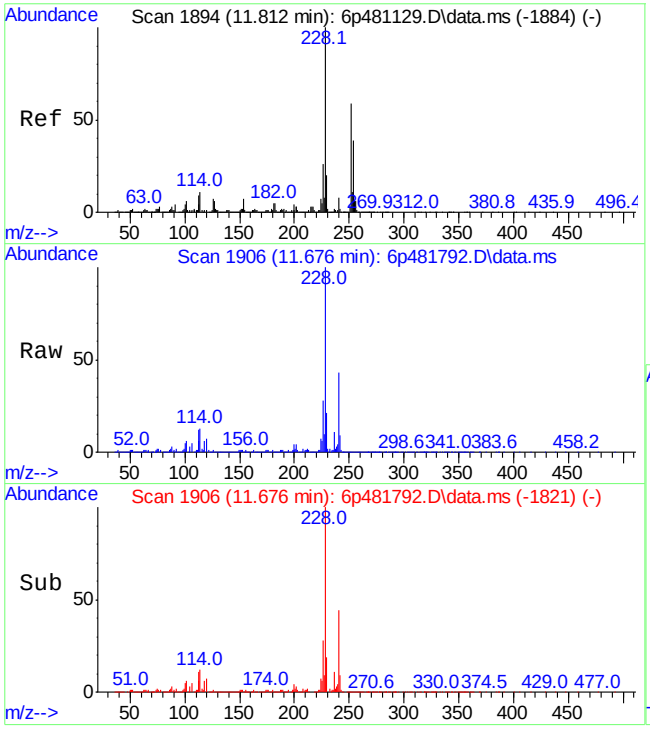


#84
Pyrene
Concen: 89.84 ppm
RT: 10.227 min Scan# 1635
Delta R.T. -0.030 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:202 Resp: 5978362

Ion	Ratio	Lower	Upper
202	100		
200	21.4	0.0	51.3
203	18.4	0.0	46.8

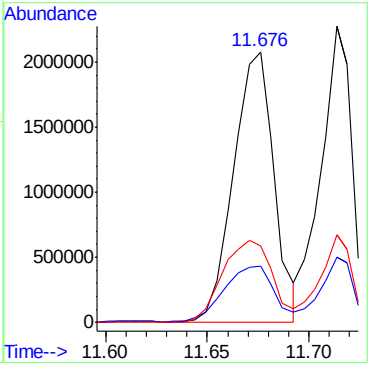


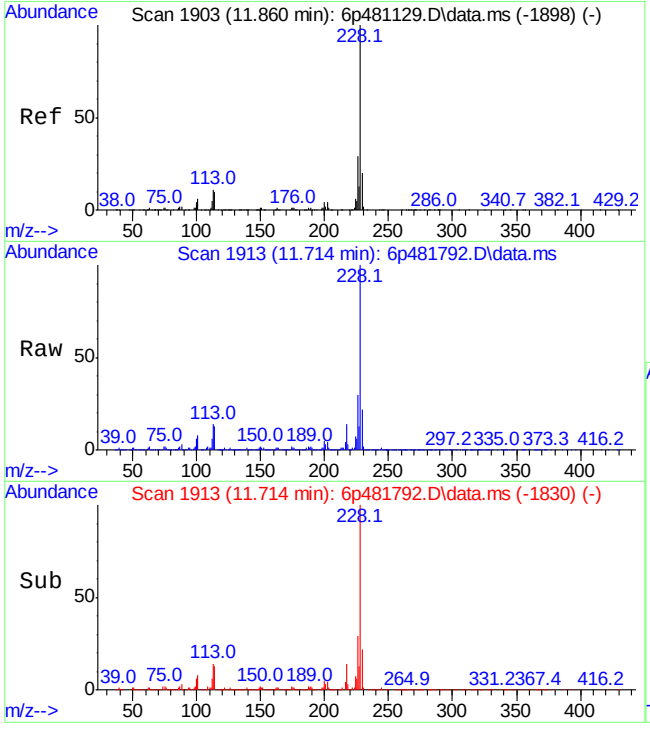


#87
Benzo[a]anthracene
Concen: 45.21 ppm
RT: 11.676 min Scan# 1906
Delta R.T. -0.048 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:228 Resp: 2875991

Ion	Ratio	Lower	Upper
228	100		
229	20.1	0.0	49.8
226	27.9	0.0	57.5

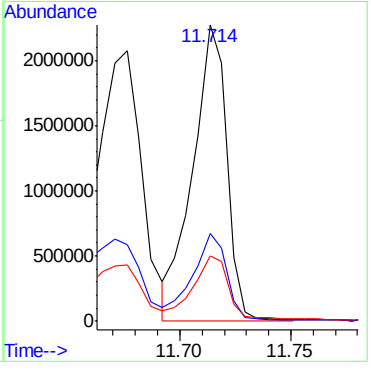




#89
Chrysene
Concen: 38.87 ppm
RT: 11.714 min Scan# 1913
Delta R.T. -0.054 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:228 Resp: 2424931

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	59.3
229	21.3	0.0	50.0



9.1.2

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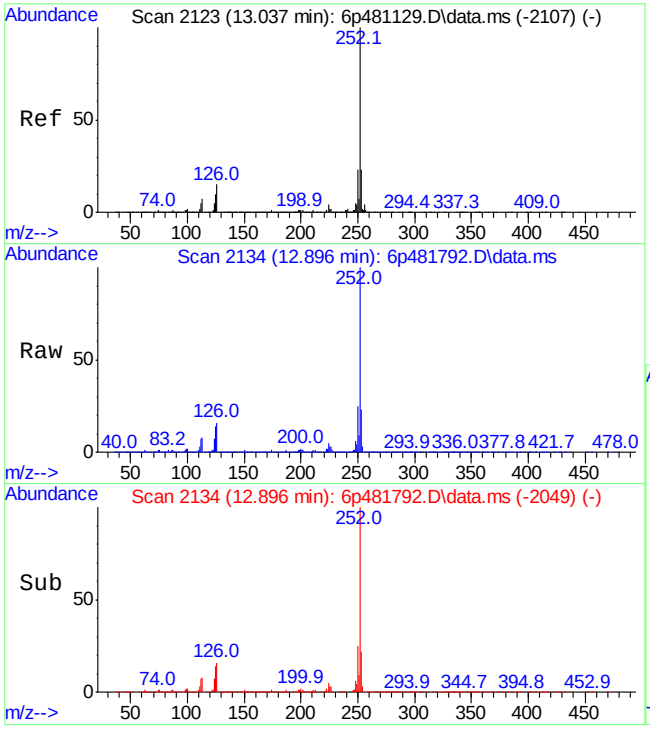
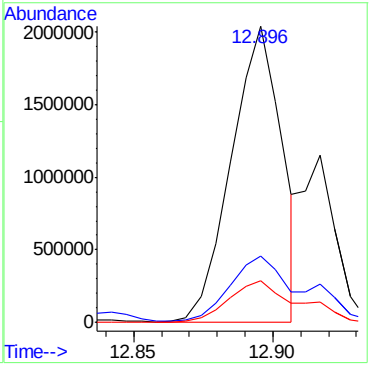
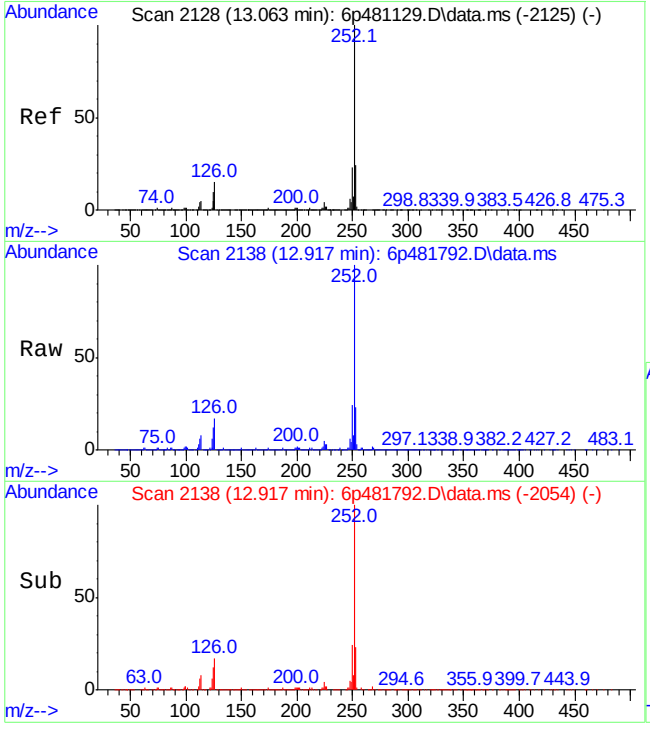


#93
Benzo[b]fluoranthene
Concen: 41.24 ppm m
RT: 12.896 min Scan# 2134
Delta R.T. -0.043 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:252 Resp: 2563014

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	52.9
125	14.0	0.0	43.3

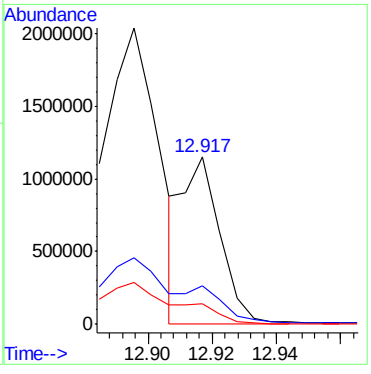




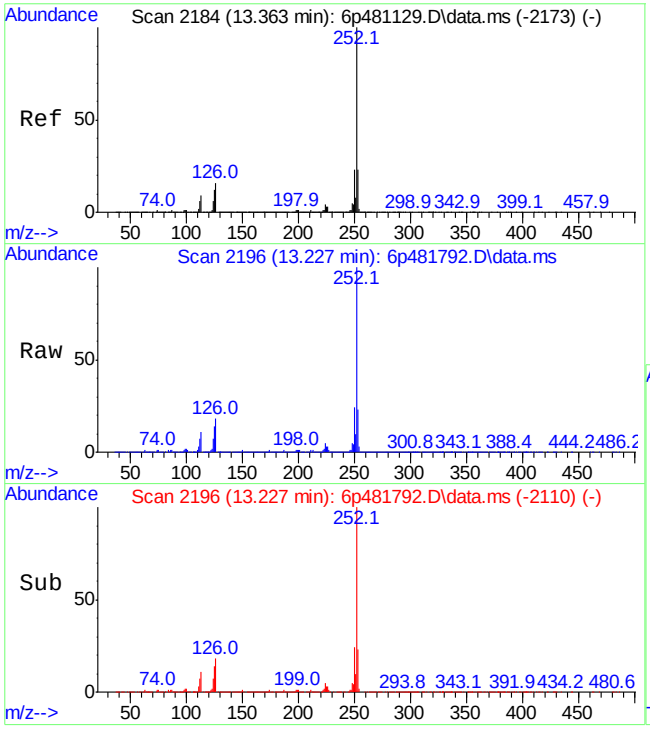
#94
Benzo[k]fluoranthene
Concen: 17.14 ppm m
RT: 12.917 min Scan# 2138
Delta R.T. -0.048 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:252 Resp: 943116

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.4
125	12.0	0.0	43.1



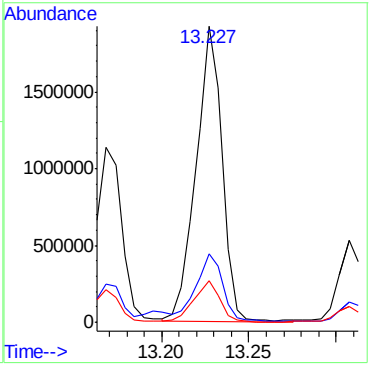
9.1.2
9

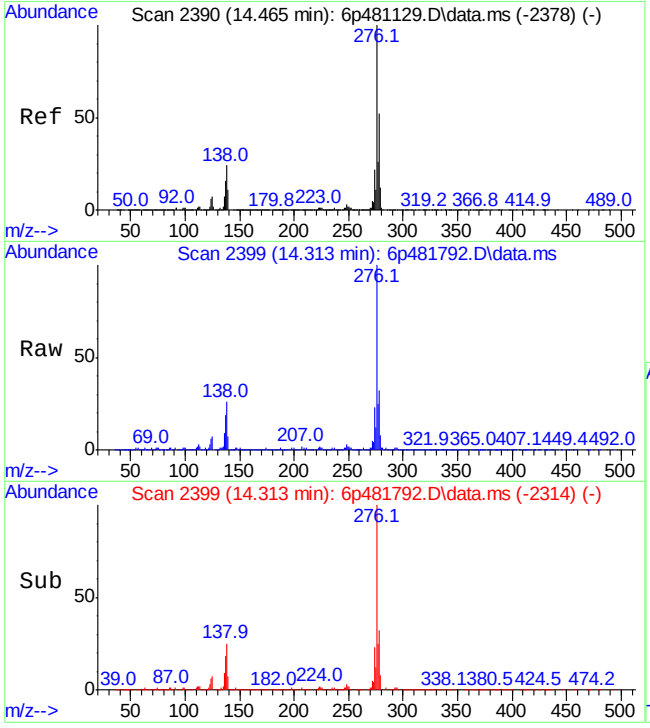


#95
Benzo[a]pyrene
Concen: 39.28 ppm
RT: 13.227 min Scan# 2196
Delta R.T. -0.042 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:252 Resp: 2005473

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	52.1
125	14.0	0.0	45.1

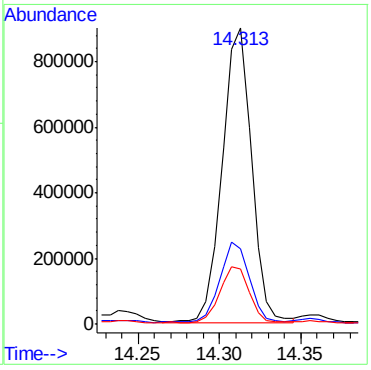


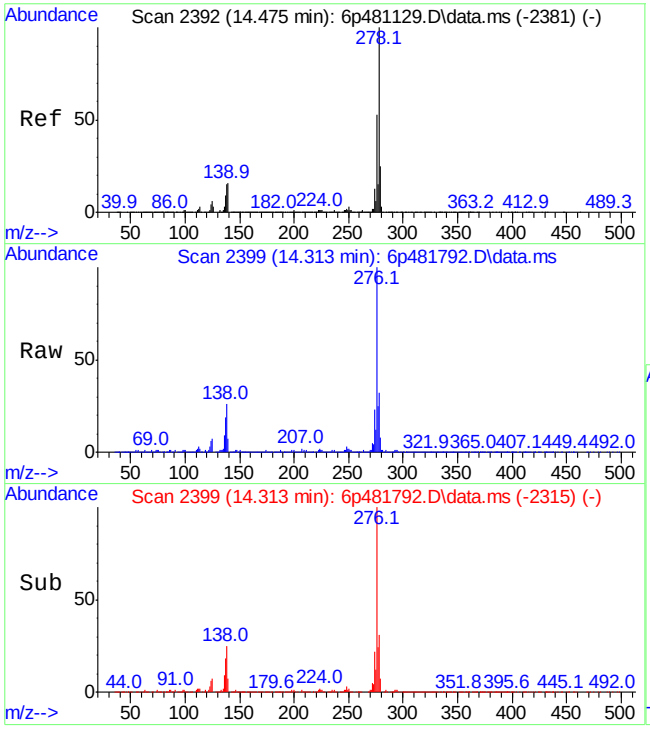


#96
Indeno[1,2,3-cd]pyrene
Concen: 16.69 ppm
RT: 14.313 min Scan# 2399
Delta R.T. -0.046 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:276 Resp: 1138242

Ion	Ratio	Lower	Upper
276	100		
138	31.9	0.0	60.0
137	18.3	0.0	49.6

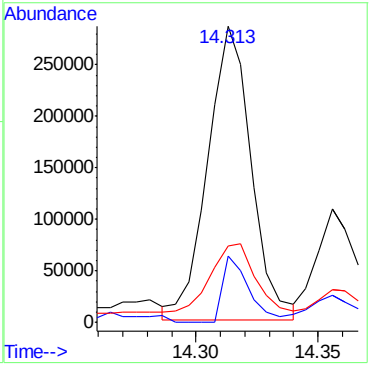


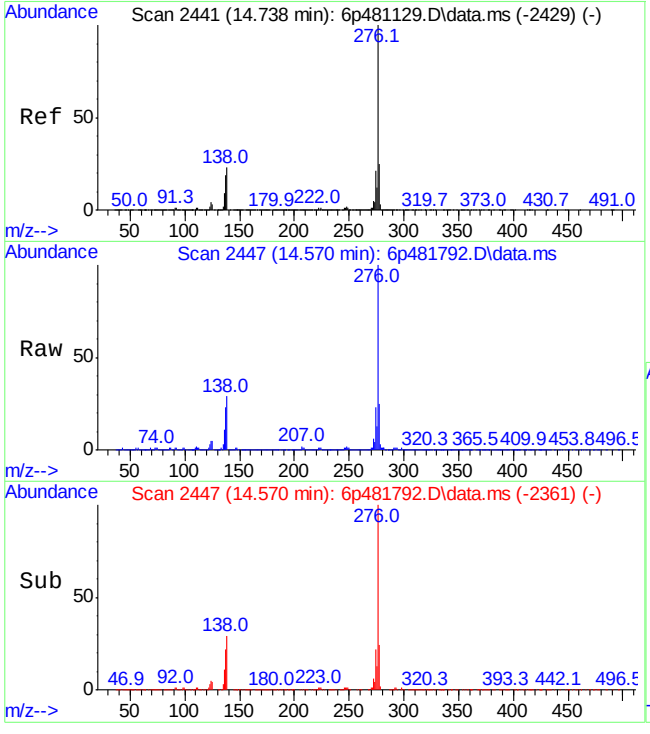


#98
Dibenz[a,h]anthracene
Concen: 5.87 ppm
RT: 14.313 min Scan# 2399
Delta R.T. -0.051 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:278 Resp: 354800

Ion	Ratio	Lower	Upper
278	100		
139	21.2	0.0	51.8
279	23.7	0.0	54.3

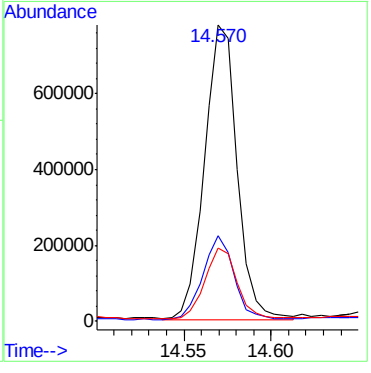




#100
Benzo[g,h,i]perylene
Concen: 18.96 ppm
RT: 14.570 min Scan# 2447
Delta R.T. -0.039 min
Lab File: 6p481792.D
Acq: 10 May 2019 12:50 pm

Tgt Ion:276 Resp: 1008225

Ion	Ratio	Lower	Upper
276	100		
138	28.6	0.0	54.9
277	24.0	0.0	53.8



Manual Integration Approval Summary

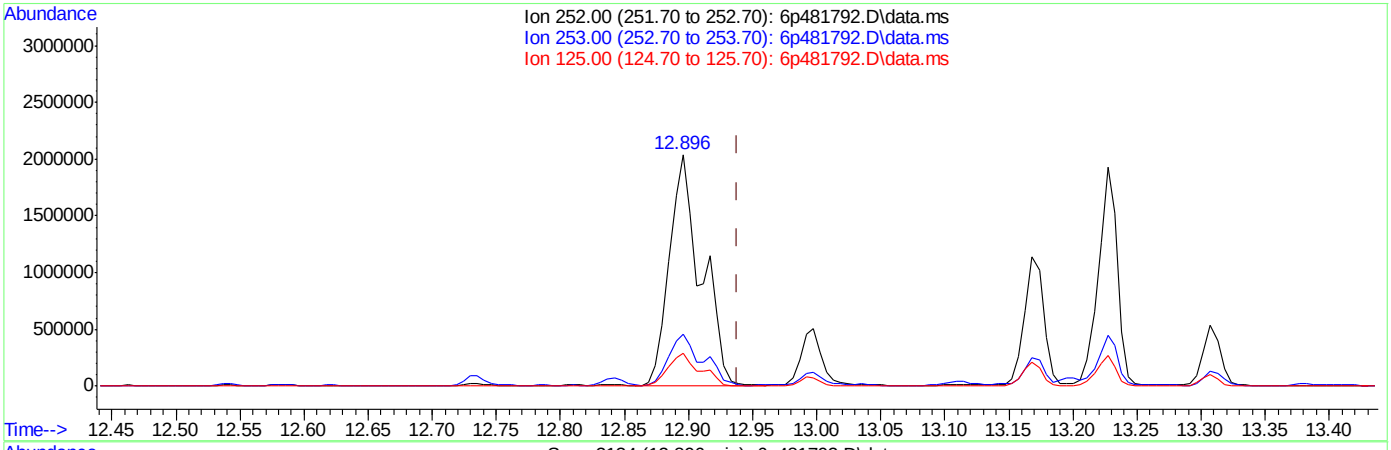
Sample Number:	JC87093-1	**Method:**	SW846 8270D
Lab FileID:	6P481792.D	**Analyst approved:**	05/10/19 13:17 Ying Li
Injection Time:	05/10/19 12:50	**Supervisor approved:**	05/10/19 17:55 Nancy Ma

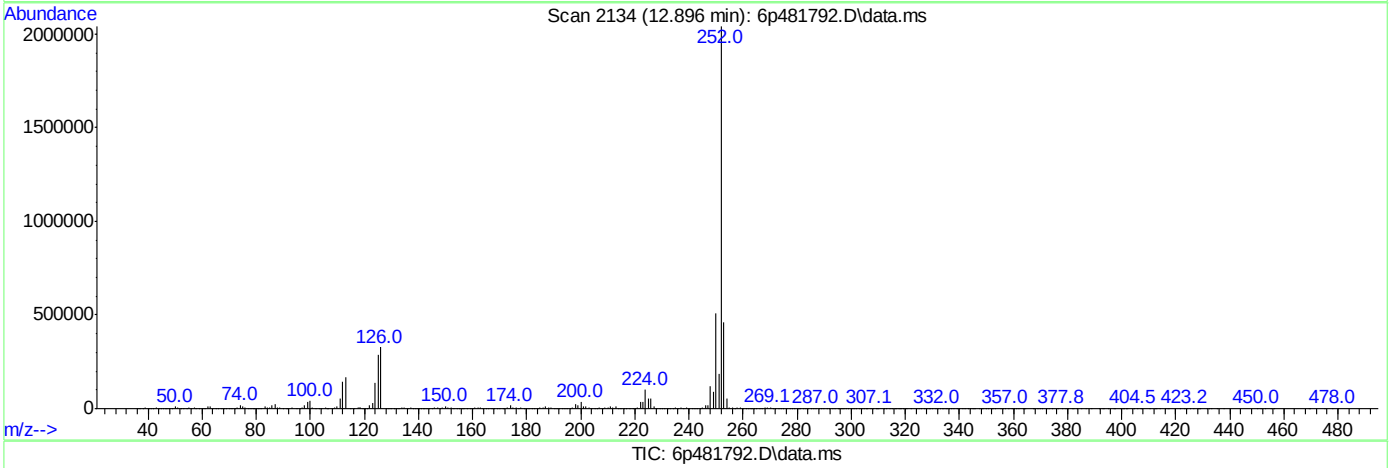
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		12.90	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.92	Overlapping peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481792.D
Acq On    : 10 May 2019  12:50 pm
Operator  : angelar
Sample    : jc87093-1
Misc      : op20110,e6p2588,30.4,,,1,50
ALS Vial  : 11   Sample Multiplier: 1

Quant Time: May 10 13:07:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title  : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration
```





TIC: 6p481792.D\data.ms

(93) Benzo[b]fluoranthene (t)

12.896min (-0.043) 56.37ppm

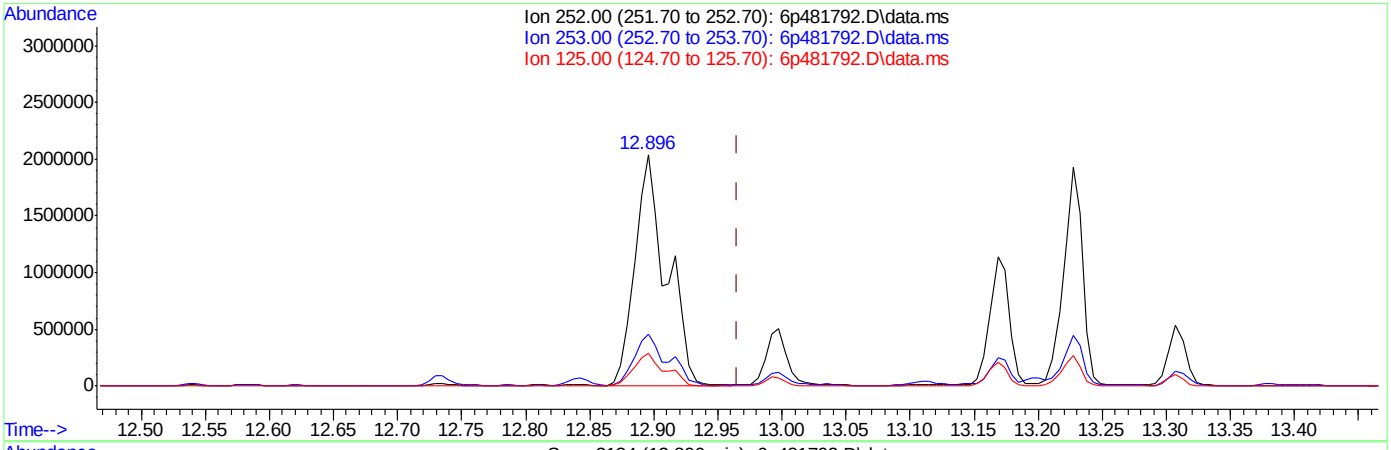
response 3503443

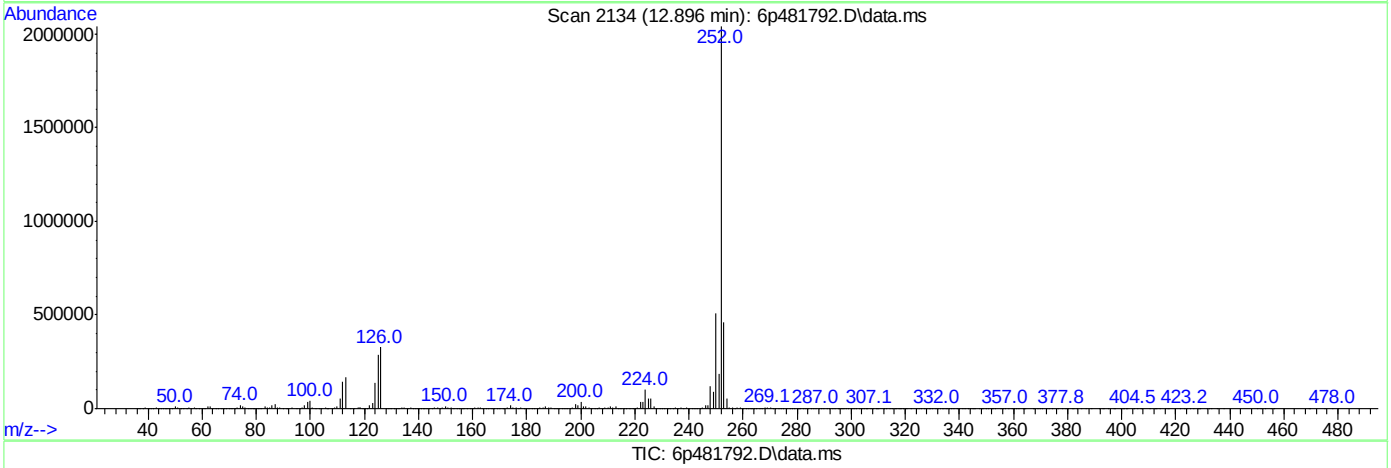
Ion	Exp%	Act%
252.00	100	100
253.00	22.90	22.07
125.00	13.30	13.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481792.D
Acq On : 10 May 2019 12:50 pm
Operator : angelar
Sample : jc87093-1
Misc : op20110,e6p2588,30.4,,,1,50
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 10 13:07:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration





TIC: 6p481792.D\data.ms

(94) Benzo[k]fluoranthene (t)

12.896min (-0.070) 63.60ppm

response 3499110

Ion	Exp%	Act%
252.00	100	100
253.00	22.40	22.07
125.00	13.10	13.97
0.00	0.00	0.00

Manual Integrations
APPROVED
(compounds with "m" flag)
Nancy Ma
05/10/19 17:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:59:34 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.753	152	163549	40.00	ppm	0.01
24) Naphthalene-d8	4.693	136	547660	40.00	ppm	0.01
47) Acenaphthene-d10	5.938	164	282399	40.00	ppm	0.02
69) Phenanthrene-d10	7.386	188	447119	40.00	ppm	0.07
83) Chrysene-d12	12.103	240	457080	40.00	ppm	0.16
91) Perylene-d12	15.025	264	455168	40.00	ppm	0.15
101) 1,4-Dichlorobenzene-d4b	3.753	152	163549	40.00	ppm	0.01
103) Phenanthrene-d10b	7.386	188	447119	40.00	ppm	0.07
105) Chrysene-d12b	12.103	240	457080	40.00	ppm	0.16
107) Naphthalene-d8b	4.693	136	547660	40.00	ppm	0.01
109) Acenaphthene-d10b	5.938	164	282399	40.00	ppm	0.02
111) Chrysene-d12d	12.103	240	457080	40.00	ppm	0.16
System Monitoring Compounds						
5) 2-Fluorophenol	2.791	112	37420	7.12	ppm	0.01
Spiked Amount 50.000			Recovery	=	14.24%	
8) Phenol-d5	3.619	99	49959	7.49	ppm	0.01
Spiked Amount 50.000			Recovery	=	14.98%	
25) Nitrobenzene-d5	4.175	82	46205	7.85	ppm	0.00
Spiked Amount 50.000			Recovery	=	15.70%	
51) 2-Fluorobiphenyl	5.468	172	78566	8.78	ppm	0.00
Spiked Amount 50.000			Recovery	=	17.56%	
73) 2,4,6-Tribromophenol	6.611	330	11302	7.60	ppm	0.03
Spiked Amount 50.000			Recovery	=	15.20%	
85) Terphenyl-d14	9.982	244	79753m	7.70	ppm	0.06
Spiked Amount 50.000			Recovery	=	15.40%	
Target Compounds						Qvalue
21) 3&4-Methylphenol	4.170	108	7380	1.48	ppm	95
38) Naphthalene	4.720	128	4557871m	348.53	ppm	
44) 2-Methylnaphthalene	5.206	141	756203	100.87	ppm	92
53) Biphenyl	5.537	154	856547	89.99	ppm	99
56) Acenaphthylene	5.836	152	1148873	95.08	ppm	98
59) Acenaphthene	5.981	153	3684949m	496.15	ppm	
62) Dibenzofuran	6.109	168	3742673	332.31	ppm	93
66) Fluorene	6.397	166	4694021m	520.04	ppm	
77) Phenanthrene	7.455	178	17303295m	1484.99	ppm	
78) Anthracene	7.503	178	6694453m	549.97	ppm	
79) Carbazole	7.722	167	2620041	222.89	ppm	98
81) Fluoranthene	9.261	202	14598585	1015.73	ppm	91
84) Pyrene	9.635	202	11105332	701.75	ppm	92
87) Benzo[a]anthracene	12.087	228	6932006	460.06	ppm	94
89) Chrysene	12.156	228	4671516	352.02	ppm	96
93) Benzo[b]fluoranthene	14.352	252	7156220	515.79	ppm	96
94) Benzo[k]fluoranthene	14.384	252	872559m	74.76	ppm	
95) Benzo[a]pyrene	14.950	252	4441579	378.56	ppm	97
96) Indeno[1,2,3-cd]pyrene	16.970	276	2483408	231.58	ppm	97
98) Dibenz[a,h]anthracene	17.002	278	769367	70.37	ppm	96
100) Benzo[g,h,i]perylene	17.402	276	2282356	211.12	ppm	96

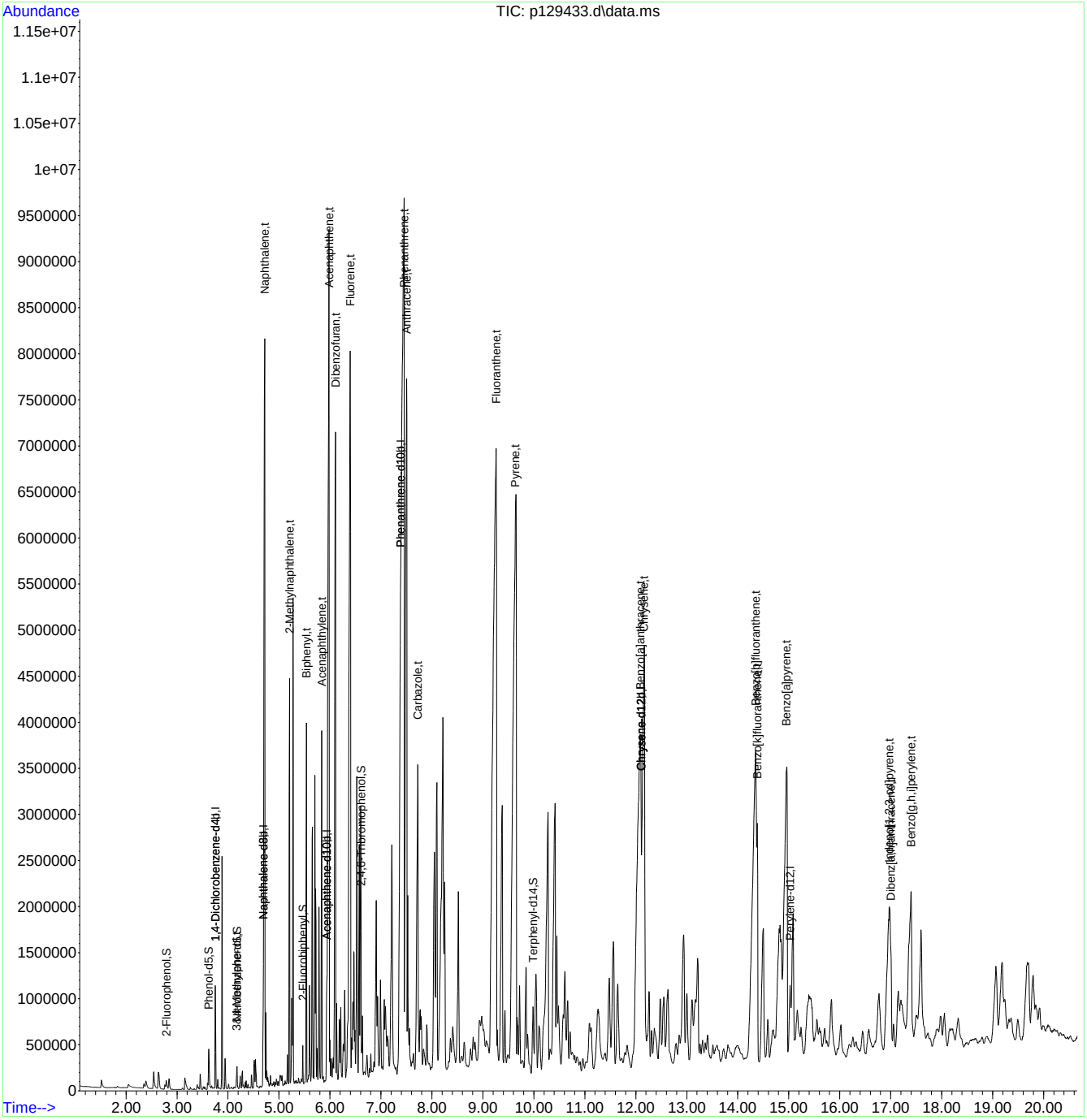
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.1.3
9

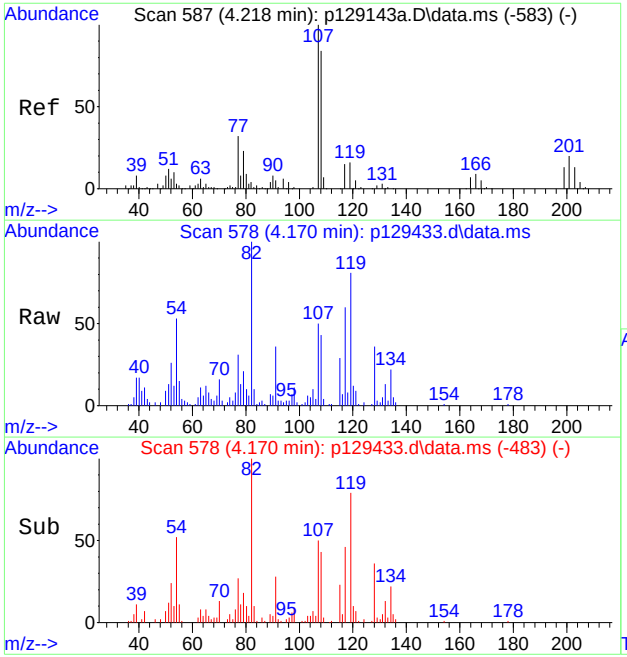
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:59:34 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration



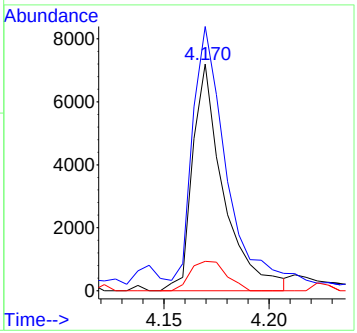
MP5844.M Fri May 10 03:42:24 2019 Page: 2

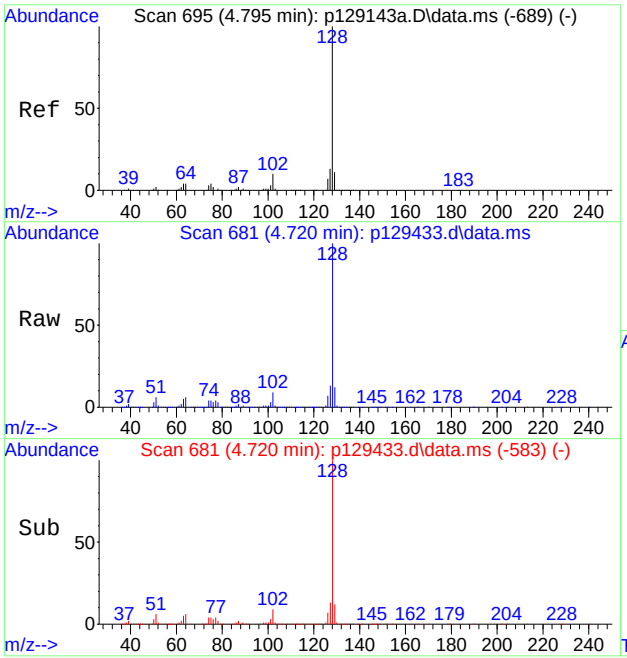


#21
3&4-Methylphenol
Concen: 1.48 ppm
RT: 4.170 min Scan# 578
Delta R.T. 0.005 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:108 Resp: 7380

Ion	Ratio	Lower	Upper
108	100		
107	113.2	88.8	148.8
90	13.4	0.0	41.5

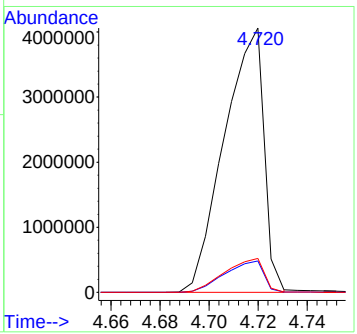




#38
Naphthalene
Concen: 348.53 ppm m
RT: 4.720 min Scan# 681
Delta R.T. 0.021 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

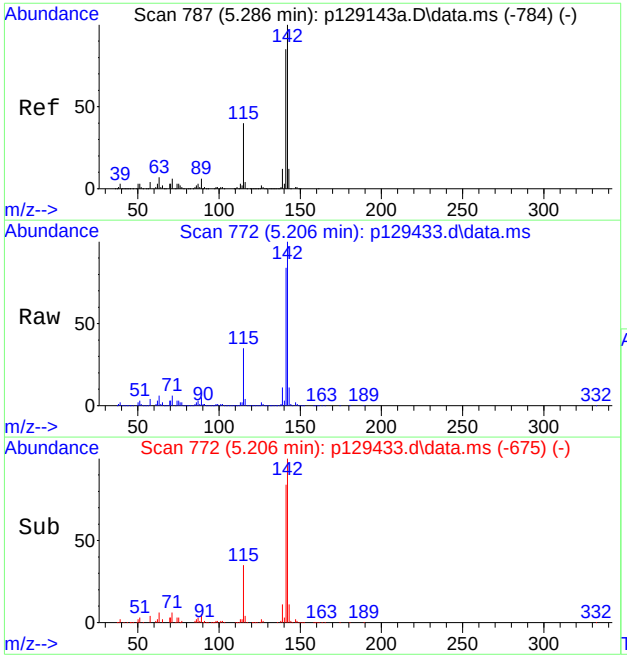
Tgt Ion:128 Resp: 4557871

Ion	Ratio	Lower	Upper
128	100		
129	11.9	0.0	40.7
127	12.9	0.0	42.8



9.1.3

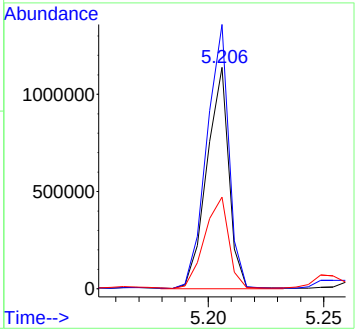
9

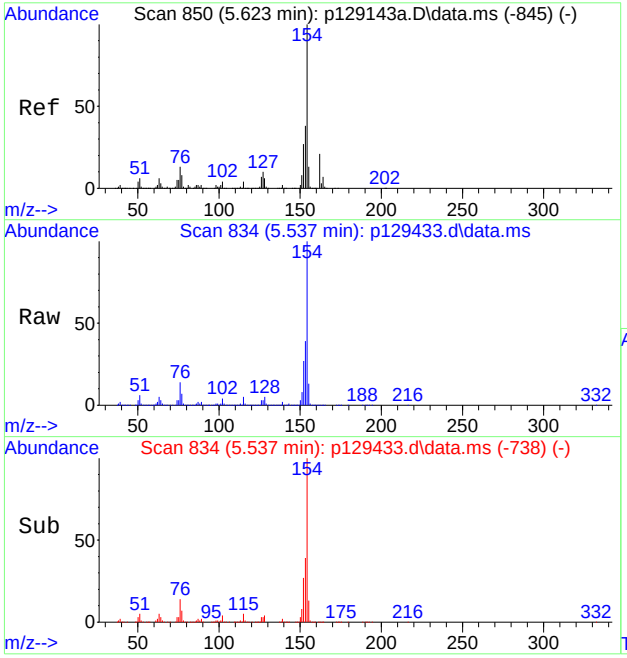


#44
2-Methylnaphthalene
Concen: 100.87 ppm
RT: 5.206 min Scan# 772
Delta R.T. 0.016 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:141 Resp: 756203

Ion	Ratio	Lower	Upper
141	100		
142	119.4	95.6	155.6
115	41.1	20.0	80.0

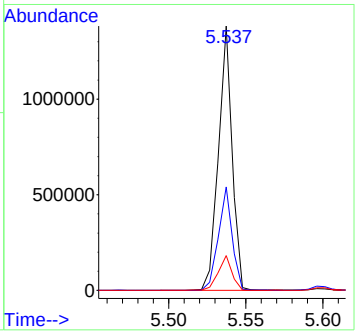




#53
Biphenyl
Concen: 89.99 ppm
RT: 5.537 min Scan# 834
Delta R.T. 0.011 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

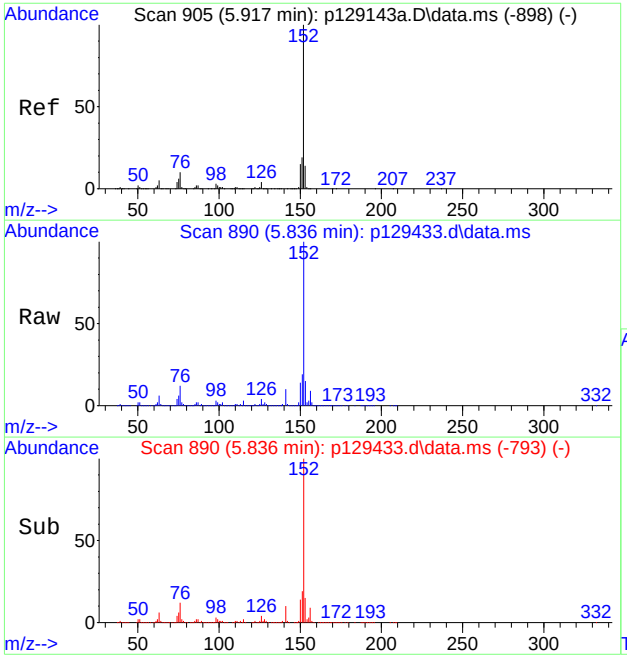
Tgt Ion:154 Resp: 856547

Ion	Ratio	Lower	Upper
154	100		
153	39.1	10.2	70.2
155	13.2	0.0	43.3



9.1.3

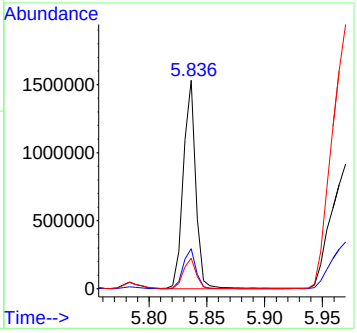
9

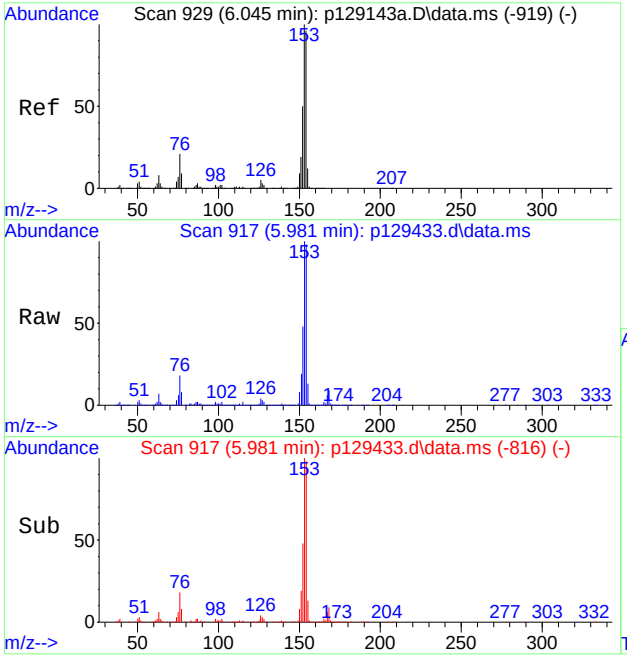


#56
Acenaphthylene
Concen: 95.08 ppm
RT: 5.836 min Scan# 890
Delta R.T. 0.016 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:152 Resp: 1148873

Ion	Ratio	Lower	Upper
152	100		
151	19.2	0.0	49.4
153	14.6	0.0	43.1

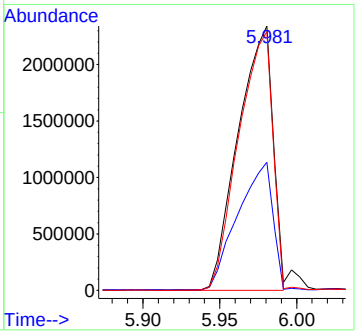


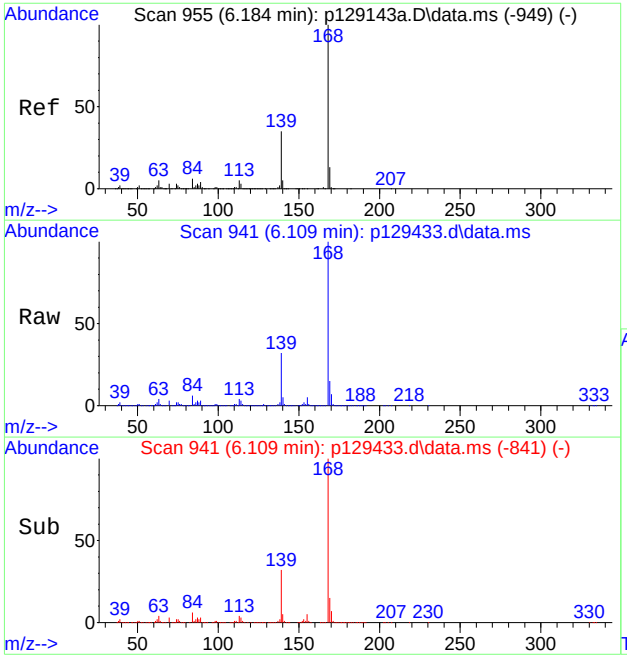


#59
Acenaphthene
Concen: 496.15 ppm m
RT: 5.981 min Scan# 917
Delta R.T. 0.037 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:153 Resp: 3684949

Ion	Ratio	Lower	Upper
153	100		
152	48.5	19.7	79.7
154	97.8	61.3	121.3

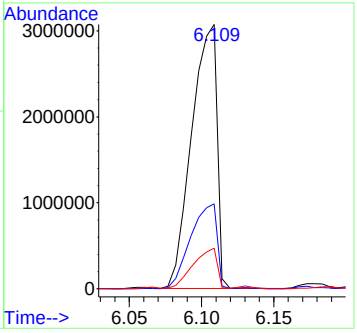


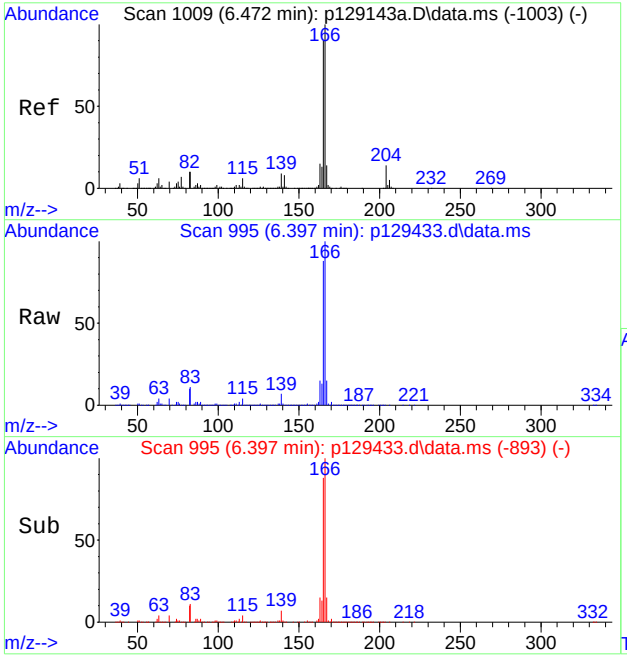


#62
Dibenzofuran
Concen: 332.31 ppm
RT: 6.109 min Scan# 941
Delta R.T. 0.032 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:168 Resp: 3742673

Ion	Ratio	Lower	Upper
168	100		
139	32.1	6.5	66.5
169	15.3	0.0	43.5

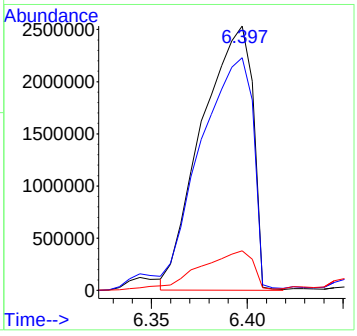


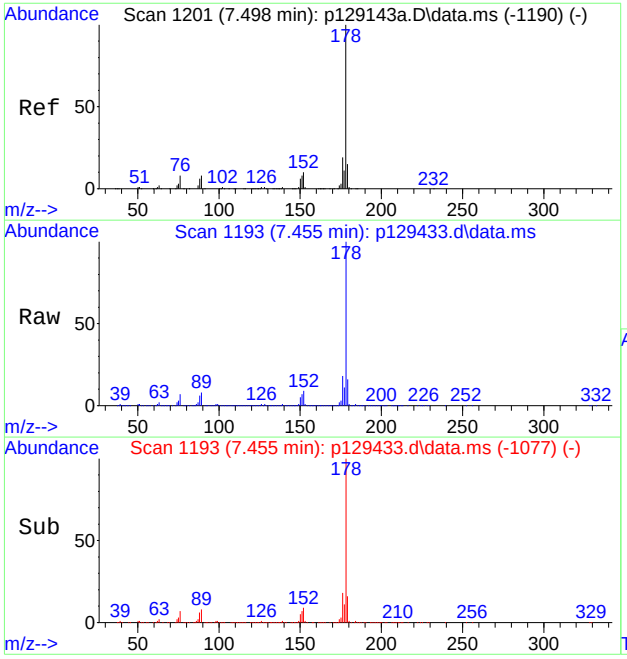


#66
Fluorene
Concen: 520.04 ppm m
RT: 6.397 min Scan# 995
Delta R.T. 0.043 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:166 Resp: 4694021

Ion	Ratio	Lower	Upper
166	100		
165	88.0	63.7	123.7
167	15.0	0.0	43.1

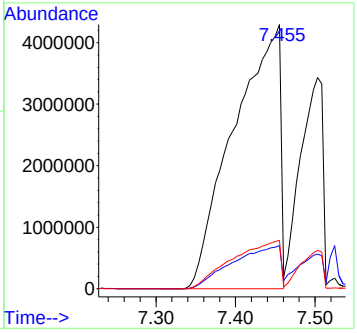


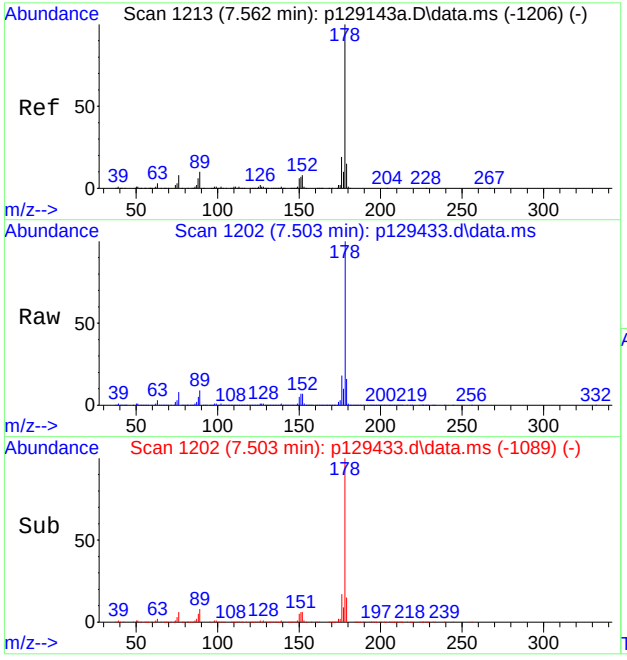


#77
Phenanthrene
Concen: 1484.99 ppm m
RT: 7.455 min Scan# 1193
Delta R.T. 0.117 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:178 Resp:17303295

Ion	Ratio	Lower	Upper
178	100		
179	16.4	0.0	45.3
176	18.3	0.0	50.0

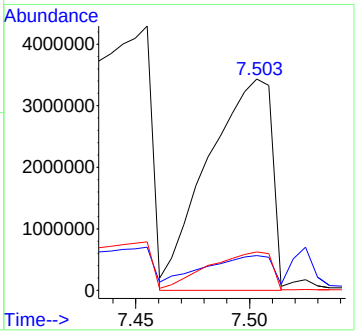


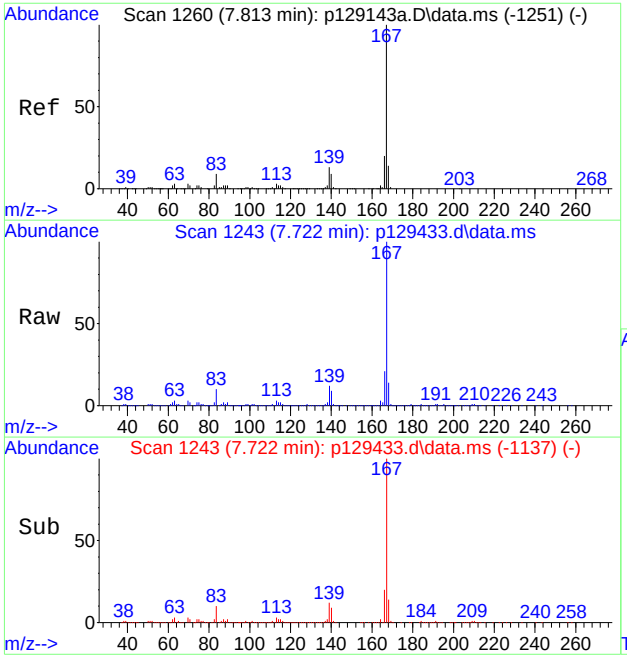


#78
Anthracene
Concen: 549.97 ppm m
RT: 7.503 min Scan# 1202
Delta R.T. 0.101 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:178 Resp: 6694453

Ion	Ratio	Lower	Upper
178	100		
179	16.5	0.0	45.1
176	18.2	0.0	48.6

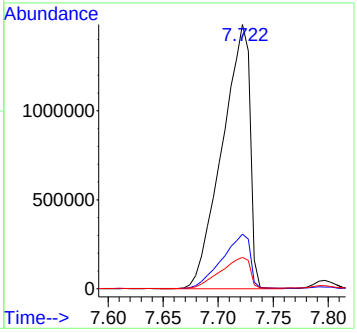


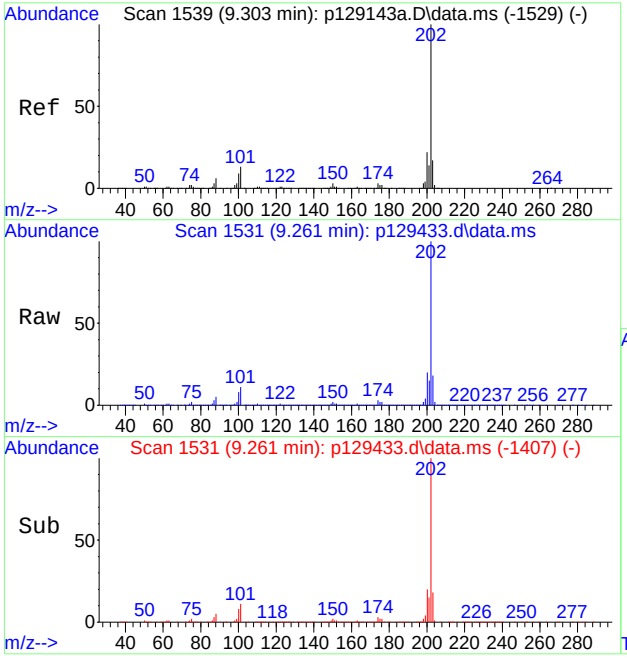


#79
Carbazole
Concen: 222.89 ppm
RT: 7.722 min Scan# 1243
Delta R.T. 0.064 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:167 Resp: 2620041

Ion	Ratio	Lower	Upper
167	100		
166	20.6	0.0	49.9
139	11.7	0.0	42.7

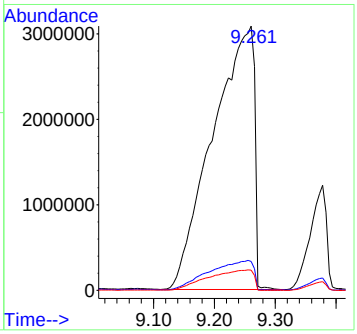


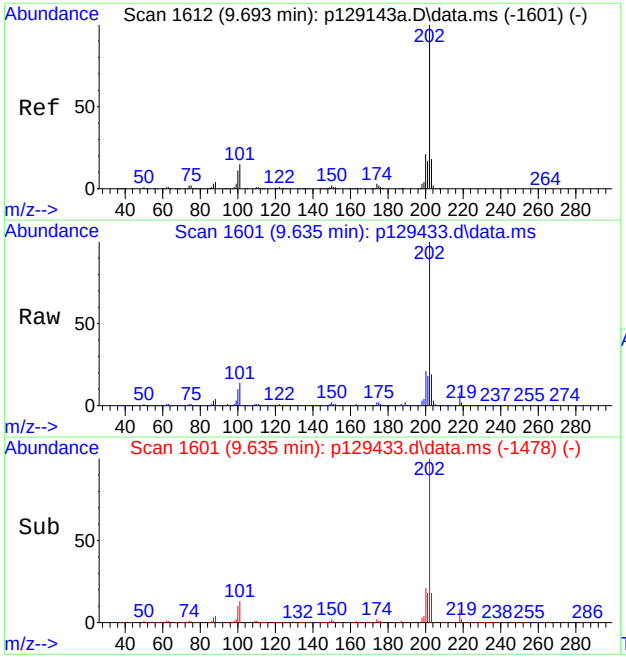


#81
Fluoranthene
Concen: 1015.73 ppm
RT: 9.261 min Scan# 1531
Delta R.T. 0.160 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:202 Resp:14598585

Ion	Ratio	Lower	Upper
202	100		
101	10.8	0.0	45.1
100	7.6	0.0	40.6

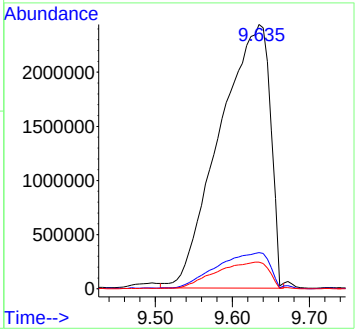


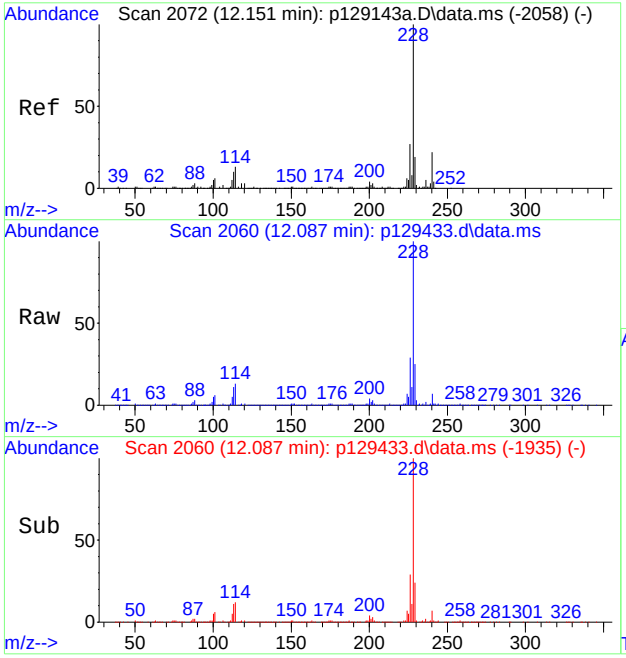


#84
Pyrene
Concen: 701.75 ppm
RT: 9.635 min Scan# 1601
Delta R.T. 0.155 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:202 Resp:11105332

Ion	Ratio	Lower	Upper
202	100		
101	13.2	0.0	46.8
100	10.1	0.0	43.1

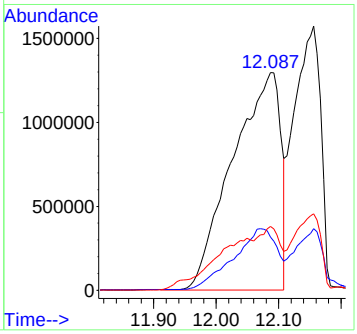


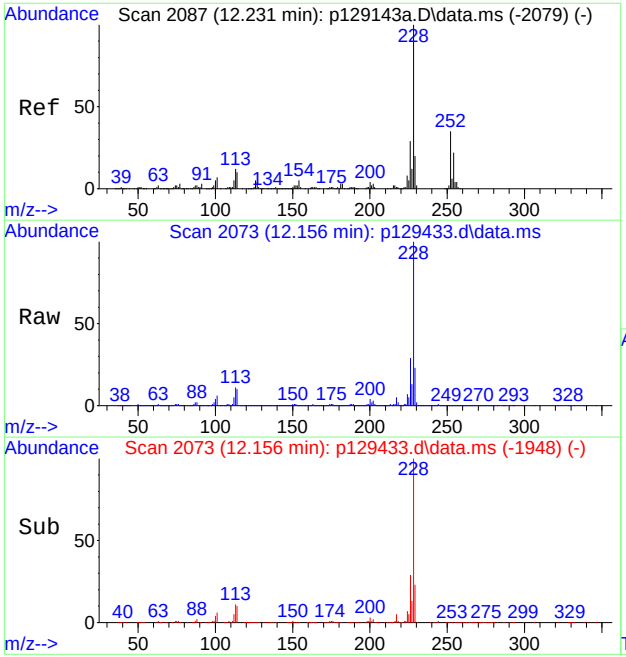


#87
Benzo[a]anthracene
Concen: 460.06 ppm
RT: 12.087 min Scan# 2060
Delta R.T. 0.165 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:228 Resp: 6932006

Ion	Ratio	Lower	Upper
228	100		
229	25.3	0.0	49.7
226	29.2	0.0	58.0

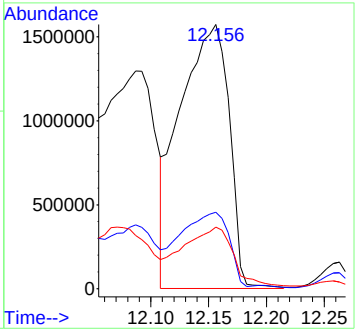


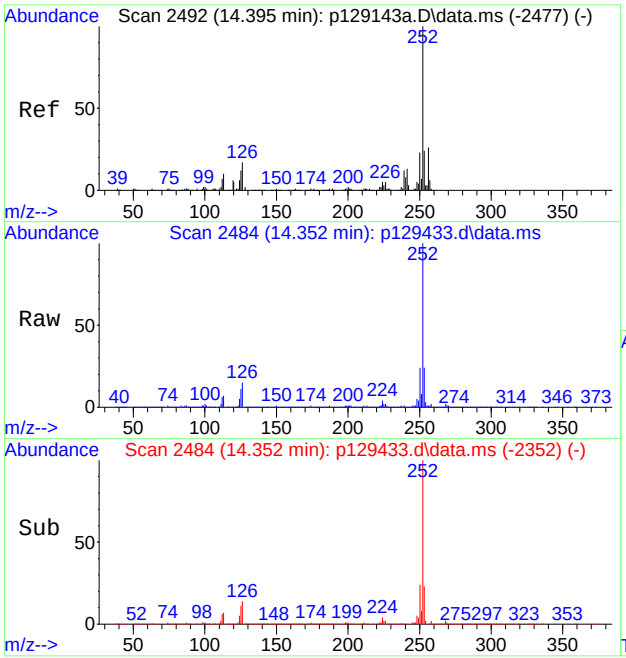


#89
Chrysene
Concen: 352.02 ppm
RT: 12.156 min Scan# 2073
Delta R.T. 0.165 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:228 Resp: 4671516

Ion	Ratio	Lower	Upper
228	100		
226	28.6	0.0	59.2
229	23.0	0.0	49.8

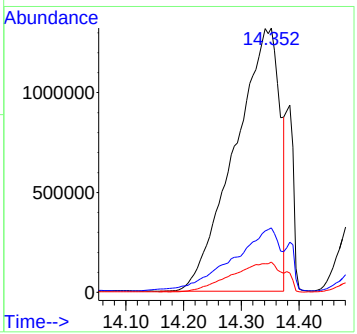


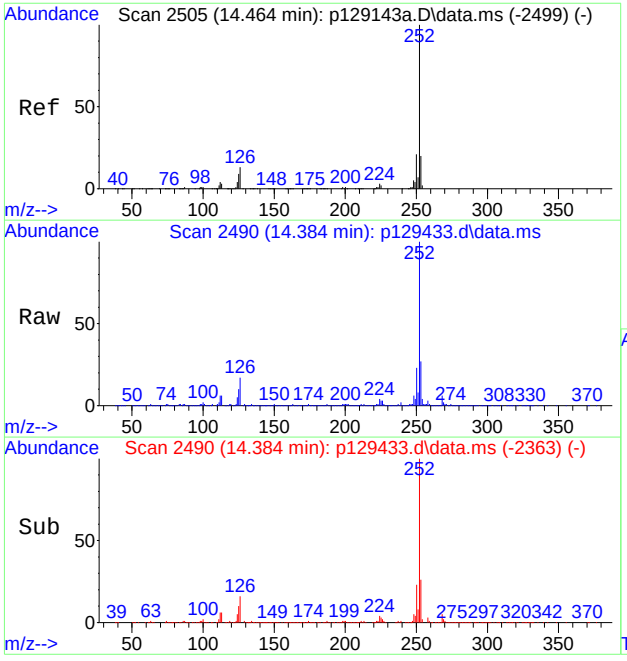


#93
Benzo[b]fluoranthene
Concen: 515.79 ppm
RT: 14.352 min Scan# 2484
Delta R.T. 0.203 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:252 Resp: 7156220

Ion	Ratio	Lower	Upper
252	100		
253	24.0	0.0	51.9
125	11.7	0.0	43.1

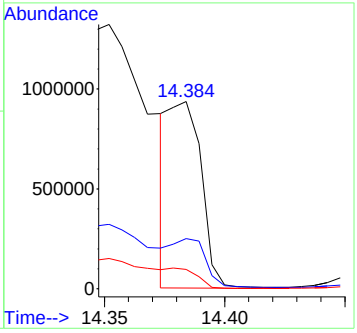


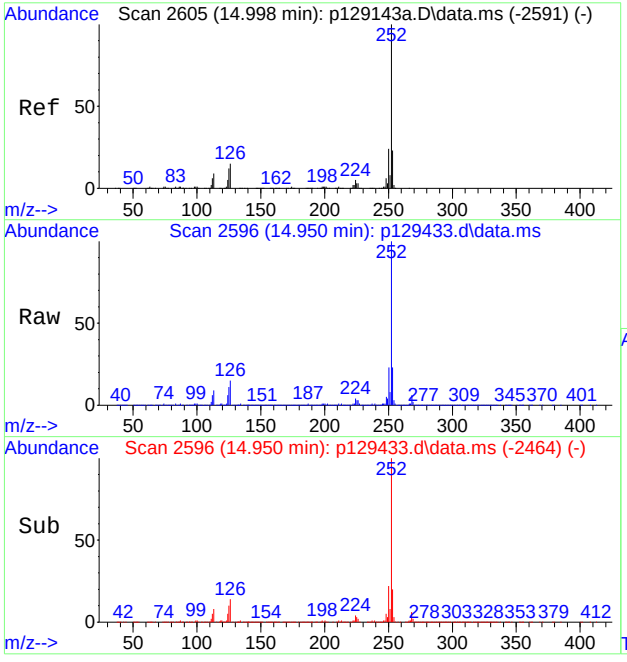


#94
Benzo[k]fluoranthene
Concen: 74.76 ppm m
RT: 14.384 min Scan# 2490
Delta R.T. 0.176 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:252 Resp: 872559

Ion	Ratio	Lower	Upper
252	100		
253	26.9	0.0	51.5
125	10.4	0.0	42.3

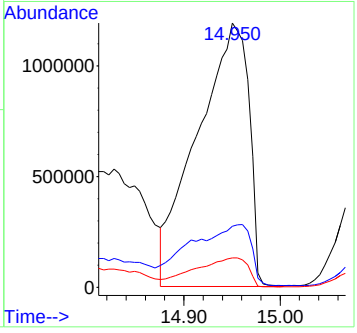


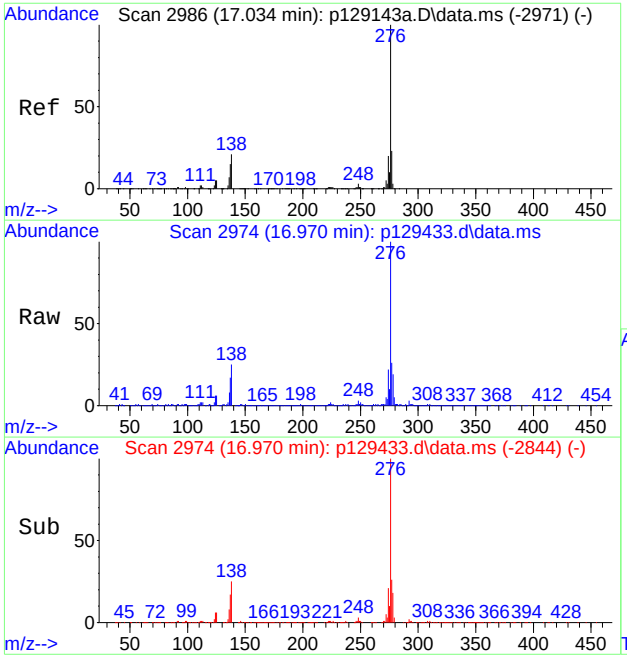


#95
Benzo[a]pyrene
Concen: 378.56 ppm
RT: 14.950 min Scan# 2596
Delta R.T. 0.203 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:252 Resp: 4441579

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.5
125	10.8	0.0	43.4

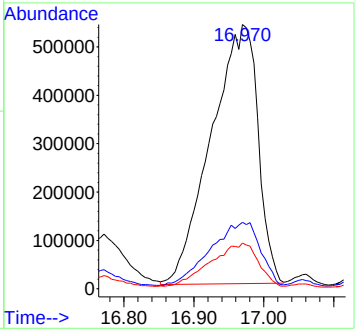


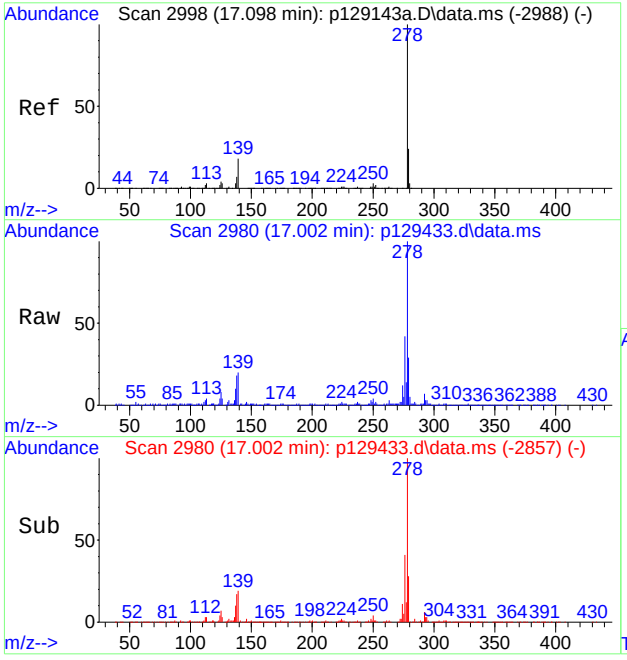


#96
Indeno[1,2,3-cd]pyrene
Concen: 231.58 ppm
RT: 16.970 min Scan# 2974
Delta R.T. 0.192 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:276 Resp: 2483408

Ion	Ratio	Lower	Upper
276	100		
138	24.3	0.0	55.8
137	16.7	0.0	48.2

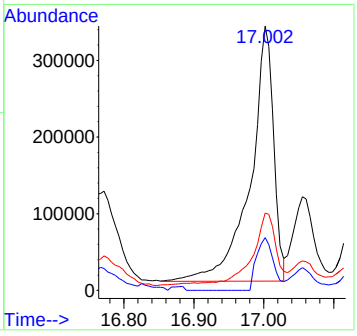


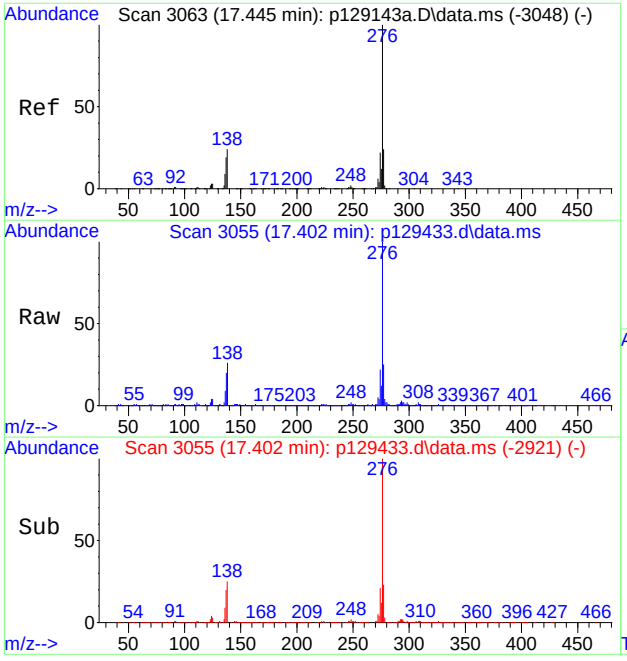


#98
Dibenz[a,h]anthracene
Concen: 70.37 ppm
RT: 17.002 min Scan# 2980
Delta R.T. 0.155 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:278 Resp: 769367

Ion	Ratio	Lower	Upper
278	100		
139	19.1	0.0	52.1
279	26.8	0.0	55.4

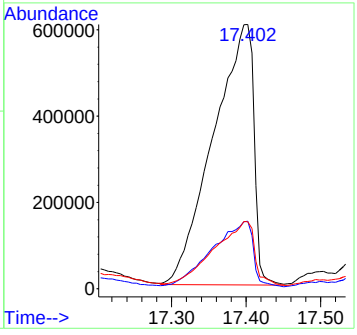




#100
Benzo[g,h,i]perylene
Concen: 211.12 ppm
RT: 17.402 min Scan# 3055
Delta R.T. 0.214 min
Lab File: p129433.d
Acq: 9 May 2019 7:49 pm

Tgt Ion:276 Resp: 2282356

Ion	Ratio	Lower	Upper
276	100		
138	25.0	0.0	57.8
277	24.0	0.0	55.4



9.1.3

9

Manual Integration Approval Summary

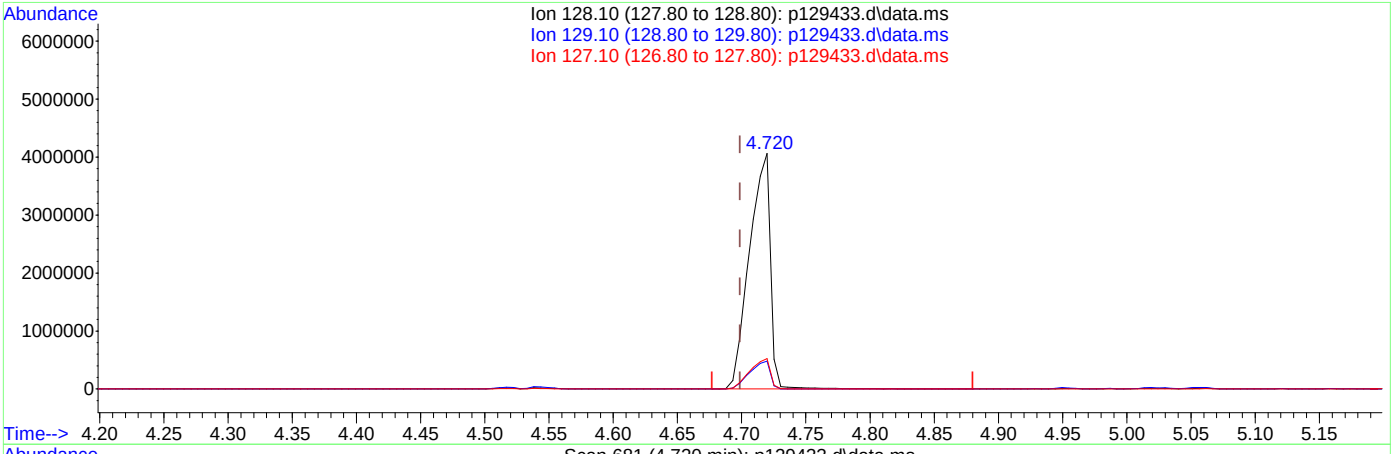
Sample Number:	JC87093-1	**Method:**	SW846 8270D
Lab FileID:	P129433.D	**Analyst approved:**	05/10/19 03:53 Jeryll Fabriene Reyes
Injection Time:	05/09/19 19:49	**Supervisor approved:**	05/10/19 17:55 Nancy Ma

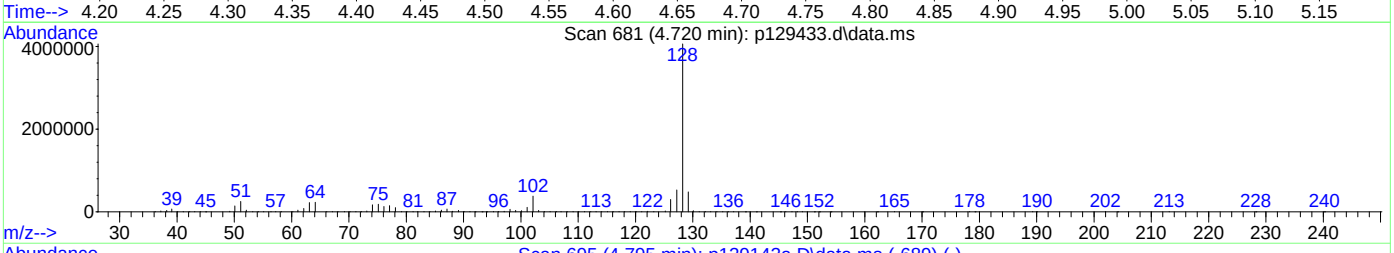
Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3		4.72	Poor instrument integration
Acenaphthene	83-32-9		5.98	Poor instrument integration
Fluorene	86-73-7		6.40	Poor instrument integration
Phenanthrene	85-01-8		7.46	Poor instrument integration
Anthracene	120-12-7		7.50	Poor instrument integration
Terphenyl-d14	1718-51-0		9.98	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		14.38	Poor instrument integration

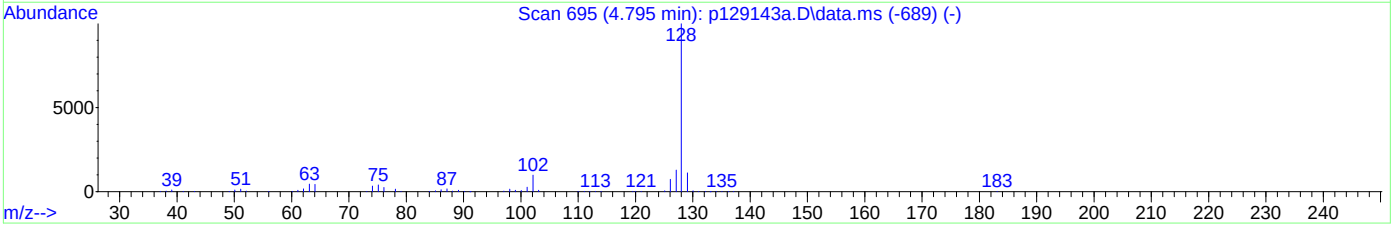
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129433.d\data.ms

(38) Naphthalene (t)

4.720min (+0.021) 353.90ppm

response 4628039

Ion	Exp%	Act%
128.10	100	100
129.10	10.70	11.85
127.10	12.80	12.86
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On    :  9 May 2019   7:49 pm
Operator  : angelar
Sample    : jc87093-1                                  Inst     : MSVOAMSP
Misc      : op20110,ep5858,30.4,,,1,5
ALS Vial  : 16   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration
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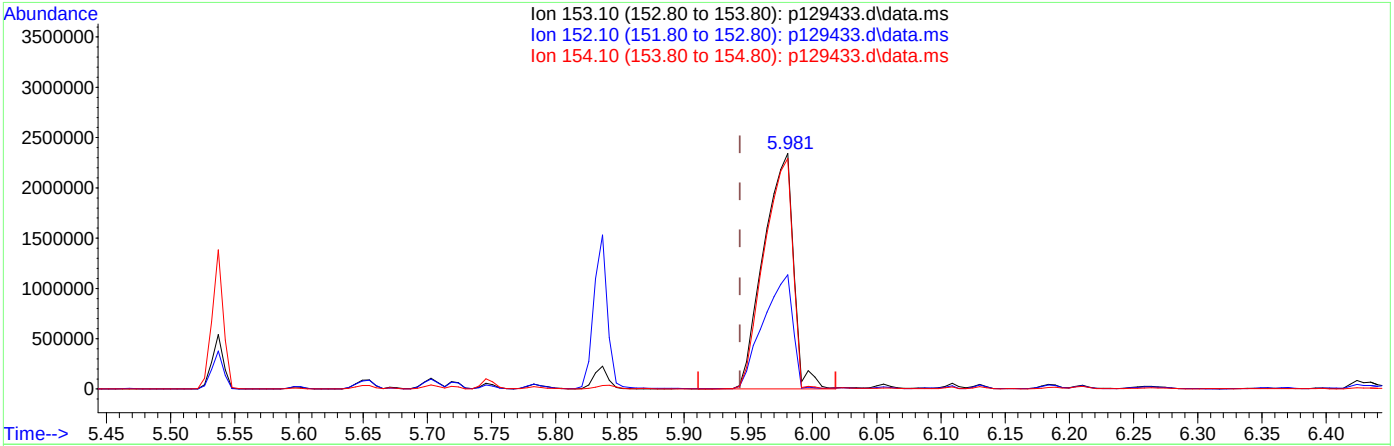

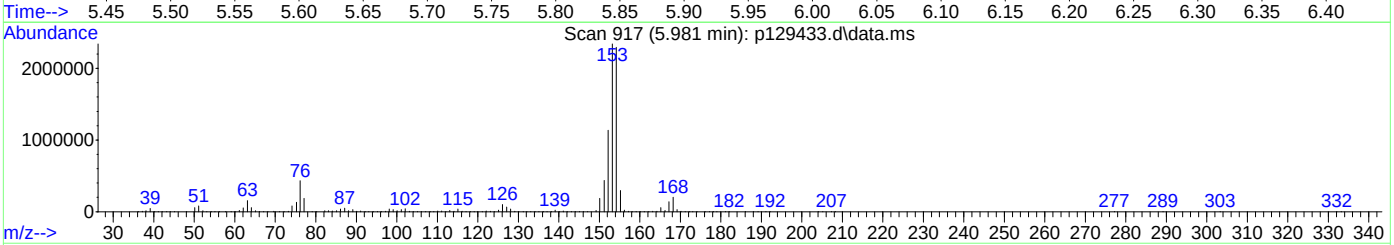

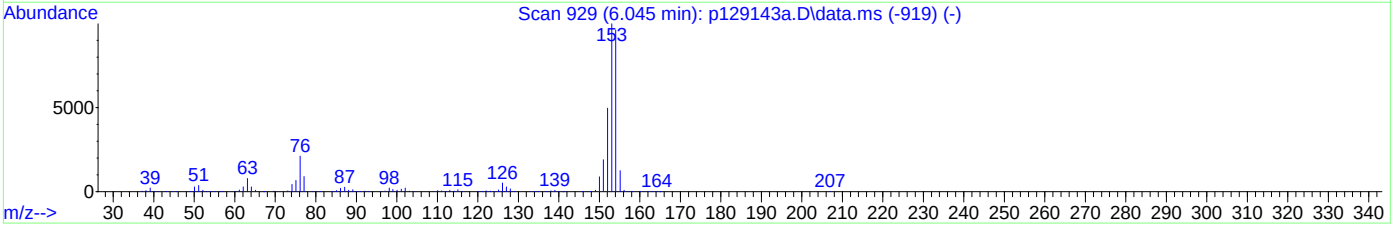

TIC: p129433.d\data.ms

(59) Acenaphthene (t)

5.981min (+0.037) 509.62ppm

response 3785000

Ion	Exp%	Act%
153.10	100	100
152.10	49.70	48.27
154.10	91.30	97.89
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On    :  9 May 2019   7:49 pm
Operator  : angelar
Sample    : jc87093-1                                  Inst     : MSVOAMSP
Misc      : op20110,ep5858,30.4,,,1,5
ALS Vial  : 16   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration
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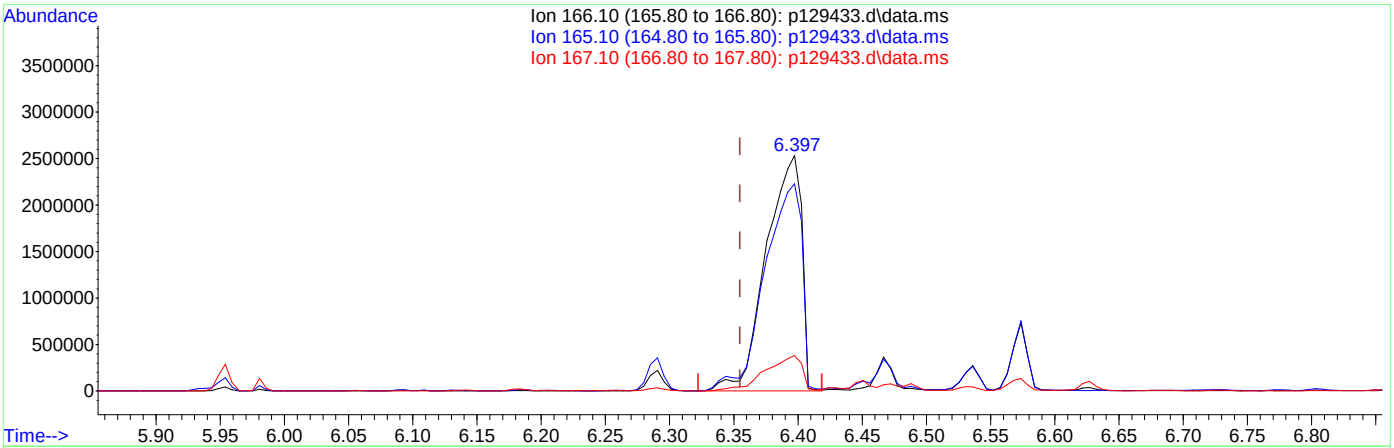
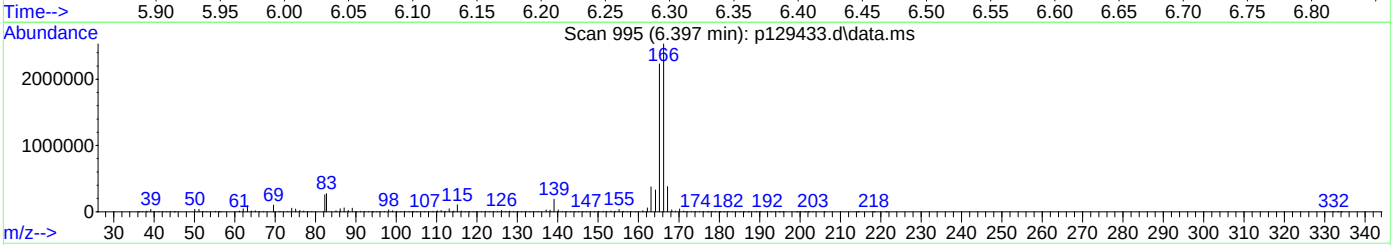
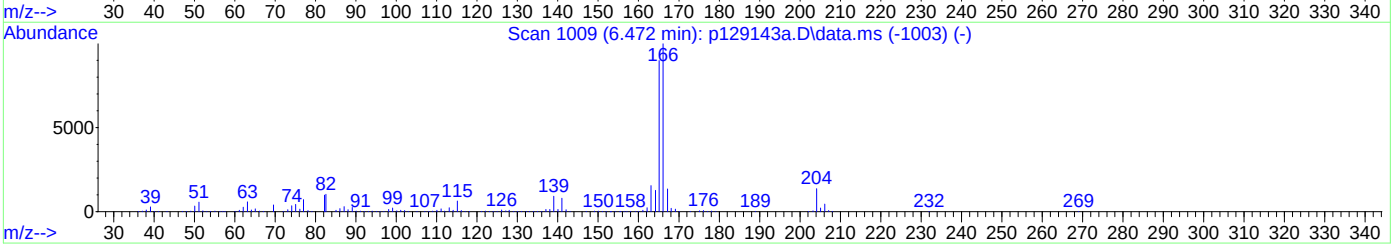






TIC: p129433.d\data.ms

(66) Fluorene (t)

6.397min (+0.043) 535.98ppm

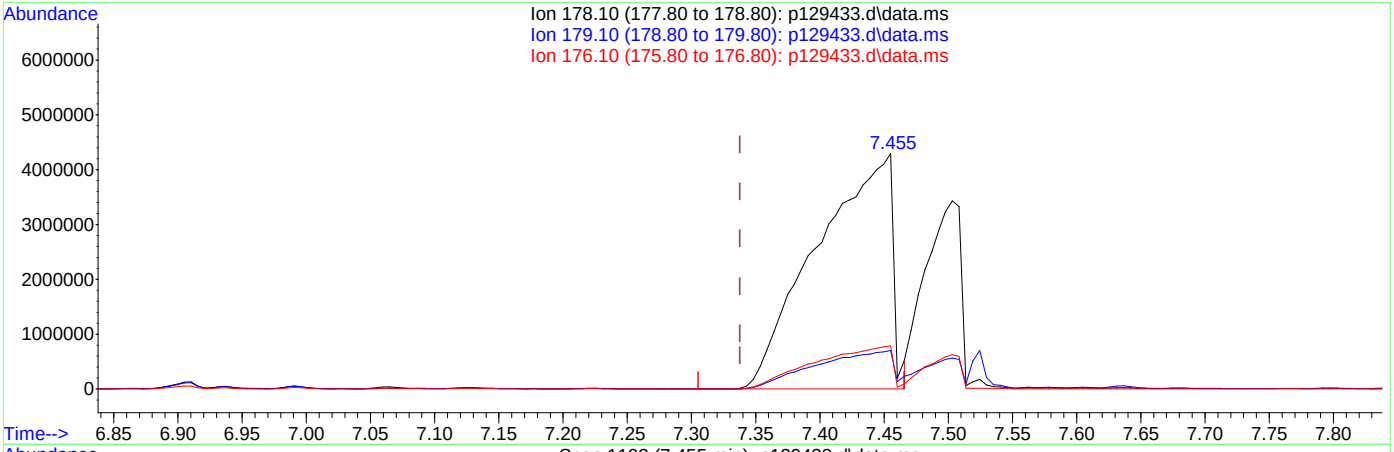
response 4837939

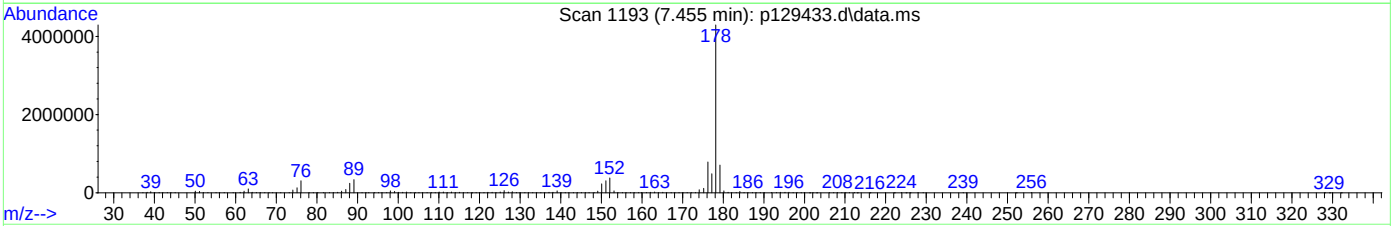
Ion	Exp%	Act%
166.10	100	100
165.10	93.70	87.75
167.10	13.10	14.64
0.00	0.00	0.00

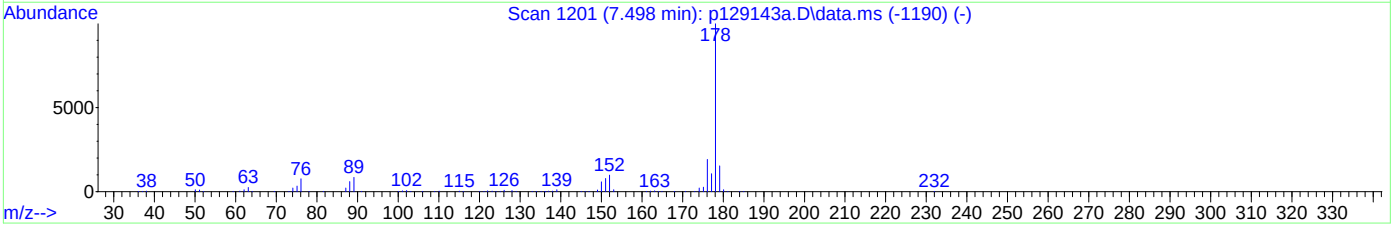
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129433.d\data.ms

(77) Phenanthrene (t)

7.455min (+0.117) 1498.13ppm

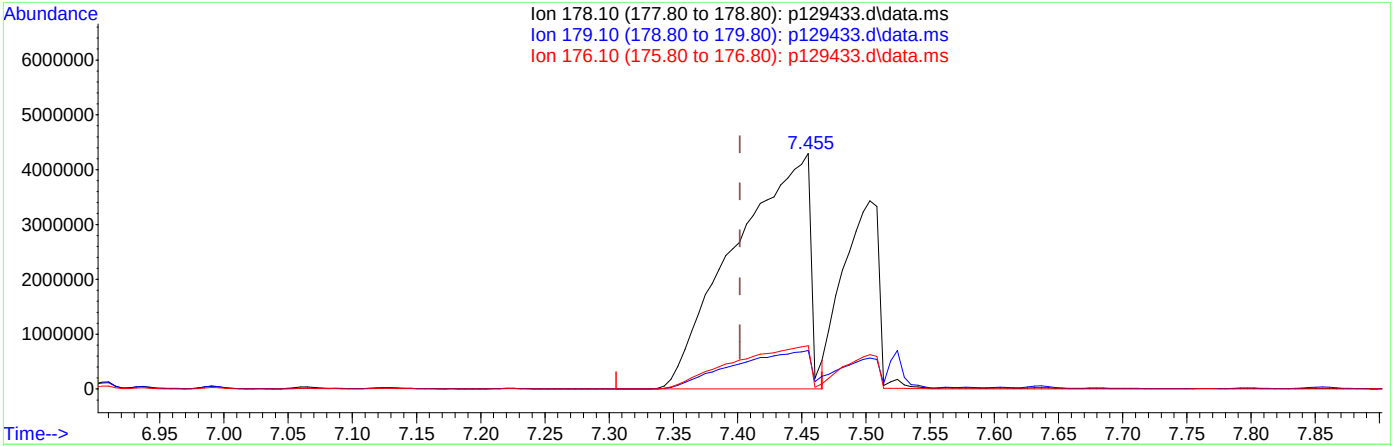
response 17456375

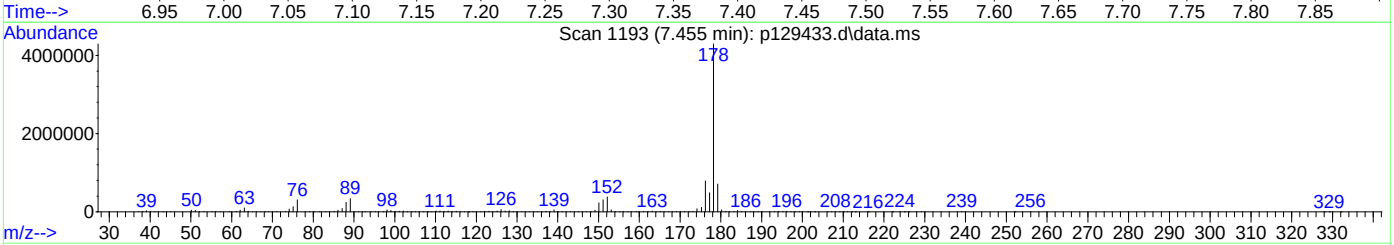
Ion	Exp%	Act%
178.10	100	100
179.10	15.30	14.52
176.10	20.00	18.35
0.00	0.00	0.00

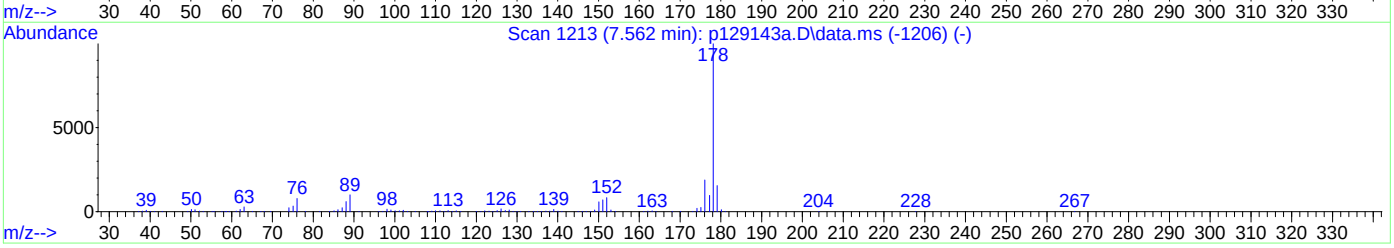
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On    :  9 May 2019   7:49 pm
Operator  : angelar
Sample    : jc87093-1                                  Inst     : MSVOAMSP
Misc      : op20110,ep5858,30.4,,,1,5
ALS Vial  : 16   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration
```







TIC: p129433.d\data.ms

(78) Anthracene (t)

7.455min (+0.053) 1434.10ppm

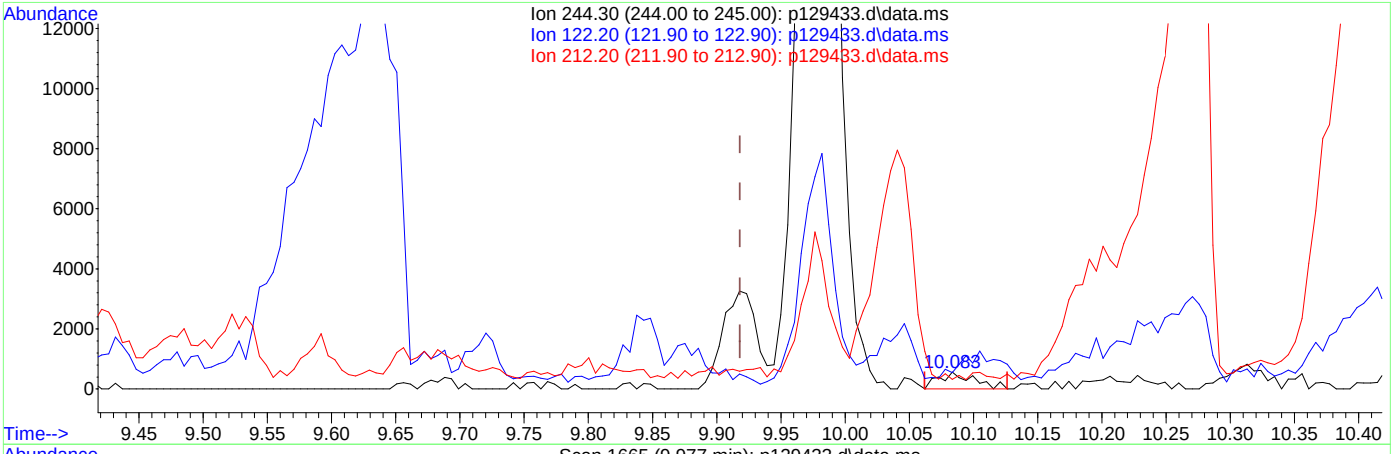
response 17456375

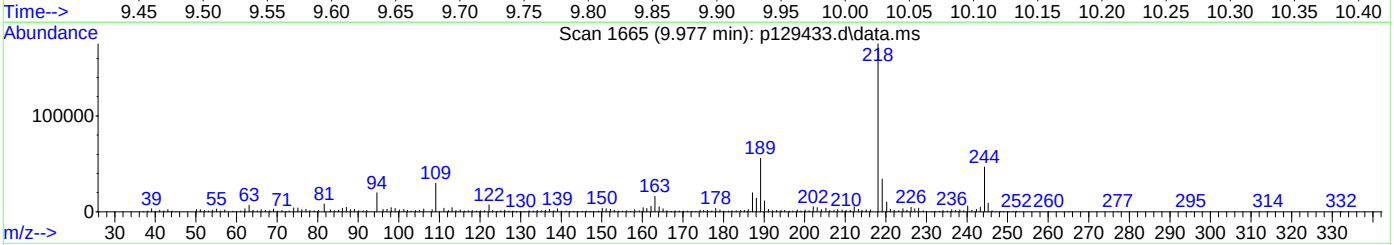
Ion	Exp%	Act%
178.10	100	100
179.10	15.10	14.52
176.10	18.60	18.35
0.00	0.00	0.00

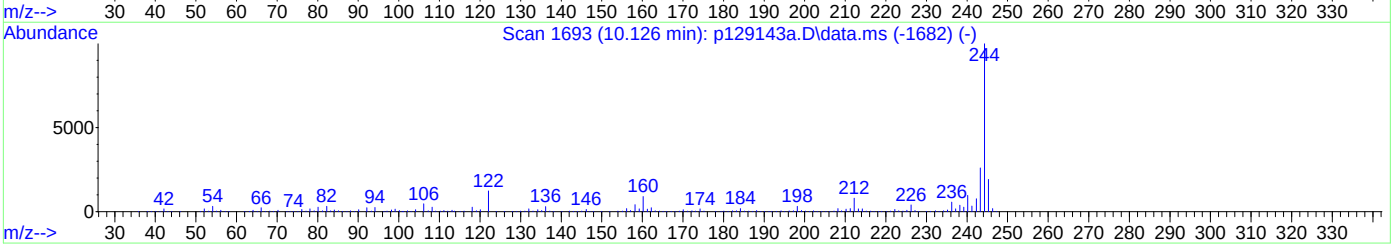
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129433.d\data.ms

(85) Terphenyl-d14 (S)

10.083min (+0.165) 0.10ppm

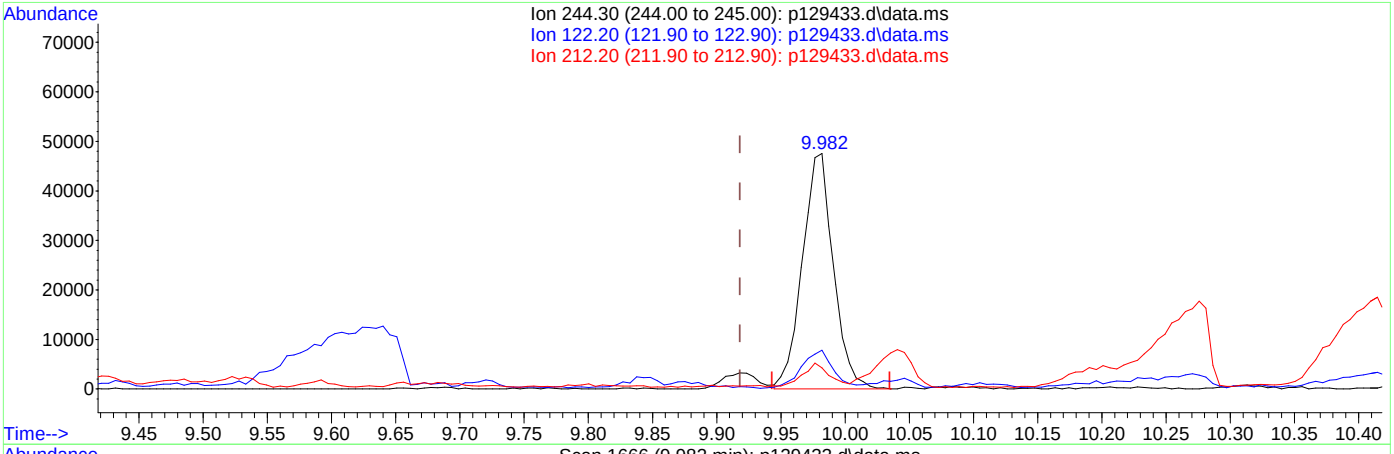
response 1076

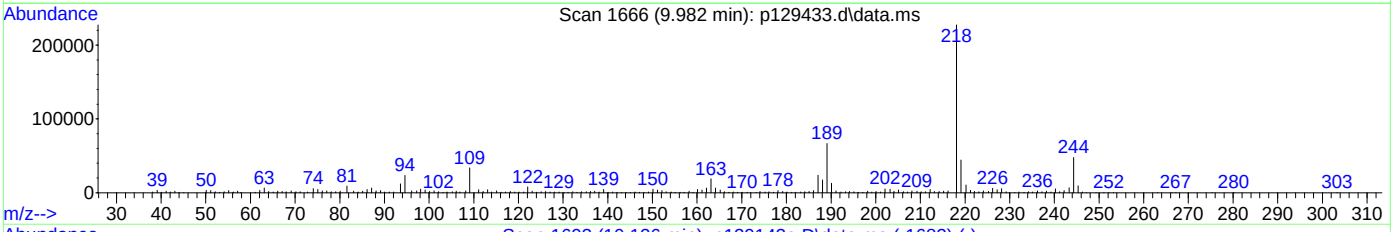
Ion	Exp%	Act%
244.30	100	100
122.20	15.50	0.00
212.20	9.20	0.00
0.00	0.00	0.00

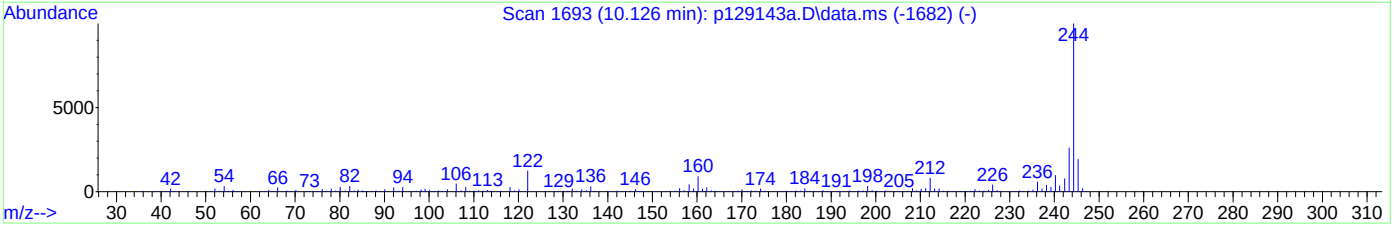
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129433.d\data.ms

(85) Terphenyl-d14 (S)

9.982min (+0.064) 7.70ppm m

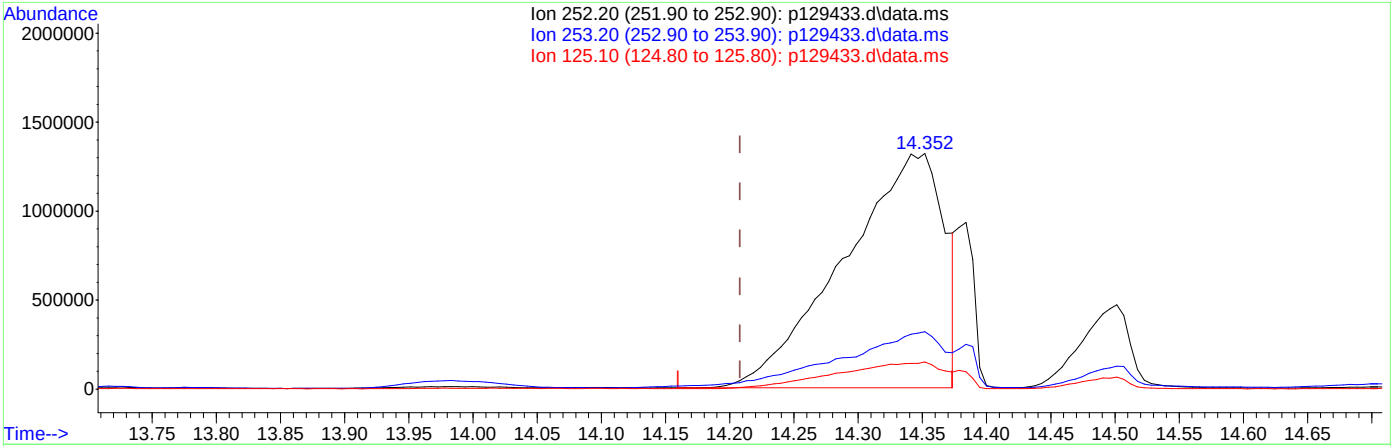
response 79753

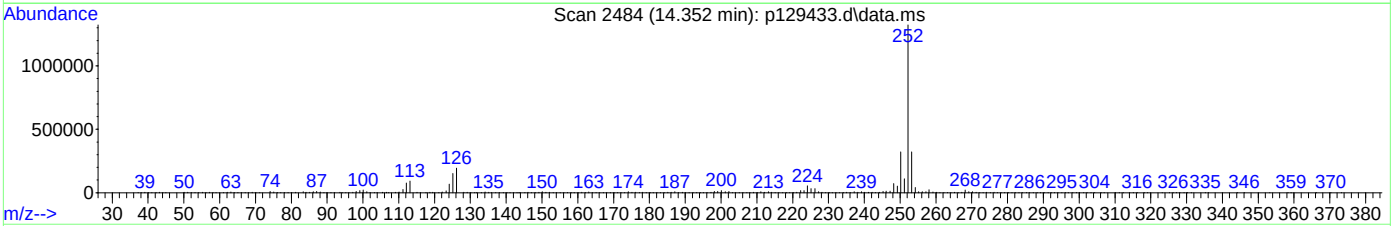
Ion	Exp%	Act%
244.30	100	100
122.20	15.50	16.49
212.20	9.20	8.98
0.00	0.00	0.00

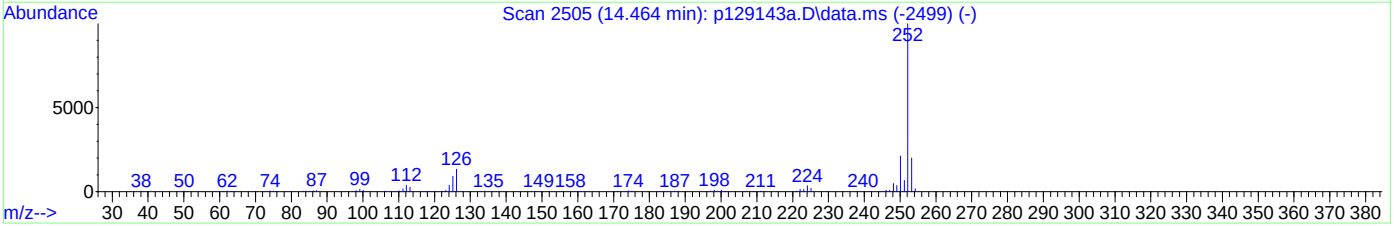
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129433.d
Acq On : 9 May 2019 7:49 pm
Operator : angelar
Sample : jc87093-1 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,5
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:29 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129433.d\data.ms

(94) Benzo[k]fluoranthene (t)

14.352min (+0.144) 613.10ppm

response 7156220

Ion	Exp%	Act%
252.20	100	100
253.20	21.50	24.02
125.10	12.30	11.70
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129381.d
Acq On : 7 May 2019 7:39 pm
Operator : christc2
Sample : jc87093-2 Inst : MSVOAMSP
Misc : op20110,ep5856,30.9,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:32:26 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

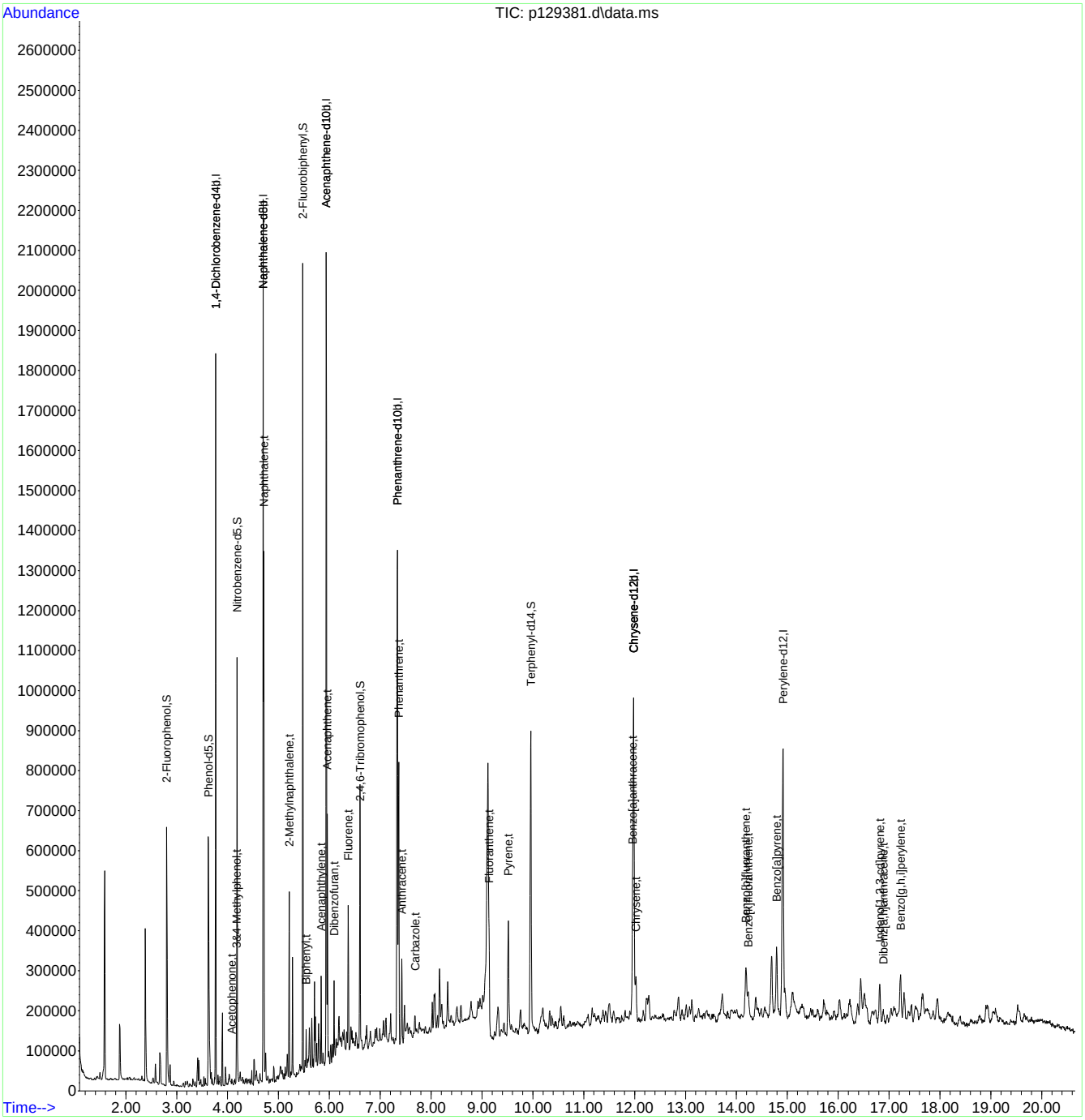
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.763	152	187257	40.00	ppm	0.00
24) Naphthalene-d8	4.698	136	610208	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	306726	40.00	ppm	0.00
69) Phenanthrene-d10	7.337	188	525191	40.00	ppm	0.01
83) Chrysene-d12	11.980	240	460693	40.00	ppm	0.02
91) Perylene-d12	14.918	264	461011	40.00	ppm	0.03
101) 1,4-Dichlorobenzene-d4b	3.763	152	187257	40.00	ppm	0.00
103) Phenanthrene-d10b	7.337	188	525191	40.00	ppm	0.01
105) Chrysene-d12b	11.980	240	460693	40.00	ppm	0.02
107) Naphthalene-d8b	4.698	136	610208	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	306726	40.00	ppm	0.00
111) Chrysene-d12d	11.980	240	460693	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	184121	30.60	ppm	0.00
Spiked Amount 50.000			Recovery = 61.20%			
8) Phenol-d5	3.625	99	230725	30.20	ppm	0.00
Spiked Amount 50.000			Recovery = 60.40%			
25) Nitrobenzene-d5	4.185	82	220914	33.70	ppm	0.00
Spiked Amount 50.000			Recovery = 67.40%			
51) 2-Fluorobiphenyl	5.478	172	386335	39.75	ppm	0.00
Spiked Amount 50.000			Recovery = 79.50%			
73) 2,4,6-Tribromophenol	6.606	330	57970	33.17	ppm	0.00
Spiked Amount 50.000			Recovery = 66.34%			
85) Terphenyl-d14	9.960	244	373624	35.79	ppm	0.02
Spiked Amount 50.000			Recovery = 71.58%			
Target Compounds						Qvalue
18) Acetophenone	4.084	105	3475	0.38	ppm	93
21) 3&4-Methylphenol	4.175	108	30196	5.30	ppm	96
38) Naphthalene	4.714	128	384435	26.38	ppm	99
44) 2-Methylnaphthalene	5.211	141	71542	8.56	ppm	99
53) Biphenyl	5.542	154	18994	1.84	ppm	97
56) Acenaphthylene	5.836	152	55505	4.23	ppm	96
59) Acenaphthene	5.959	153	109712	13.60	ppm	96
62) Dibenzofuran	6.093	168	51028	4.17	ppm	94
66) Fluorene	6.370	166	78806	8.04	ppm	95
77) Phenanthrene	7.364	178	273538	19.99	ppm	99
78) Anthracene	7.423	178	86167	6.03	ppm	96
79) Carbazole	7.685	167	18896	1.37	ppm	99
81) Fluoranthene	9.138	202	152464	9.03	ppm	97
84) Pyrene	9.517	202	169412	10.62	ppm	98
87) Benzo[a]anthracene	11.958	228	72580	4.78	ppm	82
89) Chrysene	12.023	228	84010	6.28	ppm	97
93) Benzo[b]fluoranthene	14.186	252	108703	7.74	ppm	97
94) Benzo[k]fluoranthene	14.234	252	33736	2.85	ppm	97
95) Benzo[a]pyrene	14.790	252	109577	9.22	ppm	98
96) Indeno[1,2,3-cd]pyrene	16.820	276	70000	6.44	ppm	94
98) Dibenz[a,h]anthracene	16.889	278	18285	1.65	ppm	96
100) Benzo[g,h,i]perylene	17.226	276	79913	7.30	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

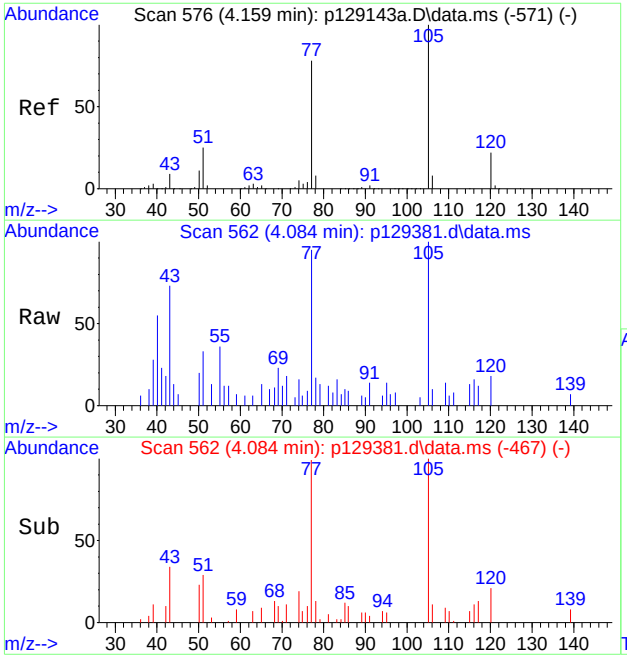
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129381.d
Acq On : 7 May 2019 7:39 pm
Operator : christc2
Sample : jc87093-2 Inst : MSVOAMSP
Misc : op20110,ep5856,30.9,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:32:26 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



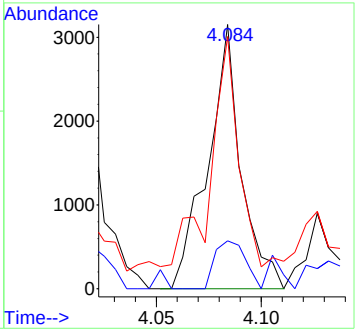
MP5844.M Wed May 08 05:05:41 2019 Page: 2

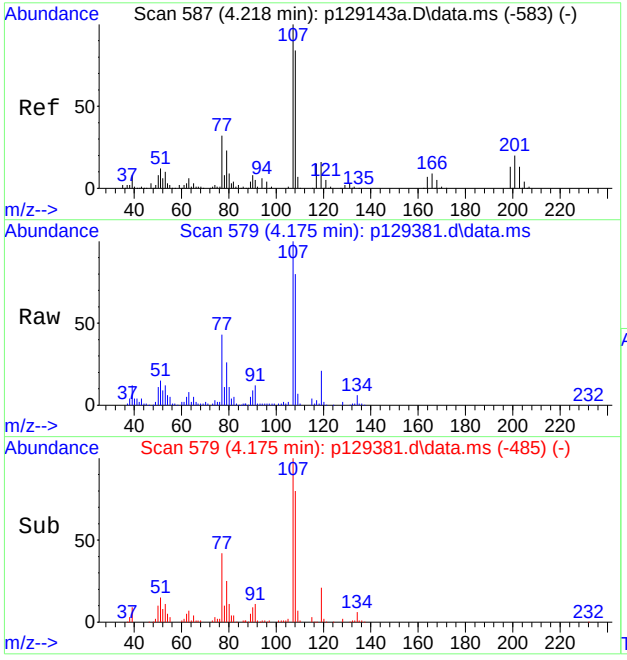


#18
Acetophenone
Concen: 0.38 ppm
RT: 4.084 min Scan# 562
Delta R.T. 0.005 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:105 Resp: 3475

Ion	Ratio	Lower	Upper
105	100		
120	11.9	0.0	50.7
77	86.0	60.4	120.4

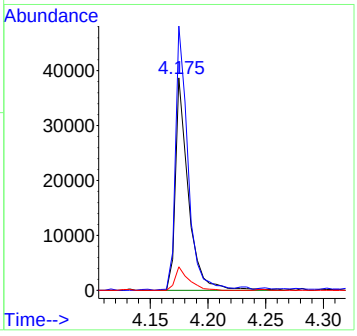


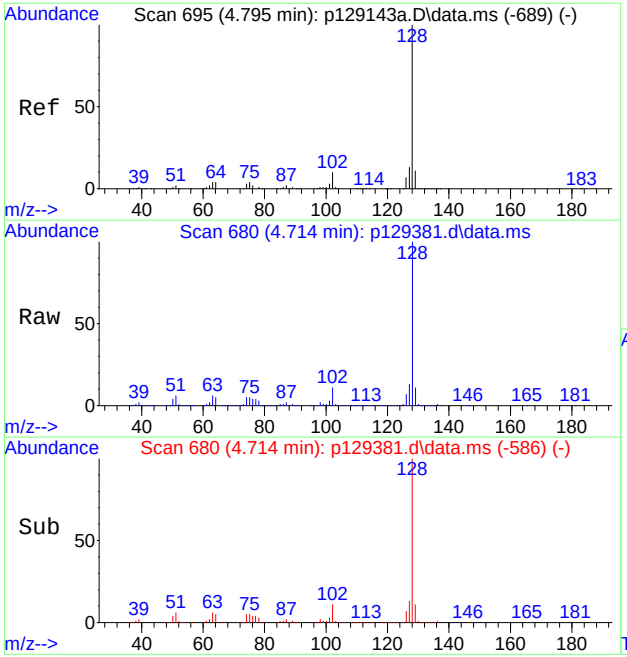


#21
3&4-Methylphenol
Concen: 5.30 ppm
RT: 4.175 min Scan# 579
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:108 Resp: 30196

Ion	Ratio	Lower	Upper
108	100		
107	123.8	89.5	149.5
90	11.2	0.0	39.8

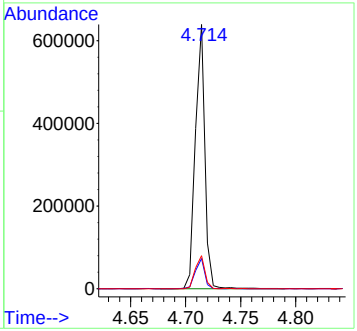


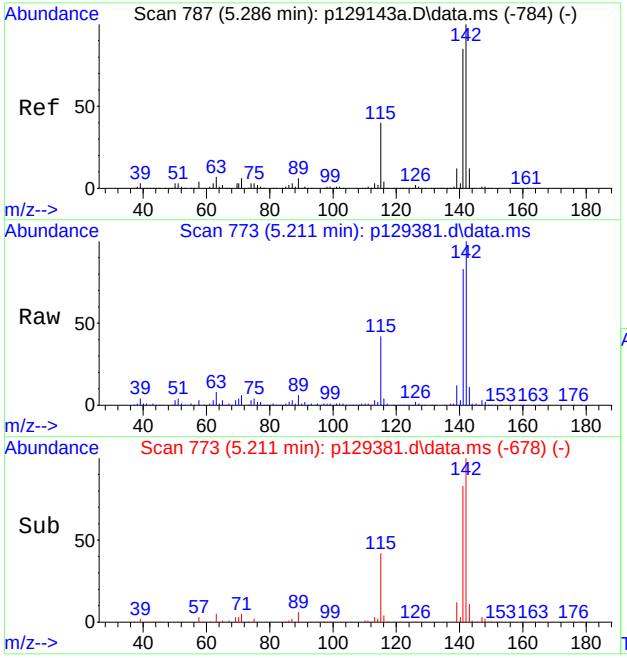


#38
Naphthalene
Concen: 26.38 ppm
RT: 4.714 min Scan# 680
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:128 Resp: 384435

Ion	Ratio	Lower	Upper
128	100		
129	11.4	0.0	40.6
127	12.5	0.0	42.5

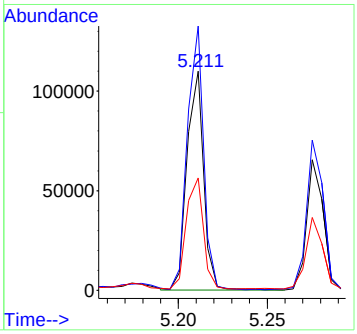




#44
2-Methylnaphthalene
Concen: 8.56 ppm
RT: 5.211 min Scan# 773
Delta R.T. 0.005 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

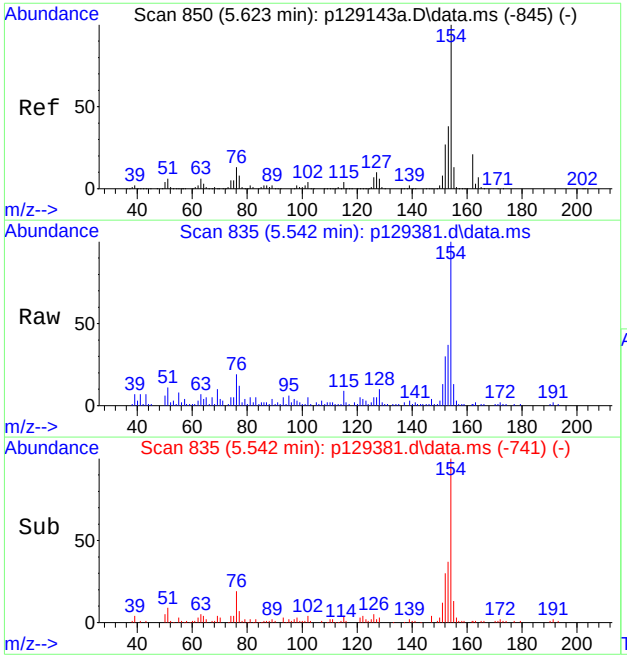
Tgt Ion:141 Resp: 71542

Ion	Ratio	Lower	Upper
141	100		
142	120.4	91.9	151.9
115	50.8	21.5	81.5



9.1.4

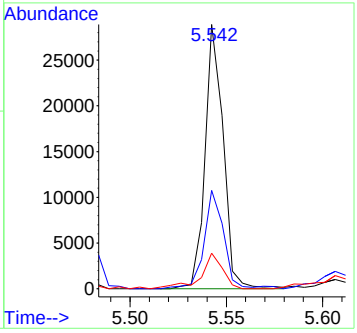
9

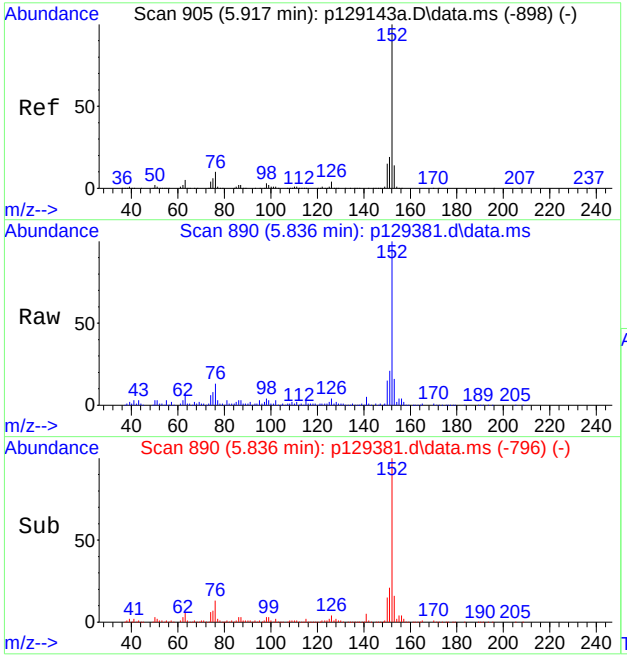


#53
Biphenyl
Concen: 1.84 ppm
RT: 5.542 min Scan# 835
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:154 Resp: 18994

Ion	Ratio	Lower	Upper
154	100		
153	37.3	9.3	69.3
155	12.8	0.0	43.0

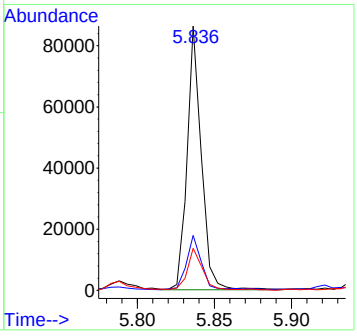




#56
Acenaphthylene
Concen: 4.23 ppm
RT: 5.836 min Scan# 890
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:152 Resp: 55505

Ion	Ratio	Lower	Upper
152	100		
151	20.6	0.0	49.2
153	15.6	0.0	43.0



9.1.4

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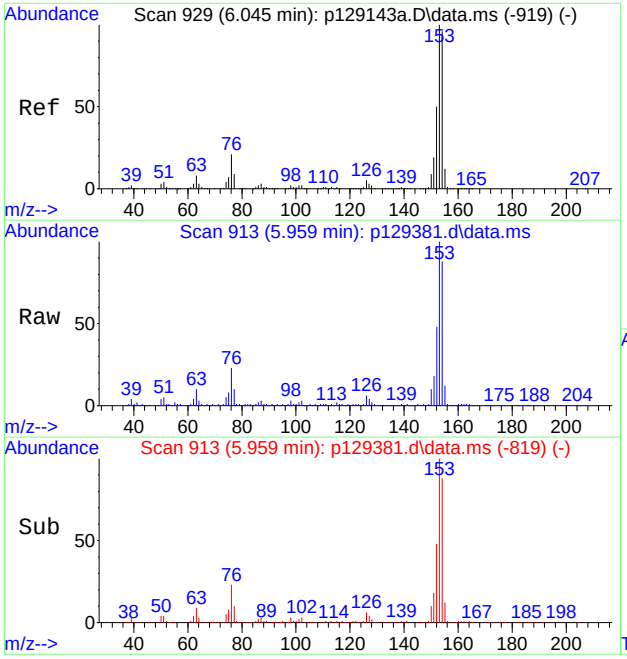
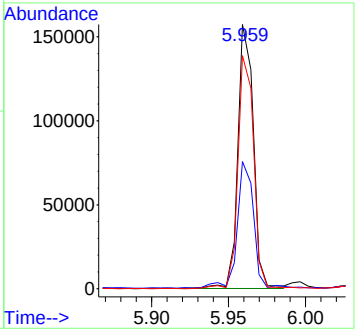
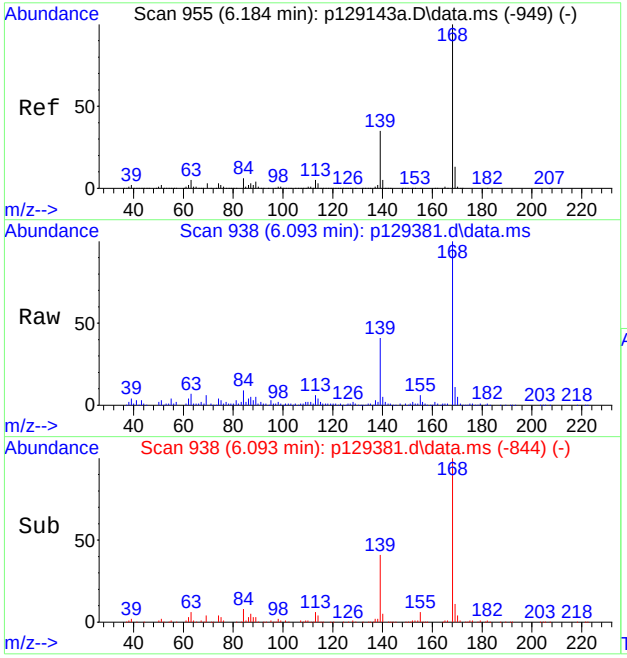


#59
Acenaphthene
Concen: 13.60 ppm
RT: 5.959 min Scan# 913
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:153 Resp: 109712

Ion	Ratio	Lower	Upper
153	100		
152	47.8	19.5	79.5
154	88.5	63.0	123.0

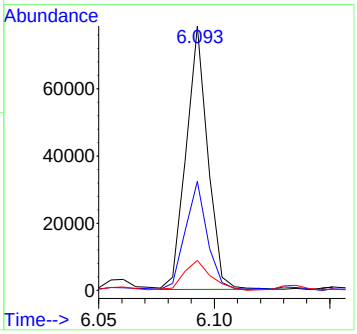




#62
Dibenzofuran
Concen: 4.17 ppm
RT: 6.093 min Scan# 938
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:168 Resp: 51028

Ion	Ratio	Lower	Upper
168	100		
139	40.7	7.2	67.2
169	10.3	0.0	43.3



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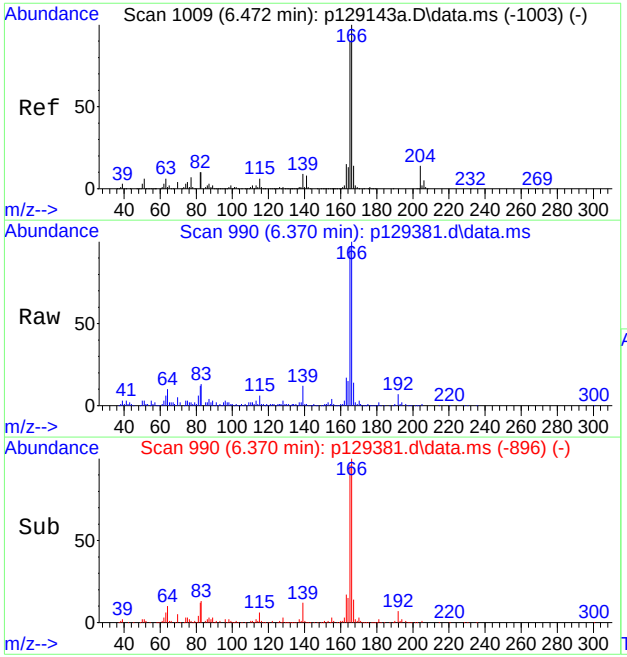
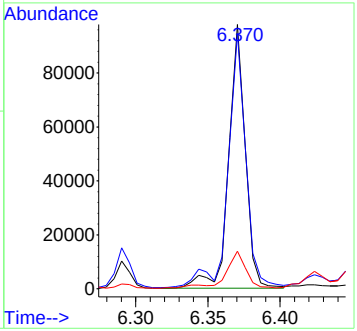
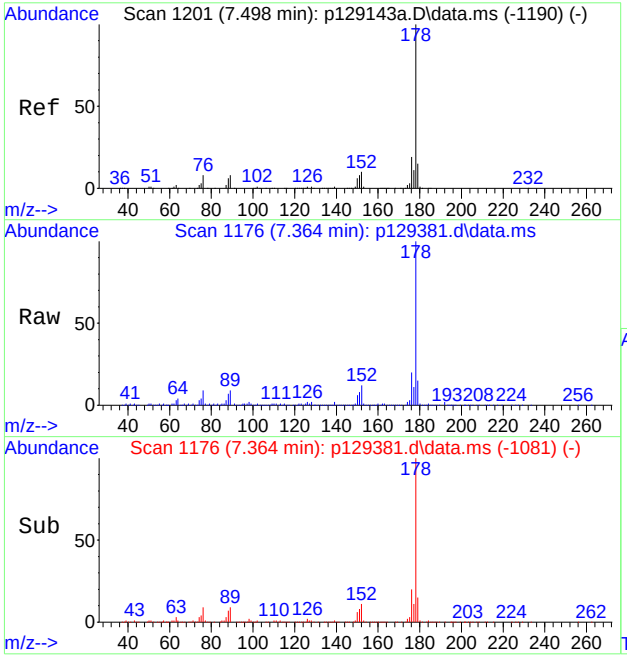


#66
Fluorene
Concen: 8.04 ppm
RT: 6.370 min Scan# 990
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:166 Resp: 78806

Ion	Ratio	Lower	Upper
166	100		
165	96.3	61.0	121.0
167	13.8	0.0	43.1

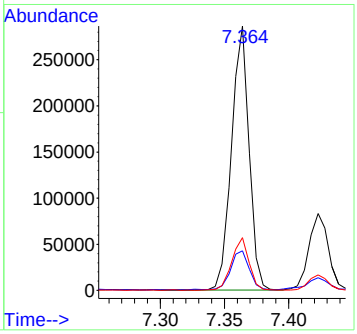




#77
Phenanthrene
Concen: 19.99 ppm
RT: 7.364 min Scan# 1176
Delta R.T. 0.005 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:178 Resp: 273538

Ion	Ratio	Lower	Upper
178	100		
179	14.6	0.0	45.5
176	19.9	0.0	49.9



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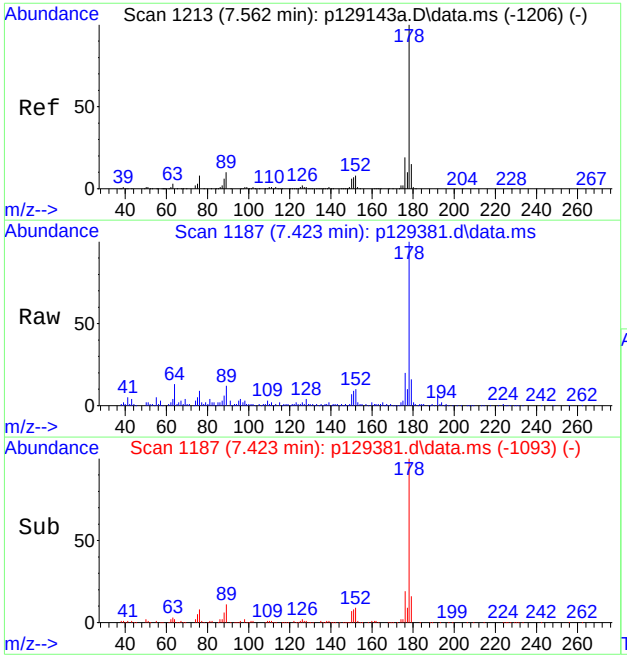
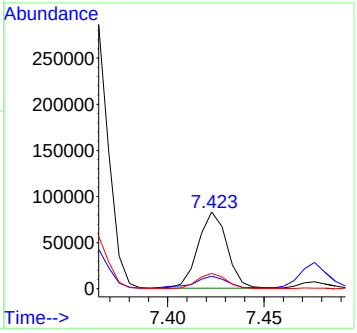
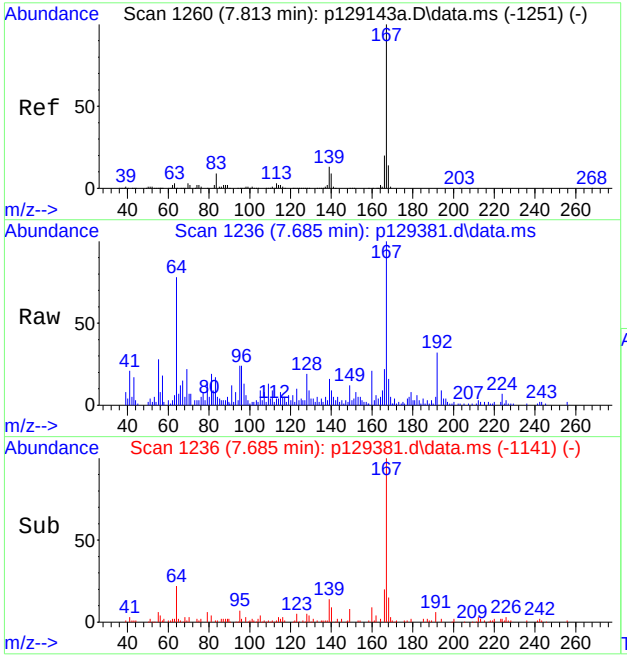


#78
Anthracene
Concen: 6.03 ppm
RT: 7.423 min Scan# 1187
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:178 Resp: 86167

Ion	Ratio	Lower	Upper
178	100		
179	13.9	0.0	45.8
176	19.9	0.0	48.4

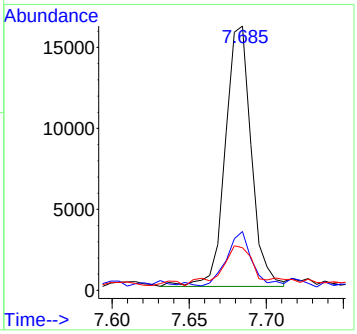




#79
Carbazole
Concen: 1.37 ppm
RT: 7.685 min Scan# 1236
Delta R.T. 0.005 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:167 Resp: 18896

Ion	Ratio	Lower	Upper
167	100		
166	19.6	0.0	49.7
139	13.1	0.0	43.8



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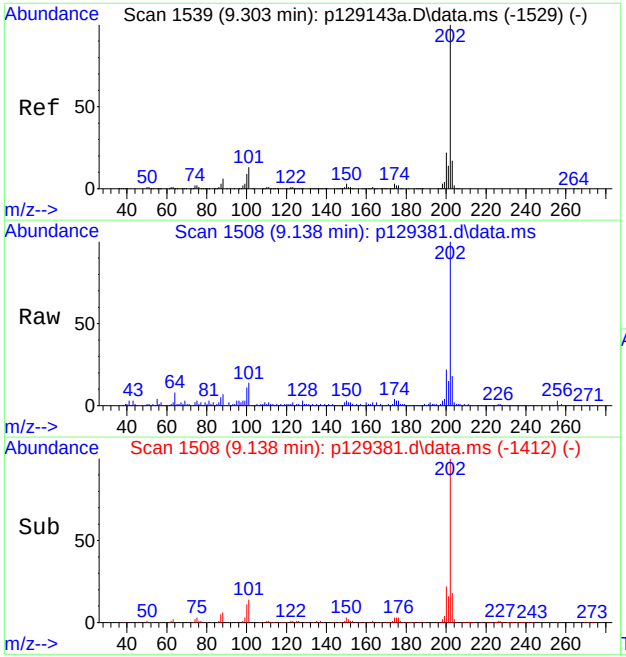
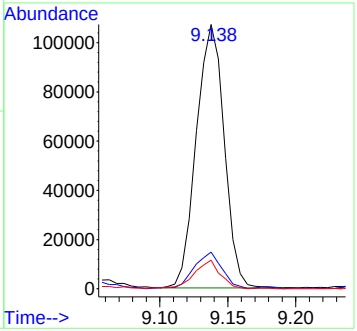
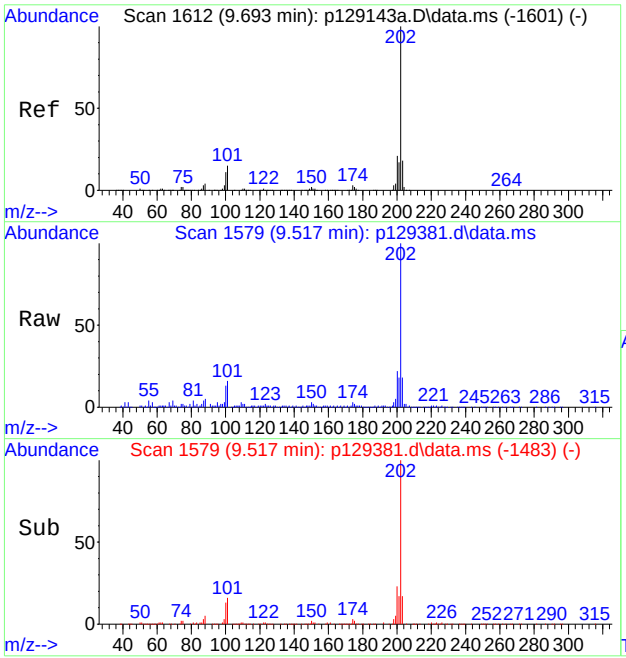


#81
Fluoranthene
Concen: 9.03 ppm
RT: 9.138 min Scan# 1508
Delta R.T. 0.011 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:202 Resp: 152464

Ion	Ratio	Lower	Upper
202	100		
101	13.7	0.0	45.1
100	10.7	0.0	41.2

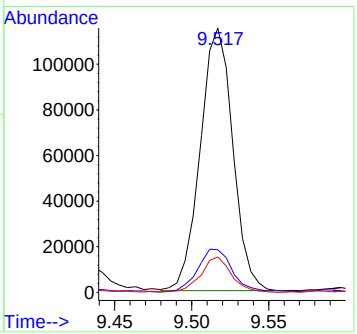




#84
Pyrene
Concen: 10.62 ppm
RT: 9.517 min Scan# 1579
Delta R.T. 0.011 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:202 Resp: 169412

Ion	Ratio	Lower	Upper
202	100		
101	15.9	0.0	46.9
100	13.4	0.0	42.7



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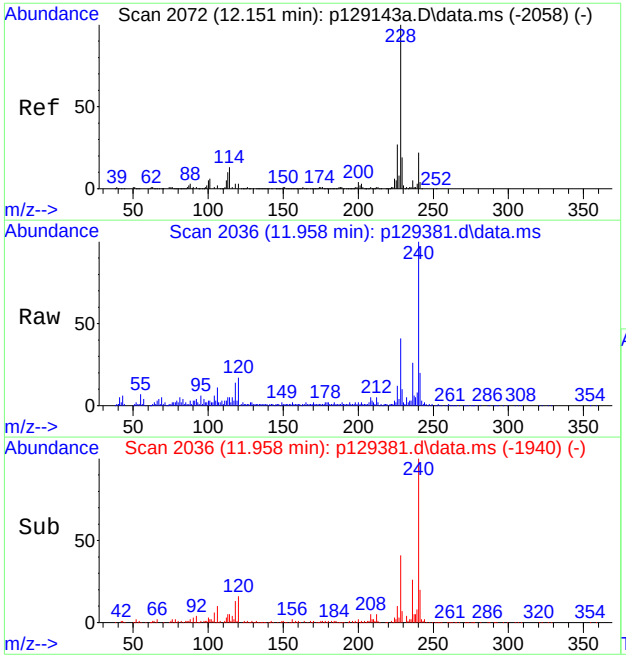
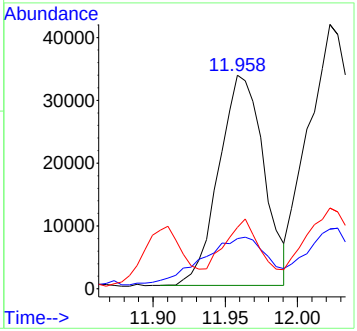
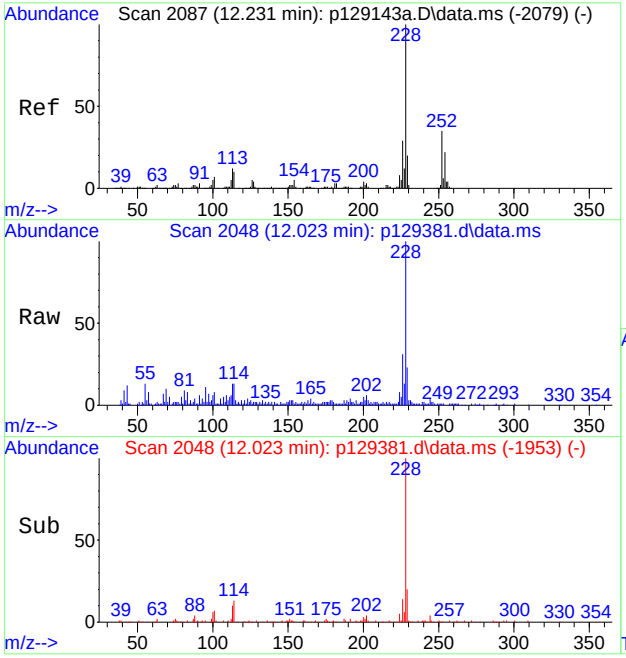


#87
Benzo[a]anthracene
Concen: 4.78 ppm
RT: 11.958 min Scan# 2036
Delta R.T. 0.011 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:228 Resp: 72580

Ion	Ratio	Lower	Upper
228	100		
229	19.0	0.0	49.8
226	11.9	0.0	57.8

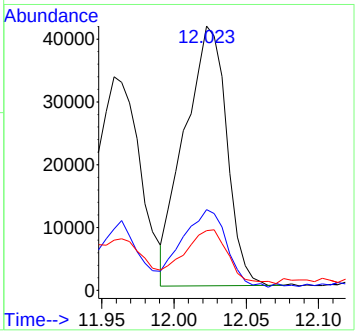


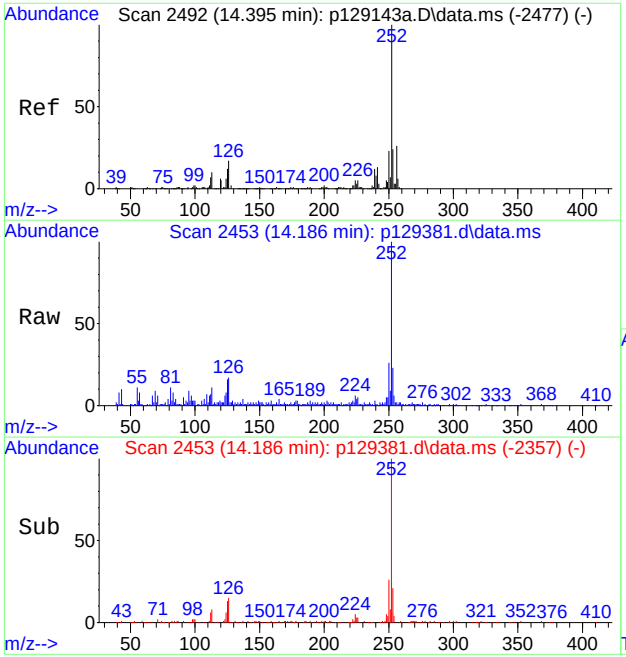


#89
Chrysene
Concen: 6.28 ppm
RT: 12.023 min Scan# 2048
Delta R.T. 0.005 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:228 Resp: 84010

Ion	Ratio	Lower	Upper
228	100		
226	28.8	0.0	59.4
229	18.3	0.0	50.5

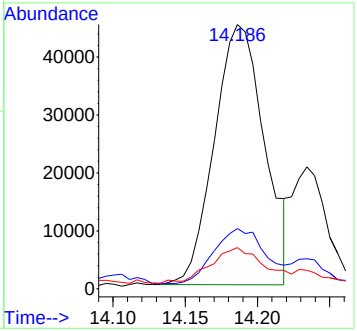


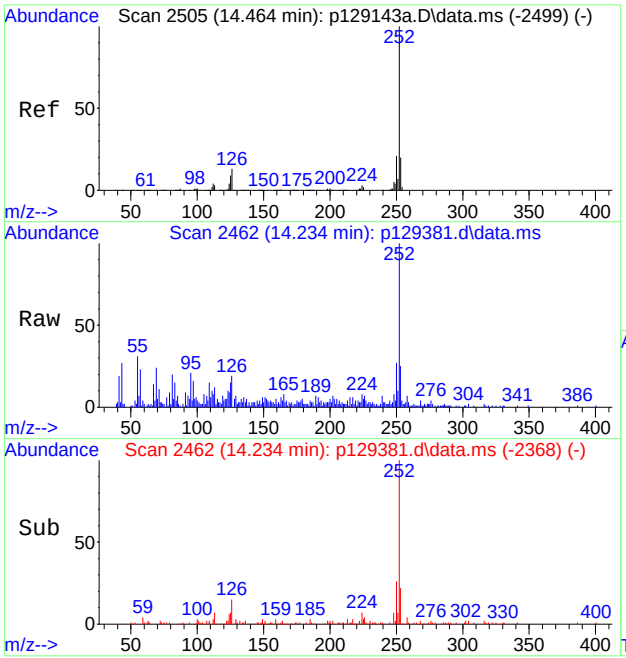


#93
Benzo[b]fluoranthene
Concen: 7.74 ppm
RT: 14.186 min Scan# 2453
Delta R.T. 0.011 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:252 Resp: 108703

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	52.9
125	13.4	0.0	42.3

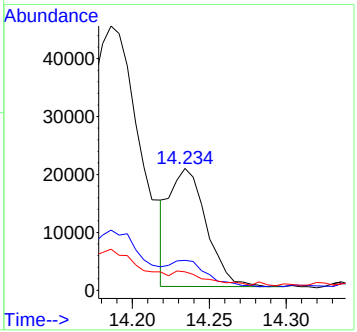




#94
Benzo[k]fluoranthene
Concen: 2.85 ppm
RT: 14.234 min Scan# 2462
Delta R.T. -0.000 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:252 Resp: 33736

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.7
125	8.1	0.0	40.5



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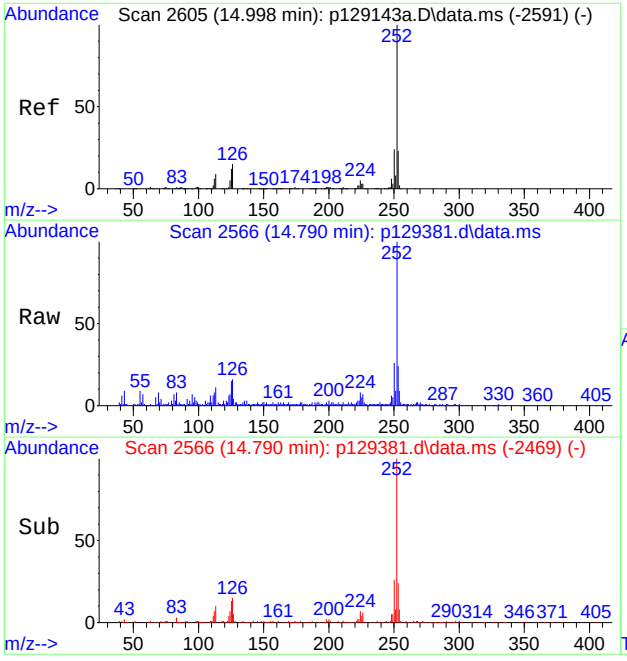
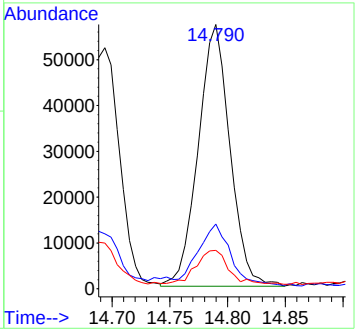
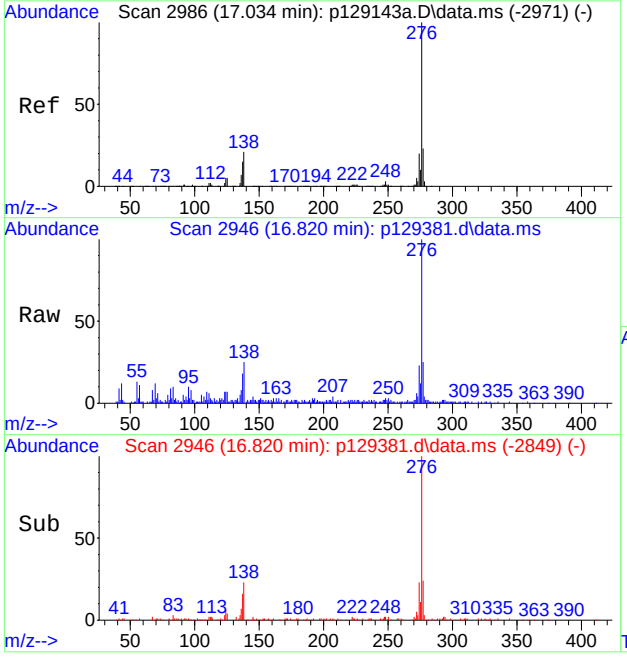


#95
Benzo[a]pyrene
Concen: 9.22 ppm
RT: 14.790 min Scan# 2566
Delta R.T. 0.016 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:252 Resp: 109577

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.6
125	12.8	0.0	43.5

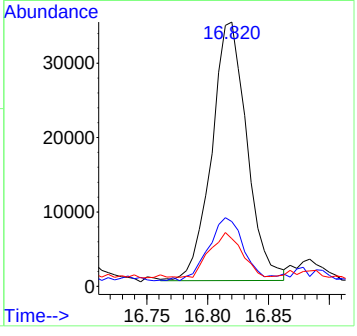


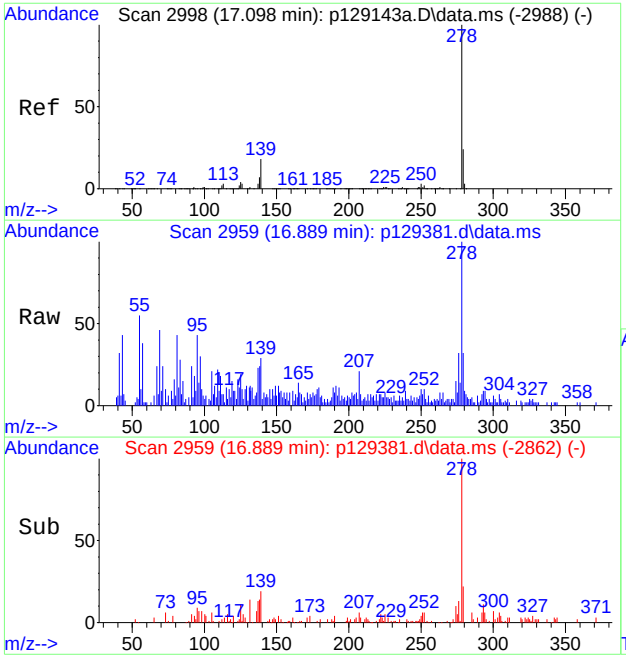


#96
Indeno[1,2,3-cd]pyrene
Concen: 6.44 ppm
RT: 16.820 min Scan# 2946
Delta R.T. 0.016 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:276 Resp: 70000

Ion	Ratio	Lower	Upper
276	100		
138	22.0	0.0	55.2
137	14.4	0.0	46.6

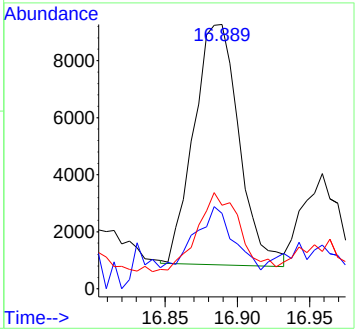


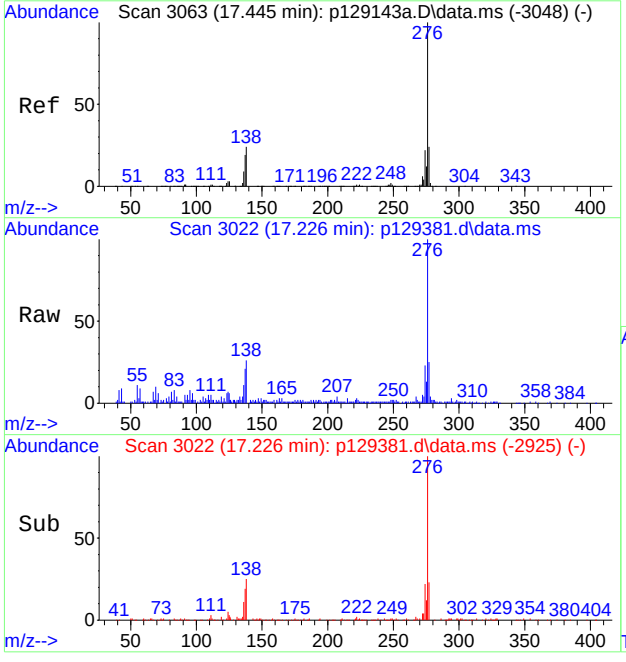


#98
Dibenz[a,h]anthracene
Concen: 1.65 ppm
RT: 16.889 min Scan# 2959
Delta R.T. 0.016 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:278 Resp: 18285

Ion	Ratio	Lower	Upper
278	100		
139	20.3	0.0	53.0
279	26.0	0.0	54.4

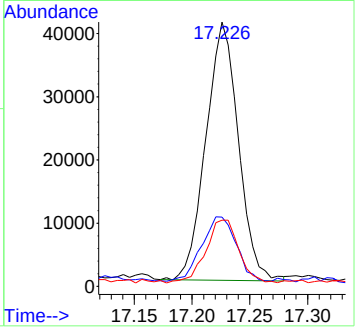




#100
Benzo[g,h,i]perylene
Concen: 7.30 ppm
RT: 17.226 min Scan# 3022
Delta R.T. 0.016 min
Lab File: p129381.d
Acq: 7 May 2019 7:39 pm

Tgt Ion:276 Resp: 79913

Ion	Ratio	Lower	Upper
276	100		
138	24.6	0.0	56.5
277	23.6	0.0	54.7



9.1.4

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Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129415.d
Acq On : 8 May 2019 8:08 pm
Operator : angelar
Sample : jc87093-3 Inst : MSVOAMSP
Misc : op20110,ep5857,31.7,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:55:46 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.753	152	169013	40.00	ppm	0.00
24) Naphthalene-d8	4.688	136	564424	40.00	ppm	0.00
47) Acenaphthene-d10	5.932	164	290846	40.00	ppm	0.00
69) Phenanthrene-d10	7.321	188	522061	40.00	ppm	0.00
83) Chrysene-d12	11.975	240	469115	40.00	ppm	0.03
91) Perylene-d12	14.934	264	500315	40.00	ppm	0.06
101) 1,4-Dichlorobenzene-d4b	3.753	152	169013	40.00	ppm	0.00
103) Phenanthrene-d10b	7.321	188	522061	40.00	ppm	0.00
105) Chrysene-d12b	11.975	240	469115	40.00	ppm	0.03
107) Naphthalene-d8b	4.688	136	564424	40.00	ppm	0.00
109) Acenaphthene-d10b	5.932	164	290846	40.00	ppm	0.00
111) Chrysene-d12d	11.975	240	469115	40.00	ppm	0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	189584	34.91	ppm	0.03
Spiked Amount 50.000			Recovery = 69.82%			
8) Phenol-d5	3.625	99	241367	35.00	ppm	0.03
Spiked Amount 50.000			Recovery = 70.00%			
25) Nitrobenzene-d5	4.175	82	214506	35.38	ppm	0.00
Spiked Amount 50.000			Recovery = 70.76%			
51) 2-Fluorobiphenyl	5.468	172	401005	43.51	ppm	0.00
Spiked Amount 50.000			Recovery = 87.02%			
73) 2,4,6-Tribromophenol	6.595	330	64334	37.03	ppm	0.00
Spiked Amount 50.000			Recovery = 74.06%			
85) Terphenyl-d14	9.945	244	393036	36.98	ppm	0.01
Spiked Amount 50.000			Recovery = 73.96%			
Target Compounds						Qvalue
21) 3&4-Methylphenol	4.186	108	4613	0.90	ppm	91
30) 2,4-Dimethylphenol	4.533	107	5546	1.12	ppm	96
38) Naphthalene	4.704	128	1084361	80.46	ppm	99
44) 2-Methylnaphthalene	5.195	141	61324	7.94	ppm	92
53) Biphenyl	5.532	154	54347	5.54	ppm	99
56) Acenaphthylene	5.826	152	156220	12.55	ppm	97
59) Acenaphthene	5.959	153	1605488	209.89	ppm	93
62) Dibenzofuran	6.087	168	1045738	90.15	ppm	97
66) Fluorene	6.371	166	1837670	197.68	ppm	97
77) Phenanthrene	7.354	178	984363	72.35	ppm	100
78) Anthracene	7.412	178	571657	40.22	ppm	99
79) Carbazole	7.679	167	866969	63.17	ppm	99
81) Fluoranthene	9.149	202	798643	47.59	ppm	97
84) Pyrene	9.517	202	557722	34.34	ppm	98
87) Benzo[a]anthracene	11.964	228	122670	7.93	ppm	92
89) Chrysene	12.023	228	123013	9.03	ppm	99
93) Benzo[b]fluoranthene	14.197	252	125326m	8.22	ppm	
94) Benzo[k]fluoranthene	14.245	252	33610m	2.62	ppm	
95) Benzo[a]pyrene	14.806	252	79990	6.20	ppm	92
96) Indeno[1,2,3-cd]pyrene	16.841	276	46326	3.93	ppm	97
98) Dibenz[a,h]anthracene	16.916	278	13122	1.09	ppm	87
100) Benzo[g,h,i]perylene	17.263	276	47296	3.98	ppm	92

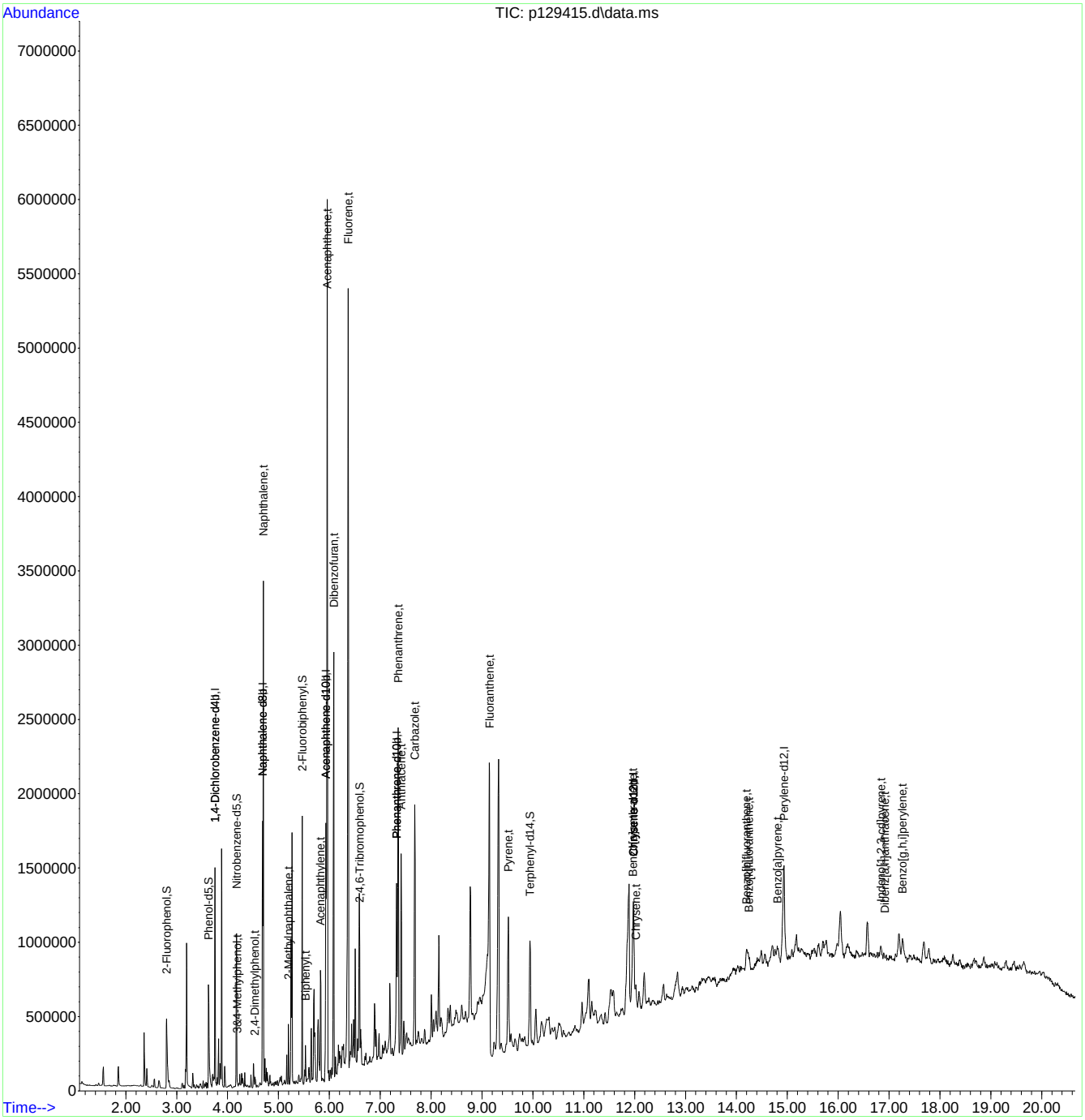
(#) = qualifier out of range (m) = manual integration (+) = signals summed

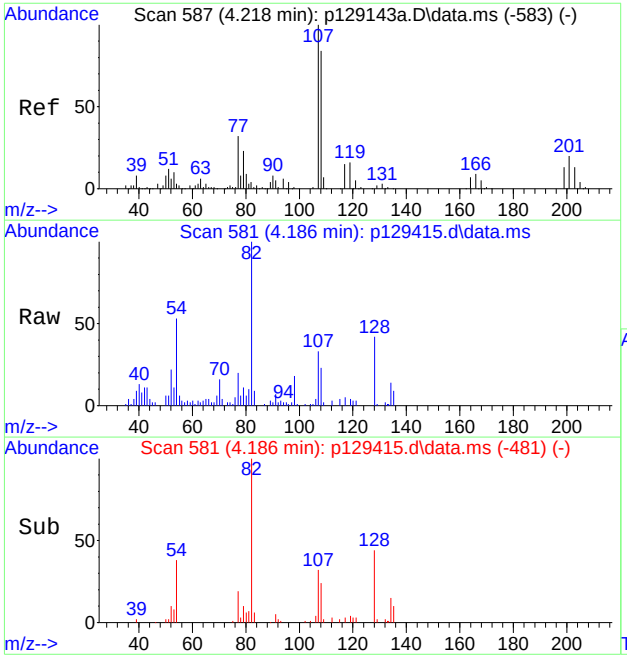
9.1.5
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129415.d
Acq On : 8 May 2019 8:08 pm
Operator : angelar
Sample : jc87093-3 Inst : MSVOAMSP
Misc : op20110,ep5857,31.7,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:55:46 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration

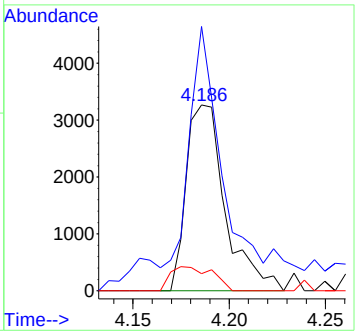


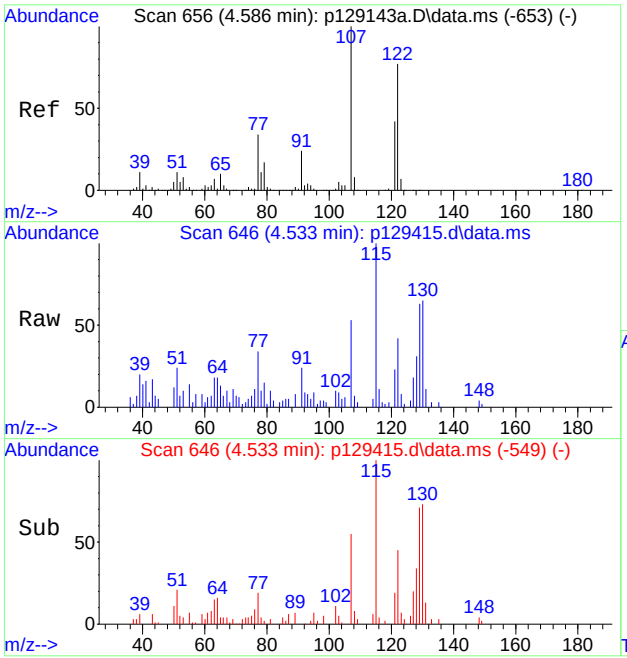


#21
3&4-Methylphenol
Concen: 0.90 ppm
RT: 4.186 min Scan# 581
Delta R.T. 0.032 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:108 Resp: 4613

Ion	Ratio	Lower	Upper
108	100		
107	128.0	87.0	147.0
90	9.2	0.0	40.2

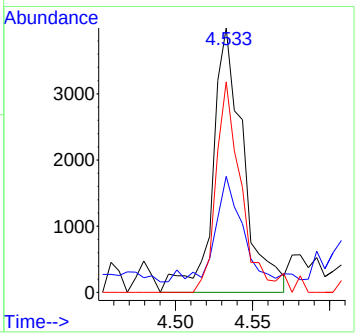


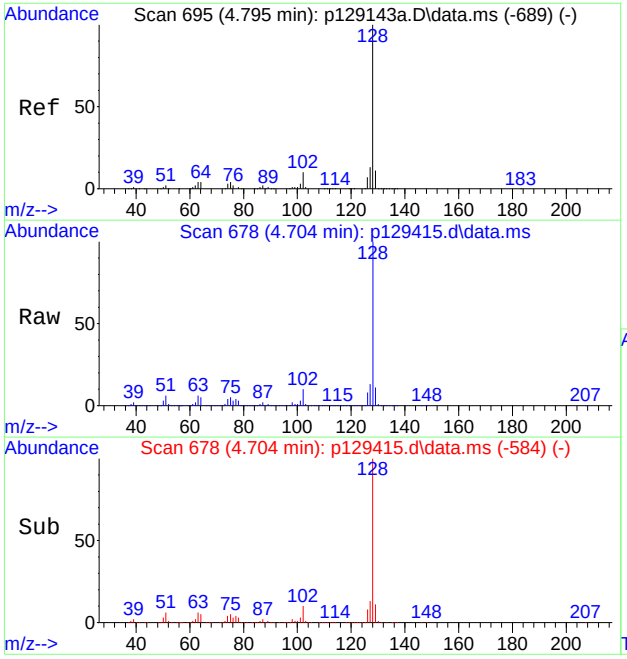


#30
2,4-Dimethylphenol
Concen: 1.12 ppm
RT: 4.533 min Scan# 646
Delta R.T. 0.016 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:107 Resp: 5546

Ion	Ratio	Lower	Upper
107	100		
121	39.6	13.4	73.4
122	78.4	50.9	110.9

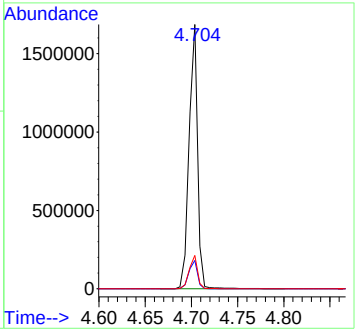


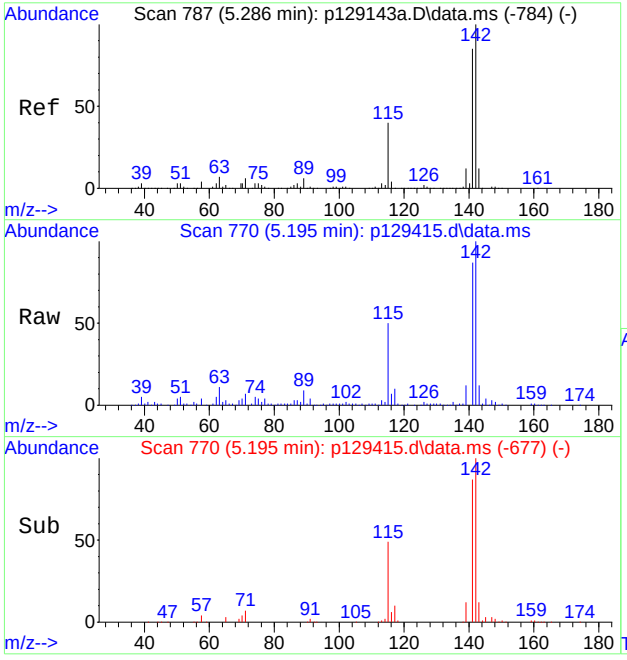


#38
Naphthalene
Concen: 80.46 ppm
RT: 4.704 min Scan# 678
Delta R.T. 0.000 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:128 Resp: 1084361

Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	41.2
127	12.6	0.0	42.6

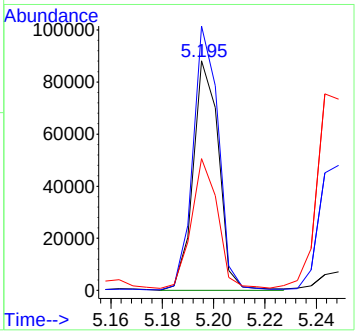


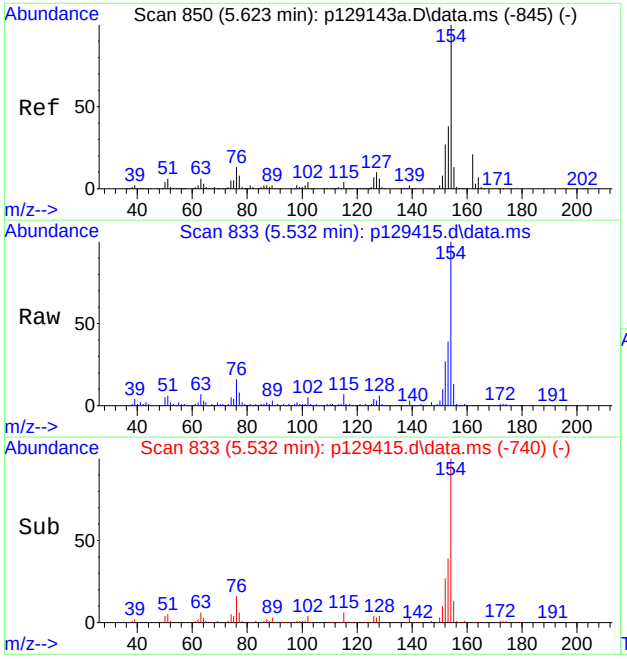


#44
2-Methylnaphthalene
Concen: 7.94 ppm
RT: 5.195 min Scan# 770
Delta R.T. -0.005 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:141 Resp: 61324

Ion	Ratio	Lower	Upper
141	100		
142	115.1	91.1	151.1
115	56.1	16.3	76.3

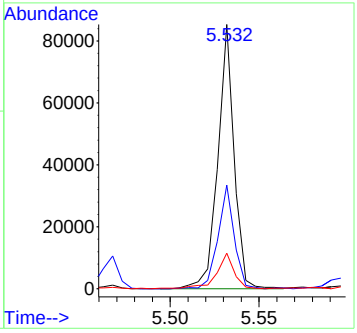


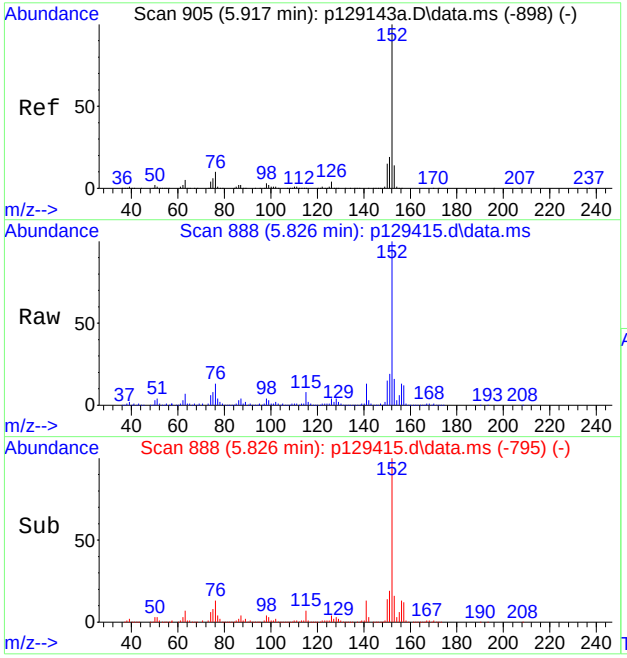


#53
Biphenyl
Concen: 5.54 ppm
RT: 5.532 min Scan# 833
Delta R.T. -0.005 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:154 Resp: 54347

Ion	Ratio	Lower	Upper
154	100		
153	39.1	8.6	68.6
155	13.3	0.0	43.1

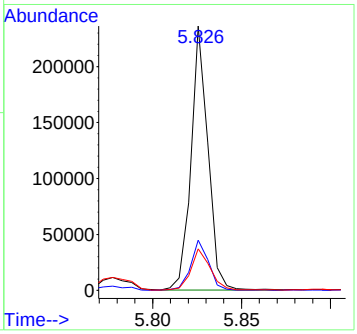


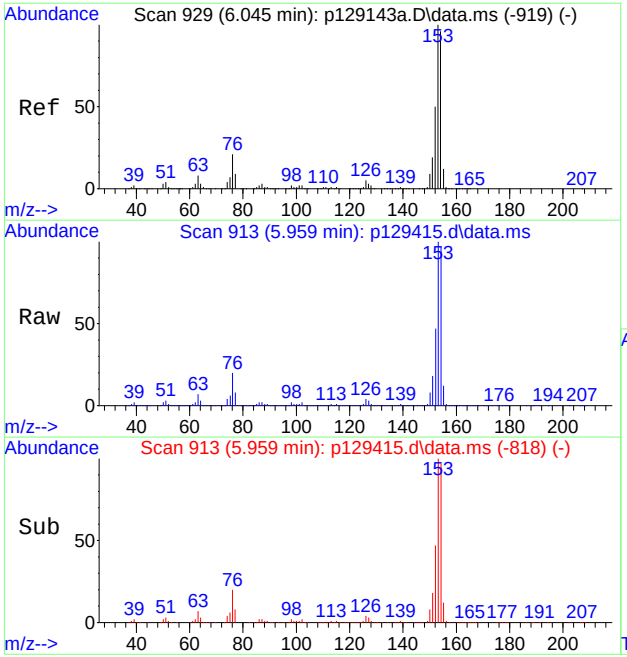


#56
Acenaphthylene
Concen: 12.55 ppm
RT: 5.826 min Scan# 888
Delta R.T. -0.005 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:152 Resp: 156220

Ion	Ratio	Lower	Upper
152	100		
151	19.0	0.0	49.5
153	15.6	0.0	42.9

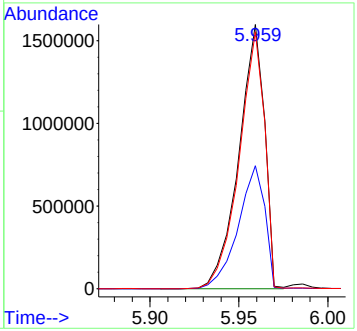


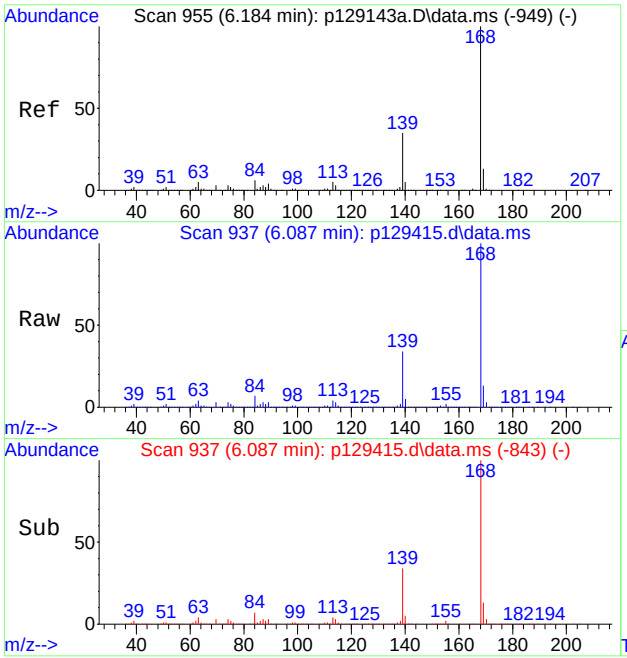


#59
Acenaphthene
Concen: 209.89 ppm
RT: 5.959 min Scan# 913
Delta R.T. 0.005 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:153 Resp: 1605488

Ion	Ratio	Lower	Upper
153	100		
152	46.6	18.5	78.5
154	97.4	58.8	118.8

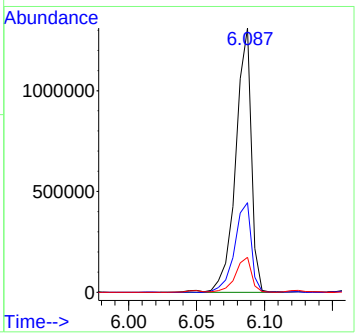




#62
Dibenzofuran
Concen: 90.15 ppm
RT: 6.087 min Scan# 937
Delta R.T. 0.000 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

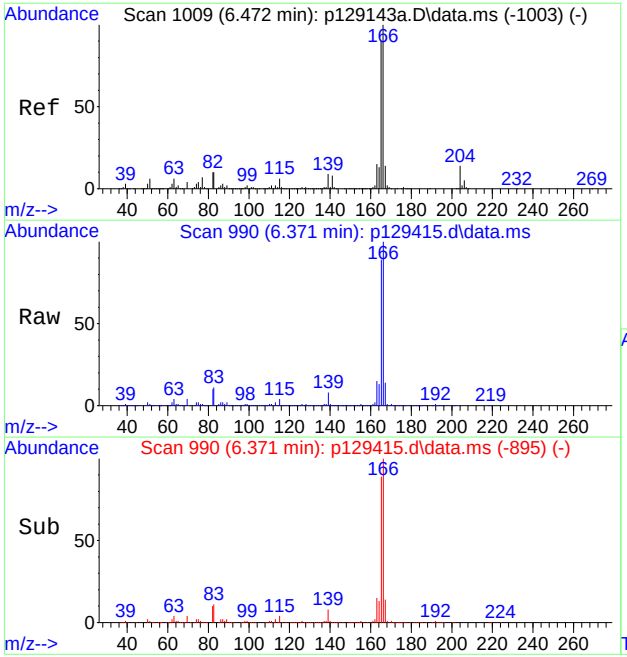
Tgt Ion:168 Resp: 1045738

Ion	Ratio	Lower	Upper
168	100		
139	33.9	6.4	66.4
169	13.2	0.0	43.3



9.1.5

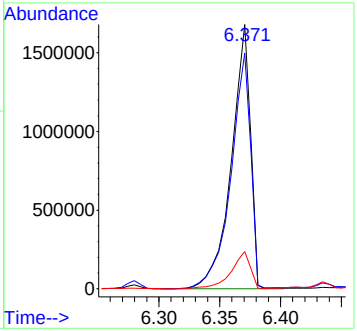
9

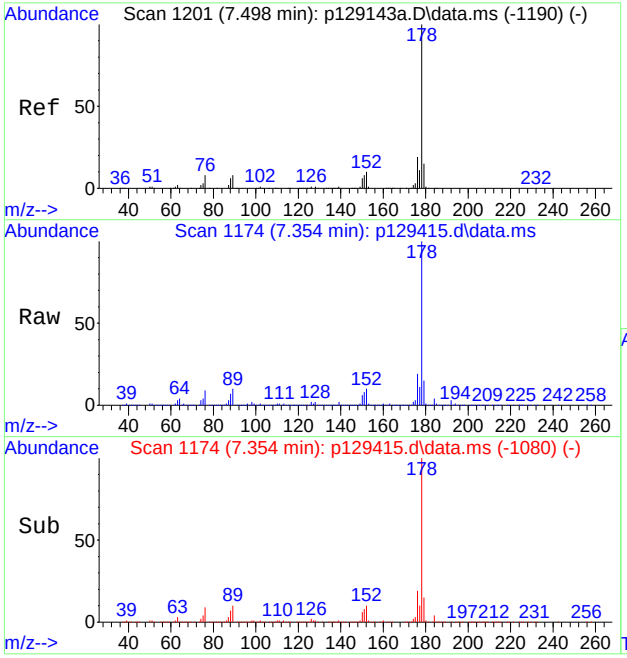


#66
Fluorene
Concen: 197.68 ppm
RT: 6.371 min Scan# 990
Delta R.T. 0.005 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:166 Resp: 1837670

Ion	Ratio	Lower	Upper
166	100		
165	89.0	62.0	122.0
167	13.9	0.0	42.5

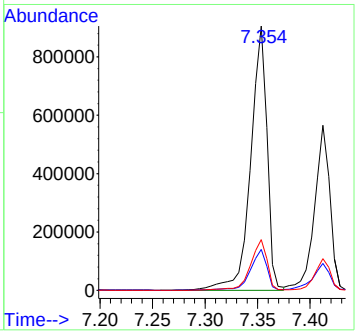


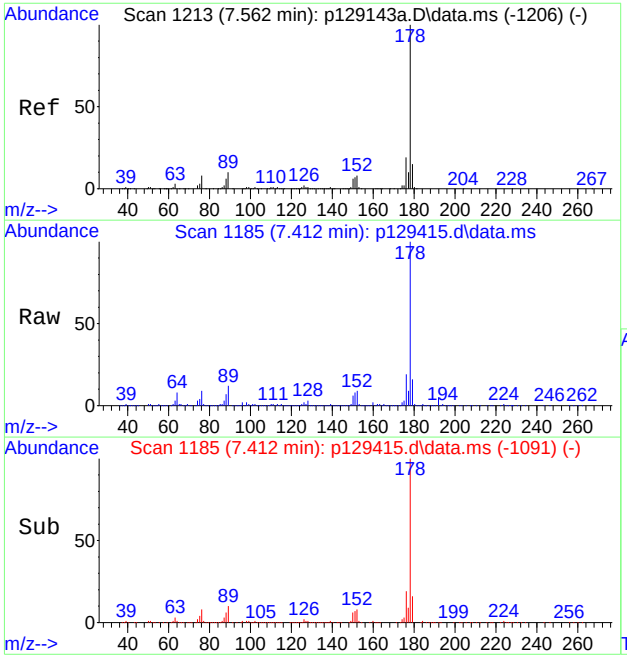


#77
Phenanthrene
Concen: 72.35 ppm
RT: 7.354 min Scan# 1174
Delta R.T. 0.000 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:178 Resp: 984363

Ion	Ratio	Lower	Upper
178	100		
179	15.4	0.0	45.3
176	19.2	0.0	49.2

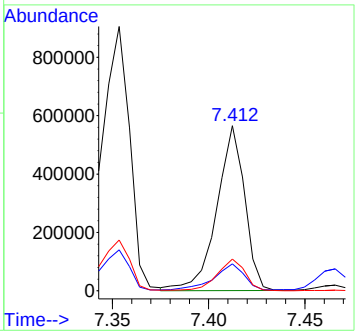


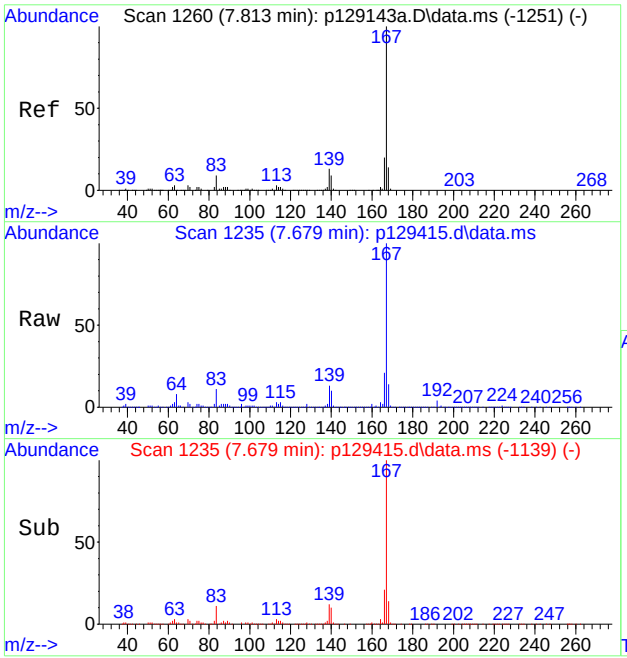


#78
Anthracene
Concen: 40.22 ppm
RT: 7.412 min Scan# 1185
Delta R.T. 0.000 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:178 Resp: 571657

Ion	Ratio	Lower	Upper
178	100		
179	16.0	0.0	45.4
176	19.2	0.0	48.9

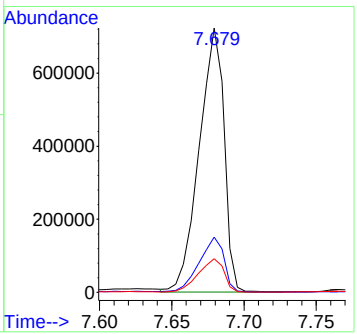


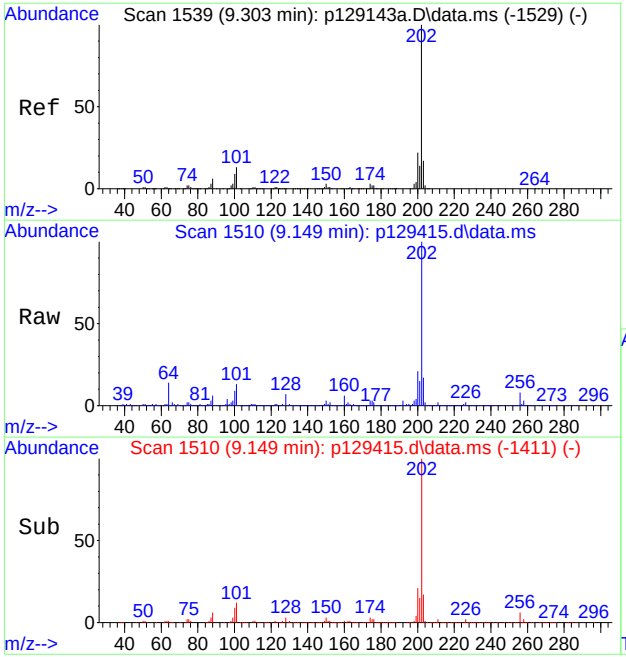


#79
Carbazole
Concen: 63.17 ppm
RT: 7.679 min Scan# 1235
Delta R.T. 0.011 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:167 Resp: 866969

Ion	Ratio	Lower	Upper
167	100		
166	20.8	0.0	50.6
139	12.6	0.0	43.3

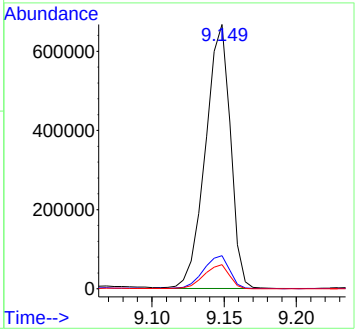


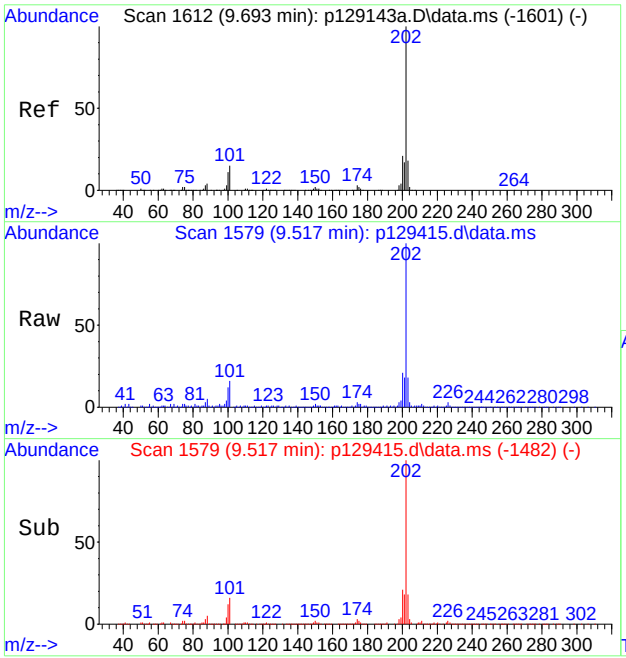


#81
Fluoranthene
Concen: 47.59 ppm
RT: 9.149 min Scan# 1510
Delta R.T. 0.027 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:202 Resp: 798643

Ion	Ratio	Lower	Upper
202	100		
101	12.4	0.0	44.1
100	9.1	0.0	40.0

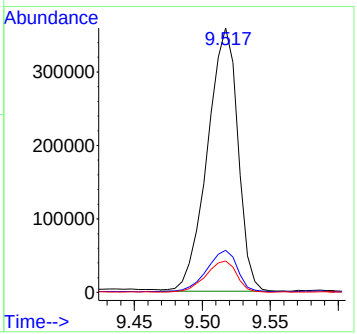


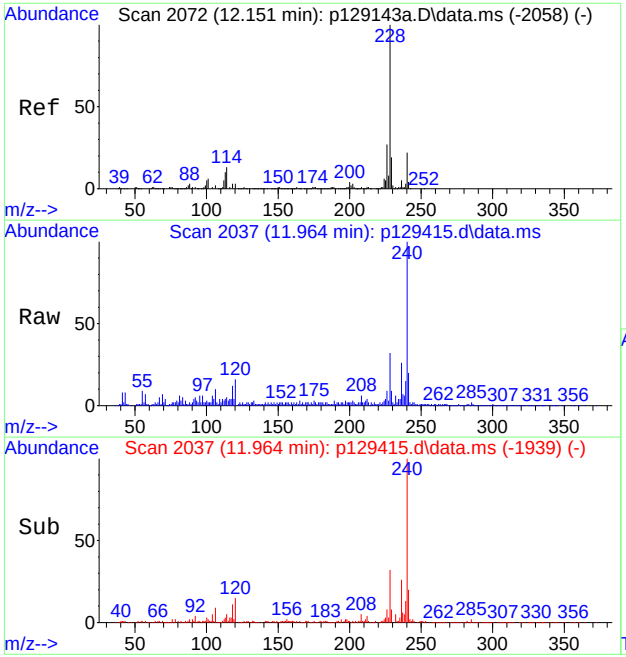


#84
Pyrene
Concen: 34.34 ppm
RT: 9.517 min Scan# 1579
Delta R.T. 0.016 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:202 Resp: 557722

Ion	Ratio	Lower	Upper
202	100		
101	15.6	0.0	46.5
100	11.8	0.0	42.4

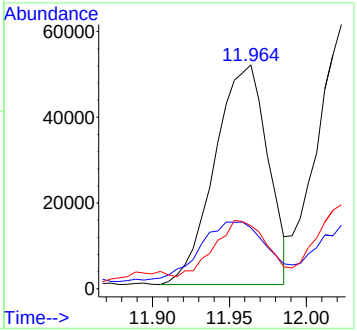


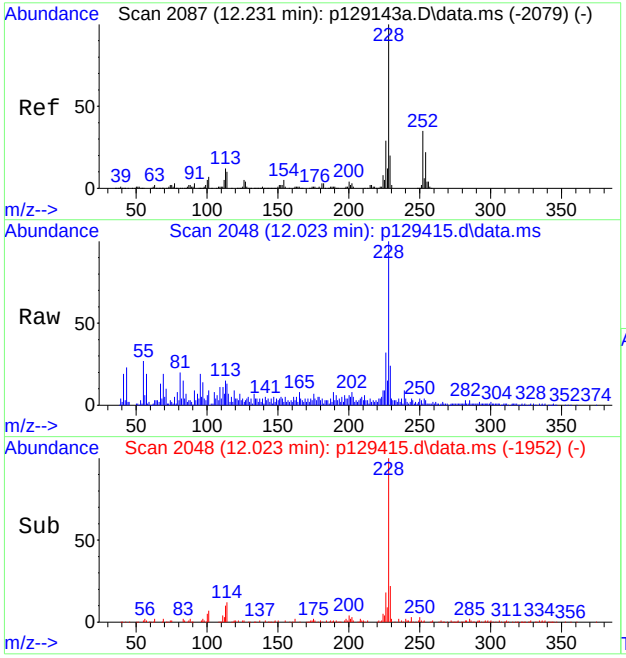


#87
Benzo[a]anthracene
Concen: 7.93 ppm
RT: 11.964 min Scan# 2037
Delta R.T. 0.021 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:228 Resp: 122670

Ion	Ratio	Lower	Upper
228	100		
229	22.1	0.0	49.8
226	22.2	0.0	57.1

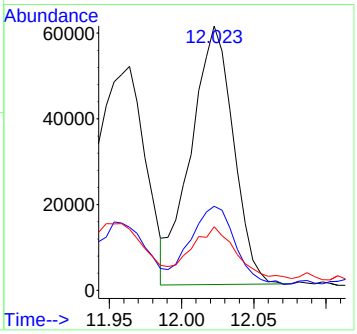


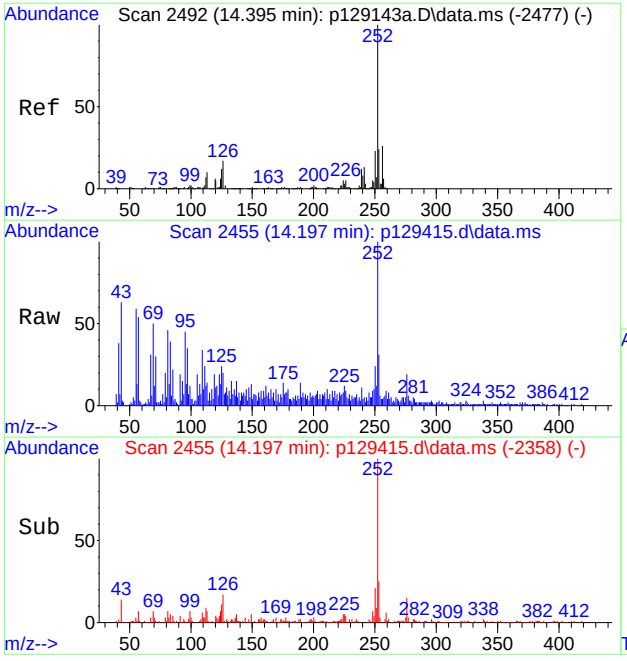


#89
Chrysene
Concen: 9.03 ppm
RT: 12.023 min Scan# 2048
Delta R.T. 0.011 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:228 Resp: 123013

Ion	Ratio	Lower	Upper
228	100		
226	29.8	0.1	60.1
229	18.8	0.0	49.6

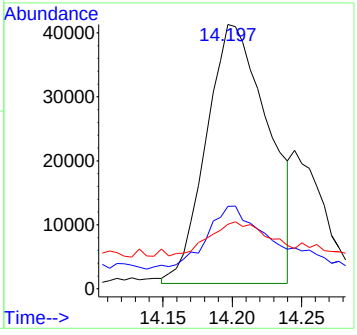


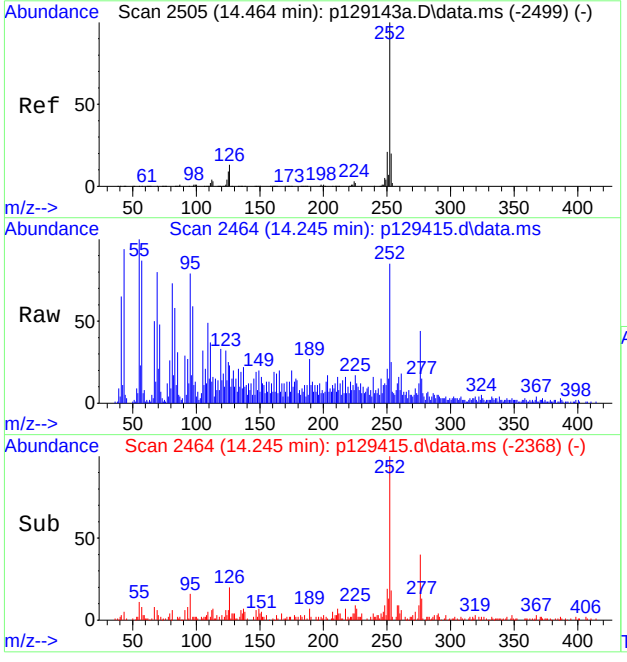


#93
Benzo[b]fluoranthene
Concen: 8.22 ppm m
RT: 14.197 min Scan# 2455
Delta R.T. 0.016 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:252 Resp: 125326

Ion	Ratio	Lower	Upper
252	100		
253	31.2	0.0	53.1
125	24.4	0.0	42.5

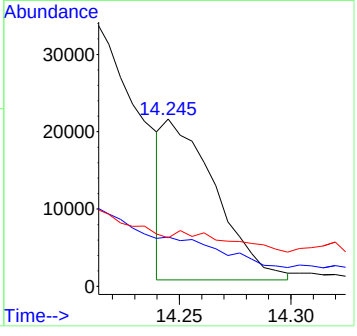


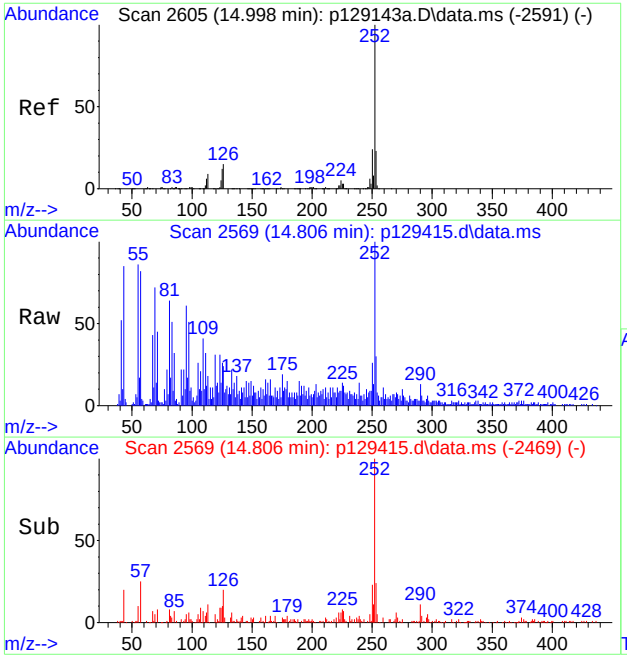


#94
Benzo[k]fluoranthene
Concen: 2.62 ppm m
RT: 14.245 min Scan# 2464
Delta R.T. 0.011 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:252 Resp: 33610

Ion	Ratio	Lower	Upper
252	100		
253	29.5	0.0	49.8
125	29.0	0.0	40.7

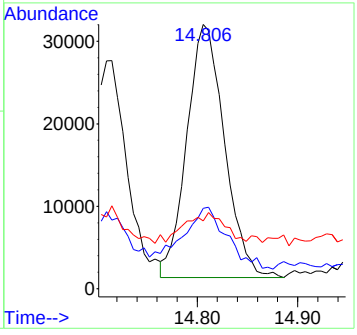


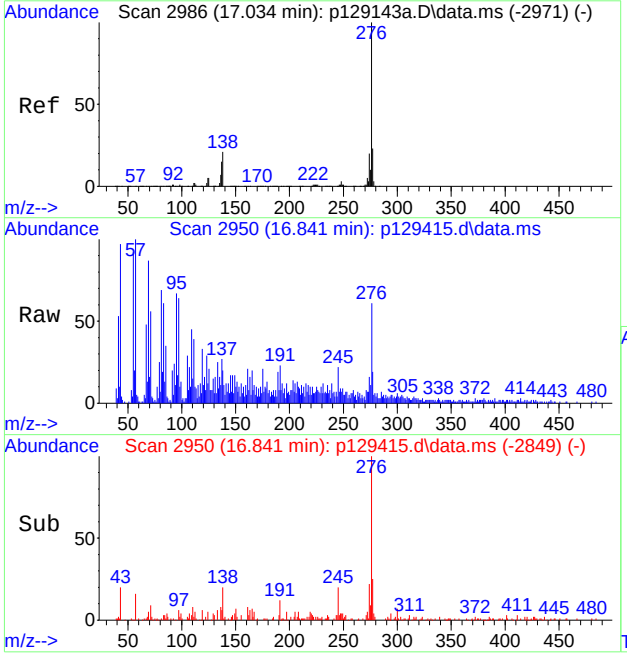


#95
Benzo[a]pyrene
Concen: 6.20 ppm
RT: 14.806 min Scan# 2569
Delta R.T. 0.032 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:252 Resp: 79990

Ion	Ratio	Lower	Upper
252	100		
253	20.1	0.0	51.7
125	5.6	0.0	42.2

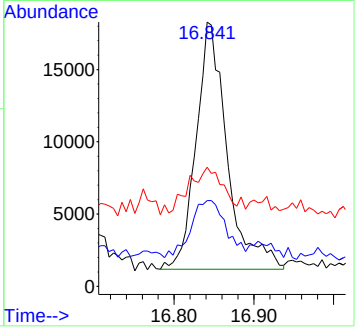




#96
Indeno[1,2,3-cd]pyrene
Concen: 3.93 ppm
RT: 16.841 min Scan# 2950
Delta R.T. 0.037 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

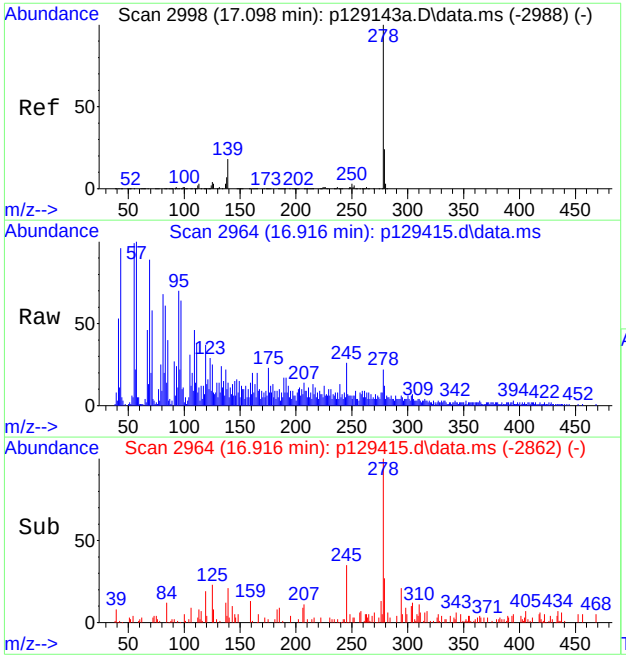
Tgt Ion:276 Resp: 46326

Ion	Ratio	Lower	Upper
276	100		
138	22.4	0.0	54.3
137	18.2	0.0	47.2



9.1.5

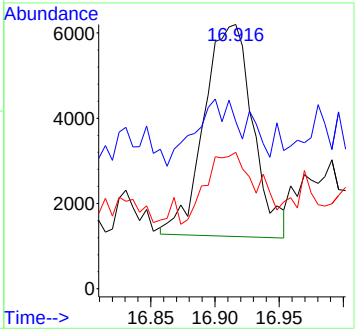
9

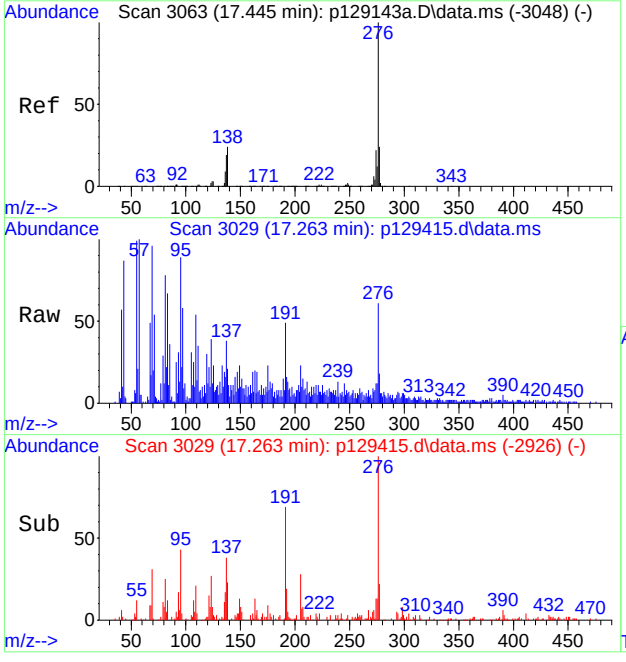


#98
Dibenz[a,h]anthracene
Concen: 1.09 ppm
RT: 16.916 min Scan# 2964
Delta R.T. 0.043 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:278 Resp: 13122

Ion	Ratio	Lower	Upper
278	100		
139	14.6	0.0	50.8
279	30.2	0.0	54.1

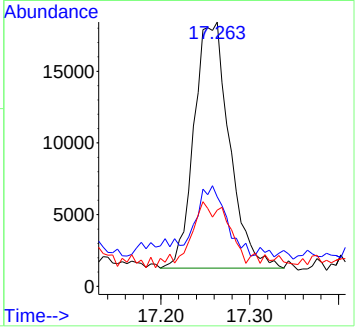




#100
Benzo[g,h,i]perylene
Concen: 3.98 ppm
RT: 17.263 min Scan# 3029
Delta R.T. 0.048 min
Lab File: p129415.d
Acq: 8 May 2019 8:08 pm

Tgt Ion:276 Resp: 47296

Ion	Ratio	Lower	Upper
276	100		
138	20.8	0.0	55.5
277	20.4	0.0	53.2



Manual Integration Approval Summary

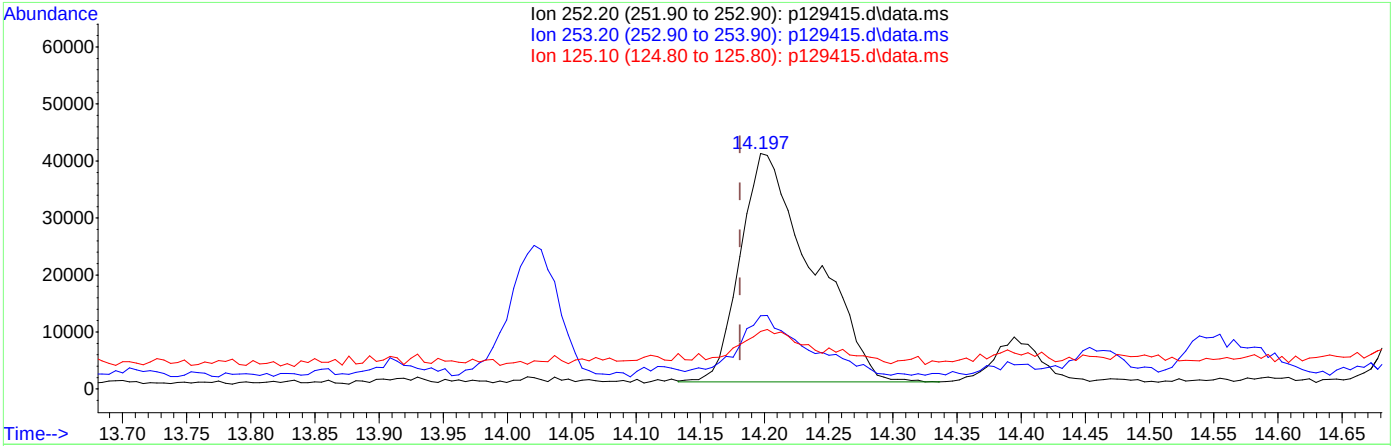
Sample Number:	JC87093-3	**Method:**	SW846 8270D
Lab FileID:	P129415.D	**Analyst approved:**	05/08/19 23:09 Michelle Co
Injection Time:	05/08/19 20:08	**Supervisor approved:**	05/13/19 19:29 Kristi Schollenberger

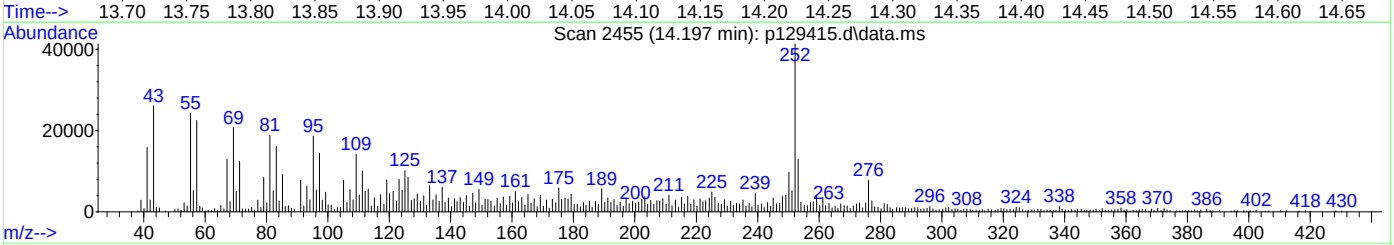
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		14.20	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		14.25	Poor instrument integration

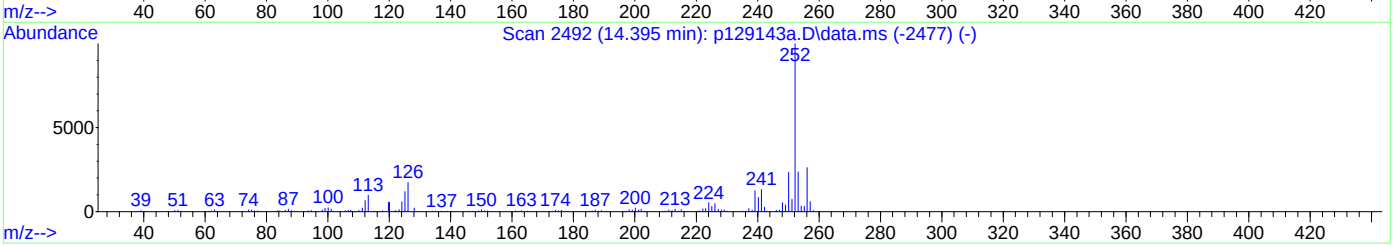
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129415.d
Acq On : 8 May 2019 8:08 pm
Operator : angelar
Sample : jc87093-3 Inst : MSVOAMSP
Misc : op20110,ep5857,31.7,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:51:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129415.d\data.ms

(93) Benzo[b]fluoranthene (t)

14.197min (+0.016) 10.26ppm

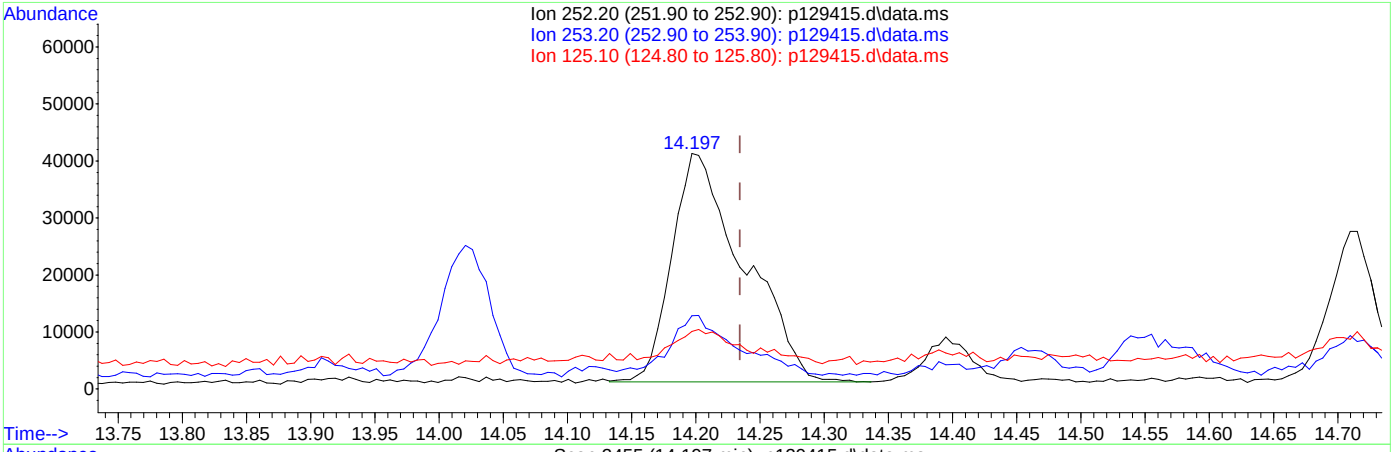
response 156459

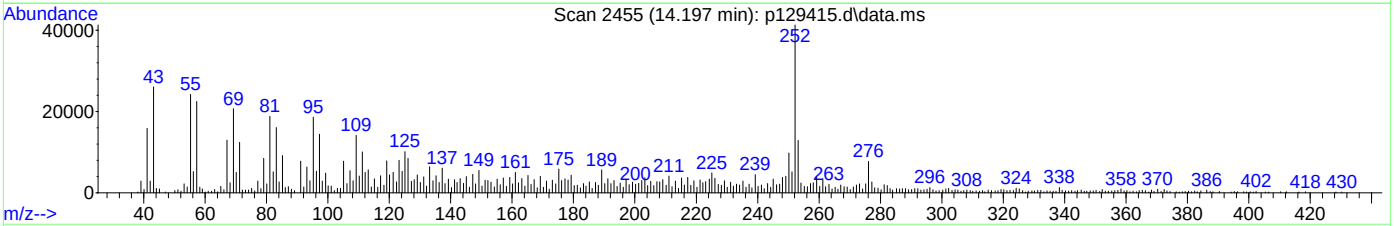
Ion	Exp%	Act%
252.20	100	100
253.20	23.10	24.58
125.10	12.50	11.51
0.00	0.00	0.00

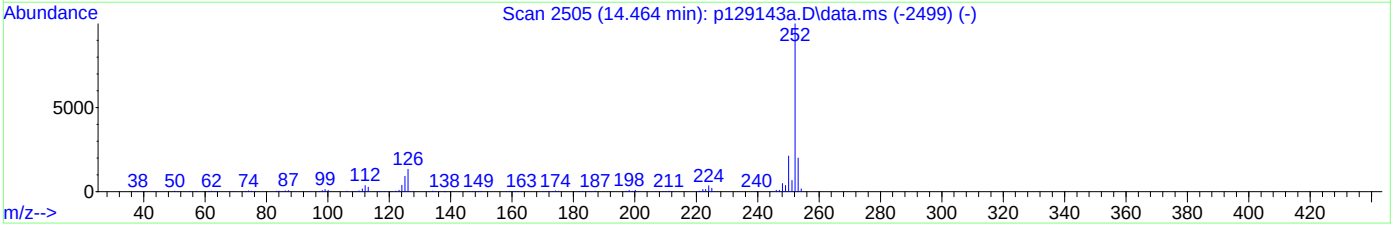
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129415.d
Acq On : 8 May 2019 8:08 pm
Operator : angelar
Sample : jc87093-3 Inst : MSVOAMSP
Misc : op20110,ep5857,31.7,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:51:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129415.d\data.ms

(94) Benzo[k]fluoranthene (t)

14.197min (-0.037) 12.19ppm

response 156459

Ion	Exp%	Act%
252.20	100	100
253.20	19.80	24.58
125.10	10.70	11.51
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:29

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129428.d
Acq On : 9 May 2019 1:27 pm
Operator : angelar
Sample : jc87093-3
Misc : op20110,ep5858,31.7,,,1,5
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 19:49:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.742	152	159894	40.00	ppm	0.00
24) Naphthalene-d8	4.677	136	548356	40.00	ppm	0.00
47) Acenaphthene-d10	5.916	164	283127	40.00	ppm	0.00
69) Phenanthrene-d10	7.300	188	511318	40.00	ppm	-0.01
83) Chrysene-d12	11.926	240	458625	40.00	ppm	-0.02
91) Perylene-d12	14.859	264	480218	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	3.742	152	159894	40.00	ppm	0.00
103) Phenanthrene-d10b	7.300	188	511318	40.00	ppm	-0.01
105) Chrysene-d12b	11.926	240	458625	40.00	ppm	-0.02
107) Naphthalene-d8b	4.677	136	548356	40.00	ppm	0.00
109) Acenaphthene-d10b	5.916	164	283127	40.00	ppm	0.00
111) Chrysene-d12d	11.926	240	458625	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.780	112	34549	6.73	ppm	0.00
Spiked Amount 50.000			Recovery	=	13.46%	
8) Phenol-d5	3.609	99	47824	7.33	ppm	0.00
Spiked Amount 50.000			Recovery	=	14.66%	
25) Nitrobenzene-d5	4.164	82	43850	7.44	ppm	0.00
Spiked Amount 50.000			Recovery	=	14.88%	
51) 2-Fluorobiphenyl	5.457	172	75404	8.41	ppm	0.00
Spiked Amount 50.000			Recovery	=	16.82%	
73) 2,4,6-Tribromophenol	6.573	330	10732	6.31	ppm	-0.01
Spiked Amount 50.000			Recovery	=	12.62%	
85) Terphenyl-d14	9.907	244	77737	7.48	ppm	-0.01
Spiked Amount 50.000			Recovery	=	14.96%	
Target Compounds						Qvalue
38) Naphthalene	4.693	128	209305m	15.98	ppm	
44) 2-Methylnaphthalene	5.190	141	11565	1.54	ppm	92
53) Biphenyl	5.521	154	11049	1.16	ppm	96
56) Acenaphthylene	5.815	152	28267	2.33	ppm	95
59) Acenaphthene	5.943	153	354003	47.54	ppm	99
62) Dibenzofuran	6.071	168	205113	18.17	ppm	98
66) Fluorene	6.349	166	391932	43.31	ppm	99
77) Phenanthrene	7.327	178	189939	14.25	ppm	99
78) Anthracene	7.391	178	112765	8.10	ppm	99
79) Carbazole	7.647	167	181743	13.52	ppm	97
81) Fluoranthene	9.095	202	157271	9.57	ppm	95
84) Pyrene	9.469	202	111239	7.01	ppm	98
87) Benzo[a]anthracene	11.916	228	27045	1.79	ppm	89
89) Chrysene	11.969	228	23854	1.79	ppm	99
93) Benzo[b]fluoranthene	14.133	252	23000	1.57	ppm	89
94) Benzo[k]fluoranthene	14.175	252	7828	0.64	ppm	92
95) Benzo[a]pyrene	14.736	252	15158	1.22	ppm	92
96) Indeno[1,2,3-cd]pyrene	16.772	276	9666	0.85	ppm	89
100) Benzo[g,h,i]perylene	17.167	276	9218	0.81	ppm	89

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129428.d
Acq On : 9 May 2019 1:27 pm
Operator : angelar
Sample : jc87093-3
Misc : op20110,ep5858,31.7,,,1,5
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 19:49:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

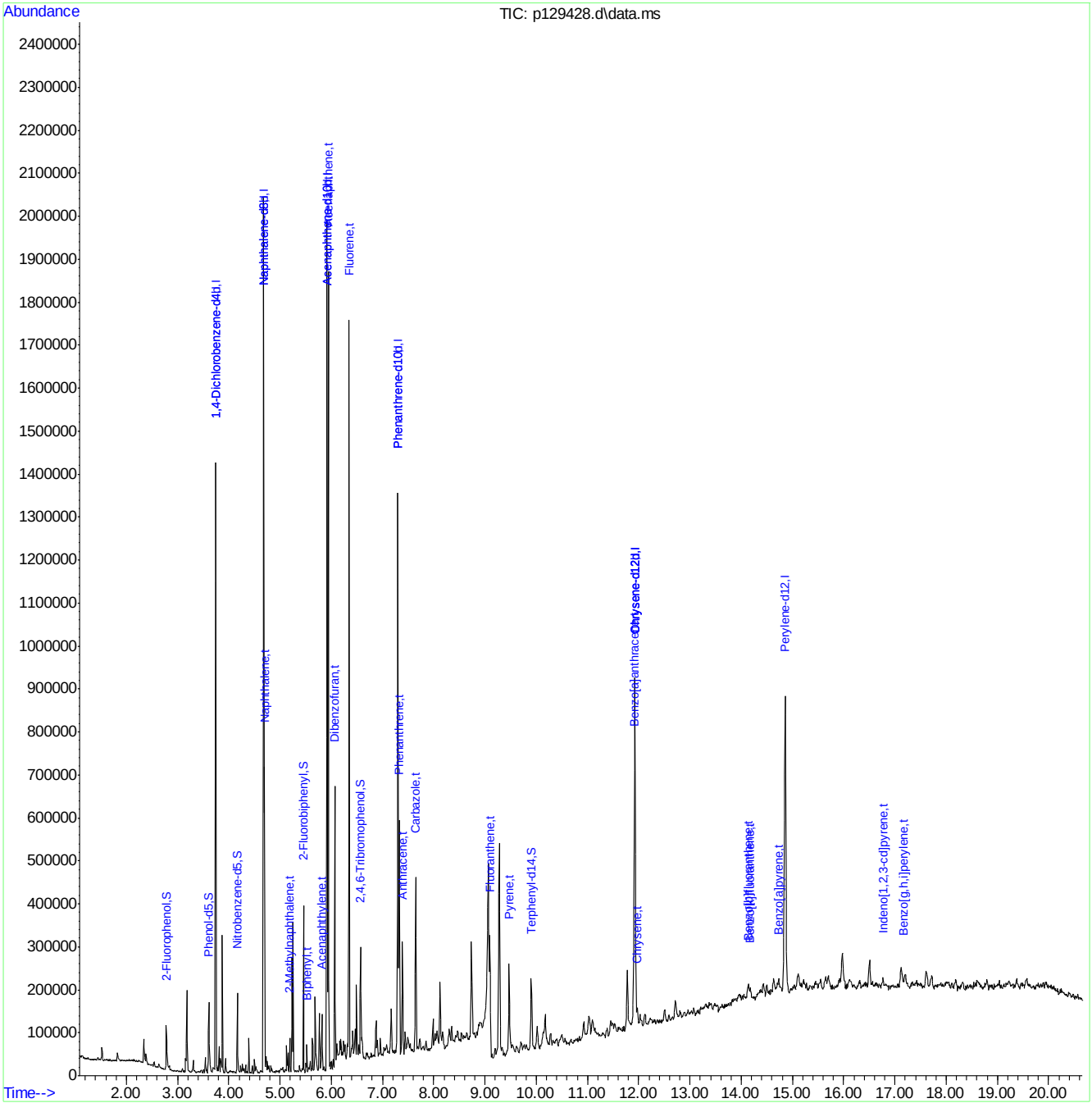
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

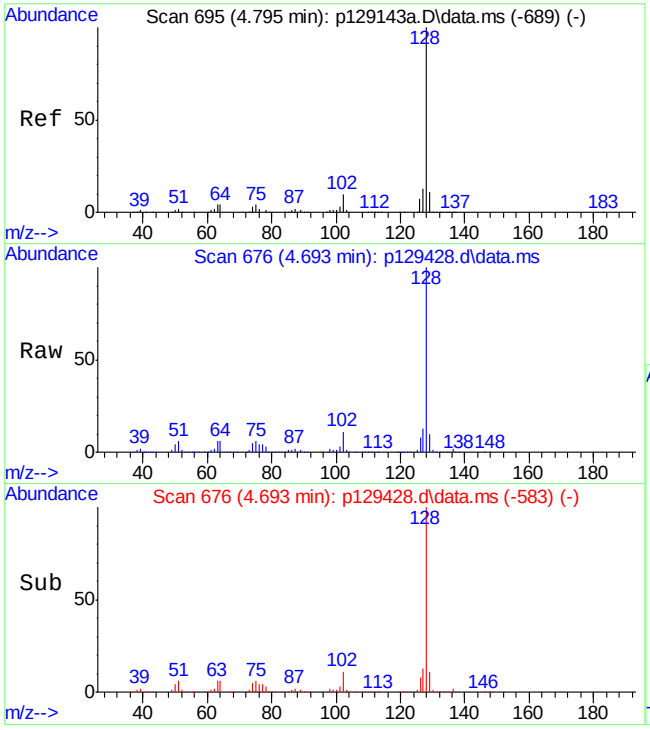
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129428.d
Acq On : 9 May 2019 1:27 pm
Operator : angelar
Sample : jc87093-3
Misc : op20110,ep5858,31.7,,,1,5
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 13 19:49:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

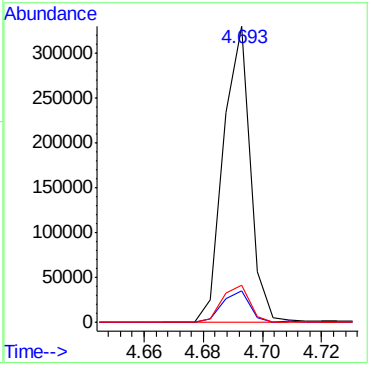


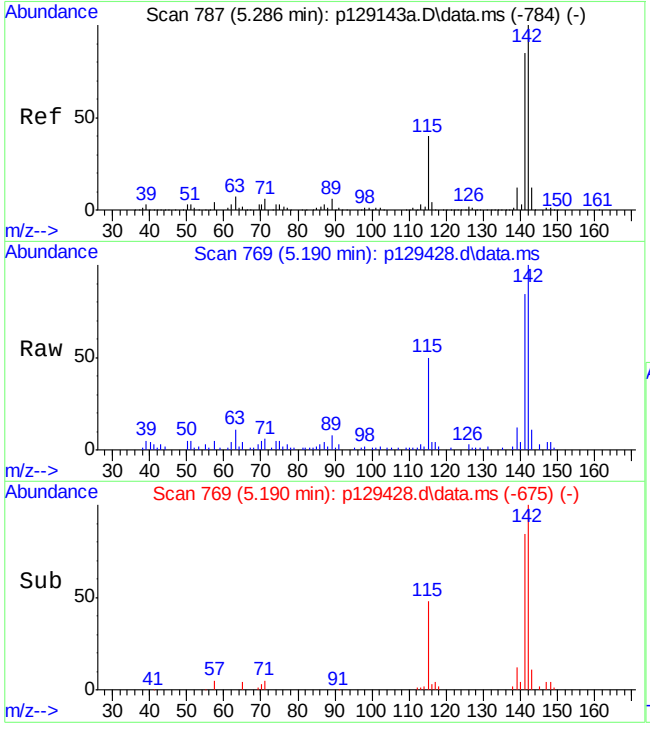


#38
Naphthalene
Concen: 15.98 ppm m
RT: 4.693 min Scan# 676
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:128 Resp: 209305

Ion	Ratio	Lower	Upper
128	100		
129	10.5	0.0	40.7
127	12.7	0.0	42.8

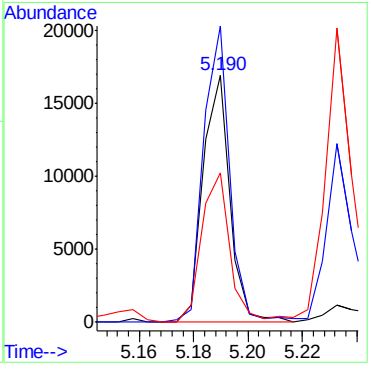


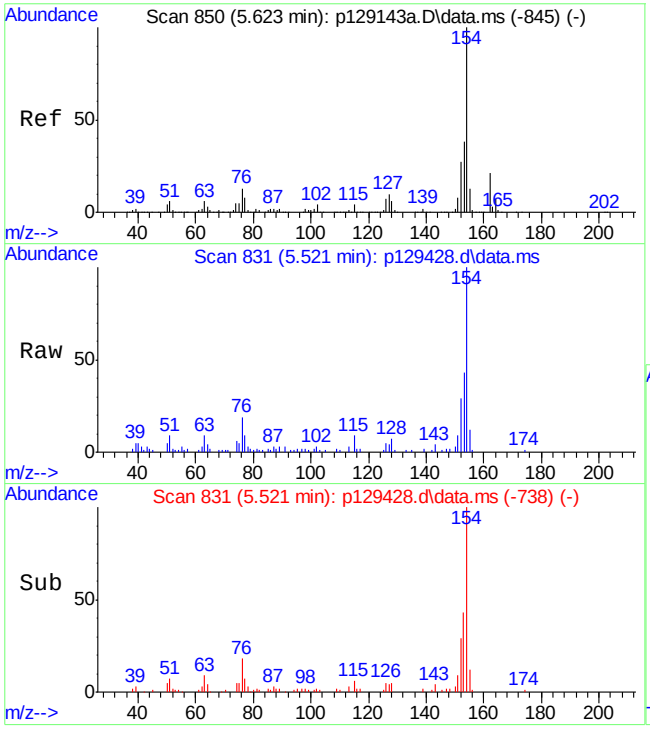


#44
2-Methylnaphthalene
Concen: 1.54 ppm
RT: 5.190 min Scan# 769
Delta R.T. -0.000 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:141 Resp: 11565

Ion	Ratio	Lower	Upper
141	100		
142	119.1	95.6	155.6
115	59.5	20.0	80.0

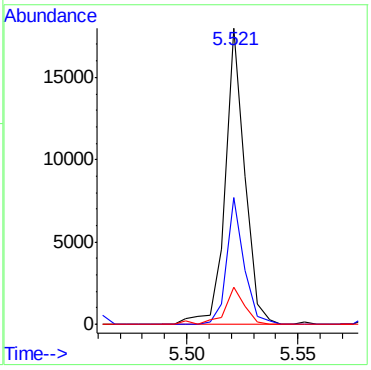


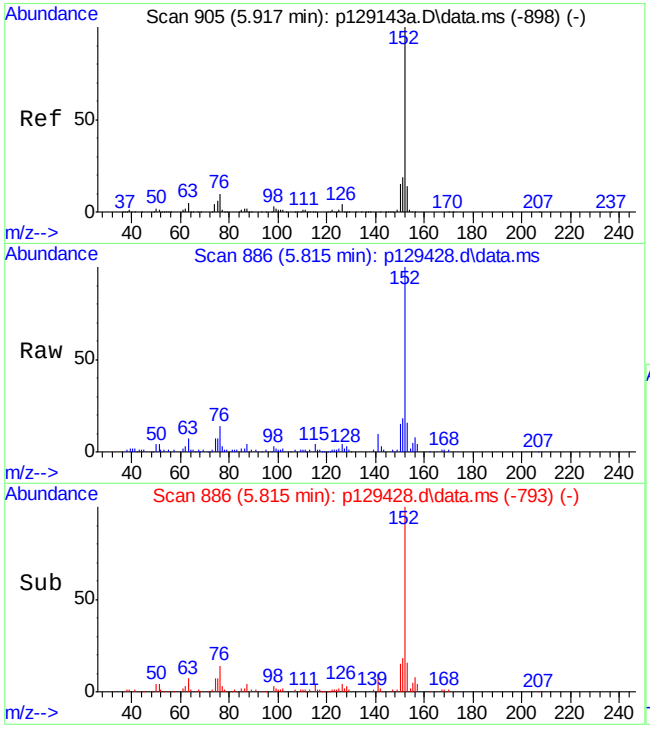


#53
Biphenyl
Concen: 1.16 ppm
RT: 5.521 min Scan# 831
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:154 Resp: 11049

Ion	Ratio	Lower	Upper
154	100		
153	42.9	10.2	70.2
155	12.5	0.0	43.3

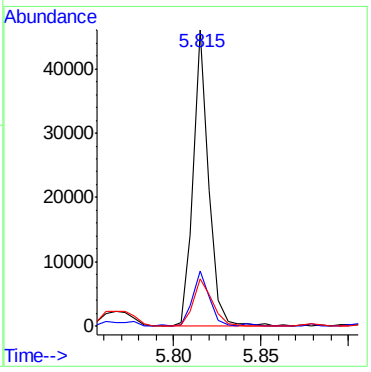




#56
Acenaphthylene
Concen: 2.33 ppm
RT: 5.815 min Scan# 886
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

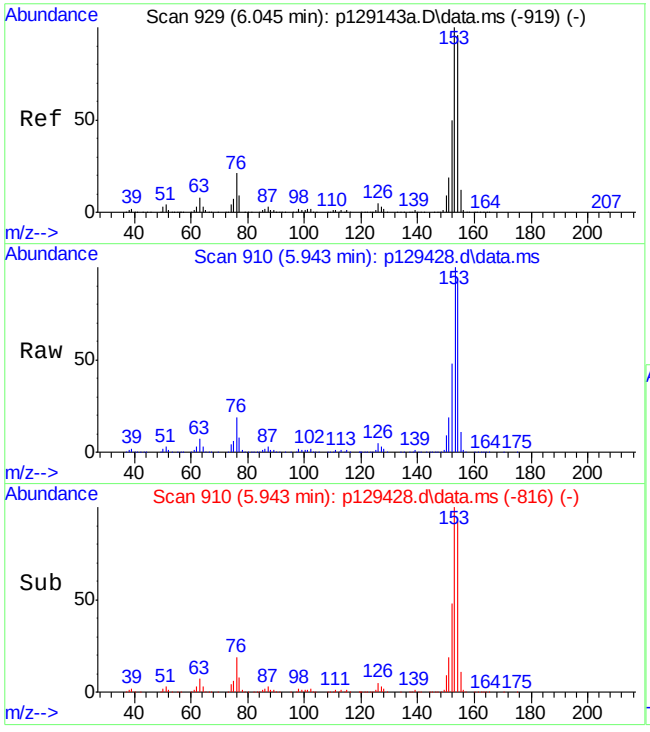
Tgt Ion:152 Resp: 28267

Ion	Ratio	Lower	Upper
152	100		
151	18.2	0.0	49.4
153	16.1	0.0	43.1



9.1.6

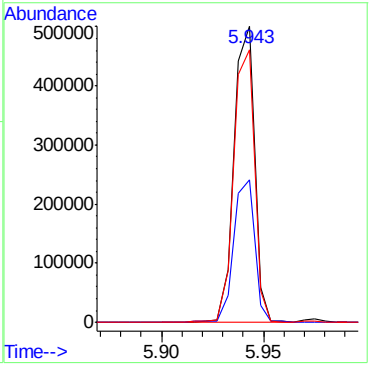
9

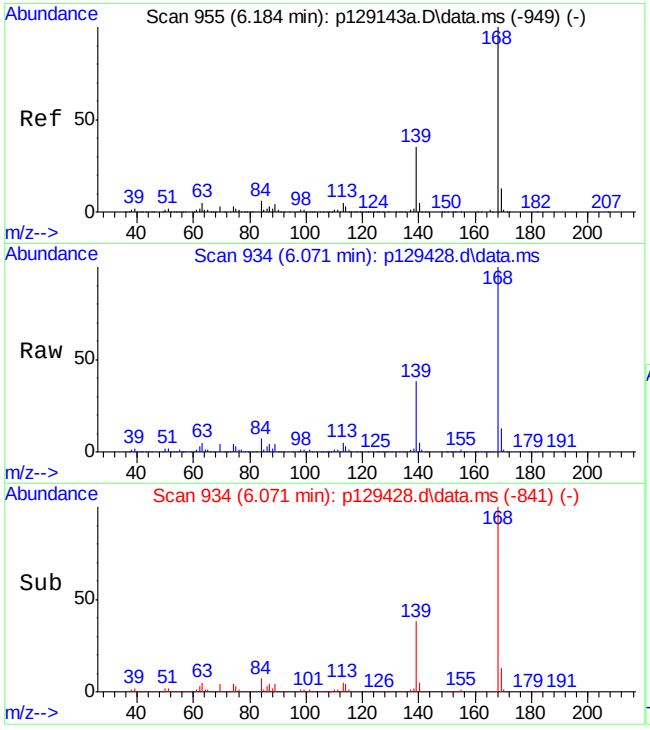


#59
Acenaphthene
Concen: 47.54 ppm
RT: 5.943 min Scan# 910
Delta R.T. -0.000 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:153 Resp: 354003

Ion	Ratio	Lower	Upper
153	100		
152	48.2	19.7	79.7
154	92.1	61.3	121.3

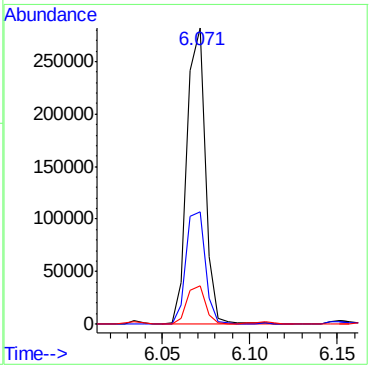




#62
Dibenzofuran
Concen: 18.17 ppm
RT: 6.071 min Scan# 934
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

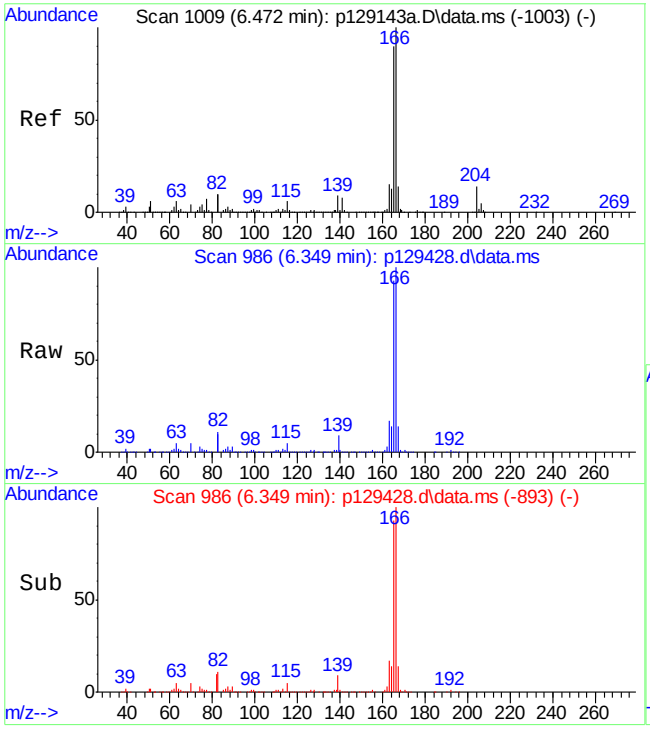
Tgt Ion:168 Resp: 205113

Ion	Ratio	Lower	Upper
168	100		
139	37.8	6.5	66.5
169	12.8	0.0	43.5



9.1.6

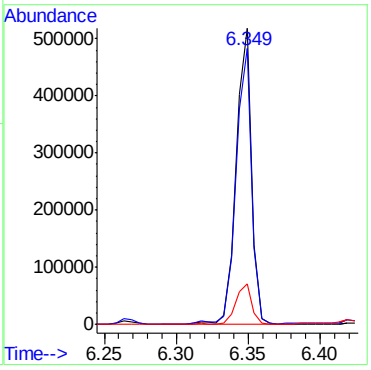
9

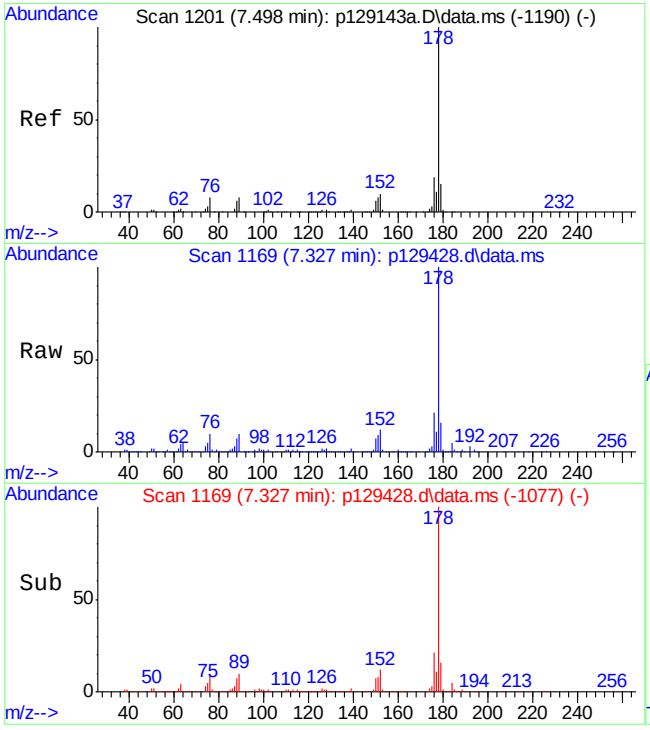


#66
Fluorene
Concen: 43.31 ppm
RT: 6.349 min Scan# 986
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:166 Resp: 391932

Ion	Ratio	Lower	Upper
166	100		
165	93.1	63.7	123.7
167	13.7	0.0	43.1

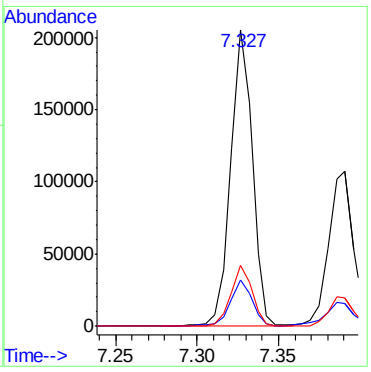


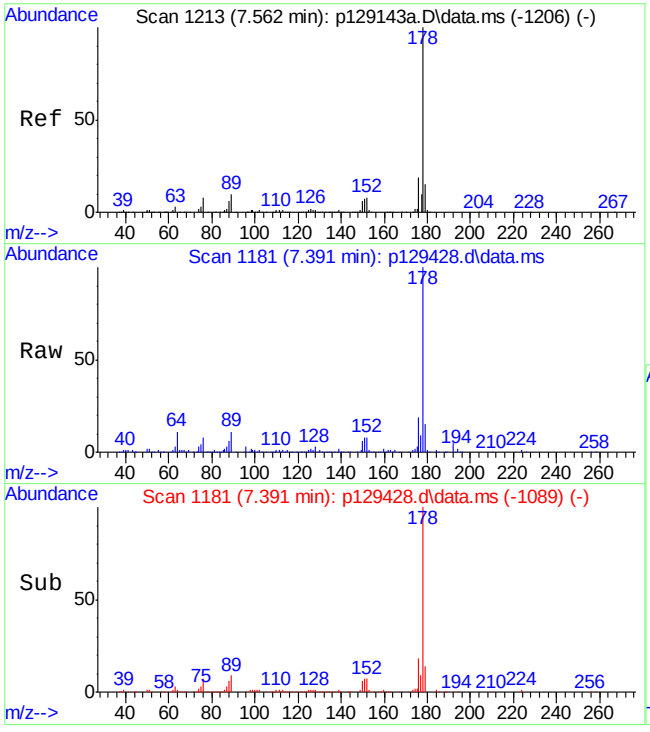


#77
Phenanthrene
Concen: 14.25 ppm
RT: 7.327 min Scan# 1169
Delta R.T. -0.011 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:178 Resp: 189939

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	45.3
176	20.5	0.0	50.0

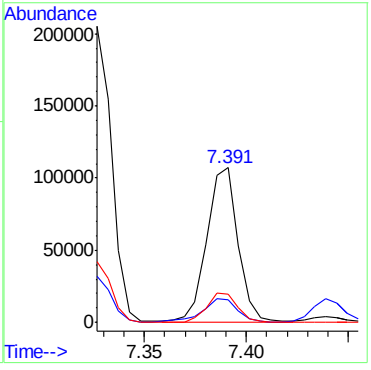


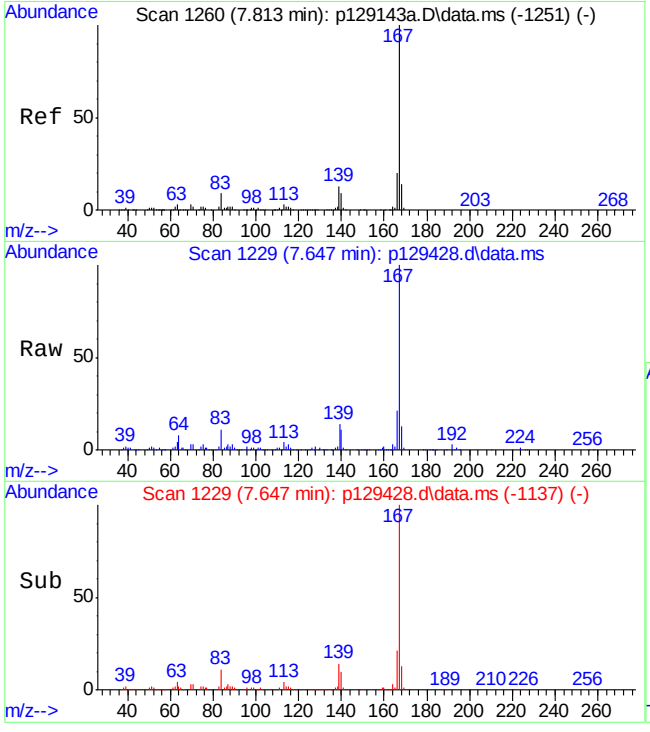


#78
Anthracene
Concen: 8.10 ppm
RT: 7.391 min Scan# 1181
Delta R.T. -0.011 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:178 Resp: 112765

Ion	Ratio	Lower	Upper
178	100		
179	14.2	0.0	45.1
176	18.5	0.0	48.6

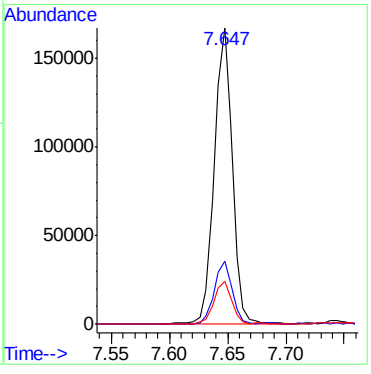


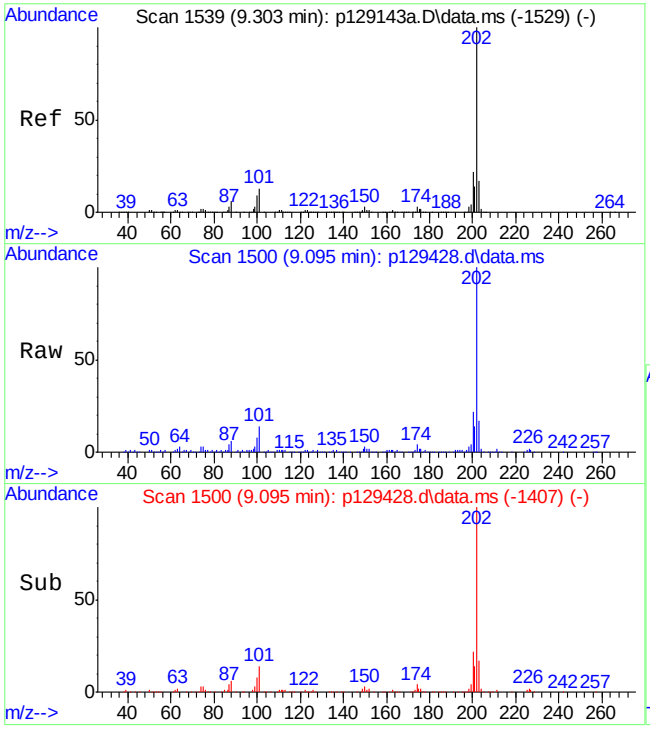


#79
Carbazole
Concen: 13.52 ppm
RT: 7.647 min Scan# 1229
Delta R.T. -0.011 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:167 Resp: 181743

Ion	Ratio	Lower	Upper
167	100		
166	21.3	0.0	49.9
139	14.1	0.0	42.7

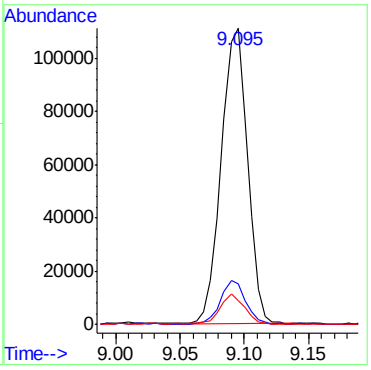


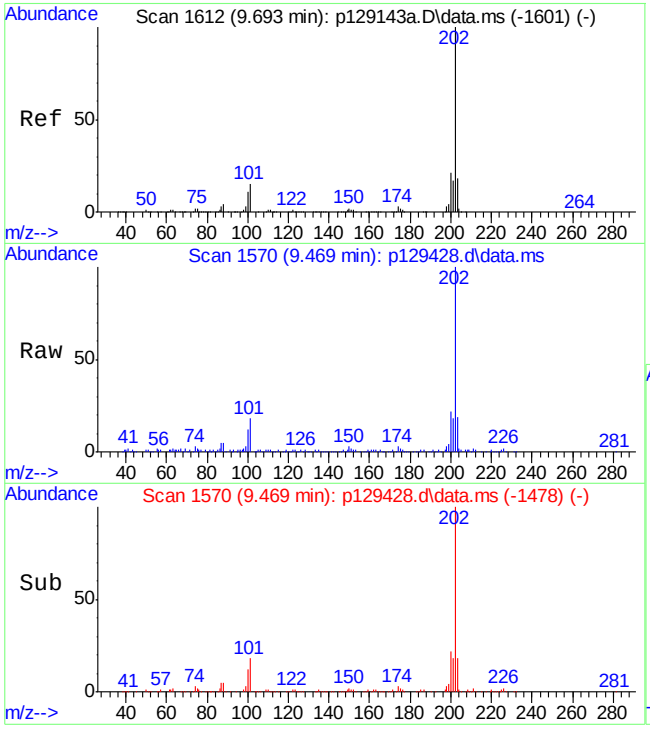


#81
Fluoranthene
Concen: 9.57 ppm
RT: 9.095 min Scan# 1500
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:202 Resp: 157271

Ion	Ratio	Lower	Upper
202	100		
101	13.8	0.0	45.1
100	7.9	0.0	40.6

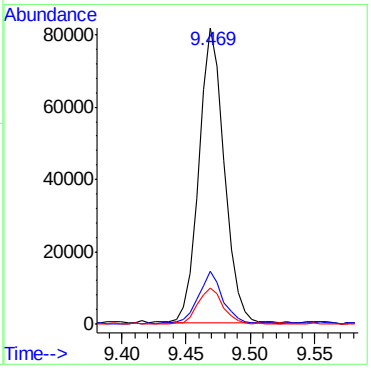




#84
Pyrene
Concen: 7.01 ppm
RT: 9.469 min Scan# 1570
Delta R.T. -0.011 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

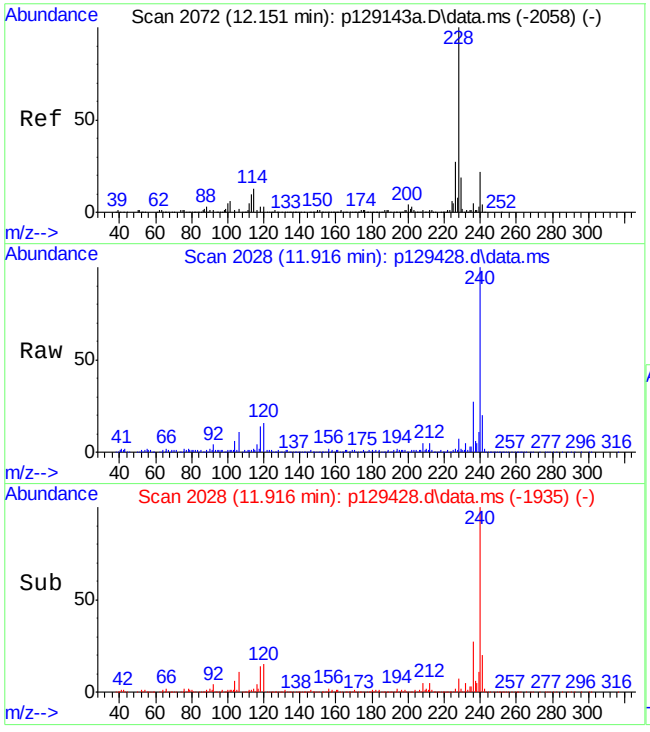
Tgt Ion:202 Resp: 111239

Ion	Ratio	Lower	Upper
202	100		
101	17.5	0.0	46.8
100	12.2	0.0	43.1



9.1.6

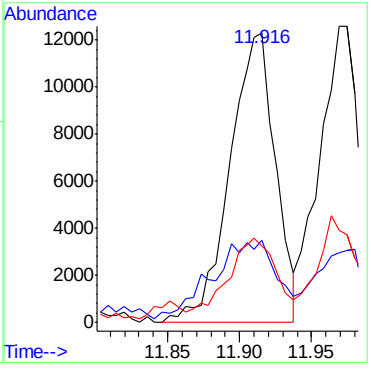
9

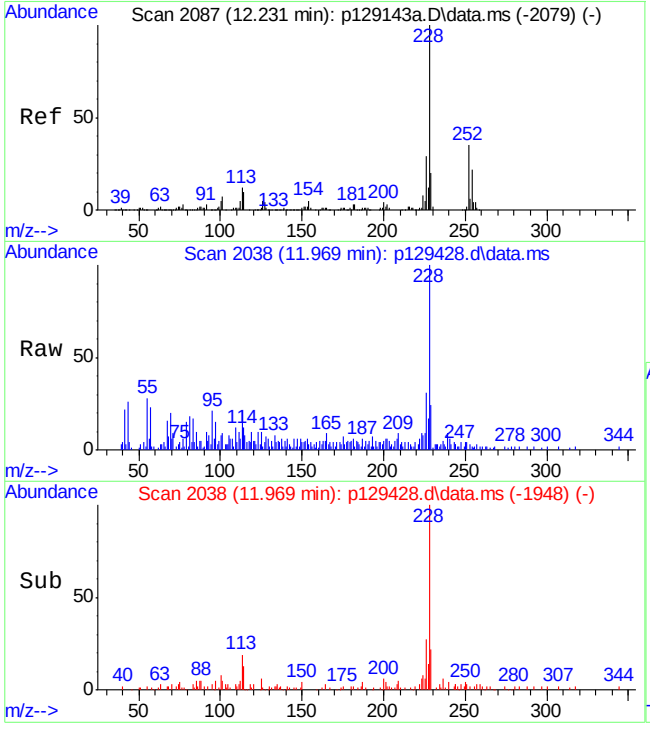


#87
Benzo[a]anthracene
Concen: 1.79 ppm
RT: 11.916 min Scan# 2028
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:228 Resp: 27045

Ion	Ratio	Lower	Upper
228	100		
229	24.1	0.0	49.7
226	22.0	0.0	58.0

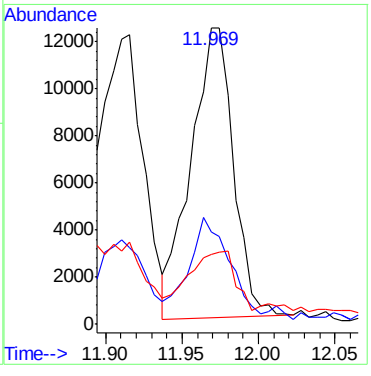


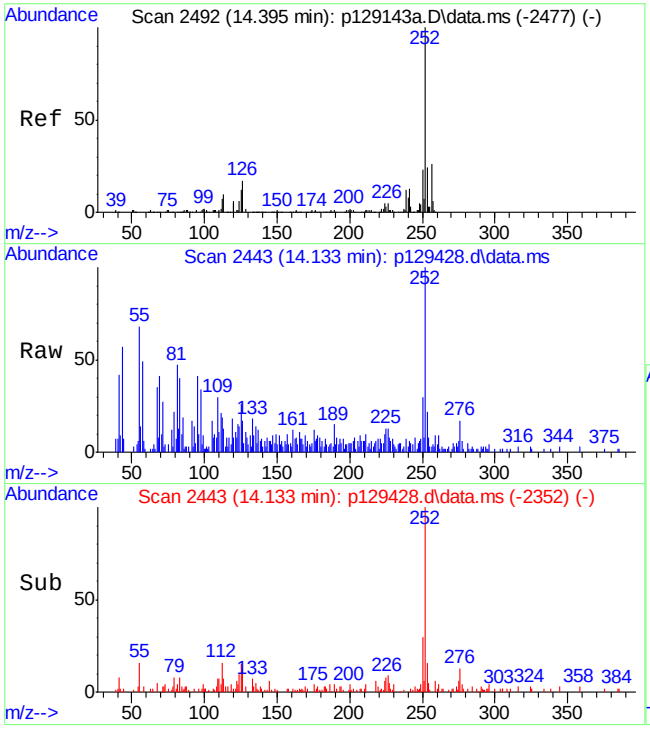


#89
Chrysene
Concen: 1.79 ppm
RT: 11.969 min Scan# 2038
Delta R.T. -0.022 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:228 Resp: 23854

Ion	Ratio	Lower	Upper
228	100		
226	29.2	0.0	59.2
229	18.7	0.0	49.8

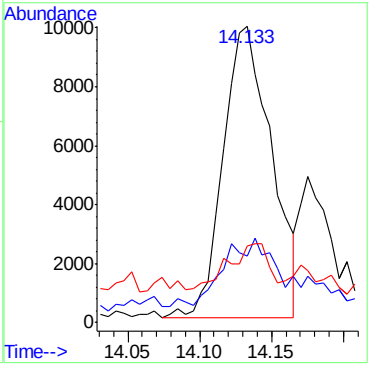


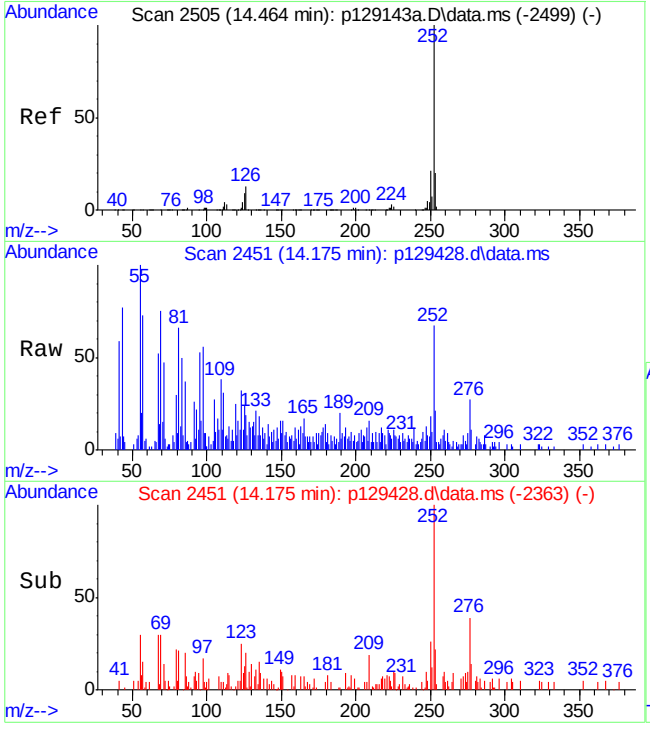


#93
Benzo[b]fluoranthene
Concen: 1.57 ppm
RT: 14.133 min Scan# 2443
Delta R.T. -0.016 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:252 Resp: 23000

Ion	Ratio	Lower	Upper
252	100		
253	14.1	0.0	51.9
125	12.2	0.0	43.1

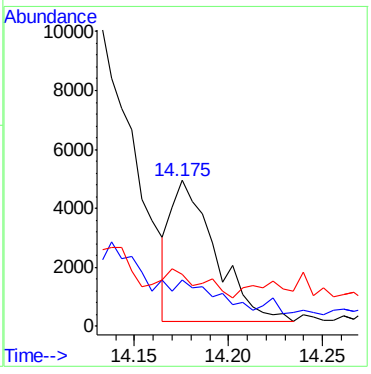


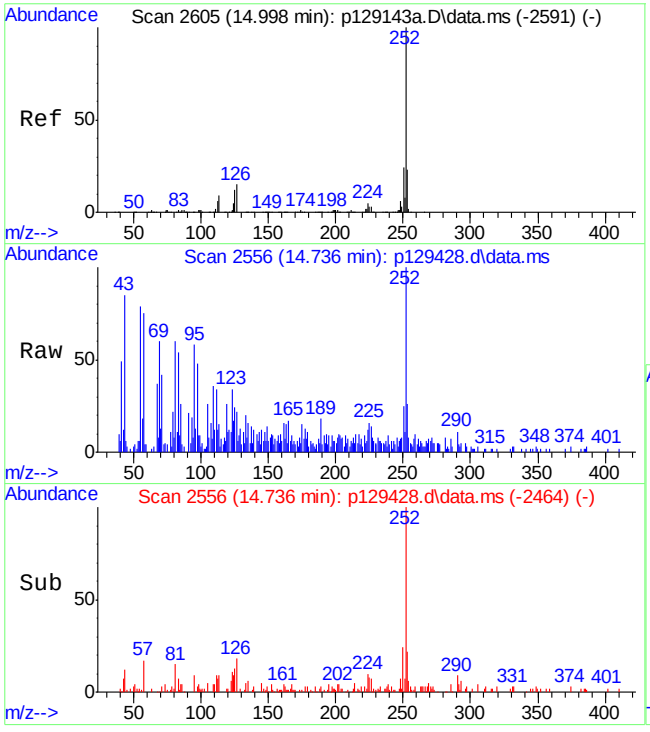


#94
Benzo[k]fluoranthene
Concen: 0.64 ppm
RT: 14.175 min Scan# 2451
Delta R.T. -0.032 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:252 Resp: 7828

Ion	Ratio	Lower	Upper
252	100		
253	16.1	0.0	51.5
125	11.2	0.0	42.3

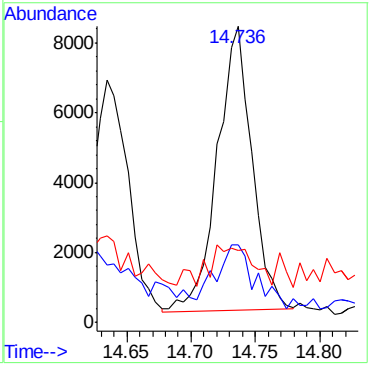


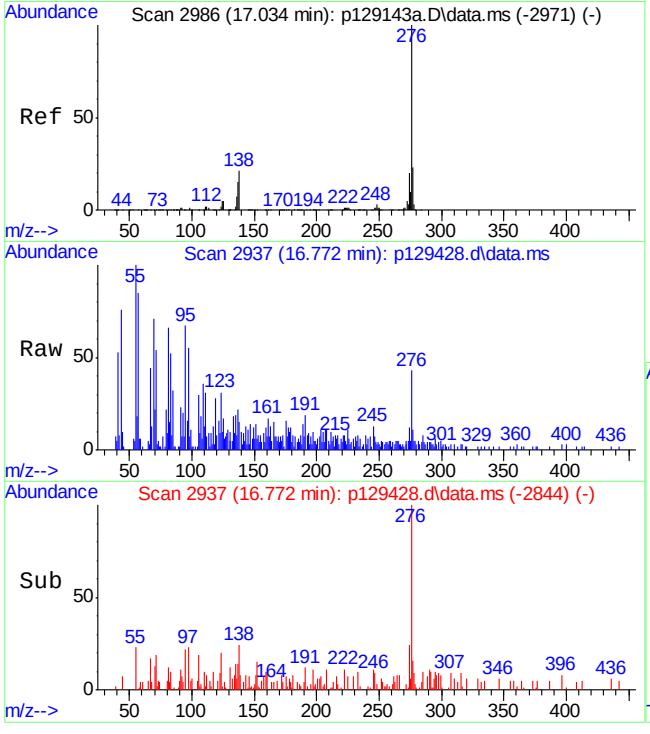


#95
Benzo[a]pyrene
Concen: 1.22 ppm
RT: 14.736 min Scan# 2556
Delta R.T. -0.011 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:252 Resp: 15158

Ion	Ratio	Lower	Upper
252	100		
253	16.5	0.0	51.5
125	11.6	0.0	43.4

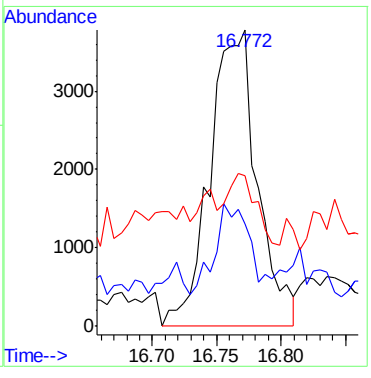


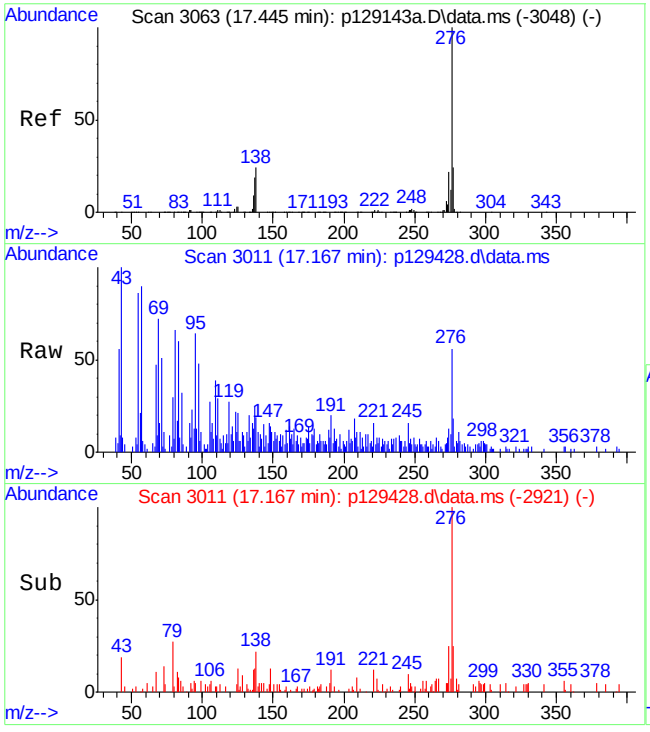


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.85 ppm
RT: 16.772 min Scan# 2937
Delta R.T. -0.006 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:276 Resp: 9666

Ion	Ratio	Lower	Upper
276	100		
138	18.2	0.0	55.8
137	15.9	0.0	48.2

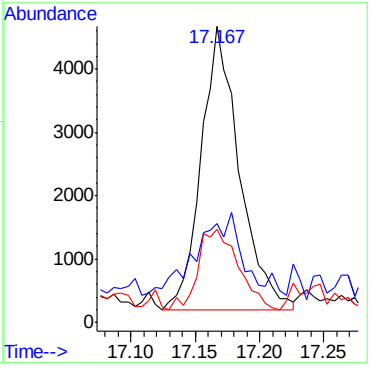




#100
Benzo[g,h,i]perylene
Concen: 0.81 ppm
RT: 17.167 min Scan# 3011
Delta R.T. -0.022 min
Lab File: p129428.d
Acq: 9 May 2019 1:27 pm

Tgt Ion:276 Resp: 9218

Ion	Ratio	Lower	Upper
276	100		
138	18.7	0.0	57.8
277	23.2	0.0	55.4



9.1.6

9

Manual Integration Approval Summary

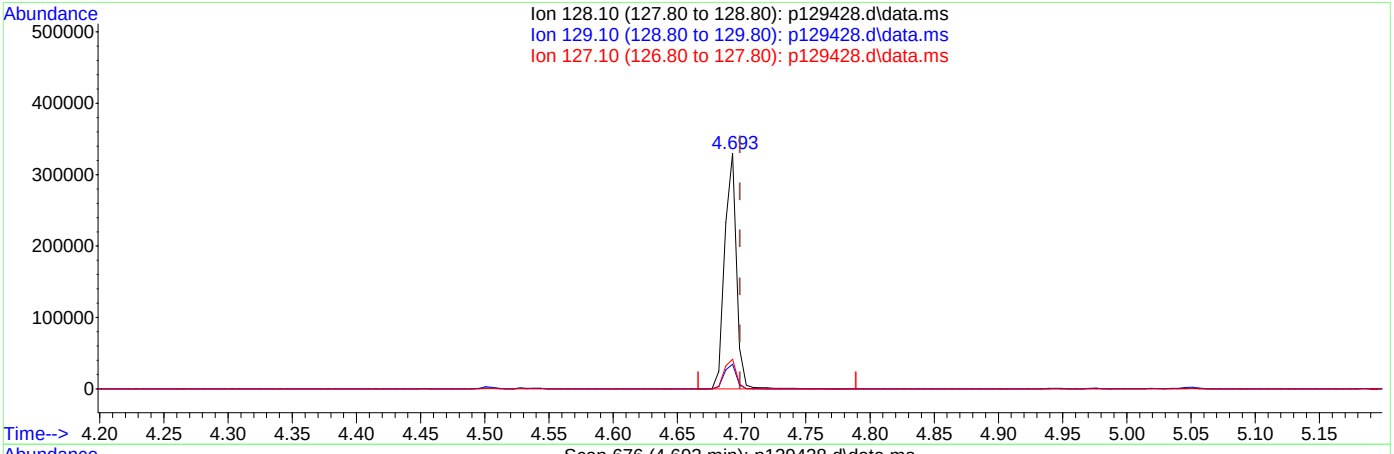
Sample Number:	JC87093-3	**Method:**	SW846 8270D
Lab FileID:	P129428.D	**Analyst approved:**	05/10/19 03:53 Jeryll Fabriene Reyes
Injection Time:	05/09/19 13:27	**Supervisor approved:**	05/13/19 19:29 Kristi Schollenberger

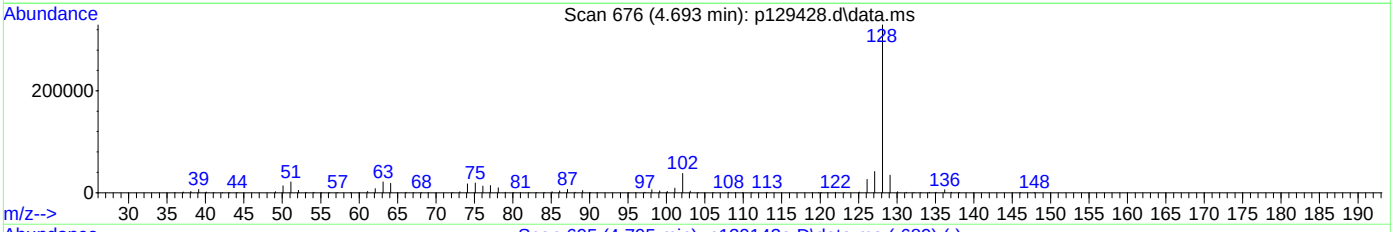
Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3		4.69	Poor instrument integration

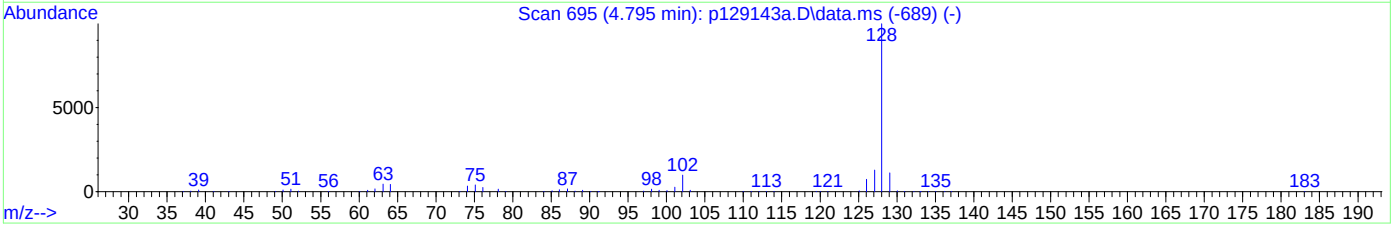
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129428.d
Acq On : 9 May 2019 1:27 pm
Operator : angelar
Sample : jc87093-3 Inst : MSVOAMSP
Misc : op20110,ep5858,31.7,,,1,5
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:01:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129428.d\data.ms

(38) Naphthalene (t)

4.693min (-0.006) 16.26ppm

response 212903

Ion	Exp%	Act%
128.10	100	100
129.10	10.70	10.49
127.10	12.80	12.65
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/13/19 11:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129416.d
Acq On : 8 May 2019 8:35 pm
Operator : angelar
Sample : jc87093-4 Inst : MSVOAMSP
Misc : op20110,ep5857,30.1,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:59:03 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.753	152	177079	40.00	ppm	0.00
24) Naphthalene-d8	4.688	136	597795	40.00	ppm	0.00
47) Acenaphthene-d10	5.932	164	308487	40.00	ppm	0.00
69) Phenanthrene-d10	7.332	188	540875	40.00	ppm	0.02
83) Chrysene-d12	11.985	240	475996	40.00	ppm	0.04
91) Perylene-d12	14.923	264	476359	40.00	ppm	0.05
101) 1,4-Dichlorobenzene-d4b	3.753	152	177079	40.00	ppm	0.00
103) Phenanthrene-d10b	7.332	188	540875	40.00	ppm	0.02
105) Chrysene-d12b	11.985	240	475996	40.00	ppm	0.04
107) Naphthalene-d8b	4.688	136	597795	40.00	ppm	0.00
109) Acenaphthene-d10b	5.932	164	308487	40.00	ppm	0.00
111) Chrysene-d12d	11.985	240	475996	40.00	ppm	0.04
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	183619	32.27	ppm	0.03
Spiked Amount 50.000			Recovery = 64.54%			
8) Phenol-d5	3.625	99	226977	31.42	ppm	0.03
Spiked Amount 50.000			Recovery = 62.84%			
25) Nitrobenzene-d5	4.175	82	213745	33.28	ppm	0.00
Spiked Amount 50.000			Recovery = 66.56%			
51) 2-Fluorobiphenyl	5.468	172	385250	39.41	ppm	0.00
Spiked Amount 50.000			Recovery = 78.82%			
73) 2,4,6-Tribromophenol	6.595	330	60474	33.60	ppm	0.00
Spiked Amount 50.000			Recovery = 67.20%			
85) Terphenyl-d14	9.955	244	412731	38.27	ppm	0.02
Spiked Amount 50.000			Recovery = 76.54%			
Target Compounds						Qvalue
18) Acetophenone	4.073	105	3174	0.37	ppm	78
21) 3&4-Methylphenol	4.175	108	39878	7.40	ppm	97
38) Naphthalene	4.704	128	400882	28.08	ppm	99
44) 2-Methylnaphthalene	5.201	141	81472	9.96	ppm	96
53) Biphenyl	5.537	154	20717	1.99	ppm	97
56) Acenaphthylene	5.831	152	70744	5.36	ppm	94
59) Acenaphthene	5.954	153	267398	32.96	ppm	96
62) Dibenzofuran	6.087	168	125093	10.17	ppm	97
66) Fluorene	6.365	166	239721	24.31	ppm	99
77) Phenanthrene	7.364	178	1118199	79.33	ppm	99
78) Anthracene	7.418	178	277050	18.82	ppm	99
79) Carbazole	7.679	167	50591	3.56	ppm	99
81) Fluoranthene	9.164	202	567334	32.63	ppm	97
84) Pyrene	9.528	202	596394	36.19	ppm	99
87) Benzo[a]anthracene	11.964	228	208039	13.26	ppm	96
89) Chrysene	12.033	228	214493	15.52	ppm	98
93) Benzo[b]fluoranthene	14.197	252	226410m	15.59	ppm	
94) Benzo[k]fluoranthene	14.240	252	69347	5.68	ppm	94
95) Benzo[a]pyrene	14.801	252	195773	15.94	ppm	99
96) Indeno[1,2,3-cd]pyrene	16.825	276	97425m	8.68	ppm	
98) Dibenz[a,h]anthracene	16.889	278	29050m	2.54	ppm	
100) Benzo[g,h,i]perylene	17.237	276	108476m	9.59	ppm	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

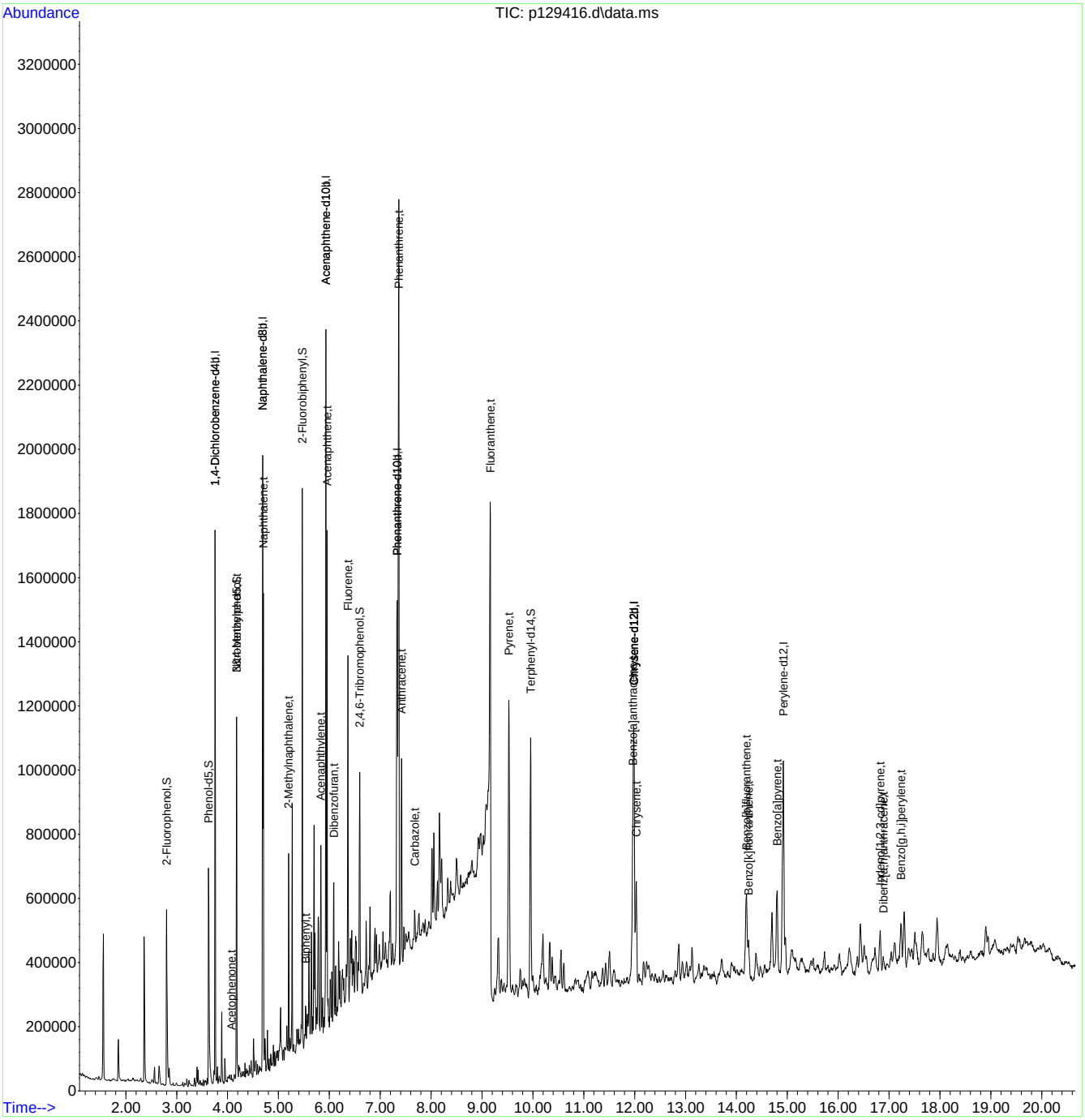
9.1.7

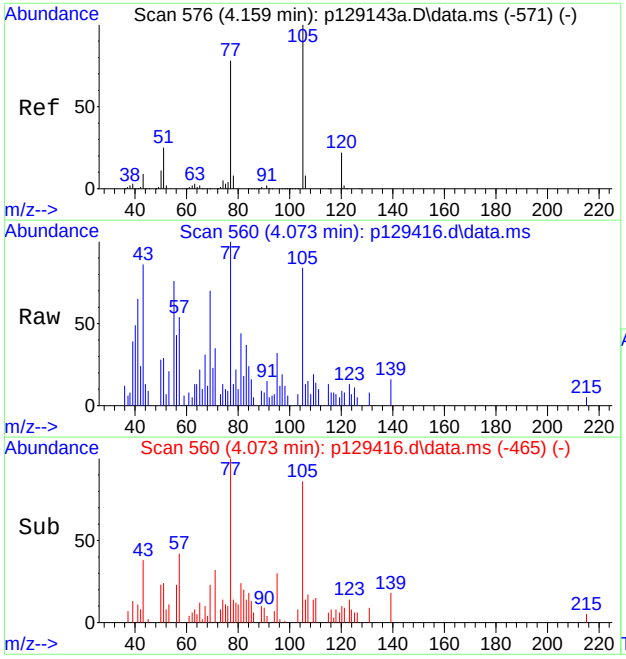
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129416.d
Acq On : 8 May 2019 8:35 pm
Operator : angelar
Sample : jc87093-4 Inst : MSVOAMSP
Misc : op20110,ep5857,30.1,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:59:03 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration

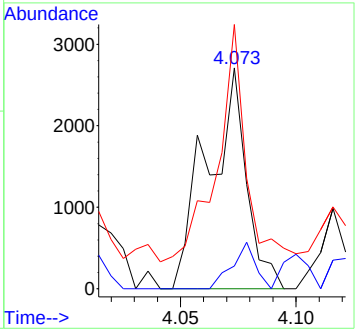


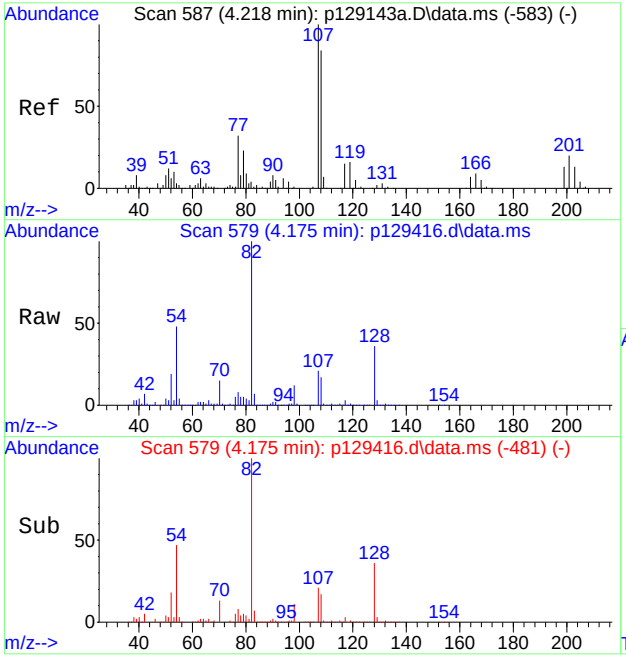


#18
Acetophenone
Concen: 0.37 ppm
RT: 4.073 min Scan# 560
Delta R.T. 0.005 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:105 Resp: 3174

Ion	Ratio	Lower	Upper
105	100		
120	4.3	0.0	50.5
77	104.4	56.6	116.6

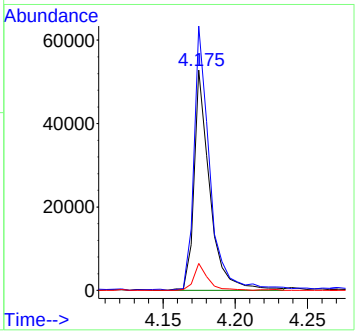




#21
3&4-Methylphenol
Concen: 7.40 ppm
RT: 4.175 min Scan# 579
Delta R.T. 0.021 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:108 Resp: 39878

Ion	Ratio	Lower	Upper
108	100		
107	119.5	87.0	147.0
90	12.3	0.0	40.2



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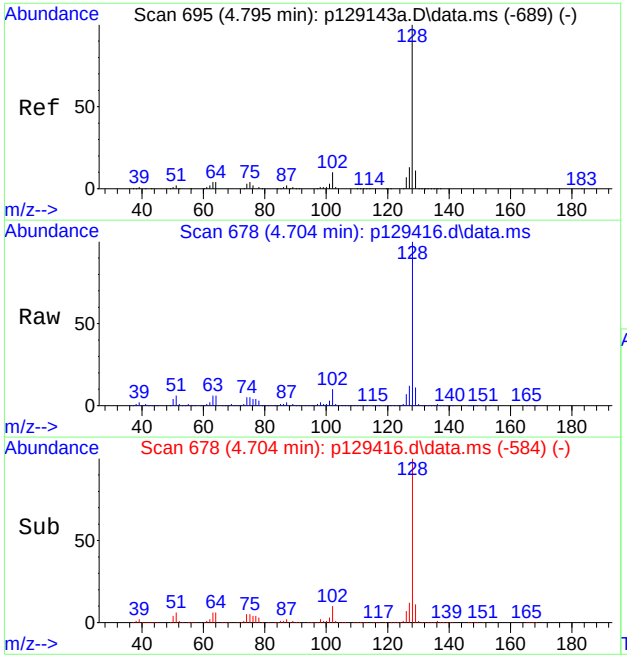
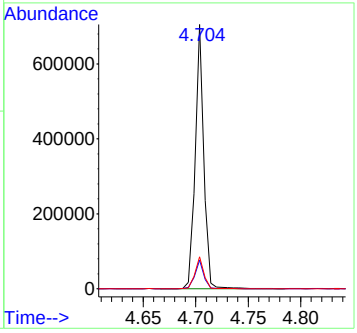
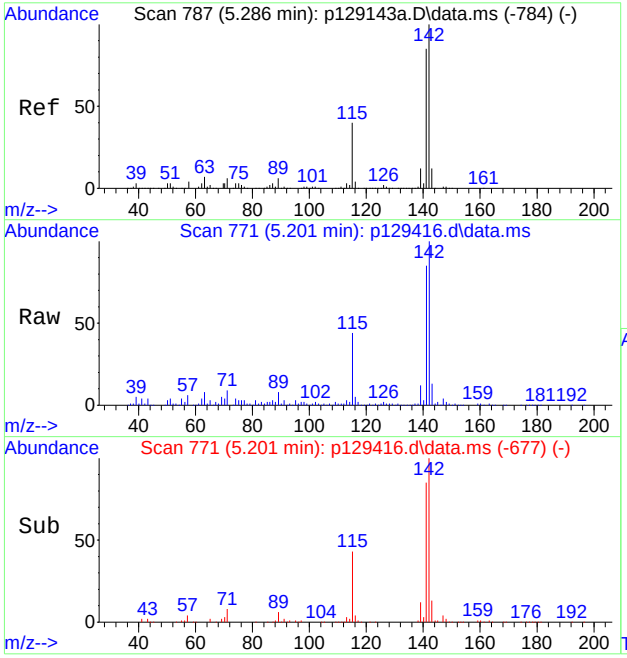


#38
Naphthalene
Concen: 28.08 ppm
RT: 4.704 min Scan# 678
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:128 Resp: 400882

Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	41.2
127	12.1	0.0	42.6

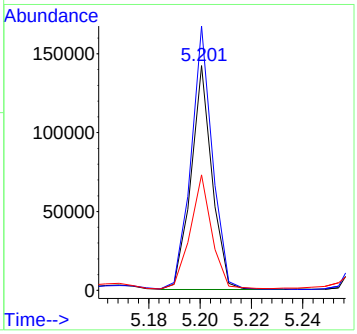


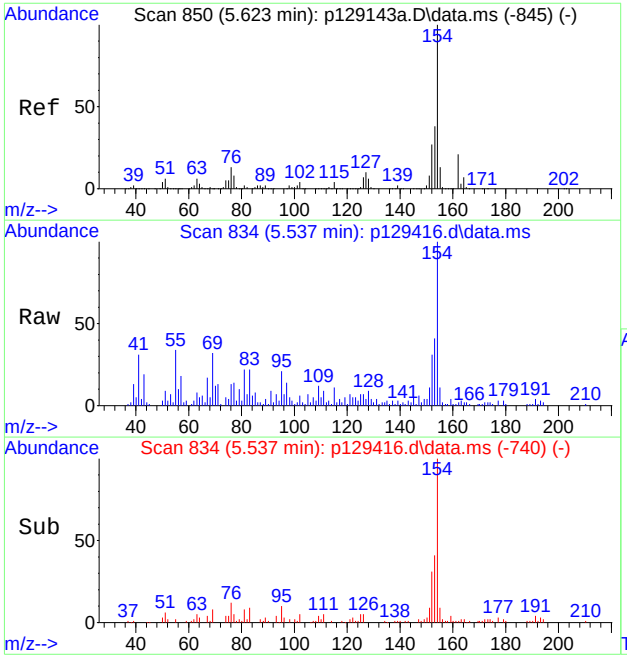


#44
2-Methylnaphthalene
Concen: 9.96 ppm
RT: 5.201 min Scan# 771
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:141 Resp: 81472

Ion	Ratio	Lower	Upper
141	100		
142	117.6	91.1	151.1
115	50.8	16.3	76.3

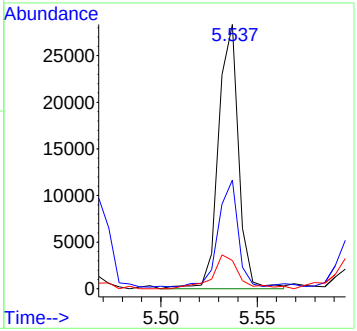


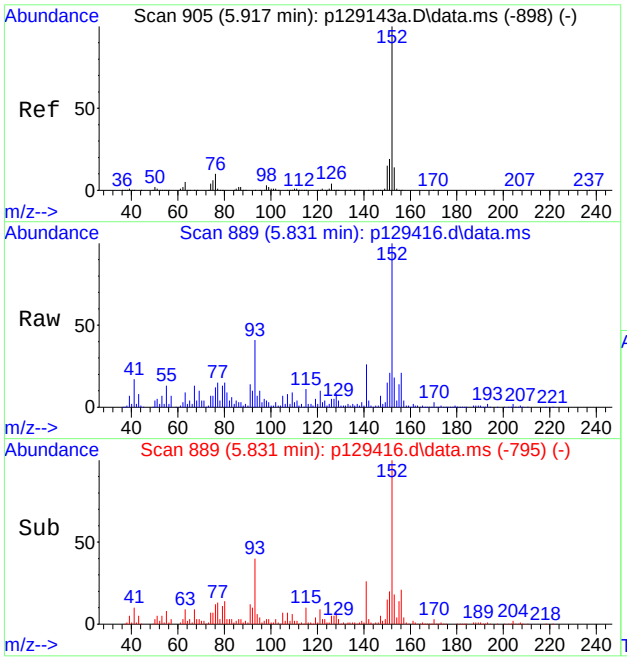


#53
Biphenyl
Concen: 1.99 ppm
RT: 5.537 min Scan# 834
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:154 Resp: 20717

Ion	Ratio	Lower	Upper
154	100		
153	39.9	8.6	68.6
155	10.3	0.0	43.1

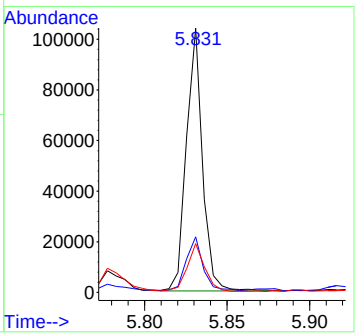


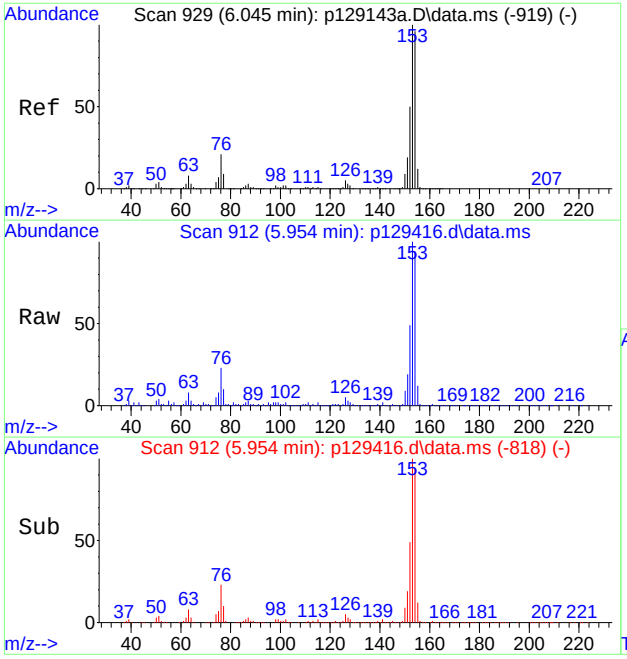


#56
Acenaphthylene
Concen: 5.36 ppm
RT: 5.831 min Scan# 889
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:152 Resp: 70744

Ion	Ratio	Lower	Upper
152	100		
151	20.4	0.0	49.5
153	18.1	0.0	42.9

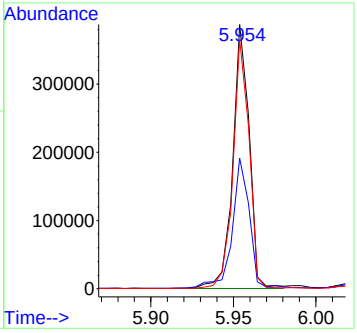


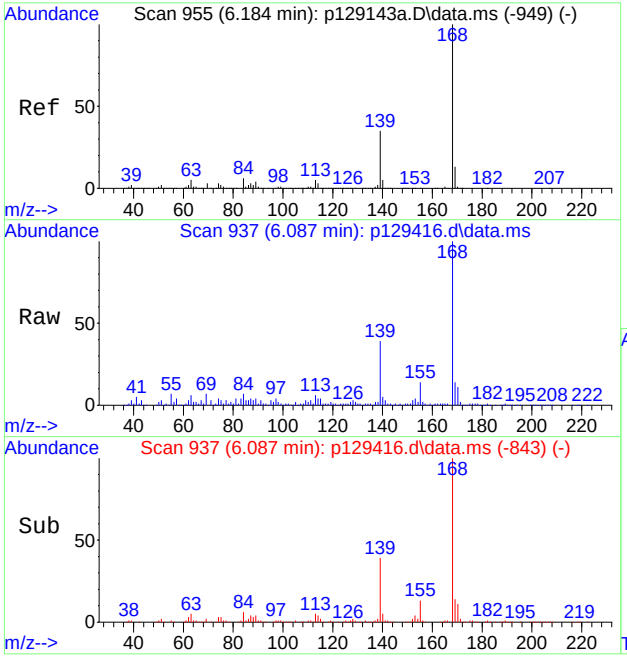


#59
Acenaphthene
Concen: 32.96 ppm
RT: 5.954 min Scan# 912
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:153 Resp: 267398

Ion	Ratio	Lower	Upper
153	100		
152	49.2	18.5	78.5
154	94.6	58.8	118.8

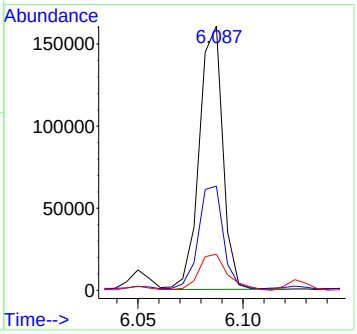




#62
Dibenzofuran
Concen: 10.17 ppm
RT: 6.087 min Scan# 937
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:168 Resp: 125093

Ion	Ratio	Lower	Upper
168	100		
139	38.8	6.4	66.4
169	12.8	0.0	43.3



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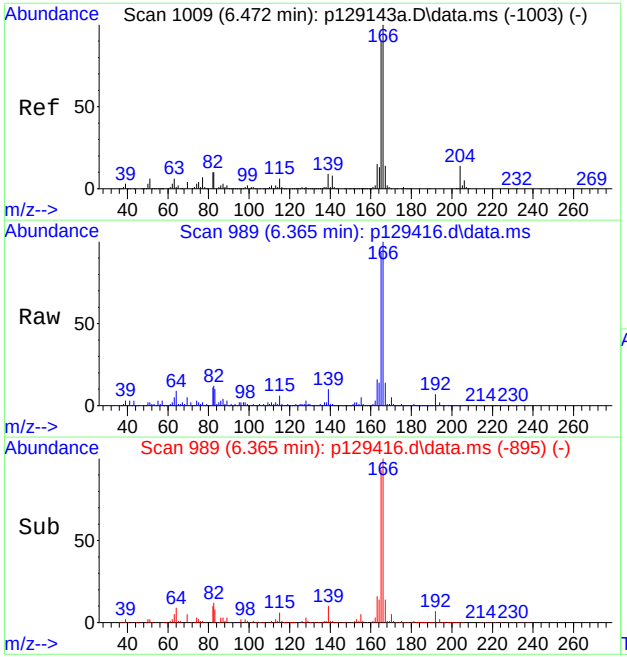
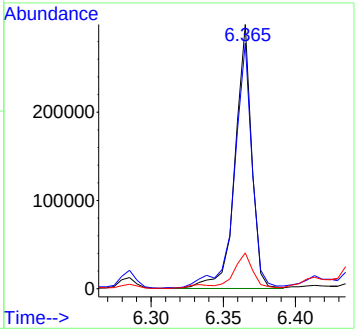
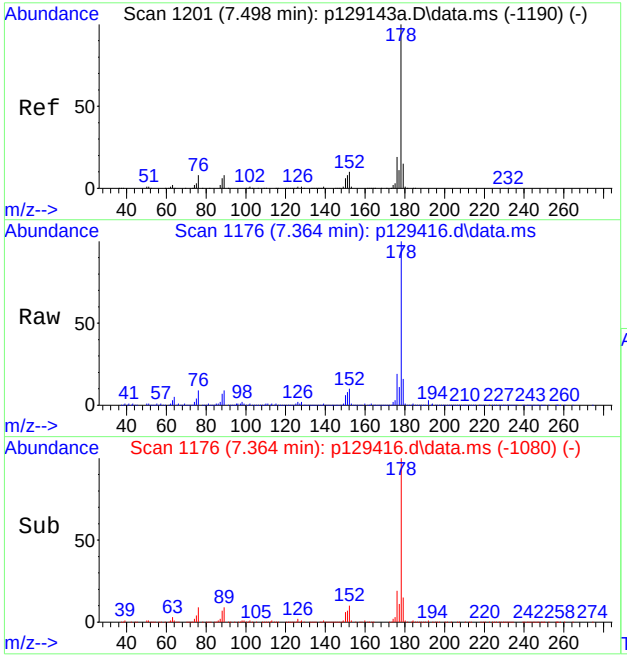


#66
Fluorene
Concen: 24.31 ppm
RT: 6.365 min Scan# 989
Delta R.T. -0.000 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:166 Resp: 239721

Ion	Ratio	Lower	Upper
166	100		
165	92.6	62.0	122.0
167	13.3	0.0	42.5

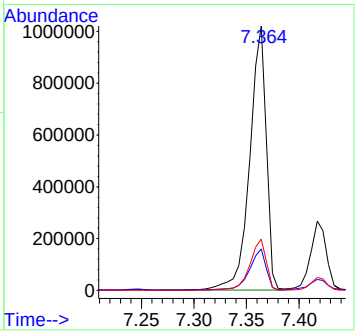


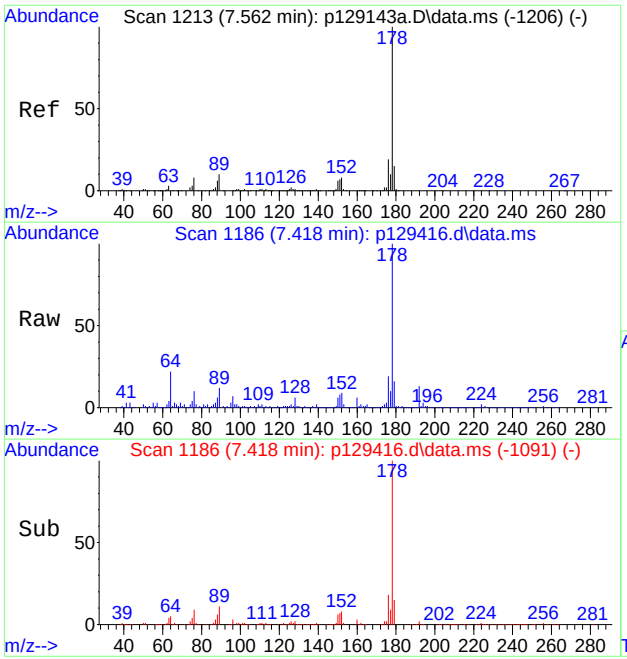


#77
Phenanthrene
Concen: 79.33 ppm
RT: 7.364 min Scan# 1176
Delta R.T. 0.011 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:178 Resp: 1118199

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	45.3
176	19.4	0.0	49.2

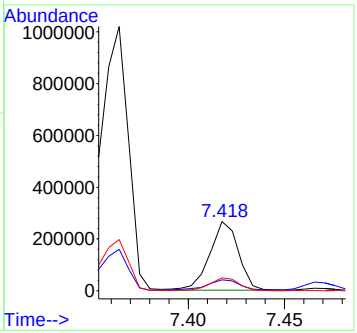


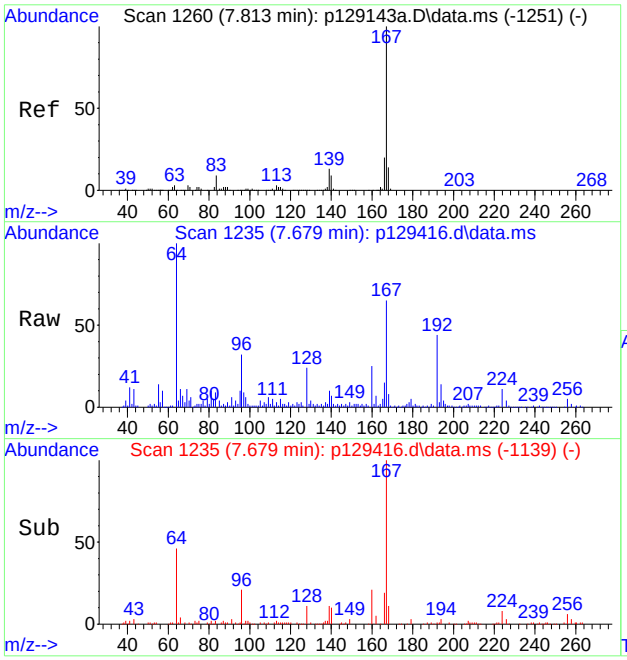


#78
Anthracene
Concen: 18.82 ppm
RT: 7.418 min Scan# 1186
Delta R.T. 0.005 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:178 Resp: 277050

Ion	Ratio	Lower	Upper
178	100		
179	14.8	0.0	45.4
176	18.6	0.0	48.9

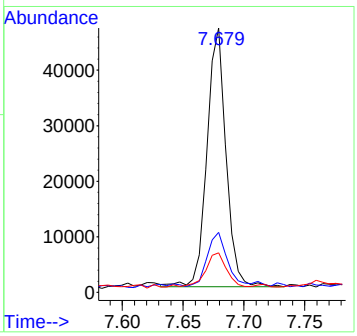




#79
Carbazole
Concen: 3.56 ppm
RT: 7.679 min Scan# 1235
Delta R.T. 0.011 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:167 Resp: 50591

Ion	Ratio	Lower	Upper
167	100		
166	20.3	0.0	50.6
139	13.2	0.0	43.3



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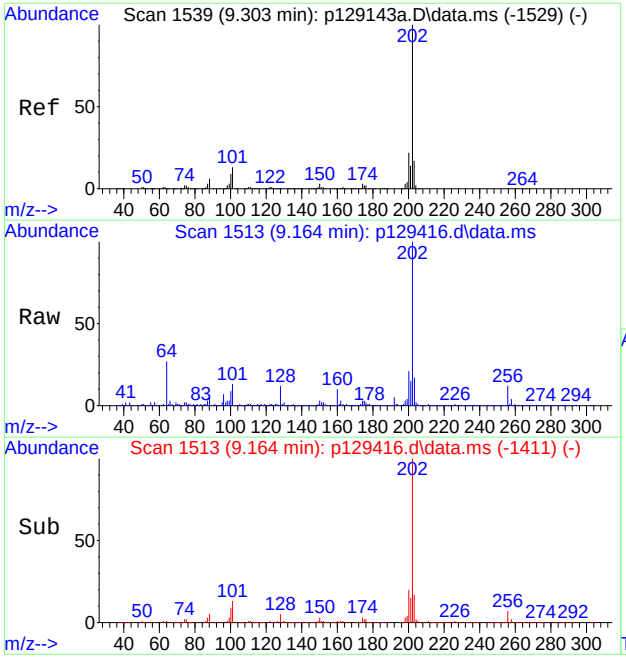
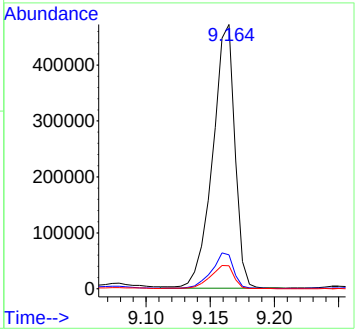
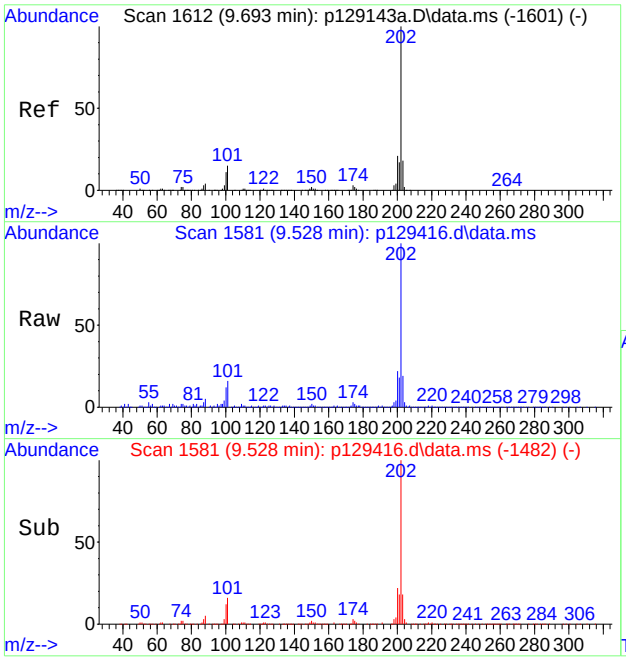


#81
Fluoranthene
Concen: 32.63 ppm
RT: 9.164 min Scan# 1513
Delta R.T. 0.043 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:202 Resp: 567334

Ion	Ratio	Lower	Upper
202	100		
101	12.8	0.0	44.1
100	8.7	0.0	40.0

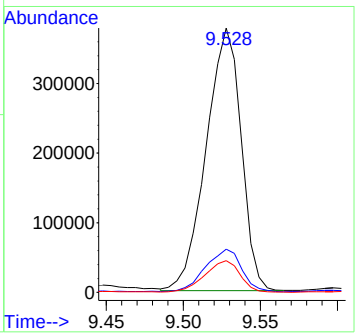


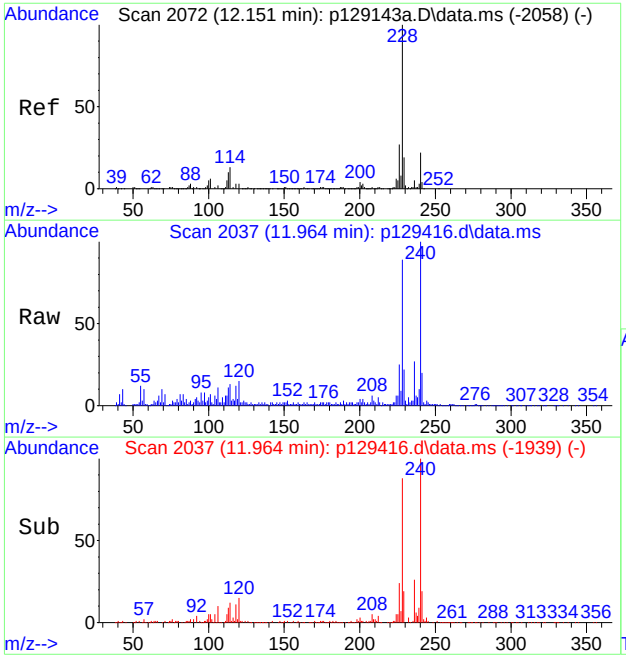


#84
Pyrene
Concen: 36.19 ppm
RT: 9.528 min Scan# 1581
Delta R.T. 0.027 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:202 Resp: 596394

Ion	Ratio	Lower	Upper
202	100		
101	16.2	0.0	46.5
100	12.0	0.0	42.4

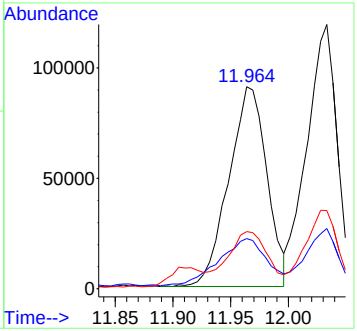


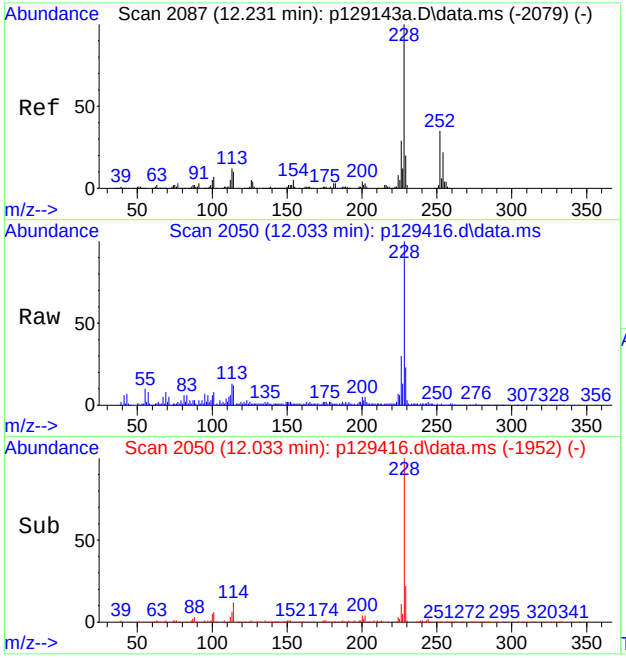


#87
Benzo[a]anthracene
Concen: 13.26 ppm
RT: 11.964 min Scan# 2037
Delta R.T. 0.021 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:228 Resp: 208039

Ion	Ratio	Lower	Upper
228	100		
229	22.4	0.0	49.8
226	25.7	0.0	57.1

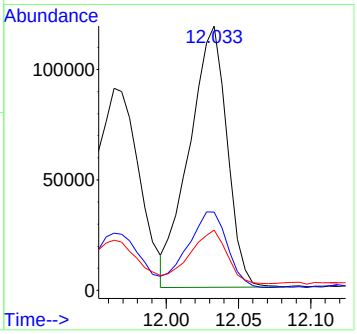


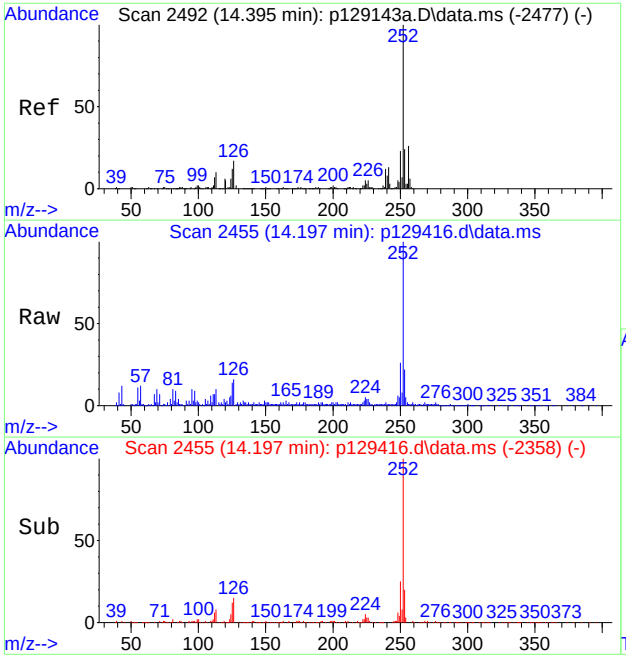


#89
Chrysene
Concen: 15.52 ppm
RT: 12.033 min Scan# 2050
Delta R.T. 0.021 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:228 Resp: 214493

Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.1	60.1
229	20.0	0.0	49.6

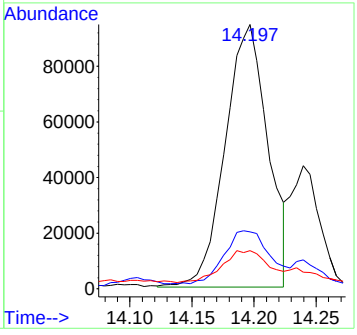


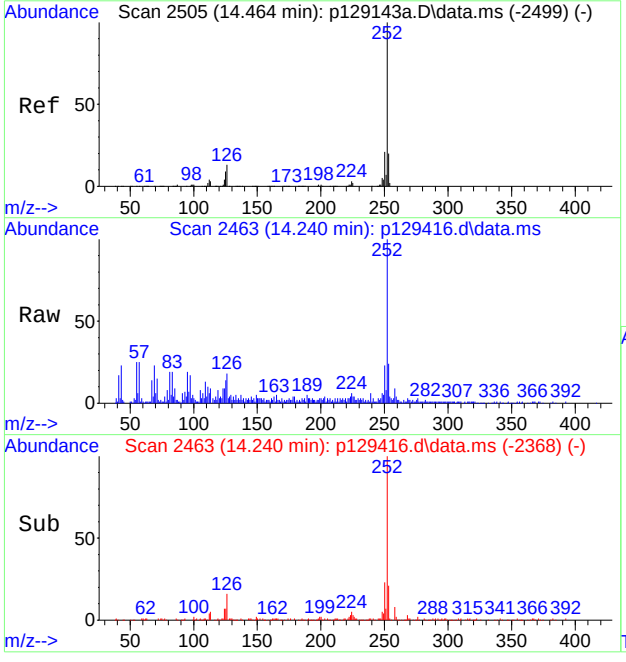


#93
Benzo[b]fluoranthene
Concen: 15.59 ppm m
RT: 14.197 min Scan# 2455
Delta R.T. 0.016 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:252 Resp: 226410

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	53.1
125	14.4	0.0	42.5

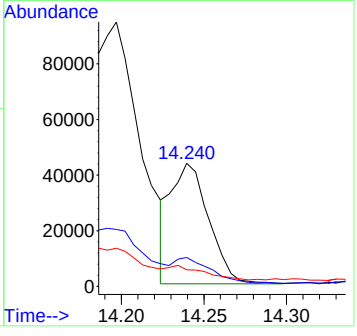




#94
Benzo[k]fluoranthene
Concen: 5.68 ppm
RT: 14.240 min Scan# 2463
Delta R.T. 0.005 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:252 Resp: 69347

Ion	Ratio	Lower	Upper
252	100		
253	20.6	0.0	49.8
125	5.8	0.0	40.7



9.1.7

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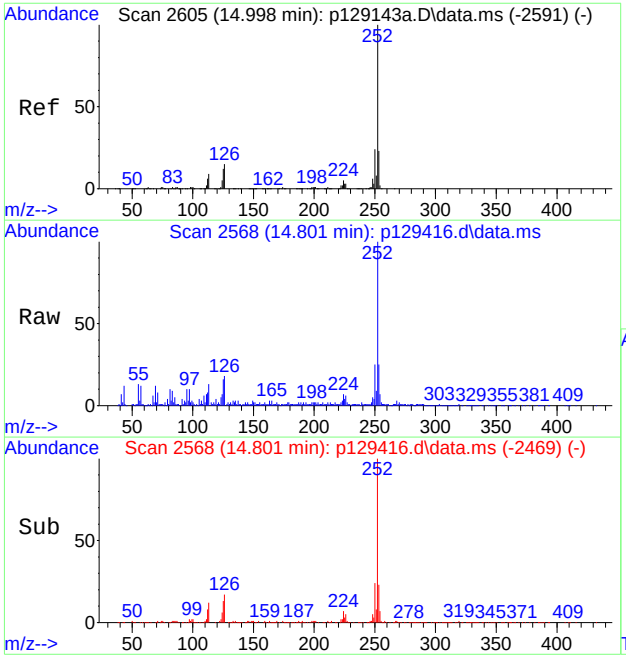
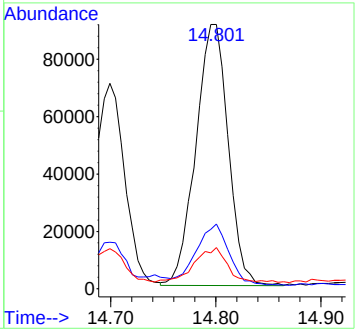
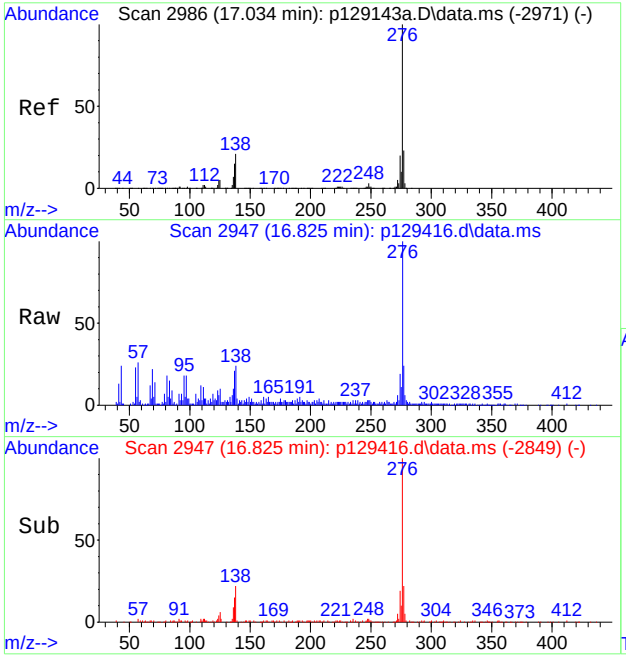


#95
Benzo[a]pyrene
Concen: 15.94 ppm
RT: 14.801 min Scan# 2568
Delta R.T. 0.027 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:252 Resp: 195773

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.7
125	12.8	0.0	42.2

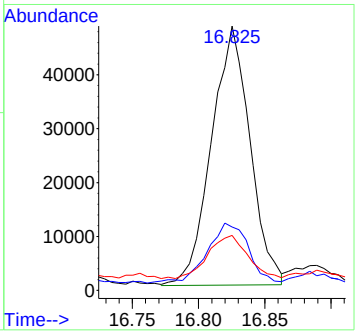


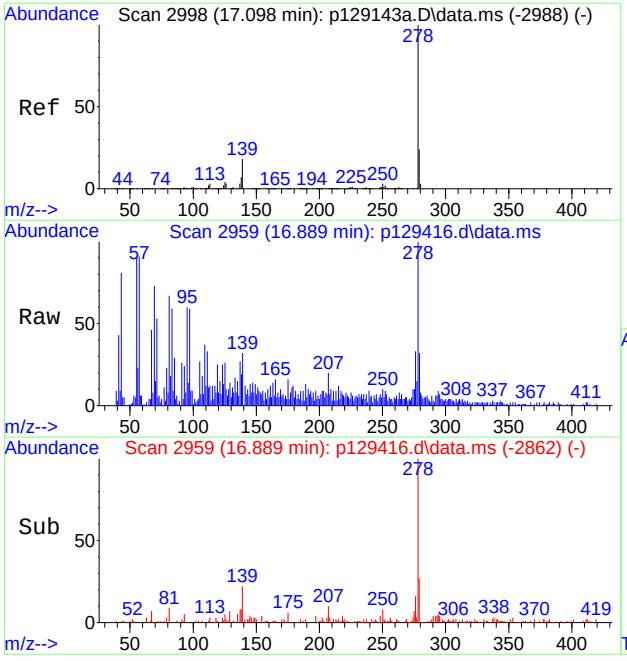


#96
Indeno[1,2,3-cd]pyrene
Concen: 8.68 ppm m
RT: 16.825 min Scan# 2947
Delta R.T. 0.021 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:276 Resp: 97425

Ion	Ratio	Lower	Upper
276	100		
138	23.9	0.0	54.3
137	20.8	0.0	47.2

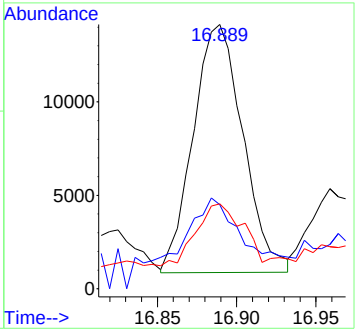


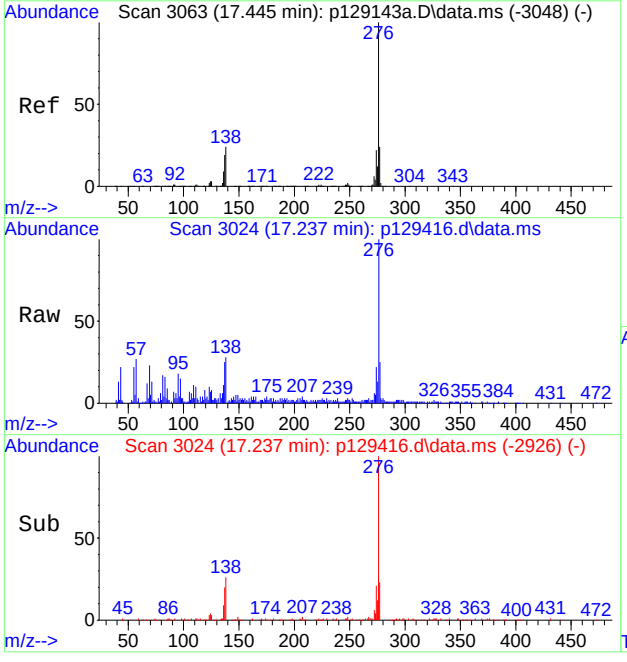


#98
Dibenz[a,h]anthracene
Concen: 2.54 ppm m
RT: 16.889 min Scan# 2959
Delta R.T. 0.016 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:278 Resp: 29050

Ion	Ratio	Lower	Upper
278	100		
139	31.8	0.0	50.8
279	32.1	0.0	54.1

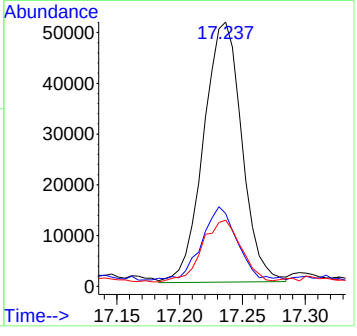




#100
Benzo[g,h,i]perylene
Concen: 9.59 ppm m
RT: 17.237 min Scan# 3024
Delta R.T. 0.021 min
Lab File: p129416.d
Acq: 8 May 2019 8:35 pm

Tgt Ion:276 Resp: 108476

Ion	Ratio	Lower	Upper
276	100		
138	27.6	0.0	55.5
277	25.0	0.0	53.2



Manual Integration Approval Summary

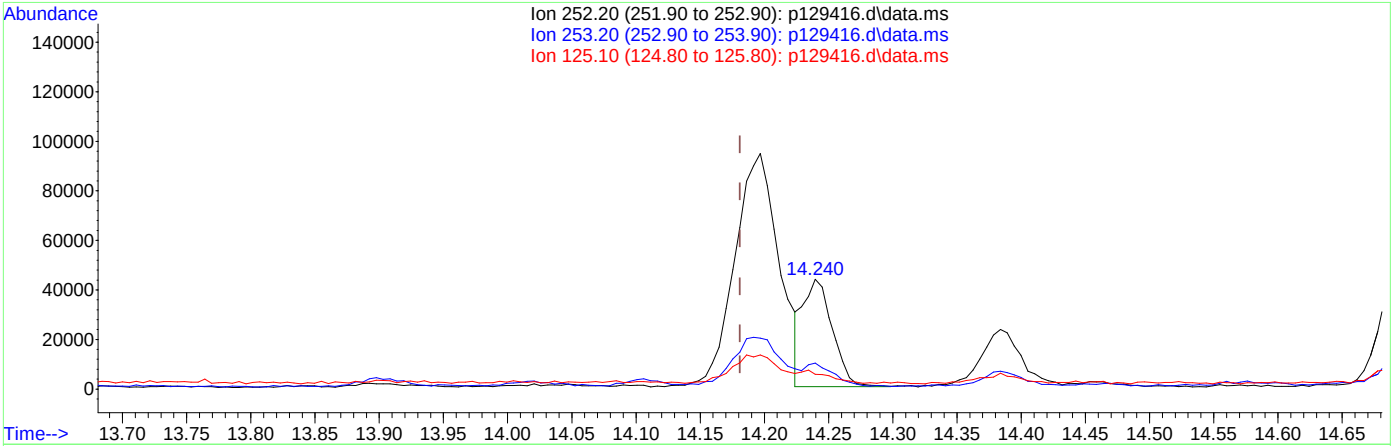
Sample Number:	JC87093-4	**Method:**	SW846 8270D
Lab FileID:	P129416.D	**Analyst approved:**	05/08/19 23:09 Michelle Co
Injection Time:	05/08/19 20:35	**Supervisor approved:**	05/13/19 11:34 Nancy Ma

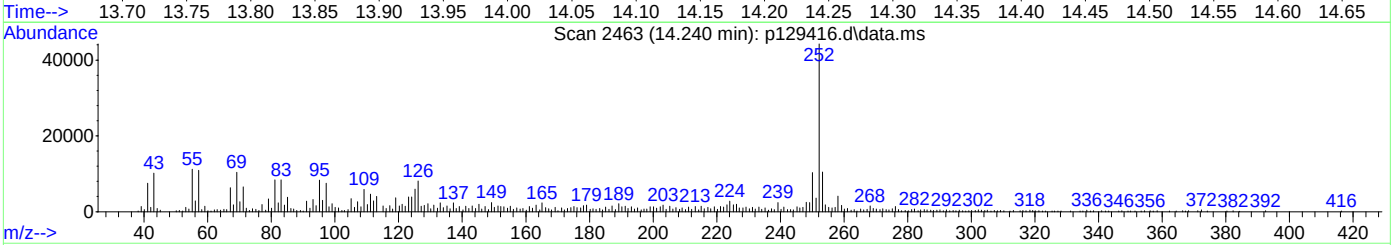
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		14.20	Poor instrument integration
Indeno(1,2,3-cd)pyrene	193-39-5		16.83	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		16.89	Poor instrument integration
Benzo(g,h,i)perylene	191-24-2		17.24	Poor instrument integration

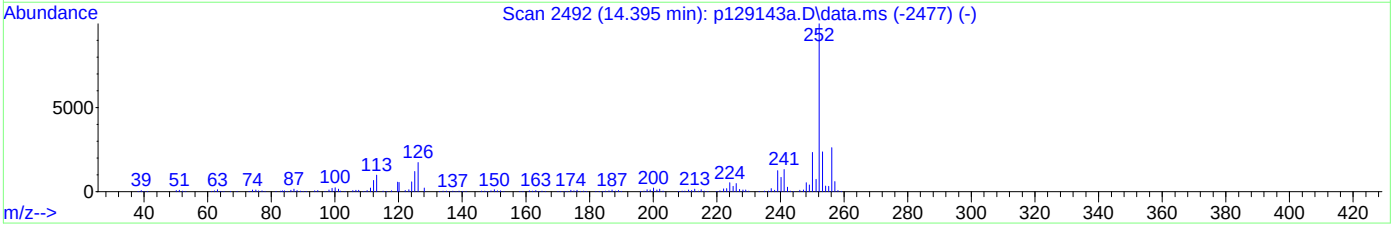
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129416.d
Acq On : 8 May 2019 8:35 pm
Operator : angelar
Sample : jc87093-4 Inst : MSVOAMSP
Misc : op20110,ep5857,30.1,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 21:42:18 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129416.d\data.ms

(93) Benzo[b]fluoranthene (t)

14.240min (+0.059) 4.78ppm

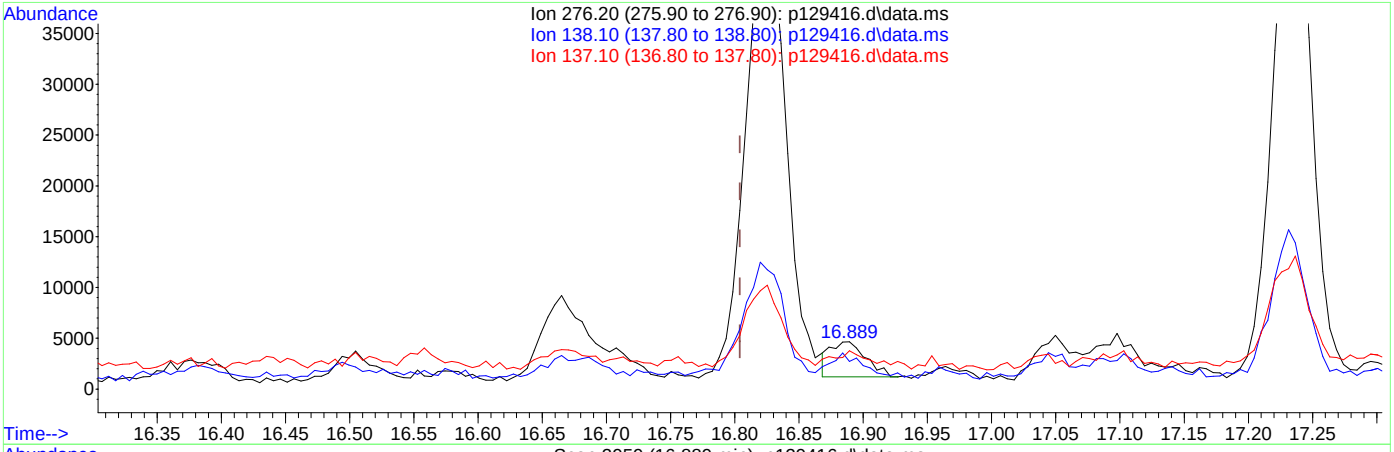
response 69347

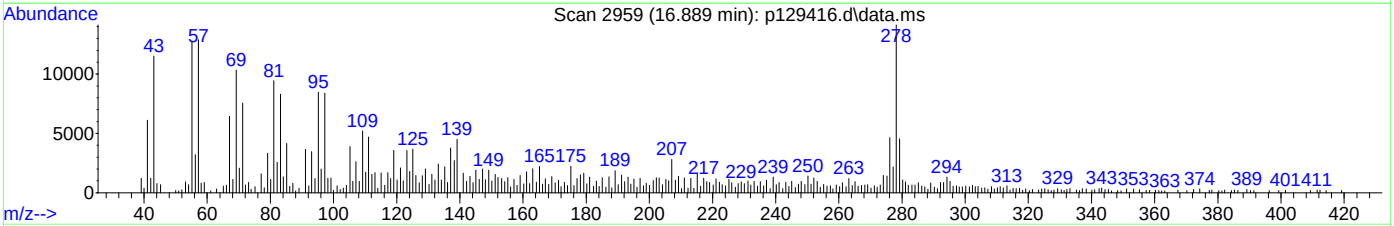
Ion	Exp%	Act%
252.20	100	100
253.20	23.10	20.56
125.10	12.50	5.77
0.00	0.00	0.00

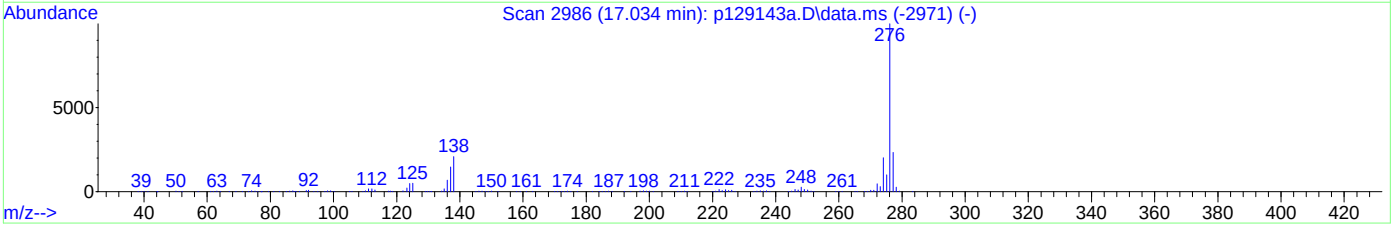
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129416.d
Acq On : 8 May 2019 8:35 pm
Operator : angelar
Sample : jc87093-4 Inst : MSVOAMSP
Misc : op20110,ep5857,30.1,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 21:42:18 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129416.d\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

16.889min (+0.085) 0.58ppm

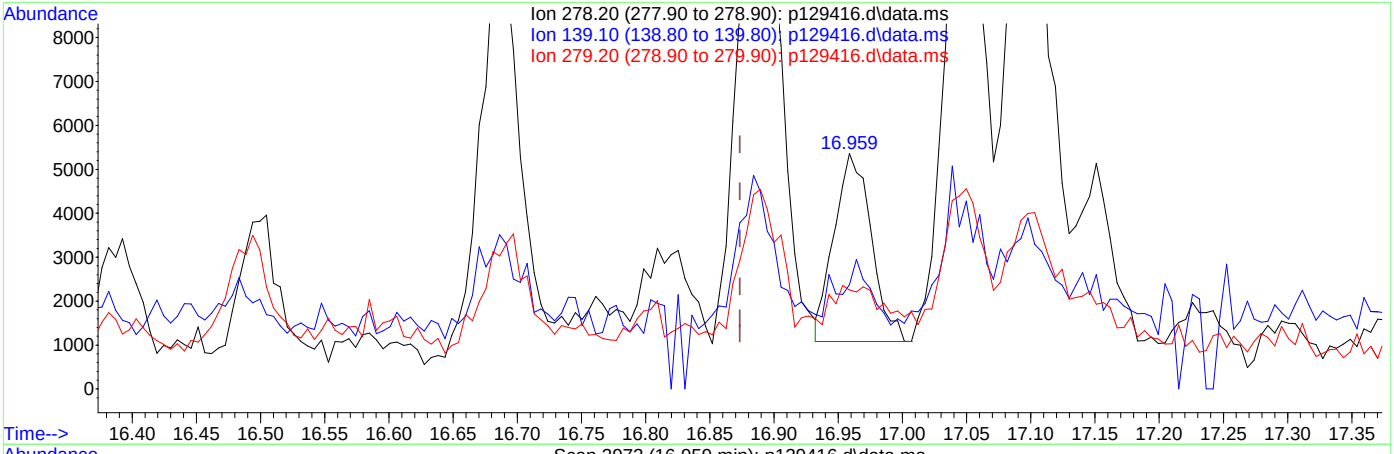
response 6564

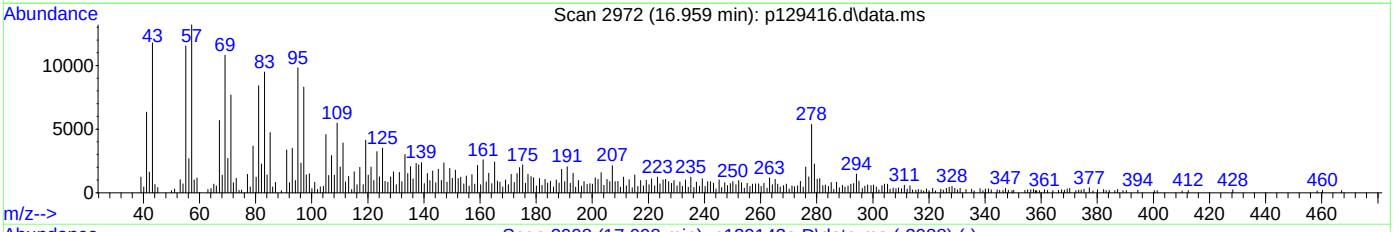
Ion	Exp%	Act%
276.20	100	100
138.10	24.30	36.45
137.10	17.20	41.20
0.00	0.00	0.00

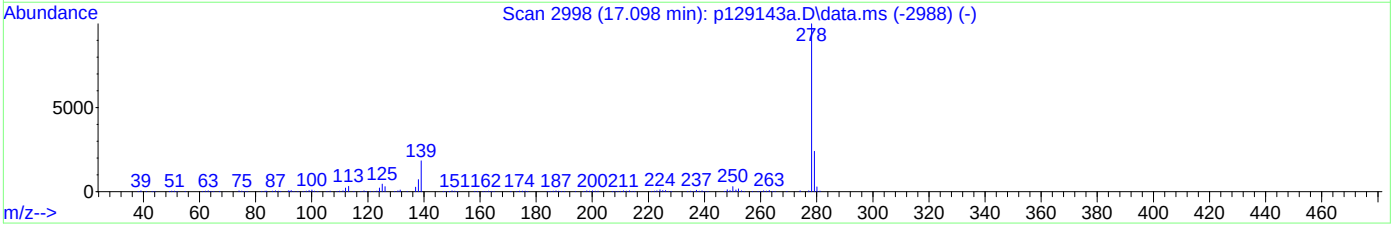
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129416.d
Acq On : 8 May 2019 8:35 pm
Operator : angelar
Sample : jc87093-4 Inst : MSVOAMSP
Misc : op20110,ep5857,30.1,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 21:42:18 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129416.d\data.ms

(98) Dibenz[a,h]anthracene (t)

16.959min (+0.085) 0.75ppm

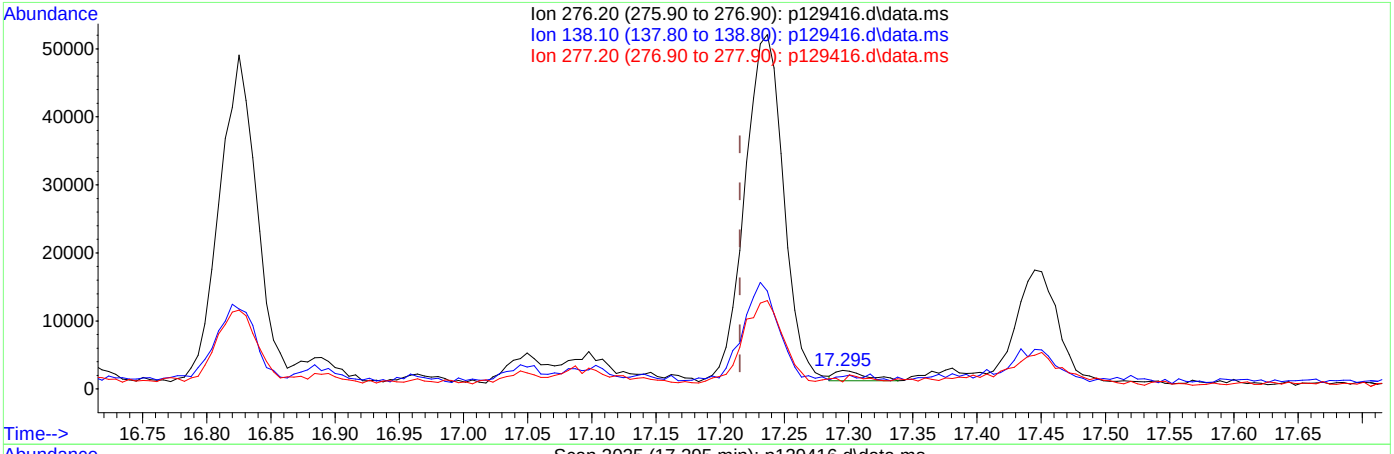
response 8601

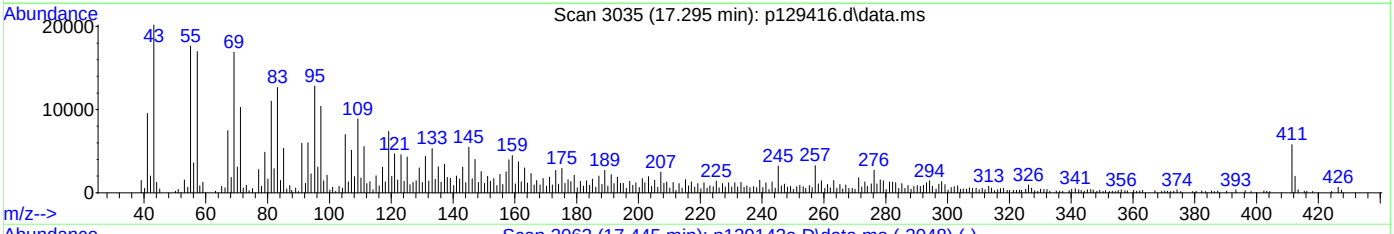
Ion	Exp%	Act%
278.20	100	100
139.10	20.80	15.84
279.20	24.10	14.30
0.00	0.00	0.00

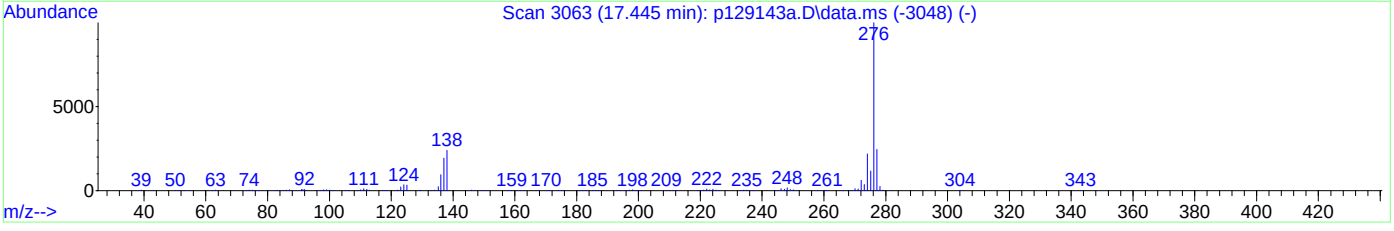
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129416.d
Acq On : 8 May 2019 8:35 pm
Operator : angelar
Sample : jc87093-4 Inst : MSVOAMSP
Misc : op20110,ep5857,30.1,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 21:42:18 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129416.d\data.ms

(100) Benzo[g,h,i]perylene (t)

17.295min (+0.080) 0.22ppm

response 2543

Ion	Exp%	Act%
276.20	100	100
138.10	25.50	25.02
277.20	23.20	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:30

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129431.d
Acq On : 9 May 2019 6:55 pm
Operator : angelar
Sample : jc87093-5
Misc : op20110,ep5858,30.4,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 19:49:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.753	152	171364	40.00	ppm	0.01
24) Naphthalene-d8	4.688	136	579519	40.00	ppm	0.00
47) Acenaphthene-d10	5.933	164	300944	40.00	ppm	0.01
69) Phenanthrene-d10	7.332	188	532688	40.00	ppm	0.02
83) Chrysene-d12	12.001	240	471721	40.00	ppm	0.06
91) Perylene-d12	14.950	264	482344	40.00	ppm	0.08
101) 1,4-Dichlorobenzene-d4b	3.753	152	171364	40.00	ppm	0.01
103) Phenanthrene-d10b	7.332	188	532688	40.00	ppm	0.02
105) Chrysene-d12b	12.001	240	471721	40.00	ppm	0.06
107) Naphthalene-d8b	4.688	136	579519	40.00	ppm	0.00
109) Acenaphthene-d10b	5.933	164	300944	40.00	ppm	0.01
111) Chrysene-d12d	12.001	240	471721	40.00	ppm	0.06
System Monitoring Compounds						
5) 2-Fluorophenol	2.786	112	183252	33.28	ppm	0.00
Spiked Amount 50.000			Recovery	=	66.56%	
8) Phenol-d5	3.614	99	237400	33.95	ppm	0.00
Spiked Amount 50.000			Recovery	=	67.90%	
25) Nitrobenzene-d5	4.175	82	217465	34.93	ppm	0.00
Spiked Amount 50.000			Recovery	=	69.86%	
51) 2-Fluorobiphenyl	5.468	172	403718	42.34	ppm	0.00
Spiked Amount 50.000			Recovery	=	84.68%	
73) 2,4,6-Tribromophenol	6.595	330	60135	33.93	ppm	0.01
Spiked Amount 50.000			Recovery	=	67.86%	
85) Terphenyl-d14	9.961	244	412280	38.57	ppm	0.04
Spiked Amount 50.000			Recovery	=	77.14%	
Target Compounds						Qvalue
18) Acetophenone	4.074	105	2356m	0.28	ppm	
21) 3&4-Methylphenol	4.164	108	59218	11.35	ppm	99
38) Naphthalene	4.704	128	425350m	30.74	ppm	
44) 2-Methylnaphthalene	5.201	141	84375	10.64	ppm	95
53) Biphenyl	5.532	154	24194	2.39	ppm	99
56) Acenaphthylene	5.831	152	70977	5.51	ppm	97
59) Acenaphthene	5.954	153	213086	26.92	ppm	98
62) Dibenzofuran	6.082	168	101045	8.42	ppm	94
66) Fluorene	6.365	166	167050m	17.37	ppm	
77) Phenanthrene	7.364	178	763880	55.03	ppm	99
78) Anthracene	7.423	178	209554	14.45	ppm	99
79) Carbazole	7.680	167	26846	1.92	ppm	98
81) Fluoranthene	9.159	202	515062	30.08	ppm	96
84) Pyrene	9.533	202	581787	35.62	ppm	98
87) Benzo[a]anthracene	11.980	228	192040	12.35	ppm	95
89) Chrysene	12.044	228	198141	14.47	ppm	98
93) Benzo[b]fluoranthene	14.219	252	197547	13.44	ppm	99
94) Benzo[k]fluoranthene	14.261	252	52875	4.27	ppm	97
95) Benzo[a]pyrene	14.822	252	165522	13.31	ppm	95
96) Indeno[1,2,3-cd]pyrene	16.852	276	81760	7.19	ppm	97
98) Dibenz[a,h]anthracene	16.911	278	22905	1.98	ppm	84

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129431.d
Acq On : 9 May 2019 6:55 pm
Operator : angelar
Sample : jc87093-5
Misc : op20110,ep5858,30.4,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 19:49:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) Benzo[g,h,i]perylene	17.264	276	89260	7.79 ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

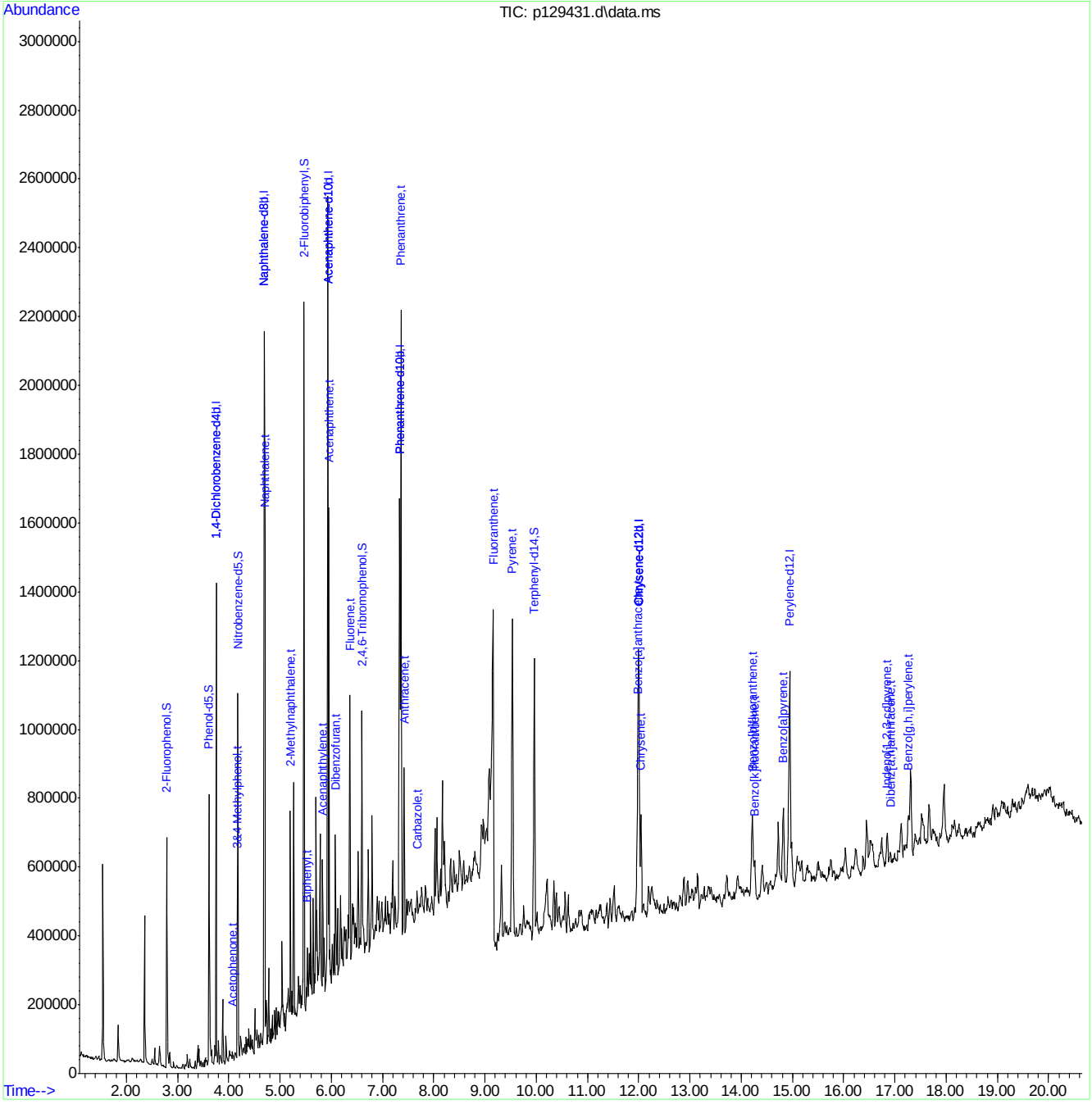
9.1.8

9

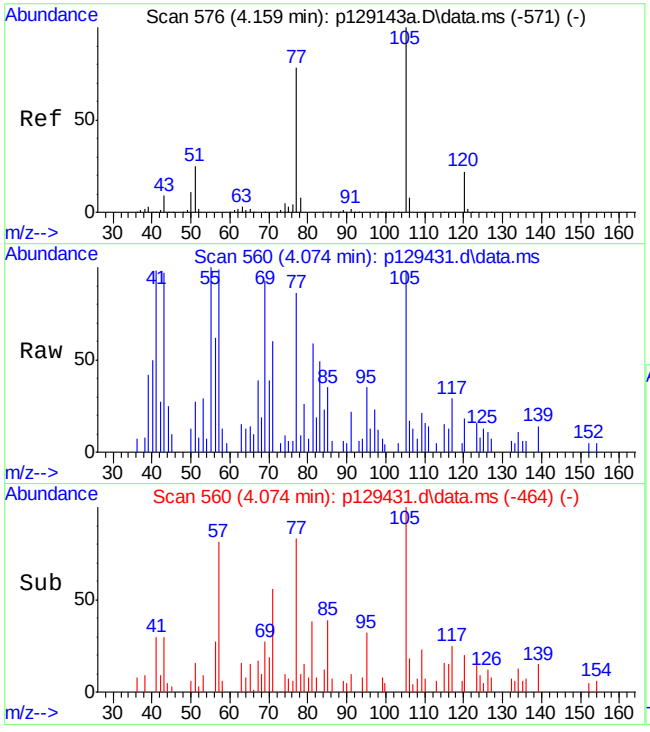
Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129431.d
Acq On : 9 May 2019 6:55 pm
Operator : angelar
Sample : jc87093-5
Misc : op20110,ep5858,30.4,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 13 19:49:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration



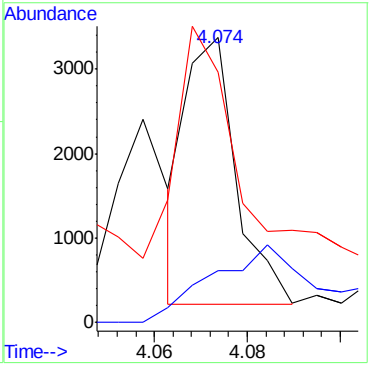
MP5844.M Mon May 13 19:50:07 2019 MANAGER

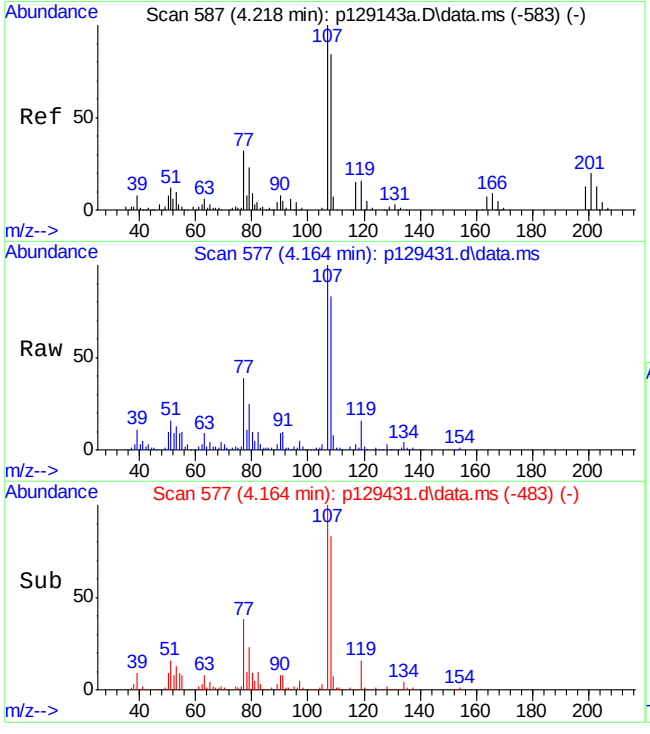


#18
Acetophenone
Concen: 0.28 ppm m
RT: 4.074 min Scan# 560
Delta R.T. 0.011 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:105 Resp: 2356

Ion	Ratio	Lower	Upper
105	100		
120	18.3	0.0	50.5
77	87.6	56.6	116.6

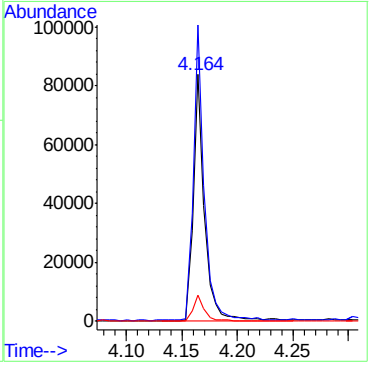


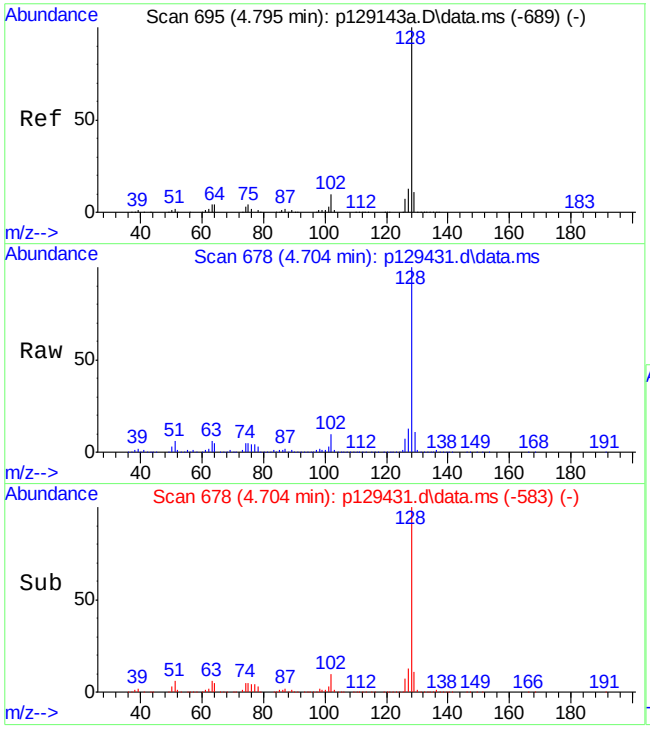


#21
3&4-Methylphenol
Concen: 11.35 ppm
RT: 4.164 min Scan# 577
Delta R.T. 0.000 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:108 Resp: 59218

Ion	Ratio	Lower	Upper
108	100		
107	119.9	88.8	148.8
90	10.5	0.0	41.5

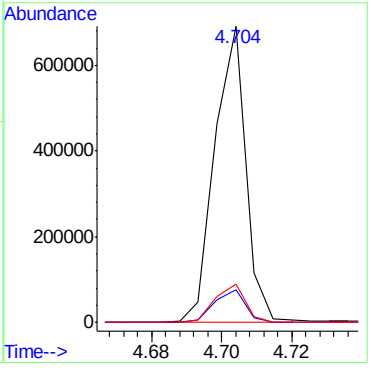


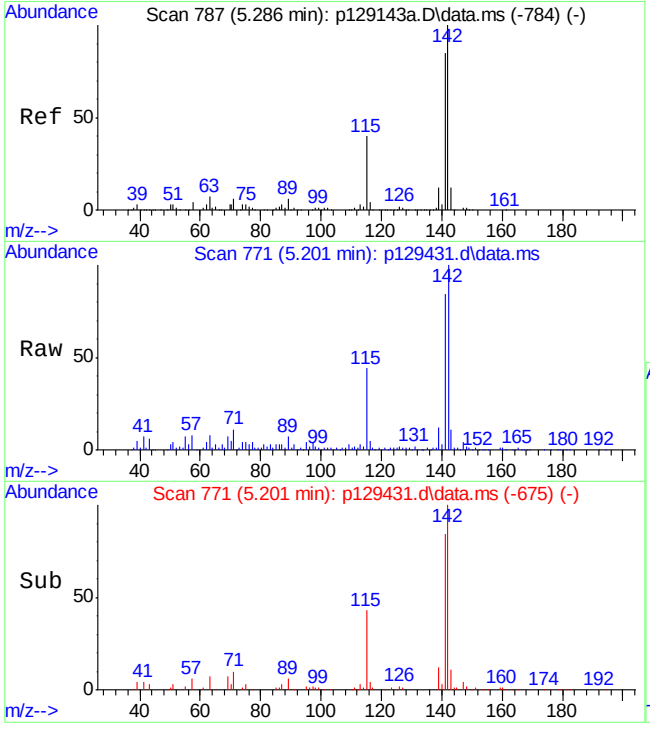


#38
Naphthalene
Concen: 30.74 ppm m
RT: 4.704 min Scan# 678
Delta R.T. 0.005 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:128 Resp: 425350

Ion	Ratio	Lower	Upper
128	100		
129	11.1	0.0	40.7
127	12.9	0.0	42.8

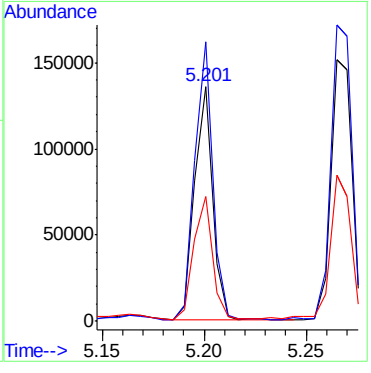


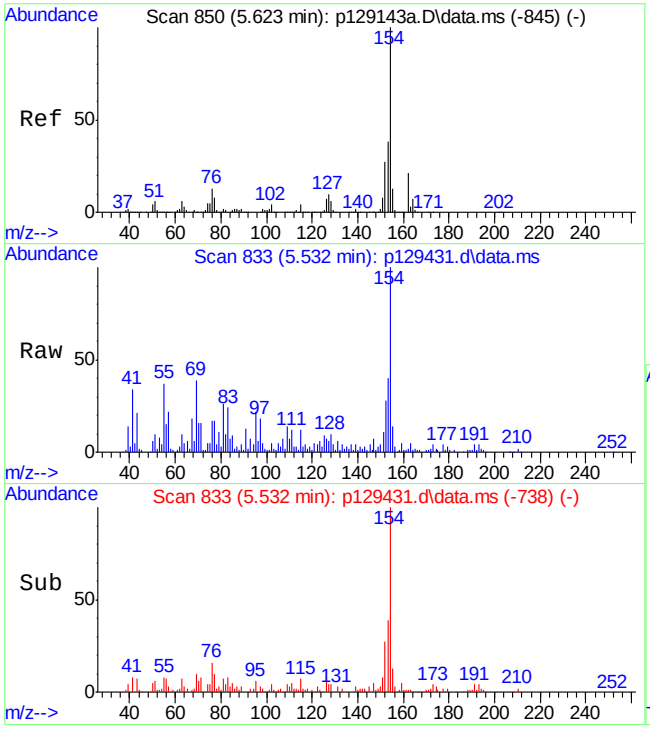


#44
2-Methylnaphthalene
Concen: 10.64 ppm
RT: 5.201 min Scan# 771
Delta R.T. 0.011 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:141 Resp: 84375

Ion	Ratio	Lower	Upper
141	100		
142	118.9	95.6	155.6
115	51.8	20.0	80.0

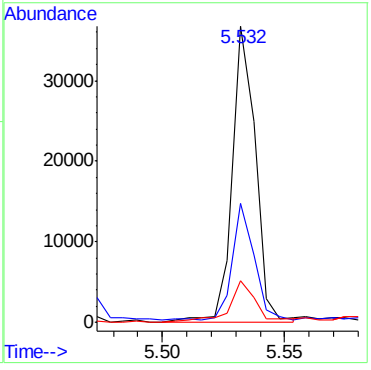


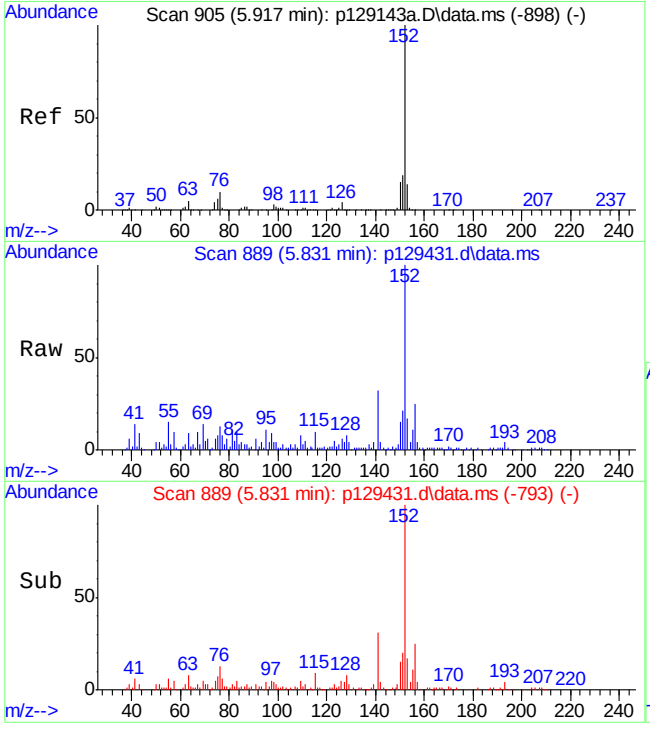


#53
Biphenyl
Concen: 2.39 ppm
RT: 5.532 min Scan# 833
Delta R.T. 0.005 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:154 Resp: 24194

Ion	Ratio	Lower	Upper
154	100		
153	39.4	10.2	70.2
155	13.5	0.0	43.3

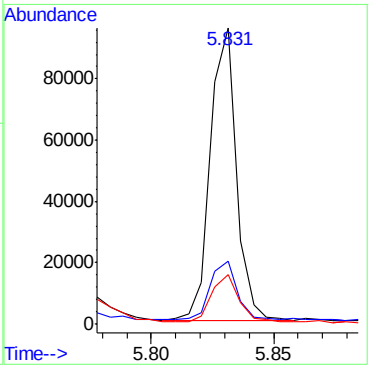


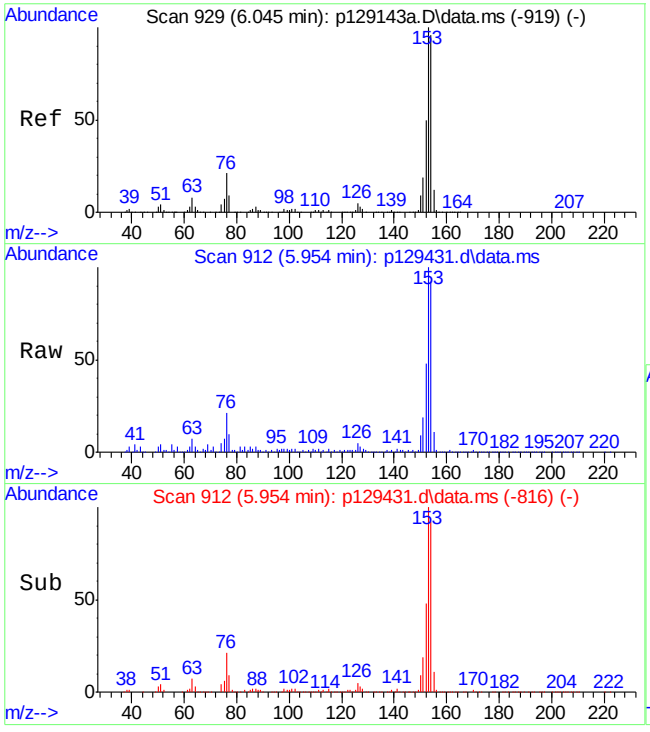


#56
Acenaphthylene
Concen: 5.51 ppm
RT: 5.831 min Scan# 889
Delta R.T. 0.011 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:152 Resp: 70977

Ion	Ratio	Lower	Upper
152	100		
151	19.6	0.0	49.4
153	16.1	0.0	43.1

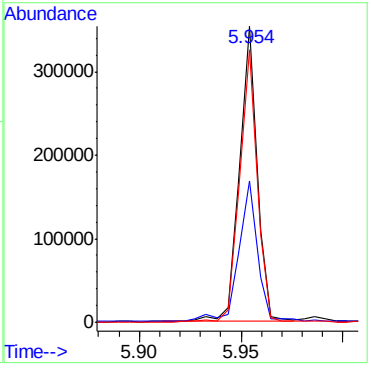


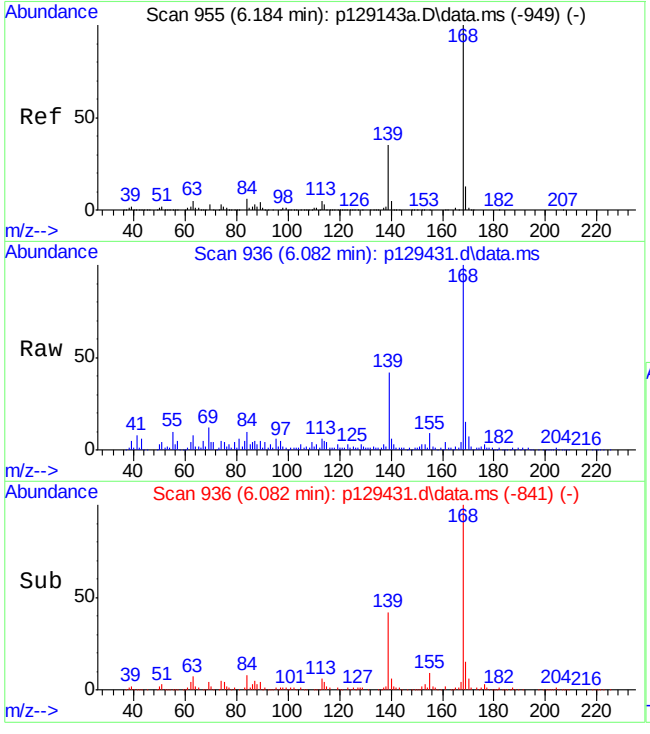


#59
Acenaphthene
Concen: 26.92 ppm
RT: 5.954 min Scan# 912
Delta R.T. 0.011 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:153 Resp: 213086

Ion	Ratio	Lower	Upper
153	100		
152	47.4	19.7	79.7
154	92.5	61.3	121.3

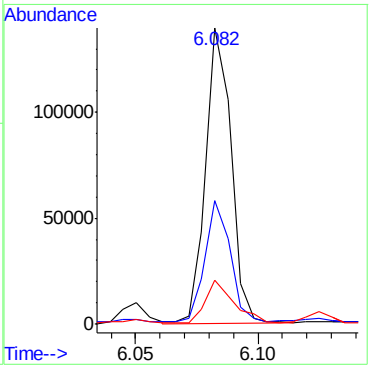


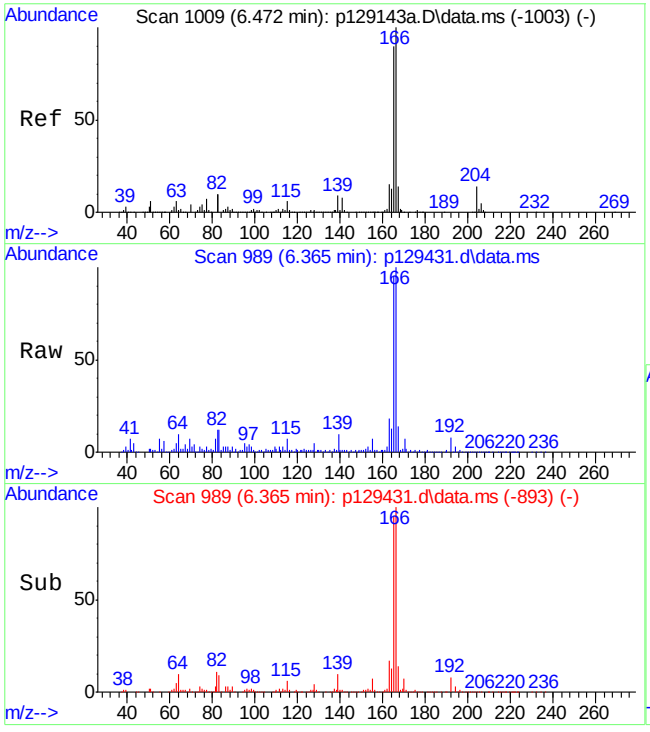


#62
Dibenzofuran
Concen: 8.42 ppm
RT: 6.082 min Scan# 936
Delta R.T. 0.005 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:168 Resp: 101045

Ion	Ratio	Lower	Upper
168	100		
139	41.1	6.5	66.5
169	14.2	0.0	43.5

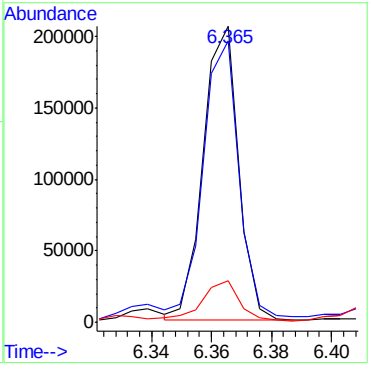


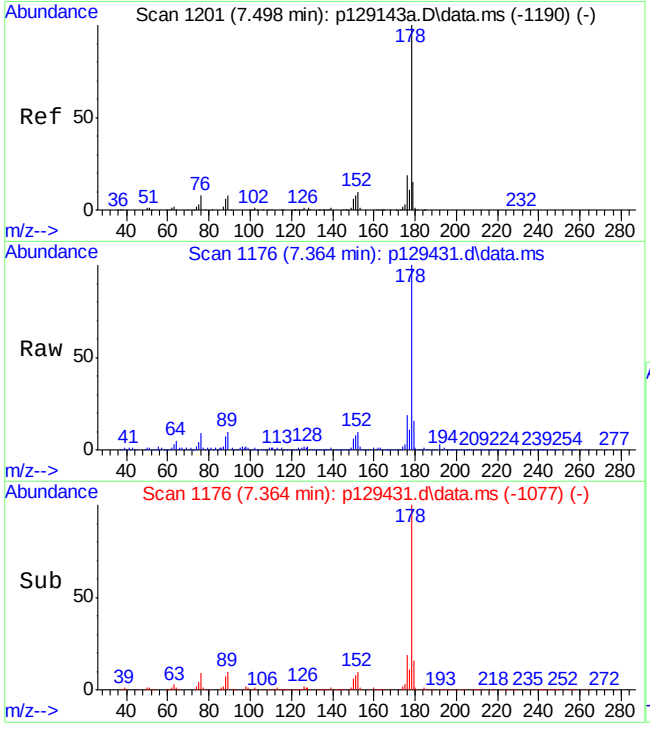


#66
Fluorene
Concen: 17.37 ppm m
RT: 6.365 min Scan# 989
Delta R.T. 0.011 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:166 Resp: 167050

Ion	Ratio	Lower	Upper
166	100		
165	95.1	63.7	123.7
167	13.9	0.0	43.1

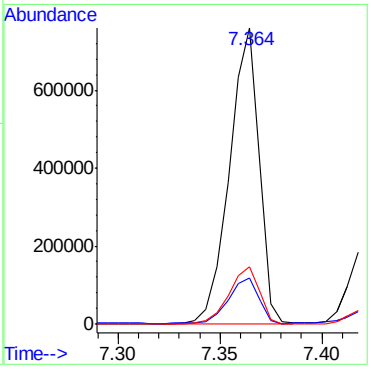


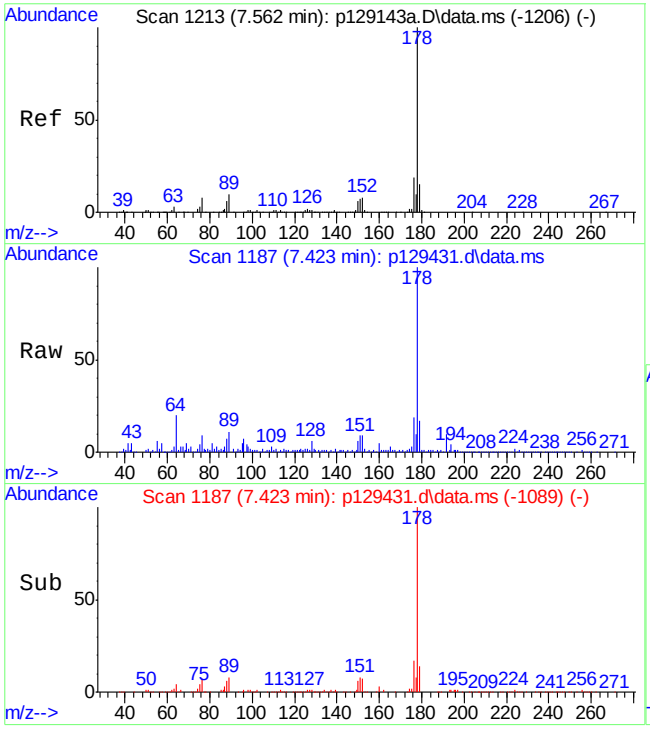


#77
Phenanthrene
Concen: 55.03 ppm
RT: 7.364 min Scan# 1176
Delta R.T. 0.027 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:178 Resp: 763880

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	45.3
176	19.3	0.0	50.0

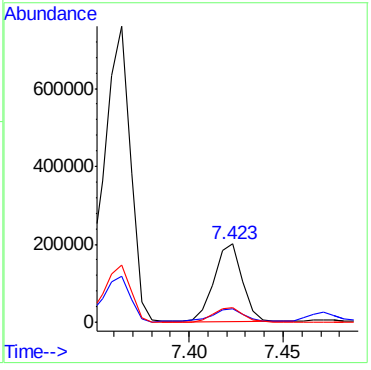


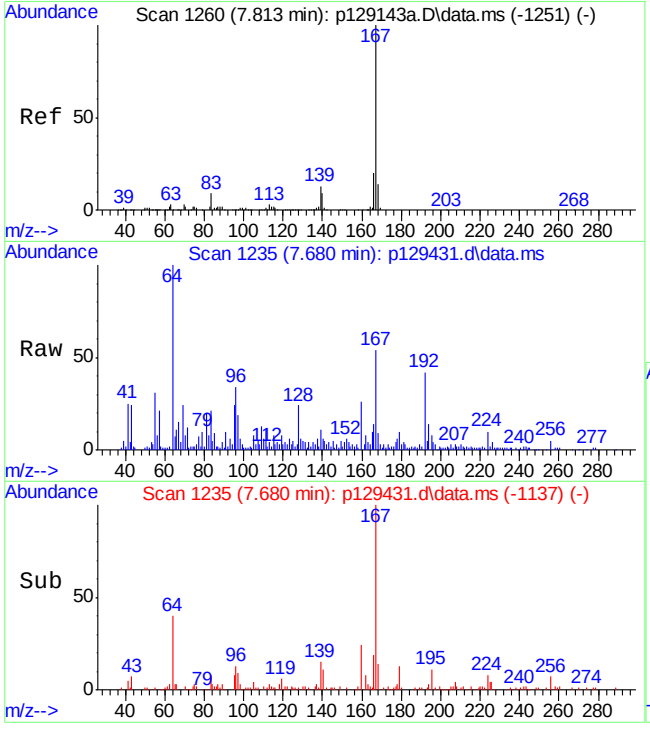


#78
Anthracene
Concen: 14.45 ppm
RT: 7.423 min Scan# 1187
Delta R.T. 0.021 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:178 Resp: 209554

Ion	Ratio	Lower	Upper
178	100		
179	15.7	0.0	45.1
176	18.7	0.0	48.6

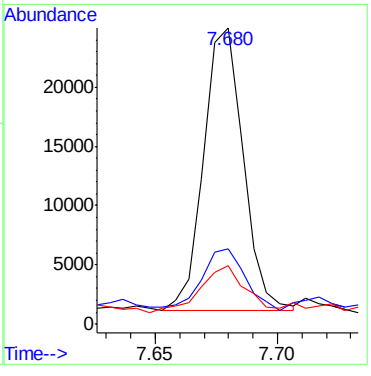


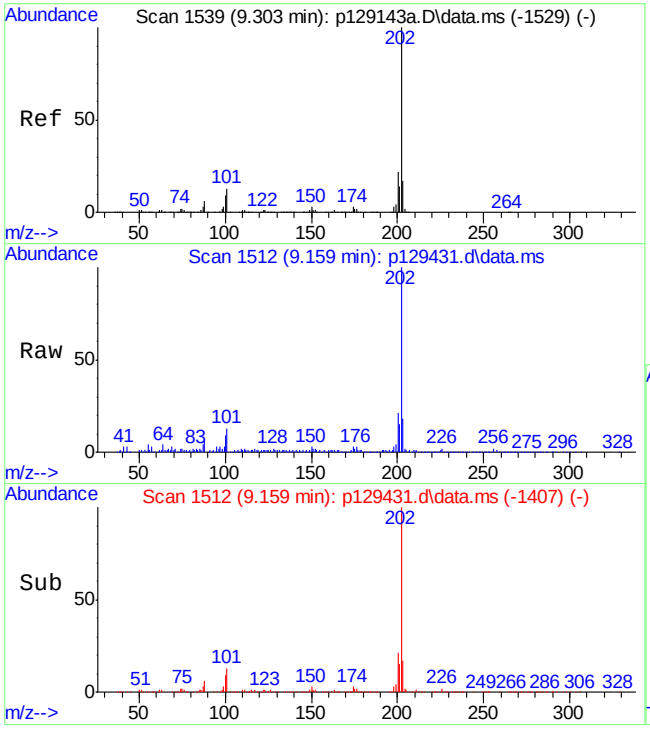


#79
Carbazole
Concen: 1.92 ppm
RT: 7.680 min Scan# 1235
Delta R.T. 0.021 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:167 Resp: 26846

Ion	Ratio	Lower	Upper
167	100		
166	20.0	0.0	49.9
139	14.4	0.0	42.7

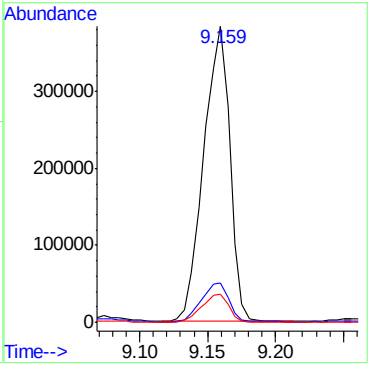


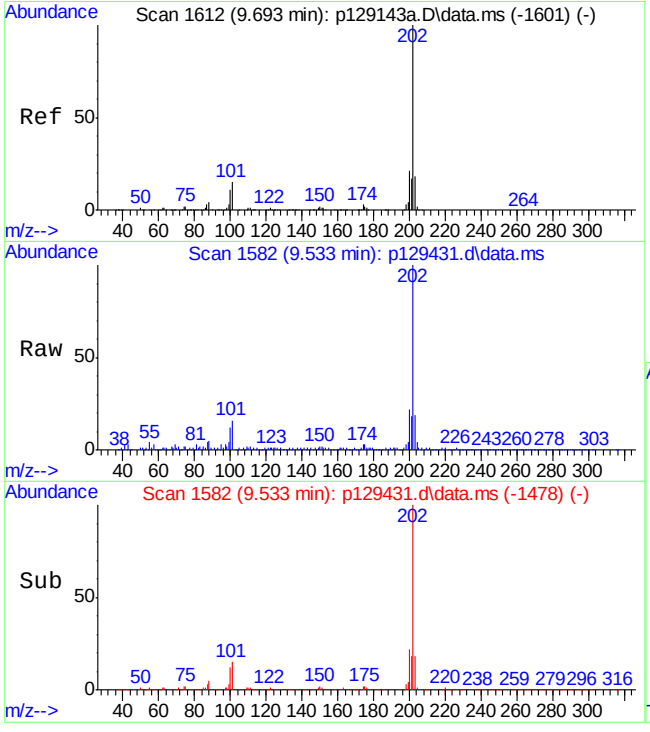


#81
Fluoranthene
Concen: 30.08 ppm
RT: 9.159 min Scan# 1512
Delta R.T. 0.059 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:202 Resp: 515062

Ion	Ratio	Lower	Upper
202	100		
101	13.2	0.0	45.1
100	9.4	0.0	40.6

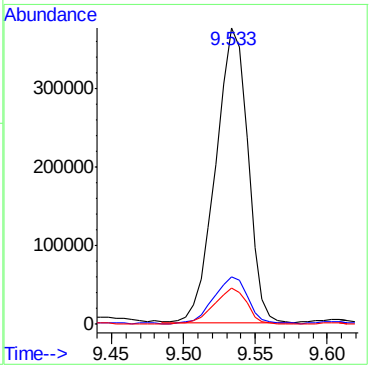


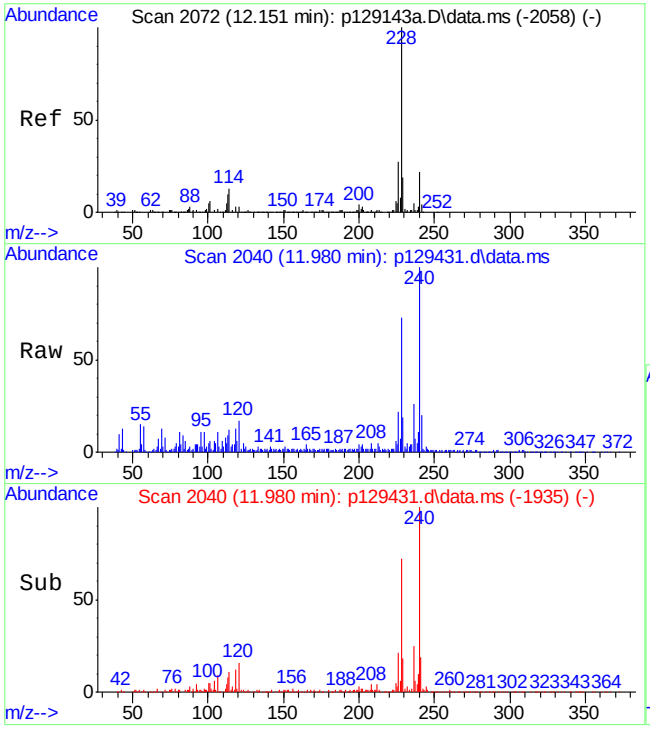


#84
Pyrene
Concen: 35.62 ppm
RT: 9.533 min Scan# 1582
Delta R.T. 0.053 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:202 Resp: 581787

Ion	Ratio	Lower	Upper
202	100		
101	15.7	0.0	46.8
100	12.1	0.0	43.1

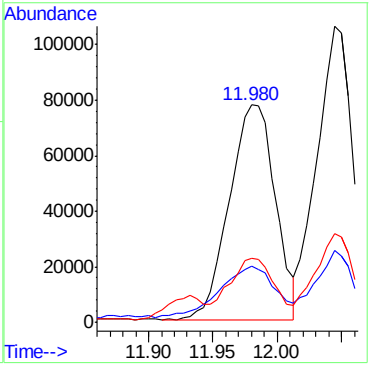


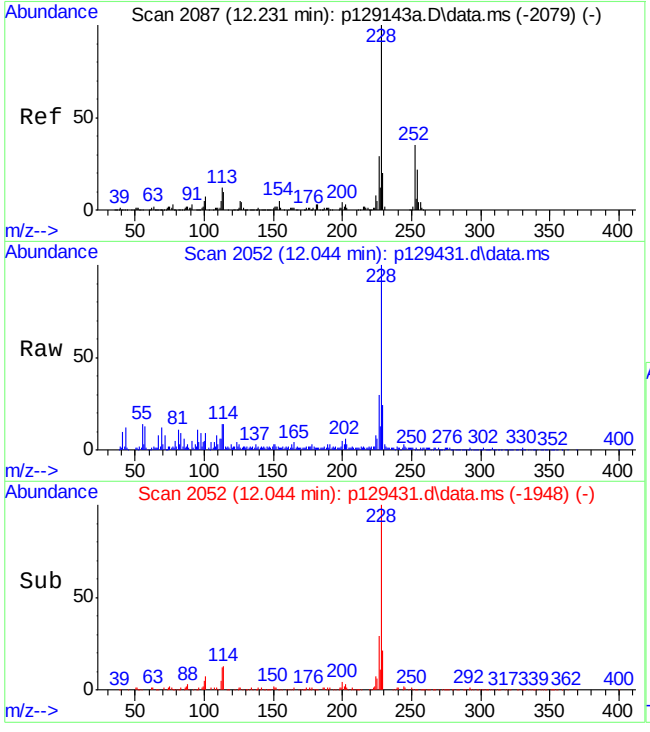


#87
Benzo[a]anthracene
Concen: 12.35 ppm
RT: 11.980 min Scan# 2040
Delta R.T. 0.059 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:228 Resp: 192040

Ion	Ratio	Lower	Upper
228	100		
229	22.3	0.0	49.7
226	25.6	0.0	58.0

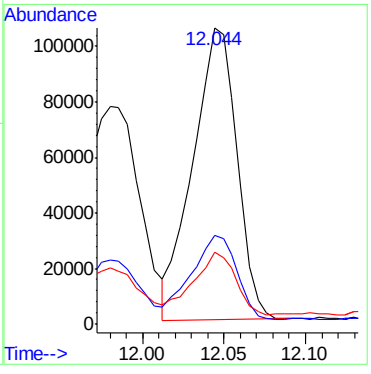


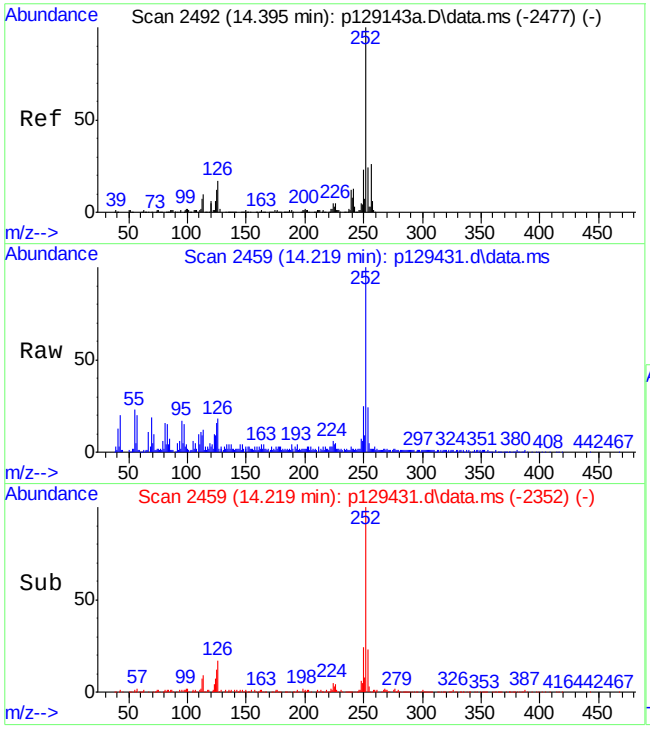


#89
Chrysene
Concen: 14.47 ppm
RT: 12.044 min Scan# 2052
Delta R.T. 0.053 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:228 Resp: 198141

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	59.2
229	21.2	0.0	49.8

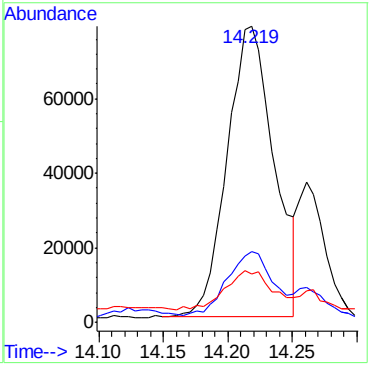


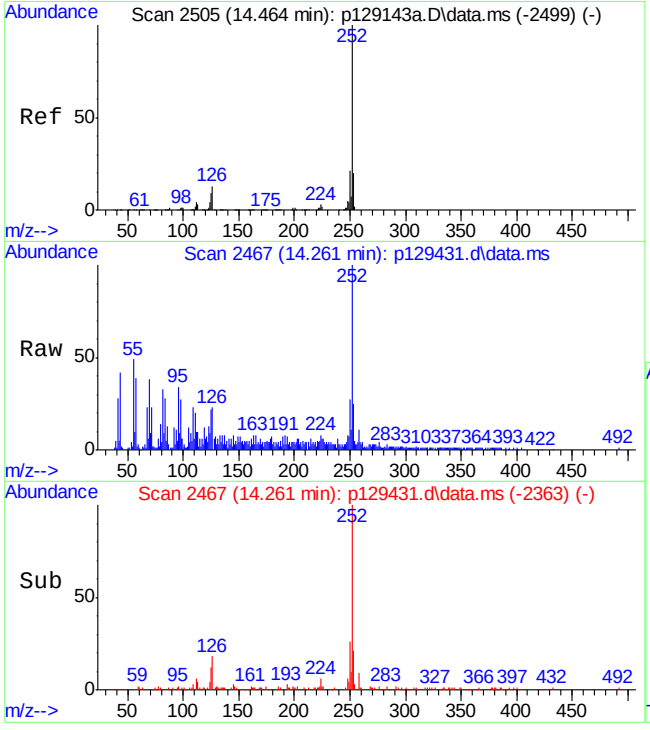


#93
Benzo[b]fluoranthene
Concen: 13.44 ppm
RT: 14.219 min Scan# 2459
Delta R.T. 0.069 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:252 Resp: 197547

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.9
125	12.0	0.0	43.1

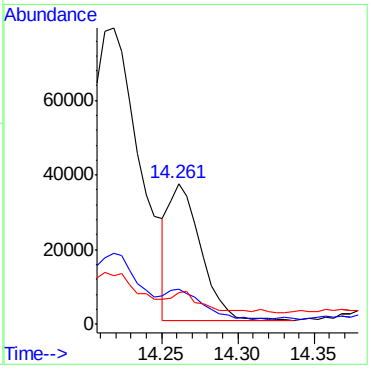


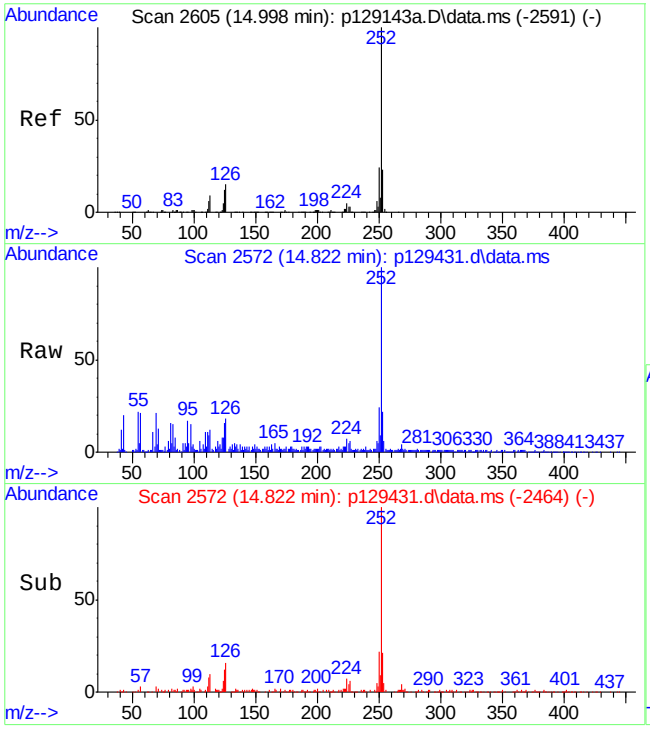


#94
Benzo[k]fluoranthene
Concen: 4.27 ppm
RT: 14.261 min Scan# 2467
Delta R.T. 0.053 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:252 Resp: 52875

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.5
125	15.1	0.0	42.3

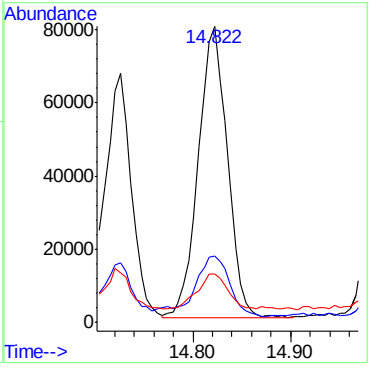


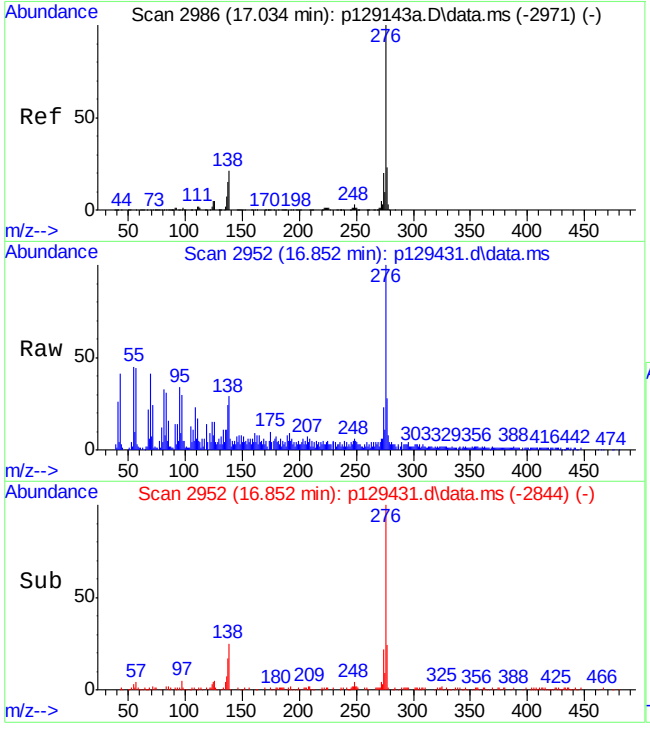


#95
Benzo[a]pyrene
Concen: 13.31 ppm
RT: 14.822 min Scan# 2572
Delta R.T. 0.075 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:252 Resp: 165522

Ion	Ratio	Lower	Upper
252	100		
253	18.8	0.0	51.5
125	12.0	0.0	43.4

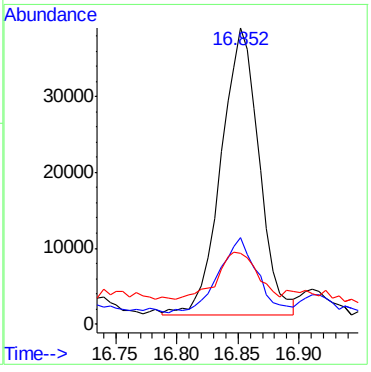


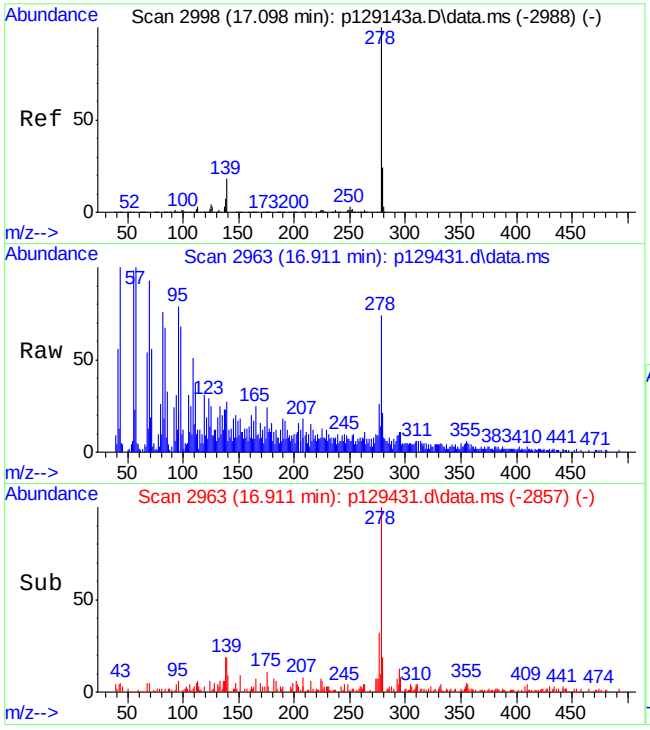


#96
Indeno[1,2,3-cd]pyrene
Concen: 7.19 ppm
RT: 16.852 min Scan# 2952
Delta R.T. 0.075 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:276 Resp: 81760

Ion	Ratio	Lower	Upper
276	100		
138	25.9	0.0	55.8
137	14.6	0.0	48.2

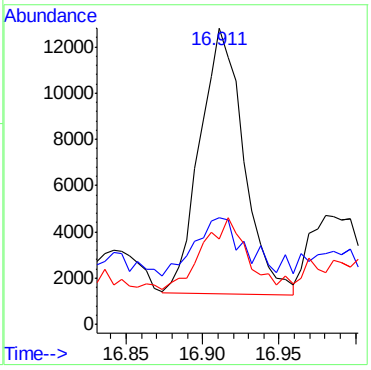


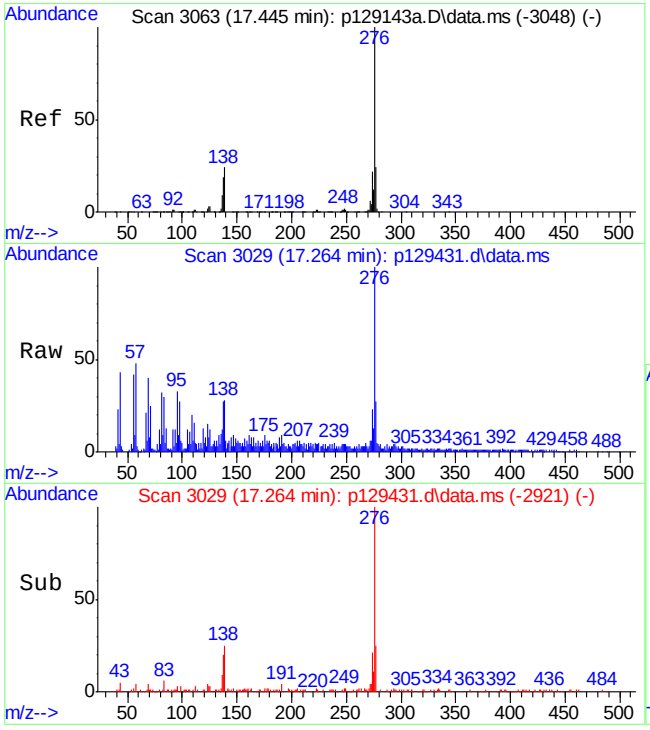


#98
Dibenz[a,h]anthracene
Concen: 1.98 ppm
RT: 16.911 min Scan# 2963
Delta R.T. 0.064 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:278 Resp: 22905

Ion	Ratio	Lower	Upper
278	100		
139	30.7	0.0	52.1
279	18.3	0.0	55.4

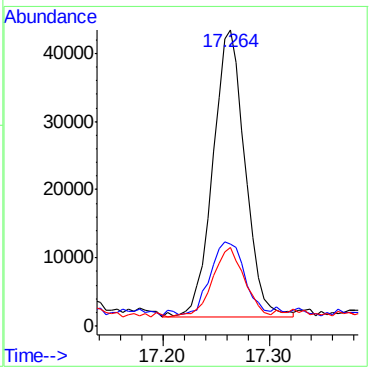




#100
Benzo[g,h,i]perylene
Concen: 7.79 ppm
RT: 17.264 min Scan# 3029
Delta R.T. 0.075 min
Lab File: p129431.d
Acq: 9 May 2019 6:55 pm

Tgt Ion:276 Resp: 89260

Ion	Ratio	Lower	Upper
276	100		
138	23.9	0.0	57.8
277	22.8	0.0	55.4



Manual Integration Approval Summary

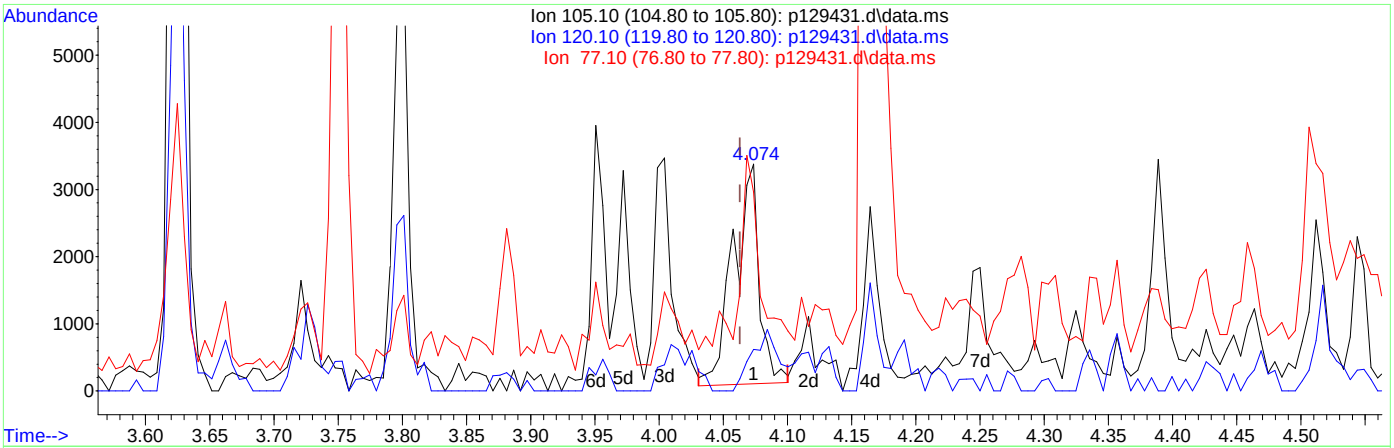
Sample Number:	JC87093-5	**Method:**	SW846 8270D
Lab FileID:	P129431.D	**Analyst approved:**	05/10/19 03:53 Jeryll Fabriene Reyes
Injection Time:	05/09/19 18:55	**Supervisor approved:**	05/13/19 19:30 Kristi Schollenberger

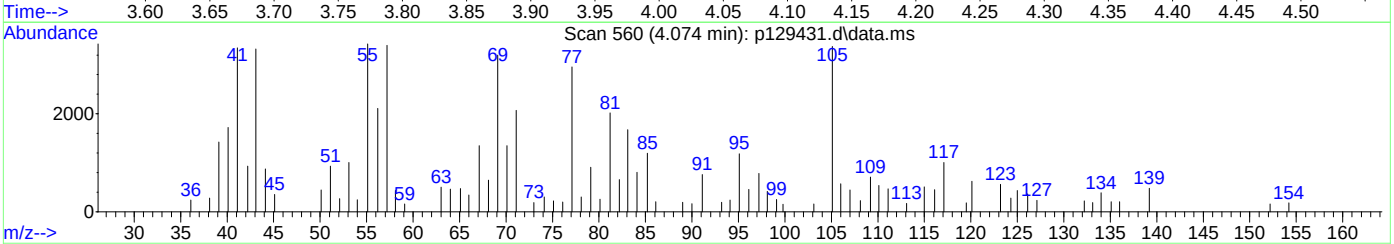
Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetophenone	98-86-2		4.07	Poor instrument integration
Naphthalene	91-20-3		4.70	Poor instrument integration
Fluorene	86-73-7		6.37	Poor instrument integration

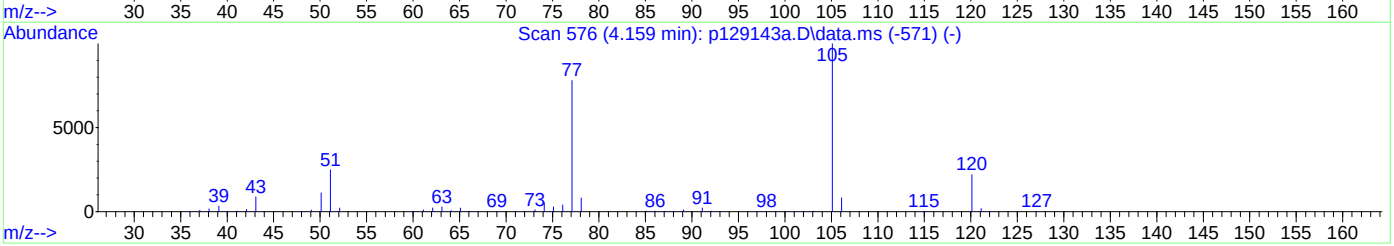
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129431.d
Acq On : 9 May 2019 6:55 pm
Operator : angelar
Sample : jc87093-5 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:15 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129431.d\data.ms

(18) Acetophenone (t)

4.074min (+0.011) 0.55ppm

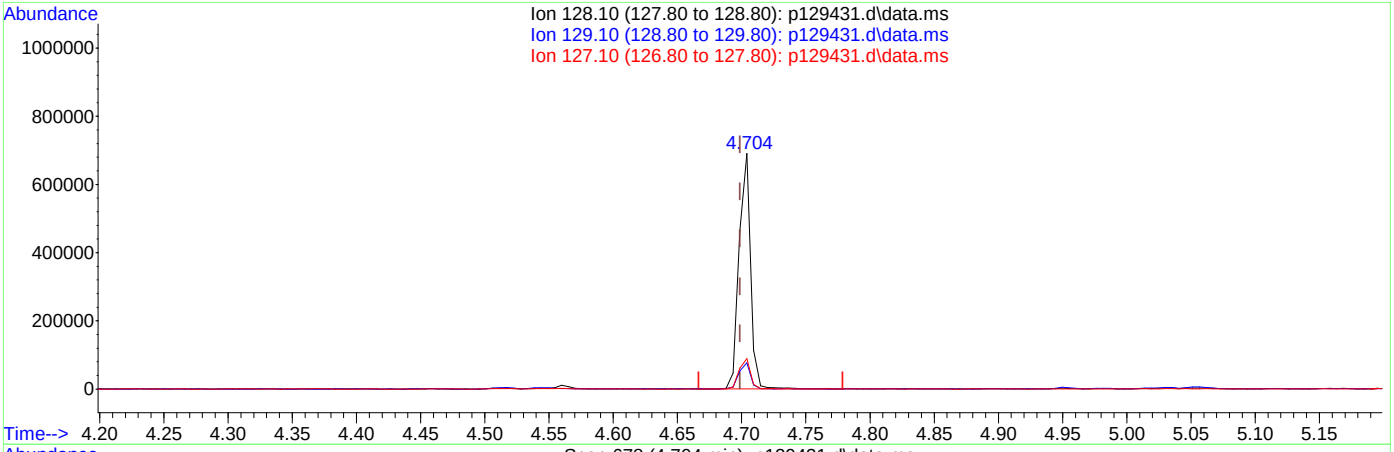
response 4600

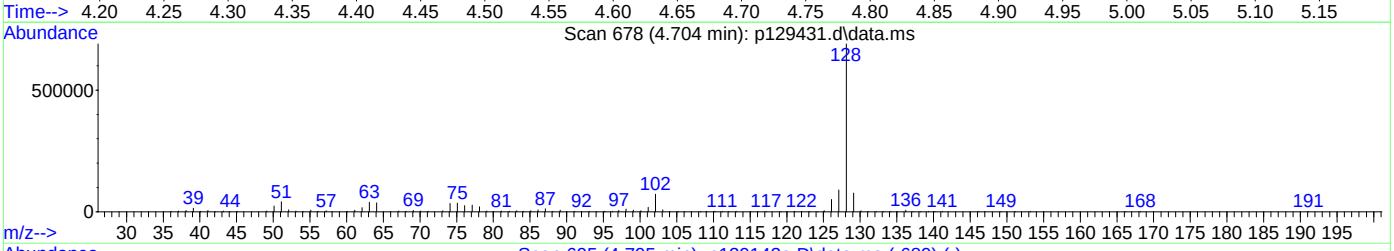
Ion	Exp%	Act%
105.10	100	100
120.10	20.50	9.31
77.10	86.60	69.68
0.00	0.00	0.00

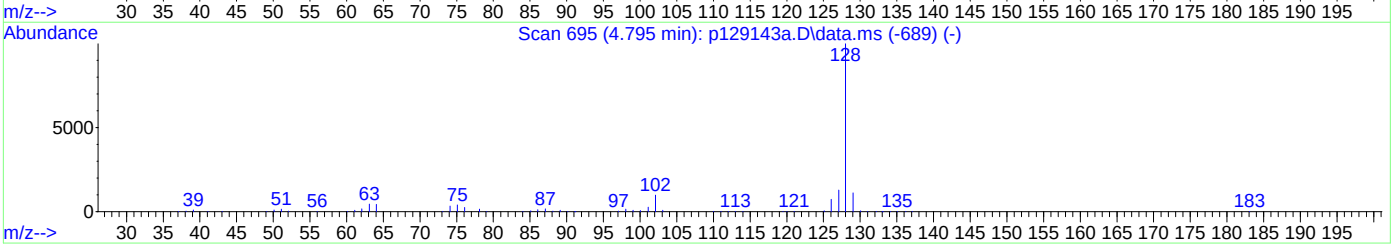
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129431.d
Acq On : 9 May 2019 6:55 pm
Operator : angelar
Sample : jc87093-5 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:15 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129431.d\data.ms

(38) Naphthalene (t)

4.704min (+0.005) 31.17ppm

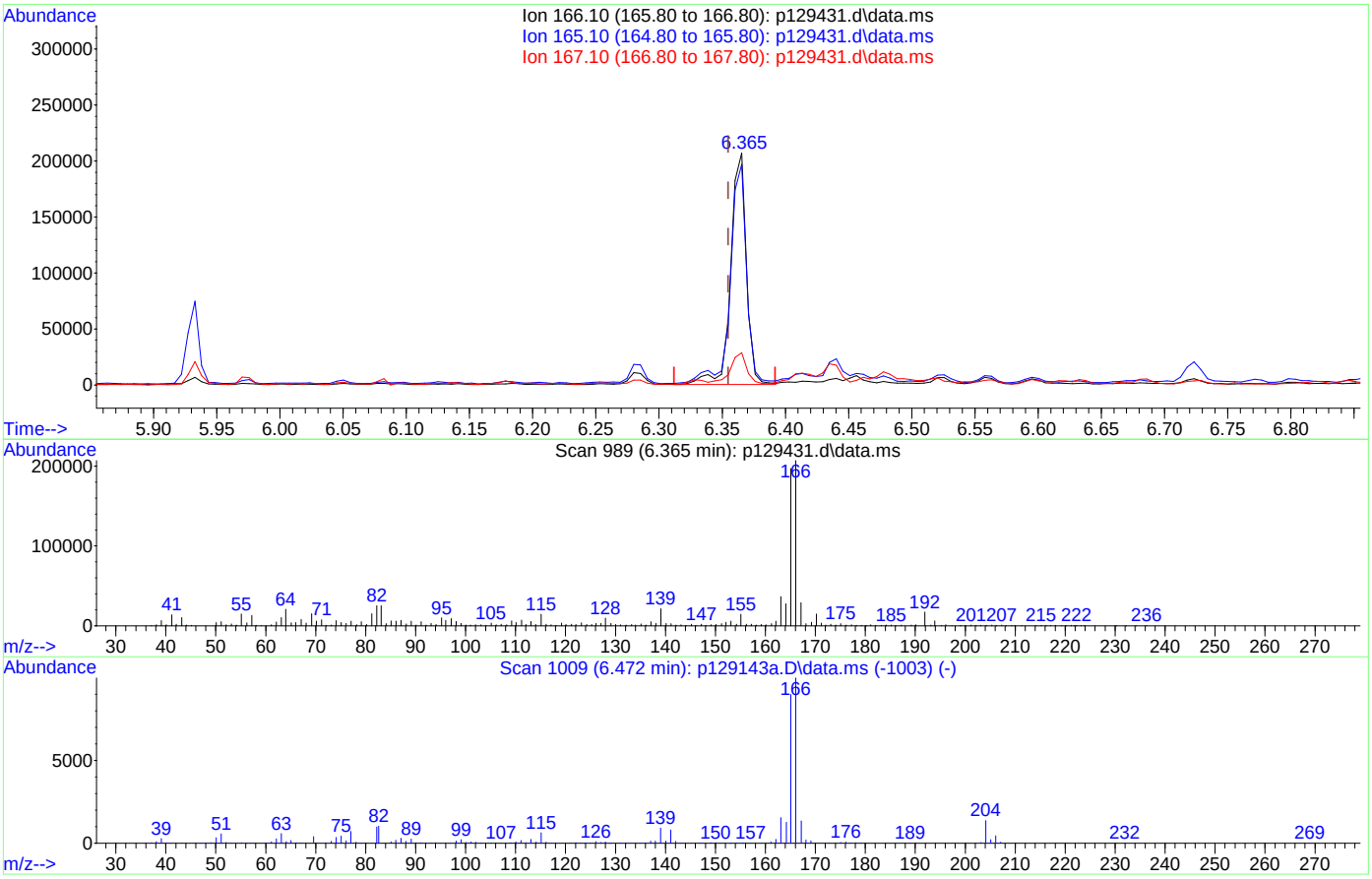
response 431381

Ion	Exp%	Act%
128.10	100	100
129.10	10.70	11.10
127.10	12.80	12.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129431.d
Acq On : 9 May 2019 6:55 pm
Operator : angelar
Sample : jc87093-5 Inst : MSVOAMSP
Misc : op20110,ep5858,30.4,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:15 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration



TIC: p129431.d\data.ms

(66) Fluorene (t)

6.365min (+0.011) 18.59ppm

response 178832

Ion	Exp%	Act%
166.10	100	100
165.10	93.70	94.28
167.10	13.10	13.33
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:38

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 13:04:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	489460	40.00	ppm	-0.04
24) Naphthalene-d8	5.183	136	1882365	40.00	ppm	-0.05
47) Acenaphthene-d10	6.852	164	1027714	40.00	ppm	-0.06
69) Phenanthrene-d10	8.520	188	1992558	40.00	ppm	-0.06
83) Chrysene-d12	11.676	240	1936958	40.00	ppm	-0.06
91) Perylene-d12	13.281	264	1928942	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.209	152	489460	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.852	164	1027714	40.00	ppm	-0.06
105) Phenanthrene-d10a	8.520	188	1992558	40.00	ppm	-0.06
109) Chrysene-d12a	11.676	240	1936958	40.00	ppm	-0.06
111) Naphthalene-d8a	5.183	136	1882365	40.00	ppm	-0.05
113) Phenanthrene-d10b	8.520	188	1992558	40.00	ppm	-0.06
115) Chrysene-d12b	11.676	240	1936958	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.273	112	5877	0.41	ppm	0.03
Spiked Amount 50.000			Recovery	=	0.82%	
8) Phenol-d5	4.038	99	4959m	0.28	ppm	0.00
Spiked Amount 50.000			Recovery	=	0.56%	
25) Nitrobenzene-d5	4.643	82	7394	0.47	ppm	-0.02
Spiked Amount 50.000			Recovery	=	0.94%	
51) 2-Fluorobiphenyl	6.167	172	15800	0.44	ppm	-0.05
Spiked Amount 50.000			Recovery	=	0.88%	
73) 2,4,6-Tribromophenol	7.734	330	2058	0.32	ppm	-0.04
Spiked Amount 50.000			Recovery	=	0.64%	
85) Terphenyl-d14	10.441	244	18638	0.41	ppm	-0.04
Spiked Amount 50.000			Recovery	=	0.82%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
38) Naphthalene	5.199	128	4893131	99.81	ppm	99
44) 2-Methylnaphthalene	5.809	141	301525	10.87	ppm	90
53) Biphenyl	6.269	154	168911	4.30	ppm	97
56) Acenaphthylene	6.702	152	490265	10.48	ppm	98
59) Acenaphthene	6.884	153	60459	1.95	ppm	99
62) Dibenzofuran	7.071	168	525379	12.15	ppm	92
66) Fluorene	7.451	166	423753	12.07	ppm	99
77) Phenanthrene	8.542	178	855839	16.00	ppm	98
78) Anthracene	8.601	178	148039	2.76	ppm	99
79) Carbazole	8.825	167	49772	0.98	ppm	92
81) Fluoranthene	9.954	202	496445	8.54	ppm	97
84) Pyrene	10.216	202	370948	5.75	ppm	100
87) Benzo[a]anthracene	11.665	228	165228	2.68	ppm	99
89) Chrysene	11.703	228	142200	2.35	ppm	99
93) Benzo[b]fluoranthene	12.885	252	153437m	2.60	ppm	
94) Benzo[k]fluoranthene	12.912	252	56174m	1.08	ppm	
95) Benzo[a]pyrene	13.222	252	90813	1.88	ppm	92
96) Indeno[1,2,3-cd]pyrene	14.308	276	67769	1.05	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 13:04:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.313	278	16585	0.29 ppm	87
100) Benzo[g,h,i]perylene	14.570	276	55449	1.10 ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

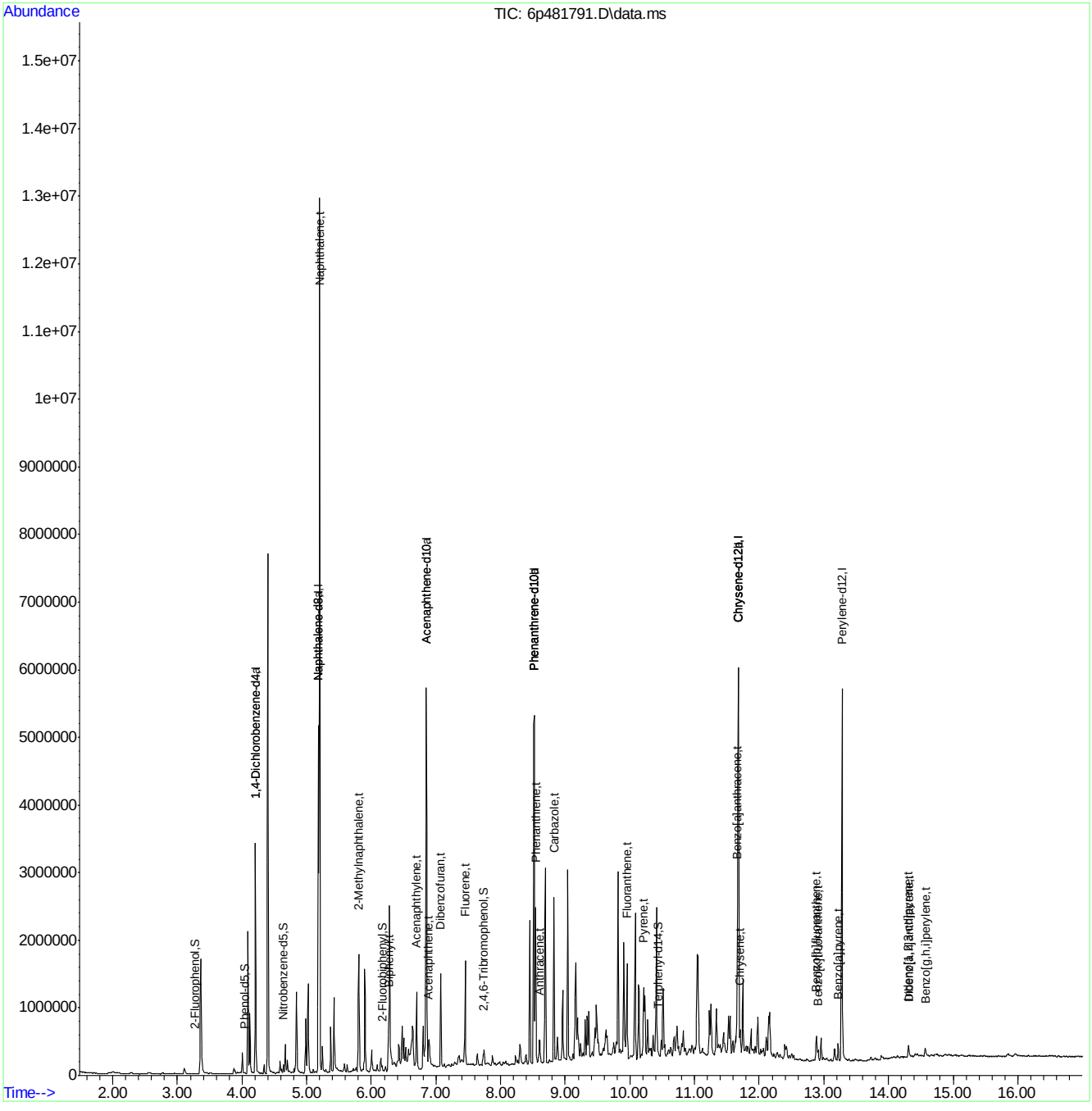
9.1.9

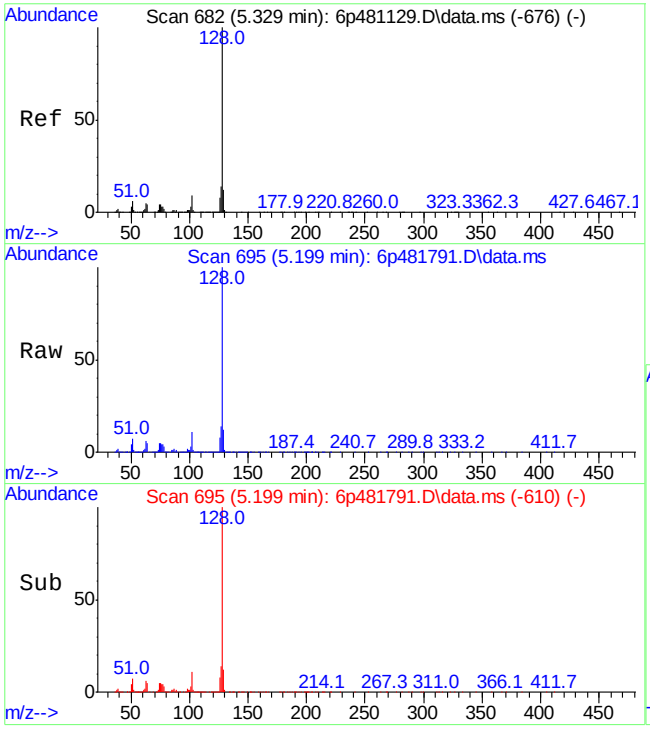
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 13:04:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

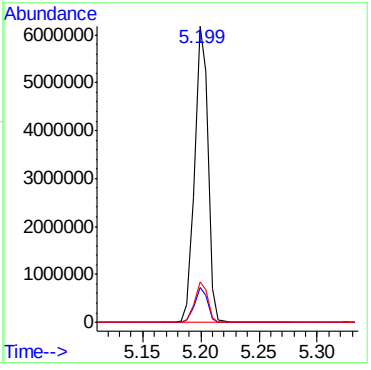


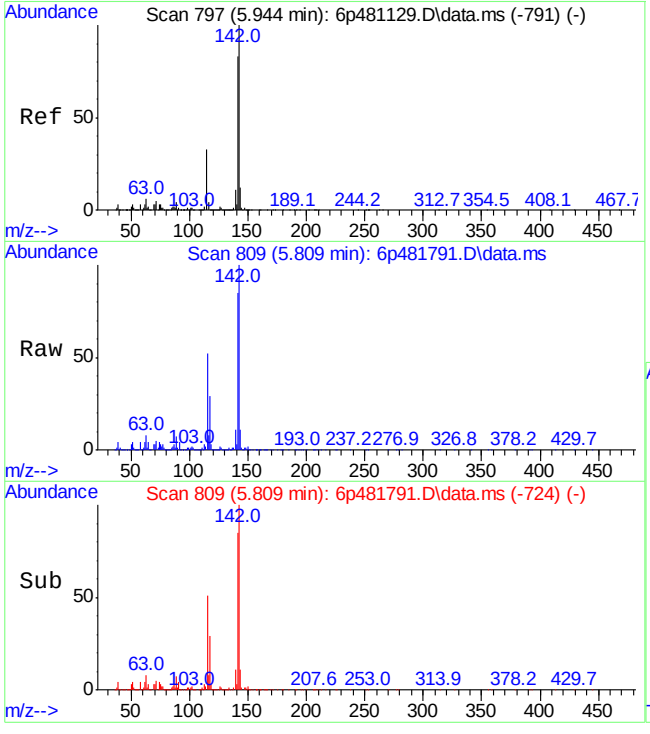


#38
Naphthalene
Concen: 99.81 ppm
RT: 5.199 min Scan# 695
Delta R.T. -0.048 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:128 Resp: 4893131

Ion	Ratio	Lower	Upper
128	100		
129	11.9	0.0	41.5
127	13.7	0.0	43.5

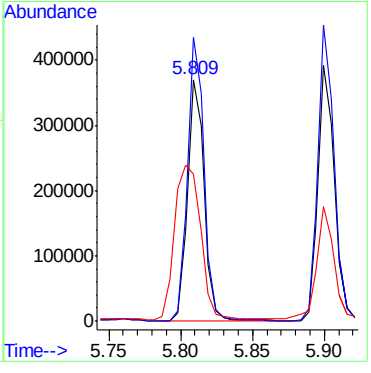


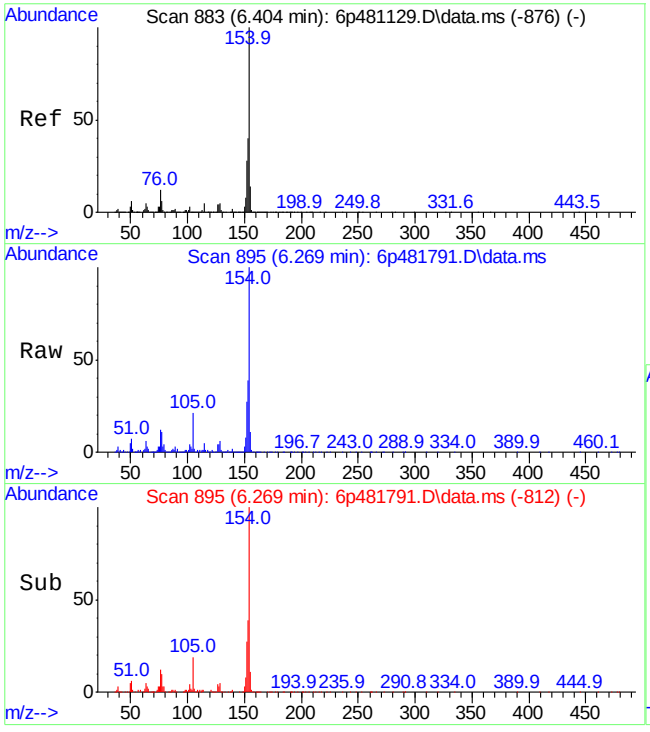


#44
2-Methylnaphthalene
Concen: 10.87 ppm
RT: 5.809 min Scan# 809
Delta R.T. -0.044 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:141 Resp: 301525

Ion	Ratio	Lower	Upper
141	100		
142	117.6	91.1	151.1
115	59.1	10.5	70.5

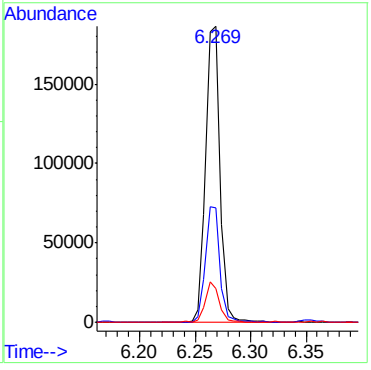


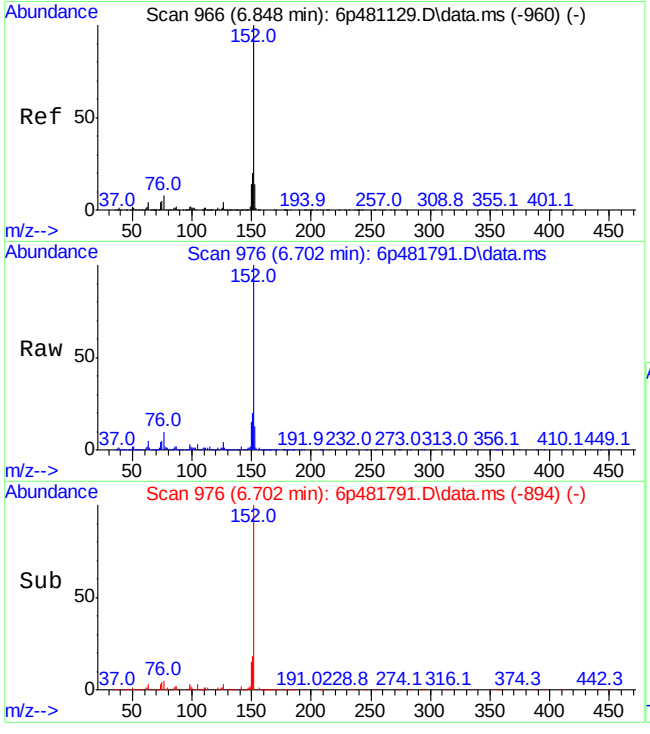


#53
Biphenyl
Concen: 4.30 ppm
RT: 6.269 min Scan# 895
Delta R.T. -0.055 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:154 Resp: 168911

Ion	Ratio	Lower	Upper
154	100		
153	38.7	10.2	70.2
155	11.2	0.0	43.5

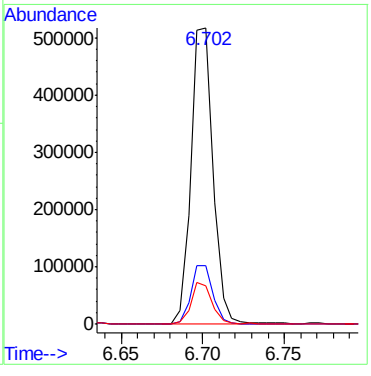


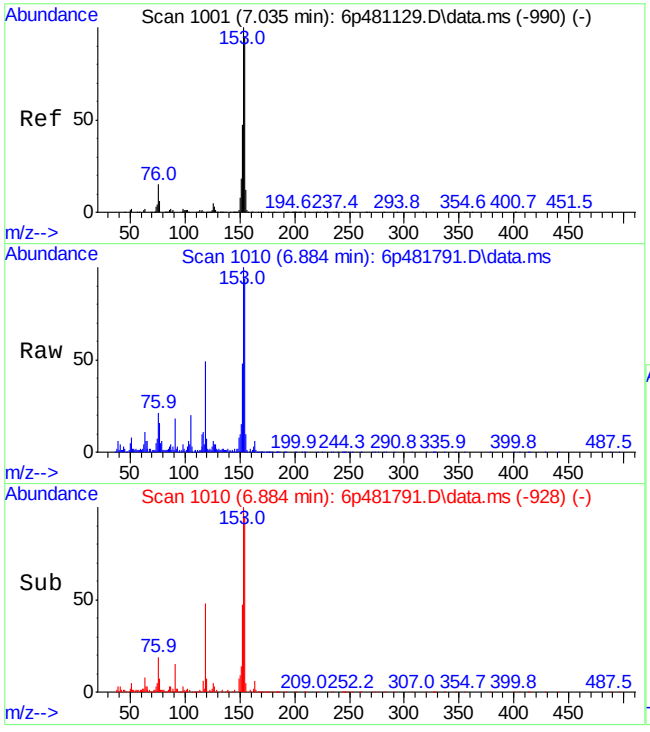


#56
Acenaphthylene
Concen: 10.48 ppm
RT: 6.702 min Scan# 976
Delta R.T. -0.061 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:152 Resp: 490265

Ion	Ratio	Lower	Upper
152	100		
151	19.6	0.0	50.3
153	12.9	0.0	43.6

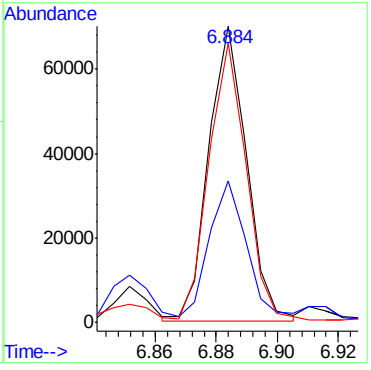


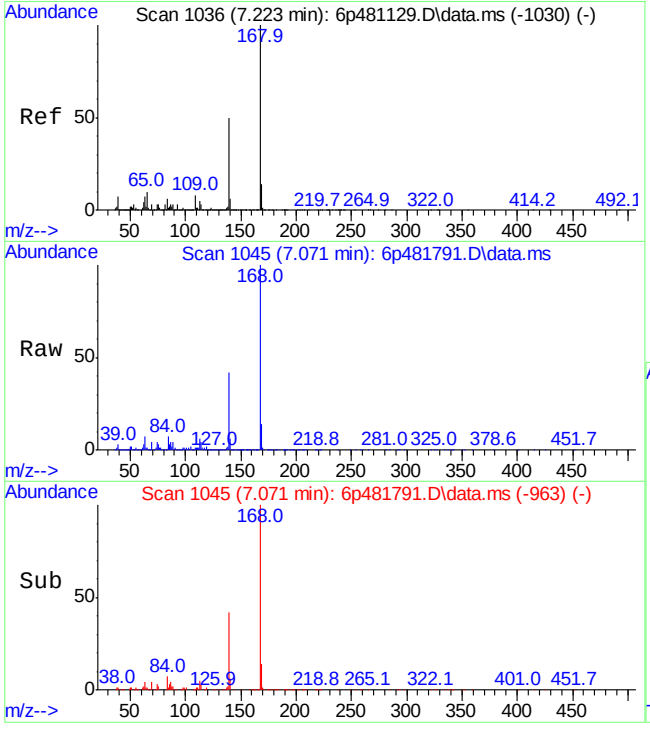


#59
Acenaphthene
Concen: 1.95 ppm
RT: 6.884 min Scan# 1010
Delta R.T. -0.064 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:153 Resp: 60459

Ion	Ratio	Lower	Upper
153	100		
152	45.3	16.9	76.9
154	94.4	65.0	125.0

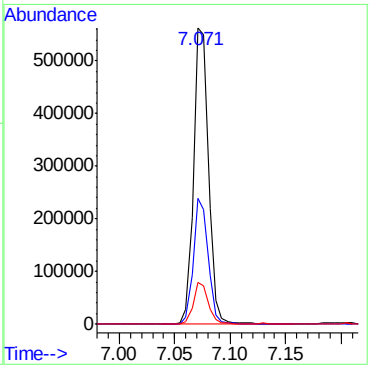


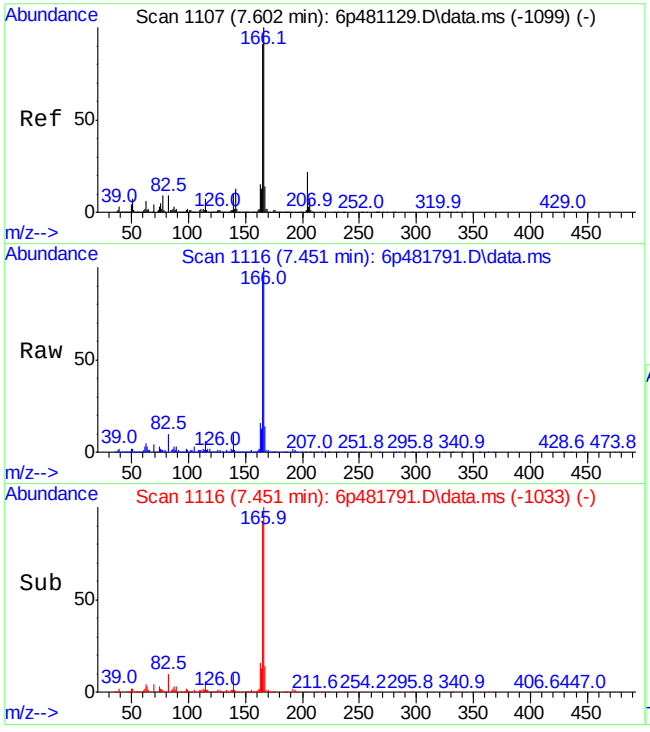


#62
Dibenzofuran
Concen: 12.15 ppm
RT: 7.071 min Scan# 1045
Delta R.T. -0.061 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:168 Resp: 525379

Ion	Ratio	Lower	Upper
168	100		
139	42.5	19.5	79.5
169	14.1	0.0	43.8

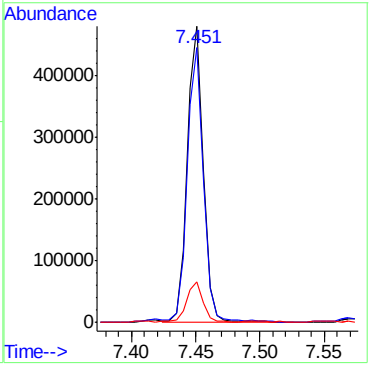


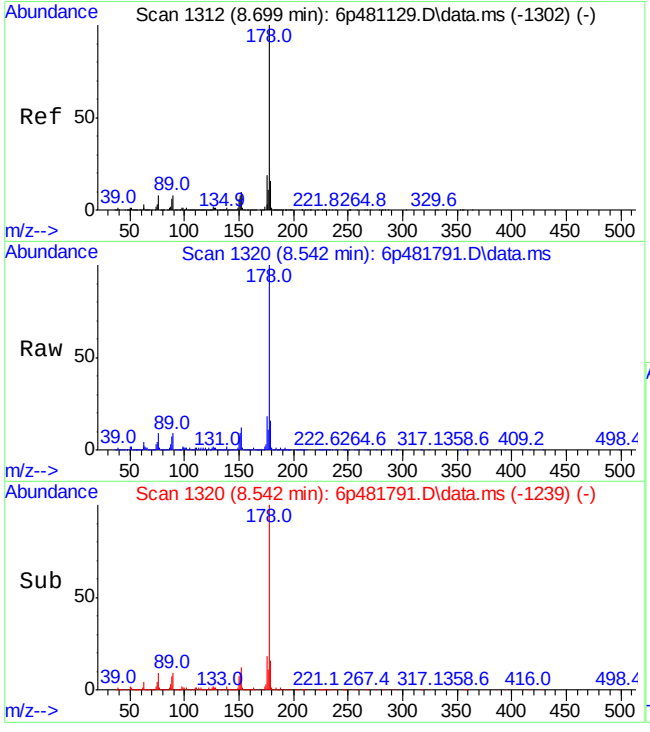


#66
Fluorene
Concen: 12.07 ppm
RT: 7.451 min Scan# 1116
Delta R.T. -0.056 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:166 Resp: 423753

Ion	Ratio	Lower	Upper
166	100		
165	92.5	61.0	121.0
167	13.4	0.0	43.5

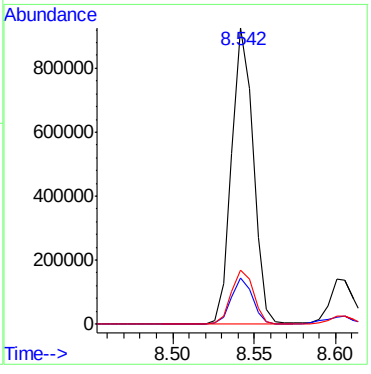


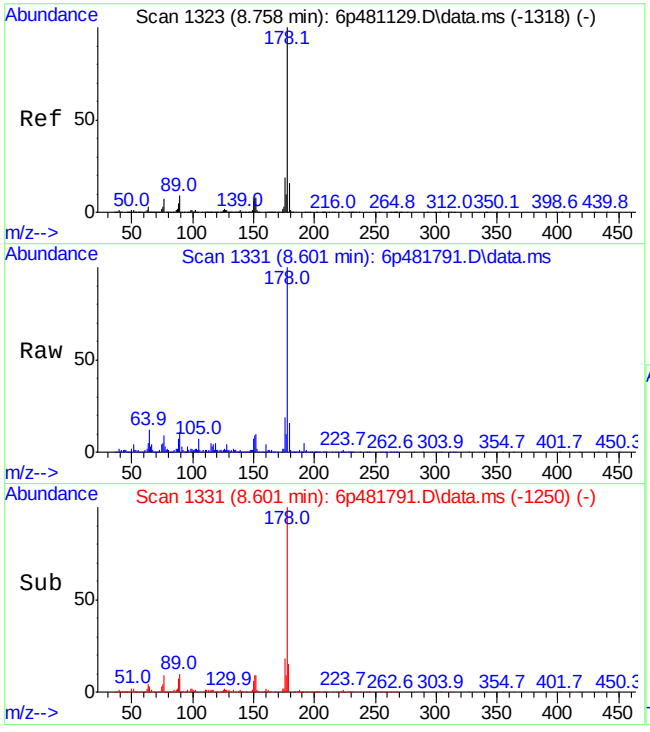


#77
Phenanthrene
Concen: 16.00 ppm
RT: 8.542 min Scan# 1320
Delta R.T. -0.069 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:178 Resp: 855839

Ion	Ratio	Lower	Upper
178	100		
179	15.6	0.0	46.1
176	18.4	0.0	49.3

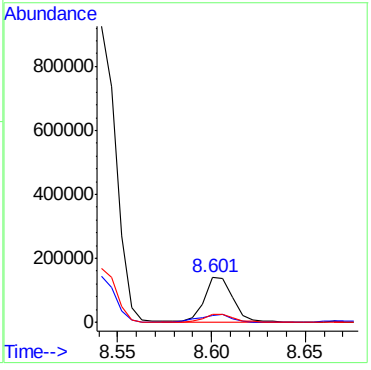


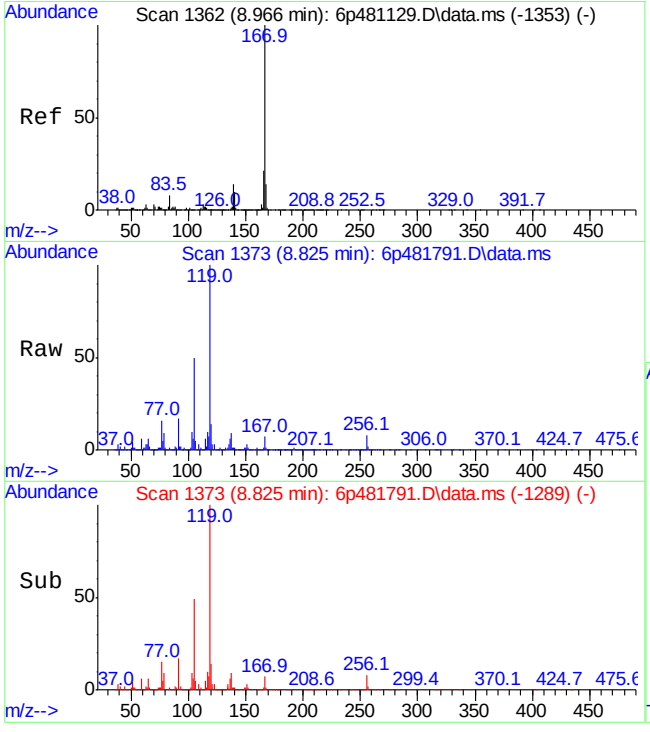


#78
Anthracene
Concen: 2.76 ppm
RT: 8.601 min Scan# 1331
Delta R.T. -0.068 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:178 Resp: 148039

Ion	Ratio	Lower	Upper
178	100		
179	15.9	0.0	46.3
176	18.7	0.0	48.6

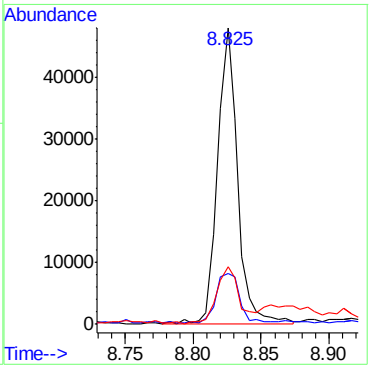


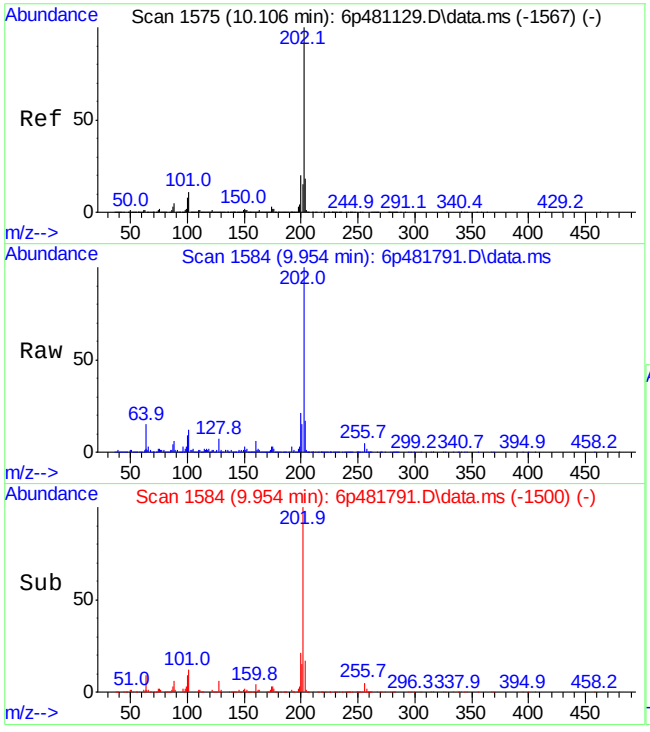


#79
Carbazole
Concen: 0.98 ppm
RT: 8.825 min Scan# 1373
Delta R.T. -0.050 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:167 Resp: 49772

Ion	Ratio	Lower	Upper
167	100		
166	16.3	0.0	50.7
139	16.2	0.0	43.6

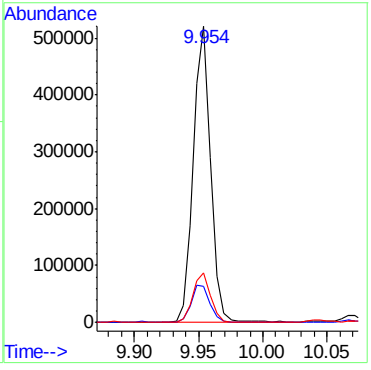


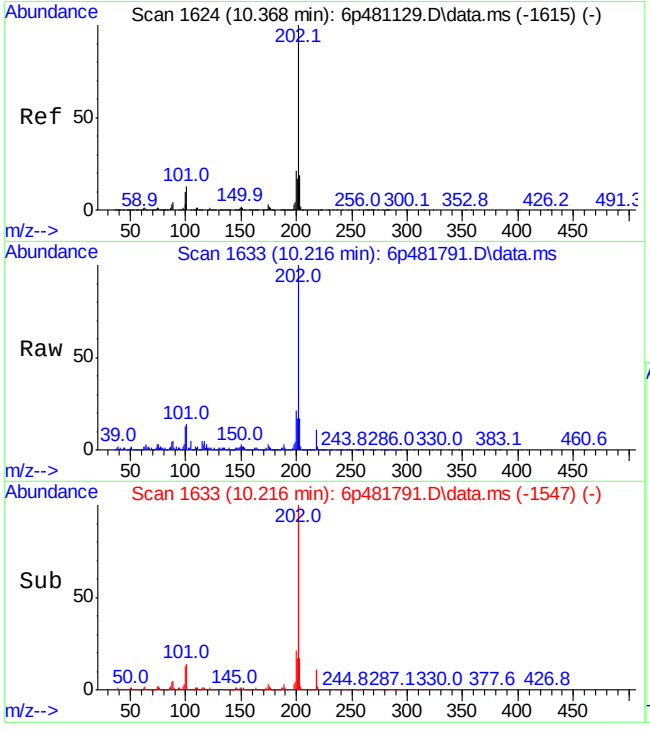


#81
Fluoranthene
Concen: 8.54 ppm
RT: 9.954 min Scan# 1584
Delta R.T. -0.050 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:202 Resp: 496445

Ion	Ratio	Lower	Upper
202	100		
101	12.1	0.0	40.6
203	16.8	0.0	47.8

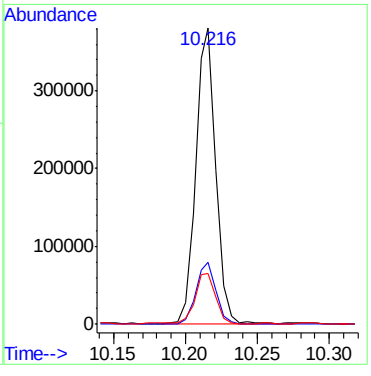


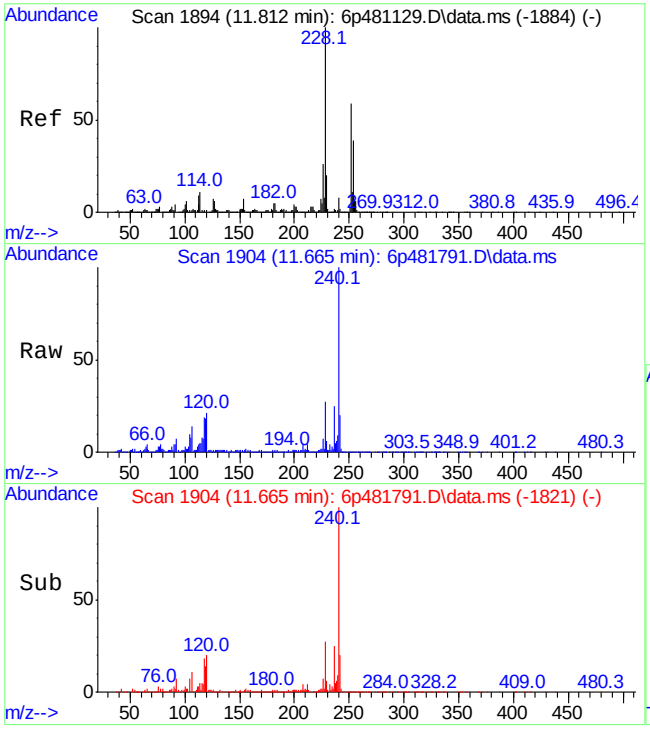


#84
Pyrene
Concen: 5.75 ppm
RT: 10.216 min Scan# 1633
Delta R.T. -0.041 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:202 Resp: 370948

Ion	Ratio	Lower	Upper
202	100		
200	21.0	0.0	51.3
203	16.8	0.0	46.8

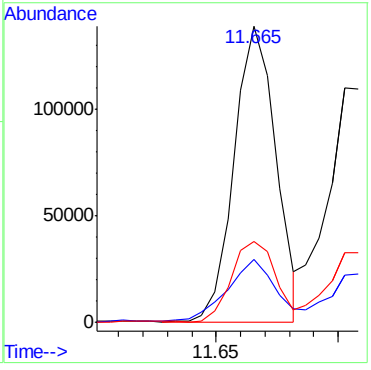


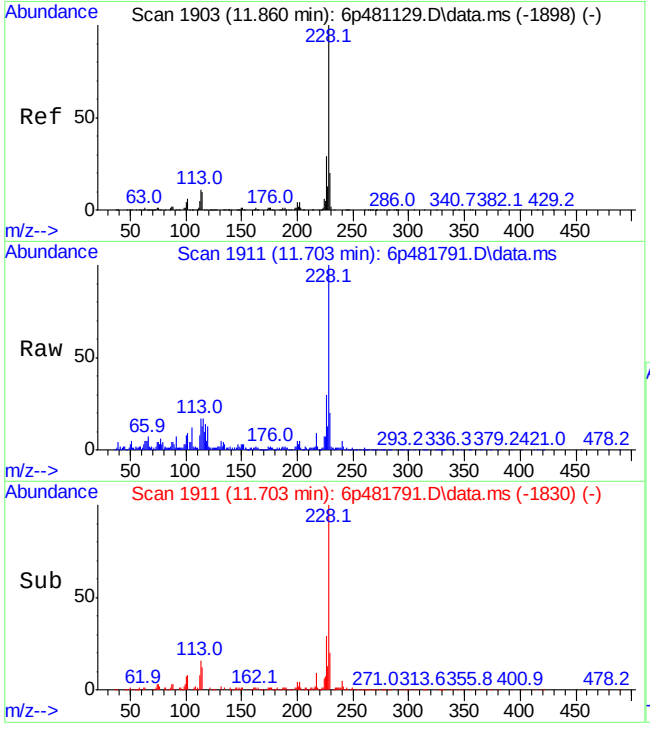


#87
Benzo[a]anthracene
Concen: 2.68 ppm
RT: 11.665 min Scan# 1904
Delta R.T. -0.059 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:228 Resp: 165228

Ion	Ratio	Lower	Upper
228	100		
229	20.4	0.0	49.8
226	27.5	0.0	57.5

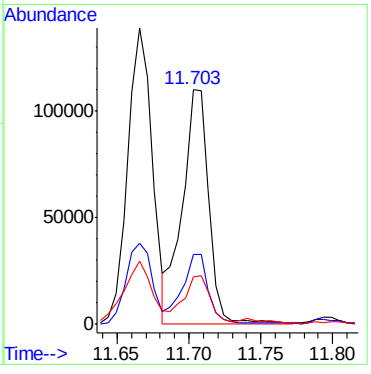


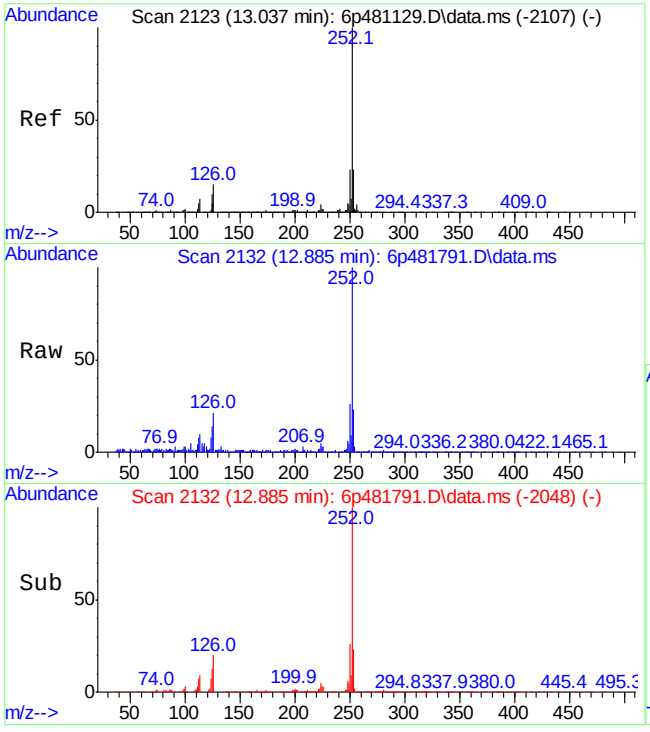


#89
Chrysene
Concen: 2.35 ppm
RT: 11.703 min Scan# 1911
Delta R.T. -0.065 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:228 Resp: 142200

Ion	Ratio	Lower	Upper
228	100		
226	30.0	0.0	59.3
229	19.2	0.0	50.0

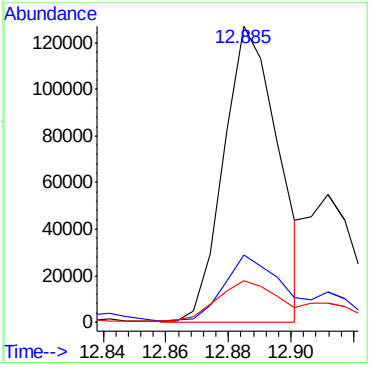


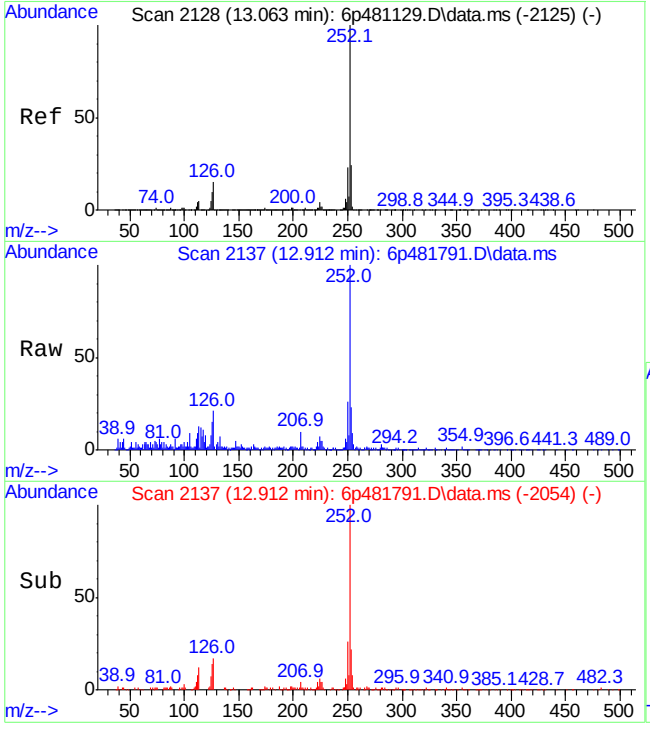


#93
Benzo[b]fluoranthene
Concen: 2.60 ppm m
RT: 12.885 min Scan# 2132
Delta R.T. -0.053 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:252 Resp: 153437

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.9
125	13.9	0.0	43.3

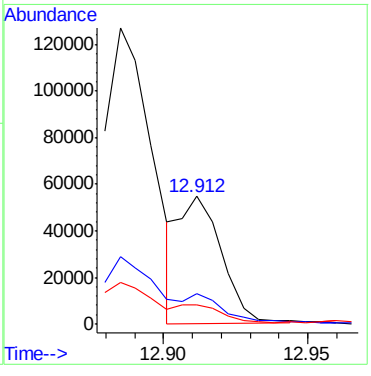


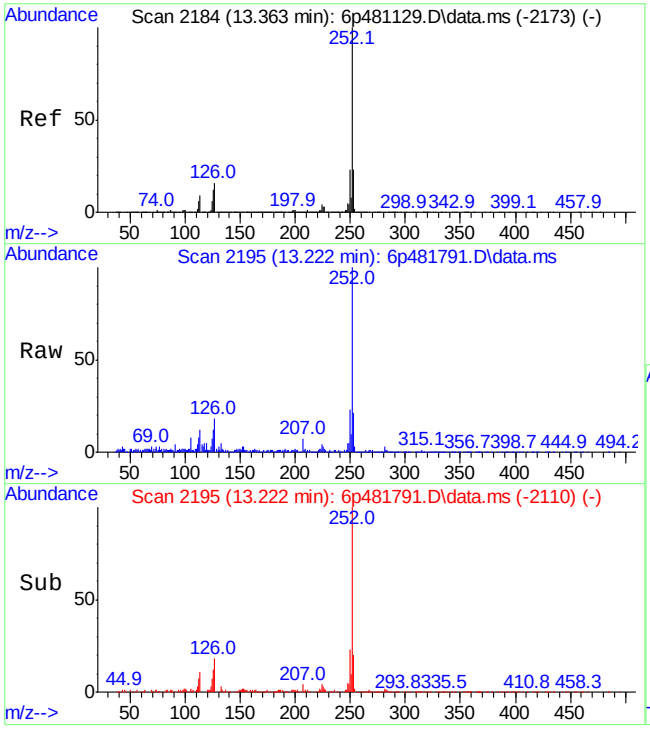


#94
Benzo[k]fluoranthene
Concen: 1.08 ppm m
RT: 12.912 min Scan# 2137
Delta R.T. -0.054 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:252 Resp: 56174

Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	52.4
125	14.8	0.0	43.1

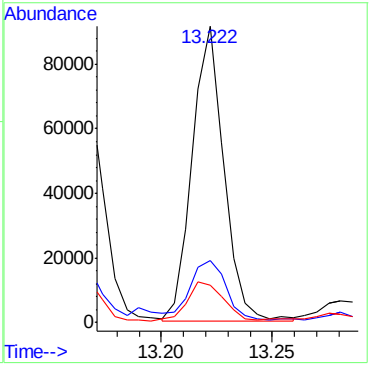


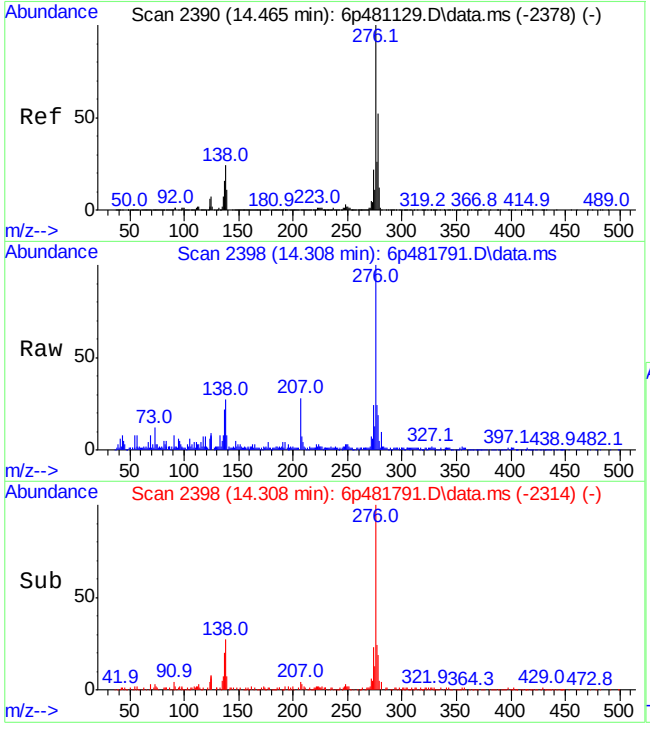


#95
Benzo[a]pyrene
Concen: 1.88 ppm
RT: 13.222 min Scan# 2195
Delta R.T. -0.047 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:252 Resp: 90813

Ion	Ratio	Lower	Upper
252	100		
253	18.9	0.0	52.1
125	11.3	0.0	45.1

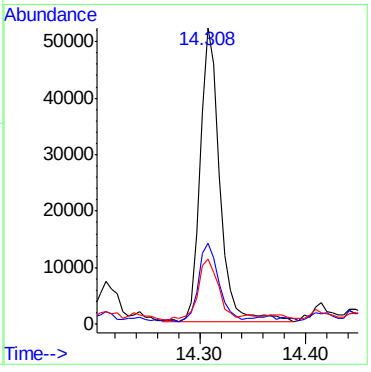


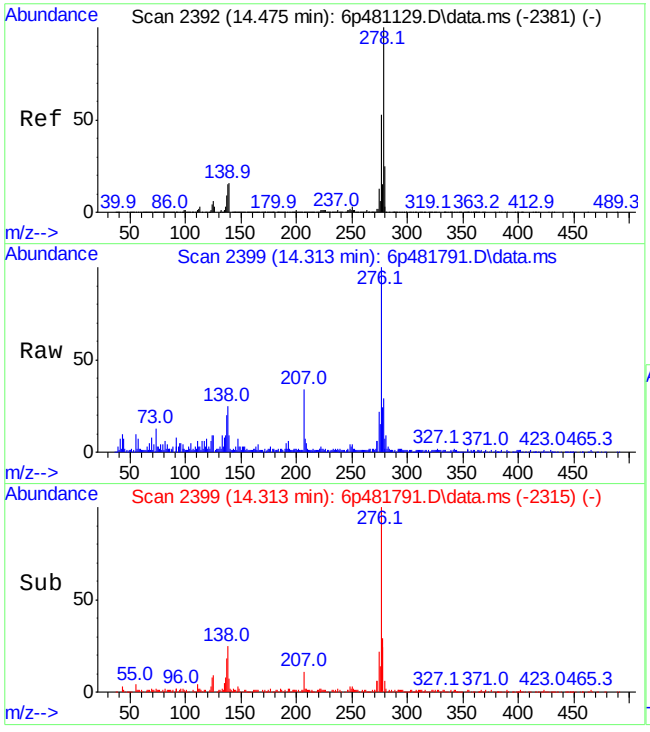


#96
Indeno[1,2,3-cd]pyrene
Concen: 1.05 ppm
RT: 14.308 min Scan# 2398
Delta R.T. -0.051 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:276 Resp: 67769

Ion	Ratio	Lower	Upper
276	100		
138	26.0	0.0	60.0
137	20.5	0.0	49.6

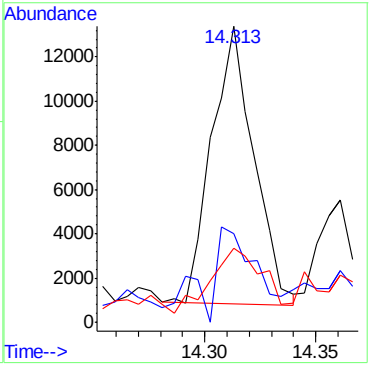


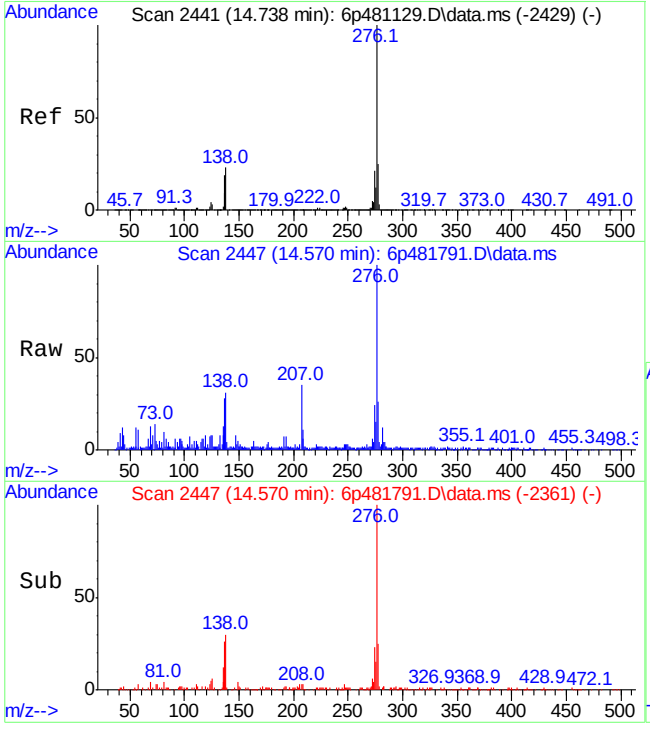


#98
Dibenz[a,h]anthracene
Concen: 0.29 ppm
RT: 14.313 min Scan# 2399
Delta R.T. -0.051 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:278 Resp: 16585

Ion	Ratio	Lower	Upper
278	100		
139	31.2	0.0	51.8
279	20.4	0.0	54.3

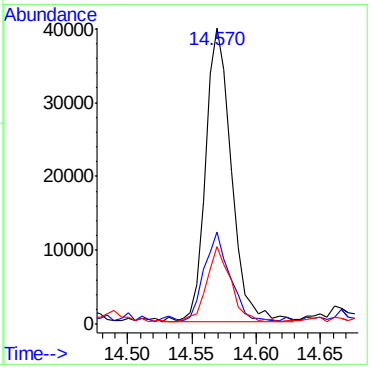




#100
Benzo[g,h,i]perylene
Concen: 1.10 ppm
RT: 14.570 min Scan# 2447
Delta R.T. -0.039 min
Lab File: 6p481791.D
Acq: 10 May 2019 12:25 pm

Tgt Ion:276 Resp: 55449

Ion	Ratio	Lower	Upper
276	100		
138	30.0	0.0	54.9
277	25.2	0.0	53.8



Manual Integration Approval Summary

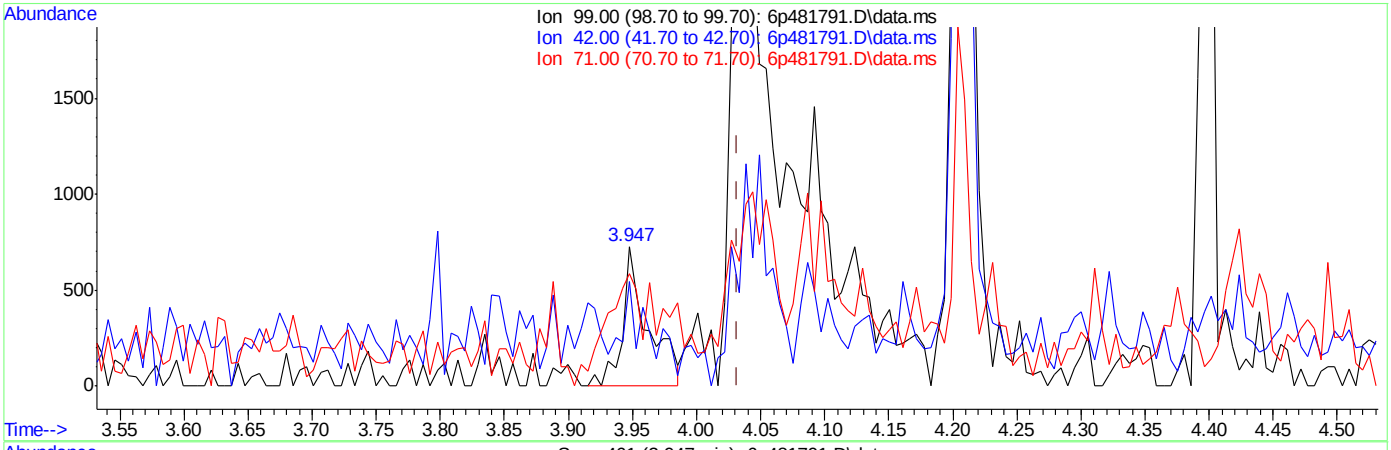
Sample Number:	JC87093-6	**Method:**	SW846 8270D
Lab FileID:	6P481791.D	**Analyst approved:**	05/10/19 13:17 Ying Li
Injection Time:	05/10/19 12:25	**Supervisor approved:**	05/13/19 19:38 Kristi Schollenberger

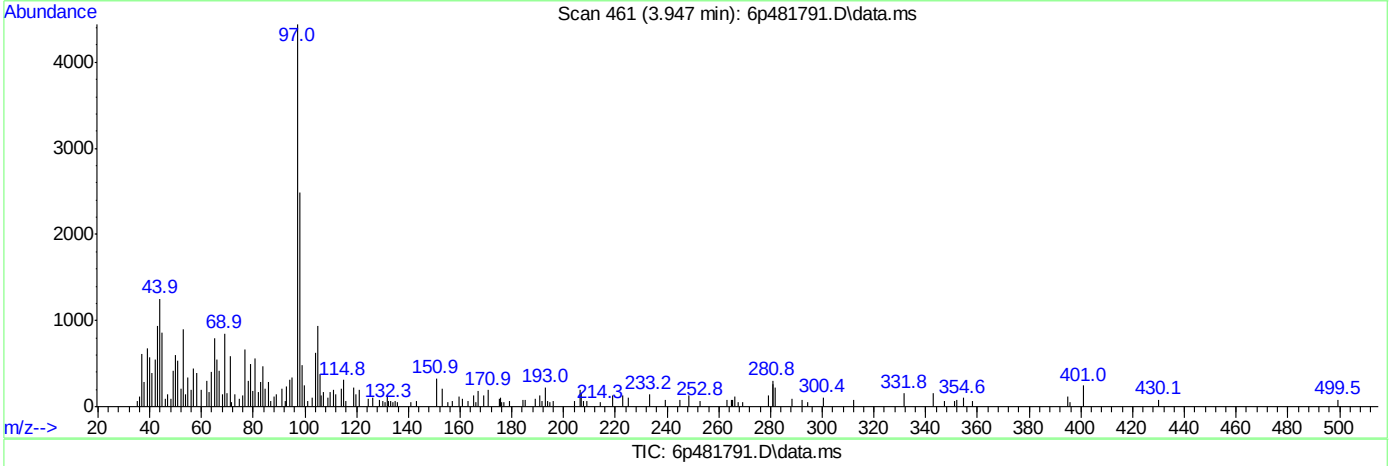
Parameter	CAS	Sig#	R.T. (min.)	Reason
Phenol-d5	4165-62-2		4.04	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		12.88	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.91	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 12:42:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration





TIC: 6p481791.D\data.ms

(8) Phenol-d5 (S)

3.947min (-0.085) 0.06ppm

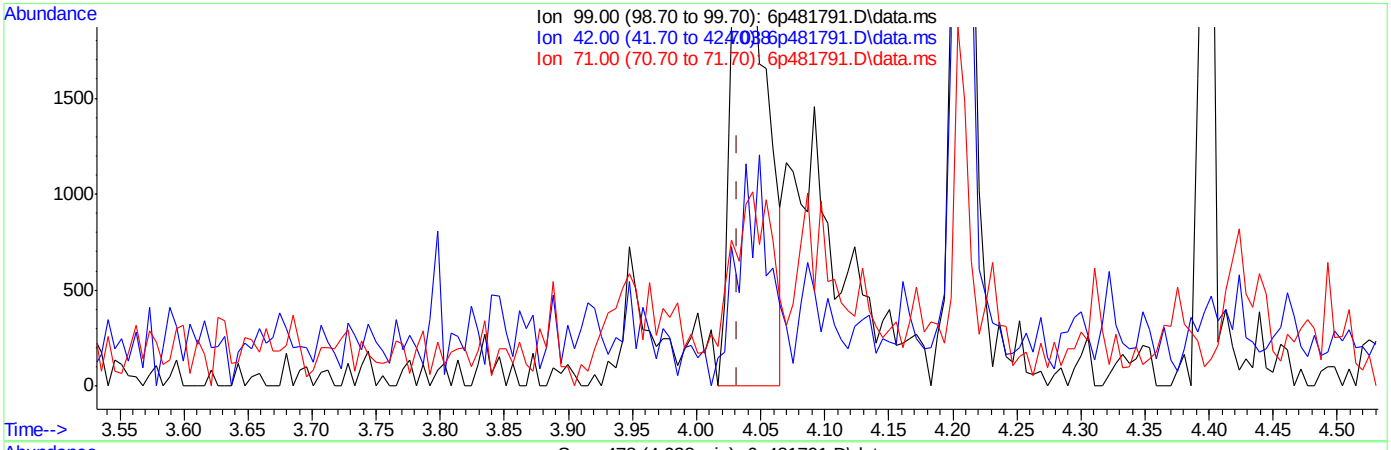
response 1006

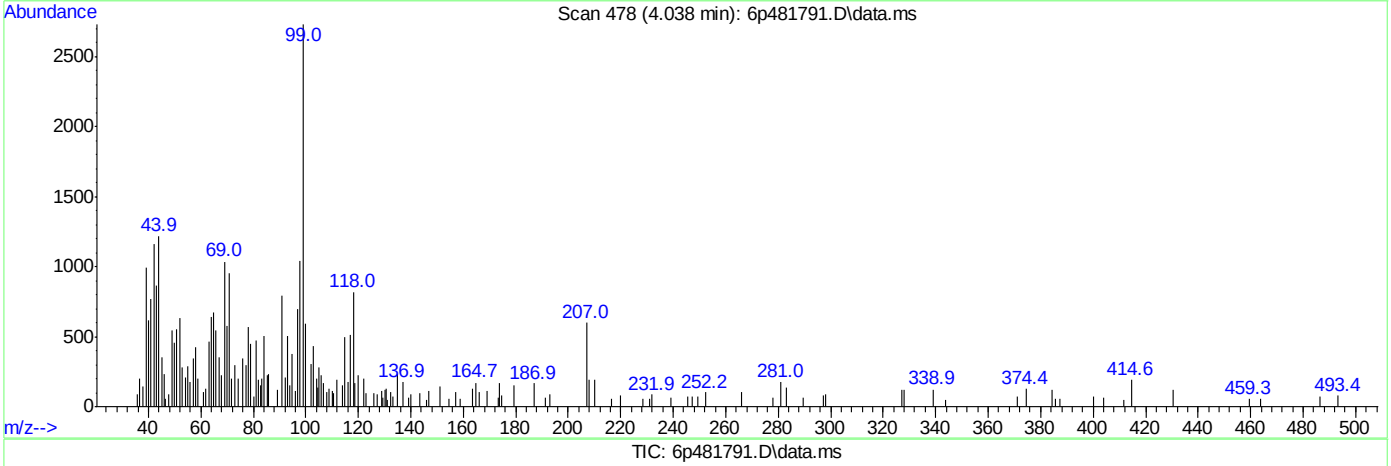
Ion	Exp%	Act%
99.00	100	100
42.00	18.80	44.30
71.00	36.10	48.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 12:42:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration





TIC: 6p481791.D\data.ms

(8) Phenol-d5 (S)

4.038min (+0.006) 0.28ppm m

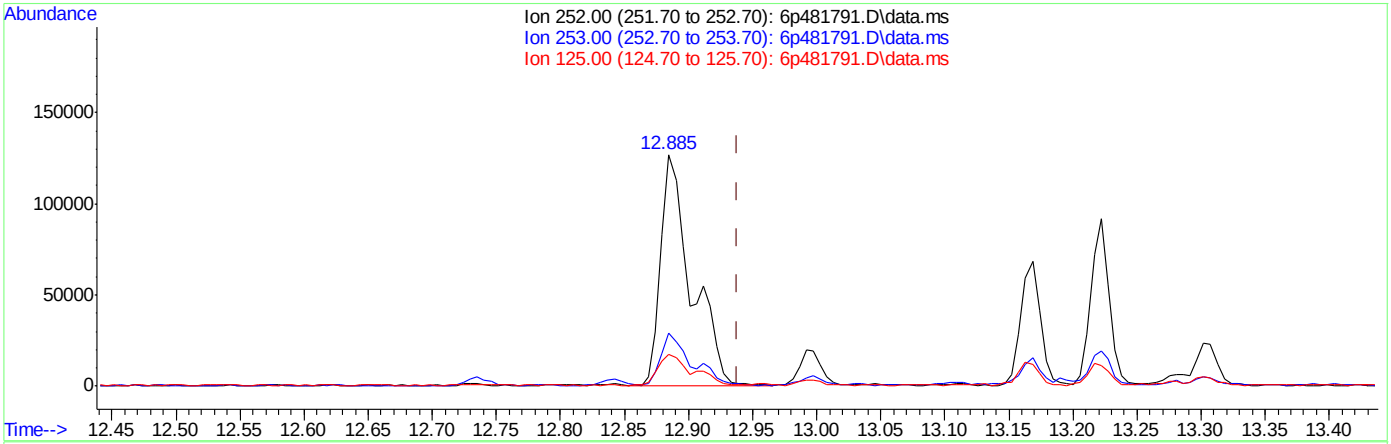
response 4959

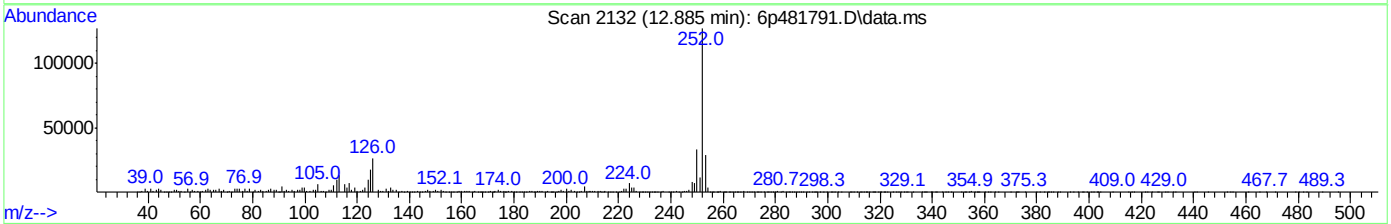
Ion	Exp%	Act%
99.00	100	100
42.00	18.80	42.40
71.00	36.10	34.85
0.00	0.00	0.00

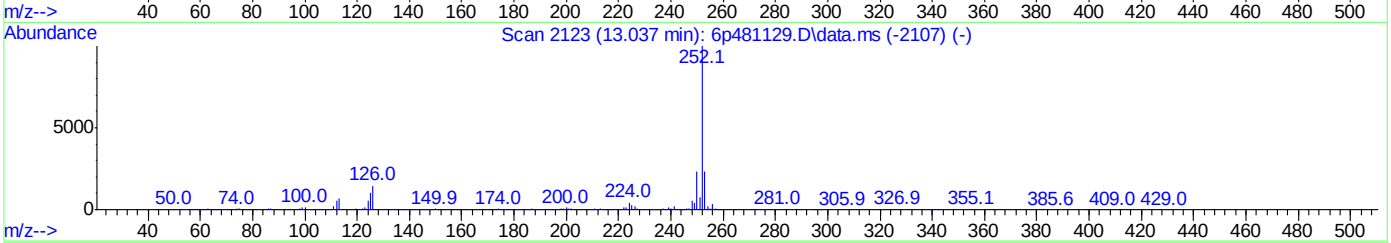
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 12:42:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481791.D\data.ms

(93) Benzo[b]fluoranthene (t)

12.885min (-0.053) 3.59ppm

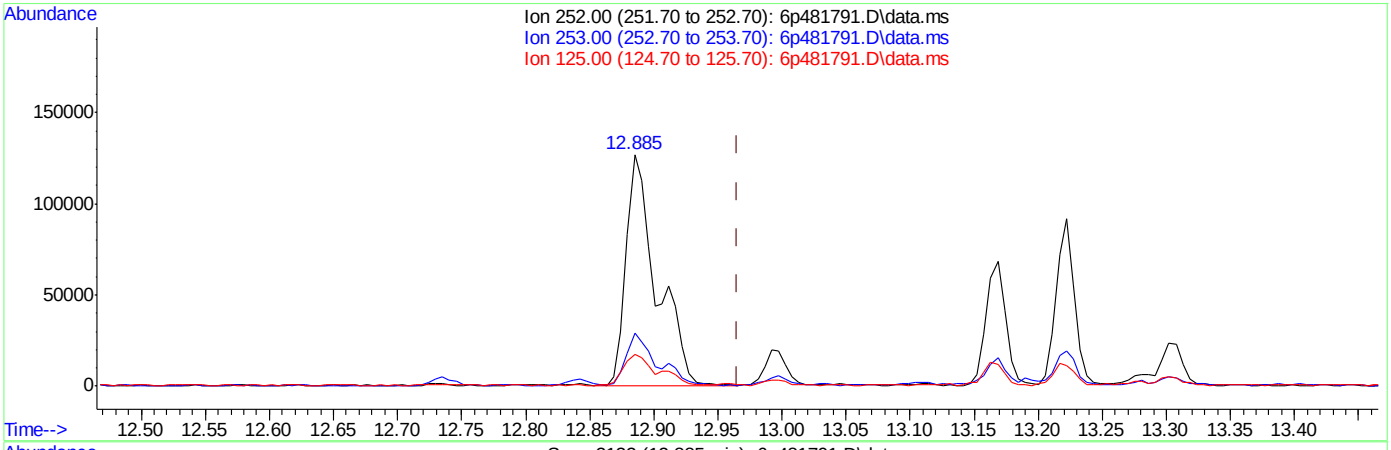
response 211379

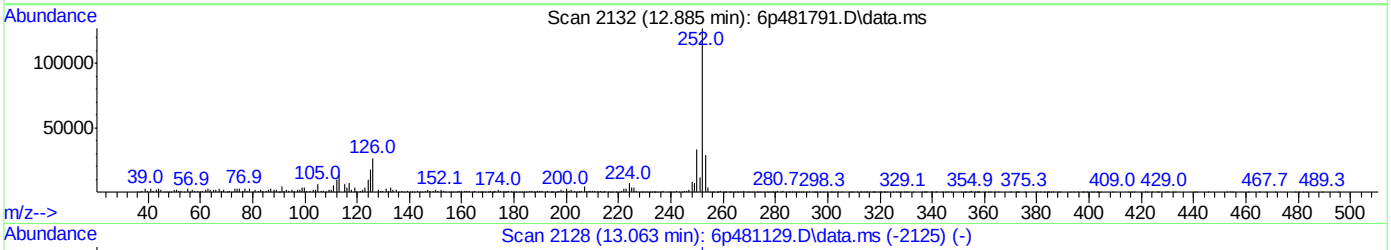
Ion	Exp%	Act%
252.00	100	100
253.00	22.90	22.18
125.00	13.30	13.39
0.00	0.00	0.00

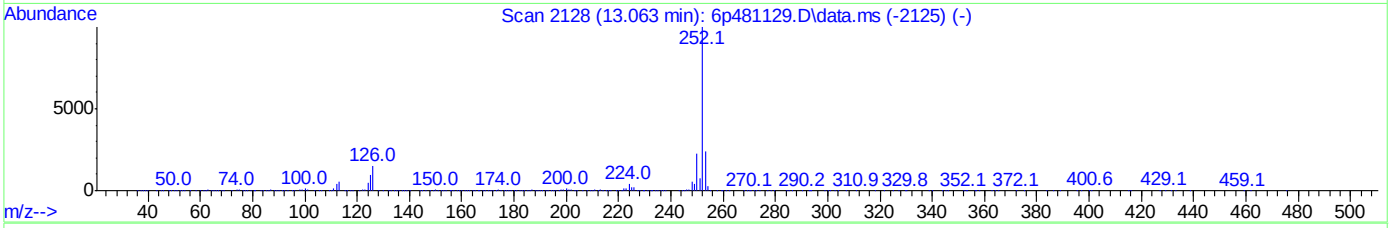
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481791.D
Acq On : 10 May 2019 12:25 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,100
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 10 12:42:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481791.D\data.ms

(94) Benzo[k]fluoranthene (t)

12.885min (-0.080) 4.05ppm

response 211379

Ion	Exp%	Act%
252.00	100	100
253.00	22.40	22.18
125.00	13.10	13.39
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:38

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On : 10 May 2019 1:38 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 14:13:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	531020	40.00	ppm	-0.04
24) Naphthalene-d8	5.193	136	2106986	40.00	ppm	-0.04
47) Acenaphthene-d10	6.857	164	1191377	40.00	ppm	-0.05
69) Phenanthrene-d10	8.526	188	2162959	40.00	ppm	-0.05
83) Chrysene-d12	11.697	240	2107959	40.00	ppm	-0.04
91) Perylene-d12	13.297	264	1954323	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4a	4.209	152	531020	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.857	164	1191362	40.00	ppm	-0.05
105) Phenanthrene-d10a	8.526	188	2162959	40.00	ppm	-0.05
109) Chrysene-d12a	11.697	240	2107959	40.00	ppm	-0.04
111) Naphthalene-d8a	5.193	136	2106986	40.00	ppm	-0.04
113) Phenanthrene-d10b	8.526	188	2162959	40.00	ppm	-0.05
115) Chrysene-d12b	11.697	240	2107959	40.00	ppm	-0.04
System Monitoring Compounds						
5) 2-Fluorophenol	3.246	112	61958	3.99	ppm	0.00
Spiked Amount 50.000			Recovery	=	7.98%	
8) Phenol-d5	4.001	99	83591	4.41	ppm	-0.03
Spiked Amount 50.000			Recovery	=	8.82%	
25) Nitrobenzene-d5	4.632	82	74918	4.27	ppm	-0.03
Spiked Amount 50.000			Recovery	=	8.54%	
51) 2-Fluorobiphenyl	6.172	172	161177	3.83	ppm	-0.05
Spiked Amount 50.000			Recovery	=	7.66%	
73) 2,4,6-Tribromophenol	7.734	330	21484	3.09	ppm	-0.04
Spiked Amount 50.000			Recovery	=	6.18%	
85) Terphenyl-d14	10.451	244	186278	3.79	ppm	-0.03
Spiked Amount 50.000			Recovery	=	7.58%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
18) Acetophenone	4.519	105	69449	2.81	ppm	94
38) Naphthalene	5.204	128	19118561m	348.41	ppm	
44) 2-Methylnaphthalene	5.824	141	3127967m	100.78	ppm	
53) Biphenyl	6.274	154	1762058	38.66	ppm	99
56) Acenaphthylene	6.712	152	6800673	125.43	ppm	99
59) Acenaphthene	6.889	153	811394	22.54	ppm	99
62) Dibenzofuran	7.081	168	5599881	111.73	ppm	91
66) Fluorene	7.461	166	4497523	110.53	ppm	99
77) Phenanthrene	8.563	178	8933746	153.84	ppm	98
78) Anthracene	8.611	178	1602410	27.51	ppm	99
79) Carbazole	8.836	167	540252	9.80	ppm	97
81) Fluoranthene	9.980	202	5415474	85.83	ppm	97
84) Pyrene	10.237	202	4054604	57.74	ppm	98
87) Benzo[a]anthracene	11.687	228	1688403	25.15	ppm	99
89) Chrysene	11.724	228	1401725	21.29	ppm	99
93) Benzo[b]fluoranthene	12.901	252	1583965m	26.54	ppm	
94) Benzo[k]fluoranthene	12.922	252	448204m	8.48	ppm	
95) Benzo[a]pyrene	13.232	252	865909	17.66	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On : 10 May 2019 1:38 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 14:13:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
96) Indeno[1,2,3-cd]pyrene	14.313	276	655516	10.01 ppm	97
98) Dibenz[a,h]anthracene	14.318	278	199796	3.44 ppm	96
100) Benzo[g,h,i]perylene	14.575	276	576294	11.29 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

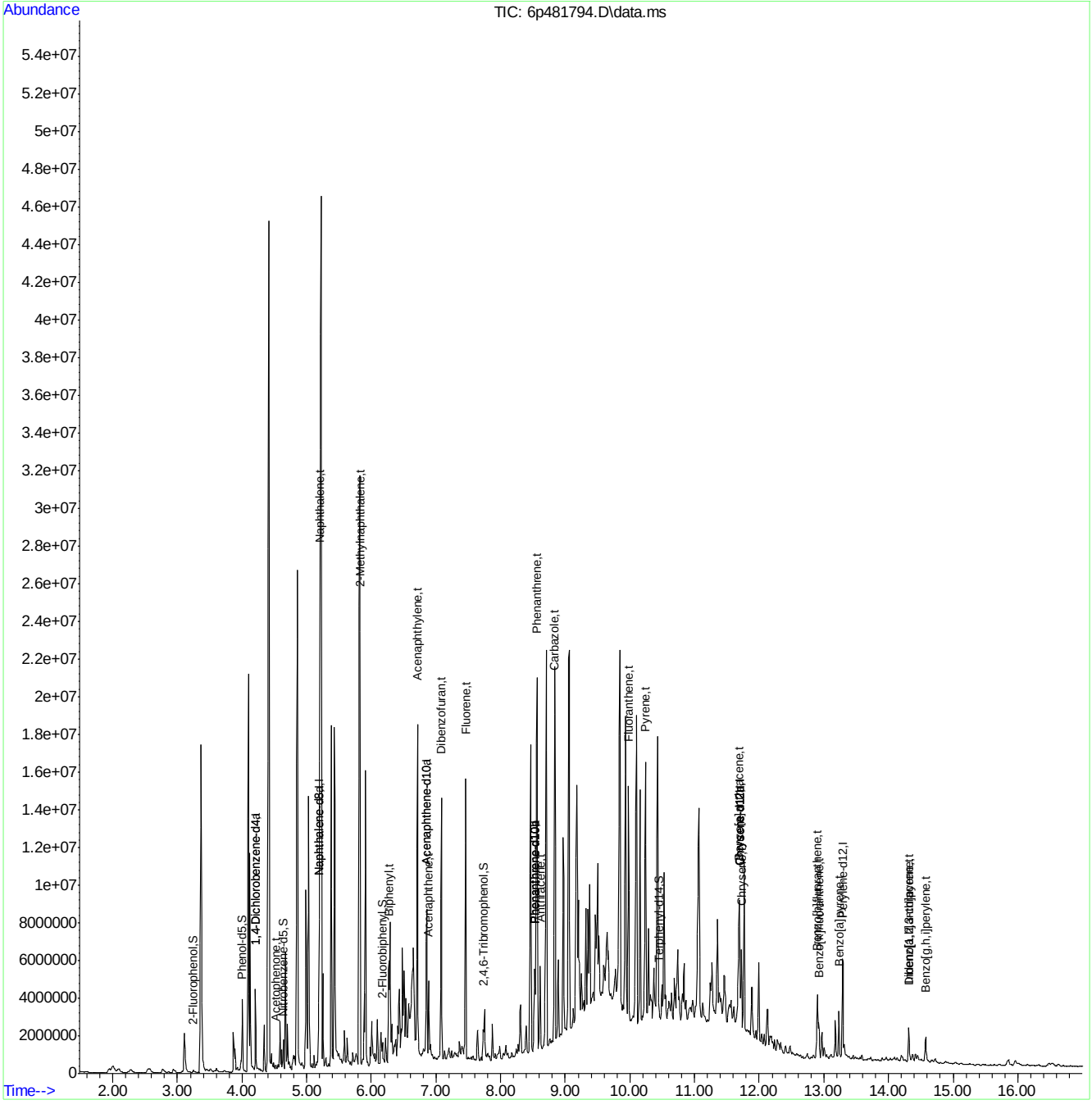
9.1.10

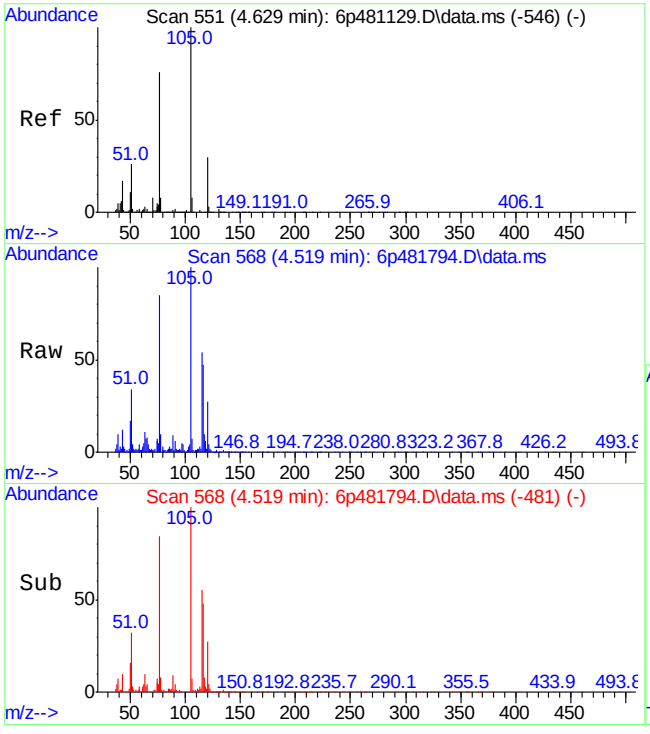
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On : 10 May 2019 1:38 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 14:13:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

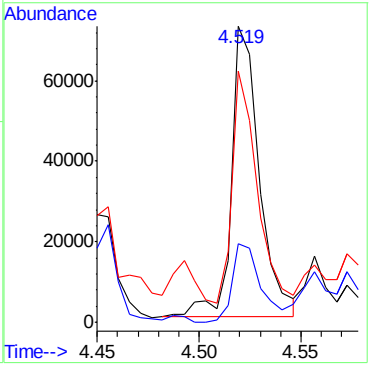


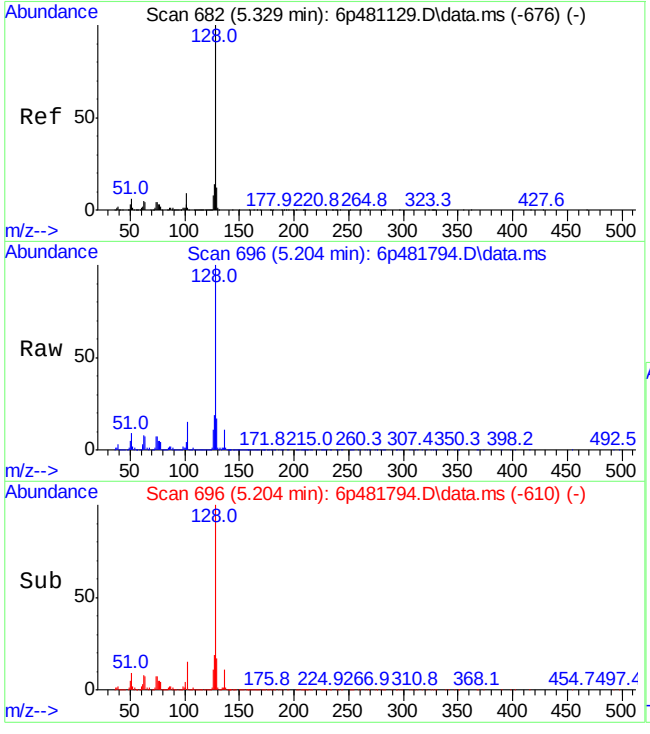


#18
Acetophenone
Concen: 2.81 ppm
RT: 4.519 min Scan# 568
Delta R.T. -0.032 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:105 Resp: 69449

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.1	60.1
77	80.0	46.3	106.3

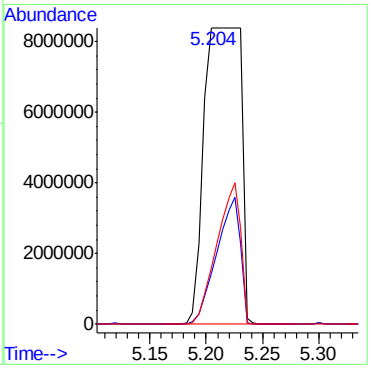


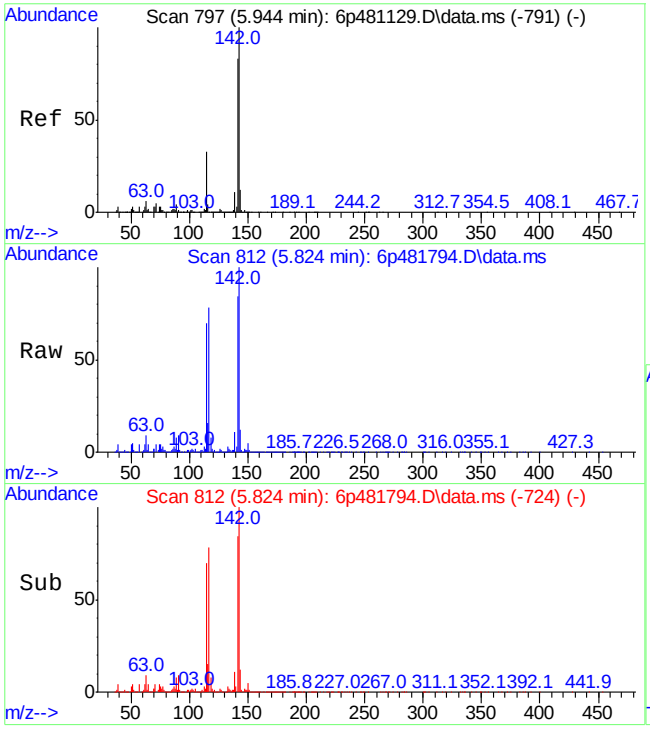


#38
Naphthalene
Concen: 348.41 ppm m
RT: 5.204 min Scan# 696
Delta R.T. -0.043 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:128 Resp:19118561

Ion	Ratio	Lower	Upper
128	100		
129	17.2	0.0	41.5
127	19.0	0.0	43.5

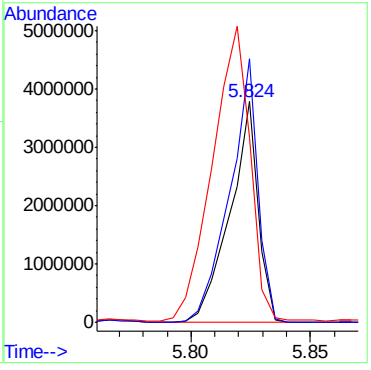


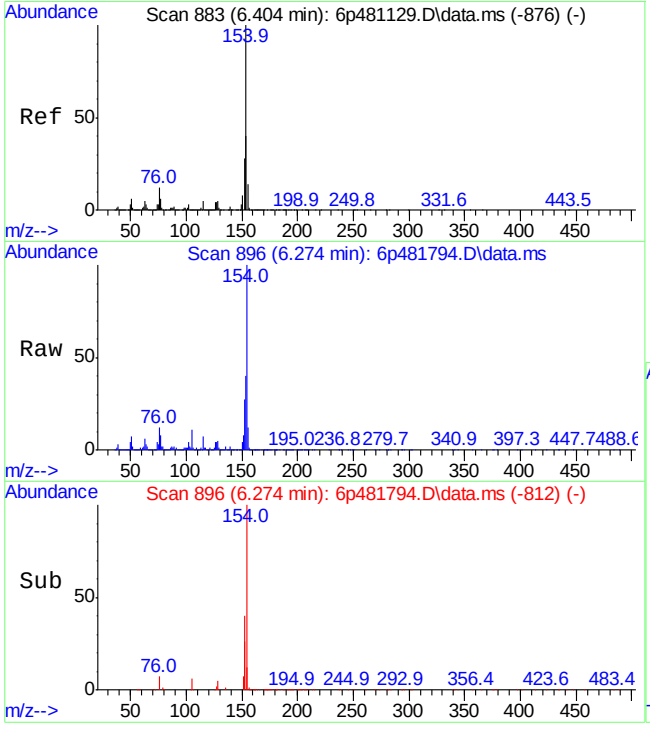


#44
2-Methylnaphthalene
Concen: 100.78 ppm m
RT: 5.824 min Scan# 812
Delta R.T. -0.028 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:141 Resp: 3127967

Ion	Ratio	Lower	Upper
141	100		
142	119.7	91.1	151.1
115	83.7	10.5	70.5#

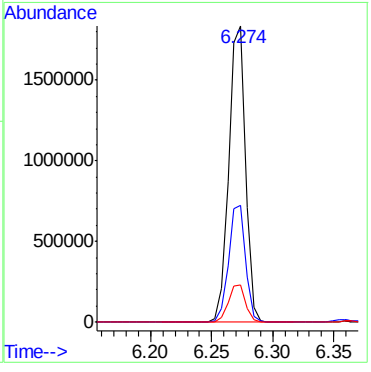




#53
Biphenyl
Concen: 38.66 ppm
RT: 6.274 min Scan# 896
Delta R.T. -0.050 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

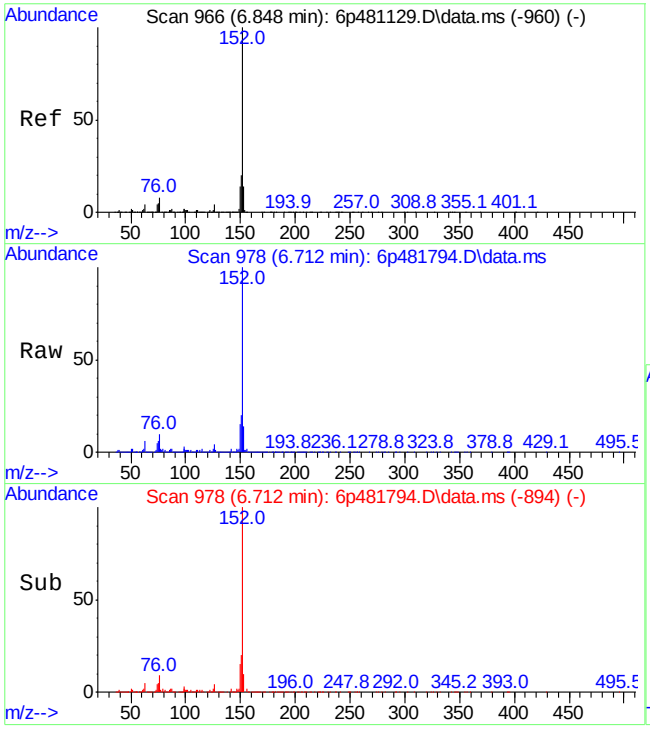
Tgt Ion:154 Resp: 1762058

Ion	Ratio	Lower	Upper
154	100		
153	39.6	10.2	70.2
155	12.4	0.0	43.5



9.1.10

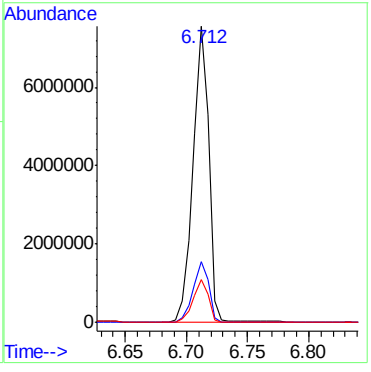
9

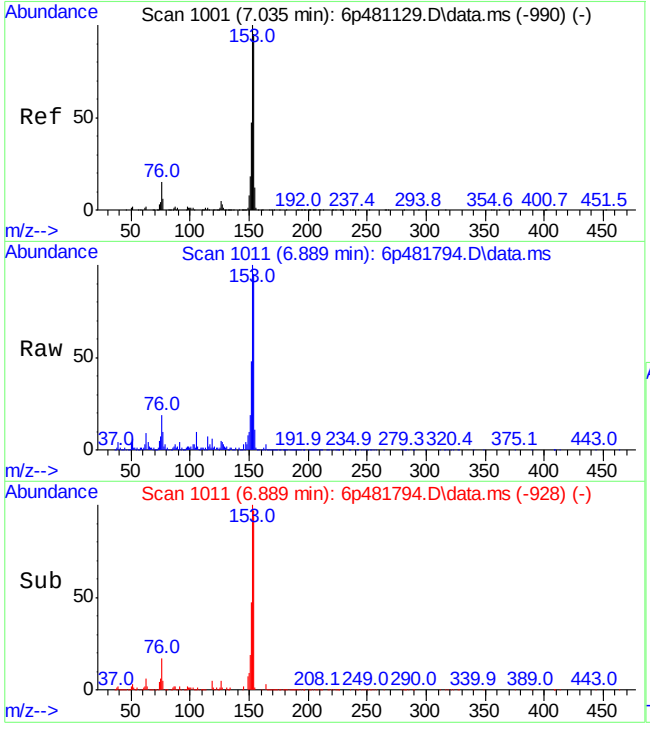


#56
Acenaphthylene
Concen: 125.43 ppm
RT: 6.712 min Scan# 978
Delta R.T. -0.050 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:152 Resp: 6800673

Ion	Ratio	Lower	Upper
152	100		
151	20.4	0.0	50.3
153	14.3	0.0	43.6

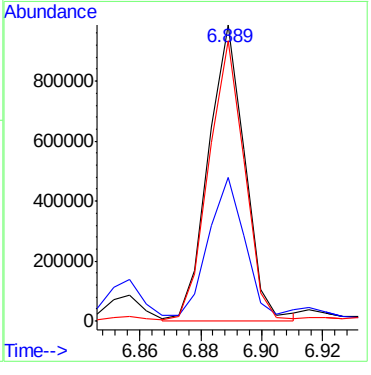




#59
Acenaphthene
Concen: 22.54 ppm
RT: 6.889 min Scan# 1011
Delta R.T. -0.058 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

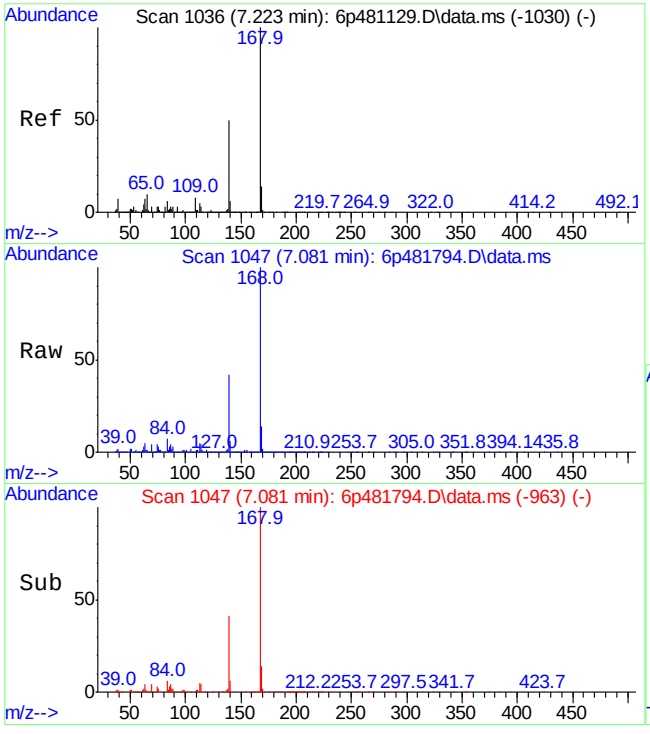
Tgt Ion:153 Resp: 811394

Ion	Ratio	Lower	Upper
153	100		
152	46.3	16.9	76.9
154	95.6	65.0	125.0



9.1.10

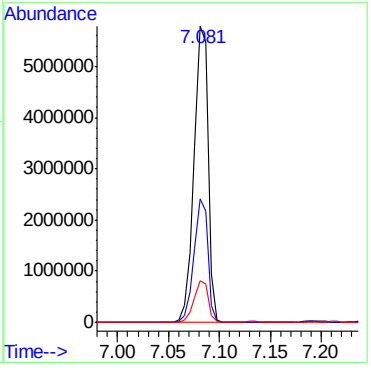
9

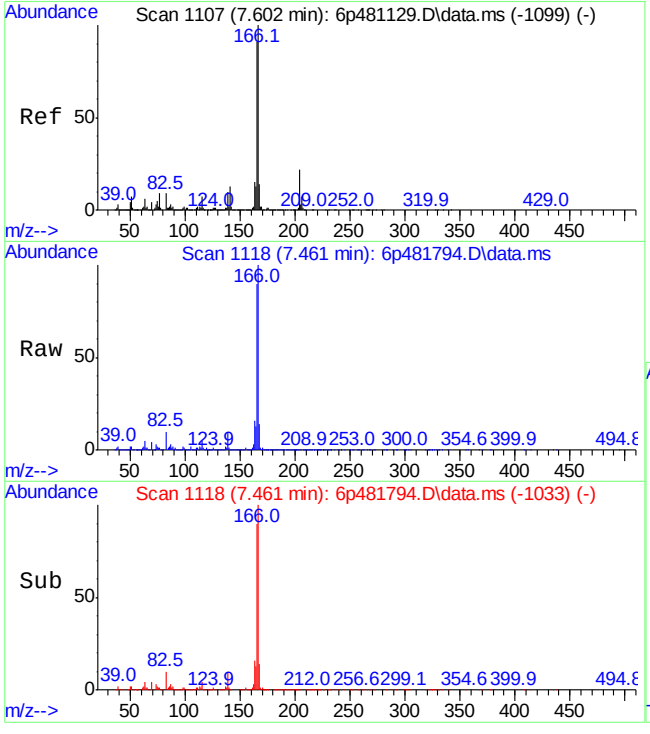


#62
Dibenzofuran
Concen: 111.73 ppm
RT: 7.081 min Scan# 1047
Delta R.T. -0.051 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:168 Resp: 5599881

Ion	Ratio	Lower	Upper
168	100		
139	41.8	19.5	79.5
169	14.0	0.0	43.8

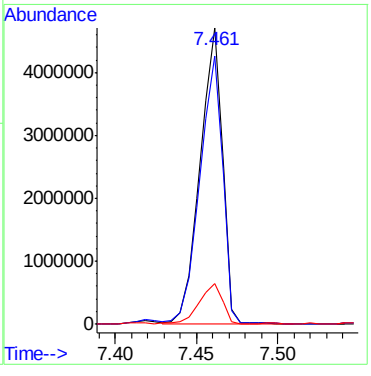


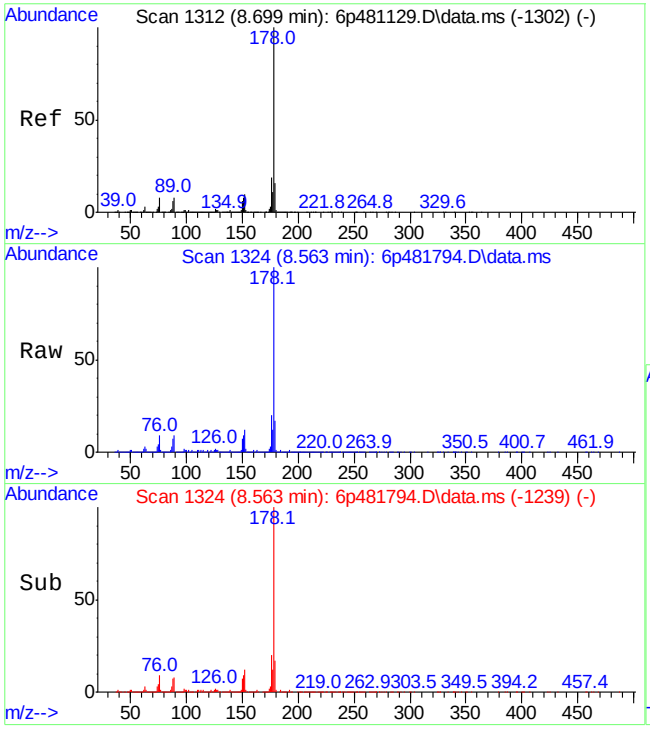


#66
Fluorene
Concen: 110.53 ppm
RT: 7.461 min Scan# 1118
Delta R.T. -0.046 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:166 Resp: 4497523

Ion	Ratio	Lower	Upper
166	100		
165	90.2	61.0	121.0
167	13.5	0.0	43.5

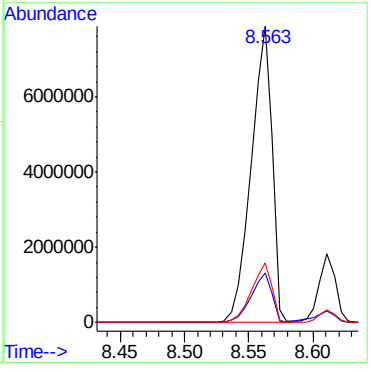


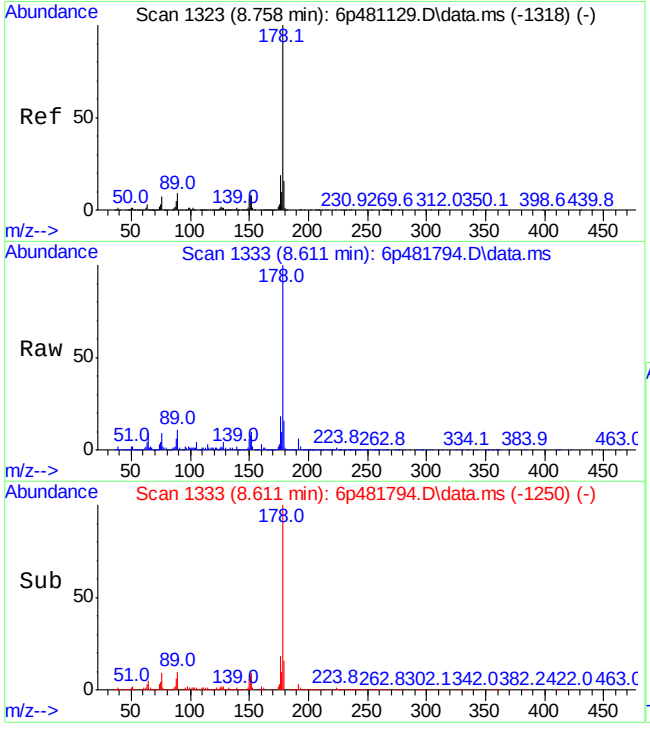


#77
Phenanthrene
Concen: 153.84 ppm
RT: 8.563 min Scan# 1324
Delta R.T. -0.048 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:178 Resp: 8933746

Ion	Ratio	Lower	Upper
178	100		
179	16.8	0.0	46.1
176	20.2	0.0	49.3

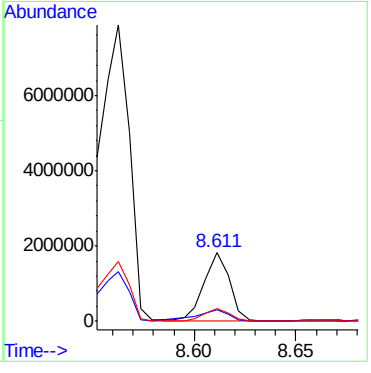


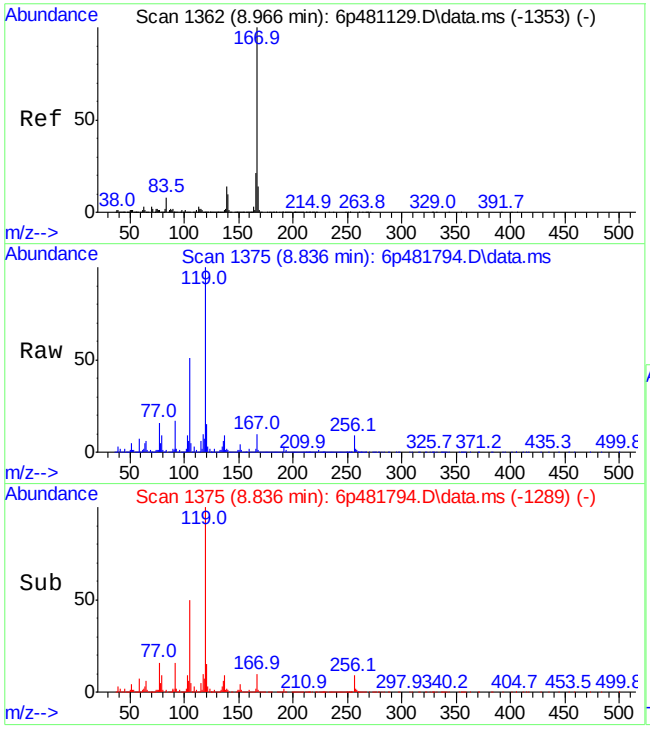


#78
Anthracene
Concen: 27.51 ppm
RT: 8.611 min Scan# 1333
Delta R.T. -0.058 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:178 Resp: 1602410

Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	46.3
176	18.3	0.0	48.6

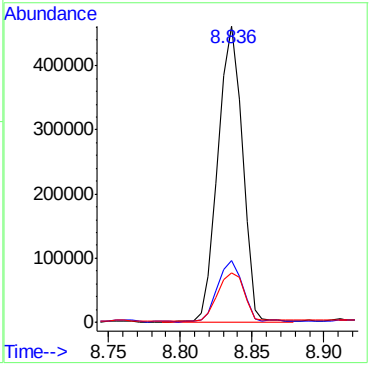


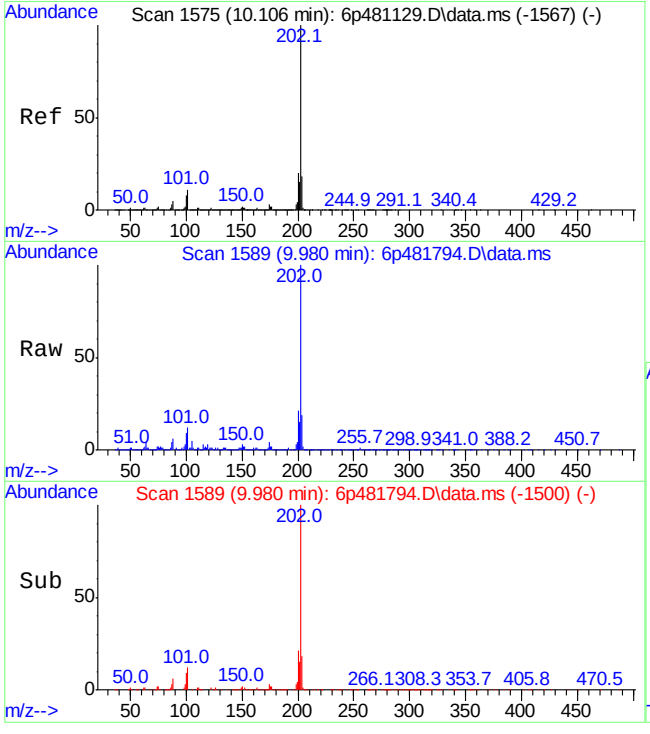


#79
Carbazole
Concen: 9.80 ppm
RT: 8.836 min Scan# 1375
Delta R.T. -0.040 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:167 Resp: 540252

Ion	Ratio	Lower	Upper
167	100		
166	20.4	0.0	50.7
139	16.4	0.0	43.6

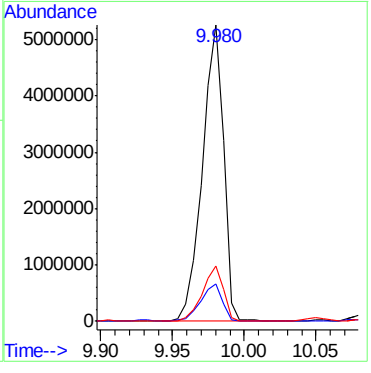


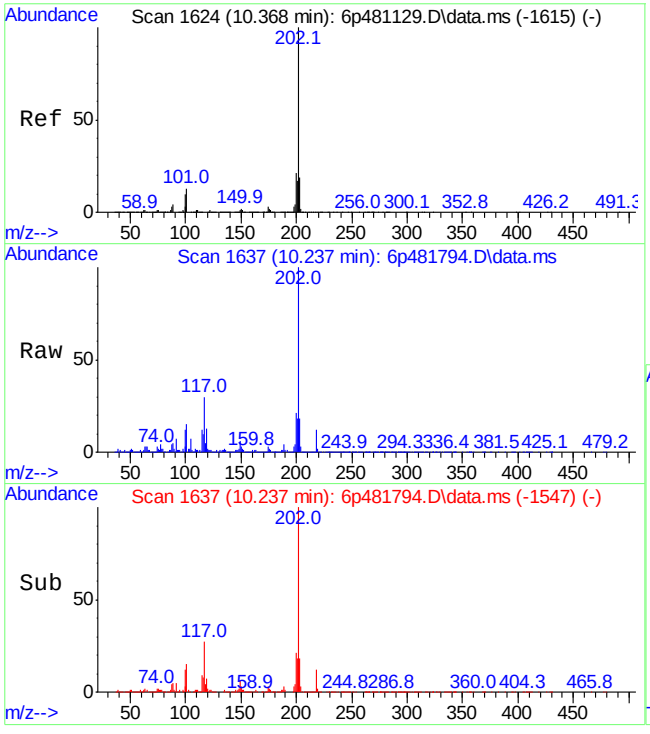


#81
Fluoranthene
Concen: 85.83 ppm
RT: 9.980 min Scan# 1589
Delta R.T. -0.023 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:202 Resp: 5415474

Ion	Ratio	Lower	Upper
202	100		
101	12.3	0.0	40.6
203	18.5	0.0	47.8

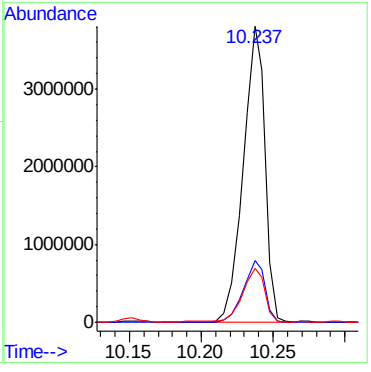


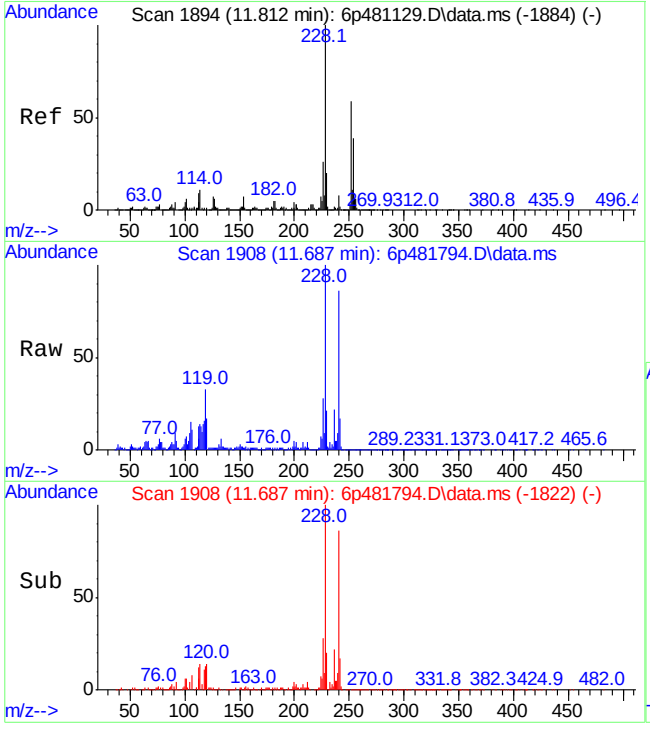


#84
Pyrene
Concen: 57.74 ppm
RT: 10.237 min Scan# 1637
Delta R.T. -0.020 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:202 Resp: 4054604

Ion	Ratio	Lower	Upper
202	100		
200	20.7	0.0	51.3
203	18.3	0.0	46.8

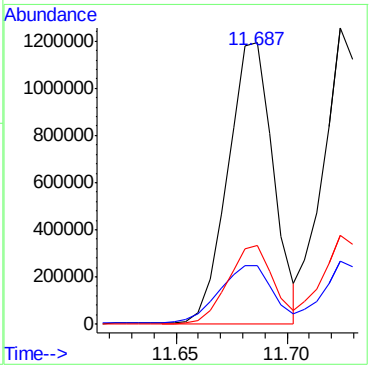


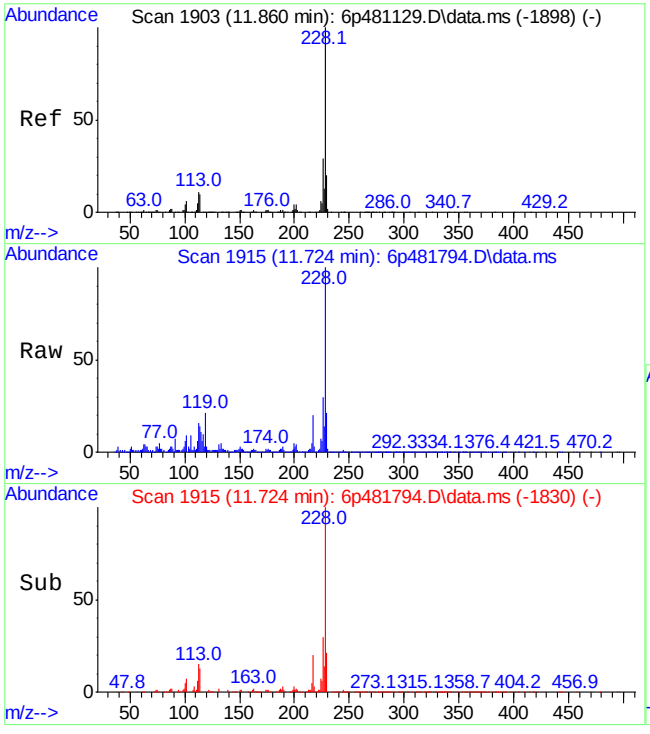


#87
Benzo[a]anthracene
Concen: 25.15 ppm
RT: 11.687 min Scan# 1908
Delta R.T. -0.037 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:228 Resp: 1688403

Ion	Ratio	Lower	Upper
228	100		
229	20.4	0.0	49.8
226	27.5	0.0	57.5

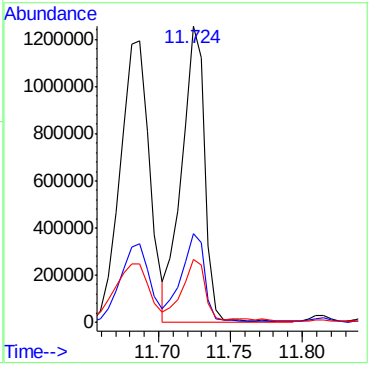


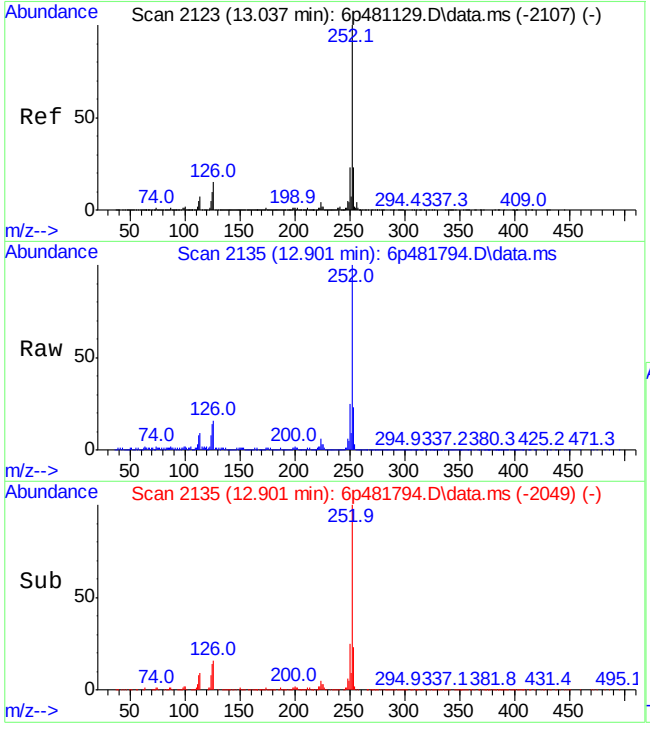


#89
Chrysene
Concen: 21.29 ppm
RT: 11.724 min Scan# 1915
Delta R.T. -0.043 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:228 Resp: 1401725

Ion	Ratio	Lower	Upper
228	100		
226	29.6	0.0	59.3
229	21.1	0.0	50.0

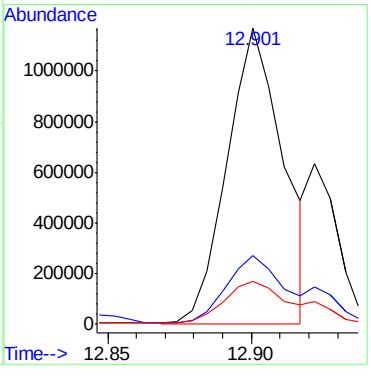




#93
Benzo[b]fluoranthene
Concen: 26.54 ppm m
RT: 12.901 min Scan# 2135
Delta R.T. -0.038 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

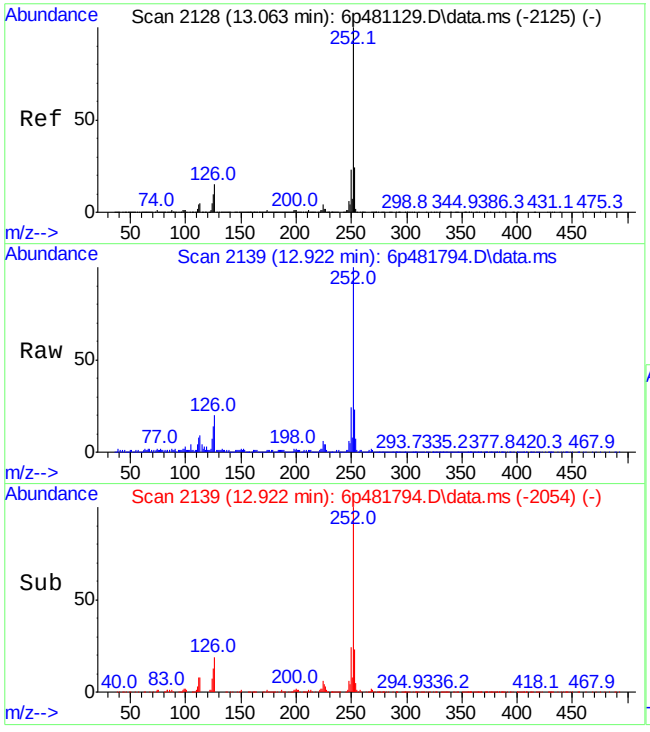
Tgt Ion:252 Resp: 1583965

Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	52.9
125	14.4	0.0	43.3



9.1.10

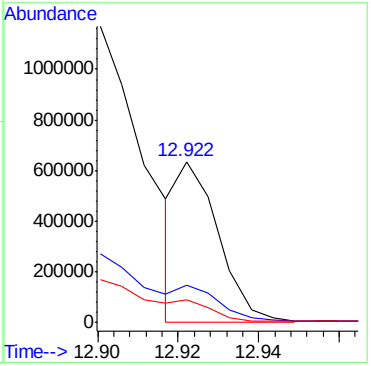
9

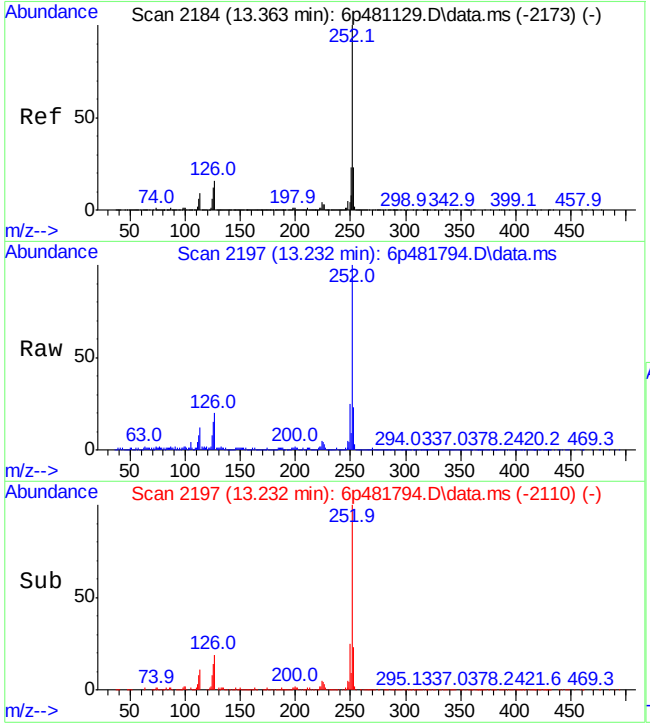


#94
Benzo[k]fluoranthene
Concen: 8.48 ppm m
RT: 12.922 min Scan# 2139
Delta R.T. -0.043 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:252 Resp: 448204

Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	52.4
125	13.8	0.0	43.1

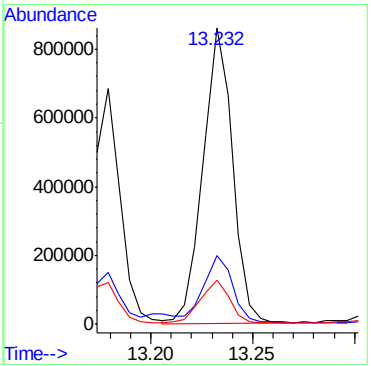


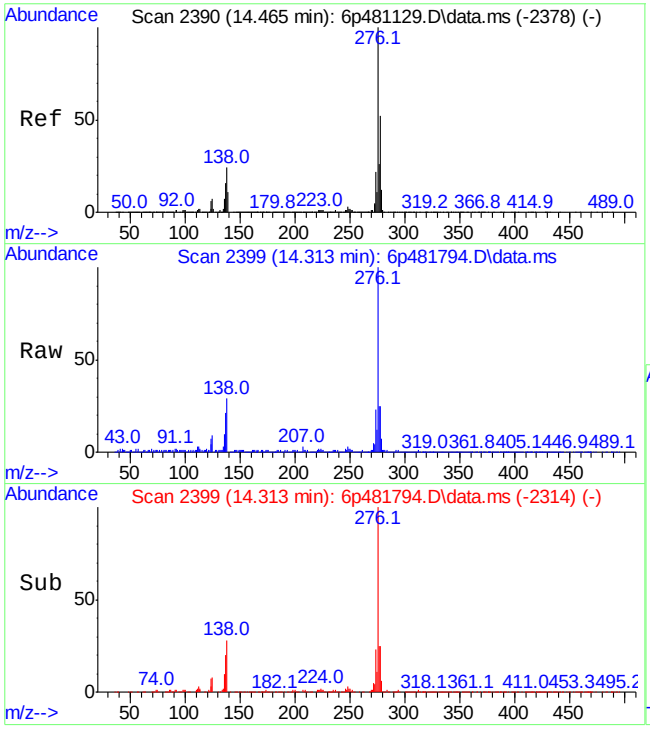


#95
Benzo[a]pyrene
Concen: 17.66 ppm
RT: 13.232 min Scan# 2197
Delta R.T. -0.037 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:252 Resp: 865909

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	52.1
125	14.5	0.0	45.1

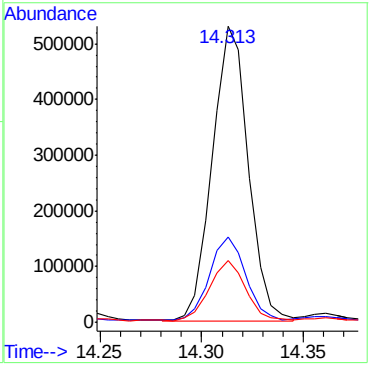


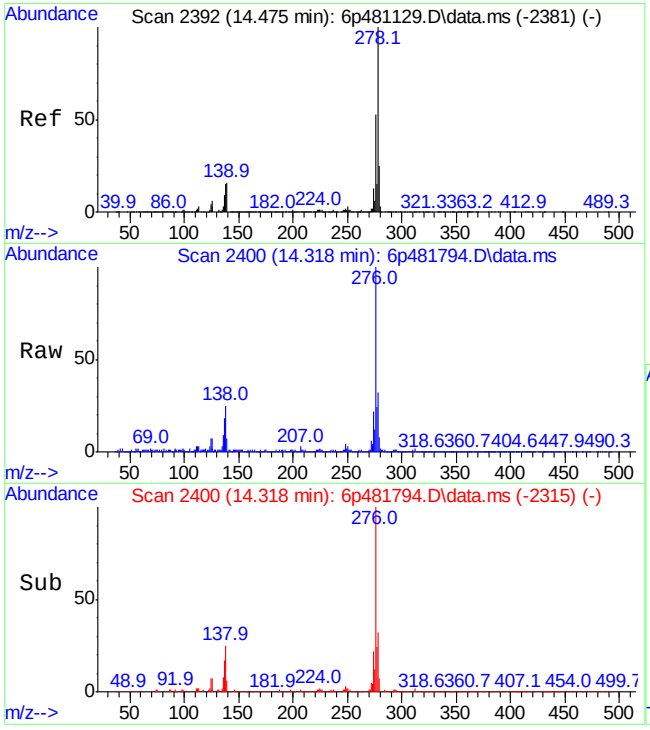


#96
Indeno[1,2,3-cd]pyrene
Concen: 10.01 ppm
RT: 14.313 min Scan# 2399
Delta R.T. -0.046 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:276 Resp: 655516

Ion	Ratio	Lower	Upper
276	100		
138	28.1	0.0	60.0
137	20.3	0.0	49.6

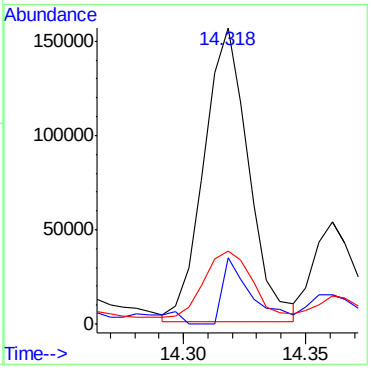


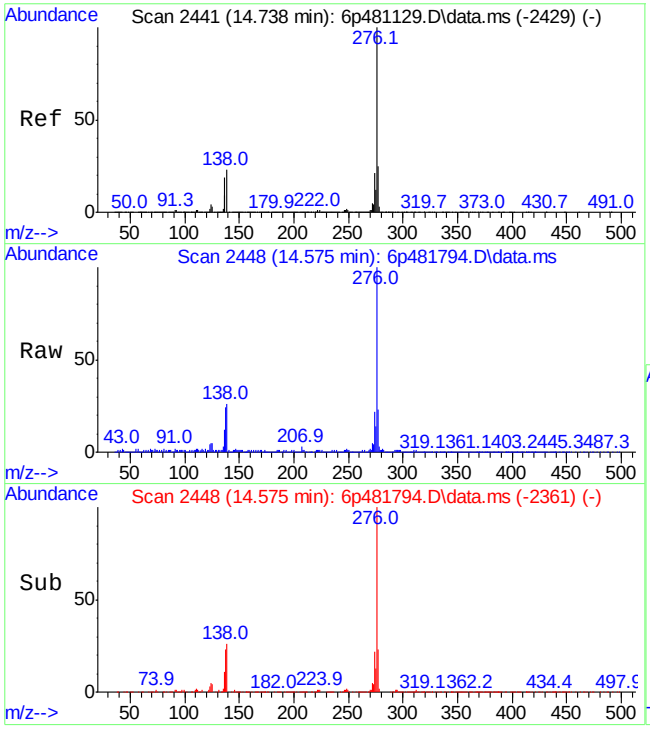


#98
Dibenz[a,h]anthracene
Concen: 3.44 ppm
RT: 14.318 min Scan# 2400
Delta R.T. -0.046 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:278 Resp: 199796

Ion	Ratio	Lower	Upper
278	100		
139	19.5	0.0	51.8
279	22.7	0.0	54.3

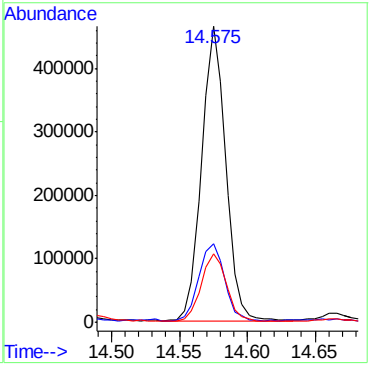




#100
Benzo[g,h,i]perylene
Concen: 11.29 ppm
RT: 14.575 min Scan# 2448
Delta R.T. -0.034 min
Lab File: 6p481794.D
Acq: 10 May 2019 1:38 pm

Tgt Ion:276 Resp: 576294

Ion	Ratio	Lower	Upper
276	100		
138	26.0	0.0	54.9
277	23.0	0.0	53.8



9.1.10

9

Manual Integration Approval Summary

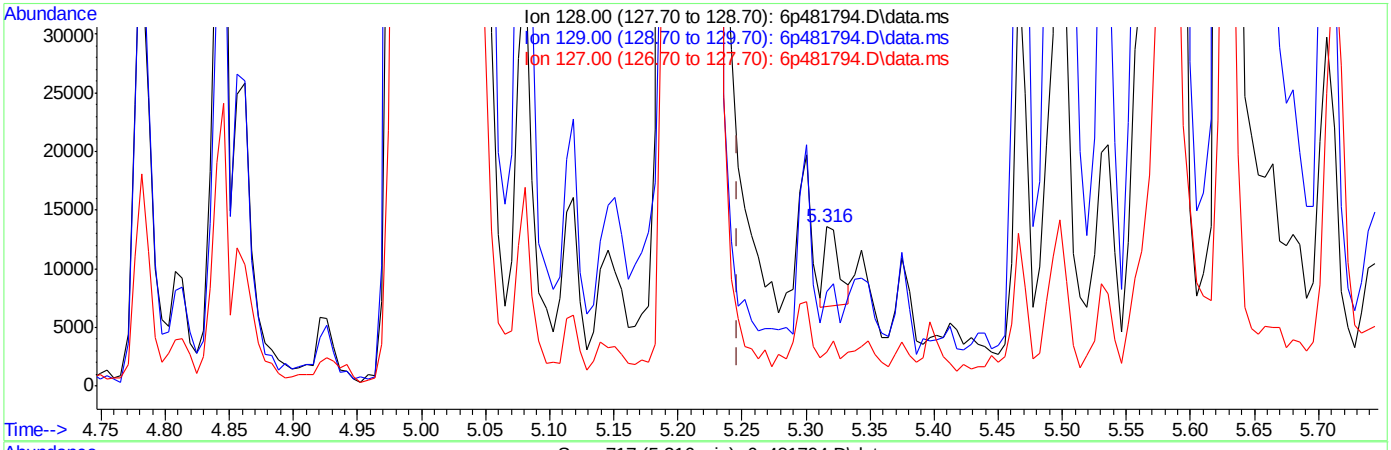
Sample Number:	JC87093-6	**Method:**	SW846 8270D
Lab FileID:	6P481794.D	**Analyst approved:**	05/10/19 14:15 Dipa Patel
Injection Time:	05/10/19 13:38	**Supervisor approved:**	05/13/19 19:38 Kristi Schollenberger

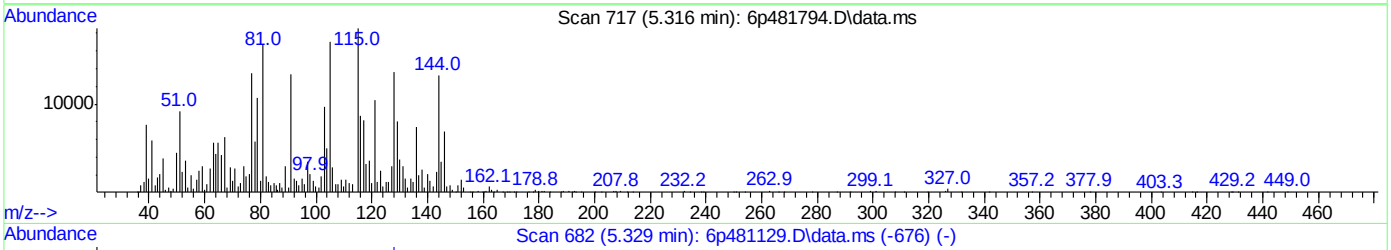
Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3		5.20	Missed peak
2-Methylnaphthalene	91-57-6		5.82	Missed peak
Benzo(b)fluoranthene	205-99-2		12.90	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.92	Overlapping peak

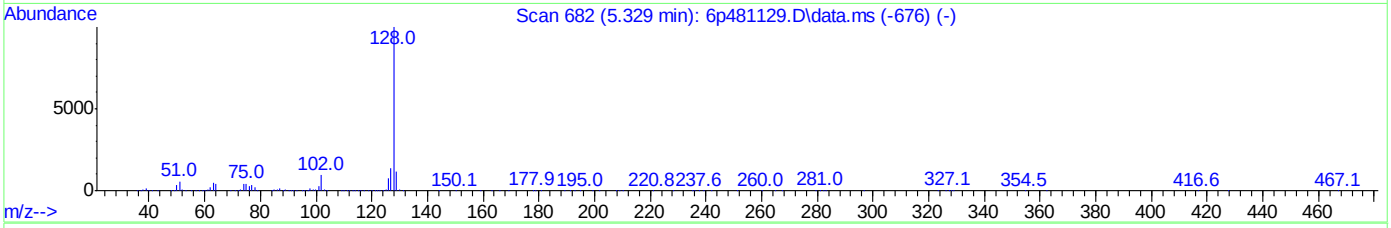
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On : 10 May 2019 1:38 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 13:55:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481794.D\data.ms

(38) Naphthalene (t)

5.316min (+0.070) 0.10ppm

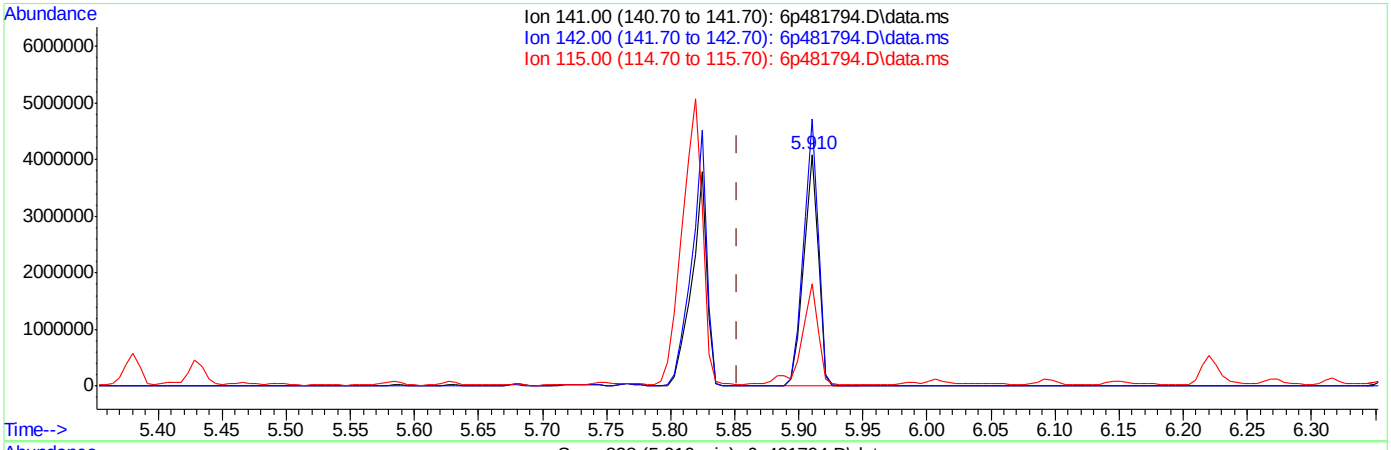
response 5446

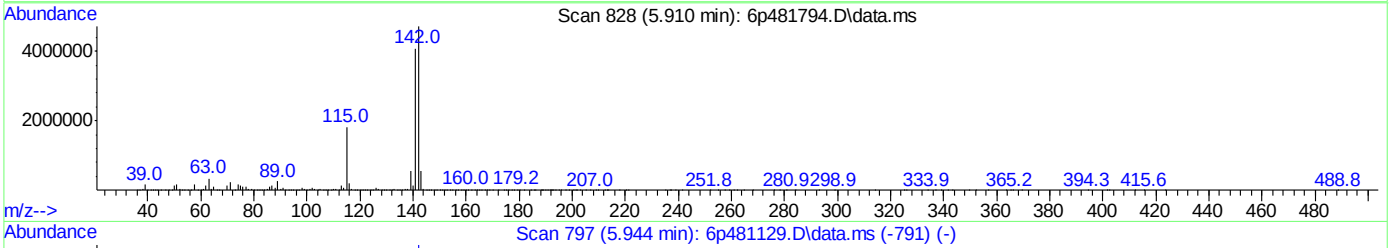
Ion	Exp%	Act%
128.00	100	100
129.00	11.50	28.94
127.00	13.50	5.16
0.00	0.00	0.00

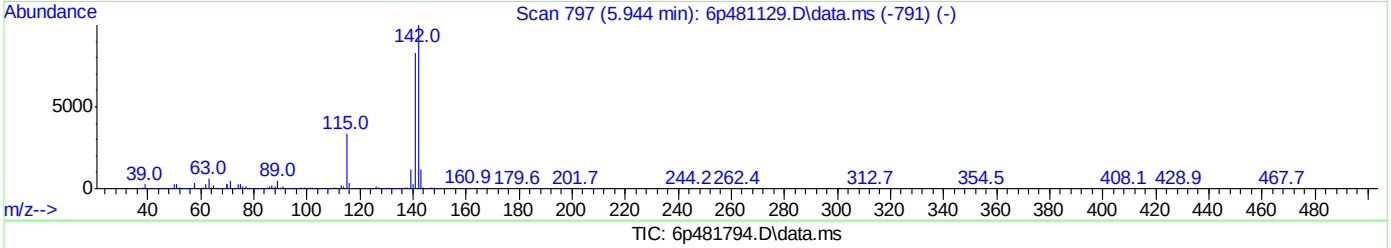
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On : 10 May 2019 1:38 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 13:55:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481794.D\data.ms

(44) 2-Methylnaphthalene (t)

5.910min (+0.058) 104.65ppm

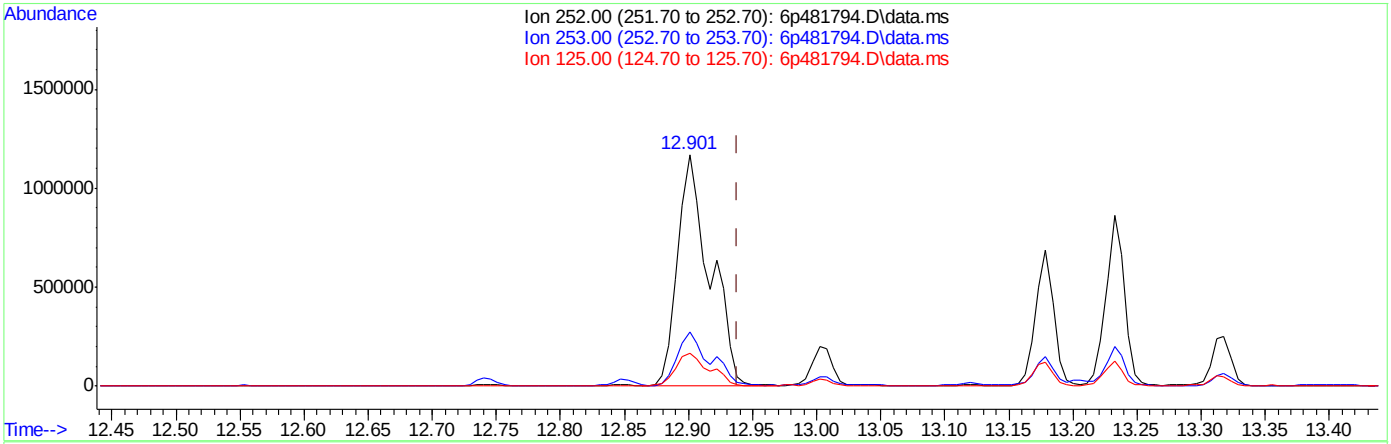
response 3248093

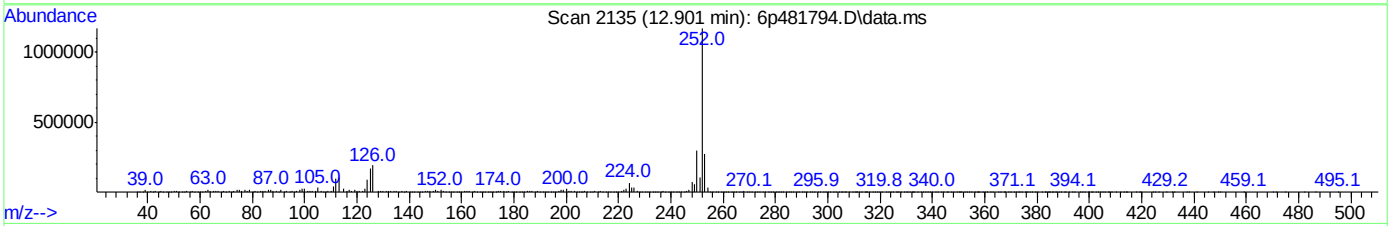
Ion	Exp%	Act%
141.00	100	100
142.00	121.10	115.34
115.00	40.50	41.77
0.00	0.00	0.00

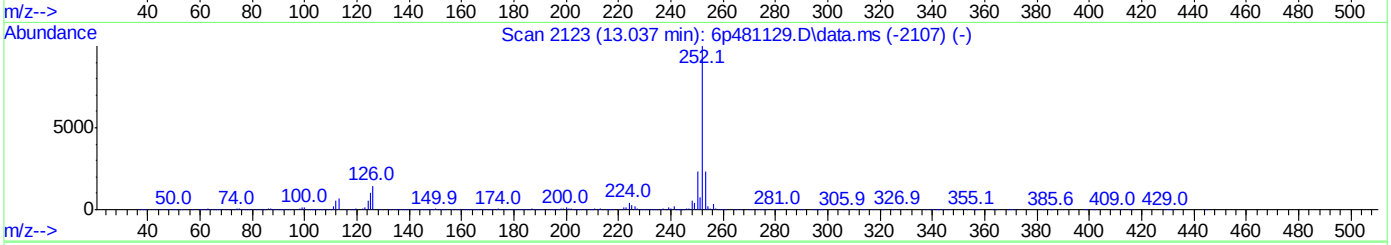
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On : 10 May 2019 1:38 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,e6p2588,30.3,,,1,10
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 10 13:55:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration







TIC: 6p481794.D\data.ms

(93) Benzo[b]fluoranthene (t)

12.901min (-0.038) 34.08ppm

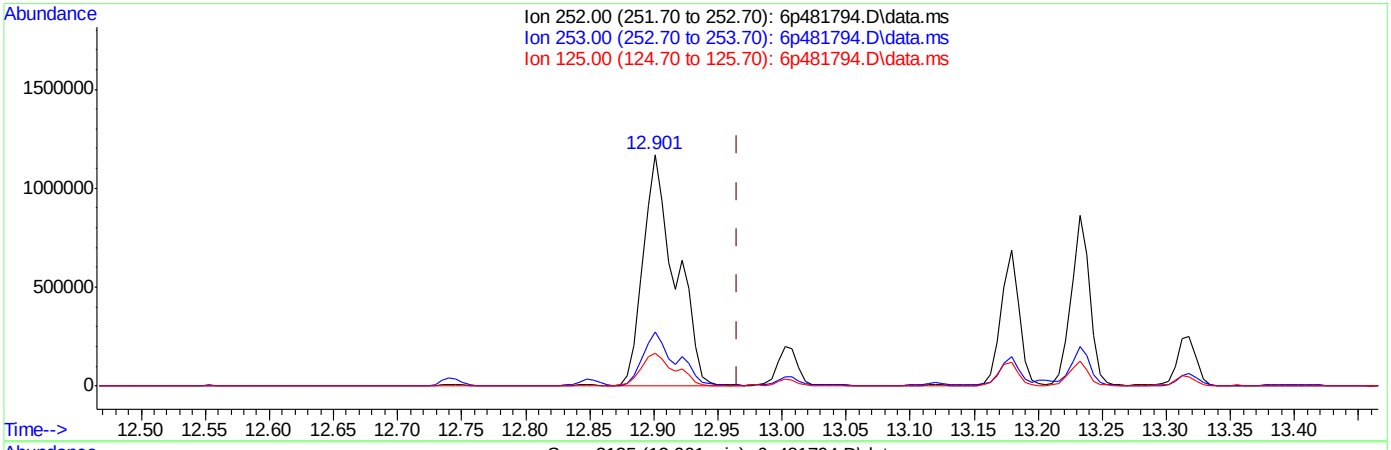
response 2034527

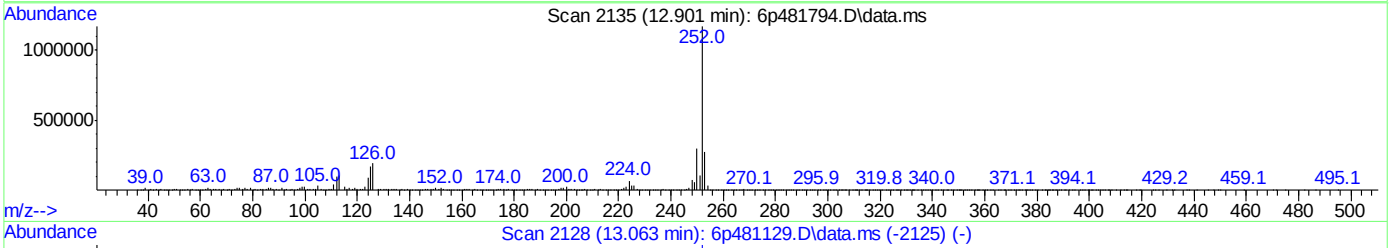
Ion	Exp%	Act%
252.00	100	100
253.00	22.90	22.76
125.00	13.30	14.15
0.00	0.00	0.00

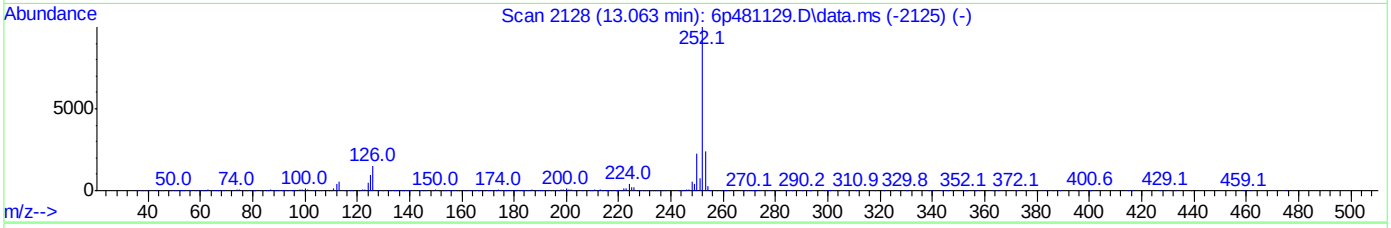
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481794.D
Acq On    : 10 May 2019   1:38 pm
Operator  : angelar
Sample    : jc87093-6
Misc      : op20110,e6p2588,30.3,,,1,10
ALS Vial  : 13   Sample Multiplier: 1

Quant Time: May 10 13:55:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title  : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration
```







TIC: 6p481794.D\data.ms

(94) Benzo[k]fluoranthene (t)

12.901min (-0.065) 38.50ppm

response 2034521

Ion	Exp%	Act%
252.00	100	100
253.00	22.40	22.76
125.00	13.10	14.15
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:38

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 19:49:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	139208	40.00	ppm	0.02
24) Naphthalene-d8	4.731	136	309028m	40.00	ppm	0.05
47) Acenaphthene-d10	5.944	164	247754	40.00	ppm	0.02
69) Phenanthrene-d10	7.365	188	437951	40.00	ppm	0.05
83) Chrysene-d12	12.087	240	444685	40.00	ppm	0.14
91) Perylene-d12	15.004	264	438399	40.00	ppm	0.13
101) 1,4-Dichlorobenzene-d4b	3.764	152	139208	40.00	ppm	0.02
103) Phenanthrene-d10b	7.365	188	437951	40.00	ppm	0.05
105) Chrysene-d12b	12.087	240	444685	40.00	ppm	0.14
107) Naphthalene-d8b	4.731	136	310497m	40.00	ppm	0.05
109) Acenaphthene-d10b	5.944	164	239297m	40.00	ppm	0.02
111) Chrysene-d12d	12.087	240	445852m	40.00	ppm	0.14
System Monitoring Compounds						
5) 2-Fluorophenol	2.797	112	95478	21.35	ppm	0.02
Spiked Amount 50.000			Recovery = 42.70%			
8) Phenol-d5	3.630	99	109894	19.35	ppm	0.02
Spiked Amount 50.000			Recovery = 38.70%			
25) Nitrobenzene-d5	4.186	82	86780	26.14	ppm	0.02
Spiked Amount 50.000			Recovery = 52.28%			
51) 2-Fluorobiphenyl	5.479	172	158345	20.17	ppm	0.02
Spiked Amount 50.000			Recovery = 40.34%			
73) 2,4,6-Tribromophenol	6.611	330	25830	17.72	ppm	0.03
Spiked Amount 50.000			Recovery = 35.44%			
85) Terphenyl-d14	10.020	244	177661	17.63	ppm	0.10
Spiked Amount 50.000			Recovery = 35.26%			
Target Compounds						Qvalue
18) Acetophenone	4.079	105	74677	10.95	ppm	95
38) Naphthalene	4.774	128	22103443m	2995.41	ppm	
44) 2-Methylnaphthalene	5.244	141	1984689	469.18	ppm	91
53) Biphenyl	5.548	154	1522286	182.29	ppm	98
56) Acenaphthylene	5.869	152	4976355	469.44	ppm	99
59) Acenaphthene	5.970	153	892908m	137.04	ppm	
62) Dibenzofuran	6.114	168	4123656	417.34	ppm	93
66) Fluorene	6.398	166	3372878m	425.93	ppm	
77) Phenanthrene	7.418	178	7349057	643.91	ppm	99
78) Anthracene	7.461	178	1599742	134.18	ppm	98
79) Carbazole	7.733	167	384011	33.35	ppm	100
81) Fluoranthene	9.272	202	4761674	338.24	ppm	93
84) Pyrene	9.640	202	3624126	235.39	ppm	94
87) Benzo[a]anthracene	12.071	228	1855016	126.54	ppm	96
89) Chrysene	12.141	228	1442744m	111.75	ppm	
93) Benzo[b]fluoranthene	14.304	252	1985847m	148.61	ppm	
94) Benzo[k]fluoranthene	14.342	252	398435m	35.44	ppm	
95) Benzo[a]pyrene	14.902	252	1071914	94.86	ppm	98
96) Indeno[1,2,3-cd]pyrene	16.906	276	699319m	67.71	ppm	
98) Dibenz[a,h]anthracene	16.954	278	142084m	13.49	ppm	
100) Benzo[g,h,i]perylene	17.328	276	645357	61.98	ppm	97

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 19:49:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration

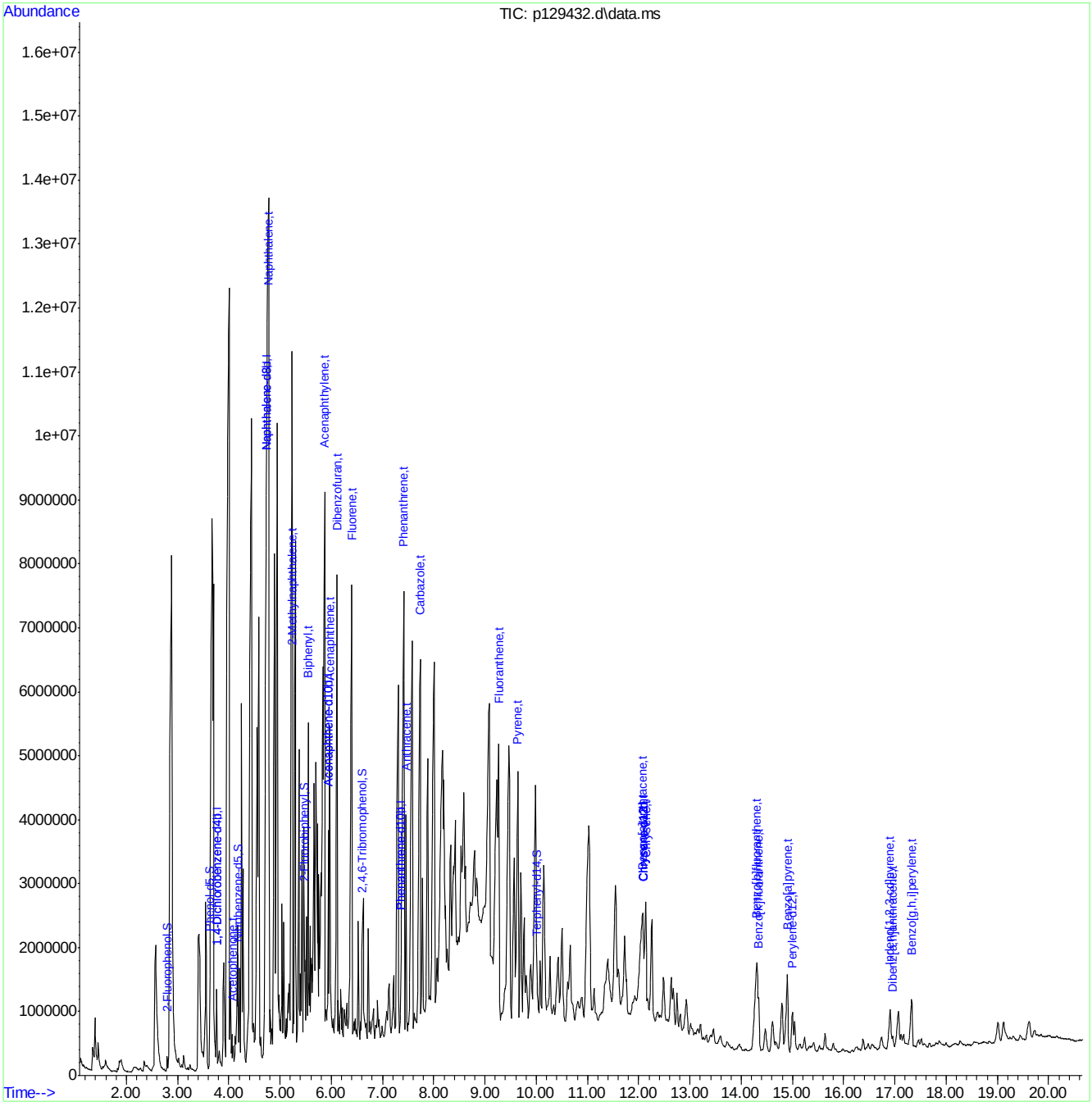
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

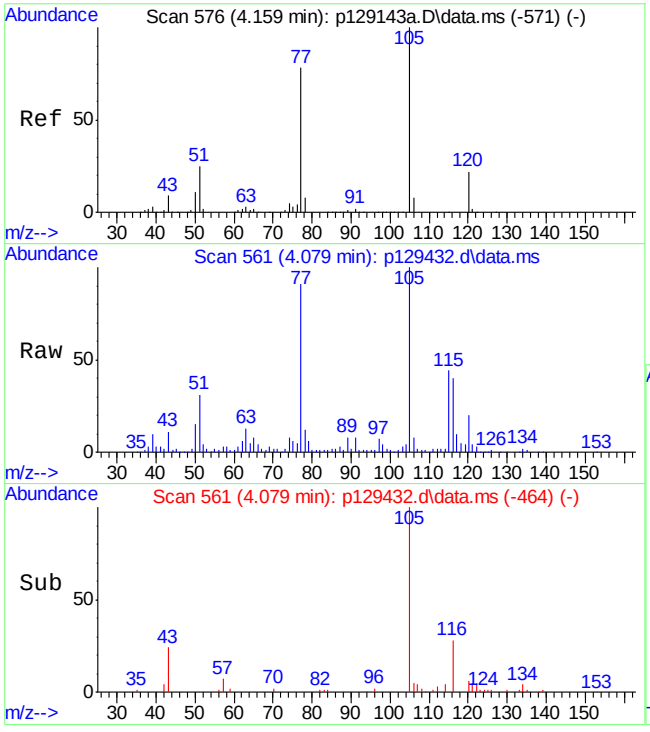
Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 13 19:49:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration



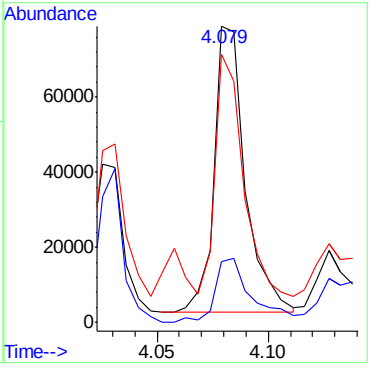
MP5844.M Mon May 13 19:50:21 2019 MANAGER

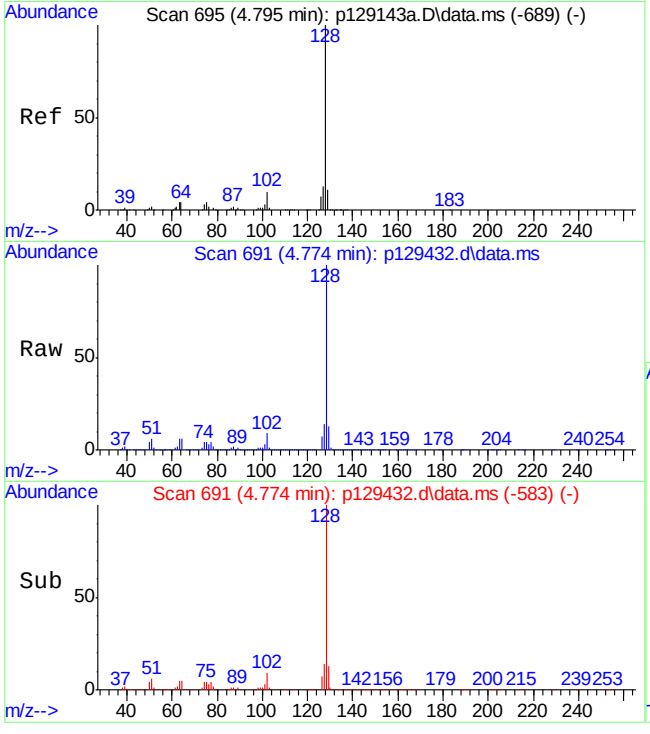


#18
Acetophenone
Concen: 10.95 ppm
RT: 4.079 min Scan# 561
Delta R.T. 0.016 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:105 Resp: 74677

Ion	Ratio	Lower	Upper
105	100		
120	20.1	0.0	50.5
77	81.5	56.6	116.6

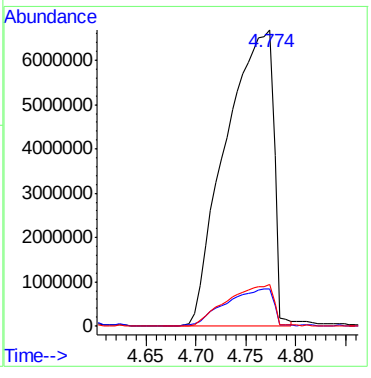


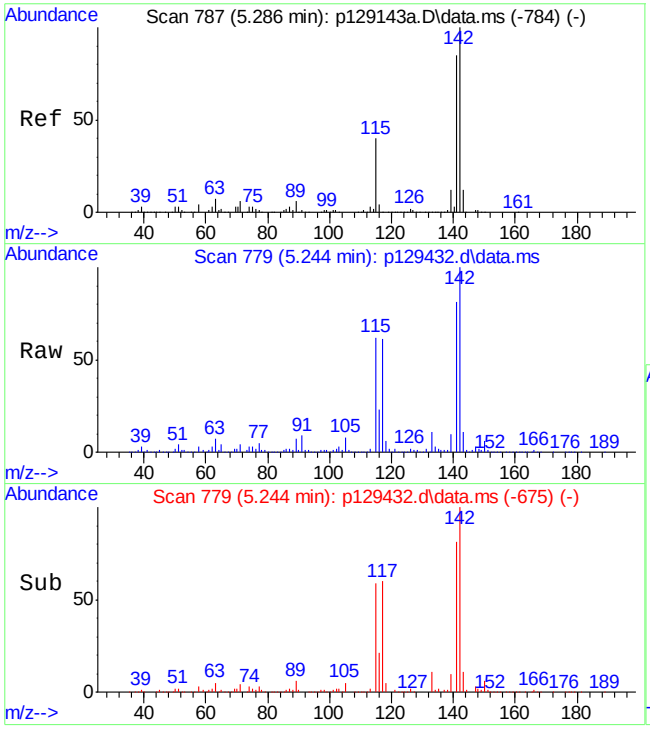


#38
Naphthalene
Concen: 2995.41 ppm m
RT: 4.774 min Scan# 691
Delta R.T. 0.075 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:128 Resp:22103443

Ion	Ratio	Lower	Upper
128	100		
129	12.5	0.0	40.7
127	14.1	0.0	42.8

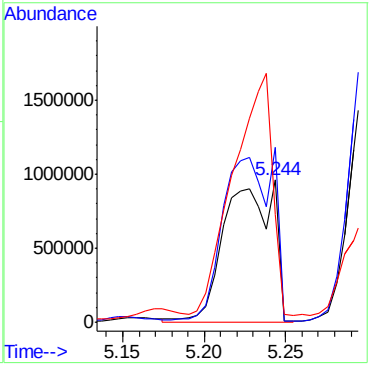


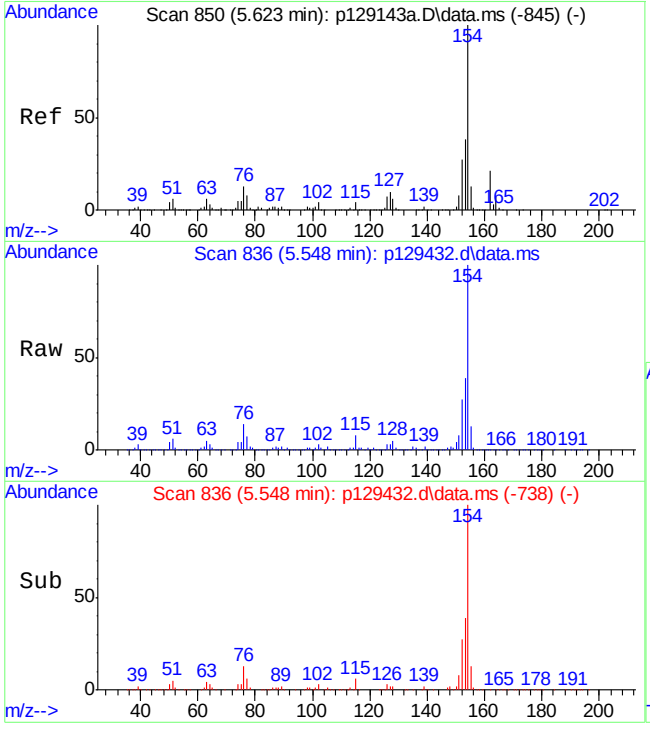


#44
2-Methylnaphthalene
Concen: 469.18 ppm
RT: 5.244 min Scan# 779
Delta R.T. 0.054 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:141 Resp: 1984689

Ion	Ratio	Lower	Upper
141	100		
142	123.7	95.6	155.6
115	69.9	20.0	80.0

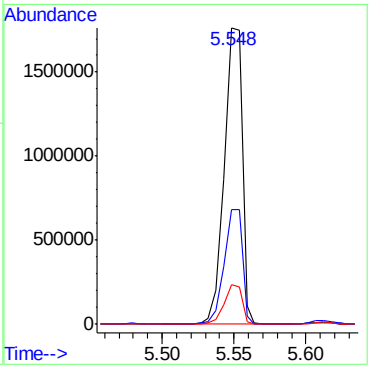


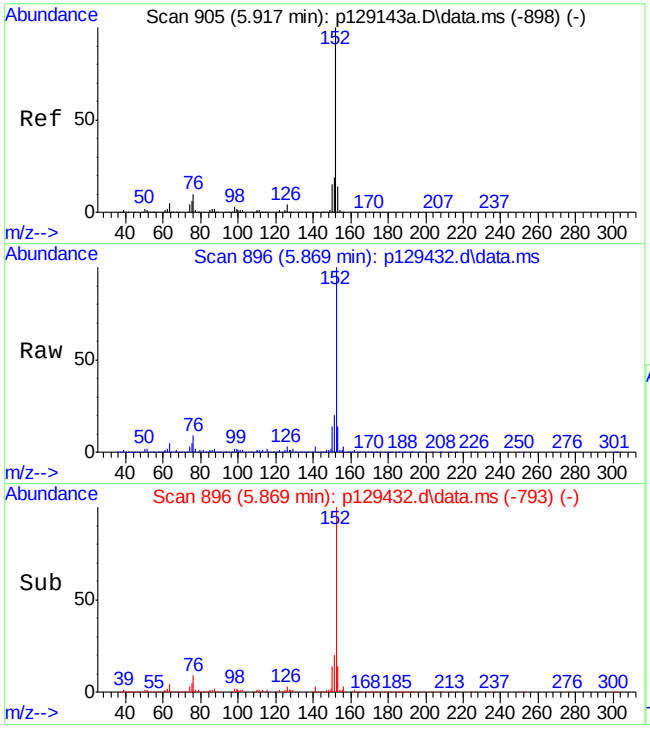


#53
Biphenyl
Concen: 182.29 ppm
RT: 5.548 min Scan# 836
Delta R.T. 0.022 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:154 Resp: 1522286

Ion	Ratio	Lower	Upper
154	100		
153	38.6	10.2	70.2
155	13.4	0.0	43.3

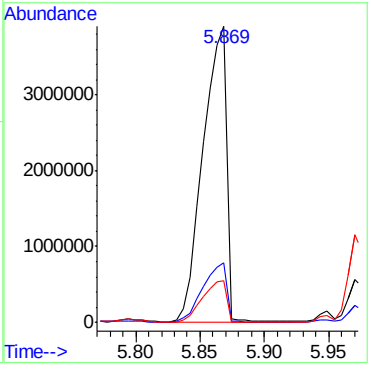


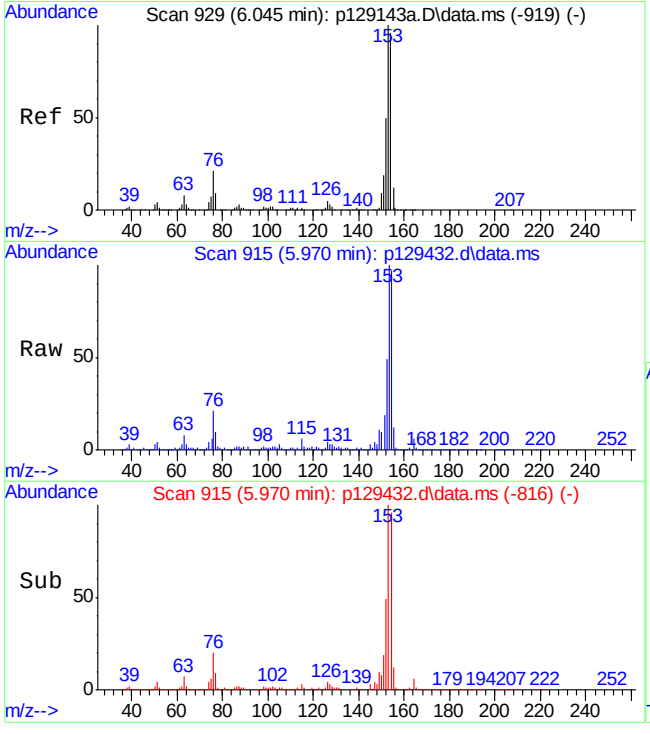


#56
Acenaphthylene
Concen: 469.44 ppm
RT: 5.869 min Scan# 896
Delta R.T. 0.048 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:152 Resp: 4976355

Ion	Ratio	Lower	Upper
152	100		
151	19.9	0.0	49.4
153	14.0	0.0	43.1

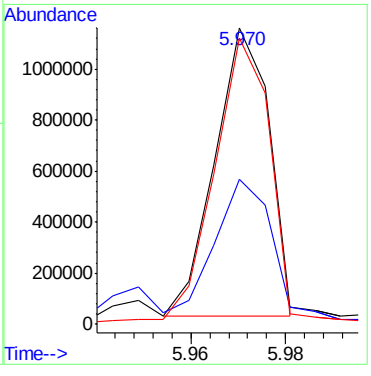


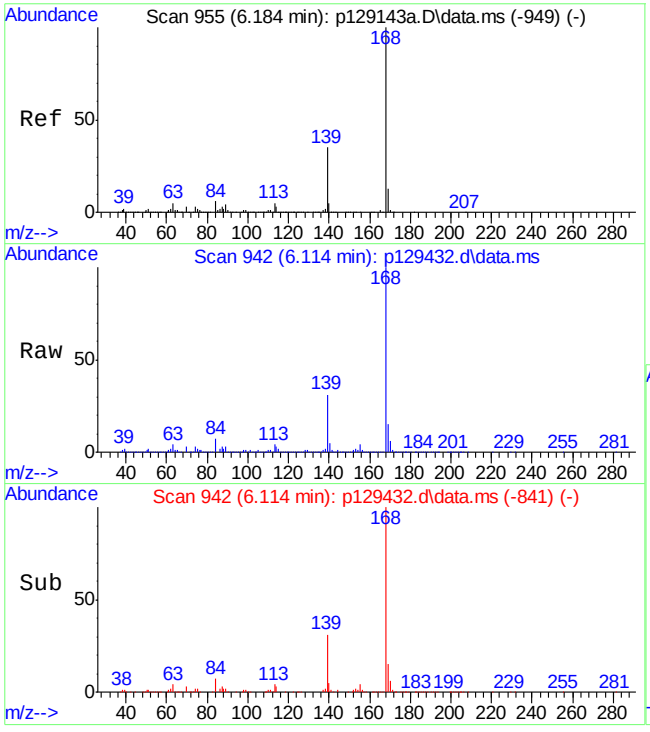


#59
Acenaphthene
Concen: 137.04 ppm m
RT: 5.970 min Scan# 915
Delta R.T. 0.027 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:153 Resp: 892908

Ion	Ratio	Lower	Upper
153	100		
152	48.7	19.7	79.7
154	96.6	61.3	121.3

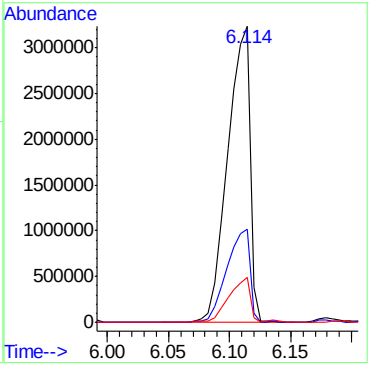


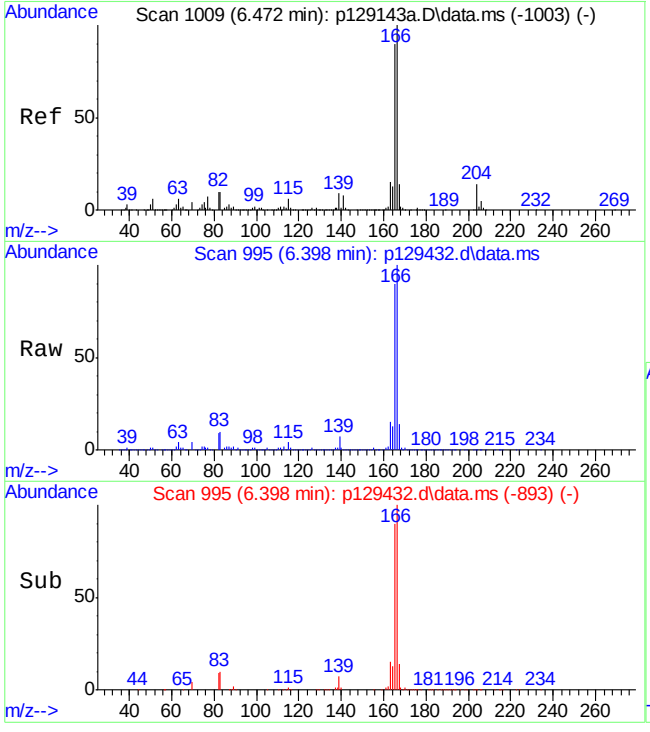


#62
Dibenzofuran
Concen: 417.34 ppm
RT: 6.114 min Scan# 942
Delta R.T. 0.038 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:168 Resp: 4123656

Ion	Ratio	Lower	Upper
168	100		
139	31.4	6.5	66.5
169	15.1	0.0	43.5

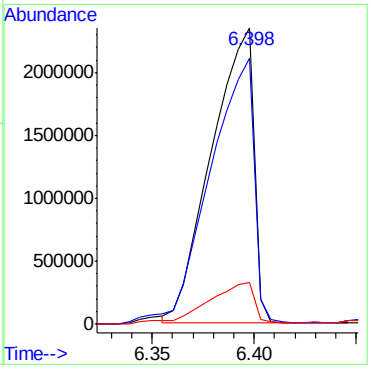


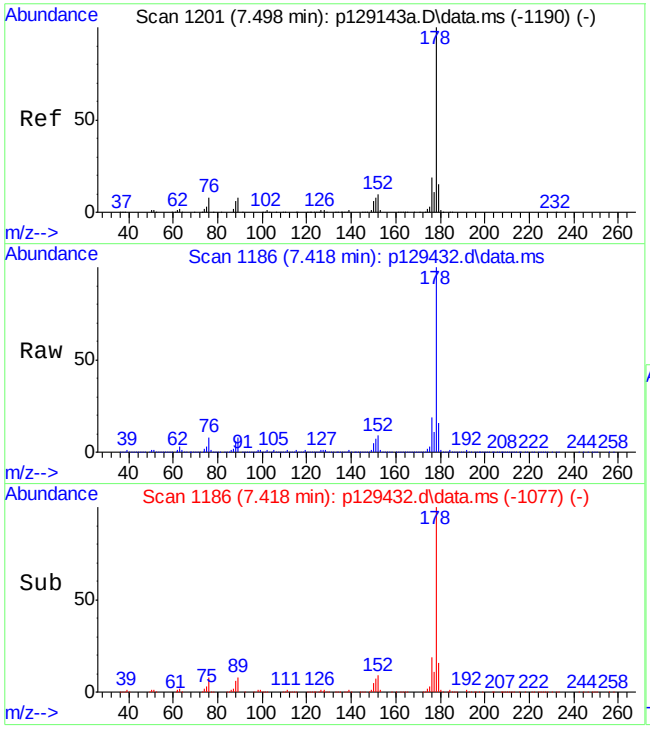


#66
Fluorene
Concen: 425.93 ppm m
RT: 6.398 min Scan# 995
Delta R.T. 0.043 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:166 Resp: 3372878

Ion	Ratio	Lower	Upper
166	100		
165	89.8	63.7	123.7
167	13.9	0.0	43.1

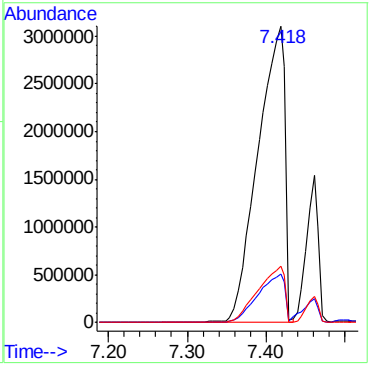


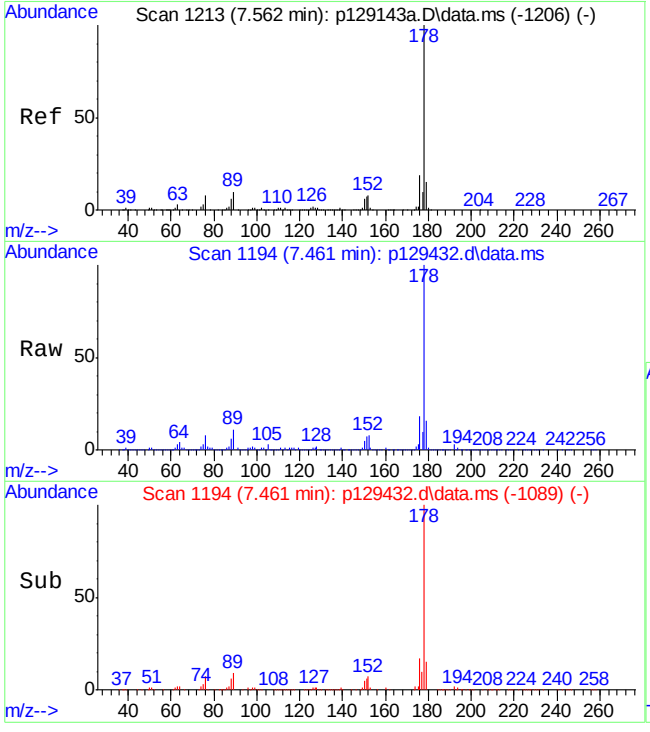


#77
Phenanthrene
Concen: 643.91 ppm
RT: 7.418 min Scan# 1186
Delta R.T. 0.080 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:178 Resp: 7349057

Ion	Ratio	Lower	Upper
178	100		
179	15.4	0.0	45.3
176	19.0	0.0	50.0

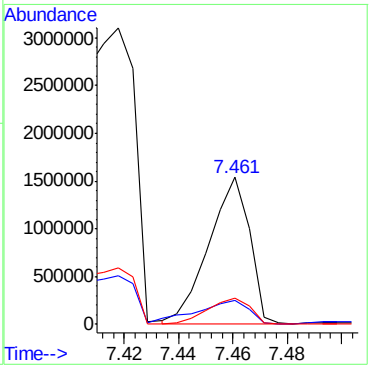


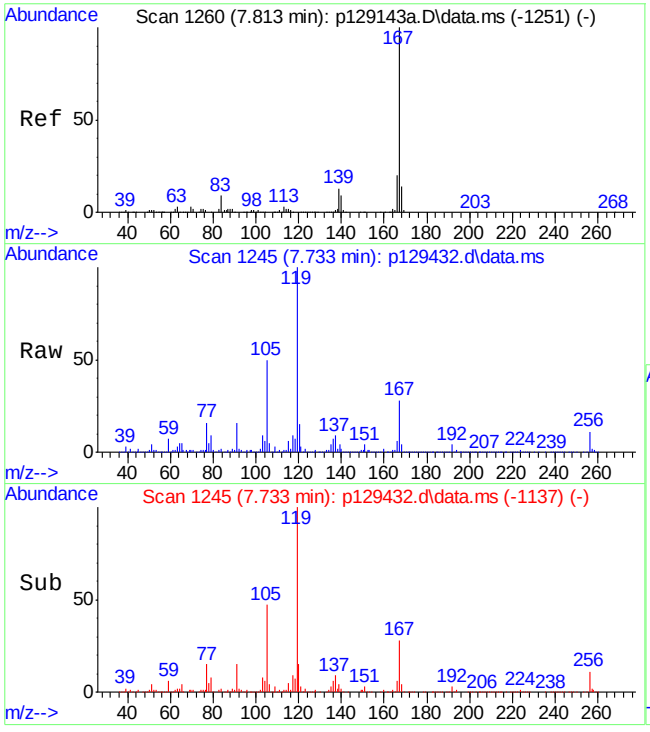


#78
Anthracene
Concen: 134.18 ppm
RT: 7.461 min Scan# 1194
Delta R.T. 0.059 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:178 Resp: 1599742

Ion	Ratio	Lower	Upper
178	100		
179	14.2	0.0	45.1
176	18.0	0.0	48.6

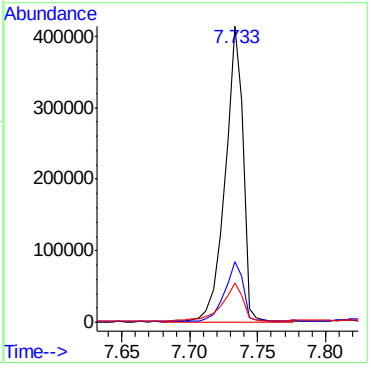


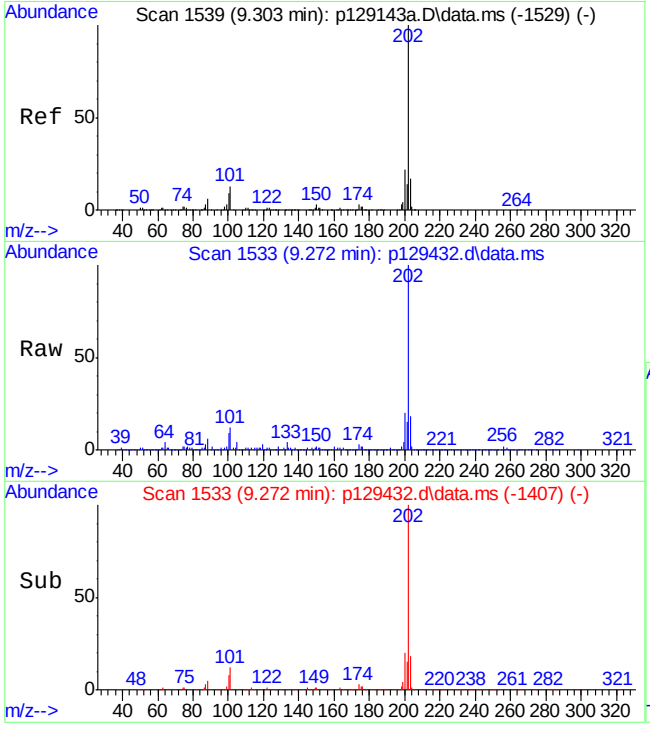


#79
Carbazole
Concen: 33.35 ppm
RT: 7.733 min Scan# 1245
Delta R.T. 0.075 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:167 Resp: 384011

Ion	Ratio	Lower	Upper
167	100		
166	20.0	0.0	49.9
139	12.6	0.0	42.7

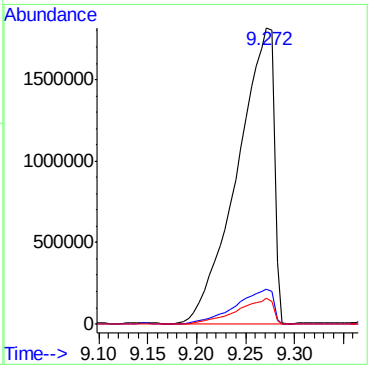


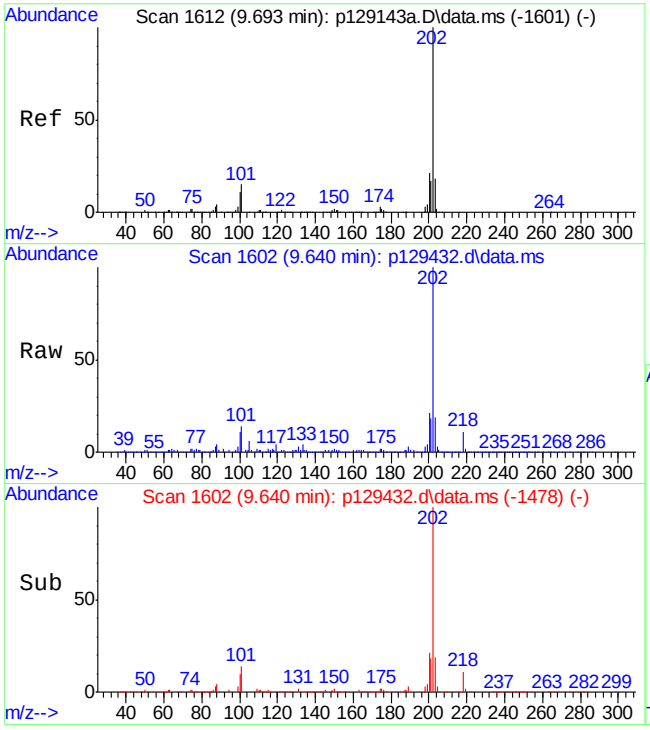


#81
Fluoranthene
Concen: 338.24 ppm
RT: 9.272 min Scan# 1533
Delta R.T. 0.171 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:202 Resp: 4761674

Ion	Ratio	Lower	Upper
202	100		
101	11.8	0.0	45.1
100	8.5	0.0	40.6

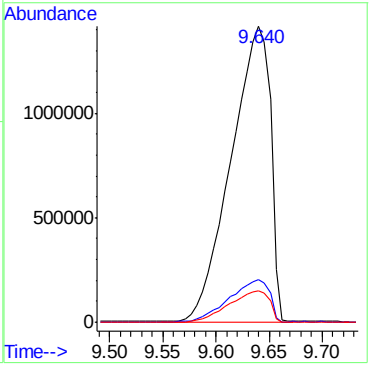


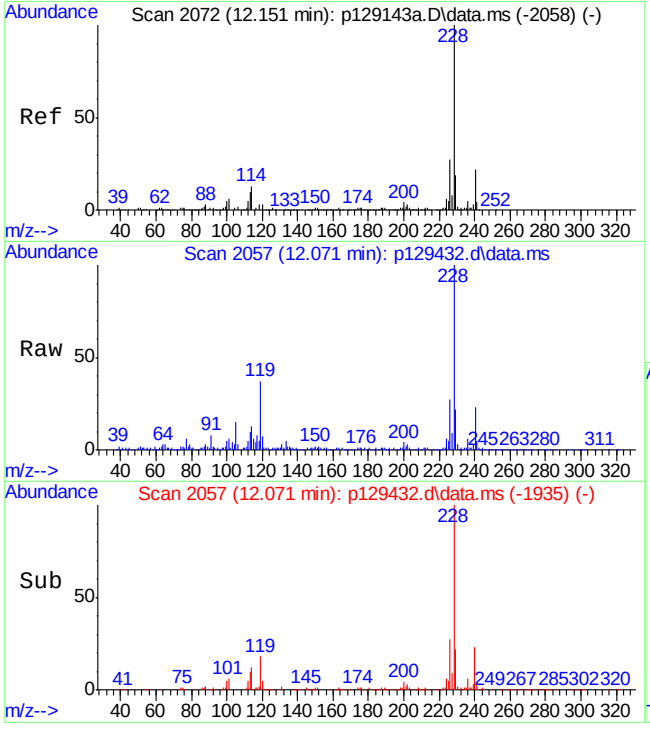


#84
Pyrene
Concen: 235.39 ppm
RT: 9.640 min Scan# 1602
Delta R.T. 0.160 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:202 Resp: 3624126

Ion	Ratio	Lower	Upper
202	100		
101	14.3	0.0	46.8
100	10.6	0.0	43.1

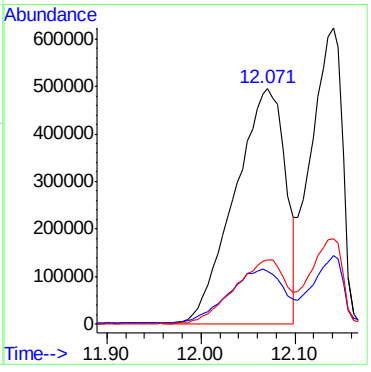


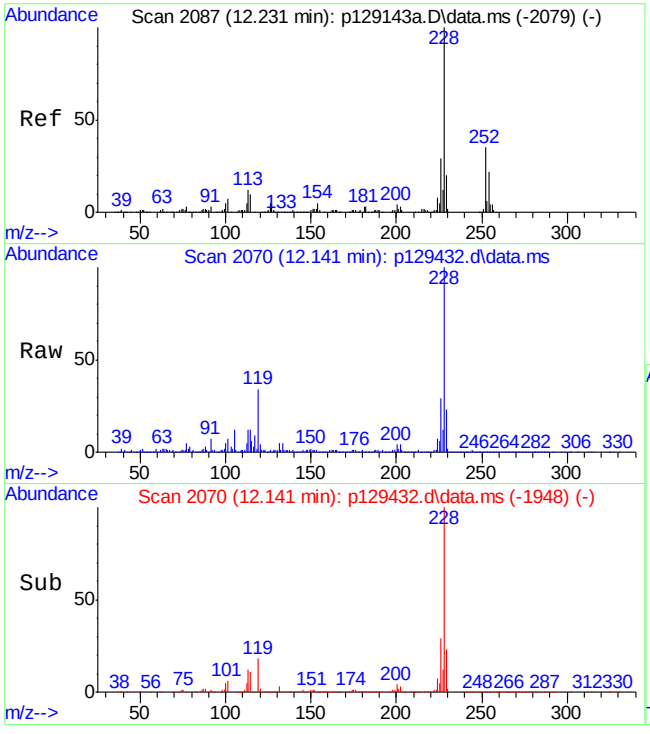


#87
Benzo[a]anthracene
Concen: 126.54 ppm
RT: 12.071 min Scan# 2057
Delta R.T. 0.150 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:228 Resp: 1855016

Ion	Ratio	Lower	Upper
228	100		
229	21.7	0.0	49.7
226	26.1	0.0	58.0

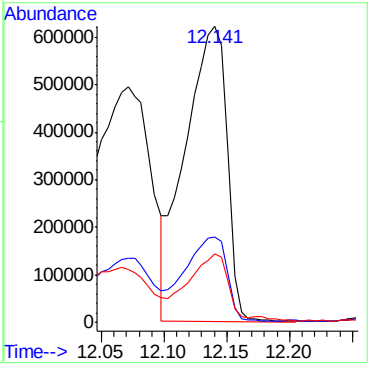


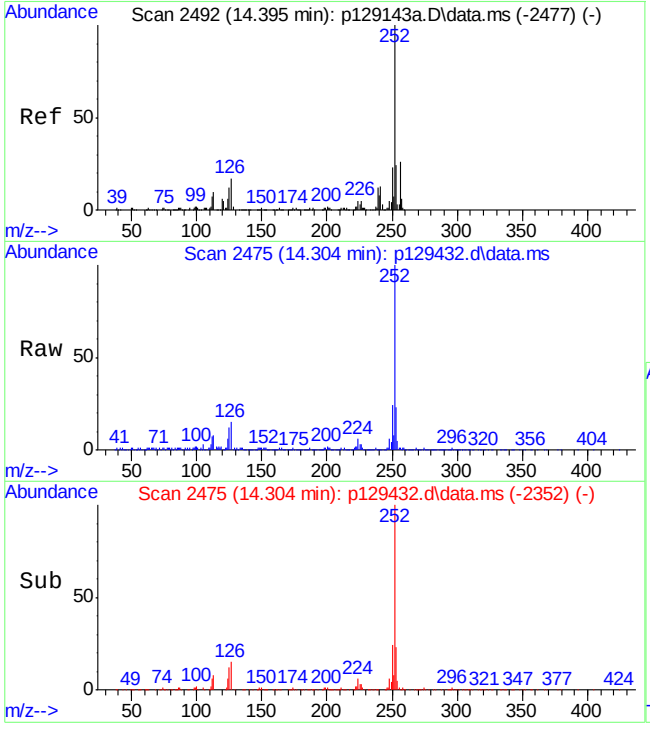


#89
Chrysene
Concen: 111.75 ppm m
RT: 12.141 min Scan# 2070
Delta R.T. 0.150 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:228 Resp: 1442744

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	59.2
229	23.0	0.0	49.8

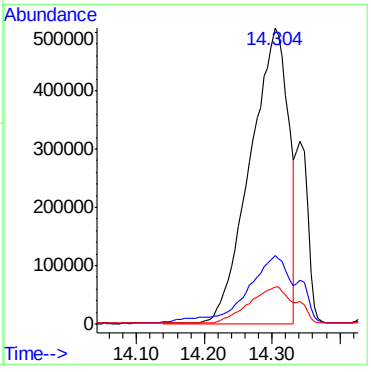


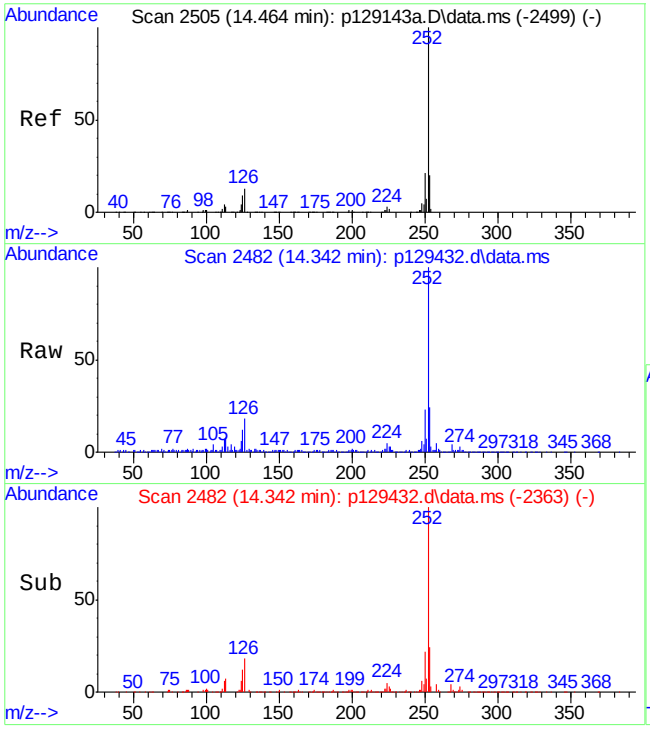


#93
Benzo[b]fluoranthene
Concen: 148.61 ppm m
RT: 14.304 min Scan# 2475
Delta R.T. 0.155 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:252 Resp: 1985847

Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	51.9
125	12.5	0.0	43.1

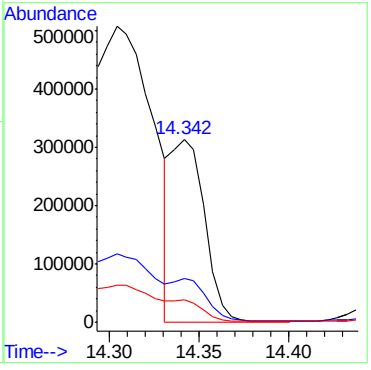


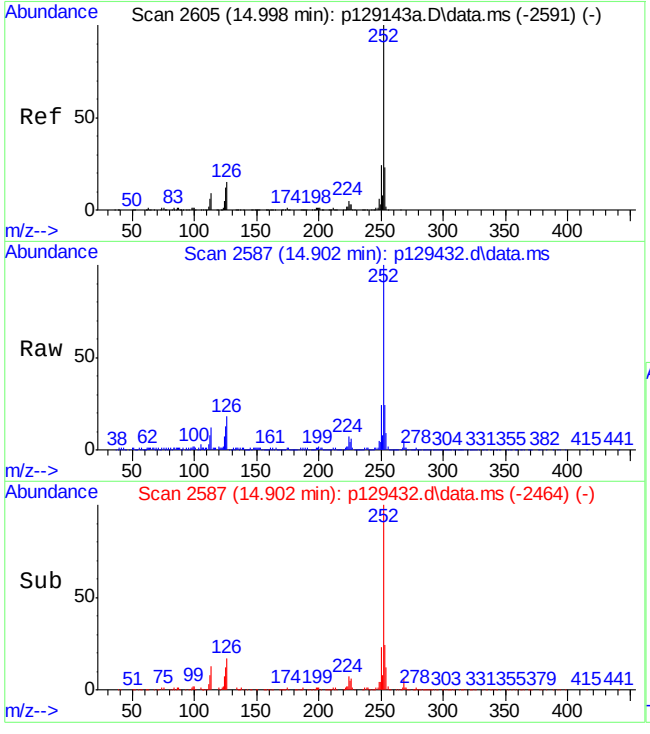


#94
Benzo[k]fluoranthene
Concen: 35.44 ppm m
RT: 14.342 min Scan# 2482
Delta R.T. 0.134 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:252 Resp: 398435

Ion	Ratio	Lower	Upper
252	100		
253	24.0	0.0	51.5
125	12.3	0.0	42.3

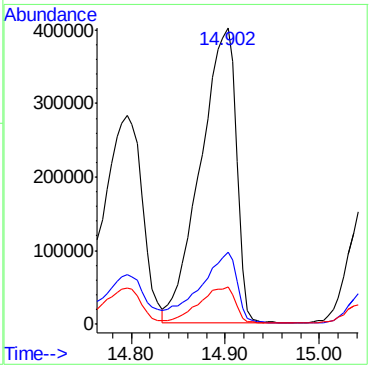


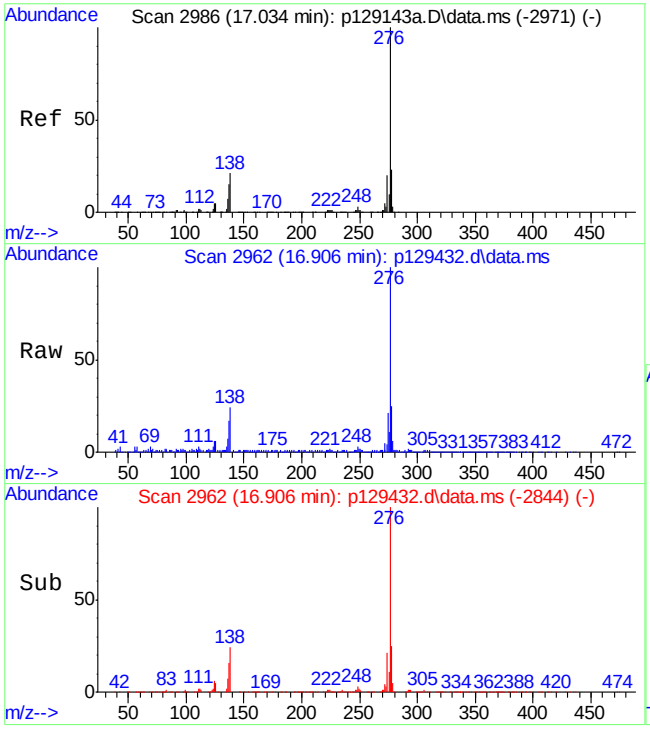


#95
Benzo[a]pyrene
Concen: 94.86 ppm
RT: 14.902 min Scan# 2587
Delta R.T. 0.155 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:252 Resp: 1071914

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	51.5
125	12.3	0.0	43.4

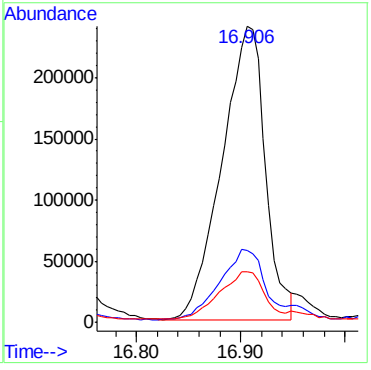


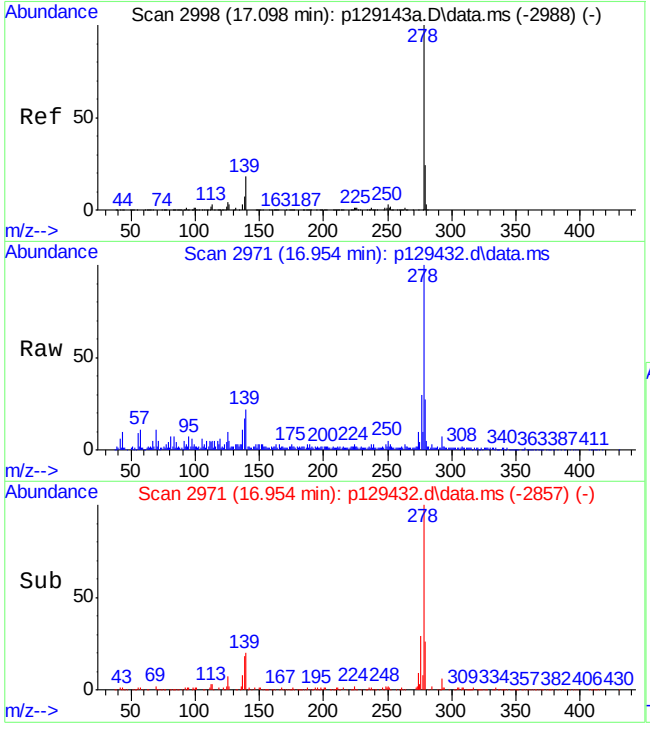


#96
Indeno[1,2,3-cd]pyrene
Concen: 67.71 ppm m
RT: 16.906 min Scan# 2962
Delta R.T. 0.128 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:276 Resp: 699319

Ion	Ratio	Lower	Upper
276	100		
138	24.4	0.0	55.8
137	17.1	0.0	48.2

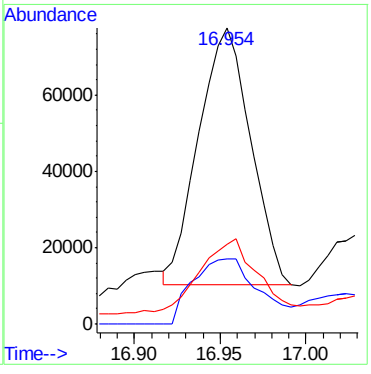




#98
Dibenz[a,h]anthracene
Concen: 13.49 ppm m
RT: 16.954 min Scan# 2971
Delta R.T. 0.107 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

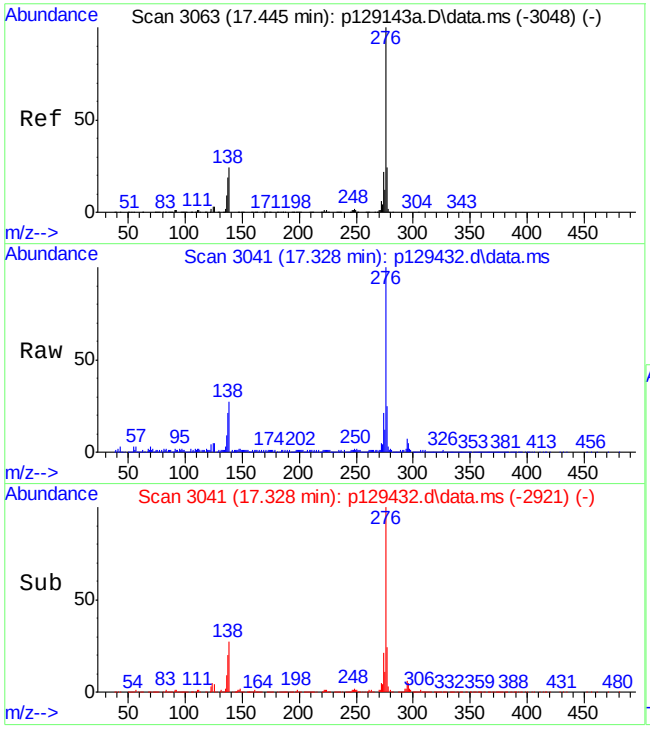
Tgt Ion:278 Resp: 142084

Ion	Ratio	Lower	Upper
278	100		
139	22.0	0.0	52.1
279	27.0	0.0	55.4



9.1.11

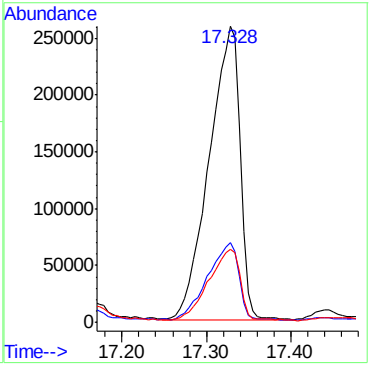
9



#100
Benzo[g,h,i]perylene
Concen: 61.98 ppm
RT: 17.328 min Scan# 3041
Delta R.T. 0.139 min
Lab File: p129432.d
Acq: 9 May 2019 7:22 pm

Tgt Ion:276 Resp: 645357

Ion	Ratio	Lower	Upper
276	100		
138	26.2	0.0	57.8
277	24.1	0.0	55.4



9.1.11

9

Manual Integration Approval Summary

Sample Number:	JC87093-6	**Method:**	SW846 8270D
Lab FileID:	P129432.D	**Analyst approved:**	05/10/19 03:53 Jeryll Fabriene Reyes
Injection Time:	05/09/19 19:22	**Supervisor approved:**	05/13/19 19:38 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene-d8	1146-65-2		4.73	Poor instrument integration
Naphthalene	91-20-3		4.77	Poor instrument integration
Acenaphthene	83-32-9		5.97	Poor instrument integration
Fluorene	86-73-7		6.40	Poor instrument integration
Chrysene	218-01-9		12.14	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		14.30	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		14.34	Poor instrument integration
Indeno(1,2,3-cd)pyrene	193-39-5		16.91	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		16.95	Poor instrument integration

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On    :  9 May 2019   7:22 pm
Operator  : angelar
Sample    : jc87093-6                                  Inst     : MSVOAMSP
Misc      : op20110,ep5858,30.3,,,1,2
ALS Vial  : 15   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration
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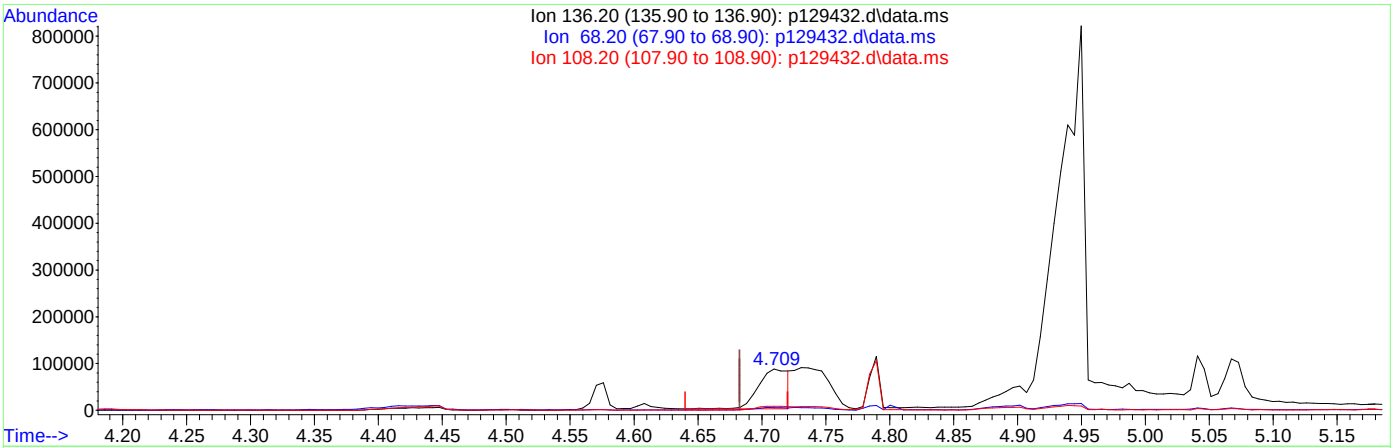
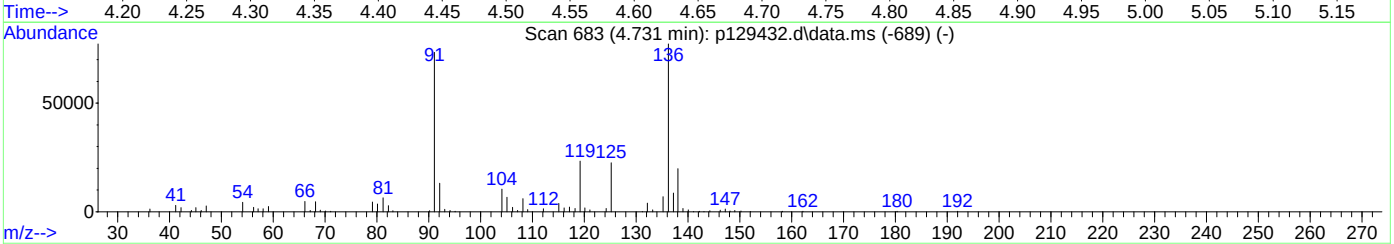
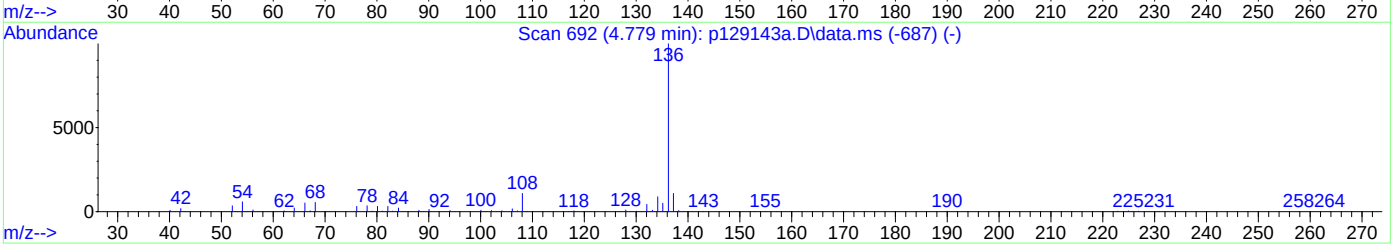






TIC: p129432.d\data.ms

(24) Naphthalene-d8 (I)

4.709min (+0.027) 40.00ppm

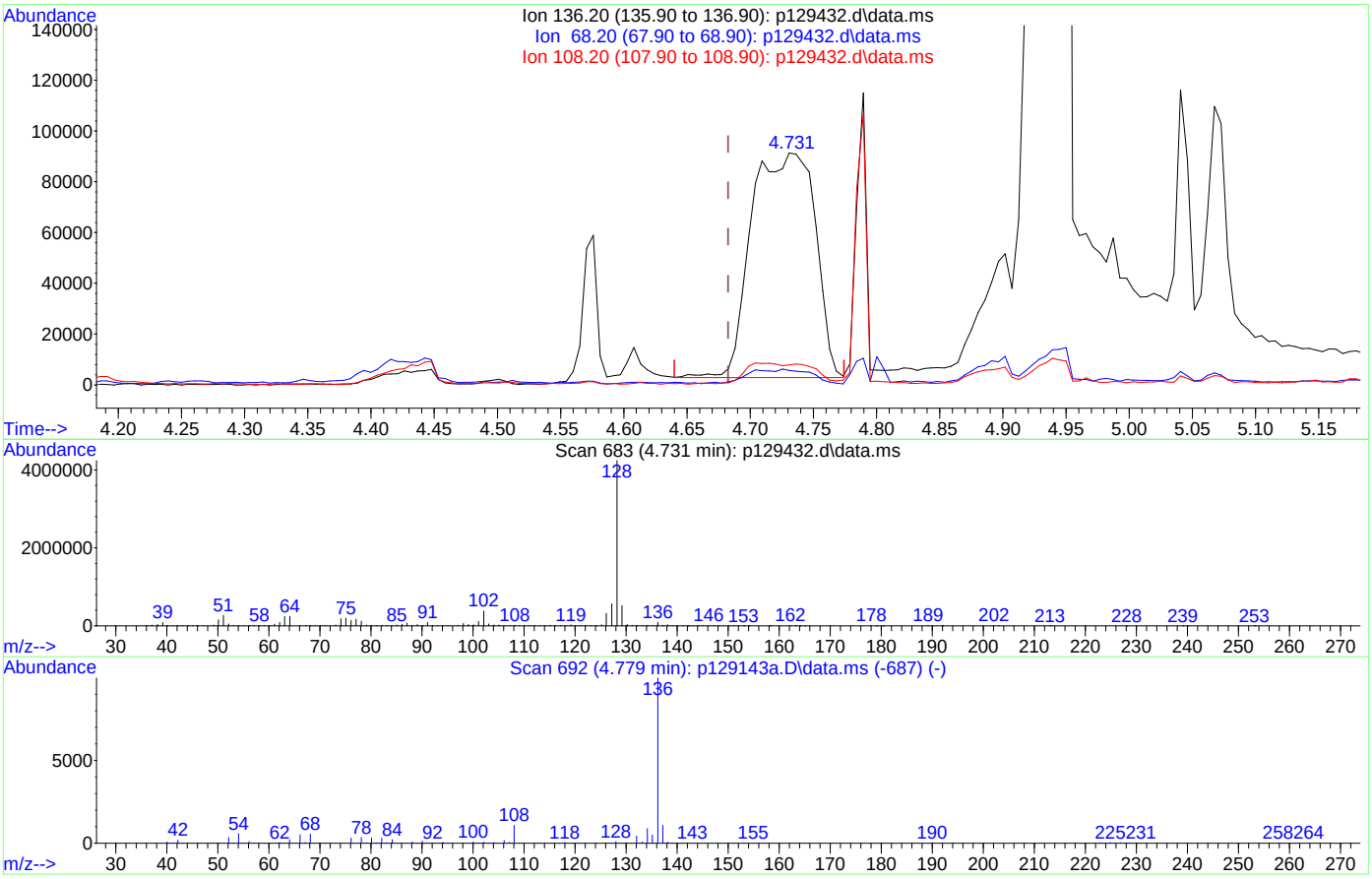
response 138354

Ion	Exp%	Act%
136.20	100	100
68.20	6.60	5.52
108.20	11.10	9.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration



TIC: p129432.d\data.ms

(24) Naphthalene-d8 (I)

4.731min (+0.048) 40.00ppm m

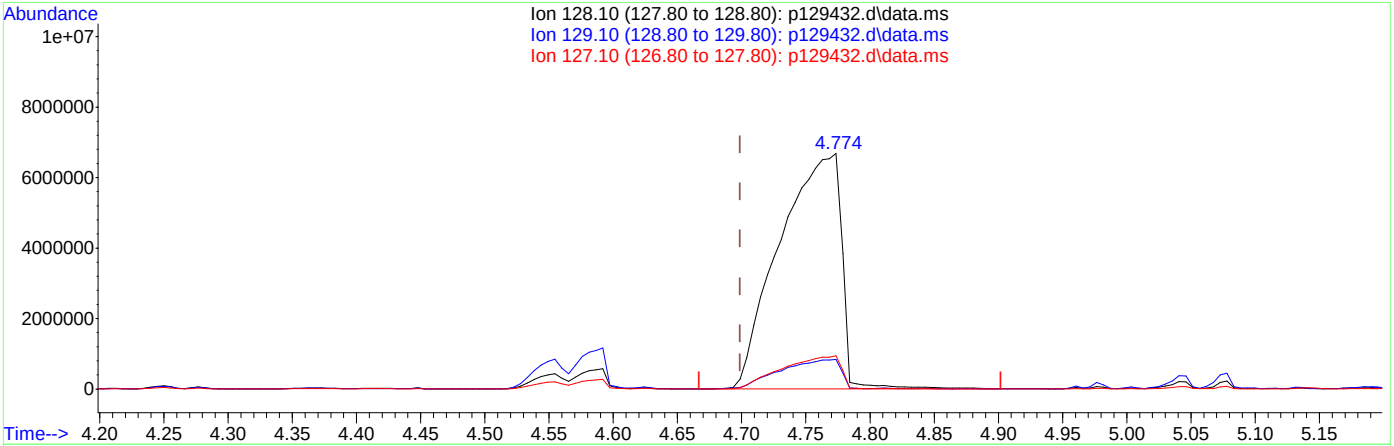
response 309028

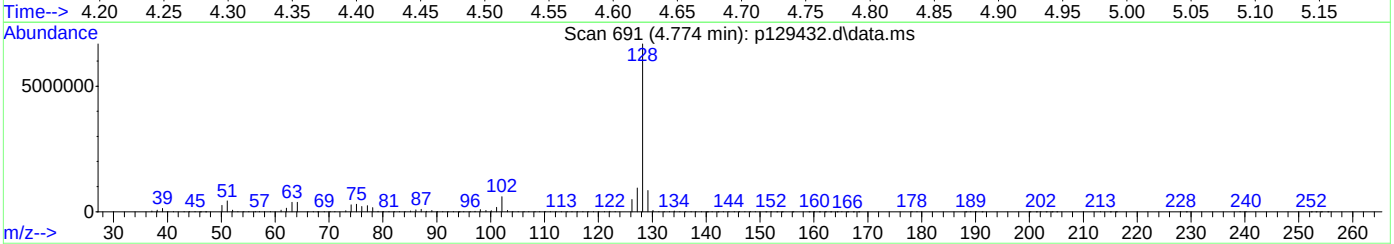
Ion	Exp%	Act%
136.20	100	100
68.20	6.60	6.19
108.20	11.10	8.67
0.00	0.00	0.00

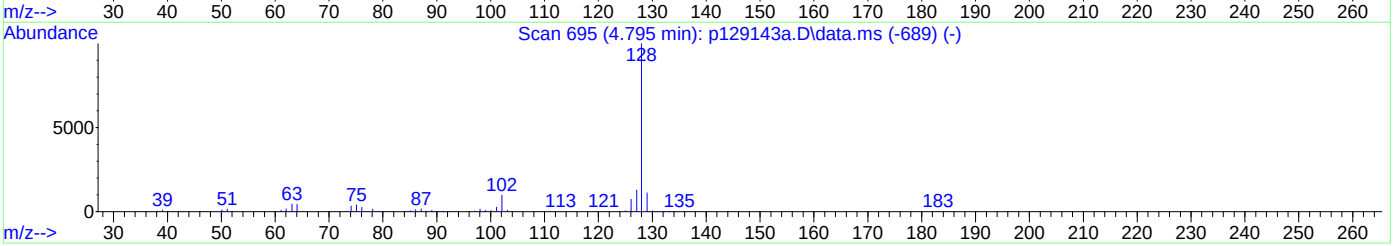
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(38) Naphthalene (t)

4.774min (+0.075) 3033.09ppm

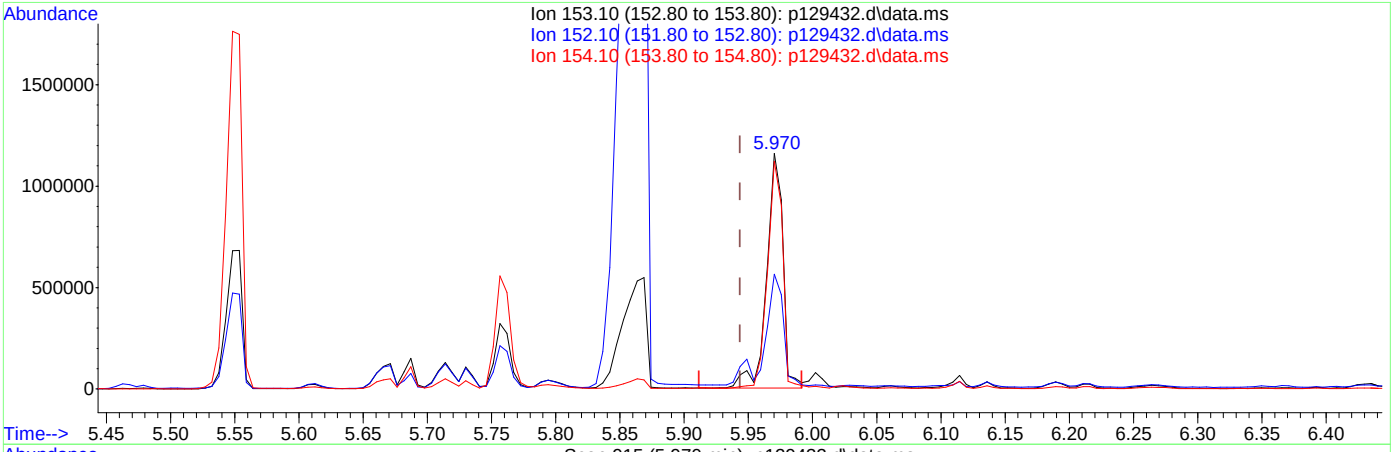
response 22381504

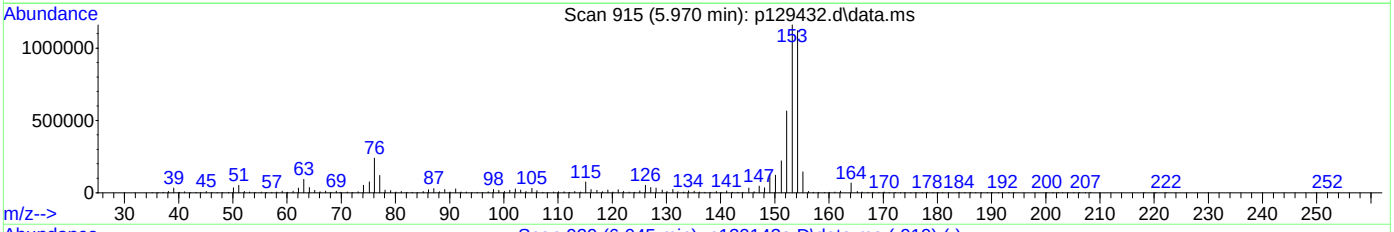
Ion	Exp%	Act%
128.10	100	100
129.10	10.70	12.48
127.10	12.80	14.10
0.00	0.00	0.00

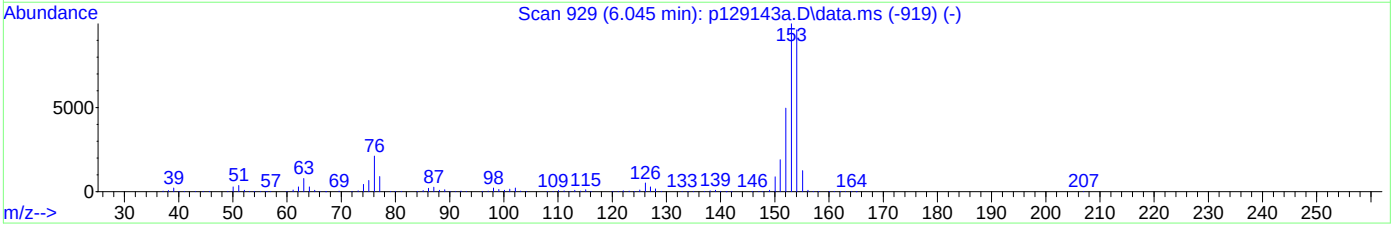
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(59) Acenaphthene (t)

5.970min (+0.027) 156.94ppm

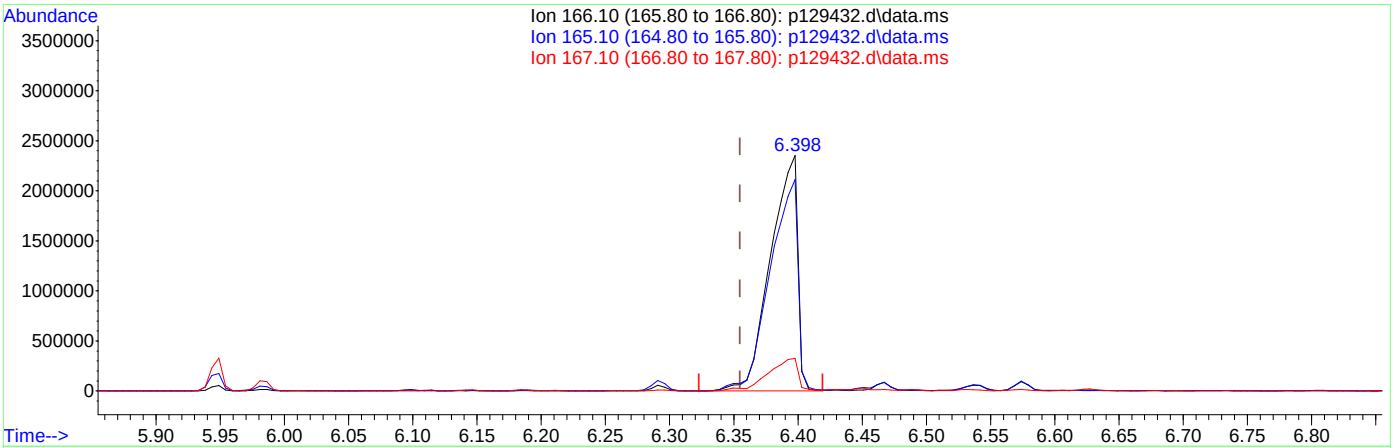
response 1022609

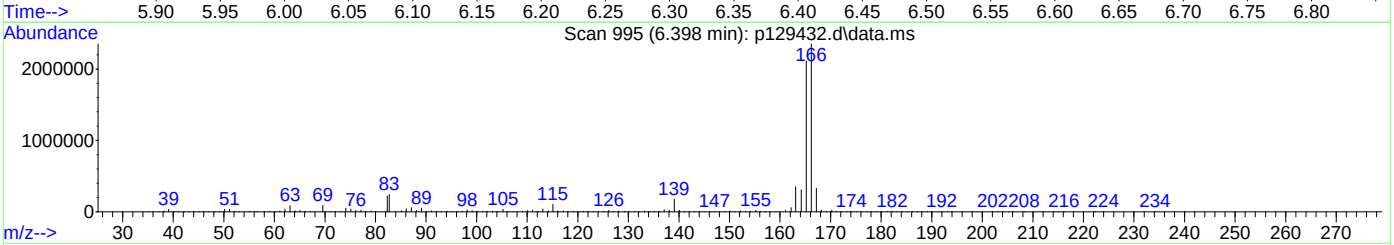
Ion	Exp%	Act%
153.10	100	100
152.10	49.70	47.75
154.10	91.30	97.12
0.00	0.00	0.00

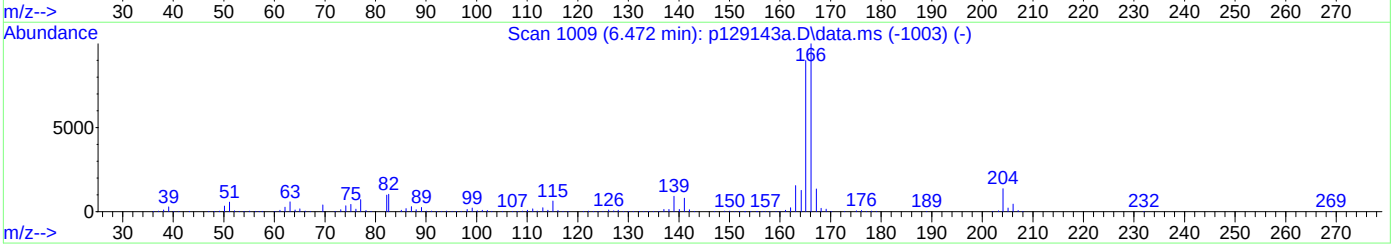
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(66) Fluorene (t)

6.398min (+0.043) 435.14ppm

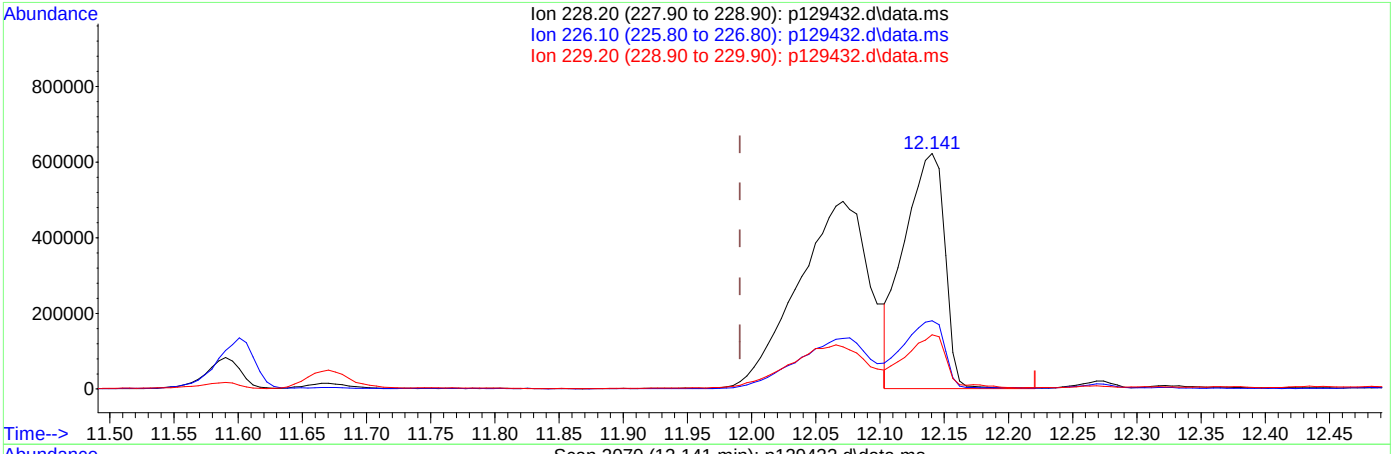
response 3445860

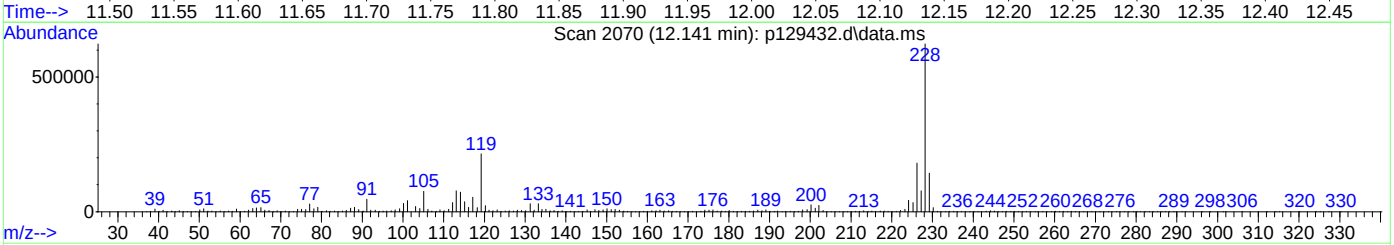
Ion	Exp%	Act%
166.10	100	100
165.10	93.70	89.68
167.10	13.10	13.74
0.00	0.00	0.00

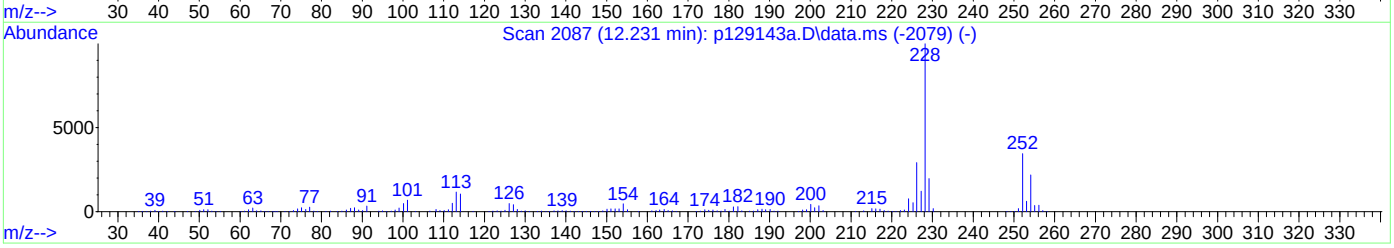
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(89) Chrysene (t)

12.141min (+0.150) 106.58ppm

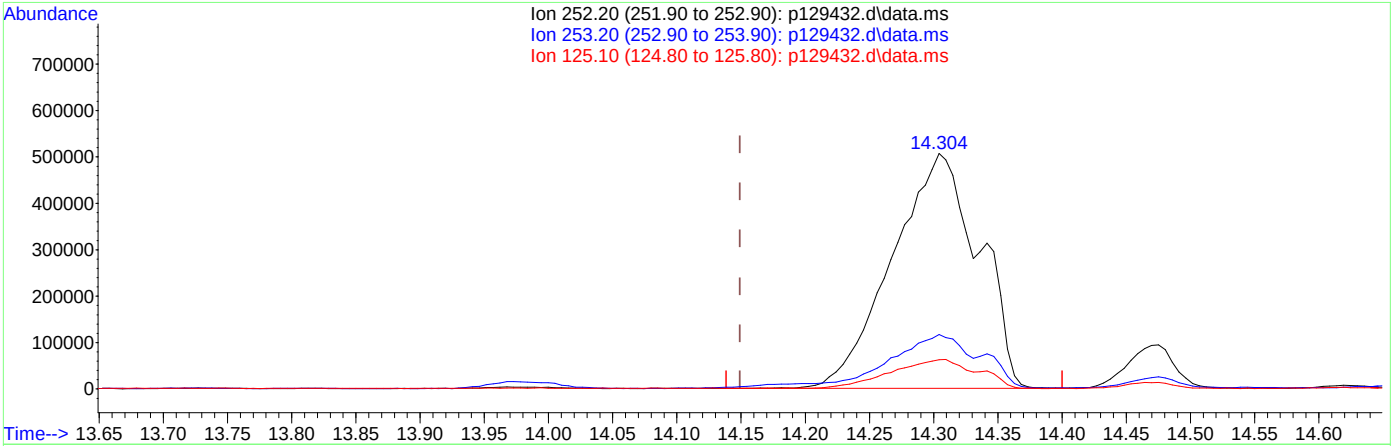
response 1376073

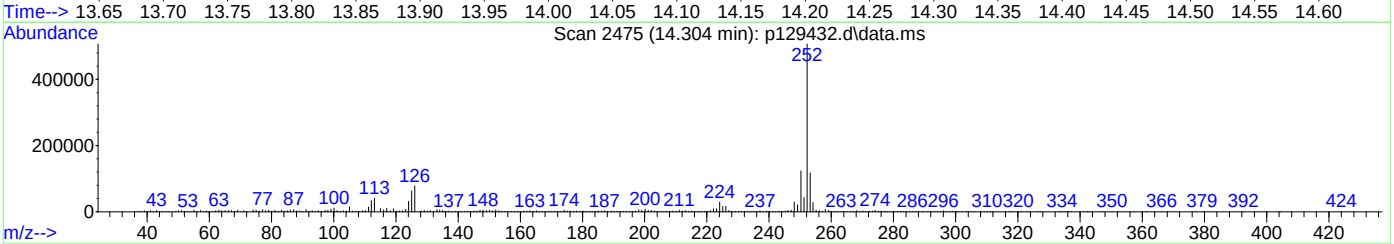
Ion	Exp%	Act%
228.20	100	100
226.10	29.20	28.45
229.20	19.80	22.90
0.00	0.00	0.00

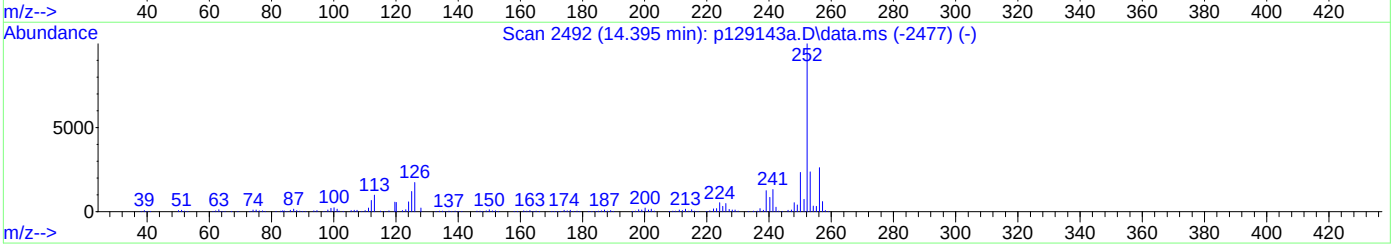
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(93) Benzo[b]fluoranthene (t)

14.304min (+0.155) 177.42ppm

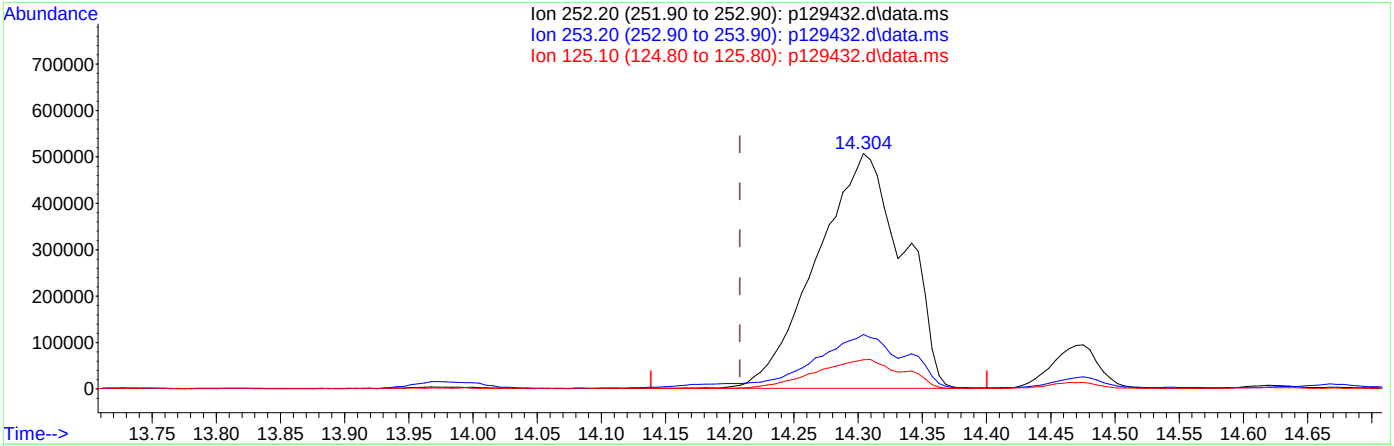
response 2370892

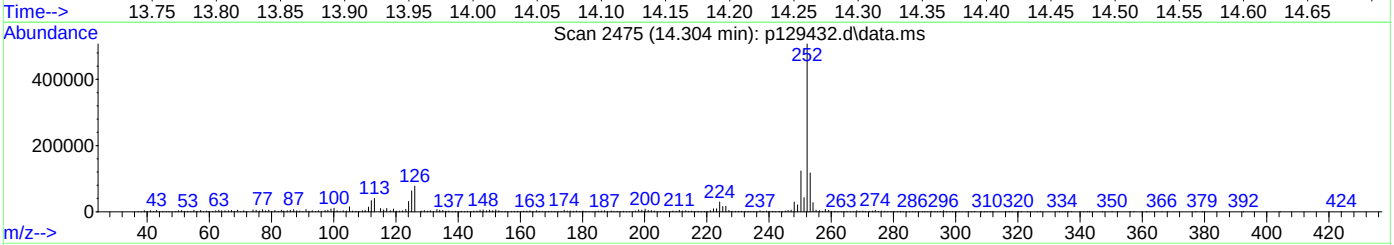
Ion	Exp%	Act%
252.20	100	100
253.20	21.90	22.60
125.10	13.10	12.18
0.00	0.00	0.00

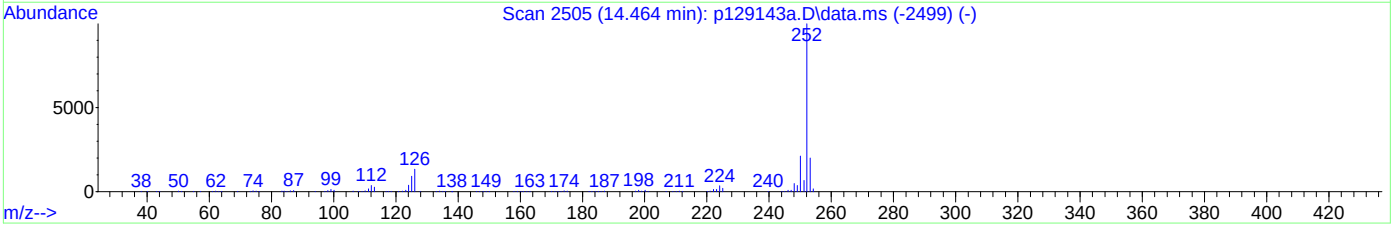
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(94) Benzo[k]fluoranthene (t)

14.304min (+0.096) 210.89ppm

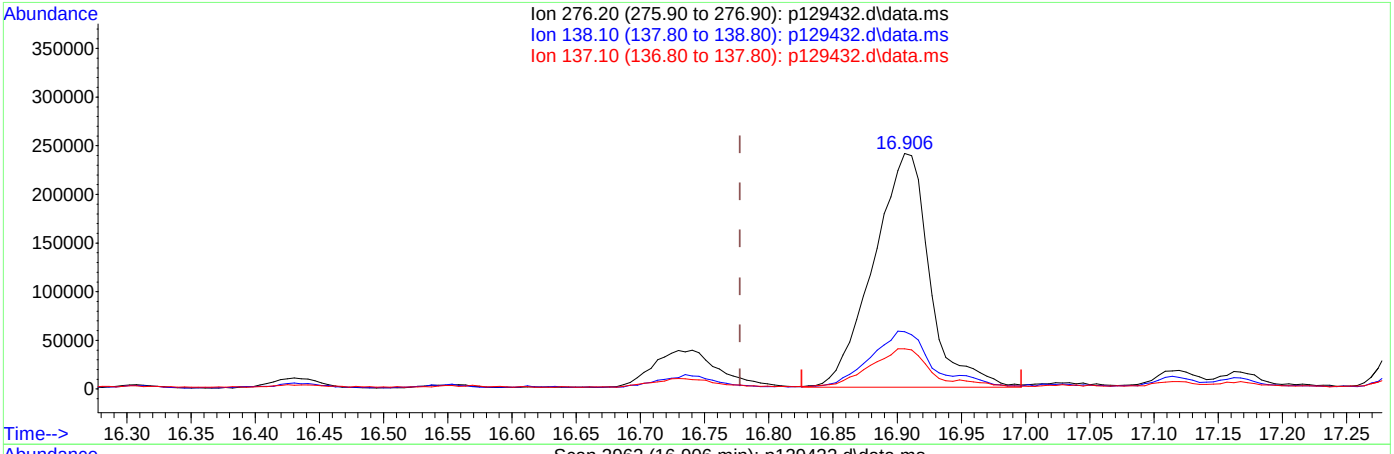
response 2370892

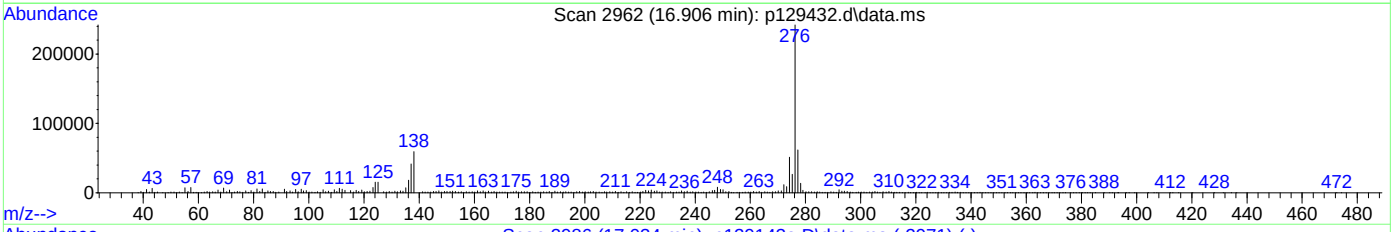
Ion	Exp%	Act%
252.20	100	100
253.20	21.50	22.60
125.10	12.30	12.18
0.00	0.00	0.00

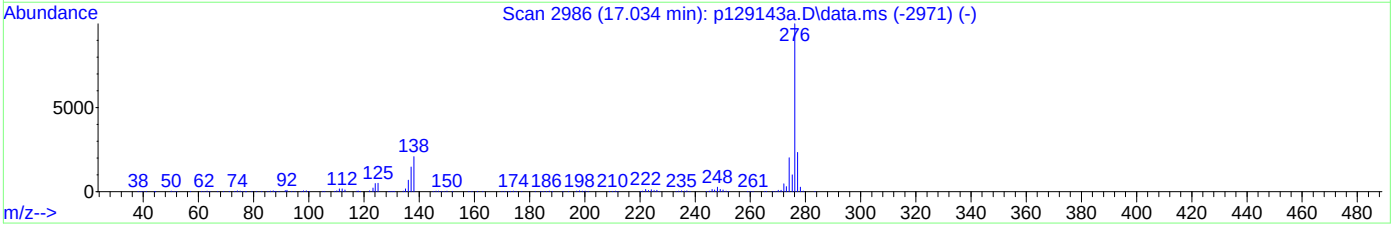
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

16.906min (+0.128) 70.75ppm

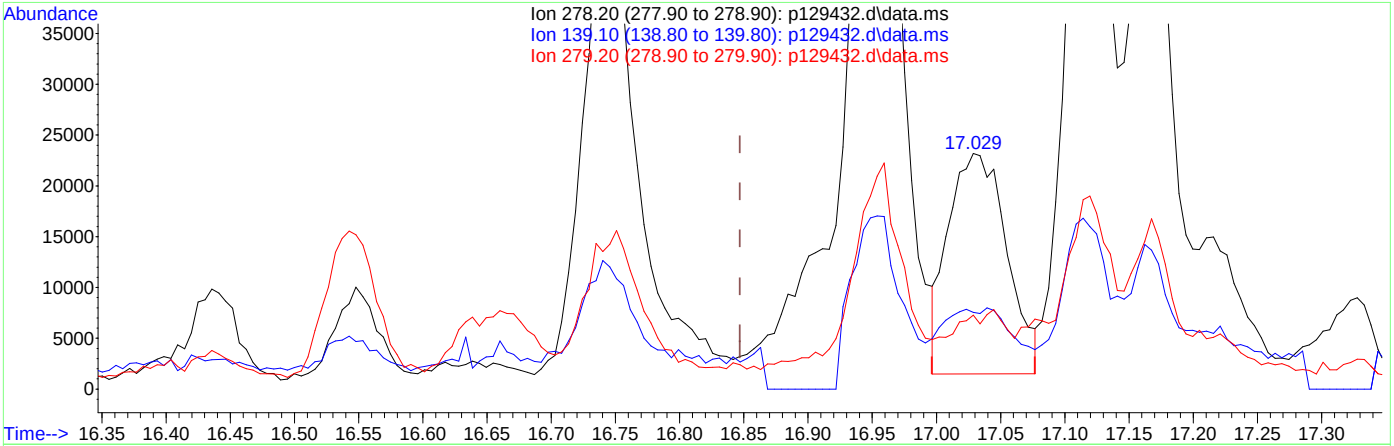
response 730799

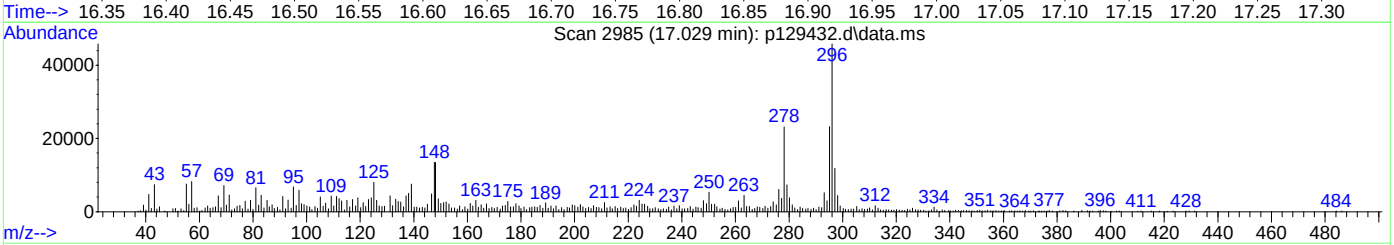
Ion	Exp%	Act%
276.20	100	100
138.10	25.80	23.56
137.10	18.20	16.11
0.00	0.00	0.00

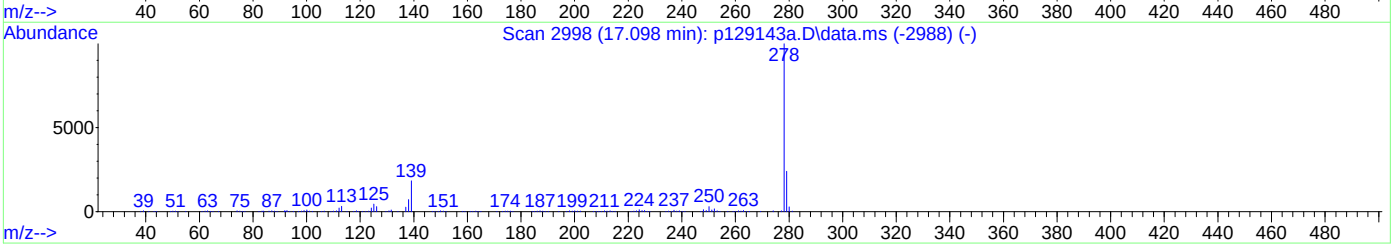
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(98) Dibenz[a,h]anthracene (t)

17.029min (+0.182) 6.51ppm

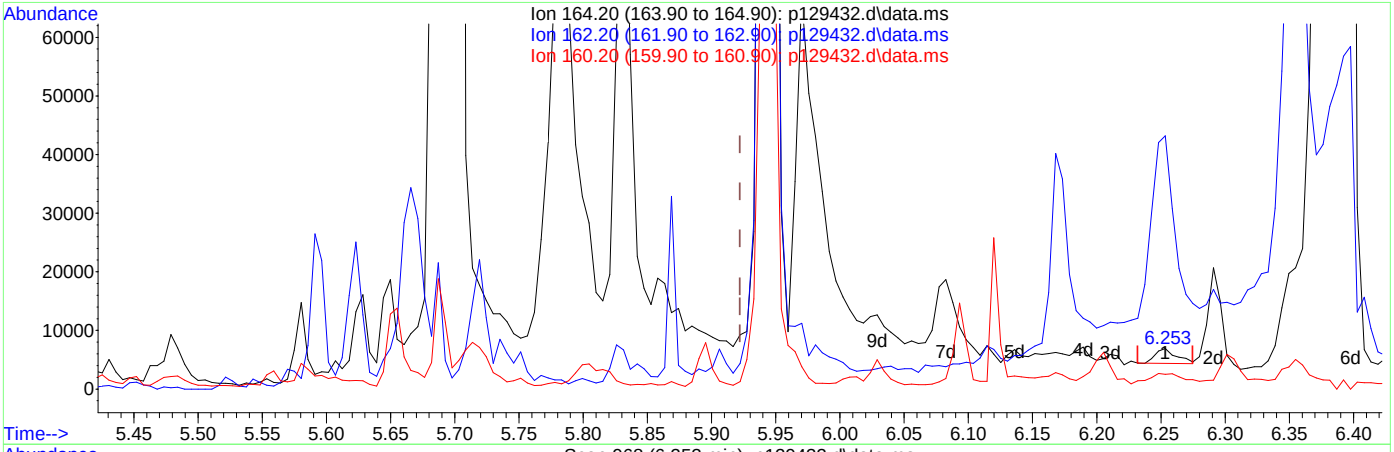
response 68582

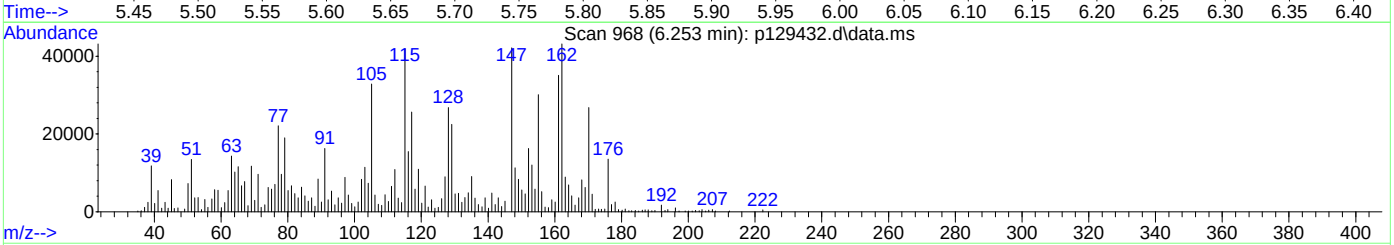
Ion	Exp%	Act%
278.20	100	100
139.10	22.10	20.73
279.20	25.40	9.21
0.00	0.00	0.00

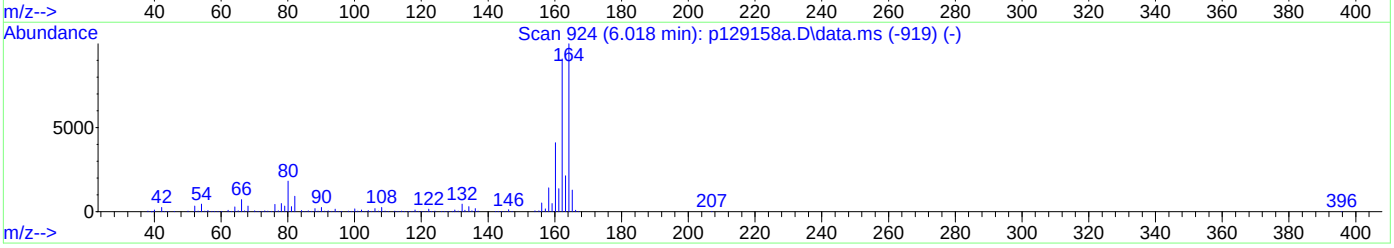
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(109) Acenaphthene-d10b (I)

6.253min (+0.331) 40.00ppm

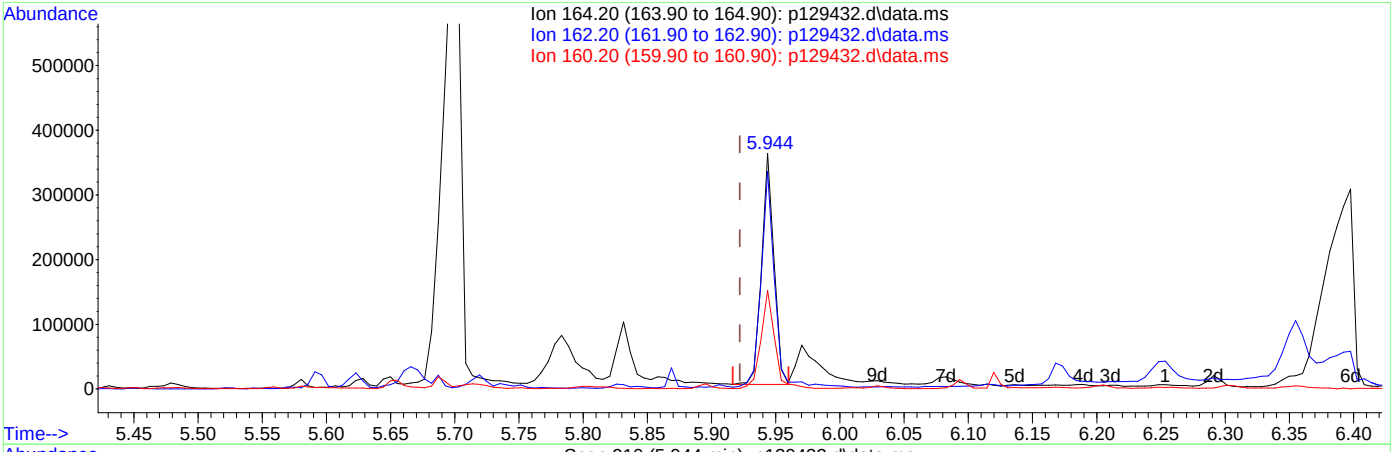
response 2912

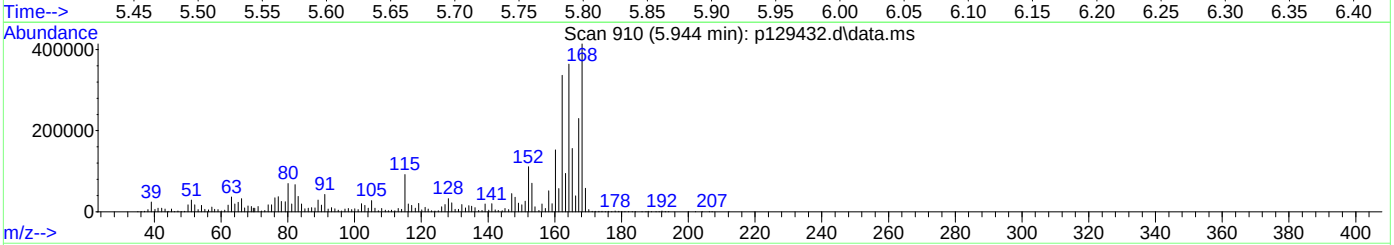
Ion	Exp%	Act%
164.20	100	100
162.20	91.60	1252.82#
160.20	40.40	43.39
0.00	0.00	0.00

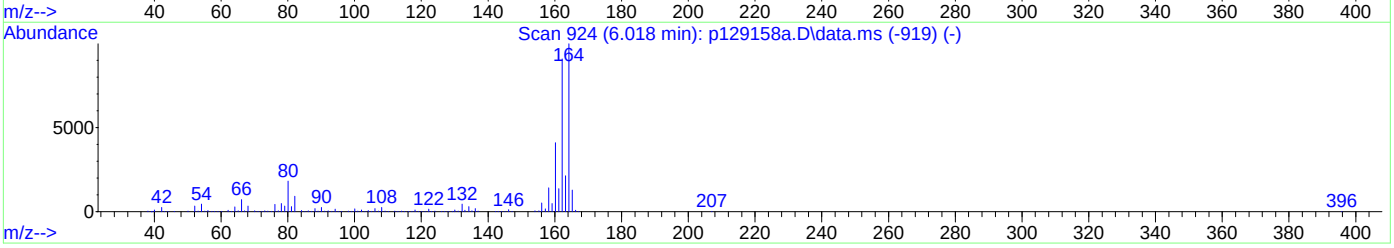
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(109) Acenaphthene-d10b (I)

5.944min (+0.022) 40.00ppm m

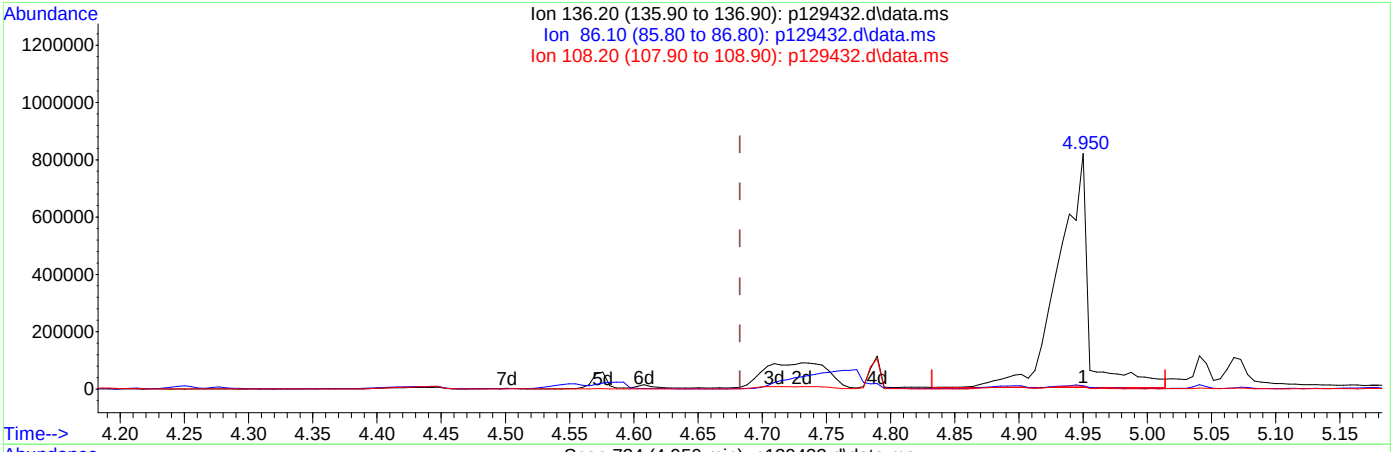
response 239297

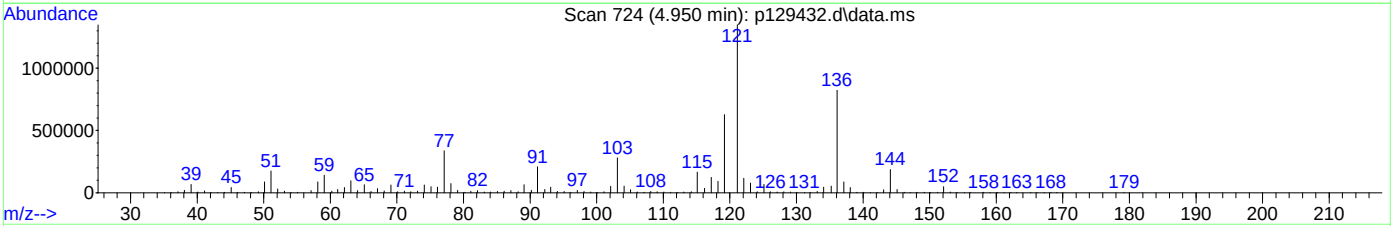
Ion	Exp%	Act%
164.20	100	100
162.20	91.60	92.43
160.20	40.40	41.84
0.00	0.00	0.00

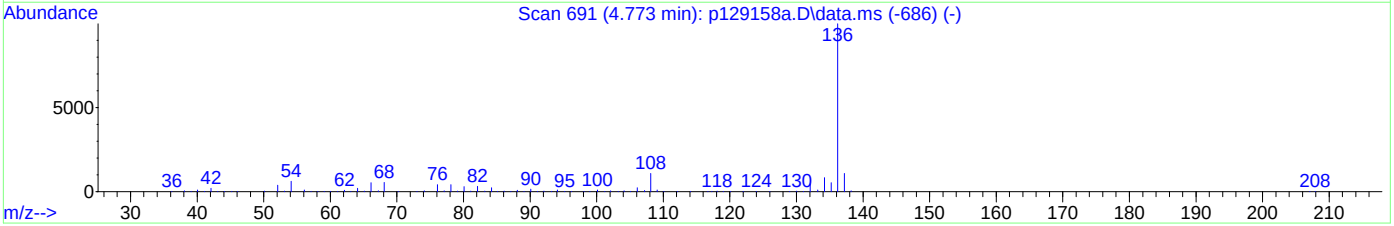
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(107) Naphthalene-d8b (I)

4.950min (+0.267) 40.00ppm

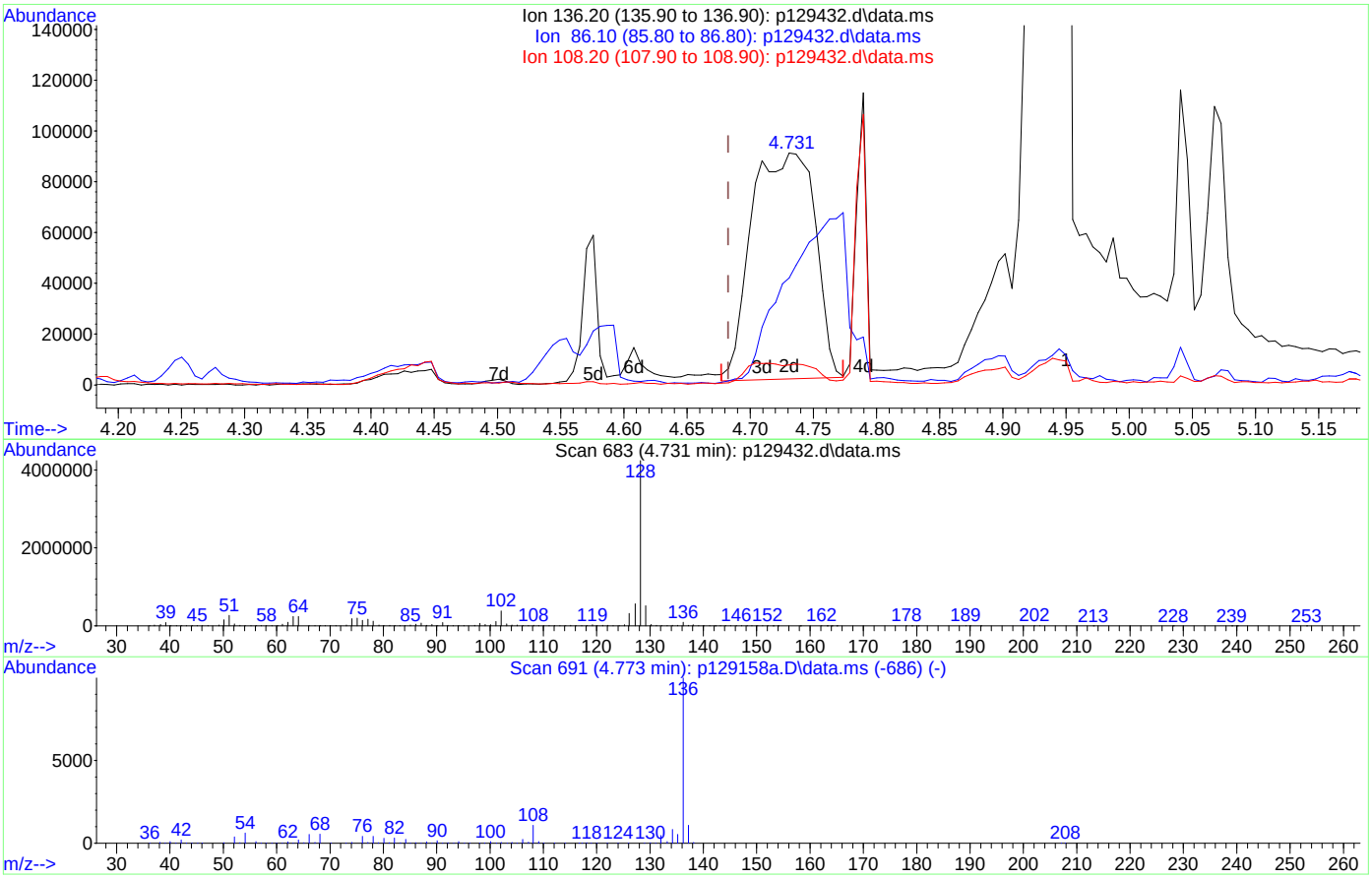
response 1328881

Ion	Exp%	Act%
136.20	100	100
86.10	1.10	1.40
108.20	11.40	1.08
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration



TIC: p129432.d\data.ms

(107) Naphthalene-d8b (I)

4.731min (+0.048) 40.00ppm m

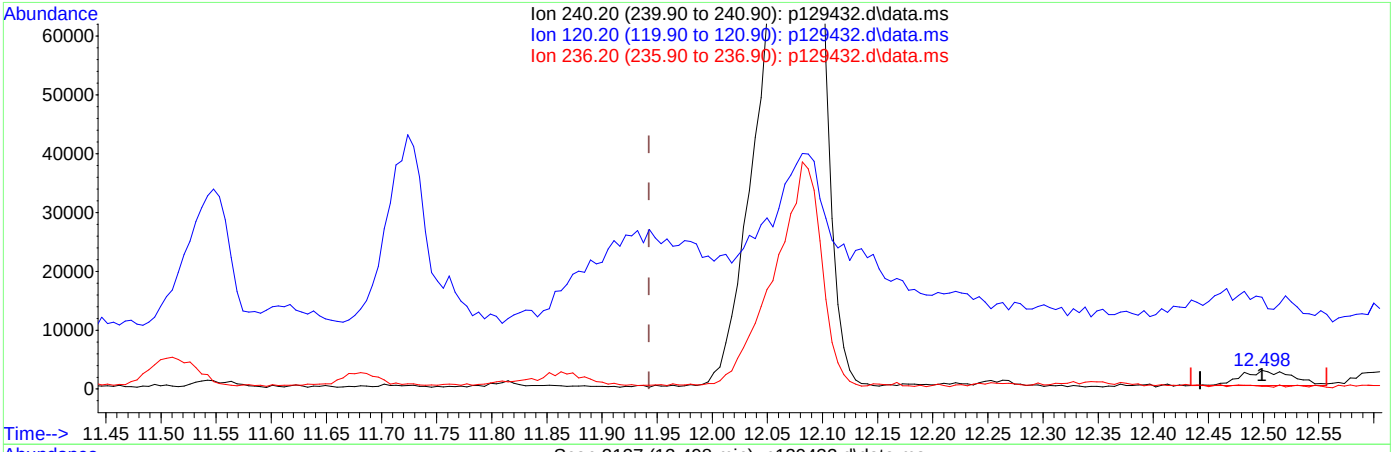
response 310497

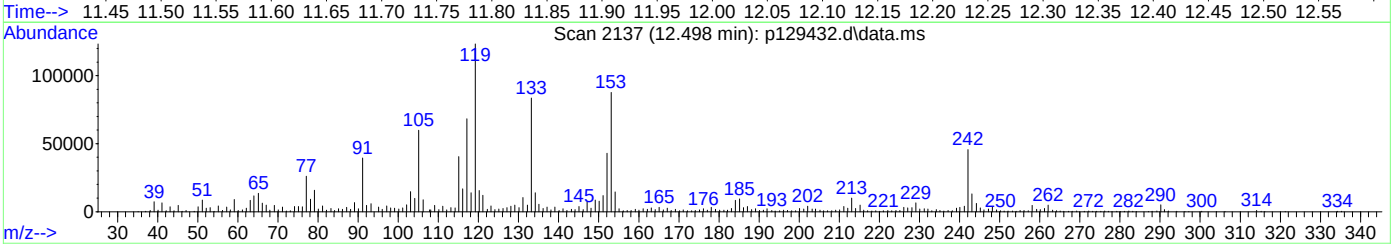
Ion	Exp%	Act%
136.20	100	100
86.10	1.10	5.99
108.20	11.40	4.62
0.00	0.00	0.00

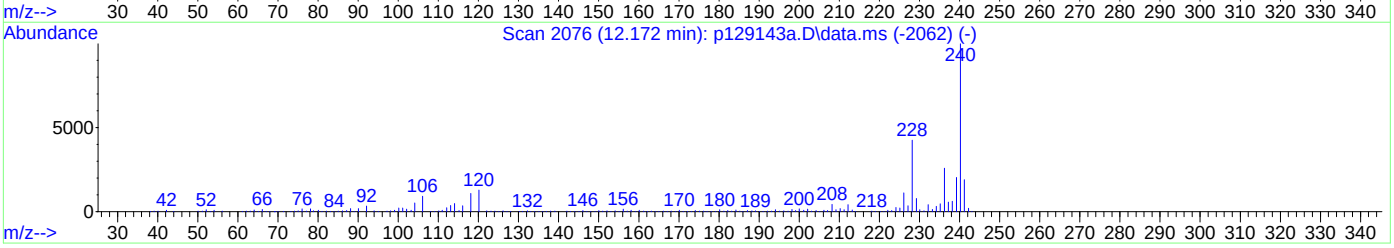
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On    :  9 May 2019   7:22 pm
Operator  : angelar
Sample    : jc87093-6                                  Inst     : MSVOAMSP
Misc      : op20110,ep5858,30.3,,,1,2
ALS Vial  : 15   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration
```







TIC: p129432.d\data.ms

(111) Chrysene-d12d (I)

12.498min (+0.556) 40.00ppm

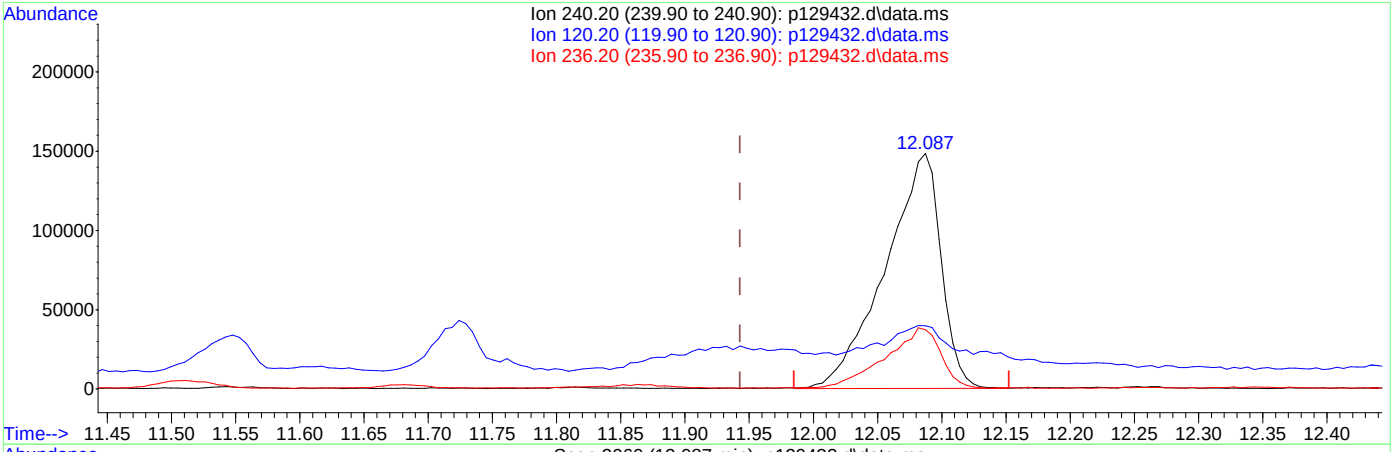
response 8422

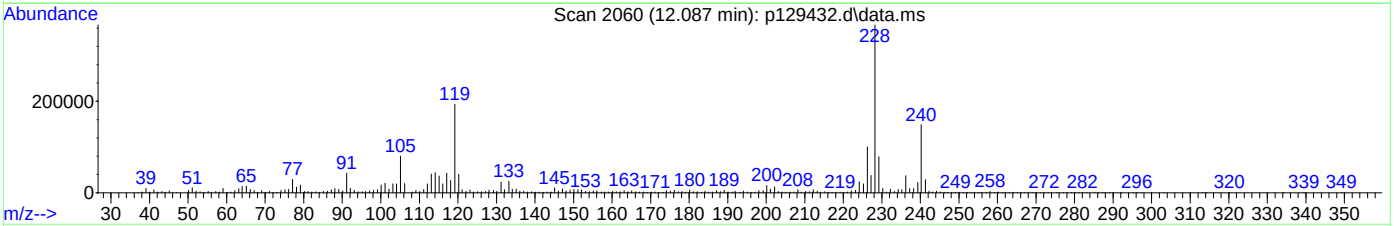
Ion	Exp%	Act%
240.20	100	100
120.20	15.10	69.33#
236.20	26.60	0.00
0.00	0.00	0.00

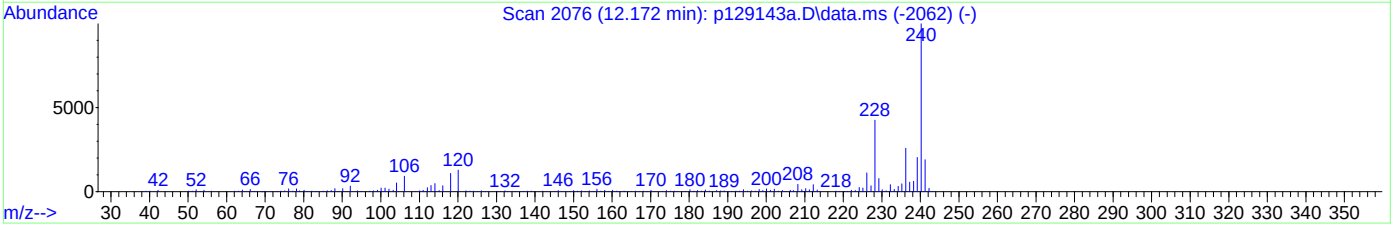
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\ep5858\
Data File : p129432.d
Acq On : 9 May 2019 7:22 pm
Operator : angelar
Sample : jc87093-6 Inst : MSVOAMSP
Misc : op20110,ep5858,30.3,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 10 02:02:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri May 10 02:01:04 2019
Response via : Initial Calibration







TIC: p129432.d\data.ms

(111) Chrysene-d12d (I)

12.087min (+0.144) 40.00ppm m

response 445852

Ion	Exp%	Act%
240.20	100	100
120.20	15.10	26.88
236.20	26.60	25.18
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129376.d
Acq On : 7 May 2019 5:23 pm
Operator : christc2
Sample : jc87093-7 Inst : MSVOAMSP
Misc : op20110,ep5856,30.3,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:12:49 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

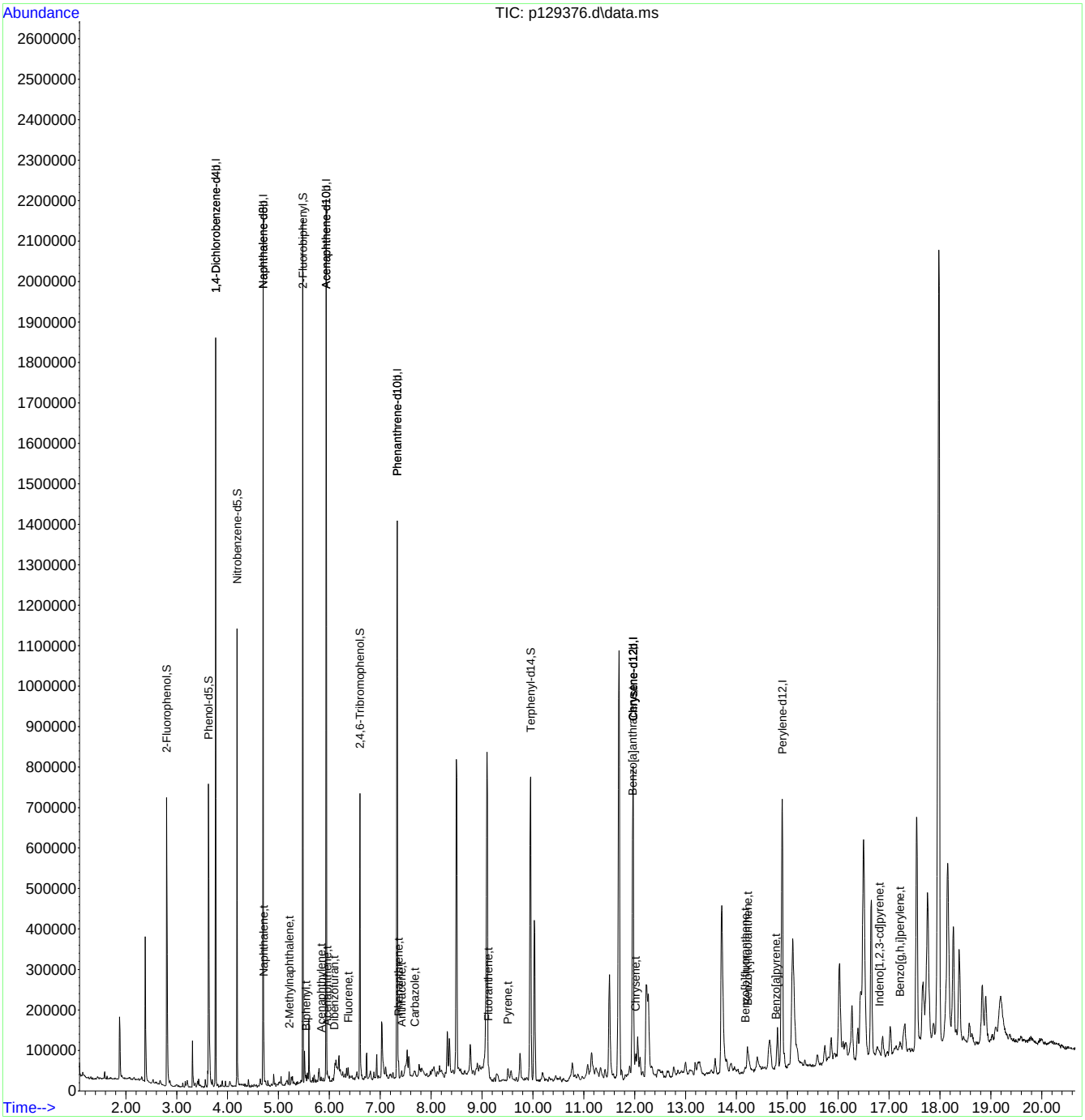
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	179257	40.00	ppm	0.00
24) Naphthalene-d8	4.699	136	590135	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	298917	40.00	ppm	0.00
69) Phenanthrene-d10	7.332	188	521492	40.00	ppm	0.00
83) Chrysene-d12	11.969	240	440447	40.00	ppm	0.01
91) Perylene-d12	14.902	264	439326	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4b	3.764	152	179257	40.00	ppm	0.00
103) Phenanthrene-d10b	7.332	188	521492	40.00	ppm	0.00
105) Chrysene-d12b	11.969	240	440447	40.00	ppm	0.01
107) Naphthalene-d8b	4.699	136	590135	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	298917	40.00	ppm	0.00
111) Chrysene-d12d	11.969	240	440447	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	191811	33.30	ppm	0.00
Spiked Amount 50.000			Recovery = 66.60%			
8) Phenol-d5	3.625	99	243768	33.33	ppm	0.00
Spiked Amount 50.000			Recovery = 66.66%			
25) Nitrobenzene-d5	4.186	82	235926	37.21	ppm	0.00
Spiked Amount 50.000			Recovery = 74.42%			
51) 2-Fluorobiphenyl	5.479	172	392595	41.45	ppm	0.00
Spiked Amount 50.000			Recovery = 82.90%			
73) 2,4,6-Tribromophenol	6.600	330	59686	34.40	ppm	0.00
Spiked Amount 50.000			Recovery = 68.80%			
85) Terphenyl-d14	9.955	244	385698	38.65	ppm	0.01
Spiked Amount 50.000			Recovery = 77.30%			
Target Compounds						Qvalue
38) Naphthalene	4.709	128	39184	2.78	ppm	97
44) 2-Methylnaphthalene	5.211	141	4321	0.53	ppm	94
53) Biphenyl	5.543	154	1852	0.18	ppm	94
56) Acenaphthylene	5.836	152	2812	0.22	ppm	95
59) Acenaphthene	5.959	153	3242	0.41	ppm #	77
62) Dibenzofuran	6.093	168	3501	0.29	ppm	76
66) Fluorene	6.371	166	5365	0.56	ppm	93
77) Phenanthrene	7.359	178	15163	1.12	ppm	93
78) Anthracene	7.418	178	5282	0.37	ppm	94
79) Carbazole	7.680	167	2076	0.15	ppm	88
81) Fluoranthene	9.127	202	17262	1.03	ppm	92
84) Pyrene	9.507	202	17803	1.17	ppm	99
87) Benzo[a]anthracene	11.959	228	9093	0.63	ppm	87
89) Chrysene	12.017	228	10384	0.81	ppm	85
93) Benzo[b]fluoranthene	14.170	252	7939	0.59	ppm	90
94) Benzo[k]fluoranthene	14.224	252	3347	0.30	ppm	66
95) Benzo[a]pyrene	14.774	252	6508	0.57	ppm	87
96) Indeno[1,2,3-cd]pyrene	16.809	276	3868	0.37	ppm	68
100) Benzo[g,h,i]perylene	17.215	276	3205	0.31	ppm	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

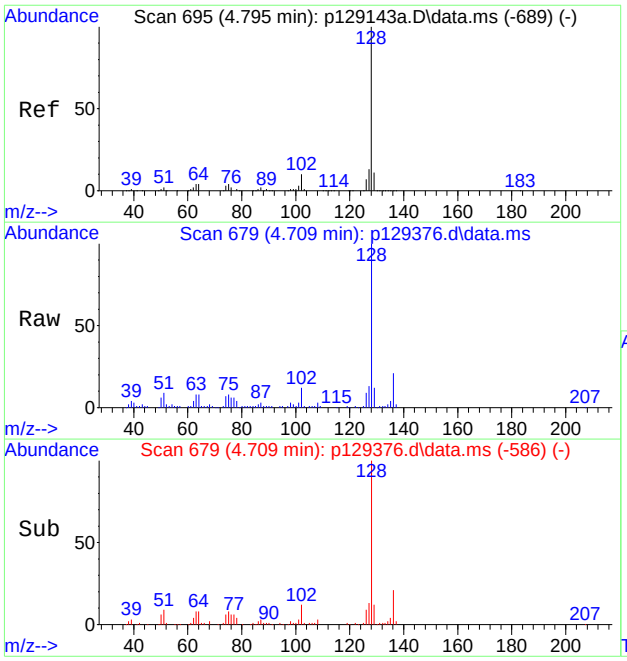
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129376.d
Acq On : 7 May 2019 5:23 pm
Operator : christc2
Sample : jc87093-7 Inst : MSVOAMSP
Misc : op20110,ep5856,30.3,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:12:49 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



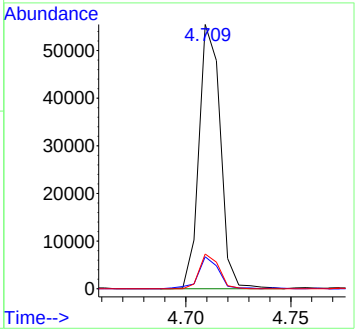
MP5844.M Wed May 08 05:05:06 2019 Page: 2

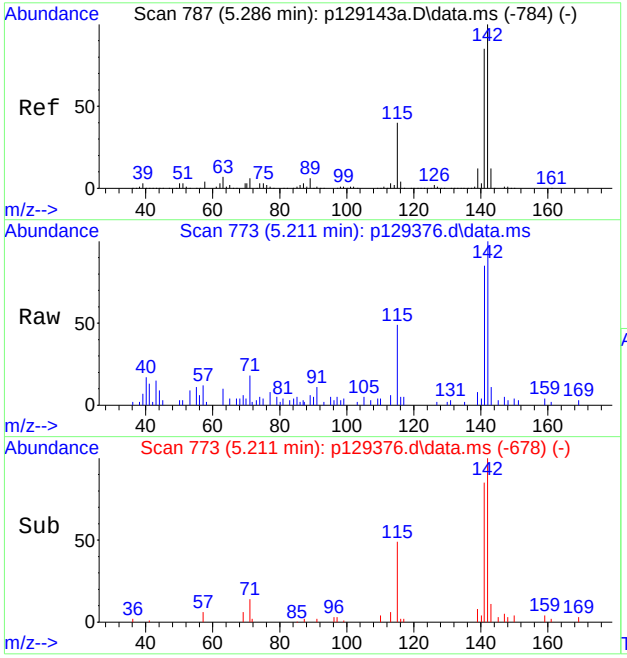


#38
Naphthalene
Concen: 2.78 ppm
RT: 4.709 min Scan# 679
Delta R.T. -0.005 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:128 Resp: 39184

Ion	Ratio	Lower	Upper
128	100		
129	12.0	0.0	40.6
127	13.1	0.0	42.5

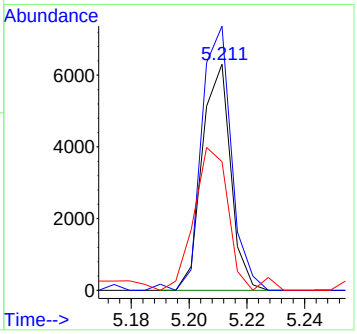


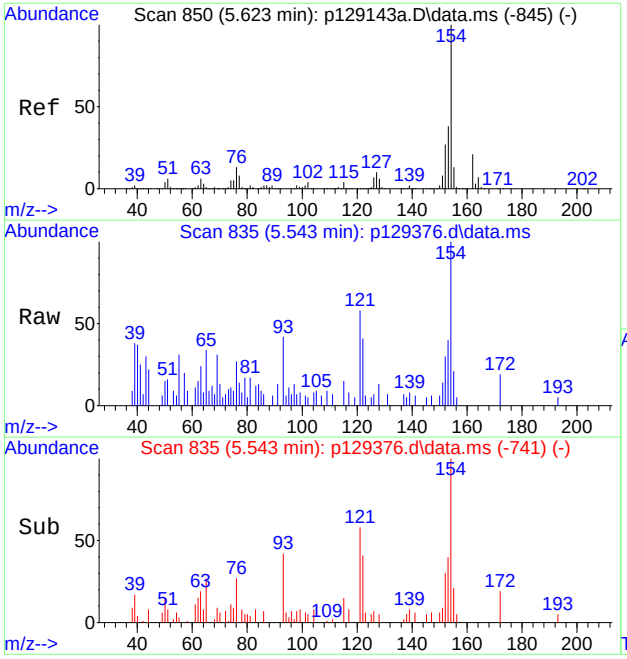


#44
2-Methylnaphthalene
Concen: 0.53 ppm
RT: 5.211 min Scan# 773
Delta R.T. 0.006 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:141 Resp: 4321

Ion	Ratio	Lower	Upper
141	100		
142	115.6	91.9	151.9
115	56.9	21.5	81.5

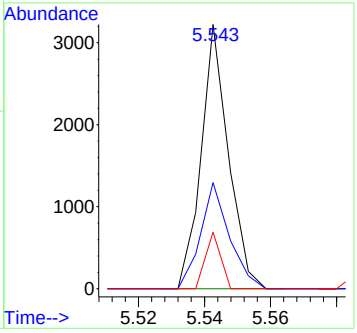


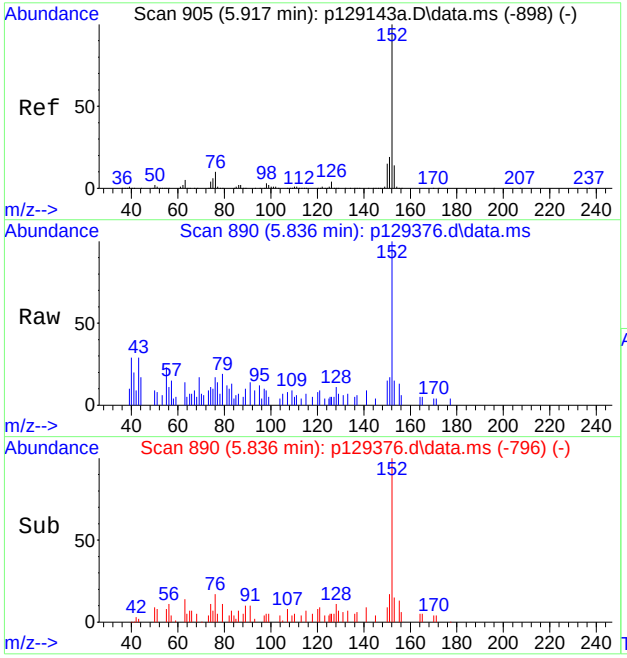


#53
Biphenyl
Concen: 0.18 ppm
RT: 5.543 min Scan# 835
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:154 Resp: 1852

Ion	Ratio	Lower	Upper
154	100		
153	40.2	9.3	69.3
155	21.5	0.0	43.0

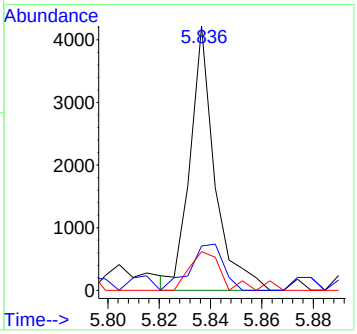




#56
Acenaphthylene
Concen: 0.22 ppm
RT: 5.836 min Scan# 890
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

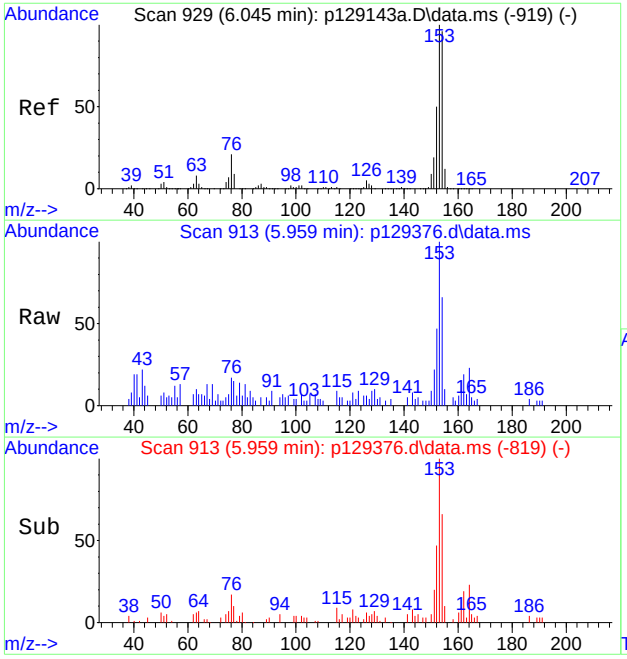
Tgt Ion:152 Resp: 2812

Ion	Ratio	Lower	Upper
152	100		
151	17.3	0.0	49.2
153	15.0	0.0	43.0



9.1.12

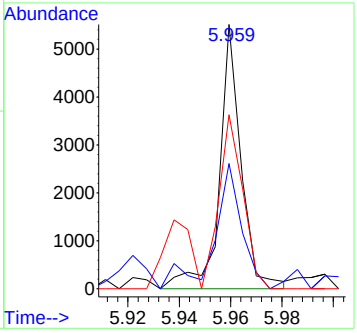
9

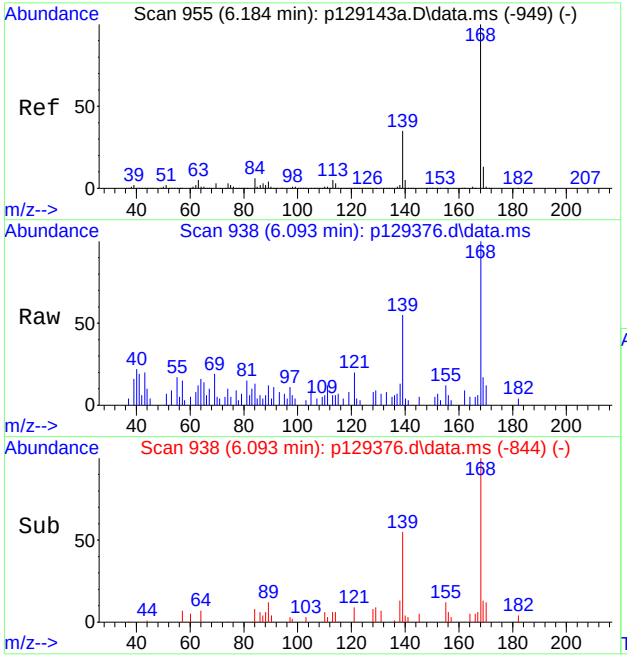


#59
Acenaphthene
Concen: 0.41 ppm
RT: 5.959 min Scan# 913
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:153 Resp: 3242

Ion	Ratio	Lower	Upper
153	100		
152	46.6	19.5	79.5
154	60.8	63.0	123.0#

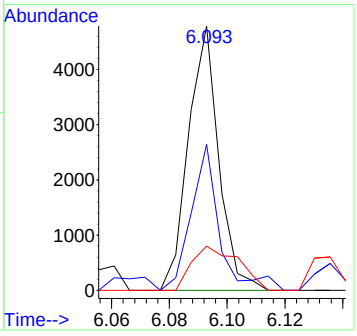


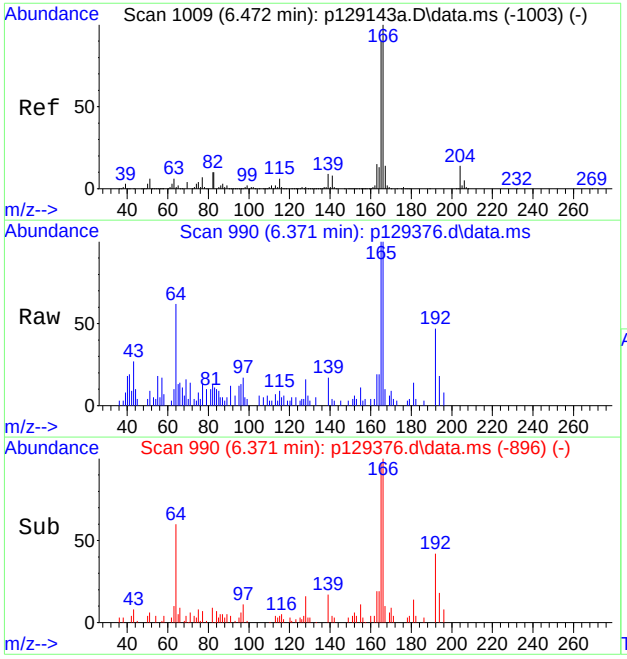


#62
Dibenzofuran
Concen: 0.29 ppm
RT: 6.093 min Scan# 938
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:168 Resp: 3501

Ion	Ratio	Lower	Upper
168	100		
139	55.2	7.2	67.2
169	16.8	0.0	43.3

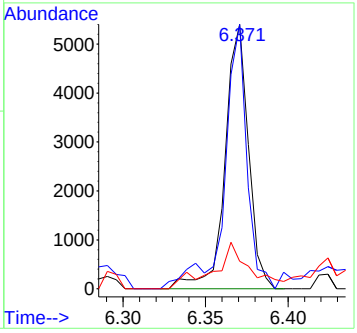


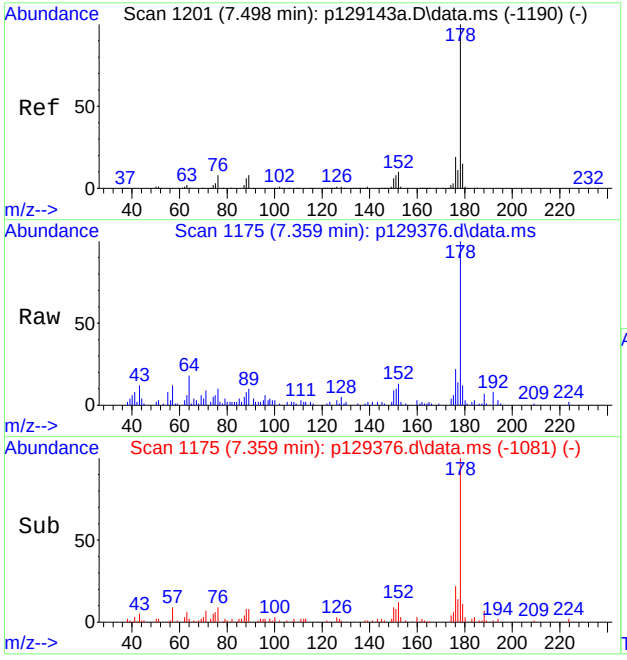


#66
Fluorene
Concen: 0.56 ppm
RT: 6.371 min Scan# 990
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:166 Resp: 5365

Ion	Ratio	Lower	Upper
166	100		
165	97.0	61.0	121.0
167	9.0	0.0	43.1

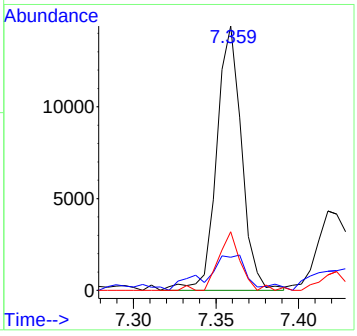


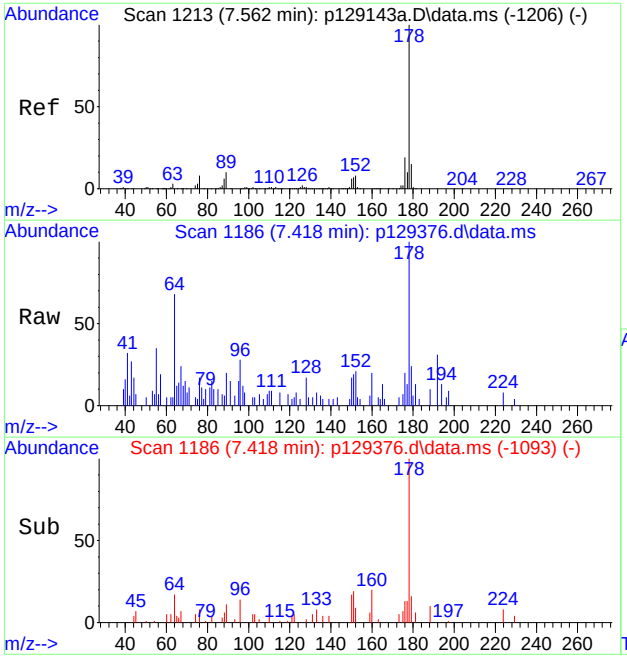


#77
Phenanthrene
Concen: 1.12 ppm
RT: 7.359 min Scan# 1175
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:178 Resp: 15163

Ion	Ratio	Lower	Upper
178	100		
179	11.3	0.0	45.5
176	21.8	0.0	49.9

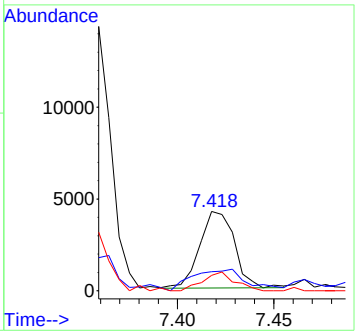


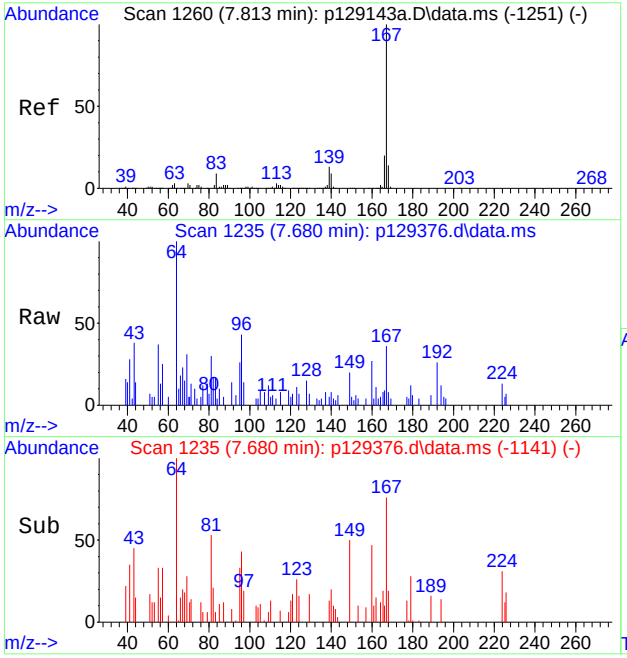


#78
Anthracene
Concen: 0.37 ppm
RT: 7.418 min Scan# 1186
Delta R.T. -0.005 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:178 Resp: 5282

Ion	Ratio	Lower	Upper
178	100		
179	21.0	0.0	45.8
176	18.6	0.0	48.4

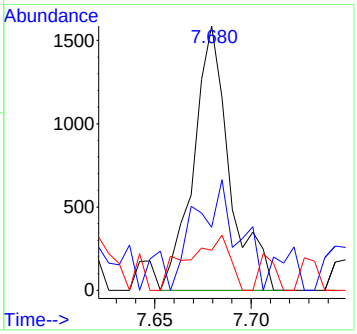




#79
Carbazole
Concen: 0.15 ppm
RT: 7.680 min Scan# 1235
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

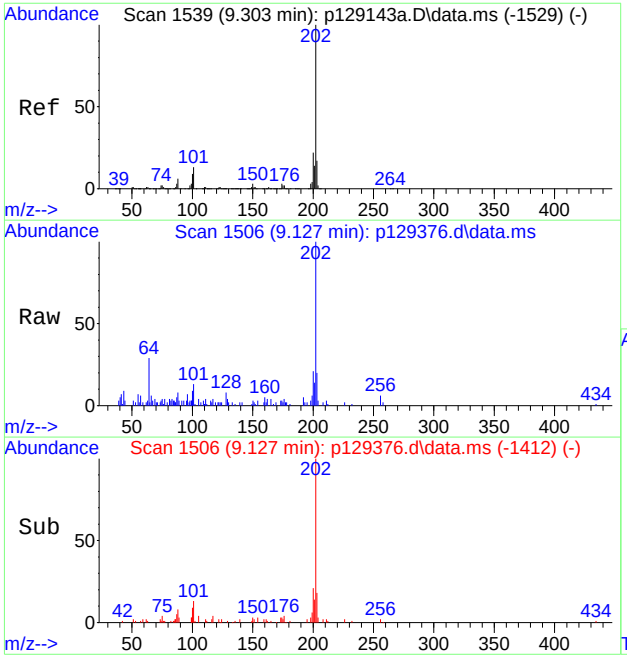
Tgt Ion:167 Resp: 2076

Ion	Ratio	Lower	Upper
167	100		
166	11.3	0.0	49.7
139	15.2	0.0	43.8



9.1.12

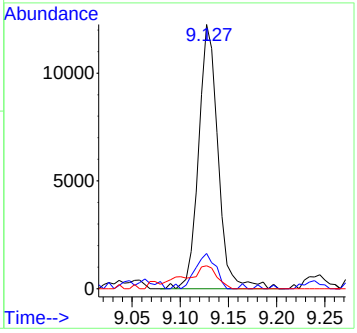
9

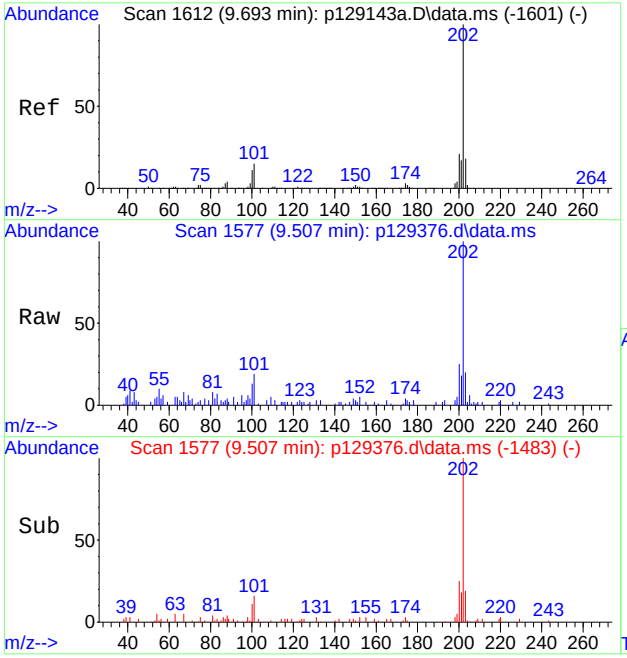


#81
Fluoranthene
Concen: 1.03 ppm
RT: 9.127 min Scan# 1506
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:202 Resp: 17262

Ion	Ratio	Lower	Upper
202	100		
101	12.0	0.0	45.1
100	7.8	0.0	41.2

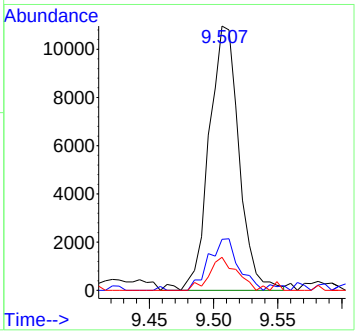




#84
Pyrene
Concen: 1.17 ppm
RT: 9.507 min Scan# 1577
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:202 Resp: 17803

Ion	Ratio	Lower	Upper
202	100		
101	17.7	0.0	46.9
100	12.6	0.0	42.7



9.1.12
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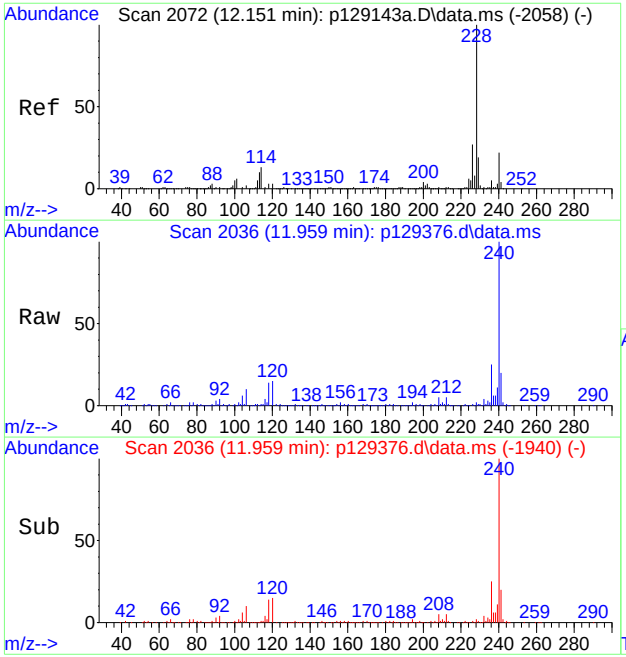
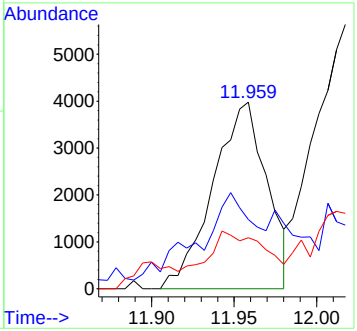
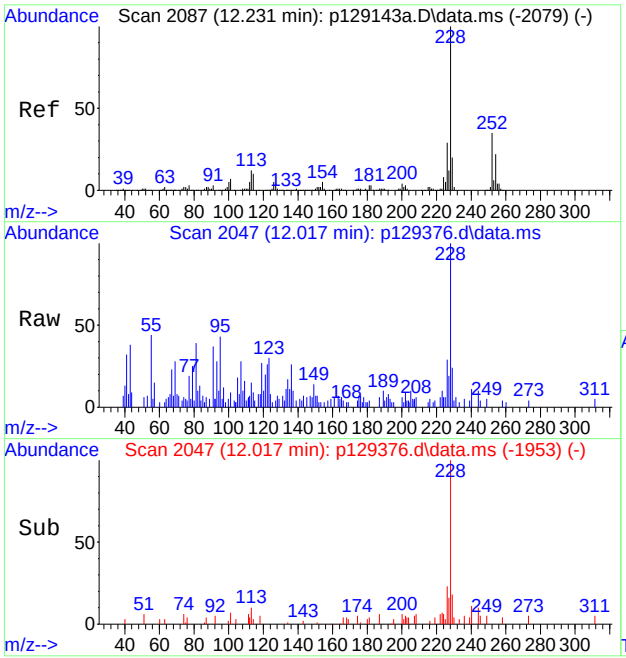


#87
Benzo[a]anthracene
Concen: 0.63 ppm
RT: 11.959 min Scan# 2036
Delta R.T. 0.011 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:228 Resp: 9093

Ion	Ratio	Lower	Upper
228	100		
229	17.8	0.0	49.8
226	18.2	0.0	57.8

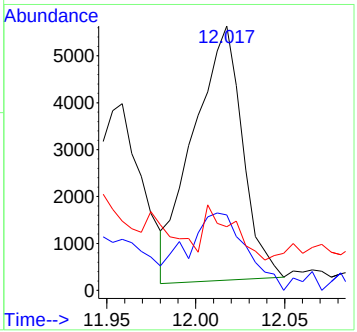


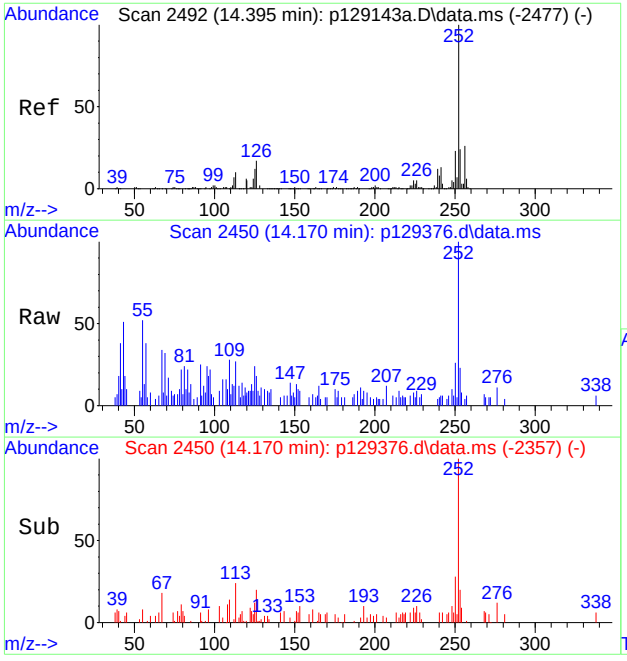


#89
Chrysene
Concen: 0.81 ppm
RT: 12.017 min Scan# 2047
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:228 Resp: 10384

Ion	Ratio	Lower	Upper
228	100		
226	27.8	0.0	59.4
229	5.4	0.0	50.5

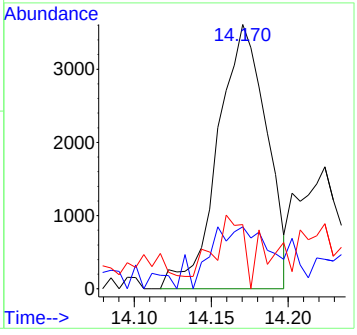


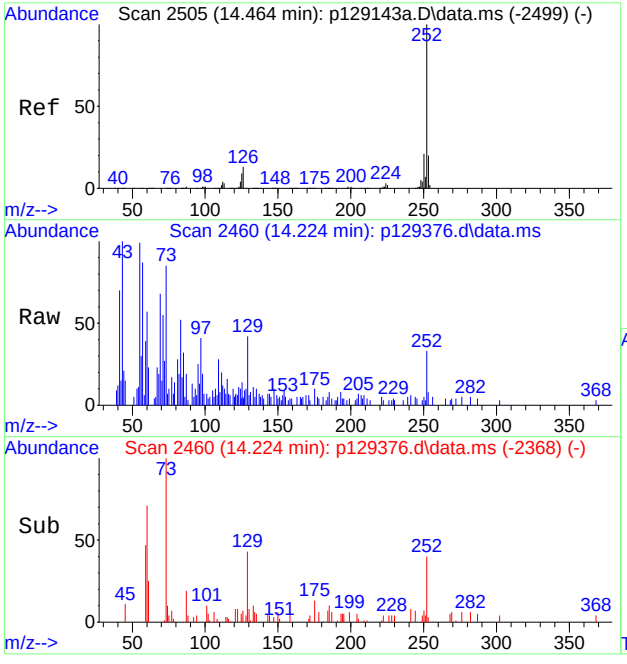


#93
Benzo[b]fluoranthene
Concen: 0.59 ppm
RT: 14.170 min Scan# 2450
Delta R.T. -0.005 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:252 Resp: 7939

Ion	Ratio	Lower	Upper
252	100		
253	17.1	0.0	52.9
125	9.9	0.0	42.3

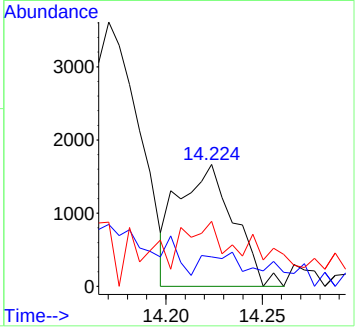


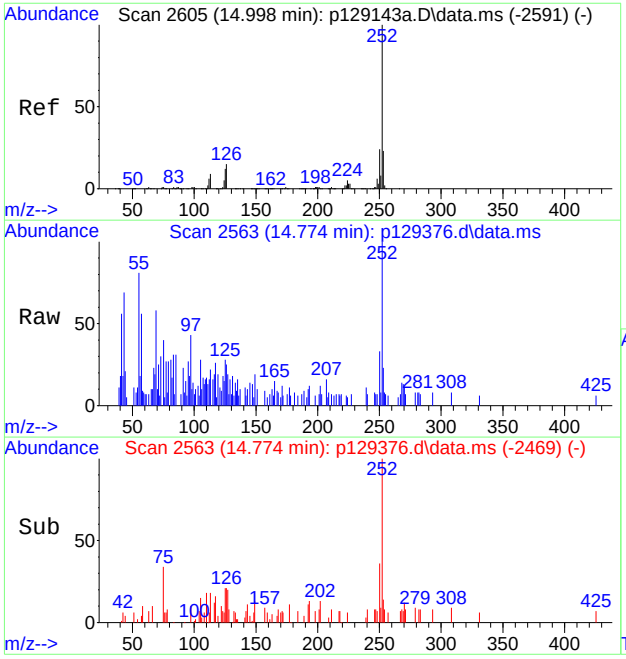


#94
Benzo[k]fluoranthene
Concen: 0.30 ppm
RT: 14.224 min Scan# 2460
Delta R.T. -0.011 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:252 Resp: 3347

Ion	Ratio	Lower	Upper
252	100		
253	7.9	0.0	51.7
125	27.4	0.0	40.5

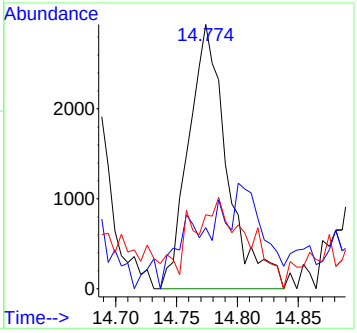


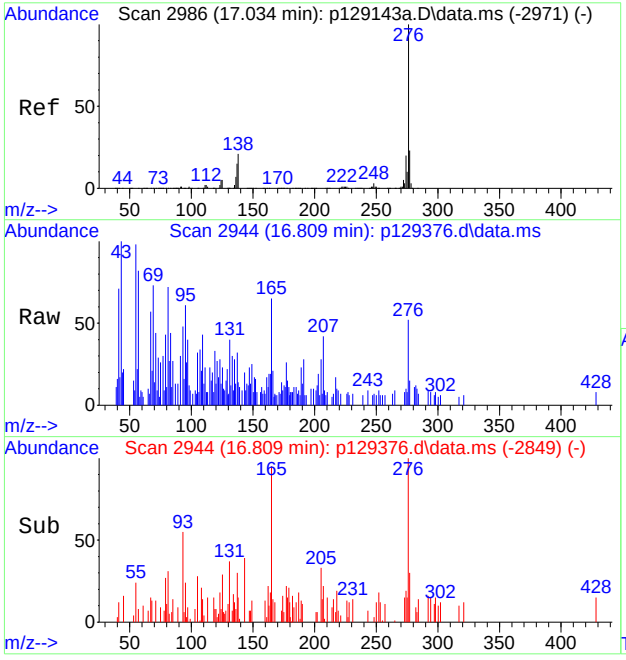


#95
Benzo[a]pyrene
Concen: 0.57 ppm
RT: 14.774 min Scan# 2563
Delta R.T. 0.000 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:252 Resp: 6508

Ion	Ratio	Lower	Upper
252	100		
253	18.9	0.0	51.6
125	23.2	0.0	43.5

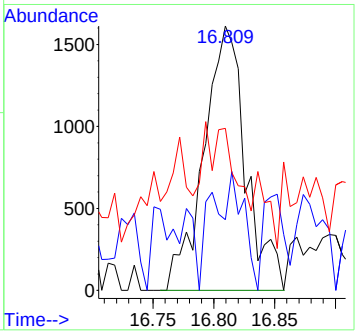


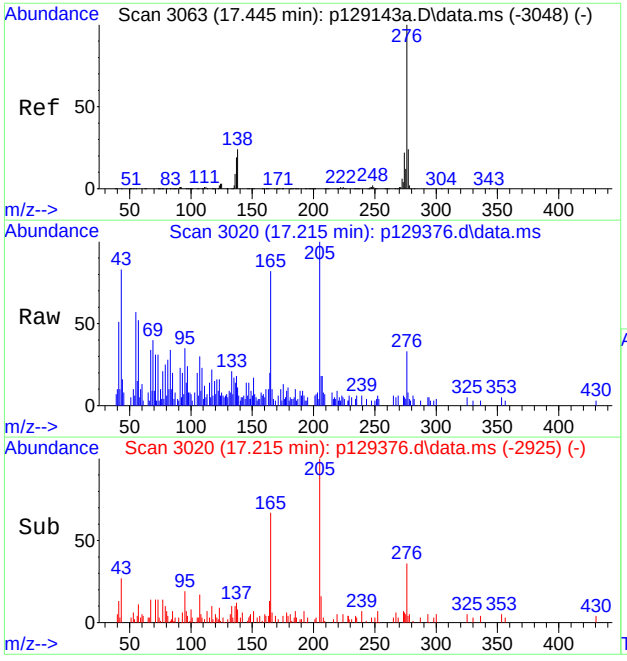


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.37 ppm
RT: 16.809 min Scan# 2944
Delta R.T. 0.006 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:276 Resp: 3868

Ion	Ratio	Lower	Upper
276	100		
138	0.8	0.0	55.2
137	20.2	0.0	46.6

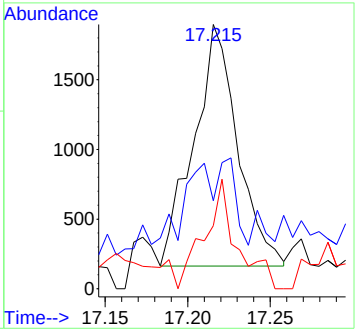




#100
Benzo[g,h,i]perylene
Concen: 0.31 ppm
RT: 17.215 min Scan# 3020
Delta R.T. 0.006 min
Lab File: p129376.d
Acq: 7 May 2019 5:23 pm

Tgt Ion:276 Resp: 3205

Ion	Ratio	Lower	Upper
276	100		
138	10.8	0.0	56.5
277	21.9	0.0	54.7



9.1.12

9

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:46

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129380.d
Acq On : 7 May 2019 7:12 pm
Operator : christc2
Sample : jc87093-8 Inst : MSVOAMSP
Misc : op20110,ep5856,31.6,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:29:33 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	158807	40.00	ppm	0.00
24) Naphthalene-d8	4.709	136	439103	40.00	ppm	0.02
47) Acenaphthene-d10	5.970	164	182781	40.00	ppm	0.03
69) Phenanthrene-d10	7.396	188	386669	40.00	ppm	0.07
83) Chrysene-d12	11.991	240	417353	40.00	ppm	0.03
91) Perylene-d12	14.908	264	440354	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4b	3.764	152	158807	40.00	ppm	0.00
103) Phenanthrene-d10b	7.396	188	386669	40.00	ppm	0.07
105) Chrysene-d12b	11.991	240	417353	40.00	ppm	0.03
107) Naphthalene-d8b	4.709	136	439103	40.00	ppm	0.02
109) Acenaphthene-d10b	5.970	164	182781	40.00	ppm	0.03
111) Chrysene-d12d	11.991	240	417353	40.00	ppm	0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	169391	33.20	ppm	0.00
Spiked Amount 50.000			Recovery	=	66.40%	
8) Phenol-d5	3.619	99	232016	35.81	ppm	0.00
Spiked Amount 50.000			Recovery	=	71.62%	
25) Nitrobenzene-d5	4.186	82	210605	44.65	ppm	0.00
Spiked Amount 50.000			Recovery	=	89.30%	
51) 2-Fluorobiphenyl	5.495	172	302124	52.17	ppm	0.02
Spiked Amount 50.000			Recovery	=	104.34%	
73) 2,4,6-Tribromophenol	6.654	330	57701	44.85	ppm	0.05
Spiked Amount 50.000			Recovery	=	89.70%	
85) Terphenyl-d14	9.998	244	360545	38.13	ppm	0.05
Spiked Amount 50.000			Recovery	=	76.26%	
Target Compounds						Qvalue
18) Acetophenone	4.084	105	13212	1.70	ppm	83
38) Naphthalene	4.736	128	5198782	495.83	ppm	98
44) 2-Methylnaphthalene	5.222	141	392454	65.29	ppm	94
53) Biphenyl	5.564	154	174007	28.24	ppm	90
59) Acenaphthene	5.991	153	58699	12.21	ppm	88
62) Dibenzofuran	6.125	168	120014	16.46	ppm	85
66) Fluorene	6.413	166	87074	14.90	ppm	96
77) Phenanthrene	7.428	178	157805	15.66	ppm	86
81) Fluoranthene	9.207	202	88193	7.10	ppm	98
84) Pyrene	9.576	202	301328m	20.85	ppm	
87) Benzo[a]anthracene	11.975	228	59779	4.35	ppm	92
89) Chrysene	12.033	228	66116	5.46	ppm	97
93) Benzo[b]fluoranthene	14.186	252	55962	4.17	ppm	93
94) Benzo[k]fluoranthene	14.229	252	17371	1.54	ppm	85
95) Benzo[a]pyrene	14.779	252	35908	3.16	ppm	94
96) Indeno[1,2,3-cd]pyrene	16.815	276	20263	1.95	ppm	94
98) Dibenz[a,h]anthracene	16.873	278	6978	0.66	ppm	83
100) Benzo[g,h,i]perylene	17.215	276	23061	2.20	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.1.13

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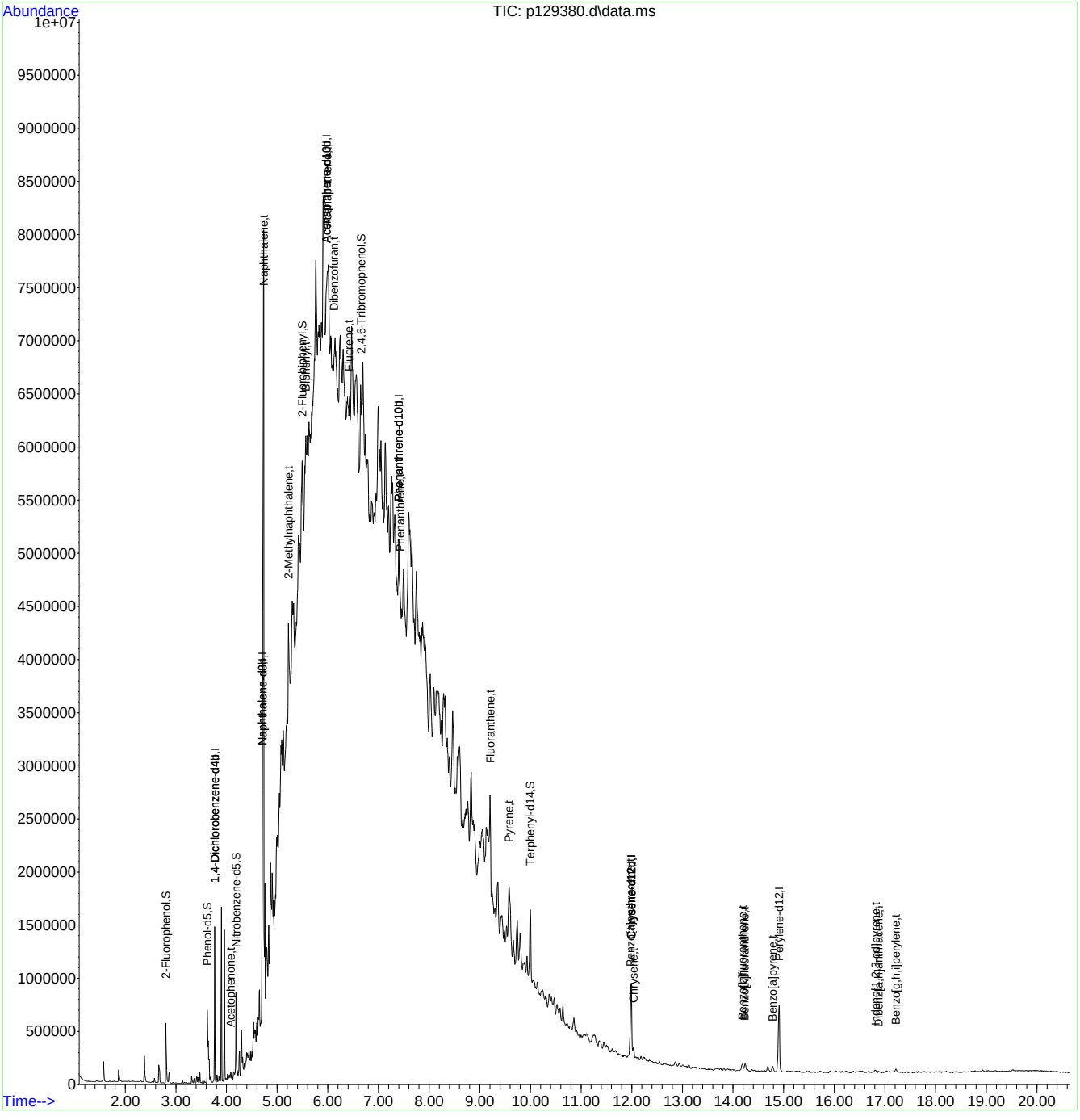
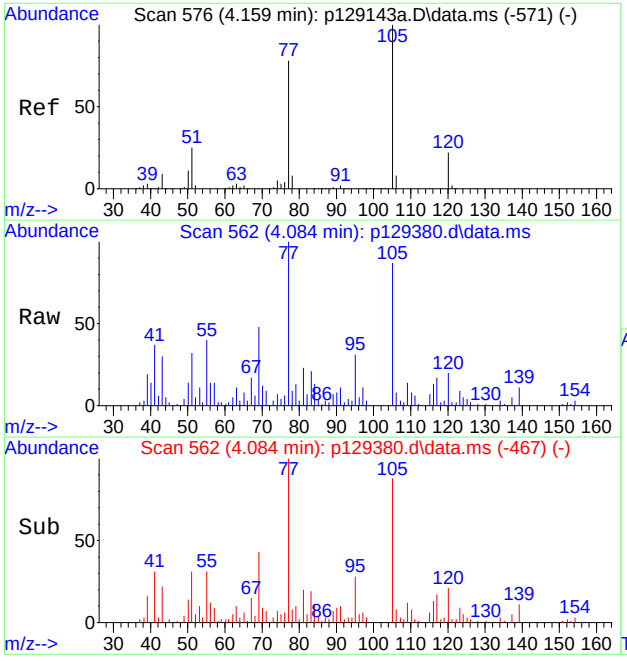
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129380.d
Acq On : 7 May 2019 7:12 pm
Operator : christc2
Sample : jc87093-8 Inst : MSVOAMSP
Misc : op20110,ep5856,31.6,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:29:33 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

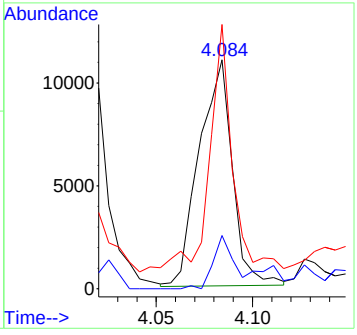


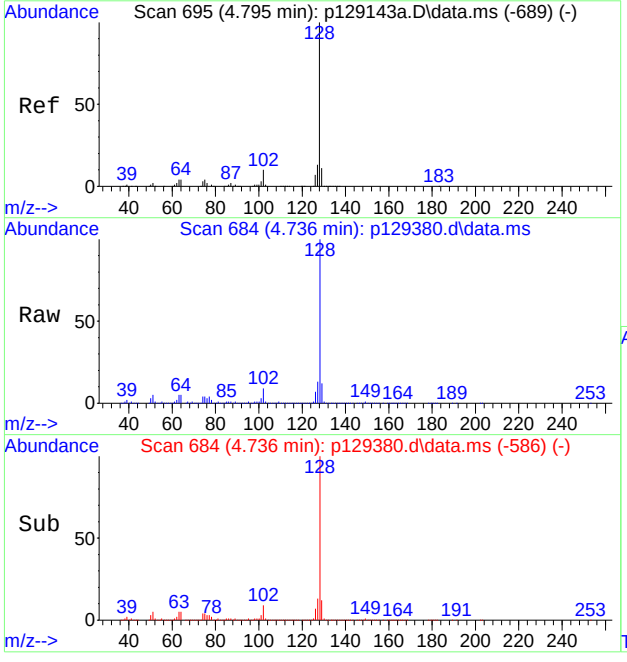


#18
Acetophenone
Concen: 1.70 ppm
RT: 4.084 min Scan# 562
Delta R.T. 0.005 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:105 Resp: 13212

Ion	Ratio	Lower	Upper
105	100		
120	22.1	0.0	50.7
77	109.3	60.4	120.4

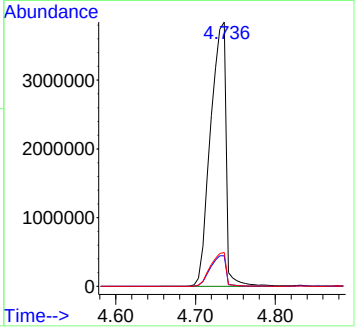




#38
Naphthalene
Concen: 495.83 ppm
RT: 4.736 min Scan# 684
Delta R.T. 0.022 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:128 Resp: 5198782

Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	40.6
127	12.9	0.0	42.5



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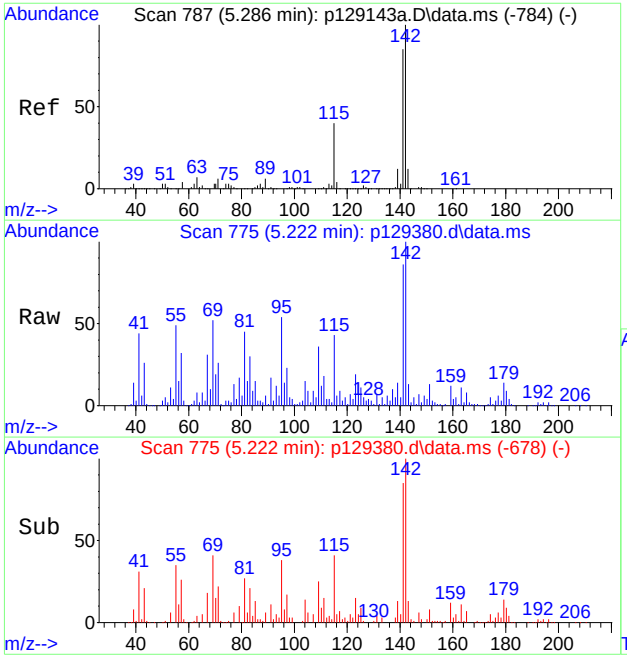
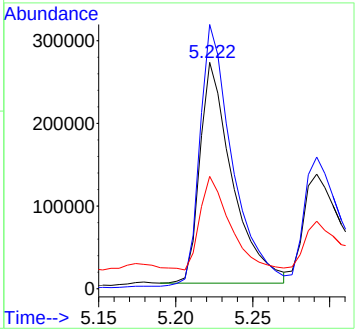
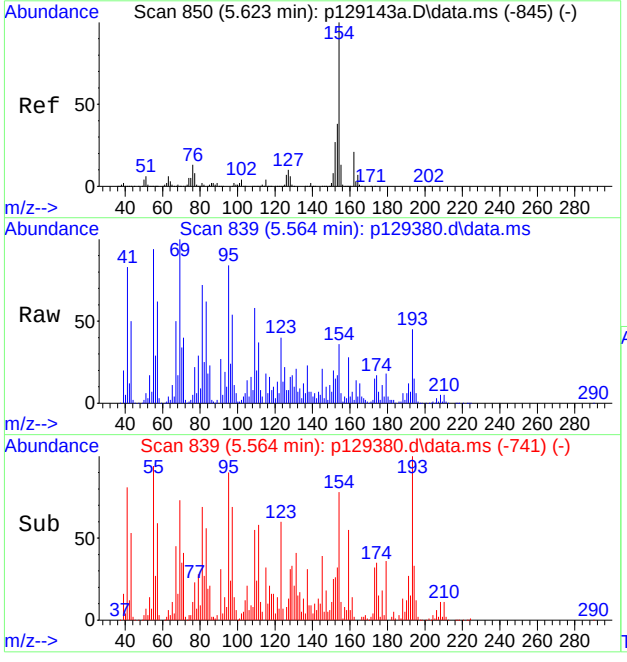


#44
2-Methylnaphthalene
Concen: 65.29 ppm
RT: 5.222 min Scan# 775
Delta R.T. 0.016 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:141 Resp: 392454

Ion	Ratio	Lower	Upper
141	100		
142	119.2	91.9	151.9
115	42.5	21.5	81.5

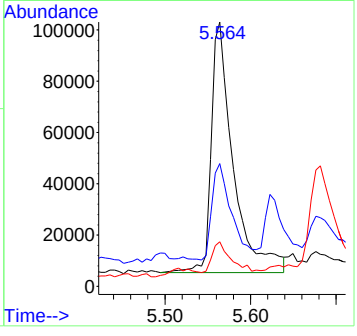




#53
Biphenyl
Concen: 28.24 ppm
RT: 5.564 min Scan# 839
Delta R.T. 0.022 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:154 Resp: 174007

Ion	Ratio	Lower	Upper
154	100		
153	32.0	9.3	69.3
155	12.1	0.0	43.0



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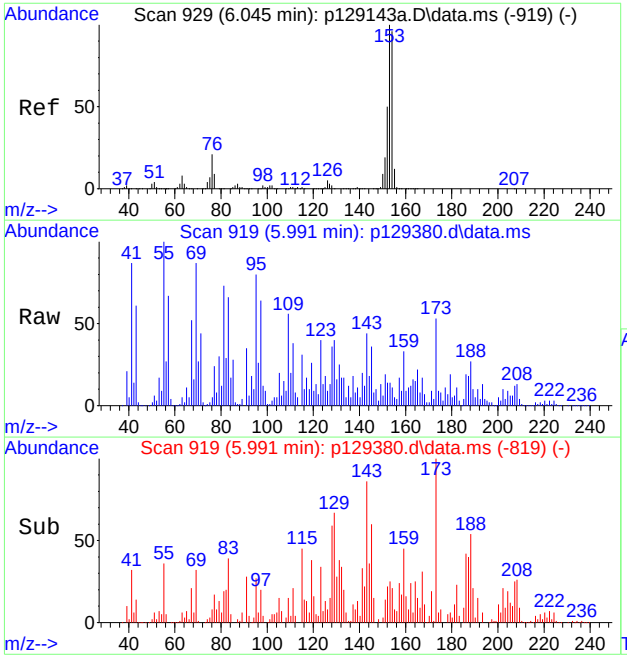
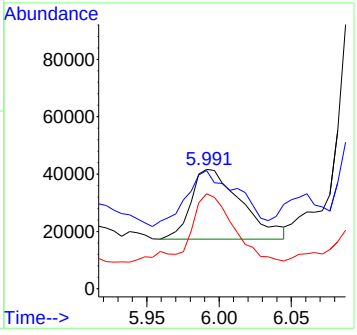
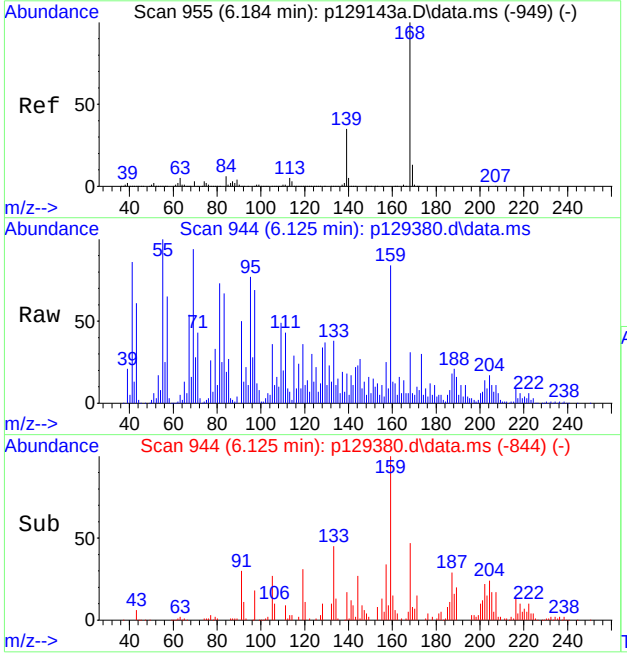


#59
Acenaphthene
Concen: 12.21 ppm
RT: 5.991 min Scan# 919
Delta R.T. 0.032 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:153 Resp: 58699

Ion	Ratio	Lower	Upper
153	100		
152	66.4	19.5	79.5
154	97.9	63.0	123.0

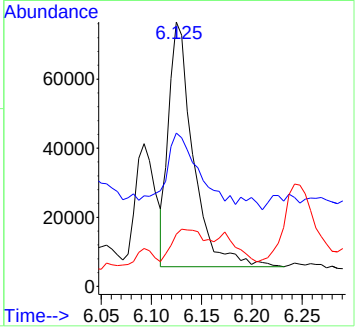


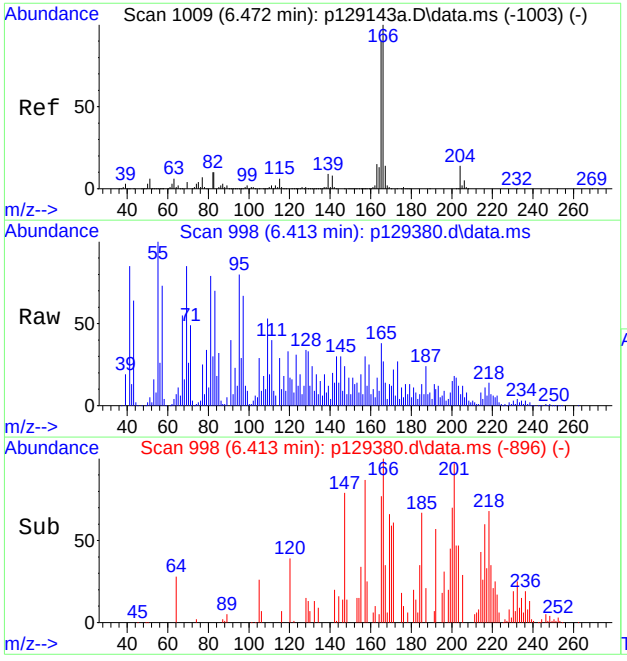


#62
Dibenzofuran
Concen: 16.46 ppm
RT: 6.125 min Scan# 944
Delta R.T. 0.032 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:168 Resp: 120014

Ion	Ratio	Lower	Upper
168	100		
139	29.2	7.2	67.2
169	4.8	0.0	43.3

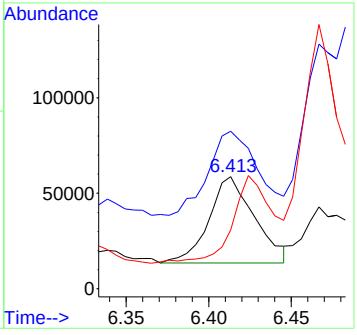


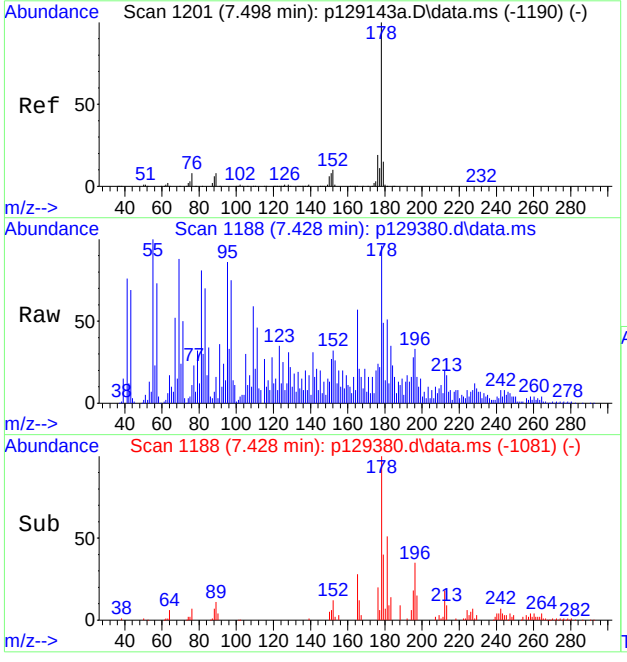


#66
Fluorene
Concen: 14.90 ppm
RT: 6.413 min Scan# 998
Delta R.T. 0.043 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:166 Resp: 87074

Ion	Ratio	Lower	Upper
166	100		
165	94.9	61.0	121.0
167	14.3	0.0	43.1

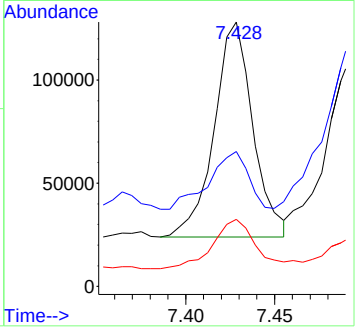




#77
Phenanthrene
Concen: 15.66 ppm
RT: 7.428 min Scan# 1188
Delta R.T. 0.070 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:178 Resp: 157805

Ion	Ratio	Lower	Upper
178	100		
179	26.1	0.0	45.5
176	22.2	0.0	49.9



9.1.13

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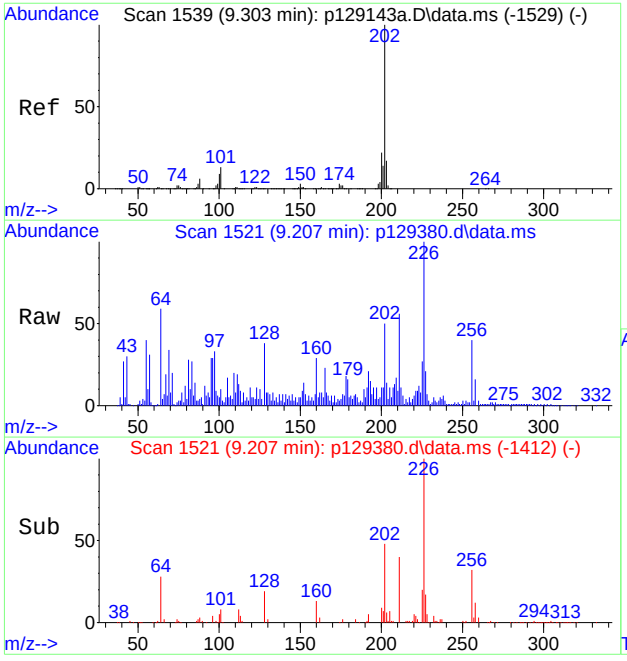
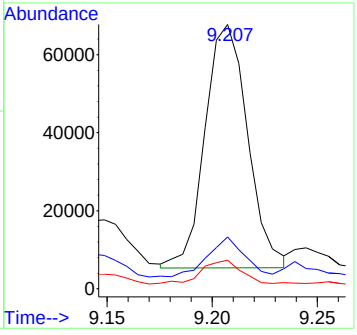
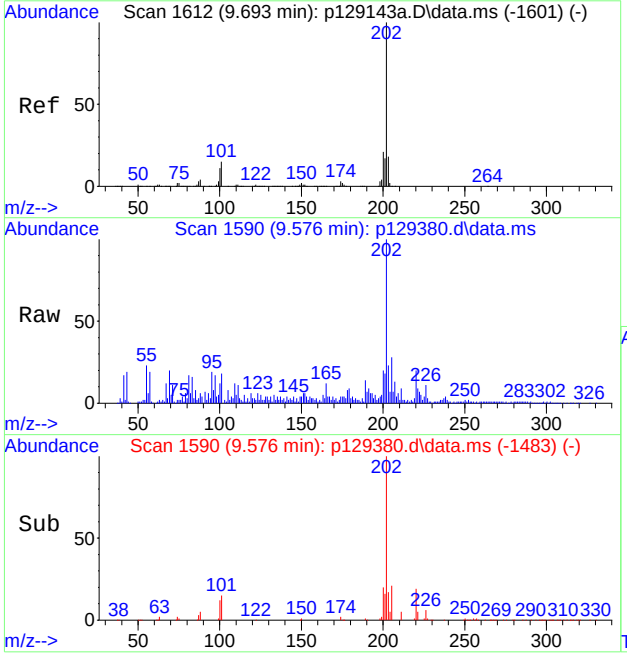


#81
Fluoranthene
Concen: 7.10 ppm
RT: 9.207 min Scan# 1521
Delta R.T. 0.080 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:202 Resp: 88193

Ion	Ratio	Lower	Upper
202	100		
101	15.1	0.0	45.1
100	9.6	0.0	41.2

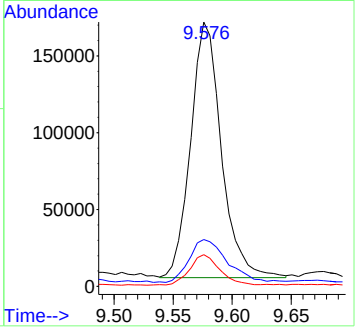


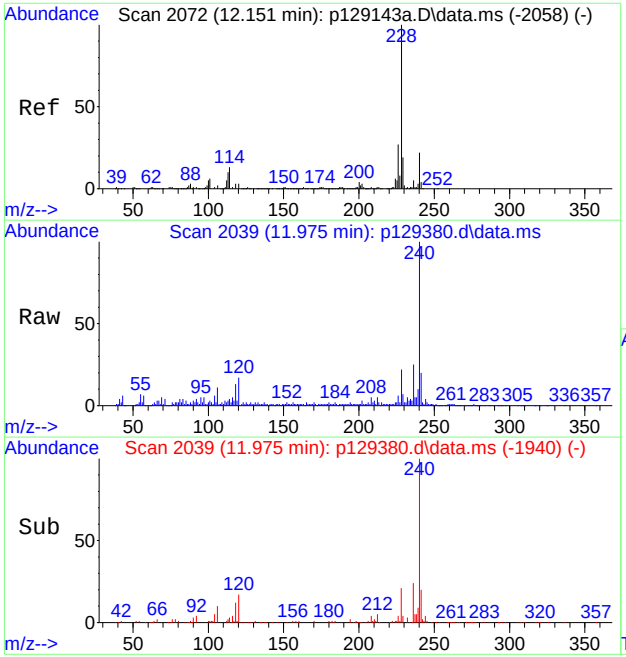


#84
Pyrene
Concen: 20.85 ppm m
RT: 9.576 min Scan# 1590
Delta R.T. 0.070 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:202 Resp: 301328

Ion	Ratio	Lower	Upper
202	100		
101	17.7	0.0	46.9
100	12.0	0.0	42.7

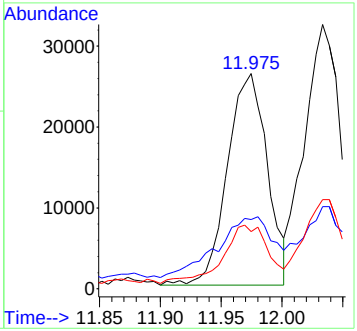


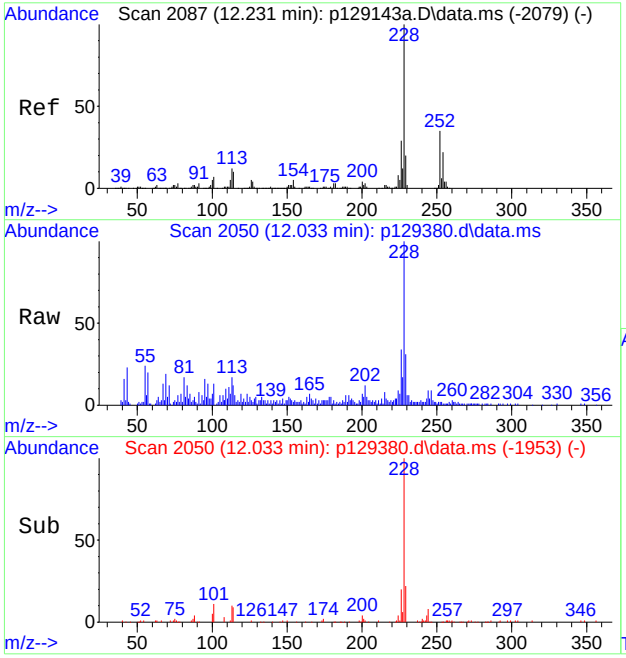


#87
Benzo[a]anthracene
Concen: 4.35 ppm
RT: 11.975 min Scan# 2039
Delta R.T. 0.027 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:228 Resp: 59779

Ion	Ratio	Lower	Upper
228	100		
229	23.7	0.0	49.8
226	23.7	0.0	57.8

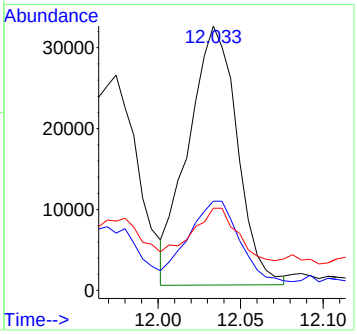




#89
Chrysene
Concen: 5.46 ppm
RT: 12.033 min Scan# 2050
Delta R.T. 0.016 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:228 Resp: 66116

Ion	Ratio	Lower	Upper
228	100		
226	32.1	0.0	59.4
229	20.3	0.0	50.5



9.1.13

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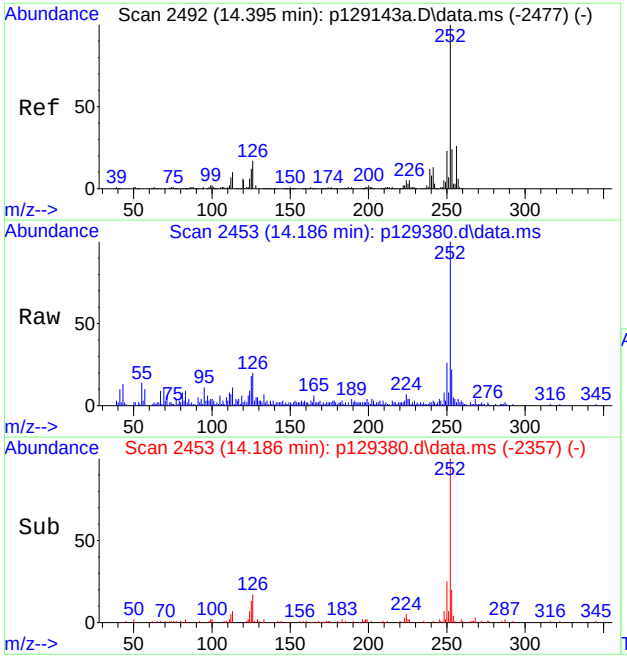
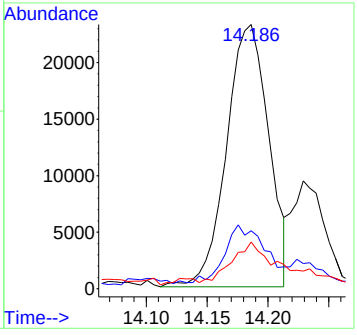
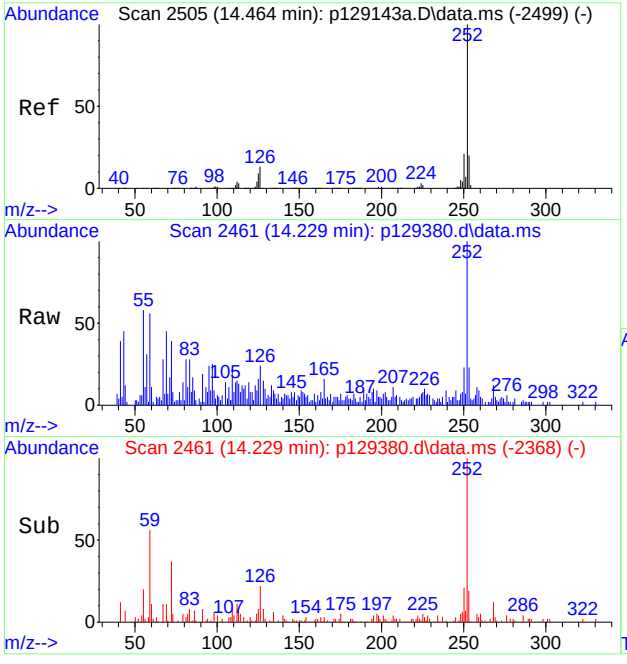


#93
Benzo[b]fluoranthene
Concen: 4.17 ppm
RT: 14.186 min Scan# 2453
Delta R.T. 0.011 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:252 Resp: 55962

Ion	Ratio	Lower	Upper
252	100		
253	19.0	0.0	52.9
125	14.4	0.0	42.3

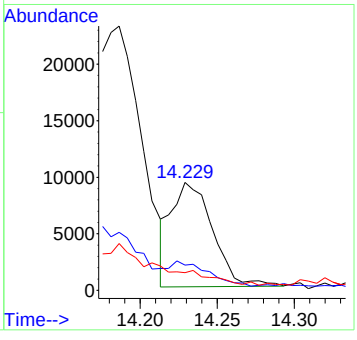


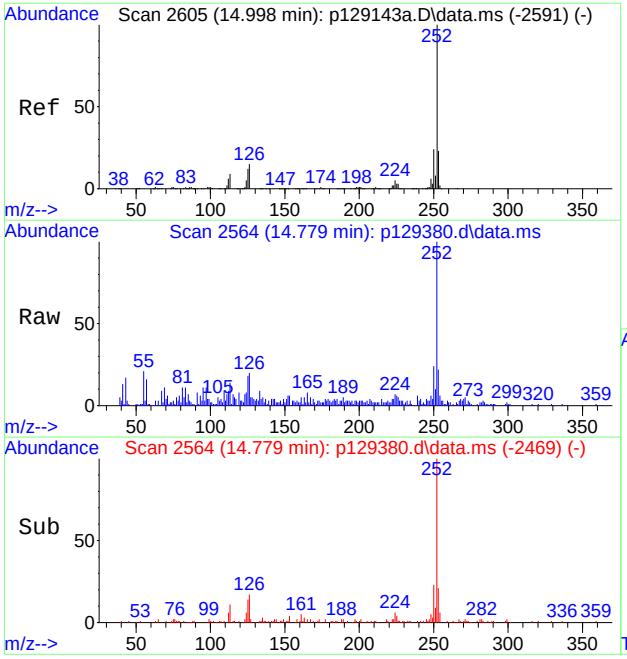


#94
Benzo[k]fluoranthene
Concen: 1.54 ppm
RT: 14.229 min Scan# 2461
Delta R.T. -0.005 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:252 Resp: 17371

Ion	Ratio	Lower	Upper
252	100		
253	15.6	0.0	51.7
125	3.5	0.0	40.5

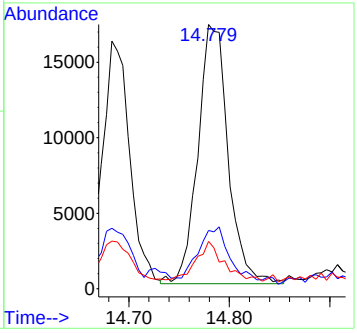


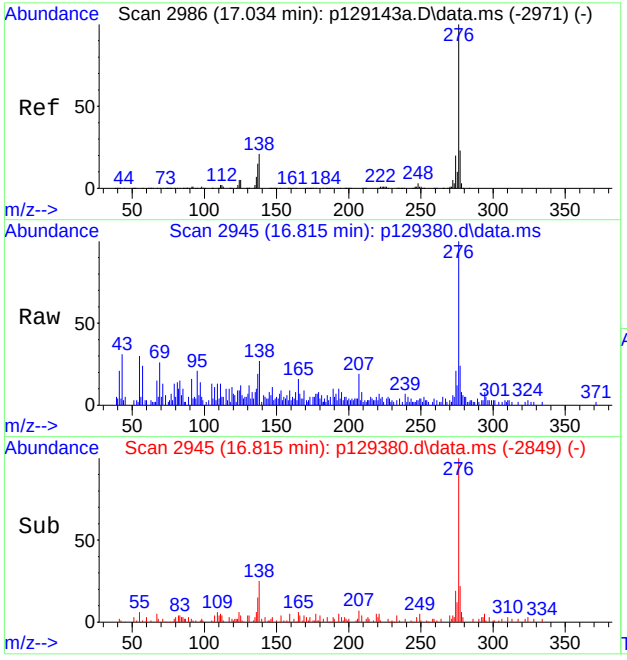


#95
Benzo[a]pyrene
Concen: 3.16 ppm
RT: 14.779 min Scan# 2564
Delta R.T. 0.005 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:252 Resp: 35908

Ion	Ratio	Lower	Upper
252	100		
253	18.2	0.0	51.6
125	14.8	0.0	43.5

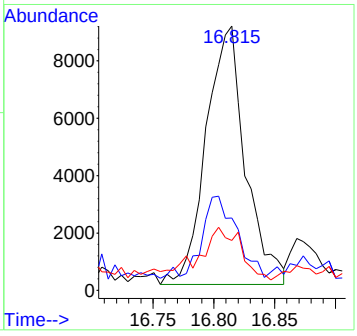




#96
Indeno[1,2,3-cd]pyrene
Concen: 1.95 ppm
RT: 16.815 min Scan# 2945
Delta R.T. 0.011 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:276 Resp: 20263

Ion	Ratio	Lower	Upper
276	100		
138	23.4	0.0	55.2
137	12.3	0.0	46.6



9.1.13

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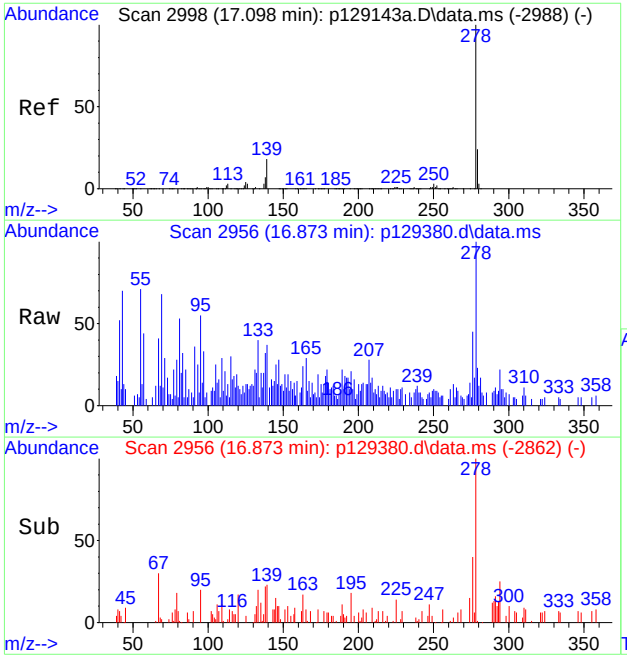
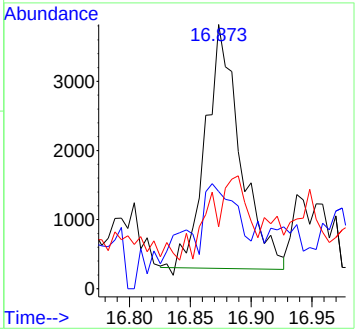
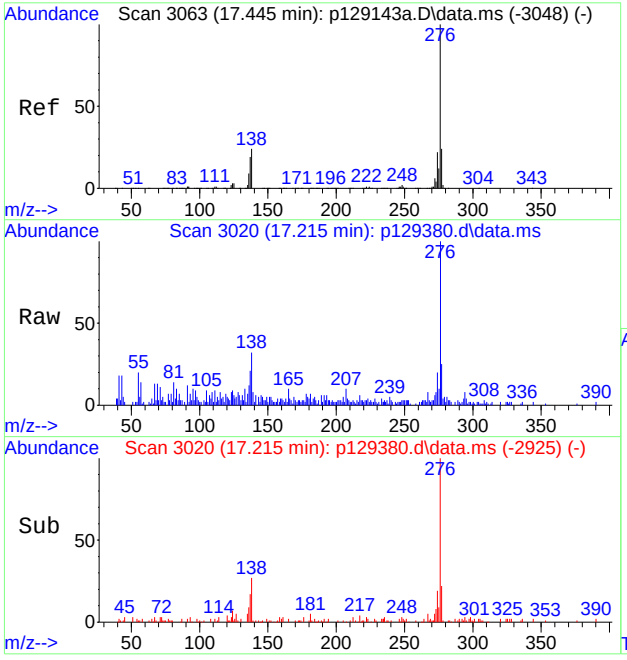


#98
Dibenz[a,h]anthracene
Concen: 0.66 ppm
RT: 16.873 min Scan# 2956
Delta R.T. 0.000 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:278 Resp: 6978

Ion	Ratio	Lower	Upper
278	100		
139	22.6	0.0	53.0
279	8.1	0.0	54.4

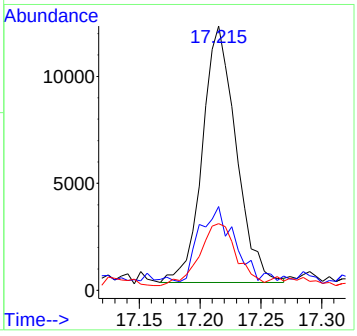




#100
Benzo[g,h,i]perylene
Concen: 2.20 ppm
RT: 17.215 min Scan# 3020
Delta R.T. 0.005 min
Lab File: p129380.d
Acq: 7 May 2019 7:12 pm

Tgt Ion:276 Resp: 23061

Ion	Ratio	Lower	Upper
276	100		
138	28.0	0.0	56.5
277	23.4	0.0	54.7



9.1.13

9

Manual Integration Approval Summary

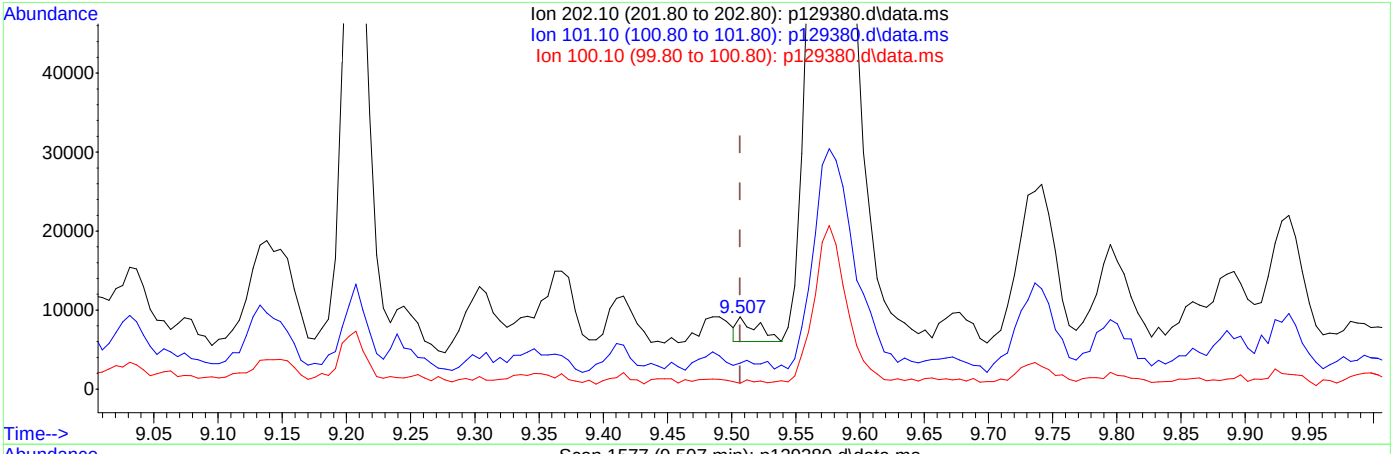
Sample Number:	JC87093-8	**Method:**	SW846 8270D
Lab FileID:	P129380.D	**Analyst approved:**	05/08/19 05:14 Michelle Co
Injection Time:	05/07/19 19:12	**Supervisor approved:**	05/13/19 19:46 Kristi Schollenberger

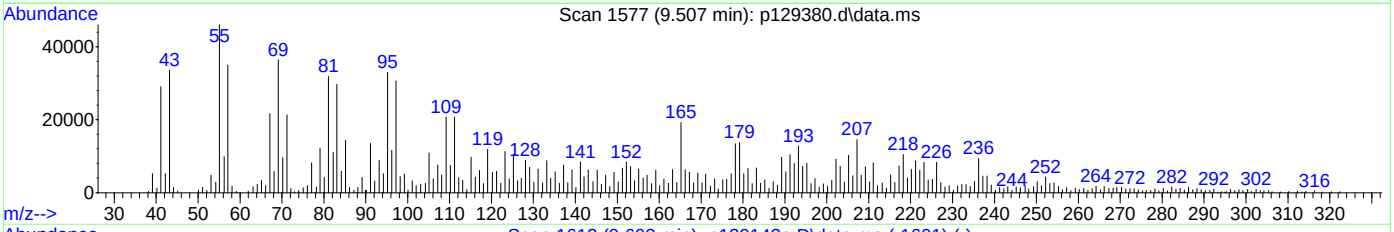
Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyrene	129-00-0		9.58	Poor instrument integration

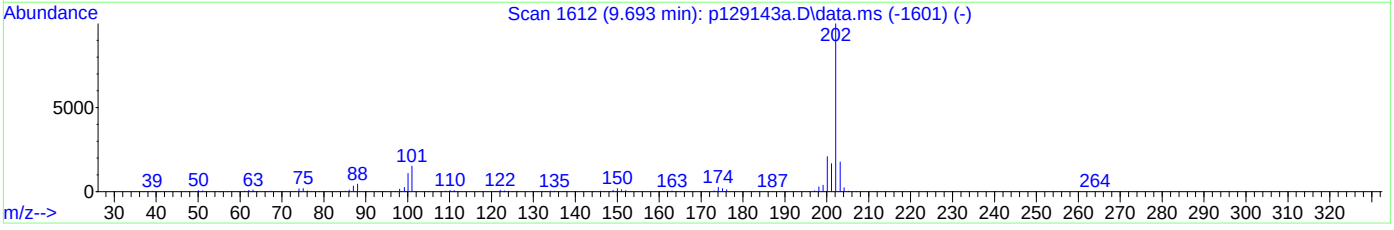
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129380.d
Acq On : 7 May 2019 7:12 pm
Operator : christc2
Sample : jc87093-8 Inst : MSVOAMSP
Misc : op20110,ep5856,31.6,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:25:22 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration







TIC: p129380.d\data.ms

(84) Pyrene (t)

9.507min (+0.000) 0.23ppm

response 3370

Ion	Exp%	Act%
202.10	100	100
101.10	16.90	11.30
100.10	12.70	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/13/19 19:46

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129412.d
Acq On : 8 May 2019 6:47 pm
Operator : angelar
Sample : jc87093-8 Inst : MSVOAMSP
Misc : op20110,ep5857,31.6,,,1,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:23:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.748	152	176296	40.00	ppm	0.00
24) Naphthalene-d8	4.688	136	539981	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	251428	40.00	ppm	0.01
69) Phenanthrene-d10	7.338	188	466780	40.00	ppm	0.02
83) Chrysene-d12	11.953	240	475372	40.00	ppm	0.01
91) Perylene-d12	14.881	264	488168	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	3.748	152	176296	40.00	ppm	0.00
103) Phenanthrene-d10b	7.338	188	466780	40.00	ppm	0.02
105) Chrysene-d12b	11.953	240	475372	40.00	ppm	0.01
107) Naphthalene-d8b	4.688	136	539981	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	251428	40.00	ppm	0.01
111) Chrysene-d12d	11.953	240	475372	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	34660	6.12	ppm	0.03
Spiked Amount 50.000			Recovery	=	12.24%	
8) Phenol-d5	3.635	99	46353	6.44	ppm	0.04
Spiked Amount 50.000			Recovery	=	12.88%	
25) Nitrobenzene-d5	4.175	82	46043	7.94	ppm	0.00
Spiked Amount 50.000			Recovery	=	15.88%	
51) 2-Fluorobiphenyl	5.473	172	66409	8.34	ppm	0.00
Spiked Amount 50.000			Recovery	=	16.68%	
73) 2,4,6-Tribromophenol	6.606	330	11211	7.22	ppm	0.01
Spiked Amount 50.000			Recovery	=	14.44%	
85) Terphenyl-d14	9.939	244	72986	6.78	ppm	0.00
Spiked Amount 50.000			Recovery	=	13.56%	
Target Compounds						Qvalue
18) Acetophenone	4.068	105	3531	0.41	ppm	91
38) Naphthalene	4.704	128	1585472	122.96	ppm	99
44) 2-Methylnaphthalene	5.201	141	93463	12.64	ppm	96
53) Biphenyl	5.537	154	41568	4.91	ppm	97
59) Acenaphthene	5.959	153	12162m	1.84	ppm	
62) Dibenzofuran	6.093	168	28701	2.86	ppm	98
66) Fluorene	6.371	166	25282	3.15	ppm	98
77) Phenanthrene	7.364	178	36946	3.04	ppm	85
81) Fluoranthene	9.127	202	20970	1.40	ppm	93
84) Pyrene	9.507	202	65870	4.00	ppm	93
87) Benzo[a]anthracene	11.937	228	16386	1.05	ppm	99
89) Chrysene	11.996	228	15956	1.16	ppm	97
93) Benzo[b]fluoranthene	14.149	252	12796m	0.86	ppm	
94) Benzo[k]fluoranthene	14.202	252	5069	0.40	ppm	89
95) Benzo[a]pyrene	14.758	252	9344	0.74	ppm	96
96) Indeno[1,2,3-cd]pyrene	16.777	276	5174	0.45	ppm	93
100) Benzo[g,h,i]perylene	17.189	276	5934	0.51	ppm	88

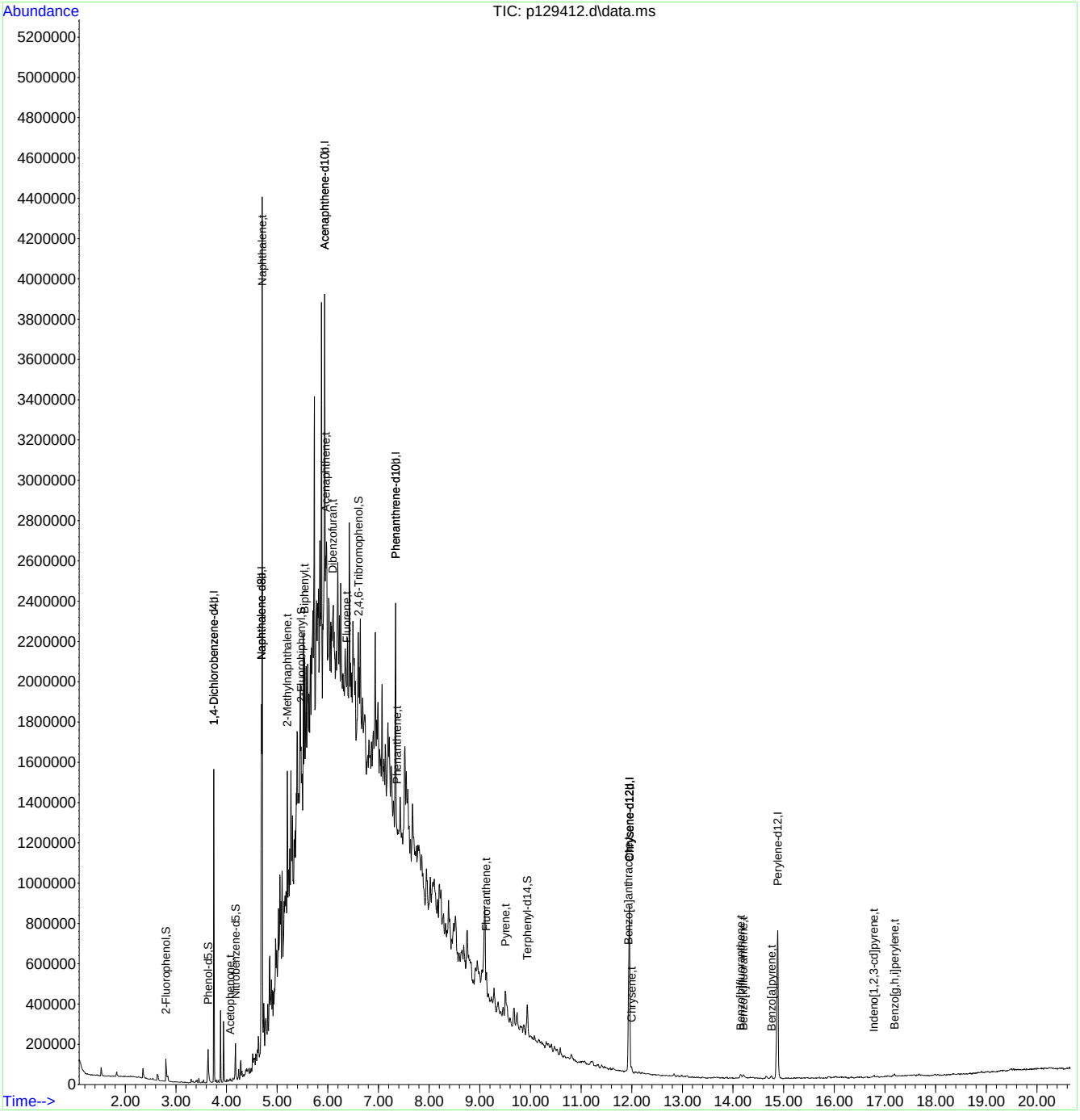
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.1.14 9

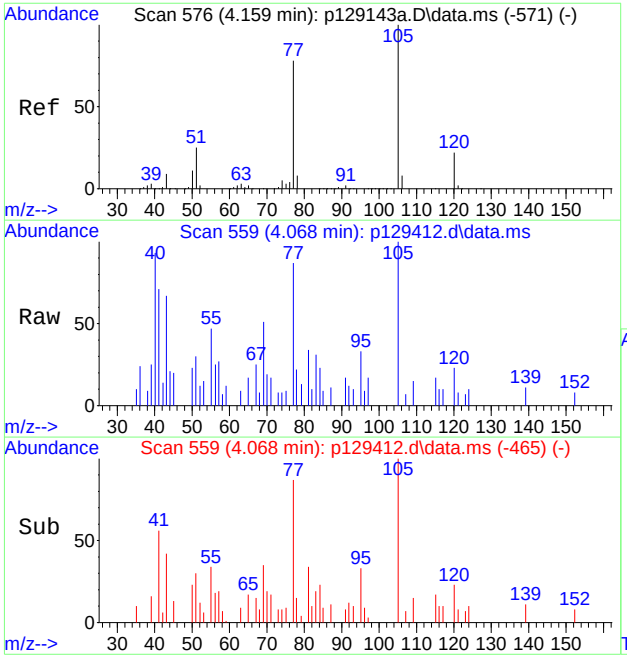
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129412.d
Acq On : 8 May 2019 6:47 pm
Operator : angelar
Sample : jc87093-8 Inst : MSVOAMSP
Misc : op20110,ep5857,31.6,,,1,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 22:23:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration



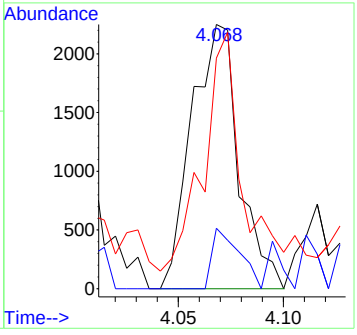
MP5844.M Wed May 08 23:21:52 2019 Page: 2

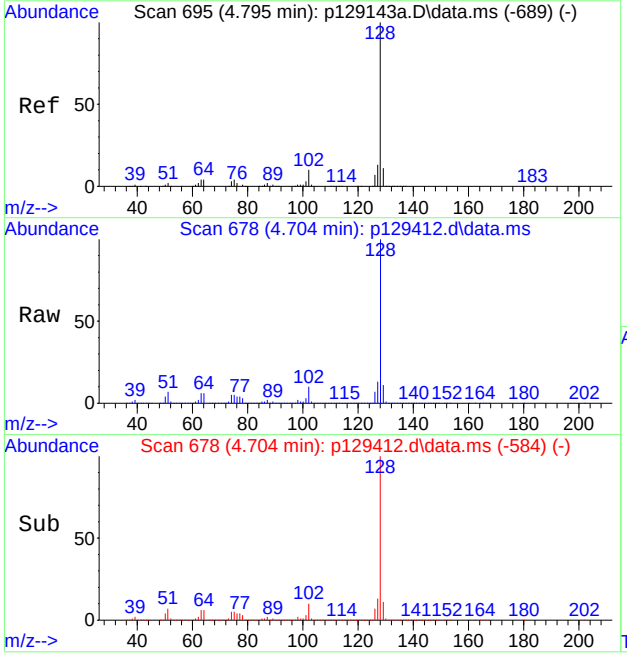


#18
Acetophenone
Concen: 0.41 ppm
RT: 4.068 min Scan# 559
Delta R.T. 0.000 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:105 Resp: 3531

Ion	Ratio	Lower	Upper
105	100		
120	19.3	0.0	50.5
77	77.0	56.6	116.6

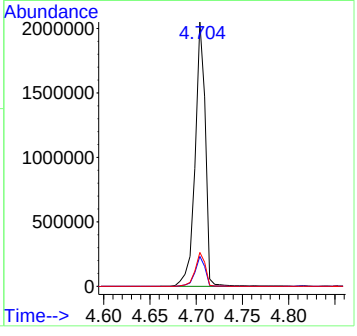




#38
Naphthalene
Concen: 122.96 ppm
RT: 4.704 min Scan# 678
Delta R.T. 0.000 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:128 Resp: 1585472

Ion	Ratio	Lower	Upper
128	100		
129	11.4	0.0	41.2
127	12.9	0.0	42.6



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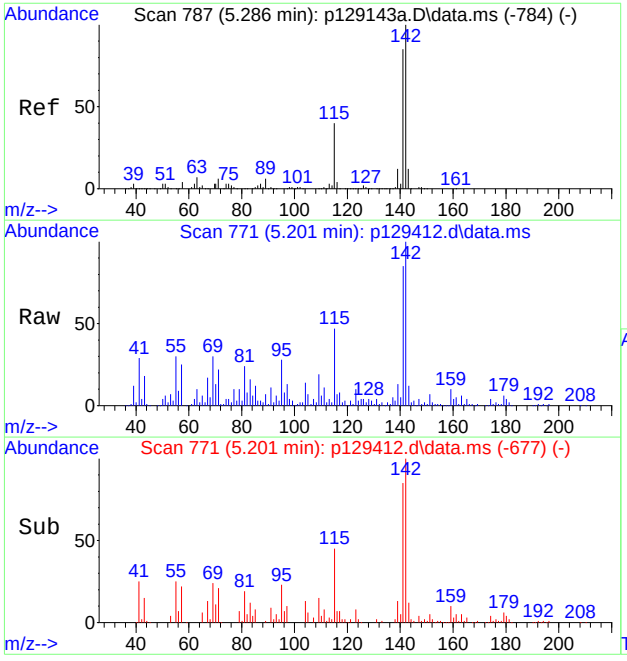
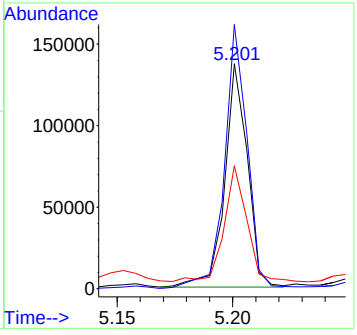
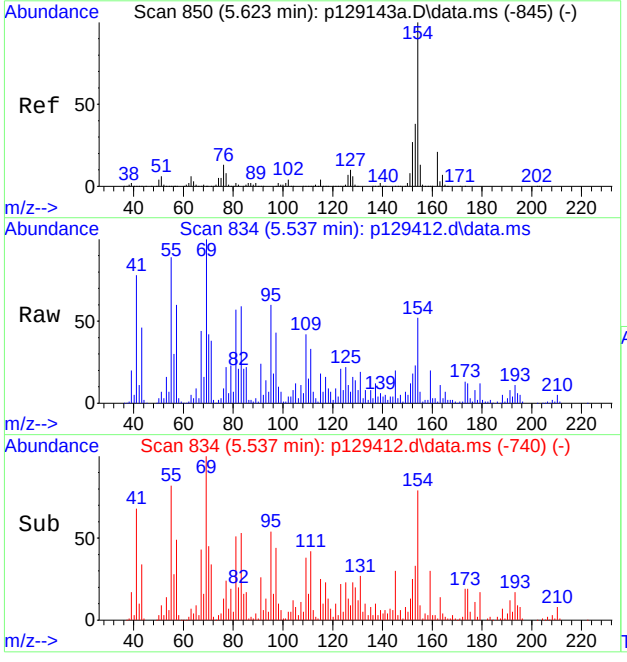


#44
2-Methylnaphthalene
Concen: 12.64 ppm
RT: 5.201 min Scan# 771
Delta R.T. 0.000 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:141 Resp: 93463

Ion	Ratio	Lower	Upper
141	100		
142	118.2	91.1	151.1
115	51.4	16.3	76.3

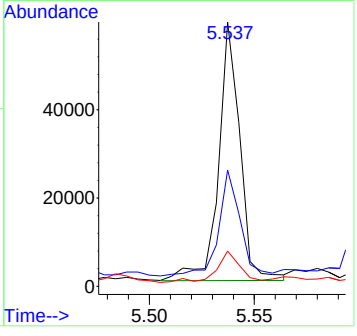




#53
Biphenyl
Concen: 4.91 ppm
RT: 5.537 min Scan# 834
Delta R.T. 0.000 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

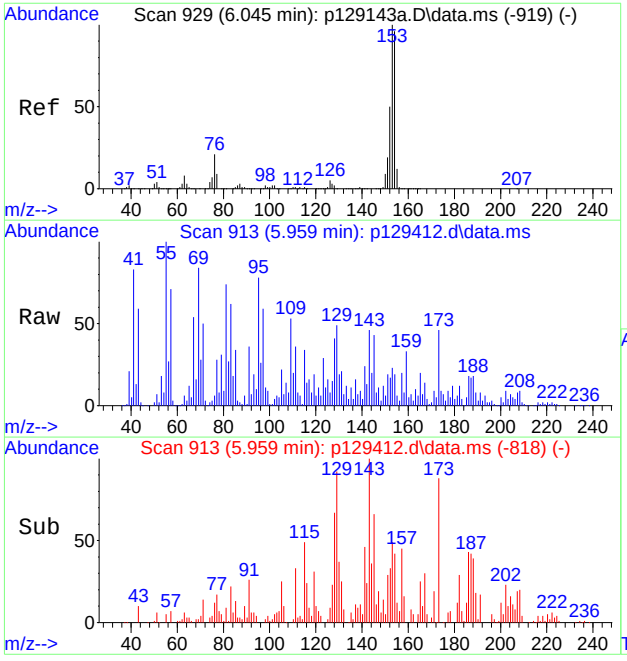
Tgt Ion:154 Resp: 41568

Ion	Ratio	Lower	Upper
154	100		
153	40.2	8.6	68.6
155	11.3	0.0	43.1



9.1.14

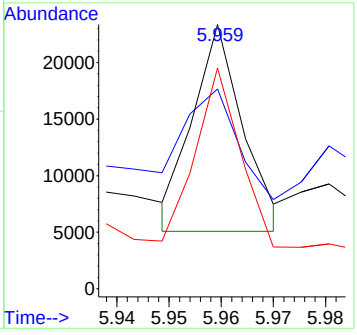
9

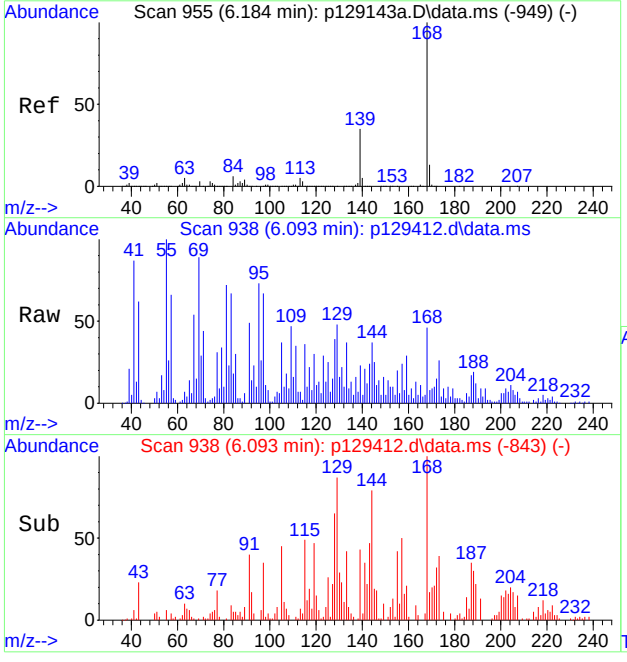


#59
Acenaphthene
Concen: 1.84 ppm m
RT: 5.959 min Scan# 913
Delta R.T. 0.006 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:153 Resp: 12162

Ion	Ratio	Lower	Upper
153	100		
152	75.6	18.5	78.5
154	83.6	58.8	118.8

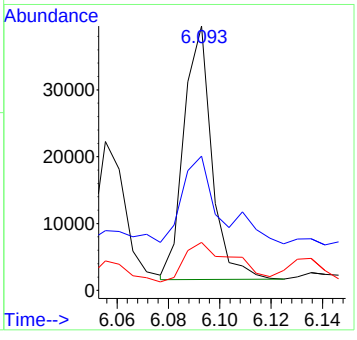




#62
Dibenzofuran
Concen: 2.86 ppm
RT: 6.093 min Scan# 938
Delta R.T. 0.006 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:168 Resp: 28701

Ion	Ratio	Lower	Upper
168	100		
139	34.6	6.4	66.4
169	13.4	0.0	43.3



9.1.14

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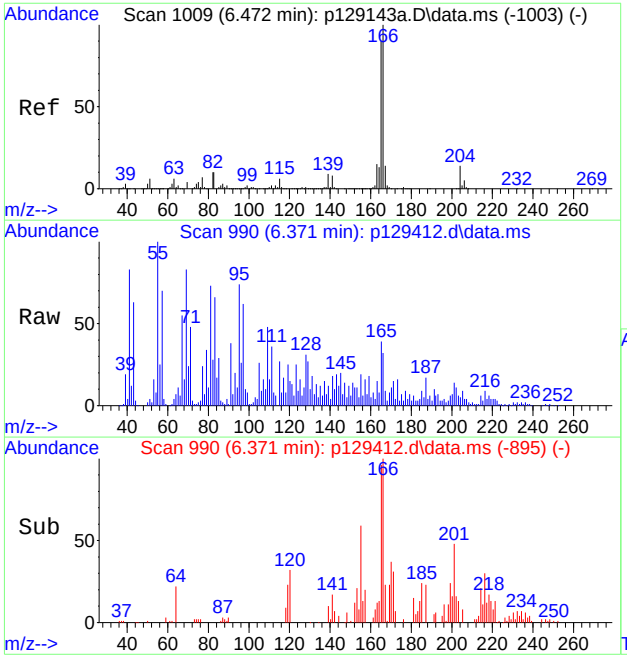
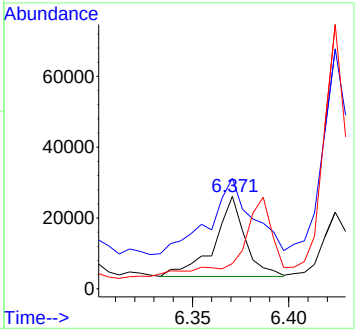
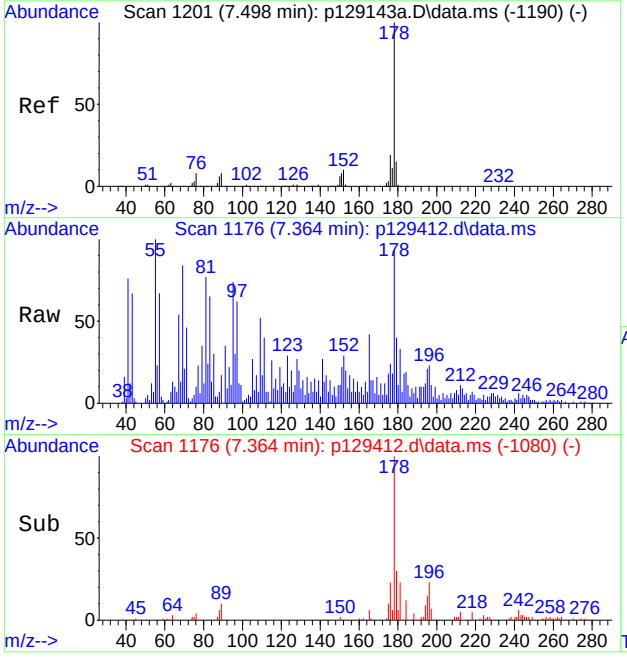


#66
Fluorene
Concen: 3.15 ppm
RT: 6.371 min Scan# 990
Delta R.T. 0.006 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:166 Resp: 25282

Ion	Ratio	Lower	Upper
166	100		
165	92.8	62.0	122.0
167	8.9	0.0	42.5

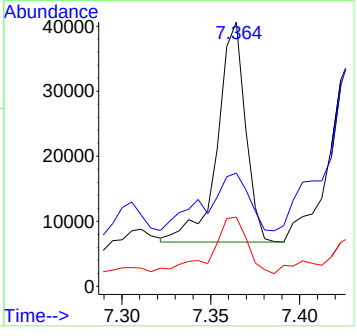




#77
Phenanthrene
Concen: 3.04 ppm
RT: 7.364 min Scan# 1176
Delta R.T. 0.011 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:178 Resp: 36946

Ion	Ratio	Lower	Upper
178	100		
179	25.2	0.0	45.3
176	22.7	0.0	49.2



9.1.14

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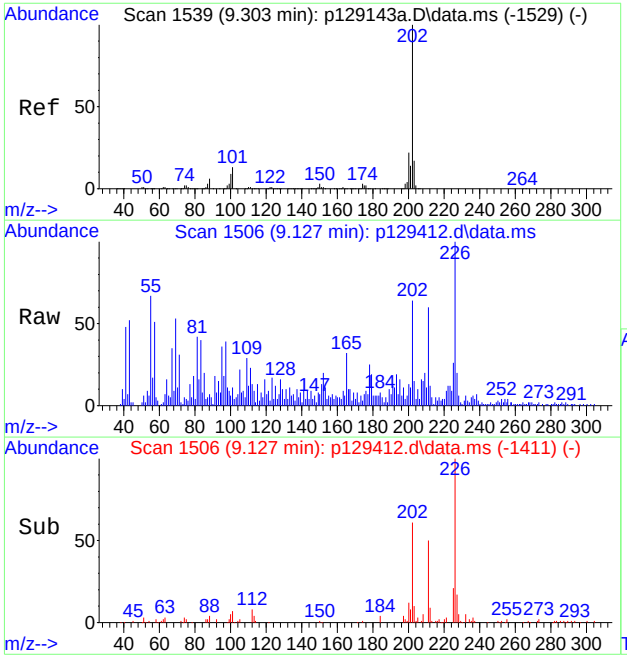
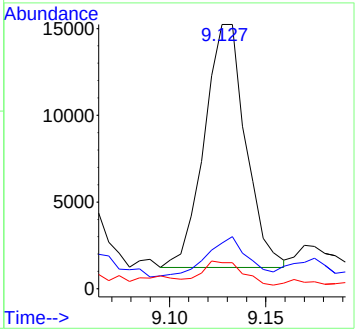
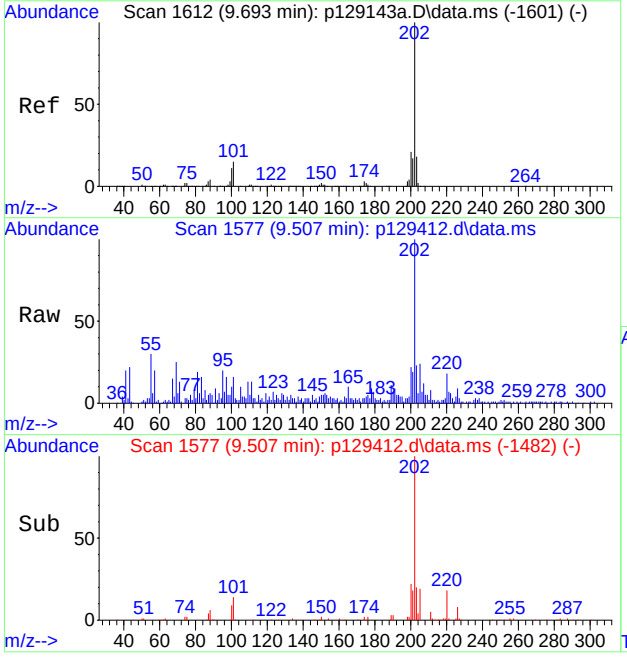


#81
Fluoranthene
Concen: 1.40 ppm
RT: 9.127 min Scan# 1506
Delta R.T. 0.006 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:202 Resp: 20970

Ion	Ratio	Lower	Upper
202	100		
101	11.7	0.0	44.1
100	7.0	0.0	40.0

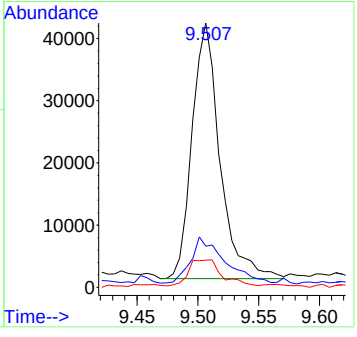




#84
Pyrene
Concen: 4.00 ppm
RT: 9.507 min Scan# 1577
Delta R.T. 0.006 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:202 Resp: 65870

Ion	Ratio	Lower	Upper
202	100		
101	13.6	0.0	46.5
100	9.9	0.0	42.4



9.1.14

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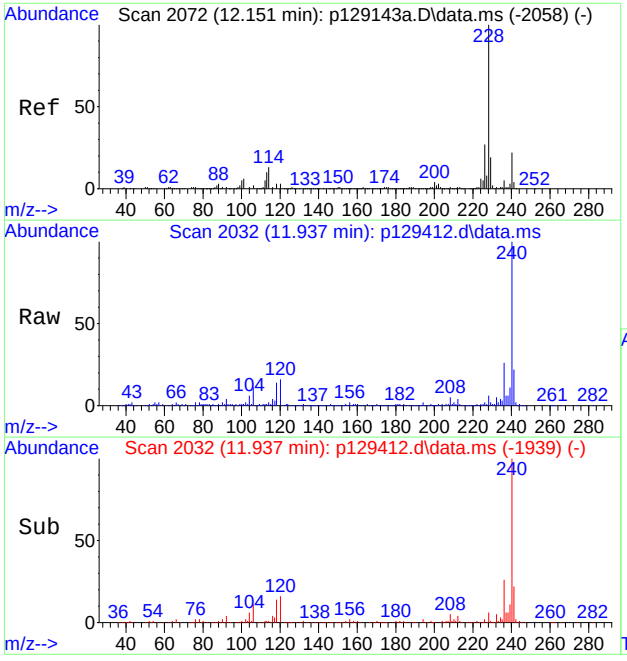
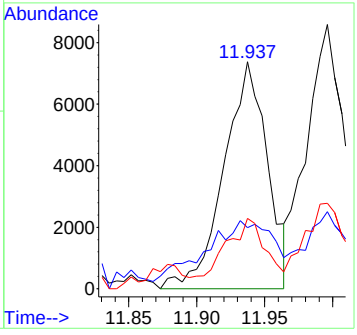
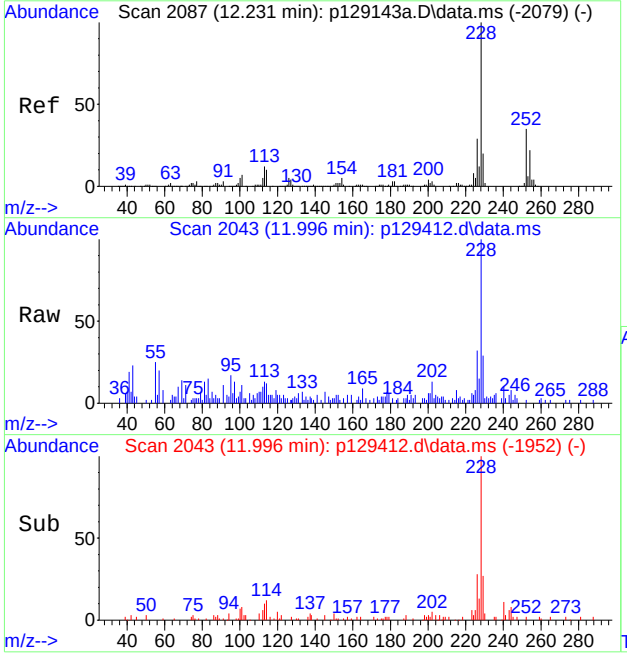


#87
Benzo[a]anthracene
Concen: 1.05 ppm
RT: 11.937 min Scan# 2032
Delta R.T. -0.005 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:228 Resp: 16386

Ion	Ratio	Lower	Upper
228	100		
229	20.1	0.0	49.8
226	27.4	0.0	57.1

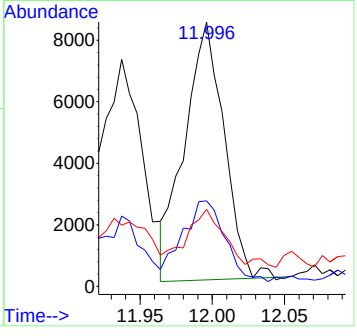


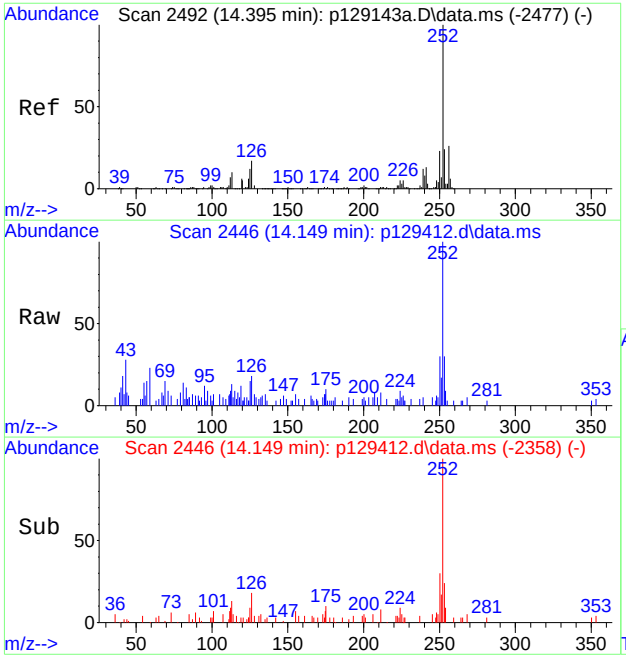


#89
Chrysene
Concen: 1.16 ppm
RT: 11.996 min Scan# 2043
Delta R.T. -0.016 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:228 Resp: 15956

Ion	Ratio	Lower	Upper
228	100		
226	32.2	0.1	60.1
229	20.3	0.0	49.6

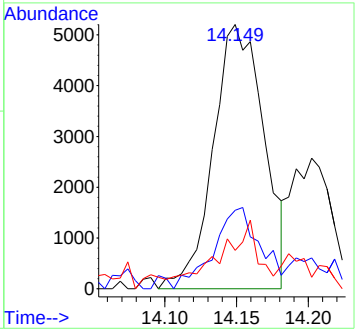


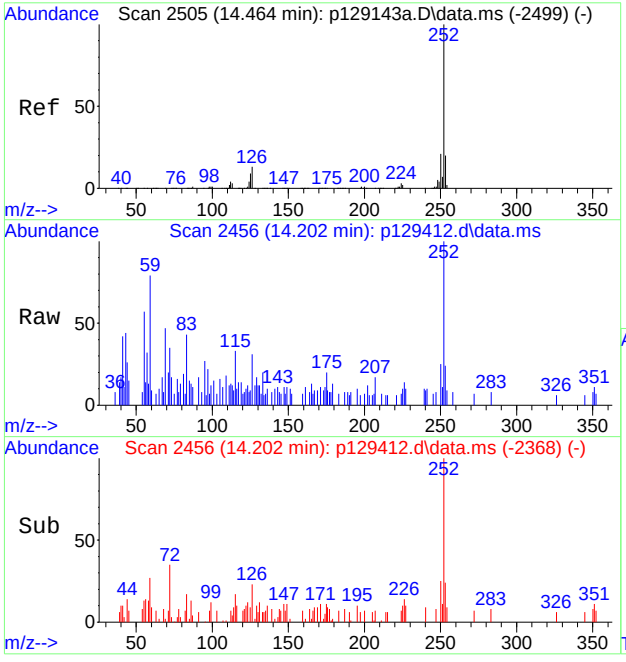


#93
Benzo[b]fluoranthene
Concen: 0.86 ppm m
RT: 14.149 min Scan# 2446
Delta R.T. -0.032 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:252 Resp: 12796

Ion	Ratio	Lower	Upper
252	100		
253	29.7	0.0	53.1
125	14.6	0.0	42.5

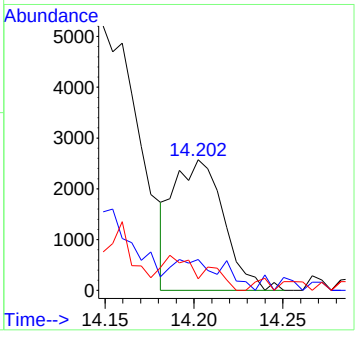




#94
Benzo[k]fluoranthene
Concen: 0.40 ppm
RT: 14.202 min Scan# 2456
Delta R.T. -0.032 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:252 Resp: 5069

Ion	Ratio	Lower	Upper
252	100		
253	20.4	0.0	49.8
125	0.0	0.0	40.7



9.1.14

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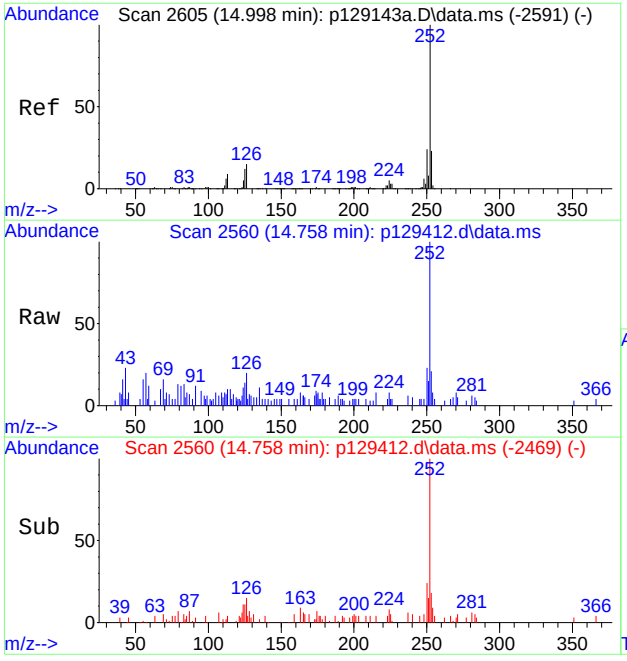
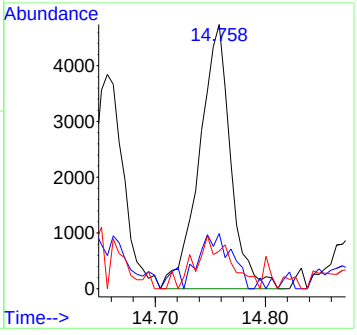
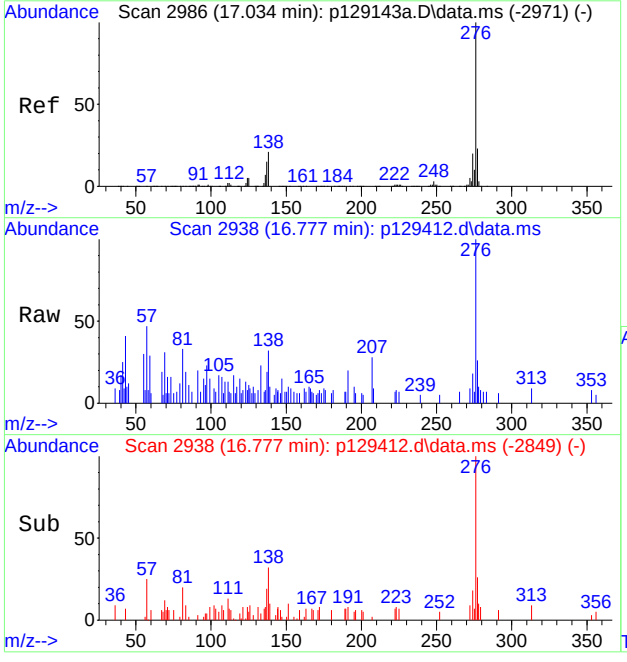


#95
Benzo[a]pyrene
Concen: 0.74 ppm
RT: 14.758 min Scan# 2560
Delta R.T. -0.016 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:252 Resp: 9344

Ion	Ratio	Lower	Upper
252	100		
253	19.1	0.0	51.7
125	11.9	0.0	42.2

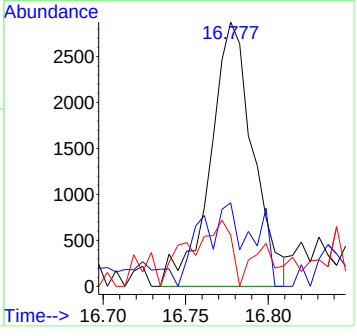




#96
Indeno[1,2,3-cd]pyrene
Concen: 0.45 ppm
RT: 16.777 min Scan# 2938
Delta R.T. -0.027 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:276 Resp: 5174

Ion	Ratio	Lower	Upper
276	100		
138	30.0	0.0	54.3
137	16.4	0.0	47.2



9.1.14

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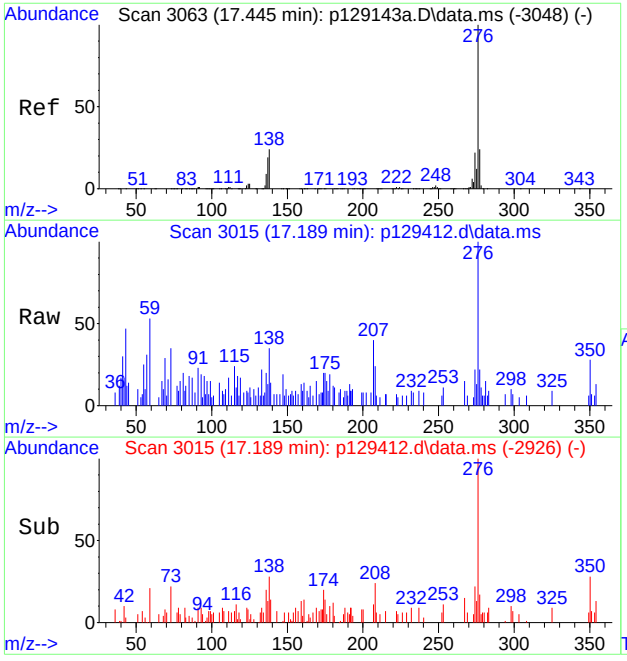
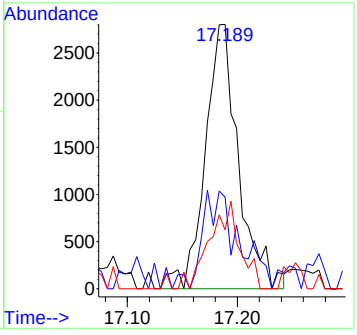


#100
Benzo[g,h,i]perylene
Concen: 0.51 ppm
RT: 17.189 min Scan# 3015
Delta R.T. -0.027 min
Lab File: p129412.d
Acq: 8 May 2019 6:47 pm

Tgt Ion:276 Resp: 5934

Ion	Ratio	Lower	Upper
276	100		
138	32.6	0.0	55.5
277	18.6	0.0	53.2



9.1.14

9

Manual Integration Approval Summary

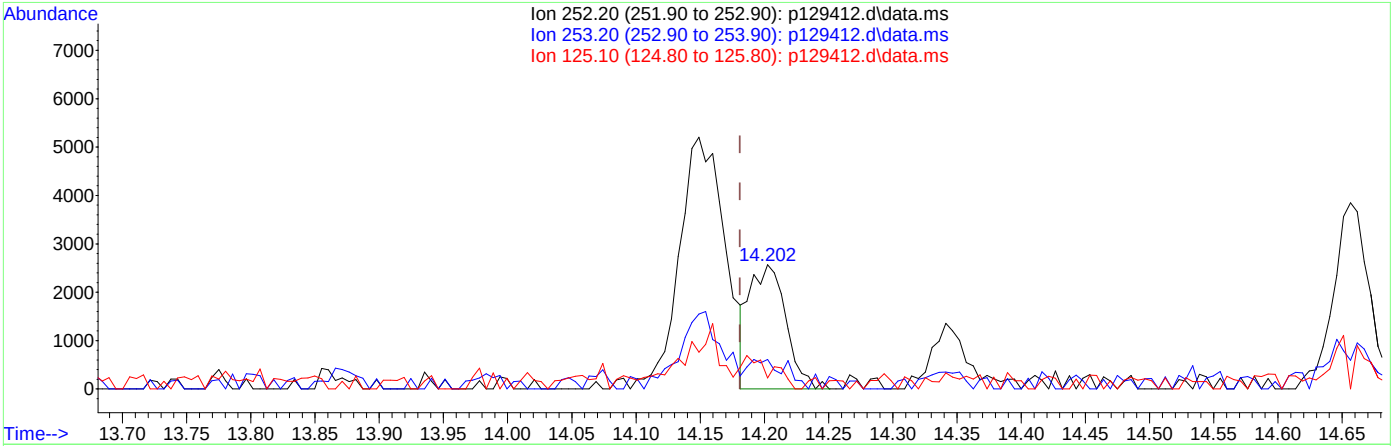
Sample Number:	JC87093-8	**Method:**	SW846 8270D
Lab FileID:	P129412.D	**Analyst approved:**	05/08/19 23:09 Michelle Co
Injection Time:	05/08/19 18:47	**Supervisor approved:**	05/13/19 19:46 Kristi Schollenberger

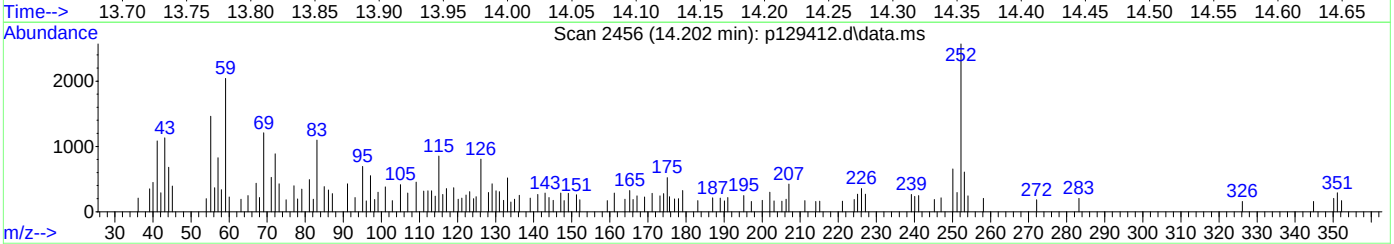
Parameter	CAS	Sig#	R.T. (min.)	Reason
Acenaphthene	83-32-9		5.96	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		14.15	Poor instrument integration

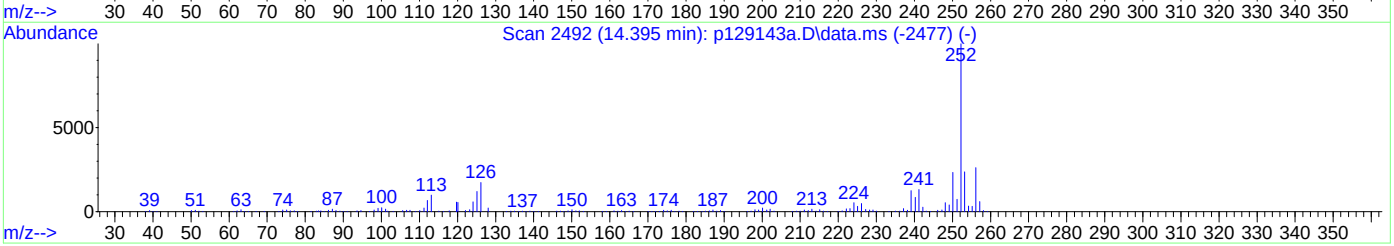
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129412.d
Acq On    :  8 May 2019   6:47 pm
Operator  : angelar
Sample    : jc87093-8                                  Inst     : MSVOAMSP
Misc      : op20110,ep5857,31.6,,,1,5
ALS Vial  : 21   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 21:41:51 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration
```







TIC: p129412.d\data.ms

(93) Benzo[b]fluoranthene (t)

14.202min (+0.022) 0.34ppm

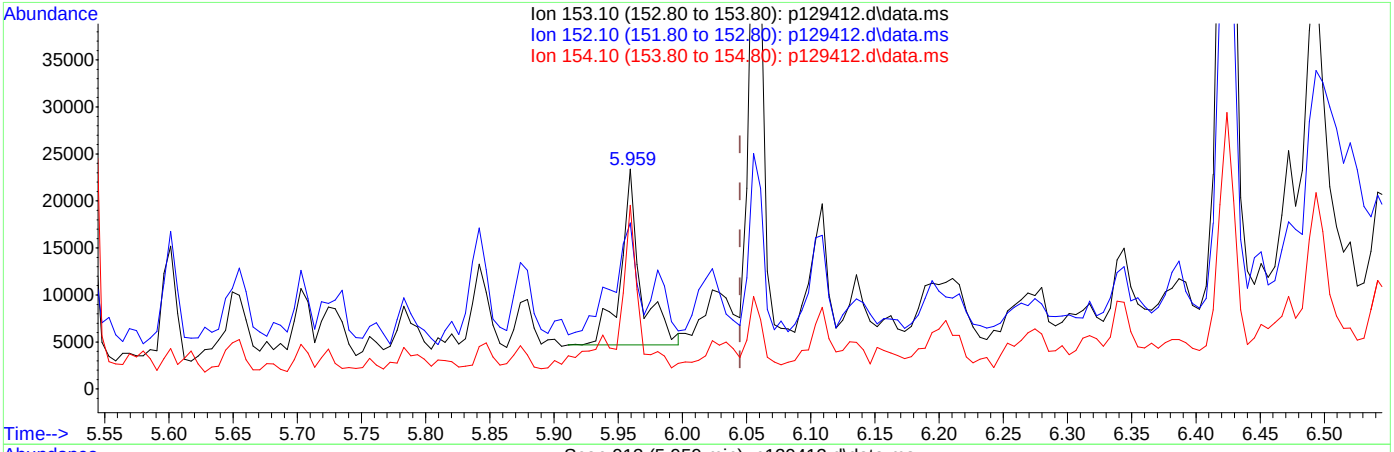
response 5069

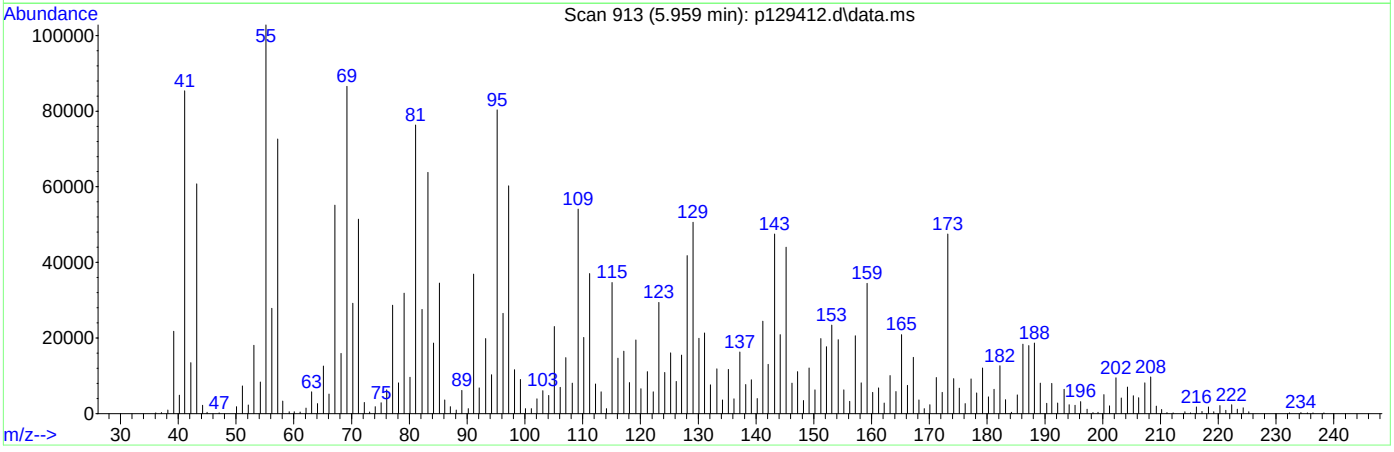
Ion	Exp%	Act%
252.20	100	100
253.20	23.10	20.42
125.10	12.50	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : X:\data validator\michellc\ep5857\
Data File : p129412.d
Acq On : 8 May 2019 6:47 pm
Operator : angelar
Sample : jc87093-8 Inst : MSVOAMSP
Misc : op20110,ep5857,31.6,,,1,5
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 19:07:53 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 16:30:33 2019
Response via : Initial Calibration





TIC: p129412.d\data.ms

(59) Acenaphthene (t)

5.959min (-0.085) 3.09ppm

response 20413

Ion	Exp%	Act%
153.10	100	100
152.10	49.60	64.74
154.10	96.30	90.80
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\aimeel\ep5858\
Data File : p129426.d
Acq On : 9 May 2019 12:32 pm
Operator : angelar
Sample : jc87093-8
Misc : op20110,ep5858,31.6,,,1,25
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 19:50:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 15:26:31 2019
Response via : Initial Calibration

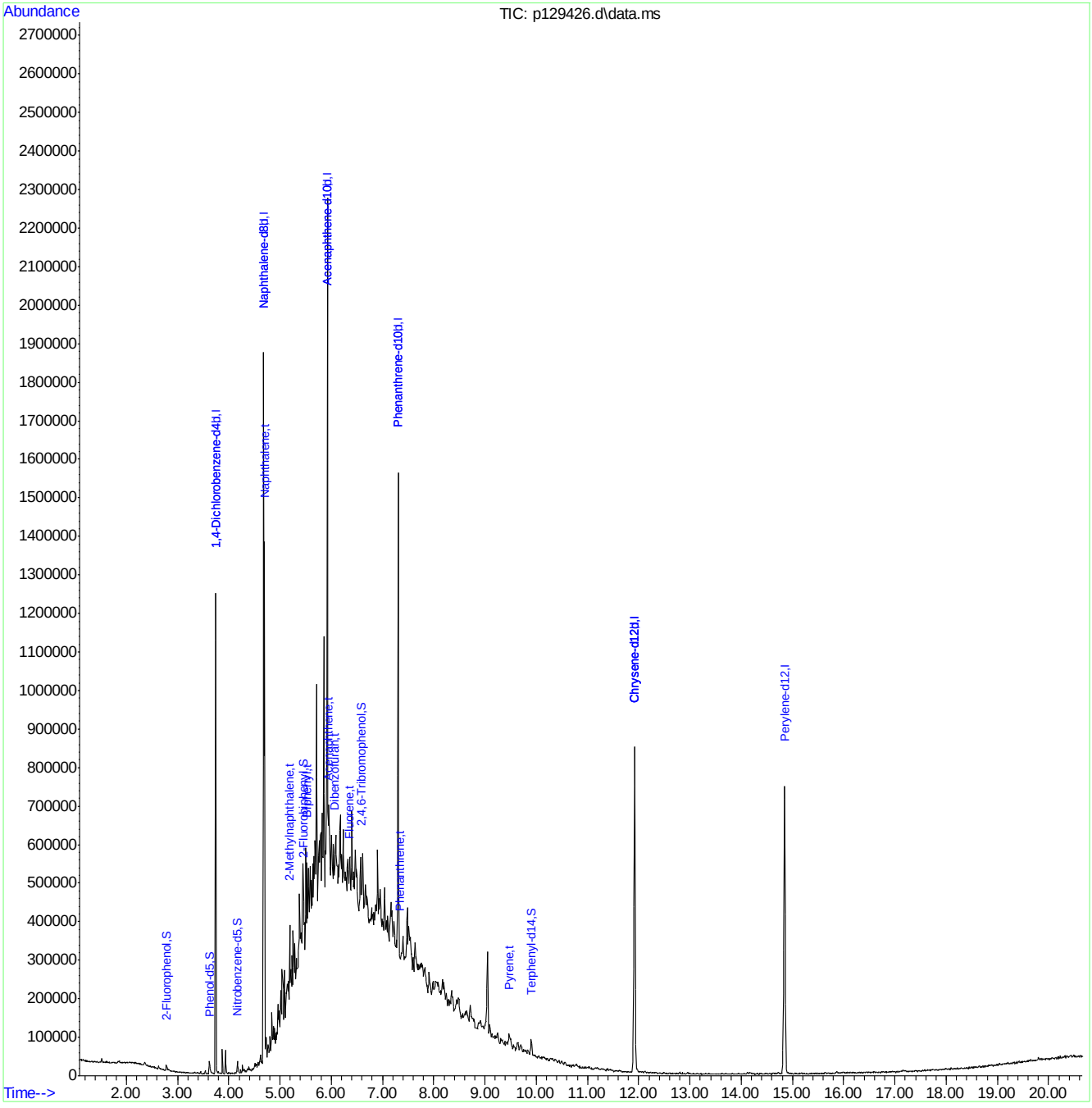
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.742	152	156078	40.00	ppm	0.00
24) Naphthalene-d8	4.677	136	521086	40.00	ppm	0.00
47) Acenaphthene-d10	5.922	164	252146	40.00	ppm	0.00
69) Phenanthrene-d10	7.306	188	481361	40.00	ppm	0.00
83) Chrysene-d12	11.921	240	502106	40.00	ppm	-0.02
91) Perylene-d12	14.849	264	513059	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4b	3.742	152	156078	40.00	ppm	0.00
103) Phenanthrene-d10b	7.306	188	481361	40.00	ppm	0.00
105) Chrysene-d12b	11.921	240	502106	40.00	ppm	-0.02
107) Naphthalene-d8b	4.677	136	521086	40.00	ppm	0.00
109) Acenaphthene-d10b	5.922	164	252146	40.00	ppm	0.00
111) Chrysene-d12d	11.921	240	502106	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.781	112	6463	1.29	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.58%	
8) Phenol-d5	3.619	99	8864	1.39	ppm	0.06
Spiked Amount 50.000			Recovery	=	2.78%	
25) Nitrobenzene-d5	4.170	82	9290	1.66	ppm	-0.01
Spiked Amount 50.000			Recovery	=	3.32%	
51) 2-Fluorobiphenyl	5.457	172	14473	1.81	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.62%	
73) 2,4,6-Tribromophenol	6.579	330	2196	1.37	ppm	0.01
Spiked Amount 50.000			Recovery	=	2.74%	
85) Terphenyl-d14	9.902	244	17260	1.52	ppm	-0.03
Spiked Amount 50.000			Recovery	=	3.04%	
Target Compounds						Qvalue
38) Naphthalene	4.693	128	372706	29.95	ppm	99
44) 2-Methylnaphthalene	5.190	141	21493	3.01	ppm	91
53) Biphenyl	5.521	154	8546	1.01	ppm	91
59) Acenaphthene	5.943	153	4490	0.68	ppm	85
62) Dibenzofuran	6.071	168	6456	0.64	ppm	94
66) Fluorene	6.349	166	5161	0.64	ppm	97
77) Phenanthrene	7.332	178	8768	0.70	ppm	75
84) Pyrene	9.469	202	16277	0.94	ppm	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

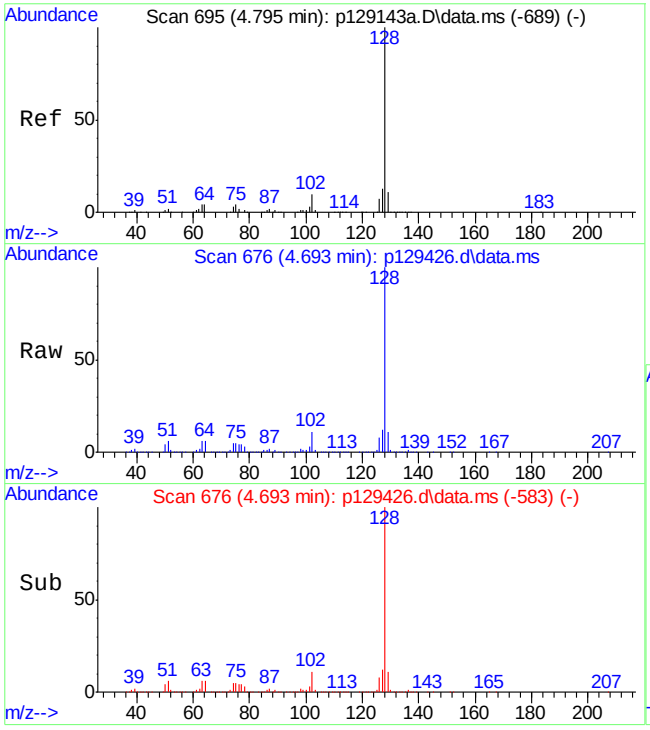
Quantitation Report (QT Reviewed)

Data Path : Z:\svoa-gcms\completed\05_may\05-10-2019\aimeel\ep5858\
Data File : p129426.d
Acq On : 9 May 2019 12:32 pm
Operator : angelar
Sample : jc87093-8
Misc : op20110,ep5858,31.6,,,1,25
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 13 19:50:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 15:26:31 2019
Response via : Initial Calibration



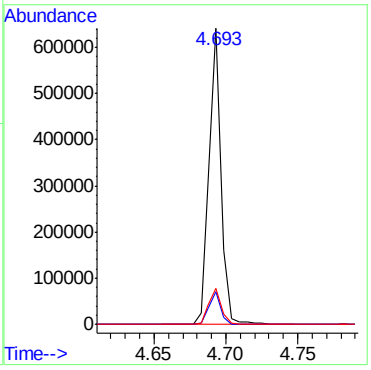
MP5844.M Mon May 13 19:51:03 2019 MANAGER Page: 2

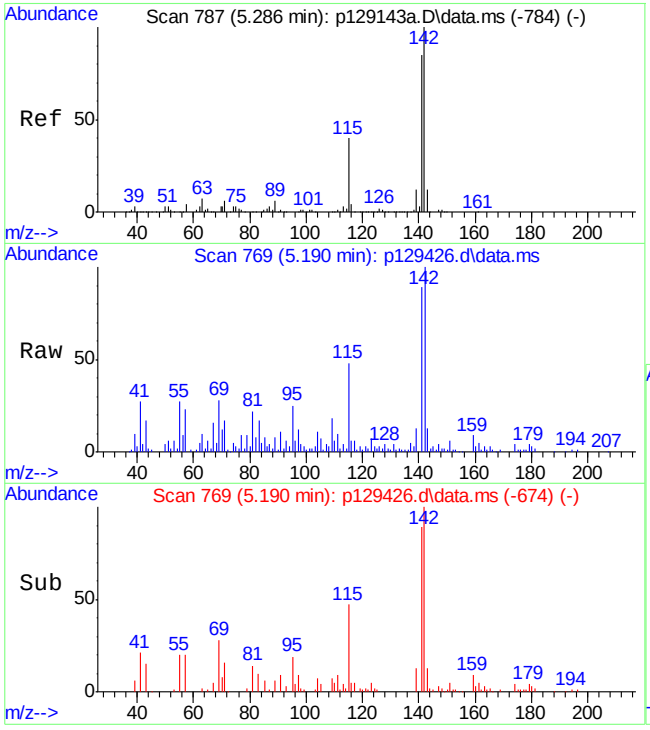


#38
Naphthalene
Concen: 29.95 ppm
RT: 4.693 min Scan# 676
Delta R.T. -0.005 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:128 Resp: 372706

Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	40.7
127	12.3	0.0	42.8

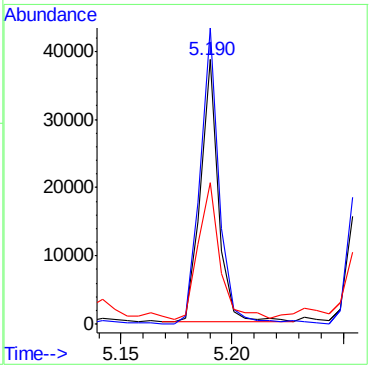


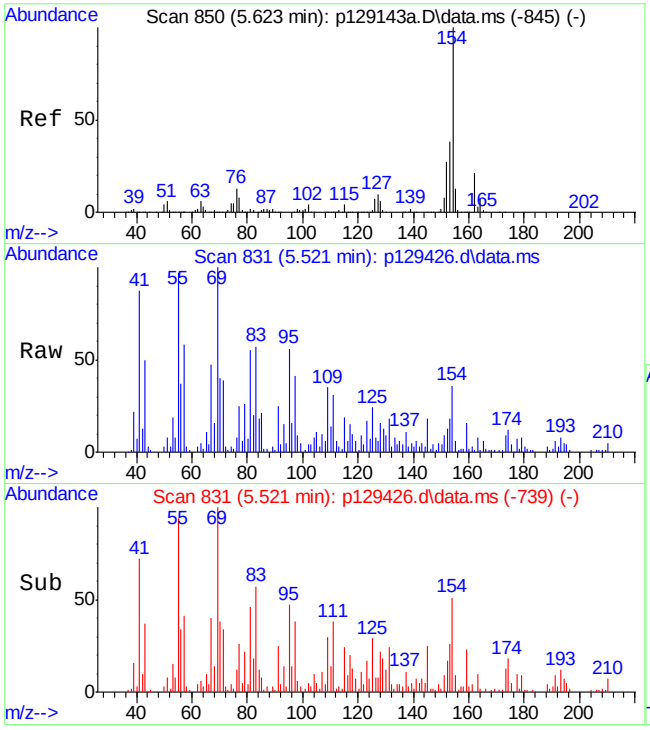


#44
2-Methylnaphthalene
Concen: 3.01 ppm
RT: 5.190 min Scan# 769
Delta R.T. 0.010 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:141 Resp: 21493

Ion	Ratio	Lower	Upper
141	100		
142	112.2	95.6	155.6
115	50.4	20.0	80.0

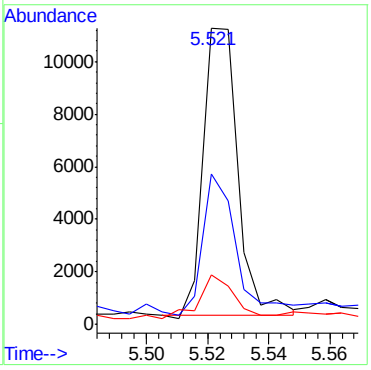


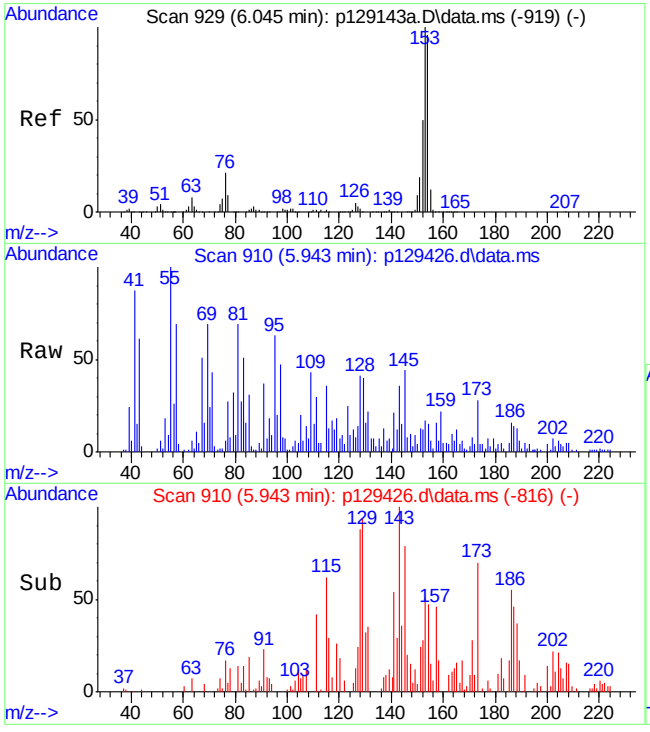


#53
Biphenyl
Concen: 1.01 ppm
RT: 5.521 min Scan# 831
Delta R.T. -0.007 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:154 Resp: 8546

Ion	Ratio	Lower	Upper
154	100		
153	47.1	10.2	70.2
155	14.2	0.0	43.3

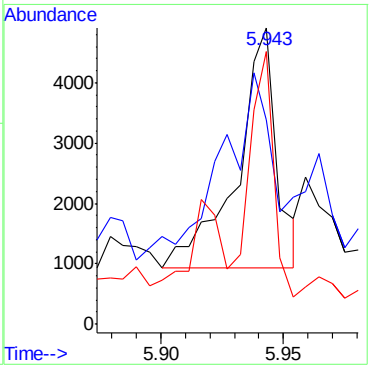


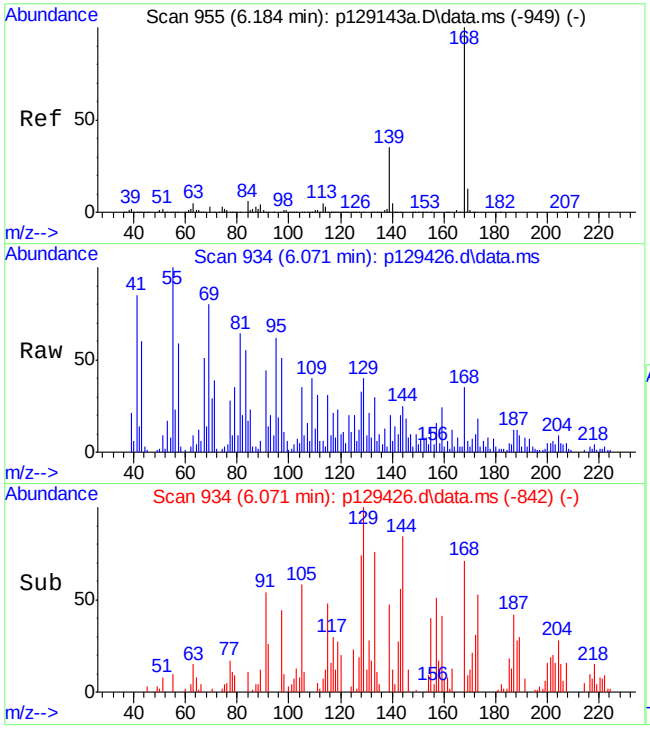


#59
Acenaphthene
Concen: 0.68 ppm
RT: 5.943 min Scan# 910
Delta R.T. 0.000 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:153 Resp: 4490

Ion	Ratio	Lower	Upper
153	100		
152	45.2	19.7	79.7
154	109.9	61.3	121.3

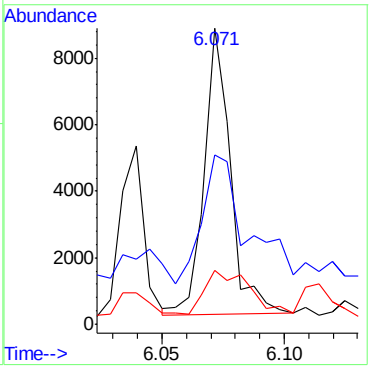


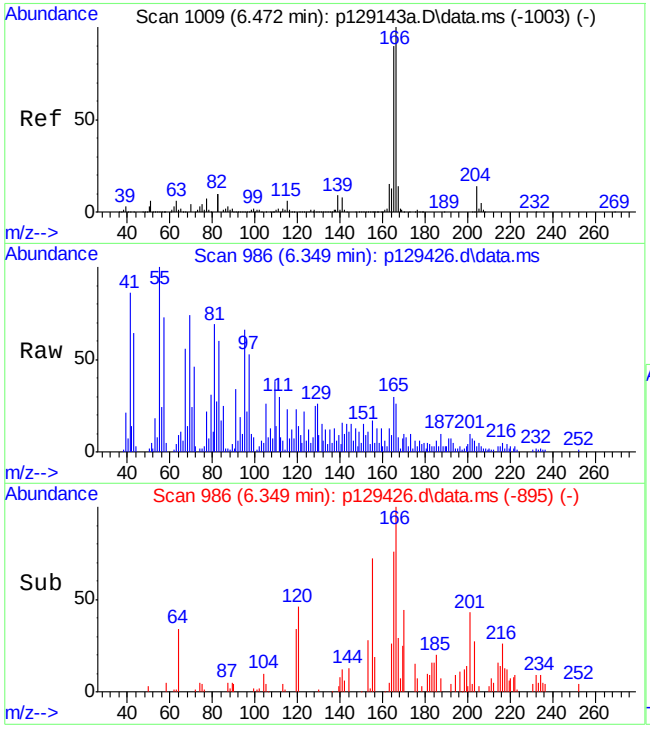


#62
Dibenzofuran
Concen: 0.64 ppm
RT: 6.071 min Scan# 934
Delta R.T. -0.008 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:168 Resp: 6456

Ion	Ratio	Lower	Upper
168	100		
139	40.5	6.5	66.5
169	15.1	0.0	43.5

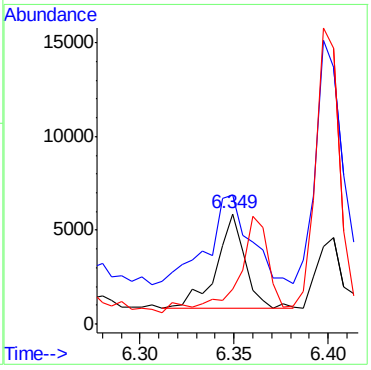




#66
Fluorene
Concen: 0.64 ppm
RT: 6.349 min Scan# 986
Delta R.T. -0.014 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

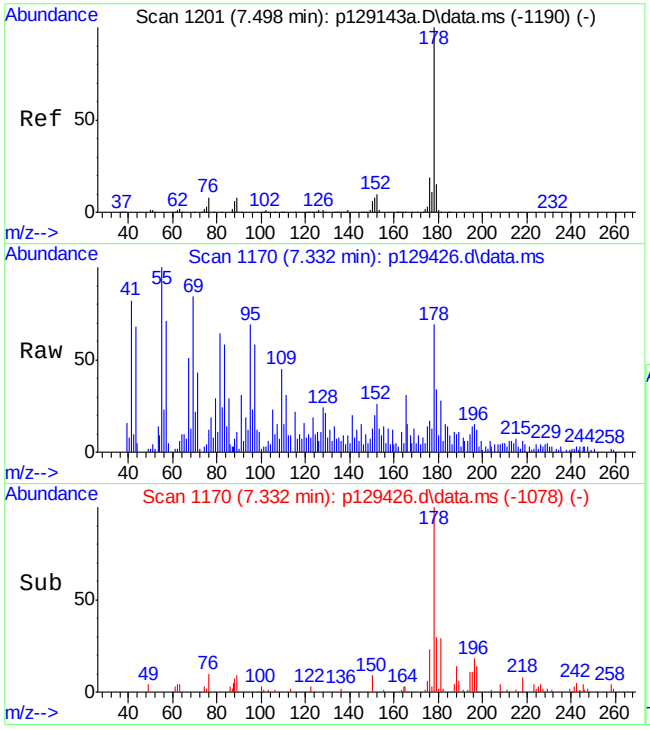
Tgt Ion:166 Resp: 5161

Ion	Ratio	Lower	Upper
166	100		
165	93.8	63.7	123.7
167	21.4	0.0	43.1



9.1.15

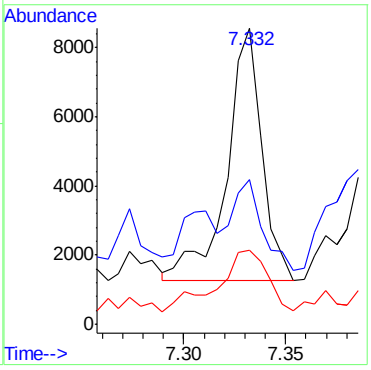
9

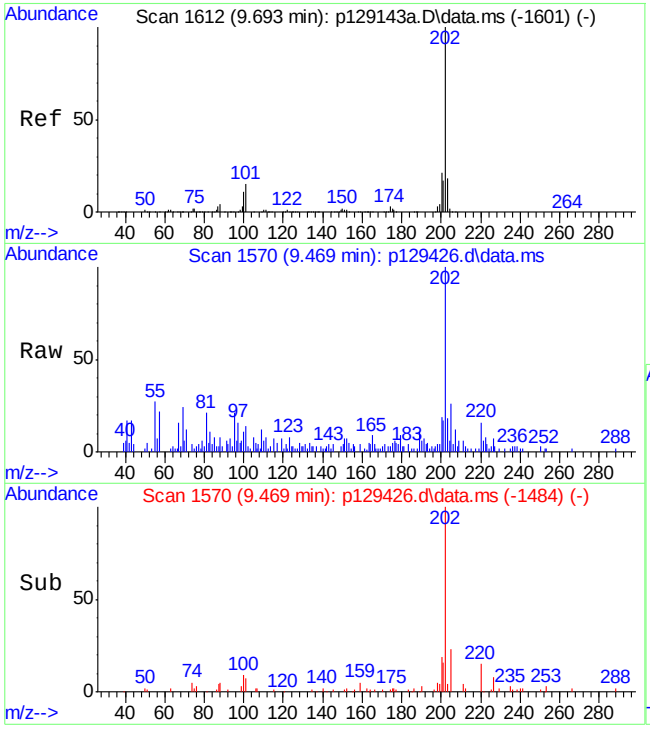


#77
Phenanthrene
Concen: 0.70 ppm
RT: 7.332 min Scan# 1170
Delta R.T. -0.010 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:178 Resp: 8768

Ion	Ratio	Lower	Upper
178	100		
179	34.1	0.0	45.3
176	24.7	0.0	50.0

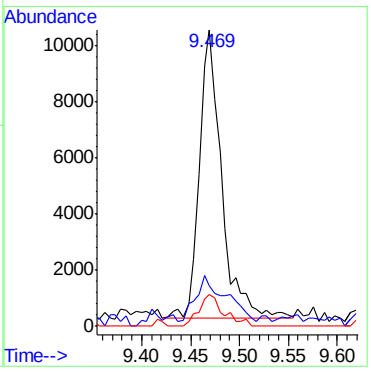




#84
Pyrene
Concen: 0.94 ppm
RT: 9.469 min Scan# 1570
Delta R.T. -0.041 min
Lab File: p129426.d
Acq: 9 May 2019 12:32 pm

Tgt Ion:202 Resp: 16277

Ion	Ratio	Lower	Upper
202	100		
101	11.4	0.0	46.8
100	10.4	0.0	43.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129378.d
Acq On : 7 May 2019 6:17 pm
Operator : christc2
Sample : jc87093-9 Inst : MSVOAMSP
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:15:02 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	177461	40.00	ppm	0.00
24) Naphthalene-d8	4.699	136	595967	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	304572	40.00	ppm	0.00
69) Phenanthrene-d10	7.332	188	500461	40.00	ppm	0.00
83) Chrysene-d12	11.969	240	459532	40.00	ppm	0.01
91) Perylene-d12	14.902	264	448510	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4b	3.764	152	177461	40.00	ppm	0.00
103) Phenanthrene-d10b	7.332	188	500461	40.00	ppm	0.00
105) Chrysene-d12b	11.969	240	459532	40.00	ppm	0.01
107) Naphthalene-d8b	4.699	136	595967	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	304572	40.00	ppm	0.00
111) Chrysene-d12d	11.969	240	459532	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	209321	36.71	ppm	0.00
Spiked Amount 50.000			Recovery = 73.42%			
8) Phenol-d5	3.625	99	264339	36.51	ppm	0.00
Spiked Amount 50.000			Recovery = 73.02%			
25) Nitrobenzene-d5	4.186	82	255054	39.84	ppm	0.00
Spiked Amount 50.000			Recovery = 79.68%			
51) 2-Fluorobiphenyl	5.478	172	415923	43.10	ppm	0.00
Spiked Amount 50.000			Recovery = 86.20%			
73) 2,4,6-Tribromophenol	6.600	330	63529	38.15	ppm	0.00
Spiked Amount 50.000			Recovery = 76.30%			
85) Terphenyl-d14	9.955	244	411603	39.53	ppm	0.01
Spiked Amount 50.000			Recovery = 79.06%			

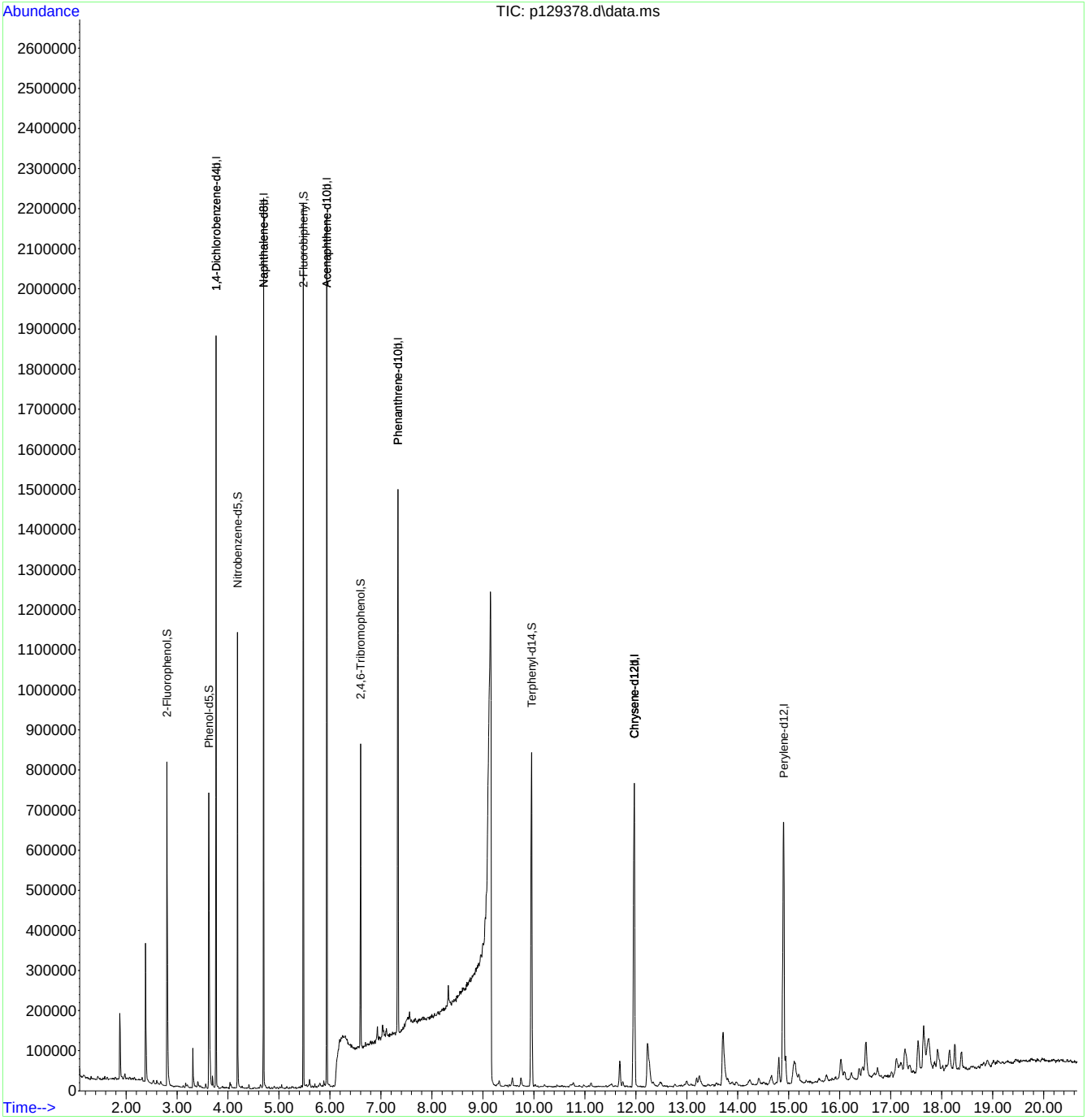
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129378.d
Acq On : 7 May 2019 6:17 pm
Operator : christc2
Sample : jc87093-9 Inst : MSVOAMSP
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:15:02 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



MP5844.M Wed May 08 05:05:21 2019 Page: 2

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/10/19 18:17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129379.d
Acq On : 7 May 2019 6:44 pm
Operator : christc2
Sample : jc87093-10 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Results File: MP5844.RES
Quant Time: May 08 04:21:15 2019
Quant Title :
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	3.764	152	172256	40.00 ppm	0.00
24) Naphthalene-d8	4.698	136	568145	40.00 ppm	0.00
47) Acenaphthene-d10	5.943	164	264804	40.00 ppm	0.00
69) Phenanthrene-d10	7.359	188	455599	40.00 ppm	0.03
83) Chrysene-d12	12.001	240	434077	40.00 ppm	0.04
91) Perylene-d12	14.913	264	456260	40.00 ppm	0.02
101) 1,4-Dichlorobenzene-d4b	3.764	152	172256	40.00 ppm	0.00
103) Phenanthrene-d10b	7.359	188	455599	40.00 ppm	0.03
105) Chrysene-d12b	12.001	240	434077	40.00 ppm	0.04
107) Naphthalene-d8b	4.698	136	568145	40.00 ppm	0.00
109) Acenaphthene-d10b	5.943	164	264804	40.00 ppm	0.00
111) Chrysene-d12d	12.001	240	434077	40.00 ppm	0.04
System Monitoring Compounds					
5) 2-Fluorophenol	2.807	112	178393	32.23 ppm	0.00
Spiked Amount 50.000			Recovery = 64.46%		
8) Phenol-d5	3.625	99	229782	32.70 ppm	0.00
Spiked Amount 50.000			Recovery = 65.40%		
25) Nitrobenzene-d5	4.186	82	210235	34.44 ppm	0.00
Spiked Amount 50.000			Recovery = 68.88%		
51) 2-Fluorobiphenyl	5.478	172	349986	41.71 ppm	0.00
Spiked Amount 50.000			Recovery = 83.42%		
73) 2,4,6-Tribromophenol	6.611	330	56345	37.17 ppm	0.01
Spiked Amount 50.000			Recovery = 74.34%		
85) Terphenyl-d14	10.035	244	373532	37.98 ppm	0.09
Spiked Amount 50.000			Recovery = 75.96%		
Target Compounds					Qvalue
9) Phenol	3.641	94	35941	4.69 ppm	91
18) Acetophenone	4.084	105	5796	0.69 ppm	83
19) 2-Methylphenol	4.057	108	9155	1.71 ppm	90
21) 3&4-Methylphenol	4.186	108	13484	2.57 ppm	85
30) 2,4-Dimethylphenol	4.544	107	6461	1.30 ppm	79
38) Naphthalene	4.720	128	1807991	133.27 ppm	99
44) 2-Methylnaphthalene	5.211	141	90619	11.65 ppm	95
53) Biphenyl	5.543	154	46020	5.16 ppm	95
56) Acenaphthylene	5.836	152	145458	12.84 ppm	98
59) Acenaphthene	5.965	153	362743	52.09 ppm	99
62) Dibenzofuran	6.093	168	158410	15.00 ppm	99
66) Fluorene	6.376	166	458465	54.17 ppm	99
77) Phenanthrene	7.391	178	70784	5.96 ppm	97
79) Carbazole	7.717	167	263166	21.97 ppm	92
81) Fluoranthene	9.261	202	116067	7.93 ppm	93
84) Pyrene	9.629	202	136007m	9.05 ppm	
87) Benzo[a]anthracene	11.991	228	35965	2.51 ppm	98
89) Chrysene	12.049	228	34822	2.76 ppm	93
93) Benzo[b]fluoranthene	14.186	252	34023	2.45 ppm	98
94) Benzo[k]fluoranthene	14.234	252	11852	1.01 ppm	93
95) Benzo[a]pyrene	14.785	252	23030	1.96 ppm	96
96) Indeno[1,2,3-cd]pyrene	16.815	276	14393	1.34 ppm	98
98) Dibenz[a,h]anthracene	16.873	278	4736	0.43 ppm	77
100) Benzo[g,h,i]perylene	17.221	276	14698	1.36 ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

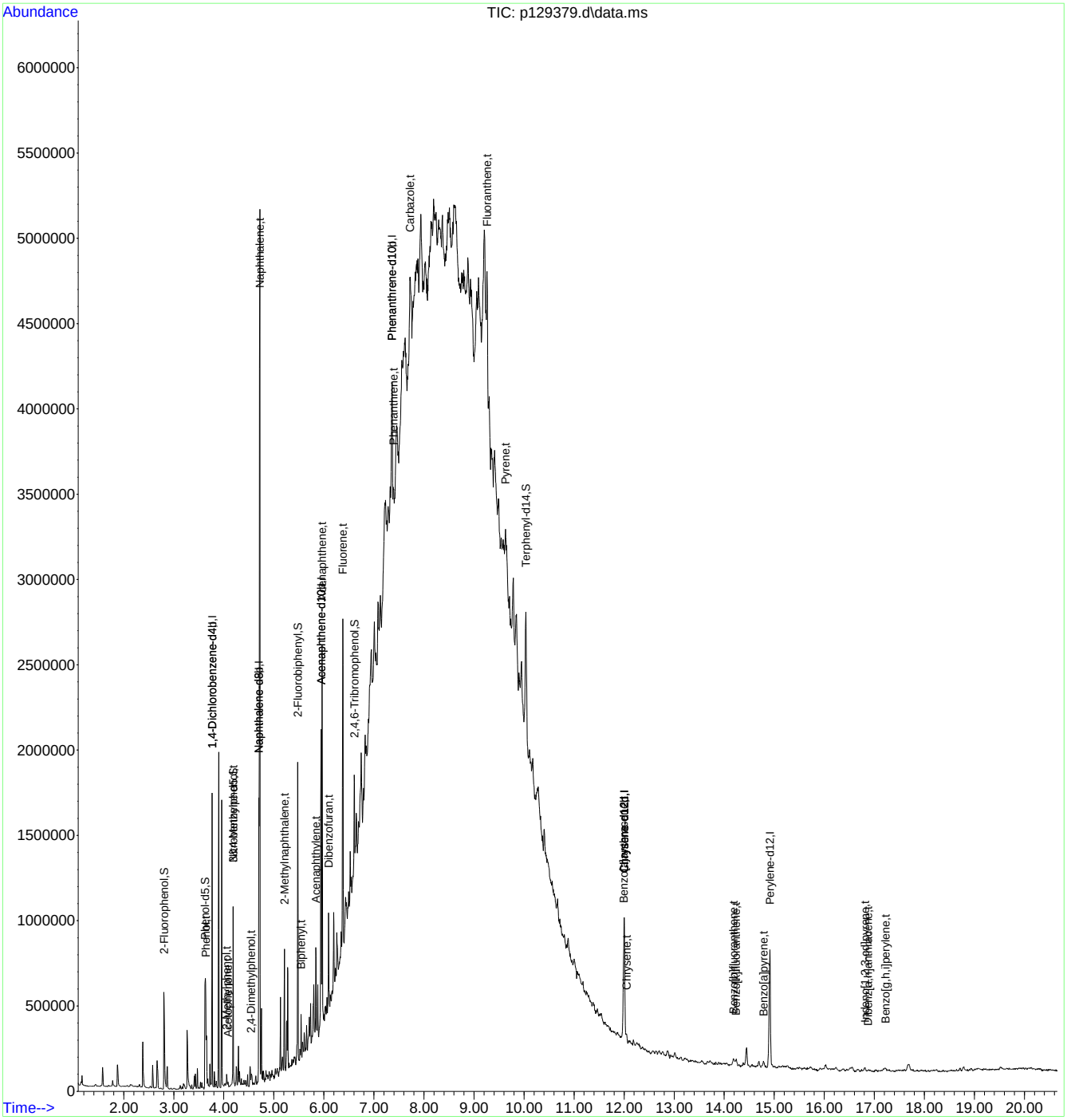
9.1.17

9

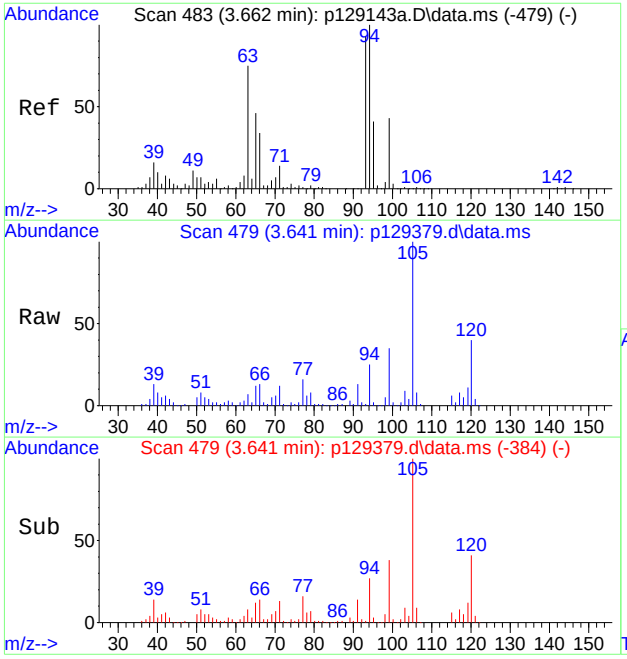
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129379.d
Acq On : 7 May 2019 6:44 pm
Operator : christc2
Sample : jc87093-10 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Results File: MP5844.RES
Quant Time: May 08 04:21:15 2019
Quant Title :
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



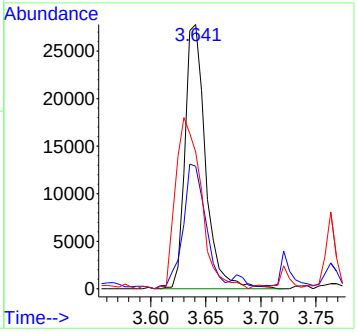
MP5844.M Wed May 08 05:05:26 2019 Page: 2

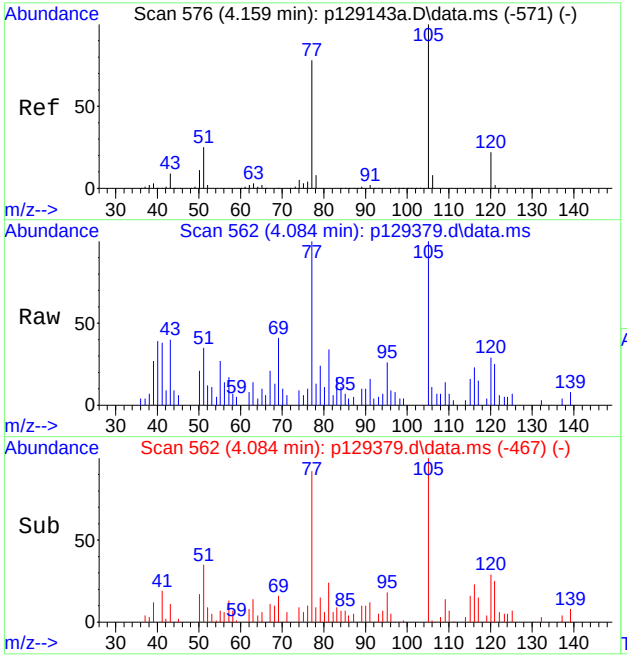


#9
Phenol
Concen: 4.69 ppm
RT: 3.641 min Scan# 479
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion: 94 Resp: 35941

Ion	Ratio	Lower	Upper
94	100		
65	38.6	2.3	62.3
66	46.9	12.7	72.7

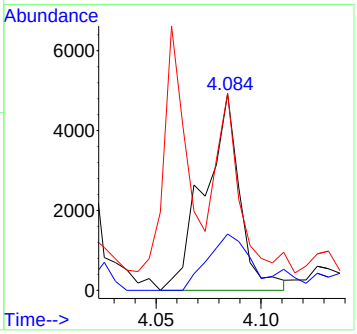




#18
Acetophenone
Concen: 0.69 ppm
RT: 4.084 min Scan# 562
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

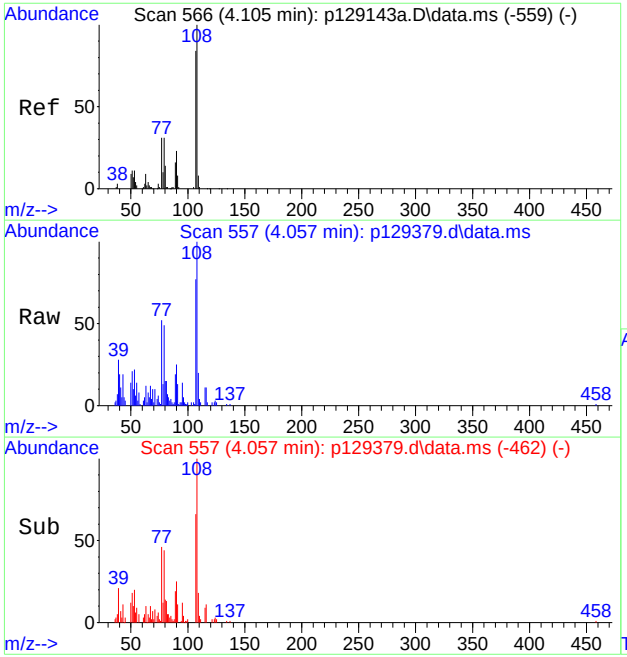
Tgt Ion:105 Resp: 5796

Ion	Ratio	Lower	Upper
105	100		
120	24.0	0.0	50.7
77	72.6	60.4	120.4



9.1.17

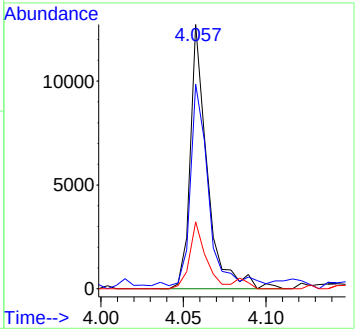
9

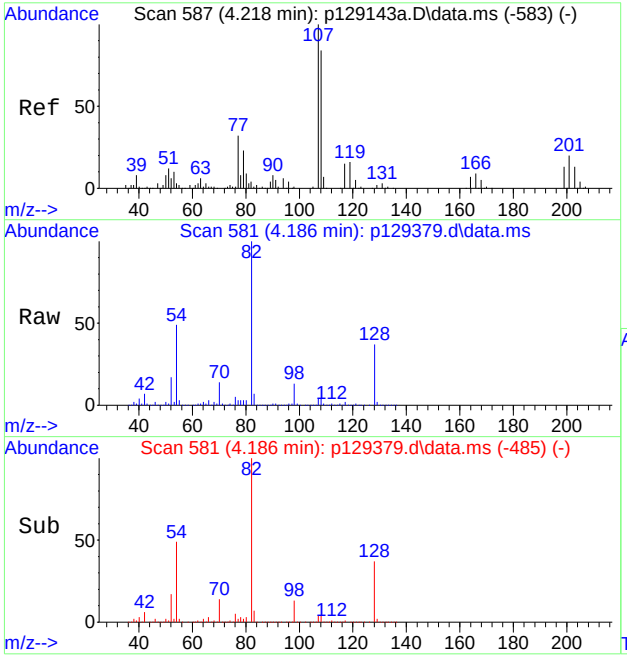


#19
2-Methylphenol
Concen: 1.71 ppm
RT: 4.057 min Scan# 557
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:108 Resp: 9155

Ion	Ratio	Lower	Upper
108	100		
107	74.7	55.8	115.8
90	25.4	0.0	54.2

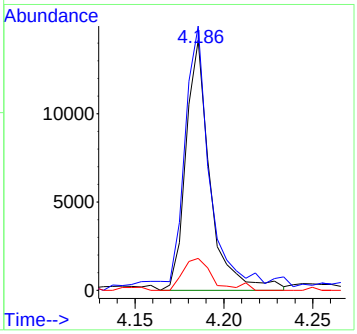




#21
3&4-Methylphenol
Concen: 2.57 ppm
RT: 4.186 min Scan# 581
Delta R.T. 0.011 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:108 Resp: 13484

Ion	Ratio	Lower	Upper
108	100		
107	102.1	89.5	149.5
90	12.8	0.0	39.8



9.1.17

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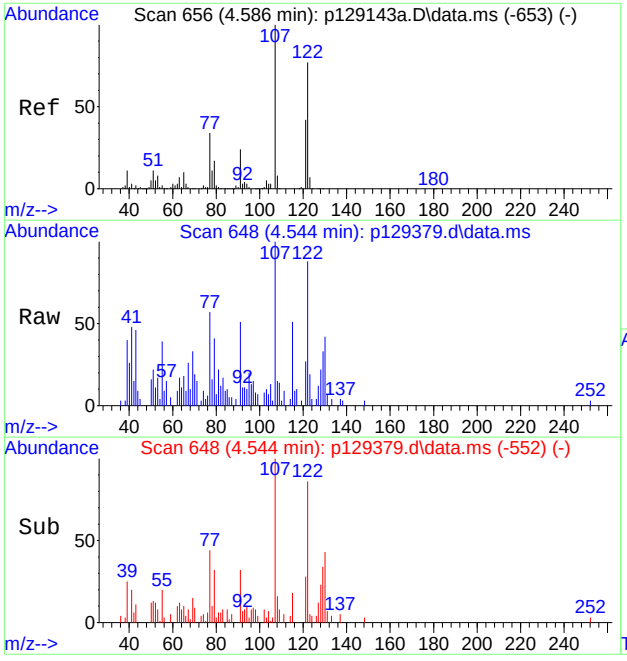
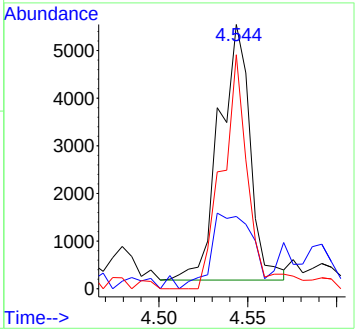
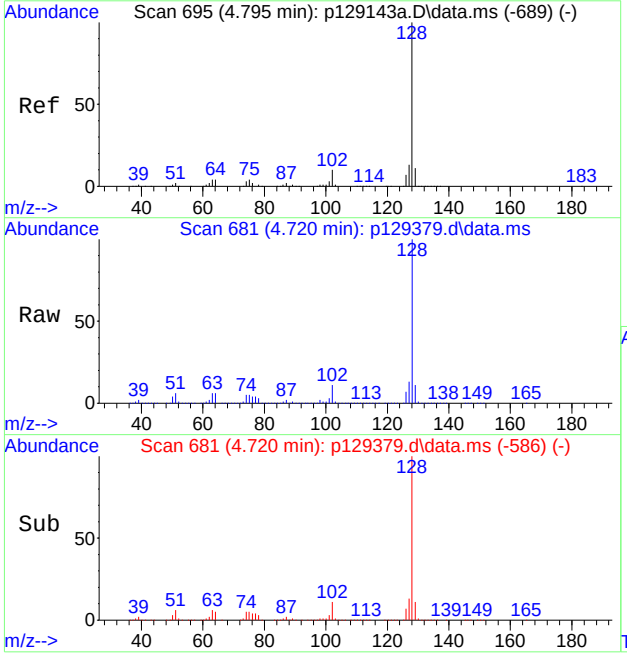


#30
2,4-Dimethylphenol
Concen: 1.30 ppm
RT: 4.544 min Scan# 648
Delta R.T. 0.011 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:107 Resp: 6461

Ion	Ratio	Lower	Upper
107	100		
121	19.7	12.2	72.2
122	90.4	48.5	108.5

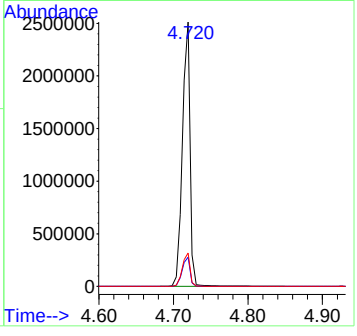




#38
Naphthalene
Concen: 133.27 ppm
RT: 4.720 min Scan# 681
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:128 Resp: 1807991

Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	40.6
127	12.6	0.0	42.5



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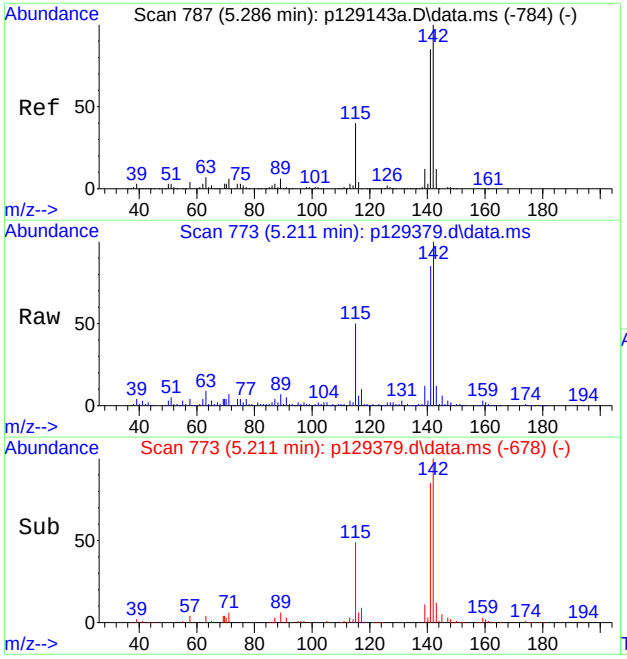
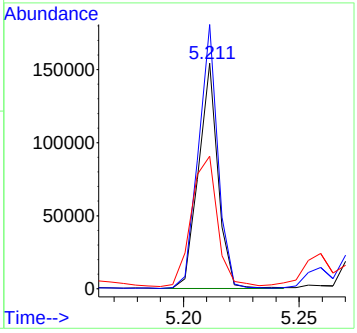
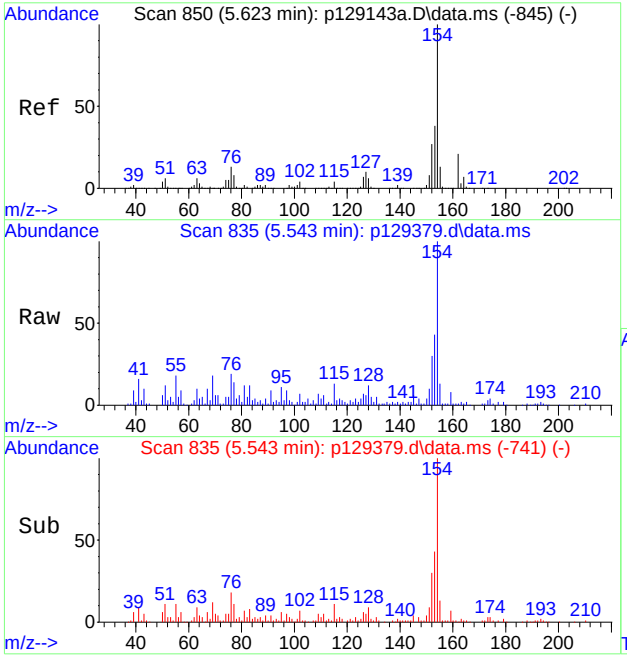


#44
2-Methylnaphthalene
Concen: 11.65 ppm
RT: 5.211 min Scan# 773
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:141 Resp: 90619

Ion	Ratio	Lower	Upper
141	100		
142	117.2	91.9	151.9
115	57.1	21.5	81.5

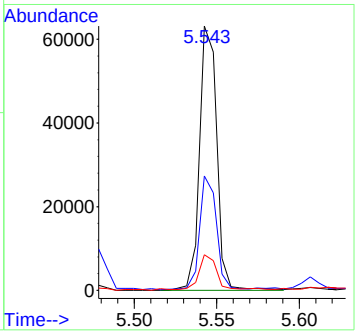




#53
Biphenyl
Concen: 5.16 ppm
RT: 5.543 min Scan# 835
Delta R.T. 0.000 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:154 Resp: 46020

Ion	Ratio	Lower	Upper
154	100		
153	42.9	9.3	69.3
155	12.8	0.0	43.0



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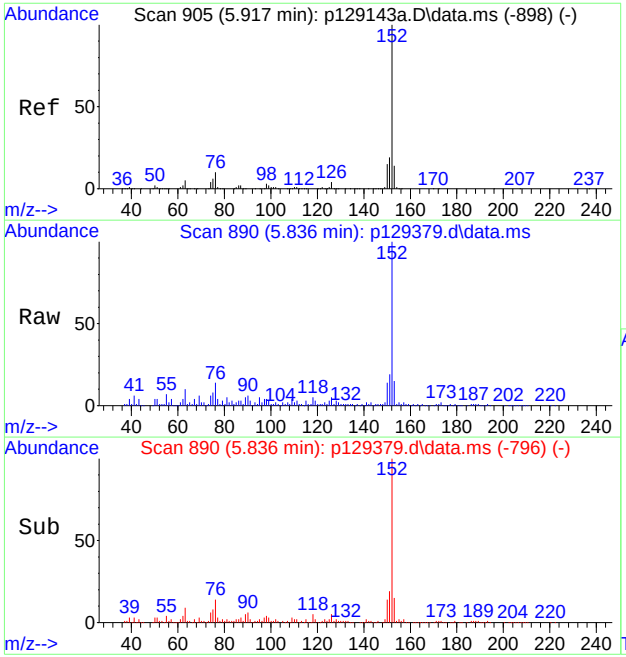
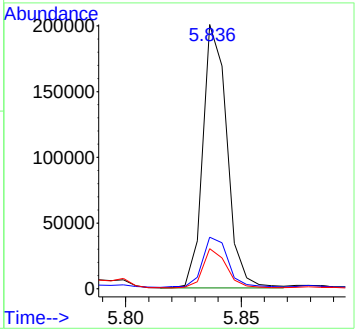
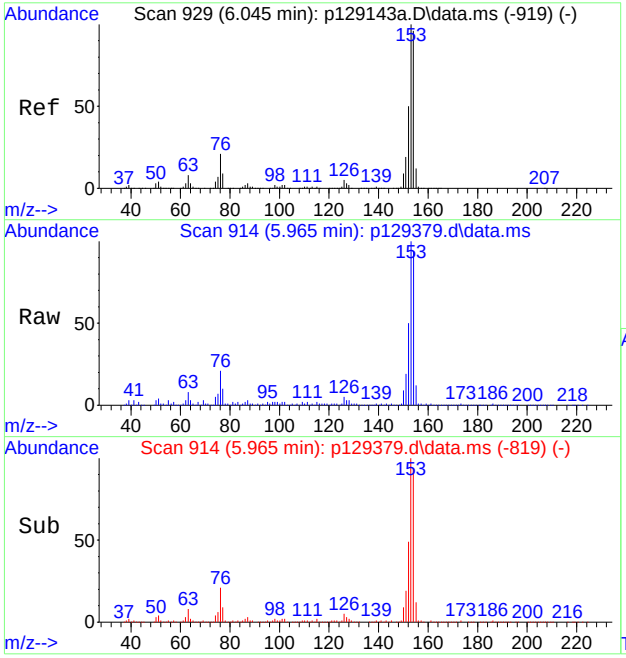


#56
Acenaphthylene
Concen: 12.84 ppm
RT: 5.836 min Scan# 890
Delta R.T. 0.000 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:152 Resp: 145458

Ion	Ratio	Lower	Upper
152	100		
151	19.0	0.0	49.2
153	14.9	0.0	43.0

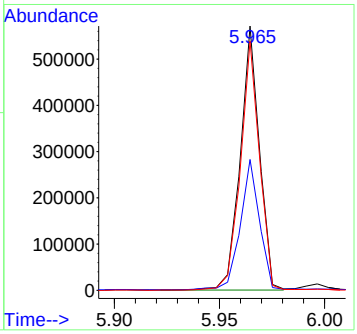




#59
Acenaphthene
Concen: 52.09 ppm
RT: 5.965 min Scan# 914
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:153 Resp: 362743

Ion	Ratio	Lower	Upper
153	100		
152	49.3	19.5	79.5
154	94.4	63.0	123.0



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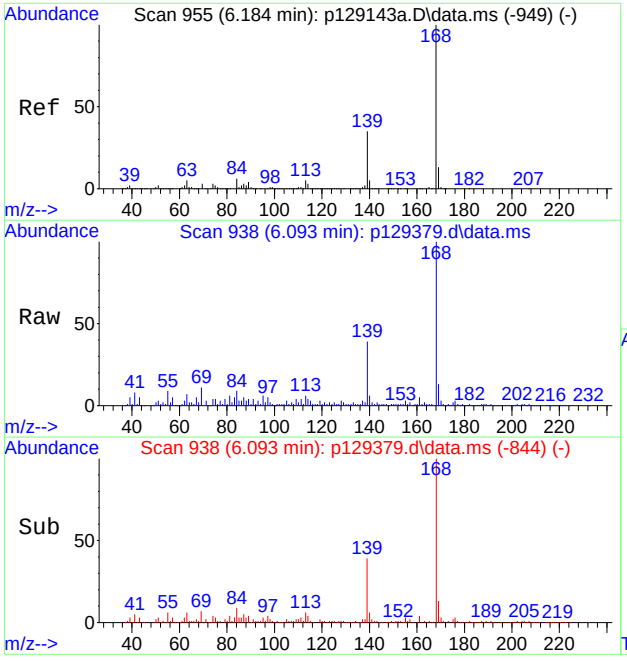
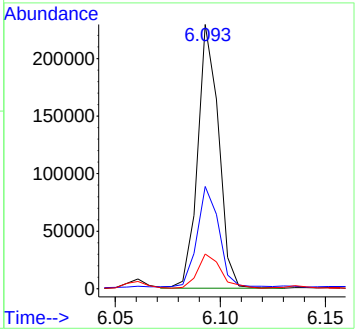
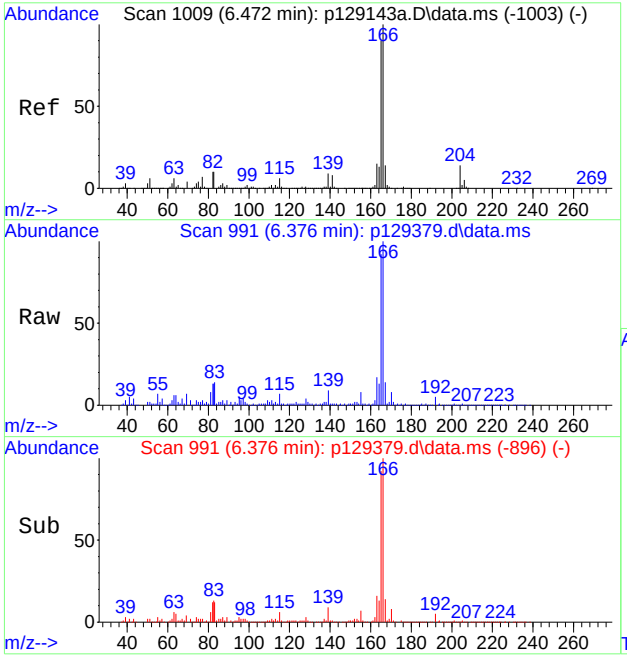


#62
Dibenzofuran
Concen: 15.00 ppm
RT: 6.093 min Scan# 938
Delta R.T. 0.000 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:168 Resp: 158410

Ion	Ratio	Lower	Upper
168	100		
139	38.0	7.2	67.2
169	12.7	0.0	43.3

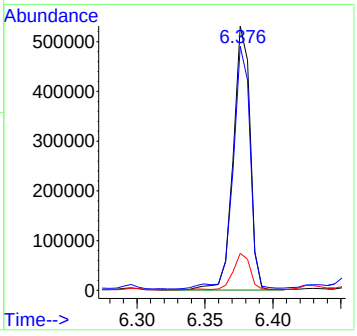


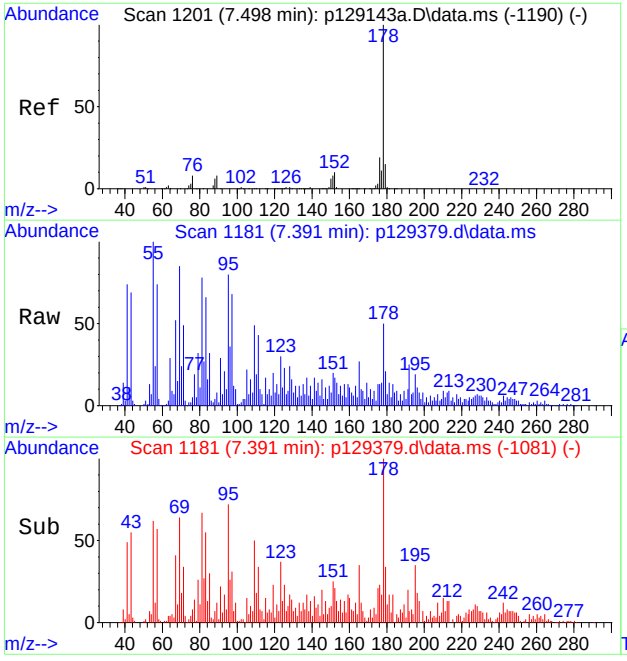


#66
Fluorene
Concen: 54.17 ppm
RT: 6.376 min Scan# 991
Delta R.T. 0.005 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:166 Resp: 458465

Ion	Ratio	Lower	Upper
166	100		
165	91.8	61.0	121.0
167	13.8	0.0	43.1

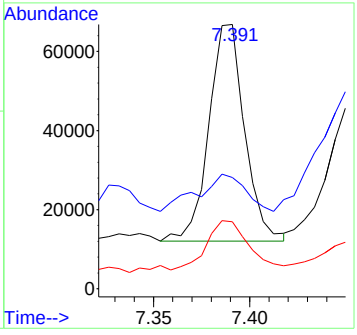


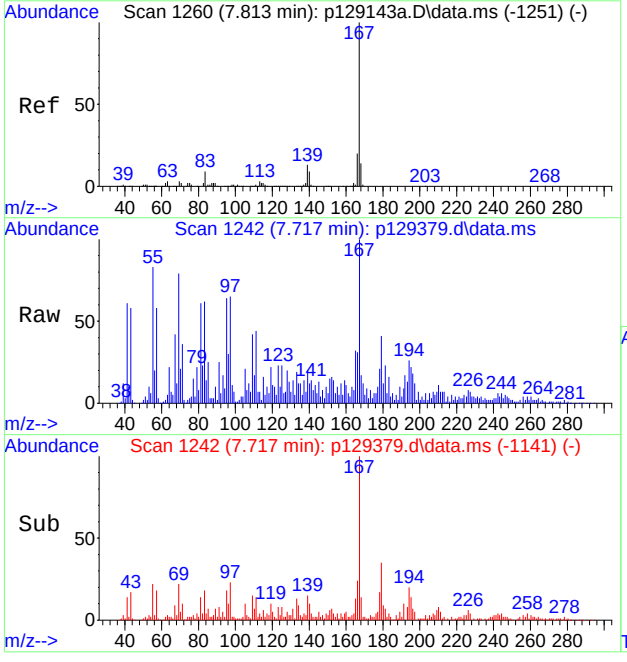


#77
Phenanthrene
Concen: 5.96 ppm
RT: 7.391 min Scan# 1181
Delta R.T. 0.032 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:178 Resp: 70784

Ion	Ratio	Lower	Upper
178	100		
179	13.1	0.0	45.5
176	20.7	0.0	49.9

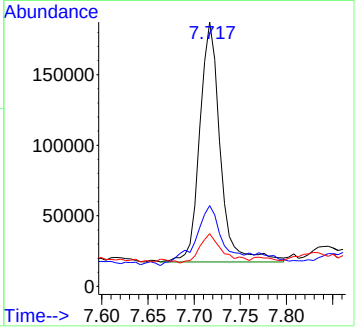




#79
Carbazole
Concen: 21.97 ppm
RT: 7.717 min Scan# 1242
Delta R.T. 0.037 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:167 Resp: 263166

Ion	Ratio	Lower	Upper
167	100		
166	23.9	0.0	49.7
139	10.9	0.0	43.8



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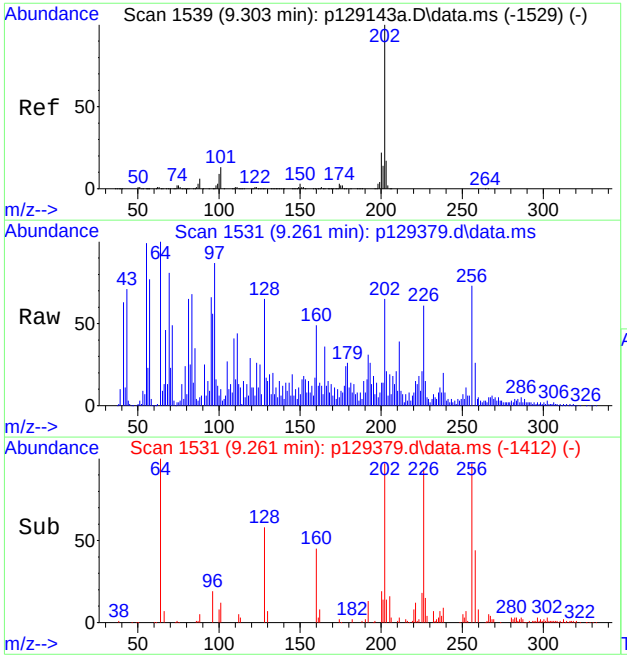
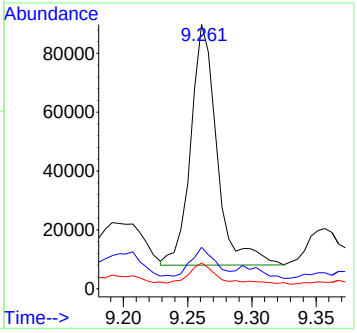
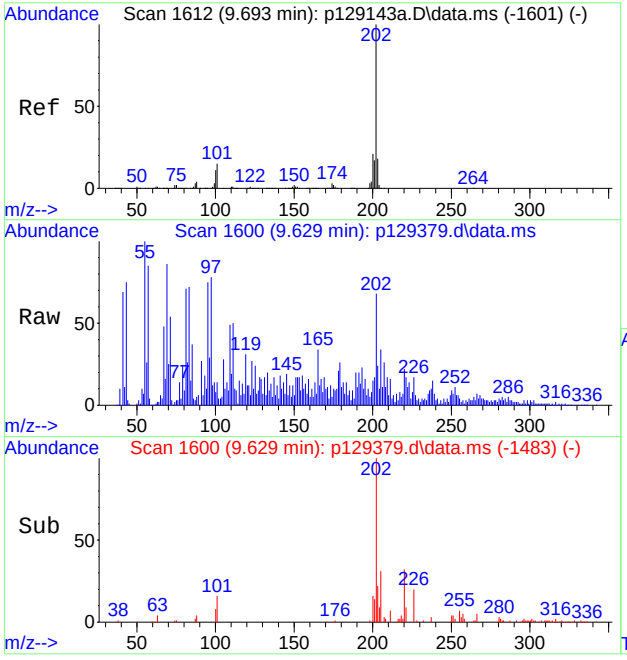


#81
Fluoranthene
Concen: 7.93 ppm
RT: 9.261 min Scan# 1531
Delta R.T. 0.134 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:202 Resp: 116067

Ion	Ratio	Lower	Upper
202	100		
101	12.5	0.0	45.1
100	8.1	0.0	41.2

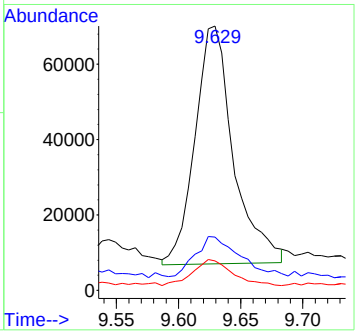


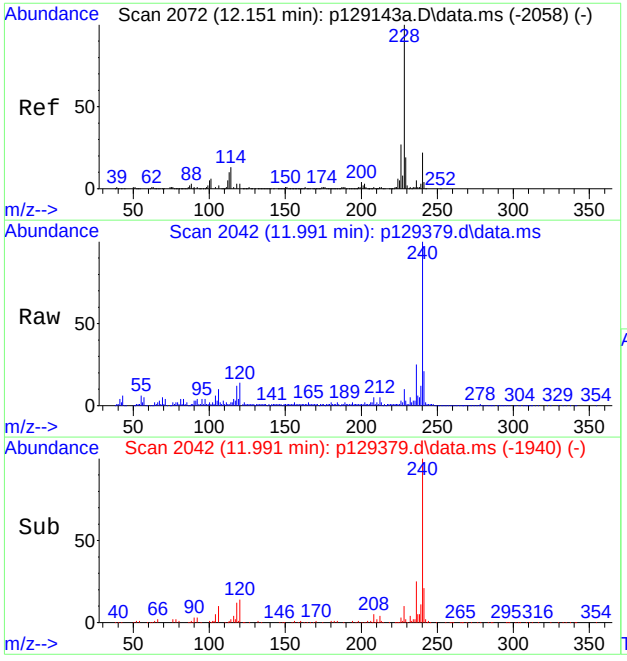


#84
Pyrene
Concen: 9.05 ppm m
RT: 9.629 min Scan# 1600
Delta R.T. 0.123 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:202 Resp: 136007

Ion	Ratio	Lower	Upper
202	100		
101	20.1	0.0	46.9
100	11.2	0.0	42.7

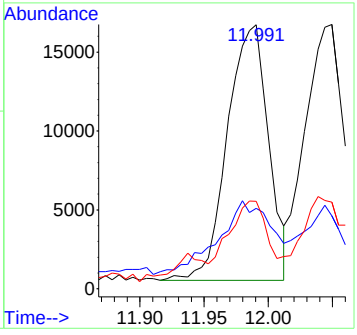


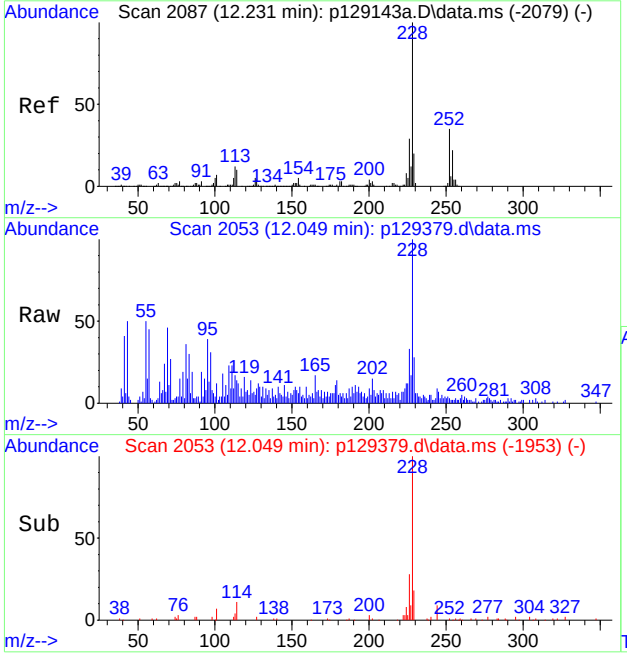


#87
Benzo[a]anthracene
Concen: 2.51 ppm
RT: 11.991 min Scan# 2042
Delta R.T. 0.043 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:228 Resp: 35965

Ion	Ratio	Lower	Upper
228	100		
229	21.6	0.0	49.8
226	28.2	0.0	57.8

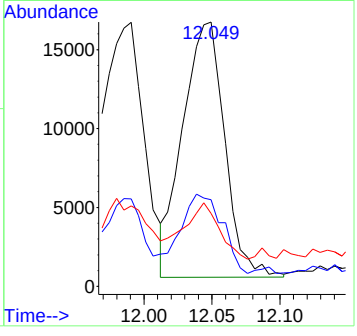




#89
Chrysene
Concen: 2.76 ppm
RT: 12.049 min Scan# 2053
Delta R.T. 0.032 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:228 Resp: 34822

Ion	Ratio	Lower	Upper
228	100		
226	28.1	0.0	59.4
229	14.0	0.0	50.5



9.1.17

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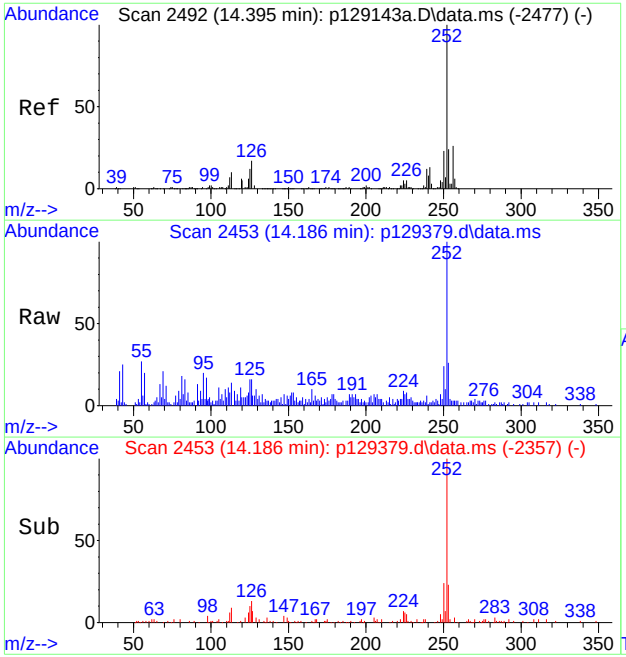
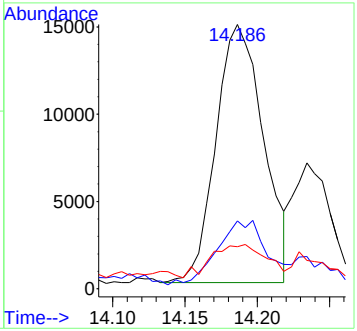
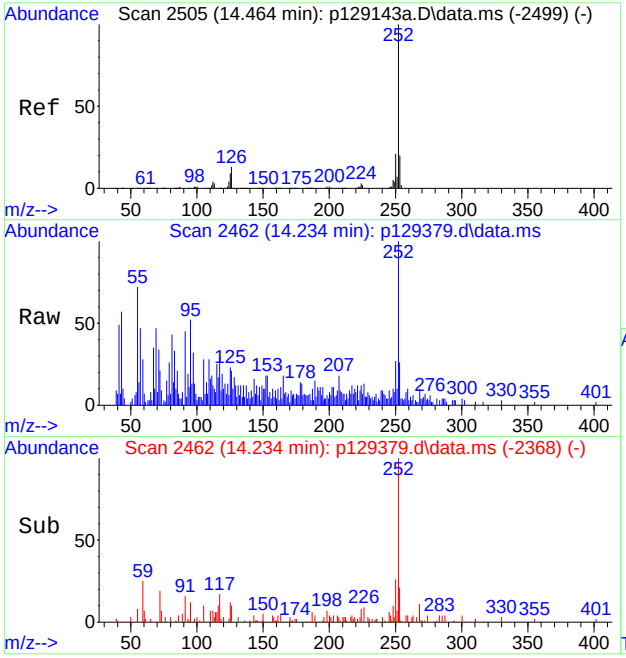


#93
Benzo[b]fluoranthene
Concen: 2.45 ppm
RT: 14.186 min Scan# 2453
Delta R.T. 0.011 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:252 Resp: 34023

Ion	Ratio	Lower	Upper
252	100		
253	23.3	0.0	52.9
125	11.1	0.0	42.3

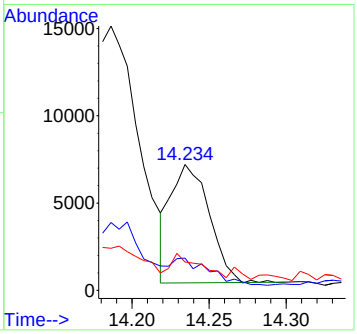




#94
Benzo[k]fluoranthene
Concen: 1.01 ppm
RT: 14.234 min Scan# 2462
Delta R.T. 0.000 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:252 Resp: 11852

Ion	Ratio	Lower	Upper
252	100		
253	20.2	0.0	51.7
125	16.1	0.0	40.5



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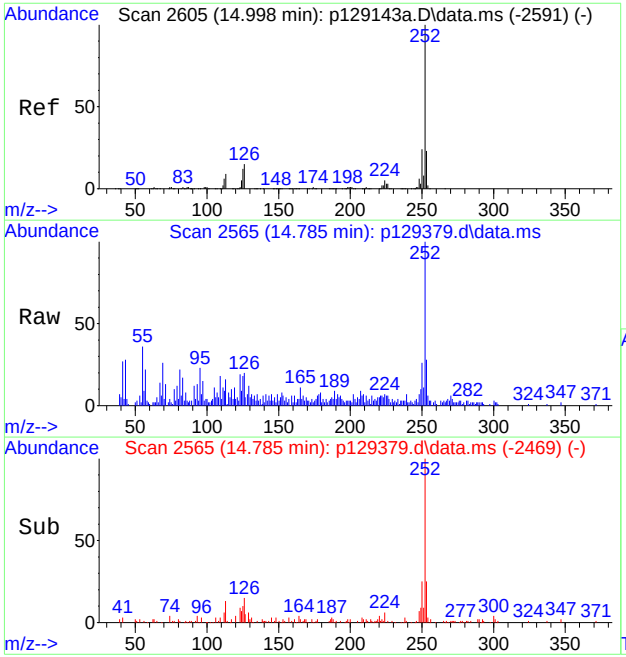
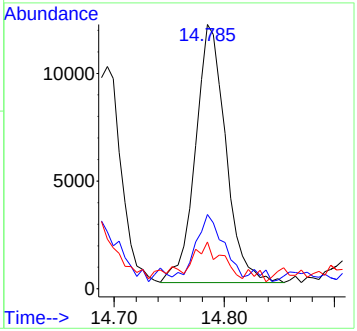
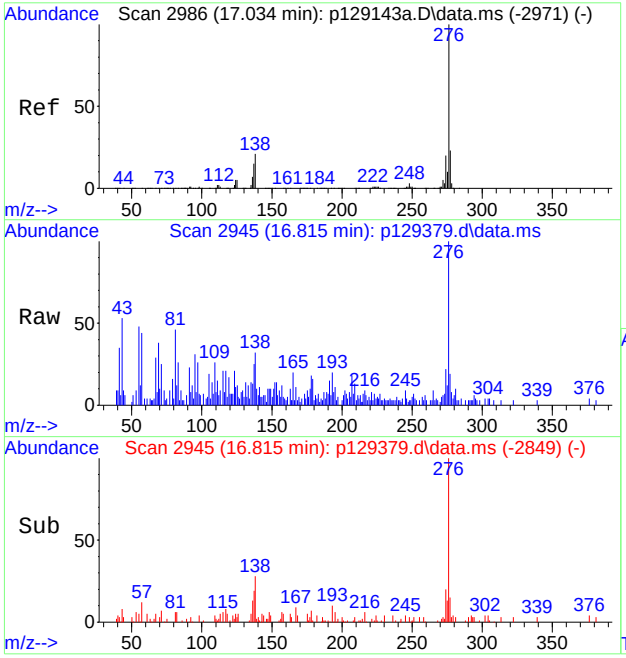


#95
Benzo[a]pyrene
Concen: 1.96 ppm
RT: 14.785 min Scan# 2565
Delta R.T. 0.011 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:252 Resp: 23030

Ion	Ratio	Lower	Upper
252	100		
253	22.4	0.0	51.6
125	10.4	0.0	43.5

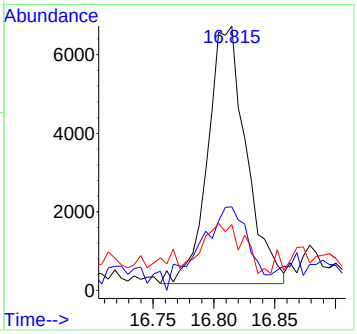




#96
Indeno[1,2,3-cd]pyrene
Concen: 1.34 ppm
RT: 16.815 min Scan# 2945
Delta R.T. 0.011 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:276 Resp: 14393

Ion	Ratio	Lower	Upper
276	100		
138	24.6	0.0	55.2
137	15.7	0.0	46.6



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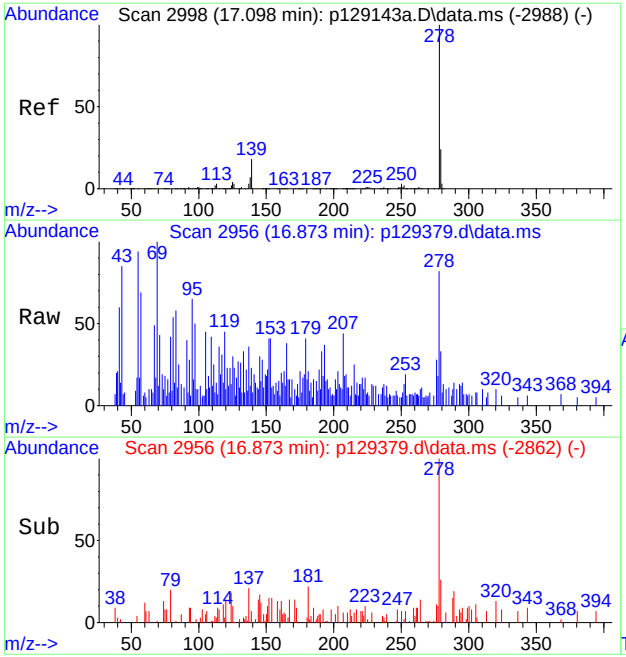
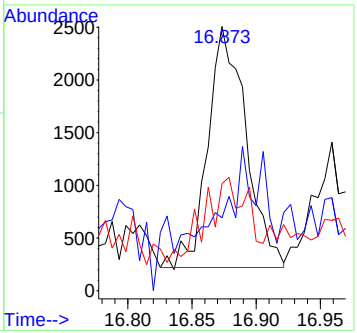
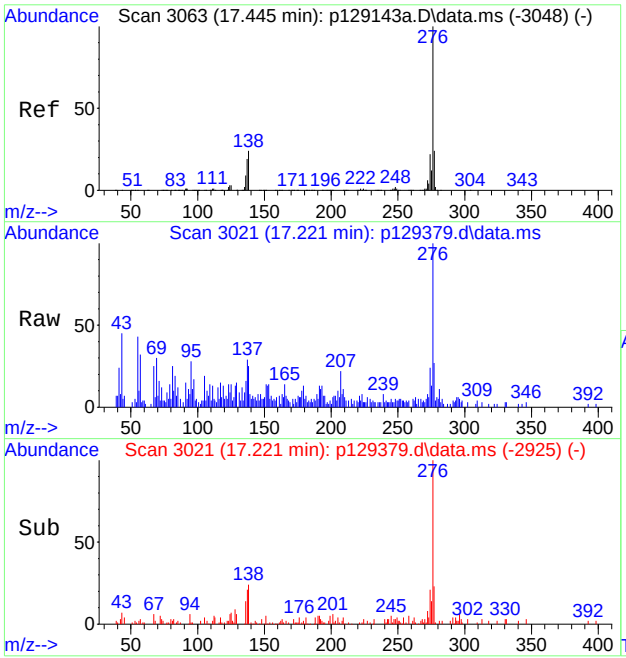


#98
Dibenz[a,h]anthracene
Concen: 0.43 ppm
RT: 16.873 min Scan# 2956
Delta R.T. 0.000 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:278 Resp: 4736

Ion	Ratio	Lower	Upper
278	100		
139	2.0	0.0	53.0
279	22.3	0.0	54.4

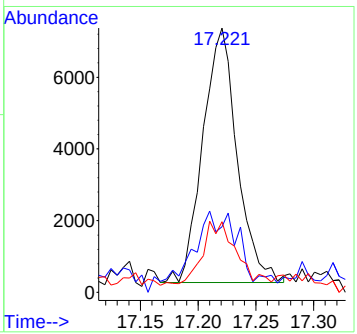




#100
Benzo[g,h,i]perylene
Concen: 1.36 ppm
RT: 17.221 min Scan# 3021
Delta R.T. 0.011 min
Lab File: p129379.d
Acq: 7 May 2019 6:44 pm

Tgt Ion:276 Resp: 14698

Ion	Ratio	Lower	Upper
276	100		
138	20.9	0.0	56.5
277	23.2	0.0	54.7



9.1.17

9

Manual Integration Approval Summary

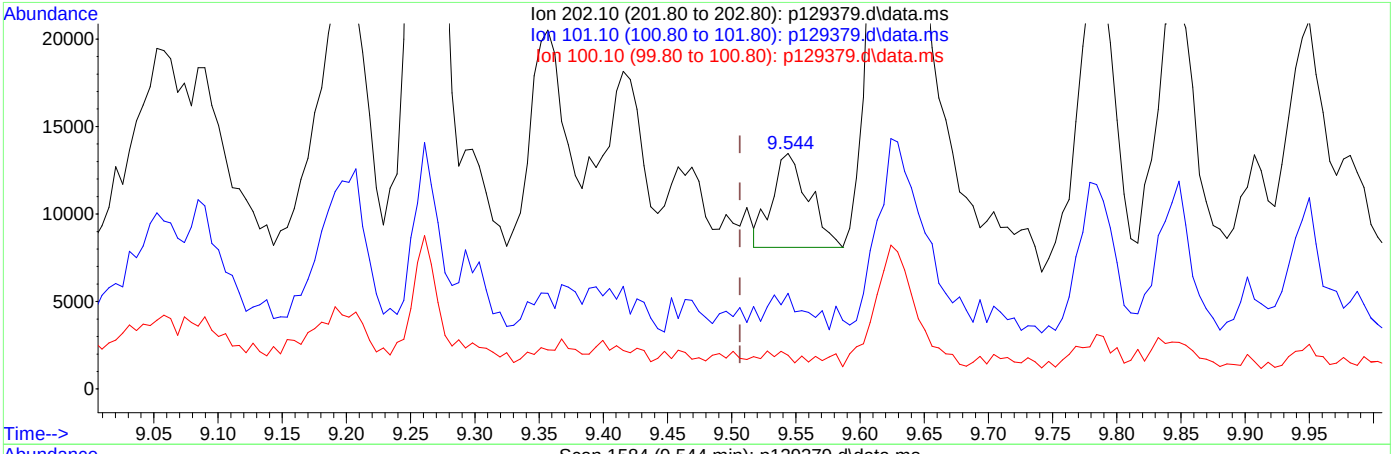
Sample Number:	JC87093-10	**Method:**	SW846 8270D
Lab FileID:	P129379.D	**Analyst approved:**	05/08/19 05:14 Michelle Co
Injection Time:	05/07/19 18:44	**Supervisor approved:**	05/10/19 18:17 Nancy Ma

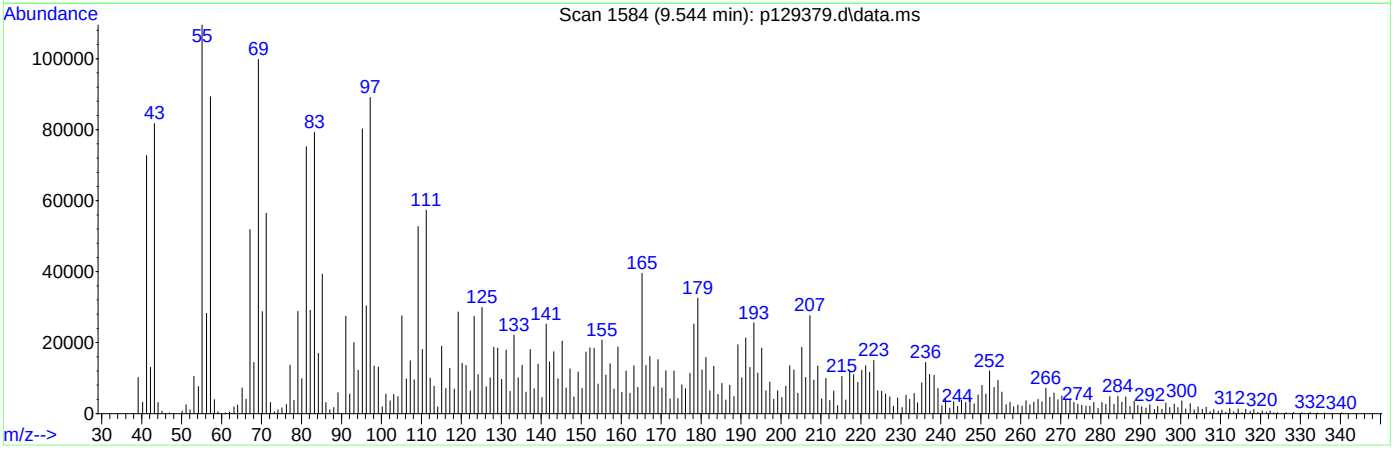
Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyrene	129-00-0		9.63	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129379.d
Acq On : 7 May 2019 6:44 pm
Operator : christc2
Sample : jc87093-10 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:03:19 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration





TIC: p129379.d\data.ms

(84) Pyrene (t)

9.544min (+0.037) 0.71ppm

response 10639

Ion	Exp%	Act%
202.10	100	100
101.10	16.90	23.68
100.10	12.70	7.50
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/10/19 18:17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129411.d
Acq On : 8 May 2019 5:20 pm
Operator : angelar
Sample : jc87093-10 Inst : MSVOAMSP
Misc : op20110,ep5857,30.7,,,1,5
ALS Vial : 20 Sample Multiplier: 1

Quant Results File: MP5844.RES
Quant Time: May 08 23:19:01 2019
Quant Title :
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.753	152	169902	40.00	ppm	0.00
24) Naphthalene-d8	4.688	136	565817	40.00	ppm	0.00
47) Acenaphthene-d10	5.927	164	296428	40.00	ppm	0.00
69) Phenanthrene-d10	7.327	188	479255	40.00	ppm	0.01
83) Chrysene-d12	11.953	240	472877	40.00	ppm	0.01
91) Perylene-d12	14.881	264	486949	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	3.753	152	169902	40.00	ppm	0.00
103) Phenanthrene-d10b	7.327	188	479255	40.00	ppm	0.01
105) Chrysene-d12b	11.953	240	472877	40.00	ppm	0.01
107) Naphthalene-d8b	4.688	136	565817	40.00	ppm	0.00
109) Acenaphthene-d10b	5.927	164	296428	40.00	ppm	0.00
111) Chrysene-d12d	11.953	240	472877	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	2.813	112	32587	5.97	ppm	0.04
Spiked Amount 50.000			Recovery	=	11.94%	
8) Phenol-d5	3.641	99	43910	6.33	ppm	0.04
Spiked Amount 50.000			Recovery	=	12.66%	
25) Nitrobenzene-d5	4.175	82	41996	6.91	ppm	0.00
Spiked Amount 50.000			Recovery	=	13.82%	
51) 2-Fluorobiphenyl	5.468	172	76835	8.18	ppm	0.00
Spiked Amount 50.000			Recovery	=	16.36%	
73) 2,4,6-Tribromophenol	6.590	330	11309	7.09	ppm	0.00
Spiked Amount 50.000			Recovery	=	14.18%	
85) Terphenyl-d14	9.944	244	76381	7.13	ppm	0.01
Spiked Amount 50.000			Recovery	=	14.26%	
Target Compounds						Qvalue
9) Phenol	3.651	94	6735	0.89	ppm	81
38) Naphthalene	4.698	128	408661	30.25	ppm	99
44) 2-Methylnaphthalene	5.195	141	19498	2.52	ppm	83
53) Biphenyl	5.532	154	10925	1.09	ppm	91
56) Acenaphthylene	5.826	152	27574	2.17	ppm	98
59) Acenaphthene	5.948	153	79633	10.21	ppm	93
62) Dibenzofuran	6.082	168	33947	2.87	ppm	98
66) Fluorene	6.360	166	103161	10.89	ppm	97
77) Phenanthrene	7.348	178	16374	1.31	ppm	93
79) Carbazole	7.674	167	56471	4.48	ppm	95
81) Fluoranthene	9.143	202	25557	1.66	ppm	99
84) Pyrene	9.517	202	32287	1.97	ppm	94
87) Benzo[a]anthracene	11.942	228	9325	0.60	ppm	77
89) Chrysene	11.996	228	8219	0.60	ppm	90
93) Benzo[b]fluoranthene	14.143	252	8789m	0.59	ppm	
95) Benzo[a]pyrene	14.752	252	6345	0.51	ppm	83
96) Indeno[1,2,3-cd]pyrene	16.777	276	4637	0.40	ppm	90
100) Benzo[g,h,i]perylene	17.183	276	4246	0.37	ppm	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

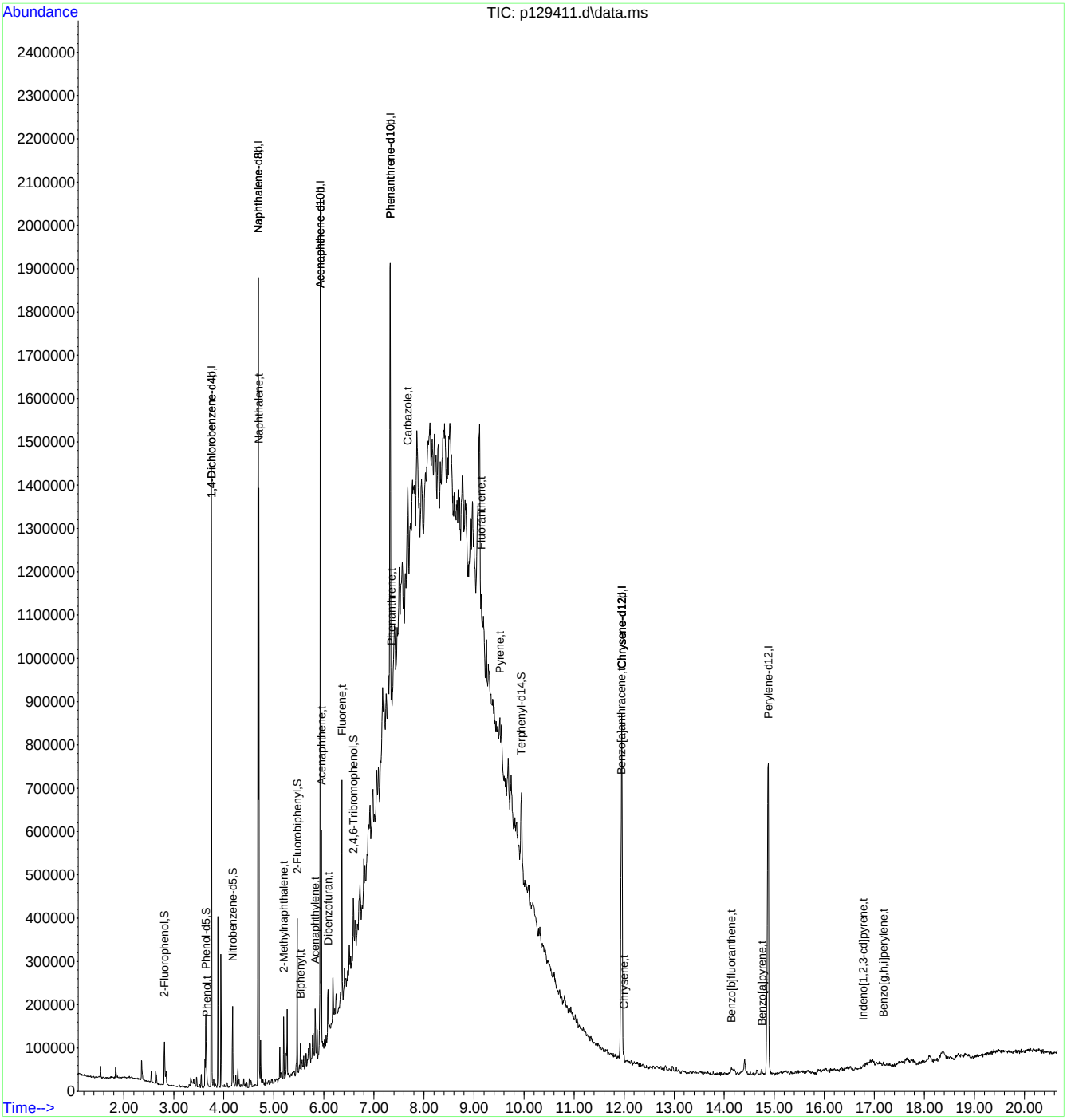
9.1.18

9

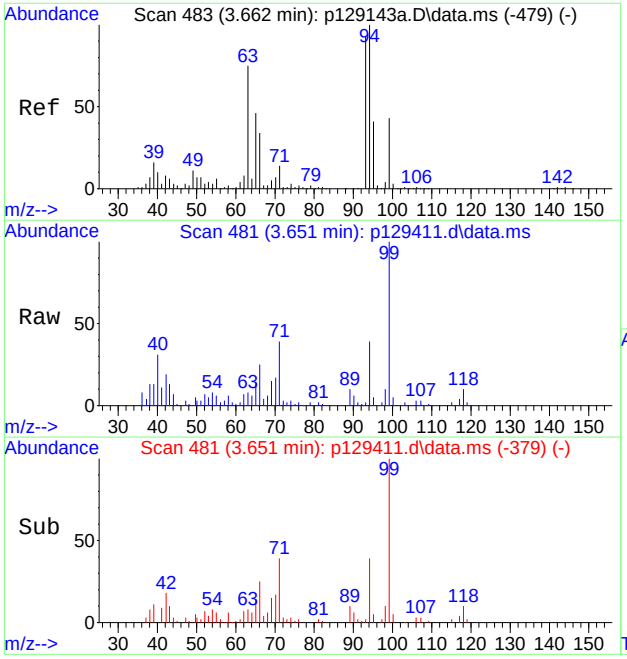
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129411.d
Acq On : 8 May 2019 5:20 pm
Operator : angelar
Sample : jc87093-10 Inst : MSVOAMSP
Misc : op20110,ep5857,30.7,,,1,5
ALS Vial : 20 Sample Multiplier: 1

Quant Results File: MP5844.RES
Quant Time: May 08 23:19:01 2019
Quant Title :
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration



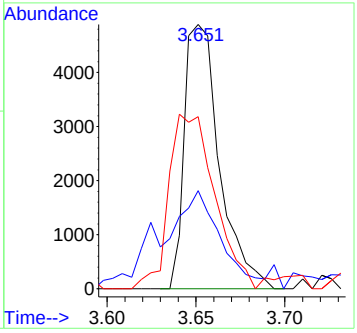
MP5844.M Wed May 08 23:19:57 2019 Page: 2

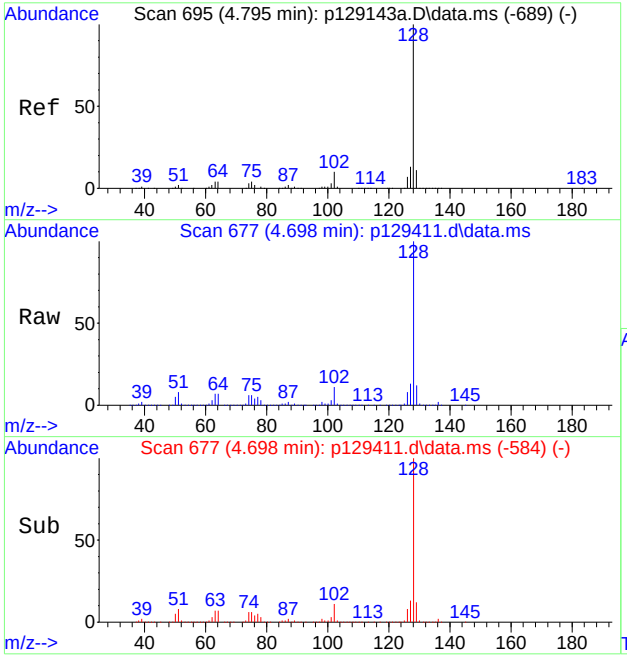


#9
Phenol
Concen: 0.89 ppm
RT: 3.651 min Scan# 481
Delta R.T. 0.043 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion: 94 Resp: 6735

Ion	Ratio	Lower	Upper
94	100		
65	29.2	0.0	58.6
66	59.4	9.4	69.4

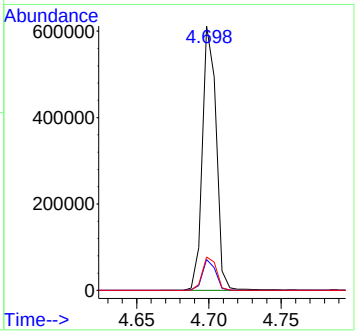


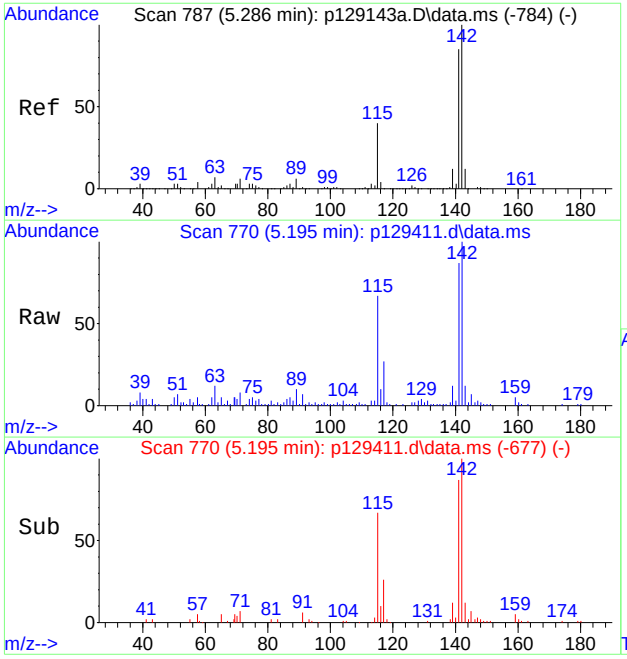


#38
Naphthalene
Concen: 30.25 ppm
RT: 4.698 min Scan# 677
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:128 Resp: 408661

Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	41.2
127	12.6	0.0	42.6

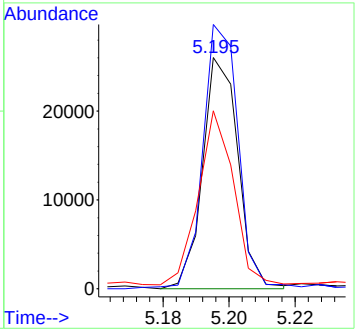


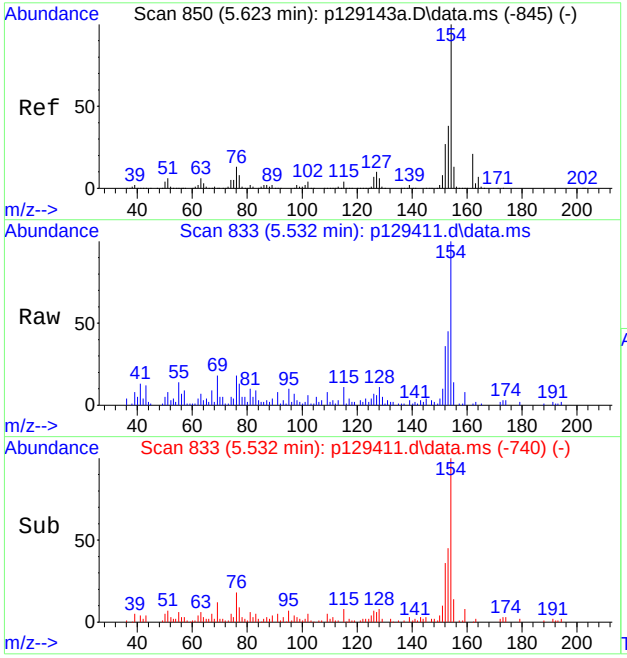


#44
2-Methylnaphthalene
Concen: 2.52 ppm
RT: 5.195 min Scan# 770
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:141 Resp: 19498

Ion	Ratio	Lower	Upper
141	100		
142	113.8	91.1	151.1
115	75.7	16.3	76.3

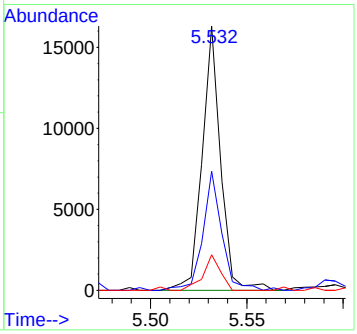


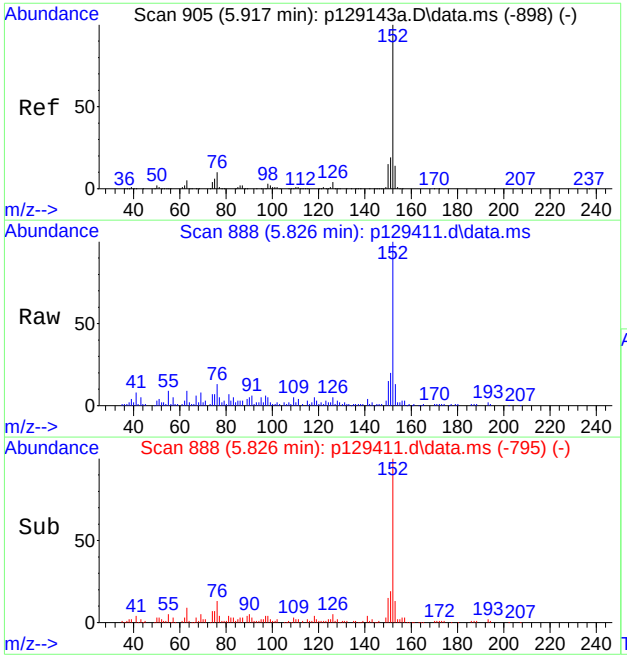


#53
Biphenyl
Concen: 1.09 ppm
RT: 5.532 min Scan# 833
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:154 Resp: 10925

Ion	Ratio	Lower	Upper
154	100		
153	45.0	8.6	68.6
155	12.2	0.0	43.1

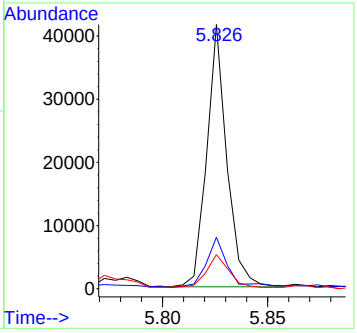


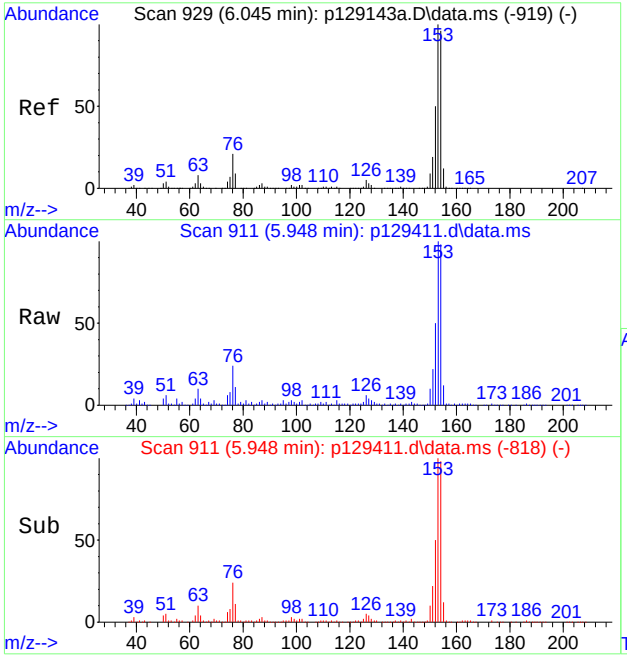


#56
Acenaphthylene
Concen: 2.17 ppm
RT: 5.826 min Scan# 888
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:152 Resp: 27574

Ion	Ratio	Lower	Upper
152	100		
151	18.6	0.0	49.5
153	12.5	0.0	42.9

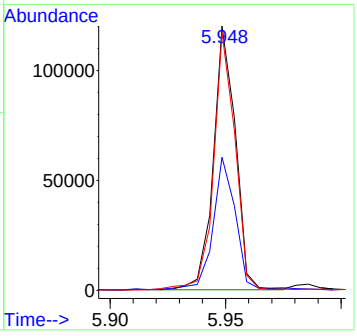




#59
Acenaphthene
Concen: 10.21 ppm
RT: 5.948 min Scan# 911
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

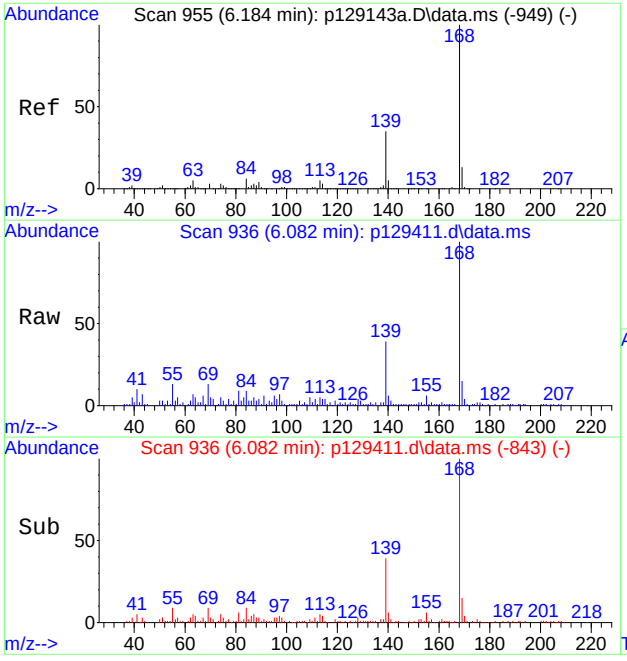
Tgt Ion:153 Resp: 79633

Ion	Ratio	Lower	Upper
153	100		
152	49.8	18.5	78.5
154	97.4	58.8	118.8



9.1.18

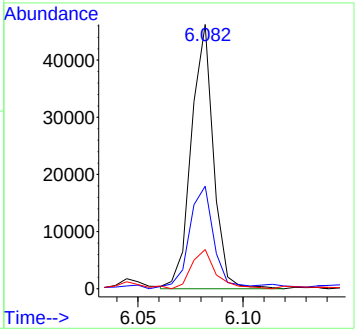
9

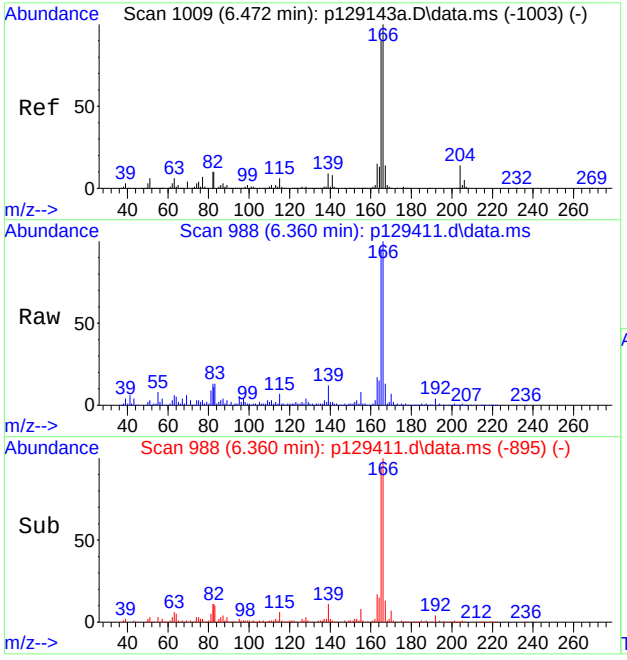


#62
Dibenzofuran
Concen: 2.87 ppm
RT: 6.082 min Scan# 936
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:168 Resp: 33947

Ion	Ratio	Lower	Upper
168	100		
139	38.0	6.4	66.4
169	13.9	0.0	43.3

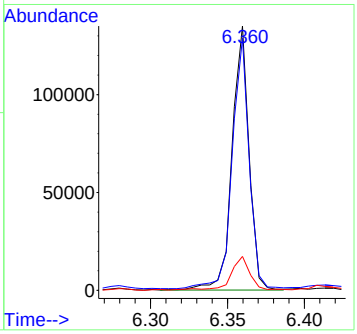


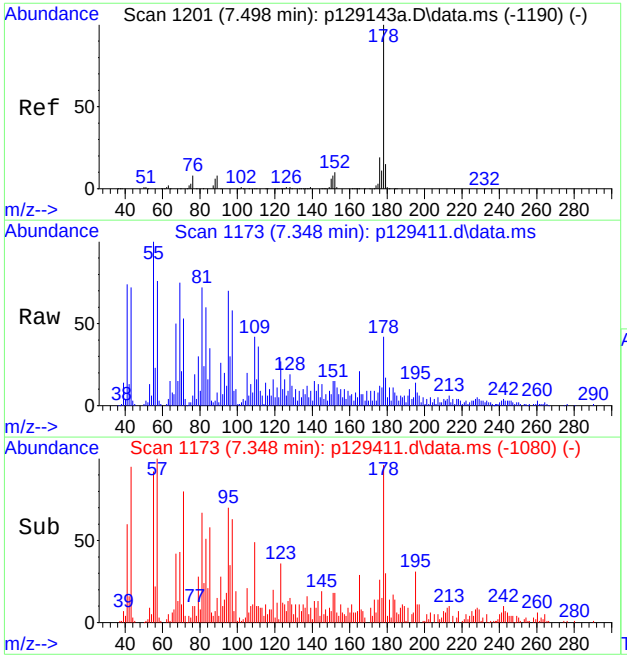


#66
Fluorene
Concen: 10.89 ppm
RT: 6.360 min Scan# 988
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:166 Resp: 103161

Ion	Ratio	Lower	Upper
166	100		
165	94.8	62.0	122.0
167	12.6	0.0	42.5

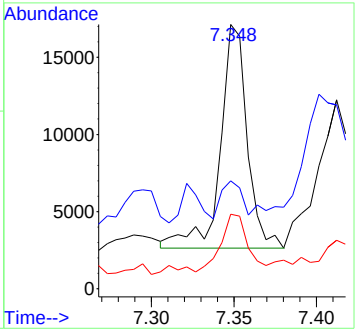


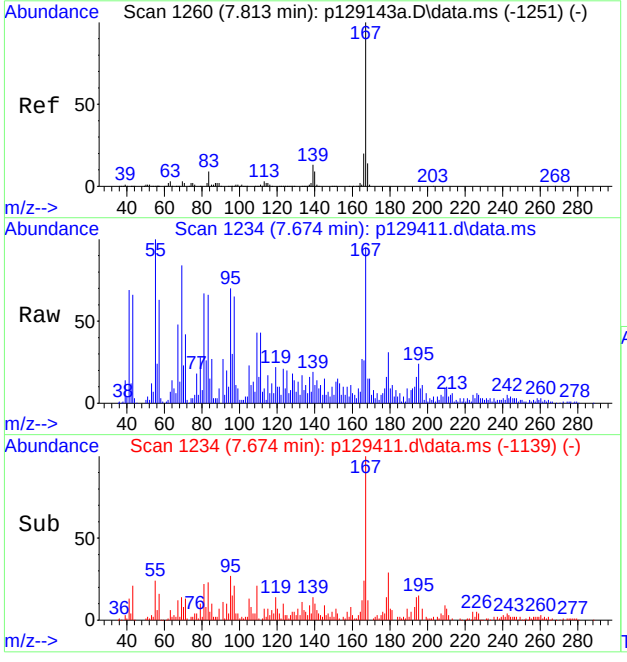


#77
Phenanthrene
Concen: 1.31 ppm
RT: 7.348 min Scan# 1173
Delta R.T. -0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:178 Resp: 16374

Ion	Ratio	Lower	Upper
178	100		
179	14.0	0.0	45.3
176	23.5	0.0	49.2

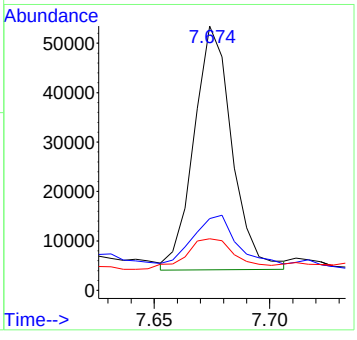




#79
Carbazole
Concen: 4.48 ppm
RT: 7.674 min Scan# 1234
Delta R.T. 0.005 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

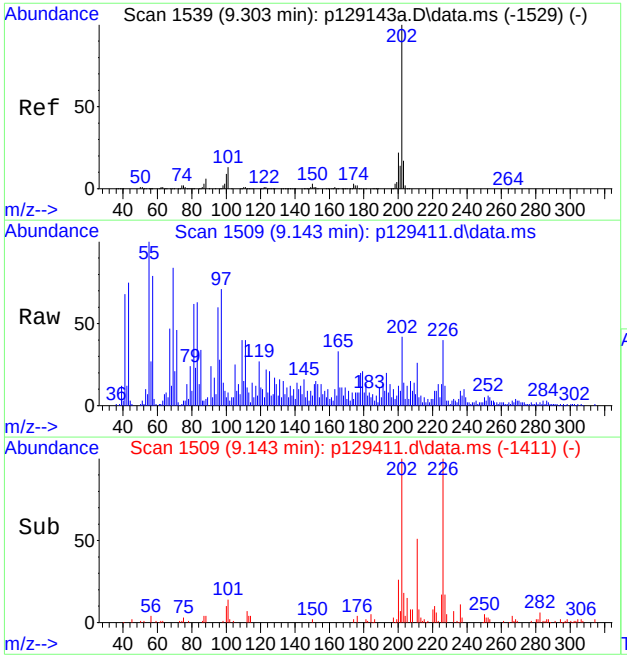
Tgt Ion:167 Resp: 56471

Ion	Ratio	Lower	Upper
167	100		
166	19.0	0.0	50.6
139	10.7	0.0	43.3



9.1.18

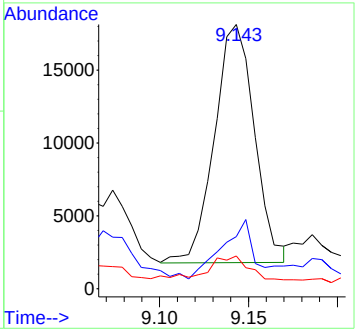
9

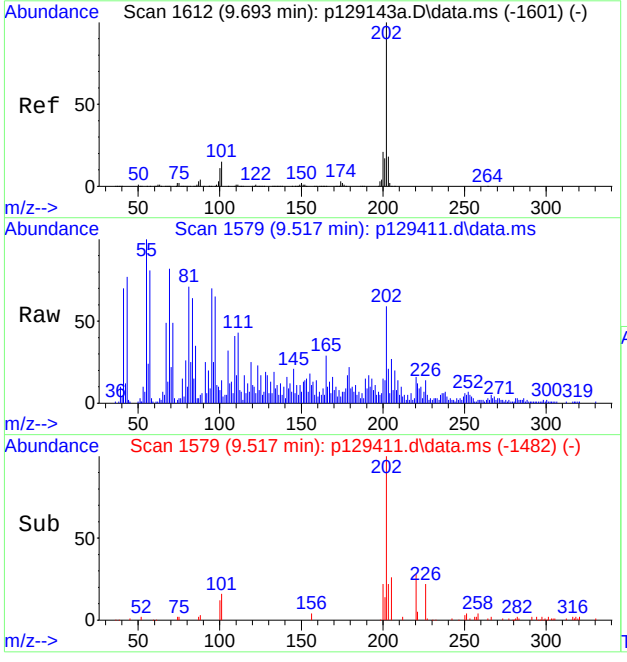


#81
Fluoranthene
Concen: 1.66 ppm
RT: 9.143 min Scan# 1509
Delta R.T. 0.021 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:202 Resp: 25557

Ion	Ratio	Lower	Upper
202	100		
101	13.8	0.0	44.1
100	9.5	0.0	40.0

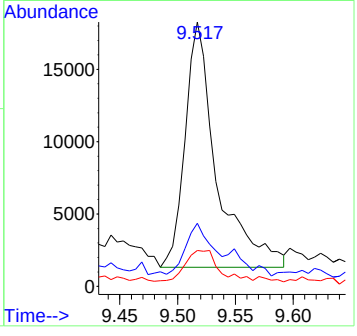


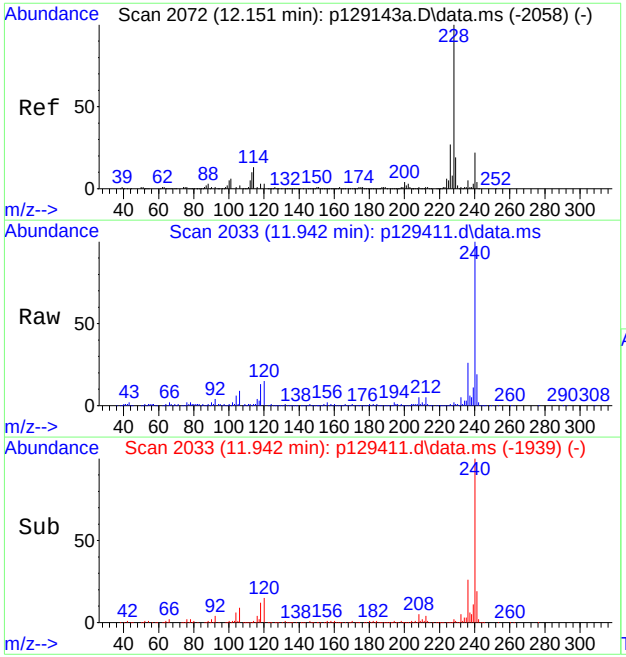


#84
Pyrene
Concen: 1.97 ppm
RT: 9.517 min Scan# 1579
Delta R.T. 0.016 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:202 Resp: 32287

Ion	Ratio	Lower	Upper
202	100		
101	20.4	0.0	46.5
100	12.8	0.0	42.4

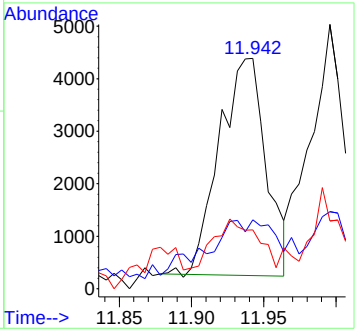


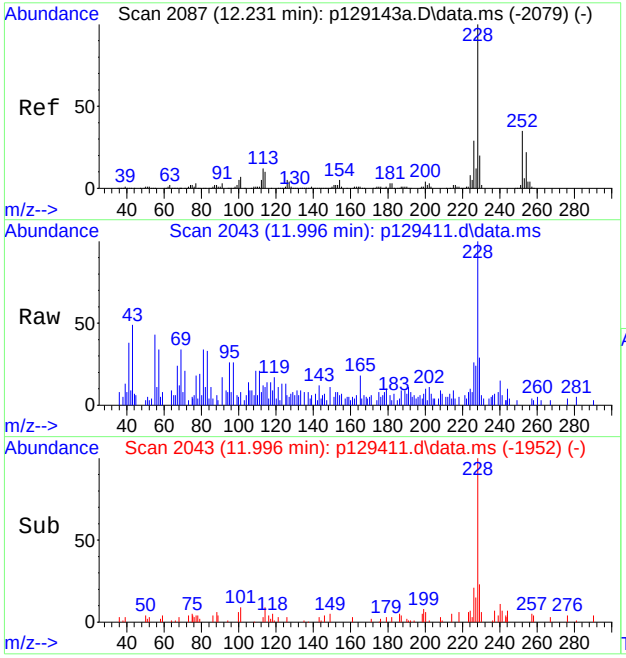


#87
Benzo[a]anthracene
Concen: 0.60 ppm
RT: 11.942 min Scan# 2033
Delta R.T. 0.000 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:228 Resp: 9325

Ion	Ratio	Lower	Upper
228	100		
229	23.2	0.0	49.8
226	9.4	0.0	57.1

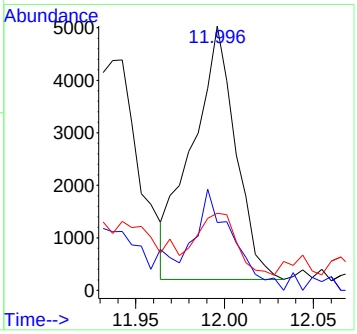


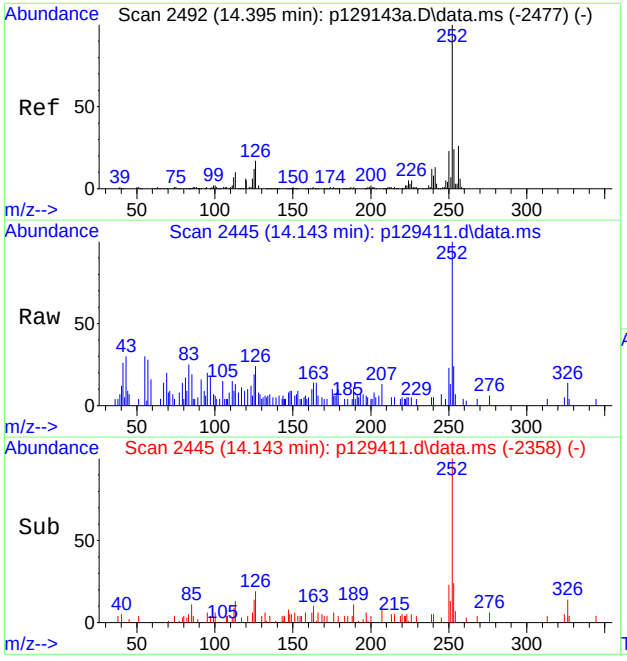


#89
Chrysene
Concen: 0.60 ppm
RT: 11.996 min Scan# 2043
Delta R.T. -0.016 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:228 Resp: 8219

Ion	Ratio	Lower	Upper
228	100		
226	21.2	0.1	60.1
229	19.6	0.0	49.6

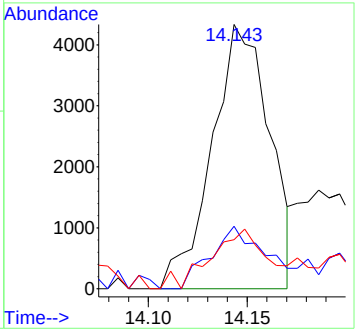


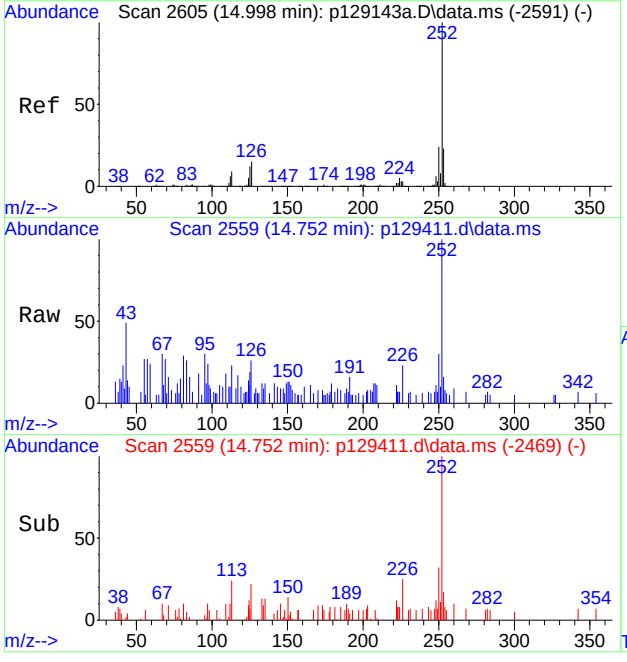


#93
Benzo[b]fluoranthene
Concen: 0.59 ppm m
RT: 14.143 min Scan# 2445
Delta R.T. -0.037 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:252 Resp: 8789

Ion	Ratio	Lower	Upper
252	100		
253	23.6	0.0	53.1
125	18.6	0.0	42.5

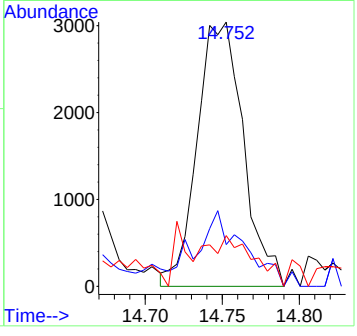




#95
Benzo[a]pyrene
Concen: 0.51 ppm
RT: 14.752 min Scan# 2559
Delta R.T. -0.021 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:252 Resp: 6345

Ion	Ratio	Lower	Upper
252	100		
253	12.8	0.0	51.7
125	17.1	0.0	42.2



9.1.18

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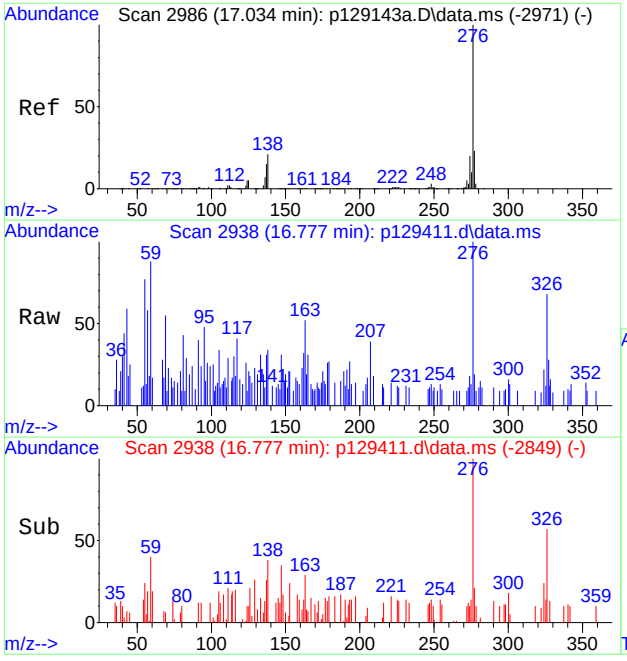
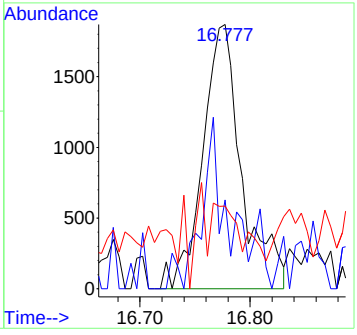
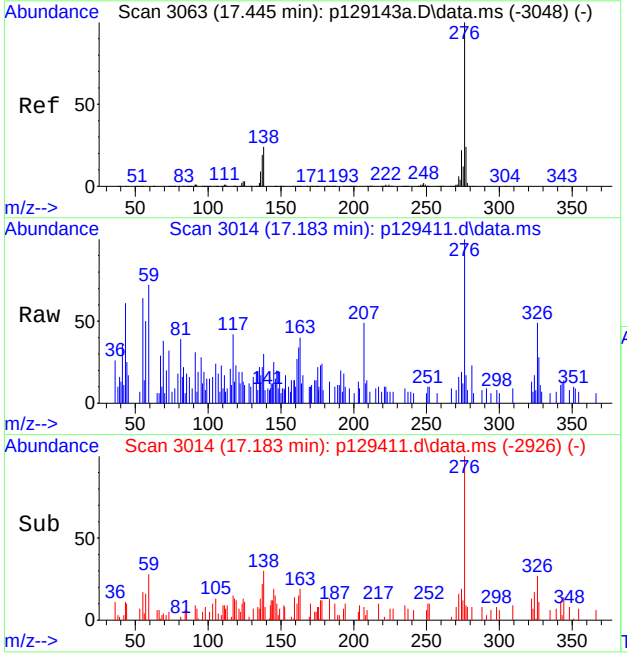


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.40 ppm
RT: 16.777 min Scan# 2938
Delta R.T. -0.027 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:276 Resp: 4637

Ion	Ratio	Lower	Upper
276	100		
138	24.7	0.0	54.3
137	7.1	0.0	47.2

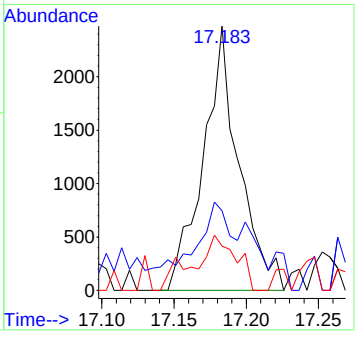




#100
Benzo[g,h,i]perylene
Concen: 0.37 ppm
RT: 17.183 min Scan# 3014
Delta R.T. -0.032 min
Lab File: p129411.d
Acq: 8 May 2019 5:20 pm

Tgt Ion:276 Resp: 4246

Ion	Ratio	Lower	Upper
276	100		
138	18.7	0.0	55.5
277	12.8	0.0	53.2



9.1.18

9

Manual Integration Approval Summary

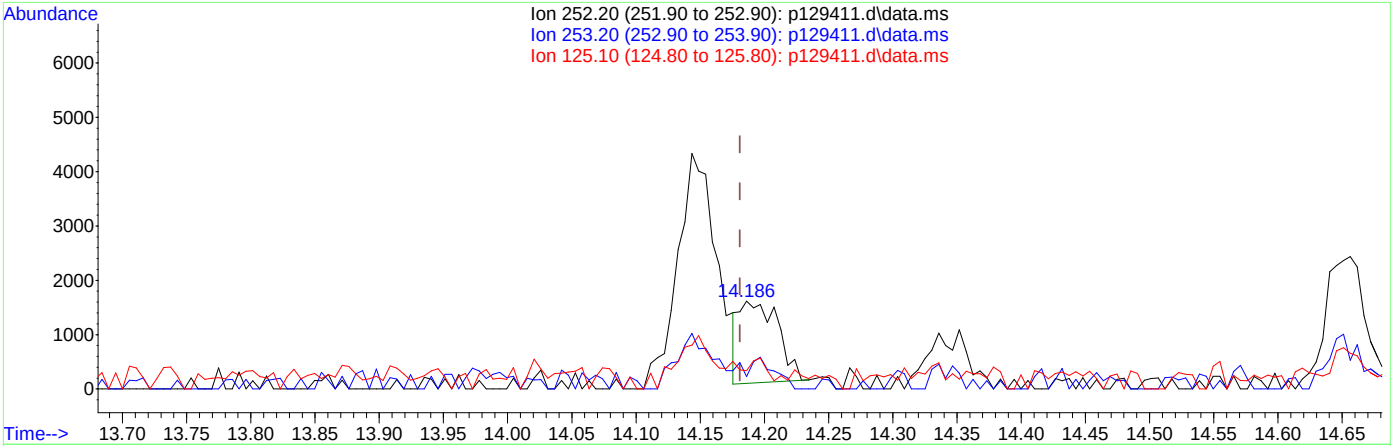
Sample Number:	JC87093-10	**Method:**	SW846 8270D
Lab FileID:	P129411.D	**Analyst approved:**	05/08/19 23:09 Michelle Co
Injection Time:	05/08/19 17:20	**Supervisor approved:**	05/10/19 18:17 Nancy Ma

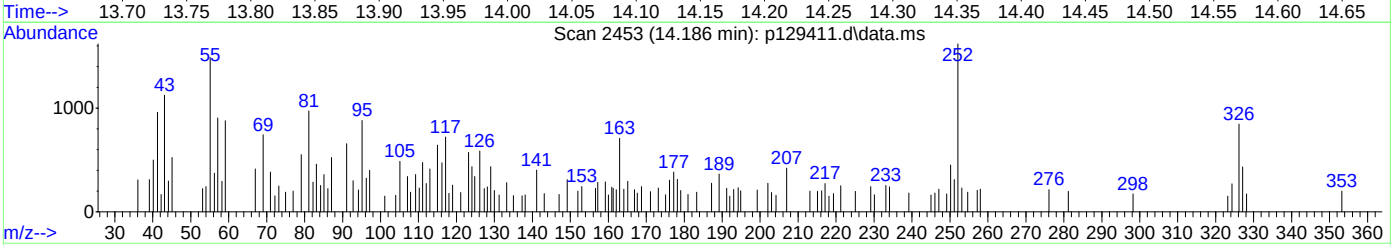
Parameter	CAS	Sig#	R.T. (min.)	Reason
Anthracene	120-12-7		0.00	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		14.14	Poor instrument integration

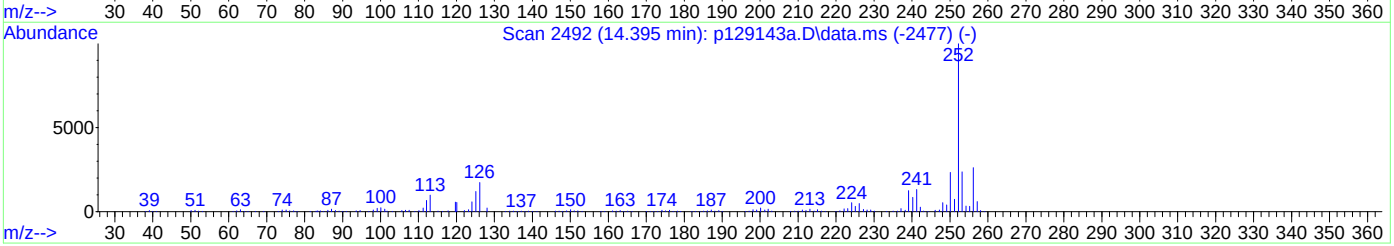
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5857\
Data File : p129411.d
Acq On : 8 May 2019 5:20 pm
Operator : angelar
Sample : jc87093-10 Inst : MSVOAMSP
Misc : op20110,ep5857,30.7,,,1,5
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 21:41:44 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 21:40:53 2019
Response via : Initial Calibration







TIC: p129411.d\data.ms

(93) Benzo[b]fluoranthene (t)

14.186min (+0.005) 0.21ppm

response 3138

Ion	Exp%	Act%
252.20	100	100
253.20	23.10	7.37
125.10	12.50	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/08/19 10:56

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129382.d
Acq On : 7 May 2019 8:06 pm
Operator : christc2
Sample : jc87093-11 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:36:42 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.763	152	169434	40.00	ppm	0.00
24) Naphthalene-d8	4.698	136	551922	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	276306	40.00	ppm	0.00
69) Phenanthrene-d10	7.337	188	469217	40.00	ppm	0.01
83) Chrysene-d12	11.985	240	426467	40.00	ppm	0.03
91) Perylene-d12	14.918	264	441169	40.00	ppm	0.03
101) 1,4-Dichlorobenzene-d4b	3.763	152	169434	40.00	ppm	0.00
103) Phenanthrene-d10b	7.337	188	469217	40.00	ppm	0.01
105) Chrysene-d12b	11.985	240	426467	40.00	ppm	0.03
107) Naphthalene-d8b	4.698	136	551922	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	276306	40.00	ppm	0.00
111) Chrysene-d12d	11.985	240	426467	40.00	ppm	0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	176754	32.47	ppm	0.00
Spiked Amount 50.000			Recovery = 64.94%			
8) Phenol-d5	3.625	99	230822	33.39	ppm	0.00
Spiked Amount 50.000			Recovery = 66.78%			
25) Nitrobenzene-d5	4.186	82	207067	34.92	ppm	0.00
Spiked Amount 50.000			Recovery = 69.84%			
51) 2-Fluorobiphenyl	5.478	172	368157	42.05	ppm	0.00
Spiked Amount 50.000			Recovery = 84.10%			
73) 2,4,6-Tribromophenol	6.606	330	58010	37.15	ppm	0.00
Spiked Amount 50.000			Recovery = 74.30%			
85) Terphenyl-d14	9.966	244	389711	40.33	ppm	0.02
Spiked Amount 50.000			Recovery = 80.66%			
Target Compounds						Qvalue
18) Acetophenone	4.084	105	1848m	0.22	ppm	
21) 3&4-Methylphenol	4.175	108	29834	5.78	ppm	99
38) Naphthalene	4.714	128	313518	23.79	ppm	100
44) 2-Methylnaphthalene	5.211	141	59672	7.90	ppm	95
53) Biphenyl	5.542	154	16940	1.82	ppm	92
56) Acenaphthylene	5.836	152	44533	3.77	ppm	98
59) Acenaphthene	5.964	153	90628	12.47	ppm	100
62) Dibenzofuran	6.093	168	30656	2.78	ppm	90
66) Fluorene	6.370	166	55083	6.24	ppm	93
77) Phenanthrene	7.364	178	220244	18.01	ppm	99
78) Anthracene	7.423	178	73516	5.76	ppm	98
79) Carbazole	7.685	167	18759	1.52	ppm	97
81) Fluoranthene	9.164	202	220357	14.61	ppm	97
84) Pyrene	9.528	202	244682	16.57	ppm	98
87) Benzo[a]anthracene	11.969	228	134034	9.53	ppm	96
89) Chrysene	12.033	228	135959	10.98	ppm	98
93) Benzo[b]fluoranthene	14.197	252	166961	12.42	ppm	96
94) Benzo[k]fluoranthene	14.240	252	57038	5.04	ppm	93
95) Benzo[a]pyrene	14.795	252	145521	12.80	ppm	98
96) Indeno[1,2,3-cd]pyrene	16.825	276	83559	8.04	ppm	96
98) Dibenz[a,h]anthracene	16.895	278	23184m	2.19	ppm	
100) Benzo[g,h,i]perylene	17.237	276	89397	8.53	ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

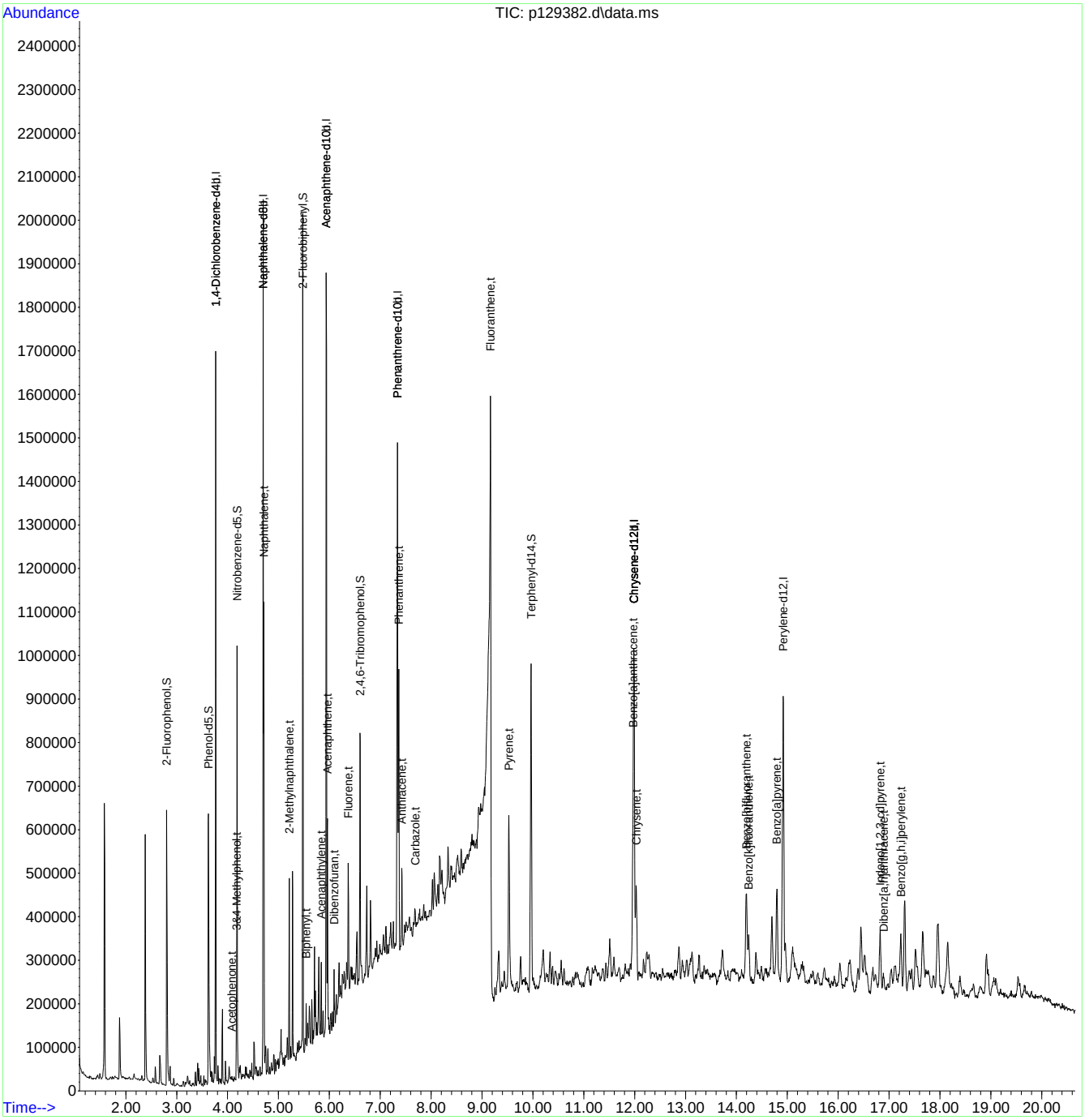
9.1.19

9

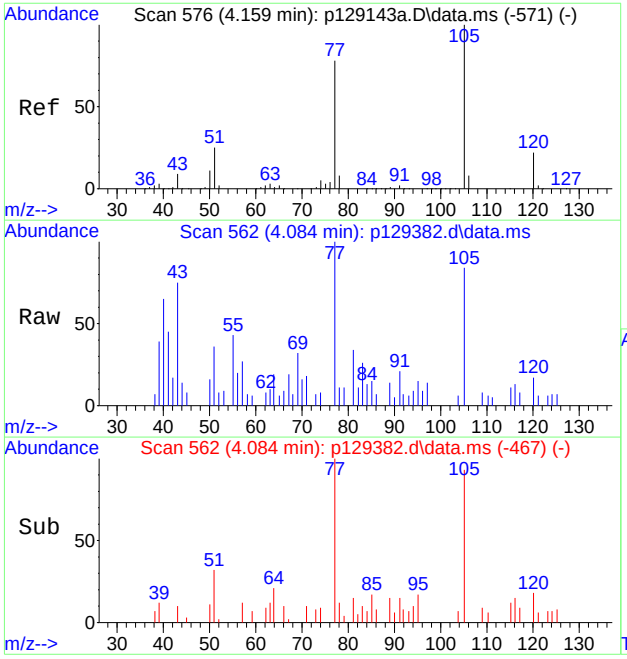
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129382.d
Acq On : 7 May 2019 8:06 pm
Operator : christc2
Sample : jc87093-11 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:36:42 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



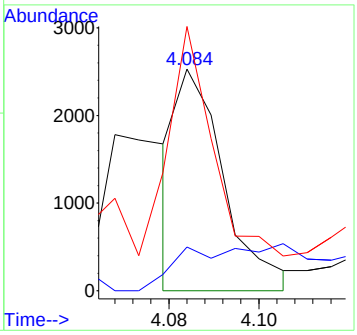
MP5844.M Wed May 08 05:05:49 2019 Page: 2

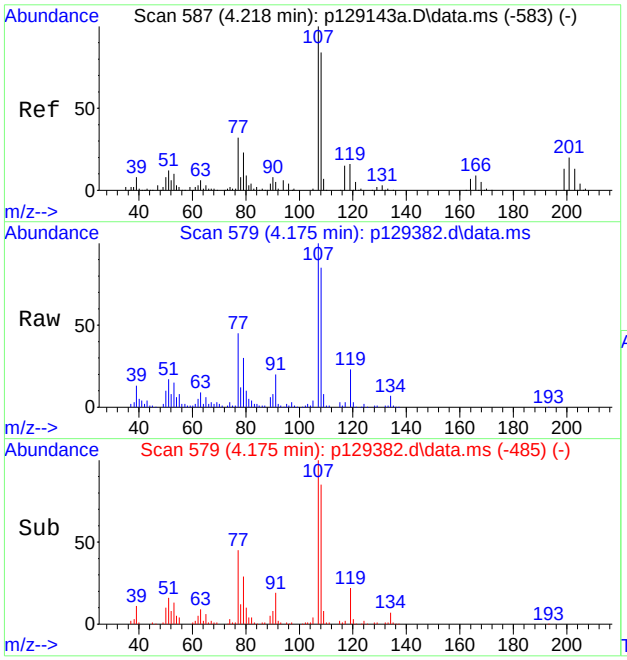


#18
Acetophenone
Concen: 0.22 ppm m
RT: 4.084 min Scan# 562
Delta R.T. 0.005 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:105 Resp: 1848

Ion	Ratio	Lower	Upper
105	100		
120	19.8	0.0	50.7
77	119.3	60.4	120.4

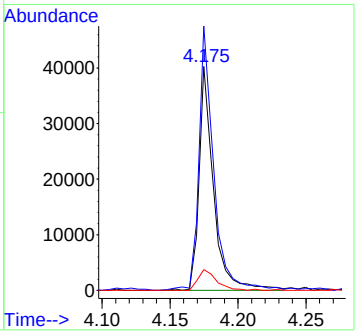


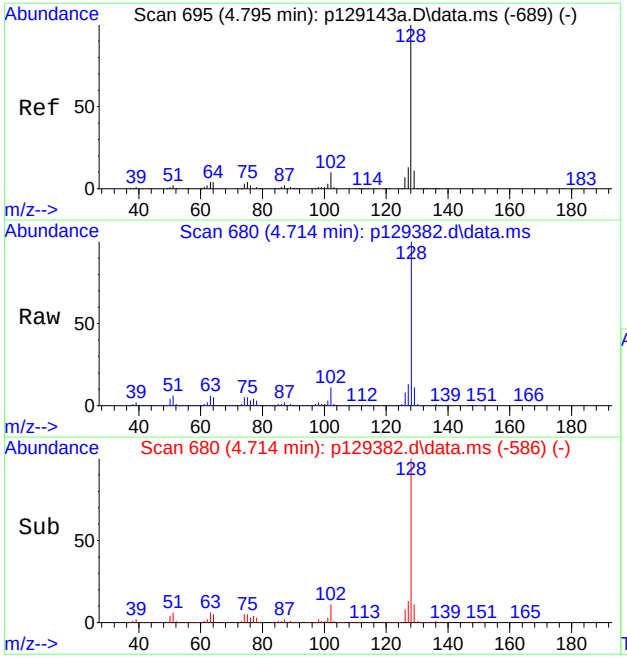


#21
3&4-Methylphenol
Concen: 5.78 ppm
RT: 4.175 min Scan# 579
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:108 Resp: 29834

Ion	Ratio	Lower	Upper
108	100		
107	118.3	89.5	149.5
90	9.3	0.0	39.8

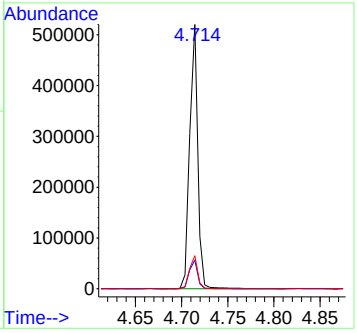


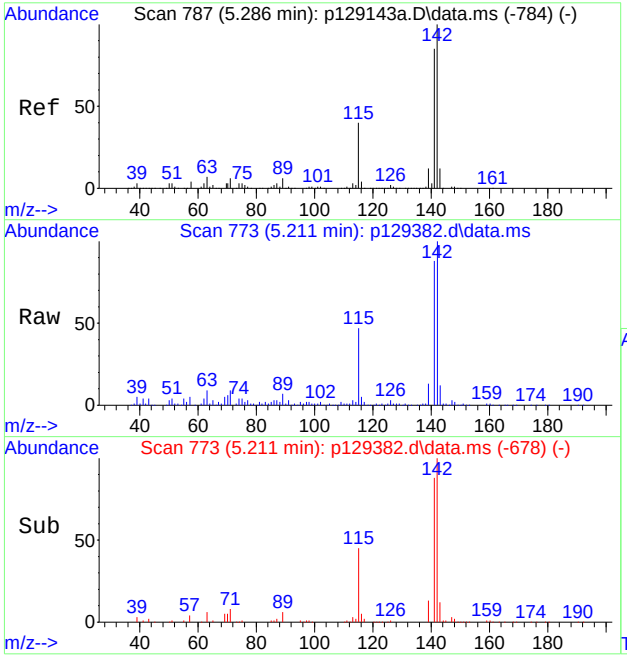


#38
Naphthalene
Concen: 23.79 ppm
RT: 4.714 min Scan# 680
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:128 Resp: 313518

Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	40.6
127	12.5	0.0	42.5

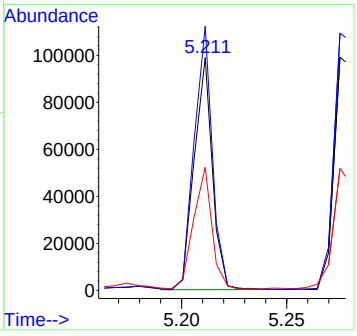




#44
2-Methylnaphthalene
Concen: 7.90 ppm
RT: 5.211 min Scan# 773
Delta R.T. 0.005 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:141 Resp: 59672

Ion	Ratio	Lower	Upper
141	100		
142	113.6	91.9	151.9
115	52.1	21.5	81.5



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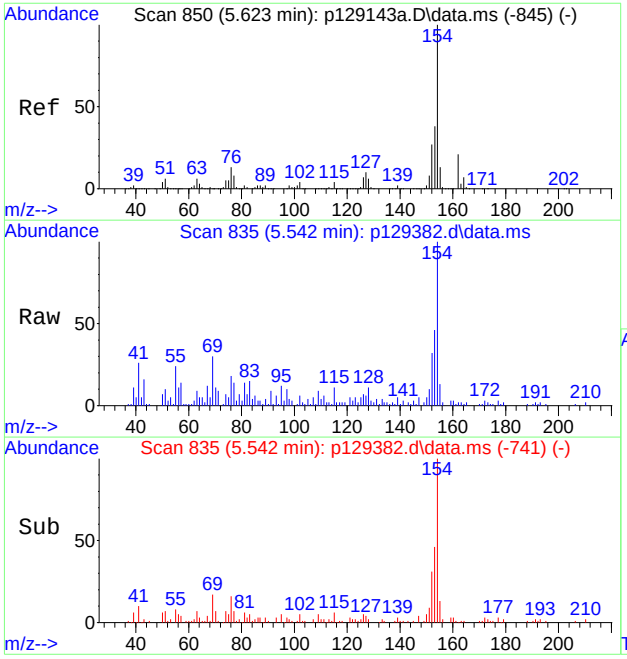
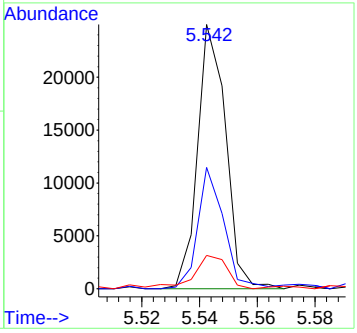
9

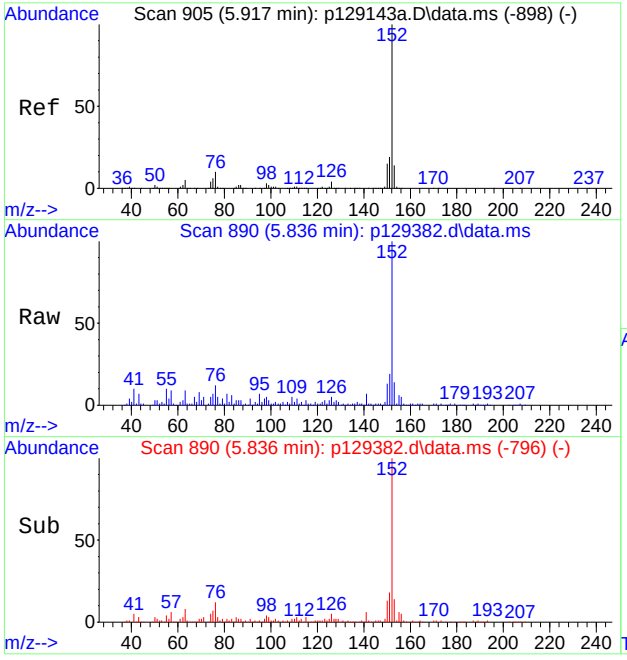


#53
Biphenyl
Concen: 1.82 ppm
RT: 5.542 min Scan# 835
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:154 Resp: 16940

Ion	Ratio	Lower	Upper
154	100		
153	45.2	9.3	69.3
155	11.4	0.0	43.0

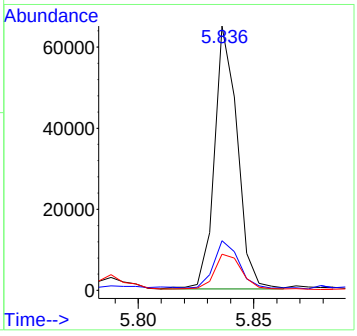




#56
Acenaphthylene
Concen: 3.77 ppm
RT: 5.836 min Scan# 890
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

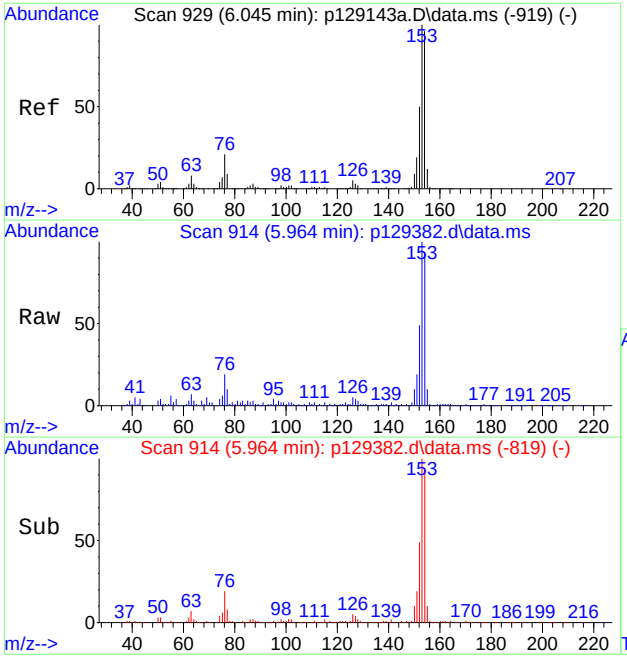
Tgt Ion:152 Resp: 44533

Ion	Ratio	Lower	Upper
152	100		
151	17.8	0.0	49.2
153	13.3	0.0	43.0



9.1.19

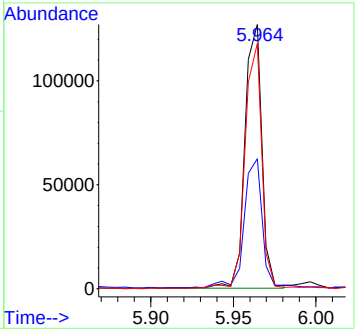
9

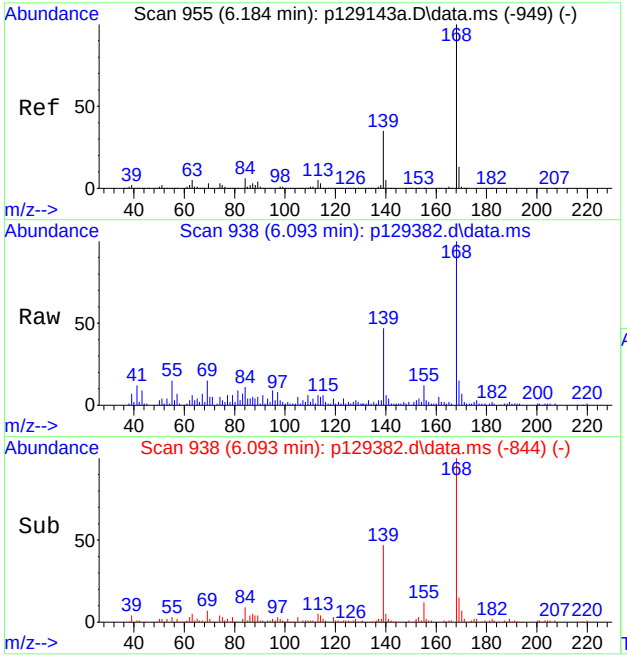


#59
Acenaphthene
Concen: 12.47 ppm
RT: 5.964 min Scan# 914
Delta R.T. 0.005 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:153 Resp: 90628

Ion	Ratio	Lower	Upper
153	100		
152	48.8	19.5	79.5
154	93.1	63.0	123.0

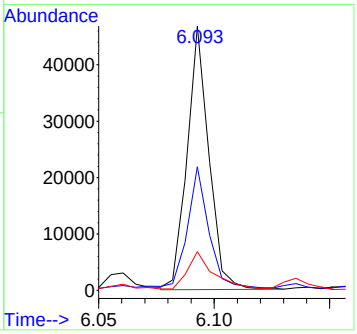




#62
Dibenzofuran
Concen: 2.78 ppm
RT: 6.093 min Scan# 938
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

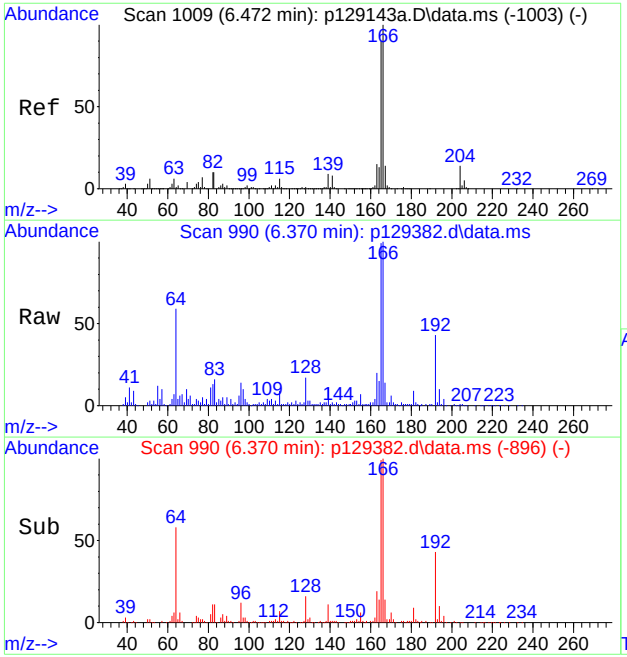
Tgt Ion:168 Resp: 30656

Ion	Ratio	Lower	Upper
168	100		
139	45.4	7.2	67.2
169	13.0	0.0	43.3



9.1.19

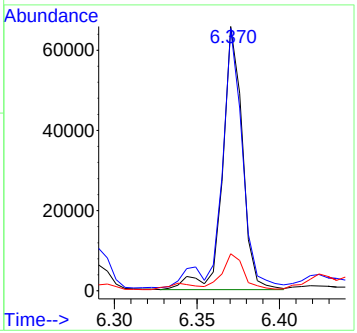
9

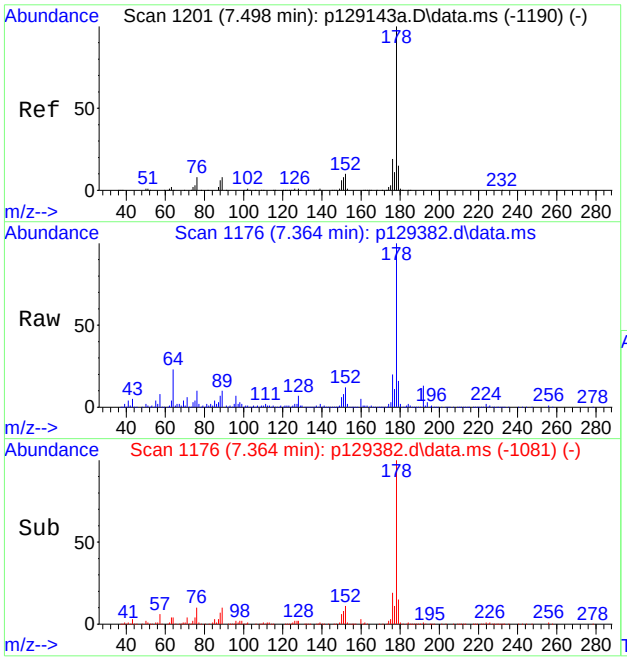


#66
Fluorene
Concen: 6.24 ppm
RT: 6.370 min Scan# 990
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:166 Resp: 55083

Ion	Ratio	Lower	Upper
166	100		
165	98.1	61.0	121.0
167	13.1	0.0	43.1

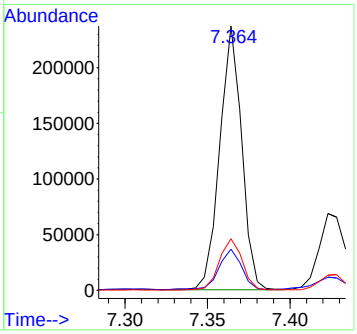




#77
Phenanthrene
Concen: 18.01 ppm
RT: 7.364 min Scan# 1176
Delta R.T. 0.005 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

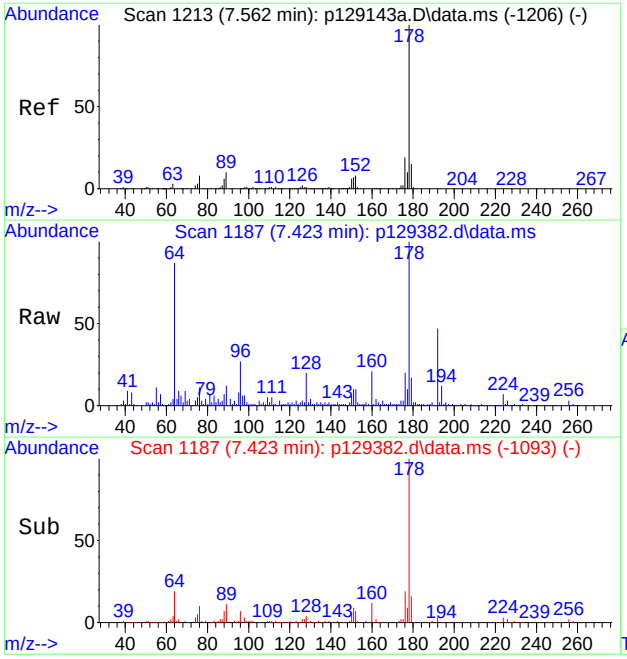
Tgt Ion:178 Resp: 220244

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	45.5
176	19.4	0.0	49.9



9.1.19

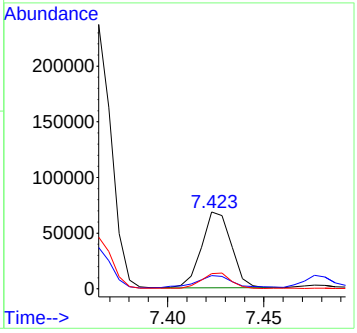
9

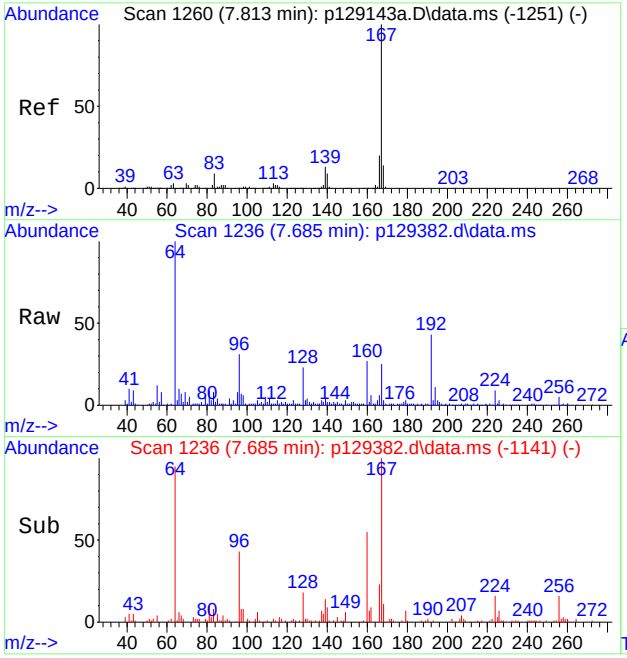


#78
Anthracene
Concen: 5.76 ppm
RT: 7.423 min Scan# 1187
Delta R.T. 0.000 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:178 Resp: 73516

Ion	Ratio	Lower	Upper
178	100		
179	15.6	0.0	45.8
176	19.5	0.0	48.4

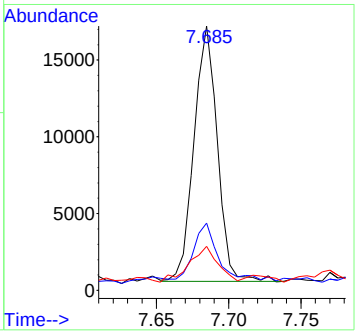




#79
Carbazole
Concen: 1.52 ppm
RT: 7.685 min Scan# 1236
Delta R.T. 0.005 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

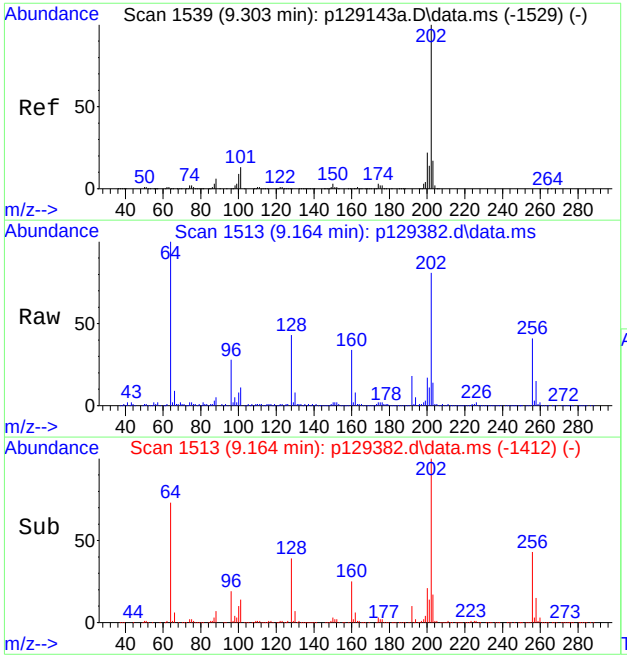
Tgt Ion:167 Resp: 18759

Ion	Ratio	Lower	Upper
167	100		
166	21.6	0.0	49.7
139	14.1	0.0	43.8



9.1.19

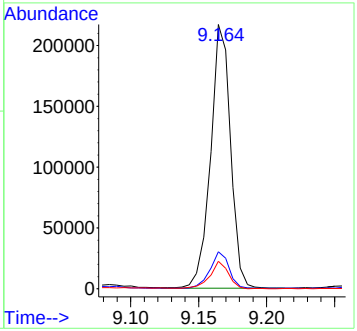
9

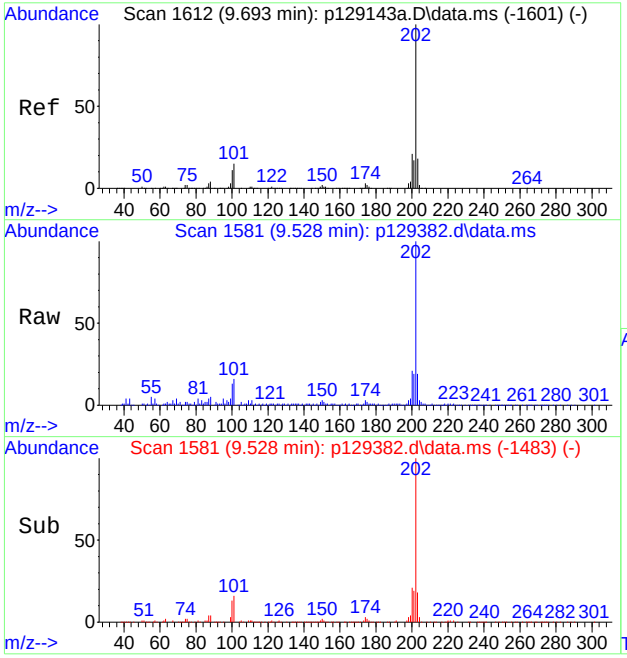


#81
Fluoranthene
Concen: 14.61 ppm
RT: 9.164 min Scan# 1513
Delta R.T. 0.037 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:202 Resp: 220357

Ion	Ratio	Lower	Upper
202	100		
101	13.8	0.0	45.1
100	10.2	0.0	41.2

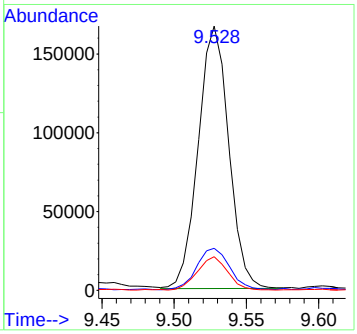


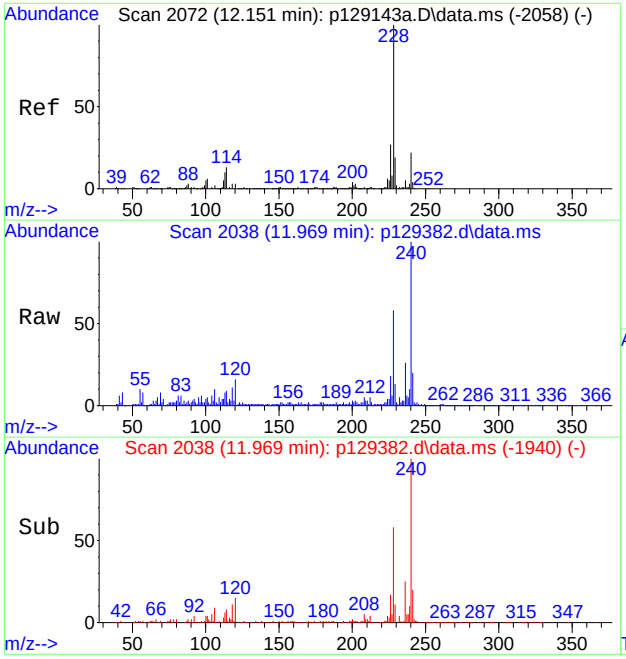


#84
Pyrene
Concen: 16.57 ppm
RT: 9.528 min Scan# 1581
Delta R.T. 0.021 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:202 Resp: 244682

Ion	Ratio	Lower	Upper
202	100		
101	15.5	0.0	46.9
100	12.6	0.0	42.7

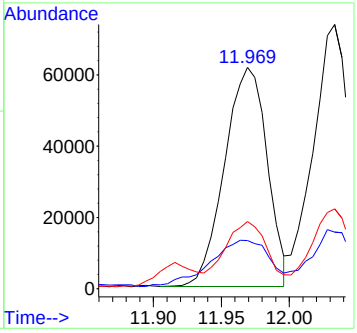


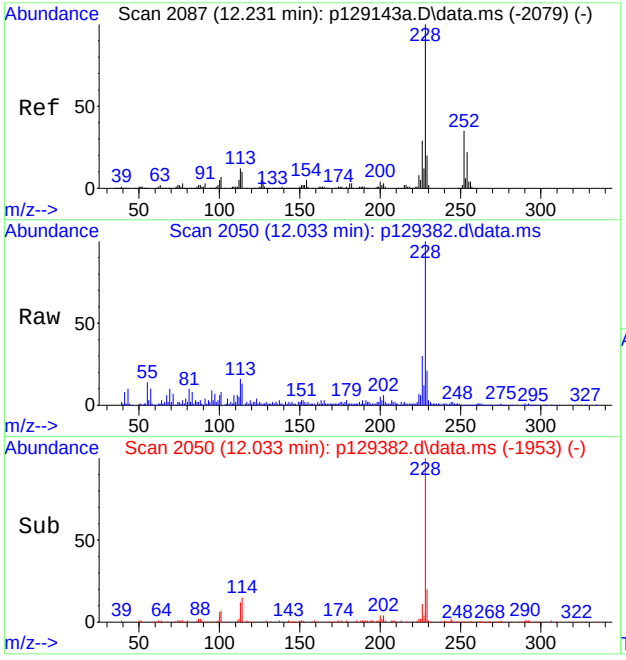


#87
Benzo[a]anthracene
Concen: 9.53 ppm
RT: 11.969 min Scan# 2038
Delta R.T. 0.021 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:228 Resp: 134034

Ion	Ratio	Lower	Upper
228	100		
229	18.9	0.0	49.8
226	25.3	0.0	57.8

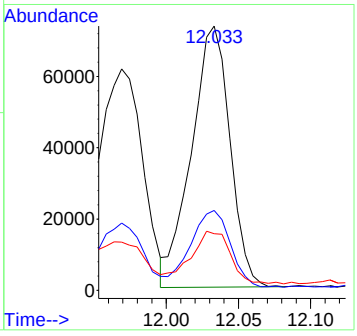




#89
Chrysene
Concen: 10.98 ppm
RT: 12.033 min Scan# 2050
Delta R.T. 0.016 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

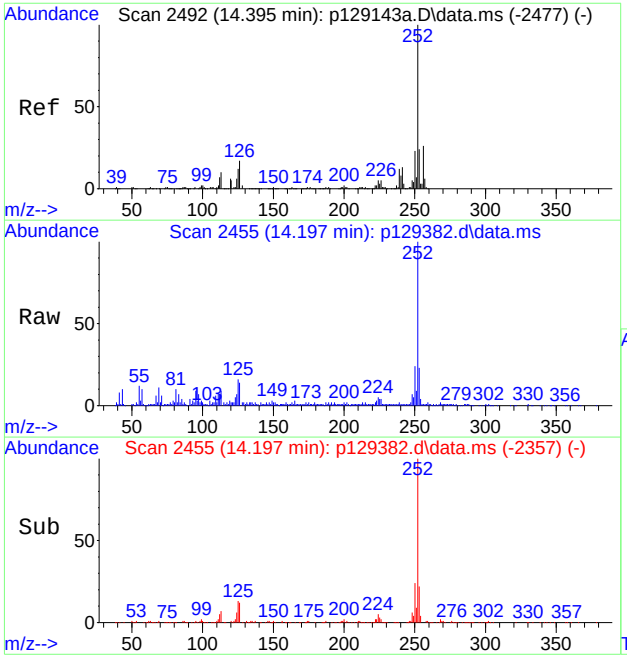
Tgt Ion:228 Resp: 135959

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	59.4
229	18.5	0.0	50.5



9.1.19

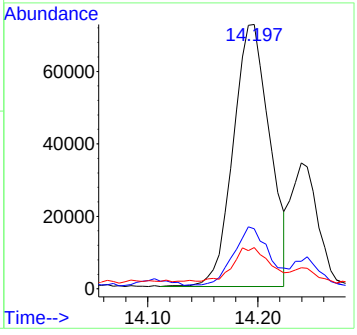
9

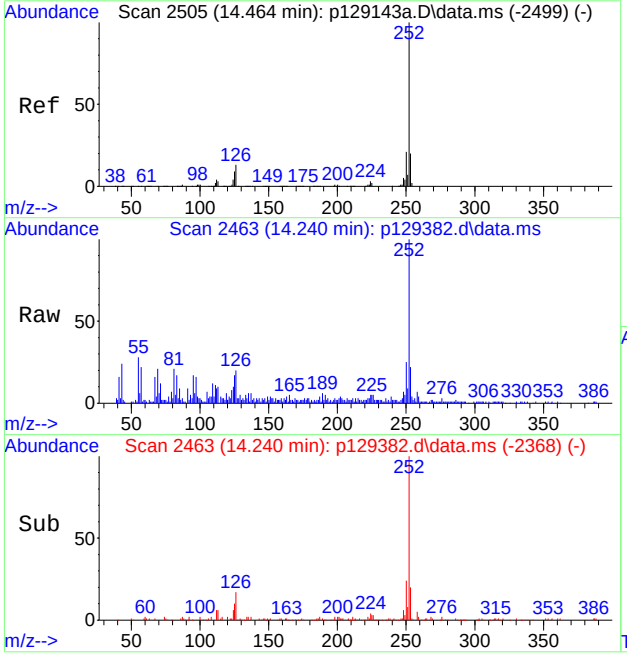


#93
Benzo[b]fluoranthene
Concen: 12.42 ppm
RT: 14.197 min Scan# 2455
Delta R.T. 0.021 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:252 Resp: 166961

Ion	Ratio	Lower	Upper
252	100		
253	20.5	0.0	52.9
125	13.2	0.0	42.3

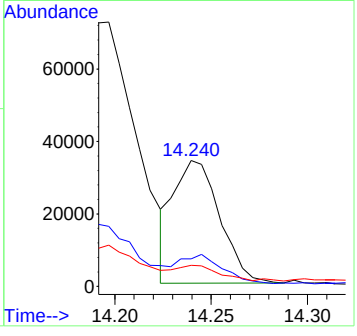


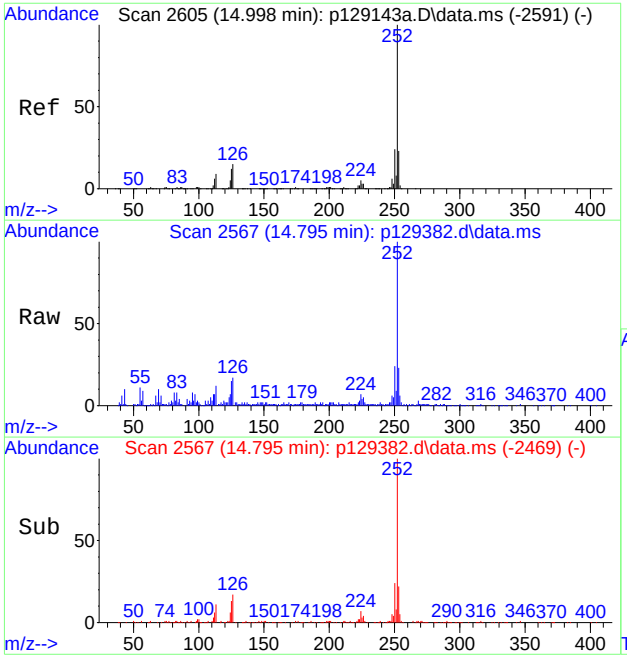


#94
Benzo[k]fluoranthene
Concen: 5.04 ppm
RT: 14.240 min Scan# 2463
Delta R.T. 0.005 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:252 Resp: 57038

Ion	Ratio	Lower	Upper
252	100		
253	17.9	0.0	51.7
125	12.0	0.0	40.5

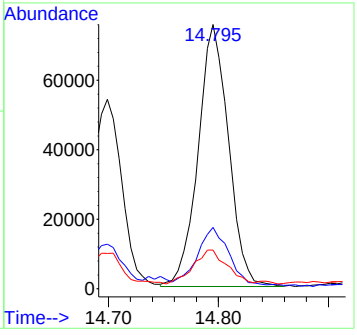


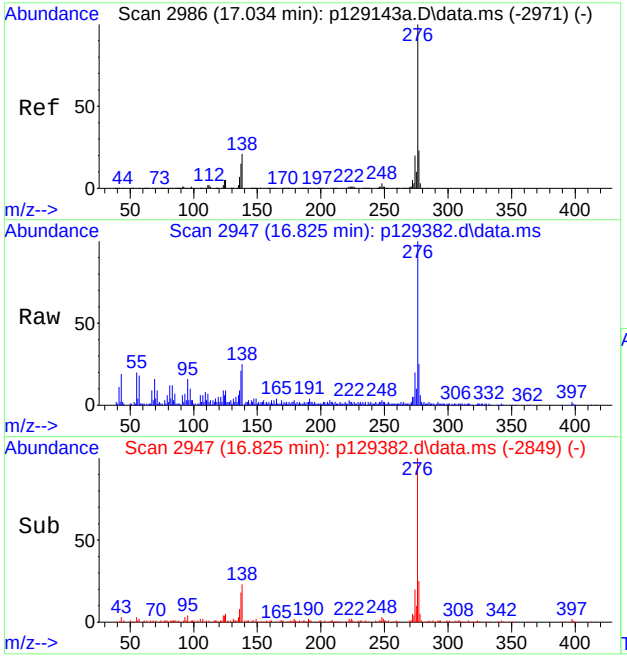


#95
Benzo[a]pyrene
Concen: 12.80 ppm
RT: 14.795 min Scan# 2567
Delta R.T. 0.021 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:252 Resp: 145521

Ion	Ratio	Lower	Upper
252	100		
253	20.5	0.0	51.6
125	12.6	0.0	43.5

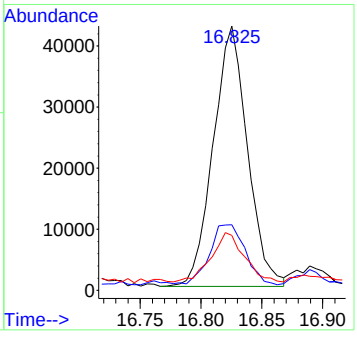


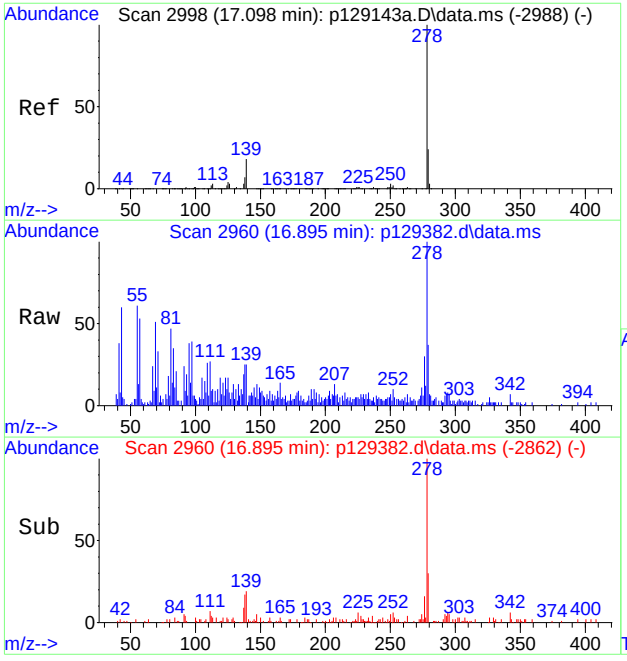


#96
Indeno[1,2,3-cd]pyrene
Concen: 8.04 ppm
RT: 16.825 min Scan# 2947
Delta R.T. 0.021 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:276 Resp: 83559

Ion	Ratio	Lower	Upper
276	100		
138	22.8	0.0	55.2
137	17.7	0.0	46.6

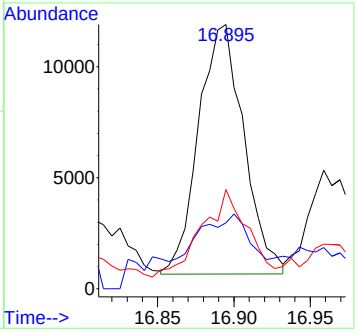


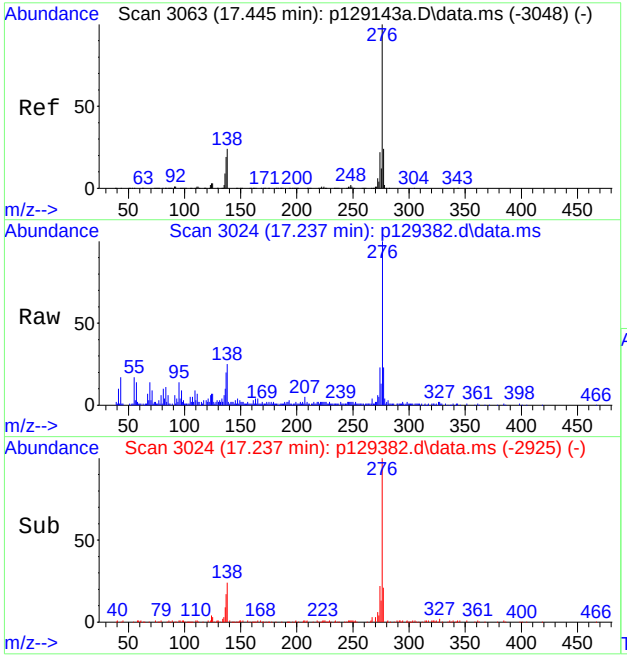


#98
Dibenz[a,h]anthracene
Concen: 2.19 ppm m
RT: 16.895 min Scan# 2960
Delta R.T. 0.021 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:278 Resp: 23184

Ion	Ratio	Lower	Upper
278	100		
139	25.0	0.0	53.0
279	37.5	0.0	54.4

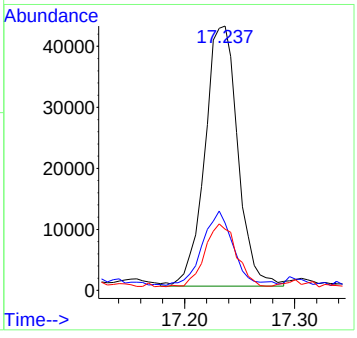




#100
Benzo[g,h,i]perylene
Concen: 8.53 ppm
RT: 17.237 min Scan# 3024
Delta R.T. 0.027 min
Lab File: p129382.d
Acq: 7 May 2019 8:06 pm

Tgt Ion:276 Resp: 89397

Ion	Ratio	Lower	Upper
276	100		
138	23.6	0.0	56.5
277	21.7	0.0	54.7



Manual Integration Approval Summary

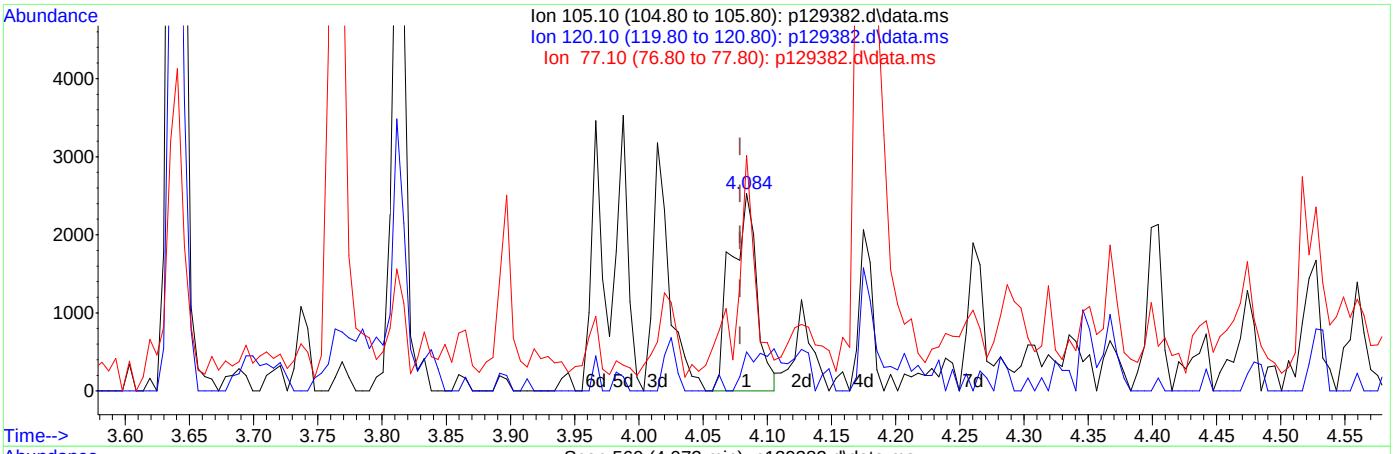
Sample Number:	JC87093-11	**Method:**	SW846 8270D
Lab FileID:	P129382.D	**Analyst approved:**	05/08/19 05:14 Michelle Co
Injection Time:	05/07/19 20:06	**Supervisor approved:**	05/08/19 10:56 Nancy Ma

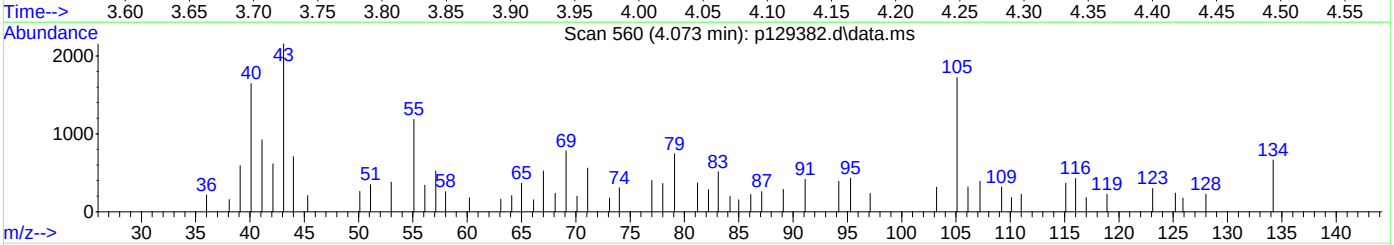
Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetophenone	98-86-2		4.08	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		16.89	Poor instrument integration

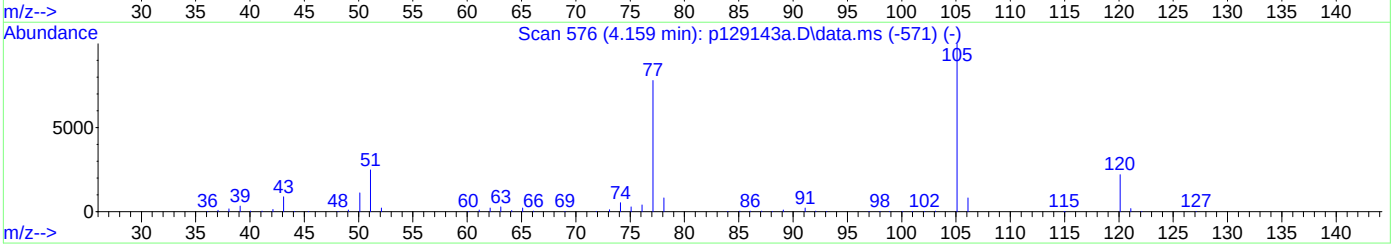
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129382.d
Acq On : 7 May 2019 8:06 pm
Operator : christc2
Sample : jc87093-11 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:03:44 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration







TIC: p129382.d\data.ms

(18) Acetophenone (t)

4.084min (+0.005) 0.43ppm

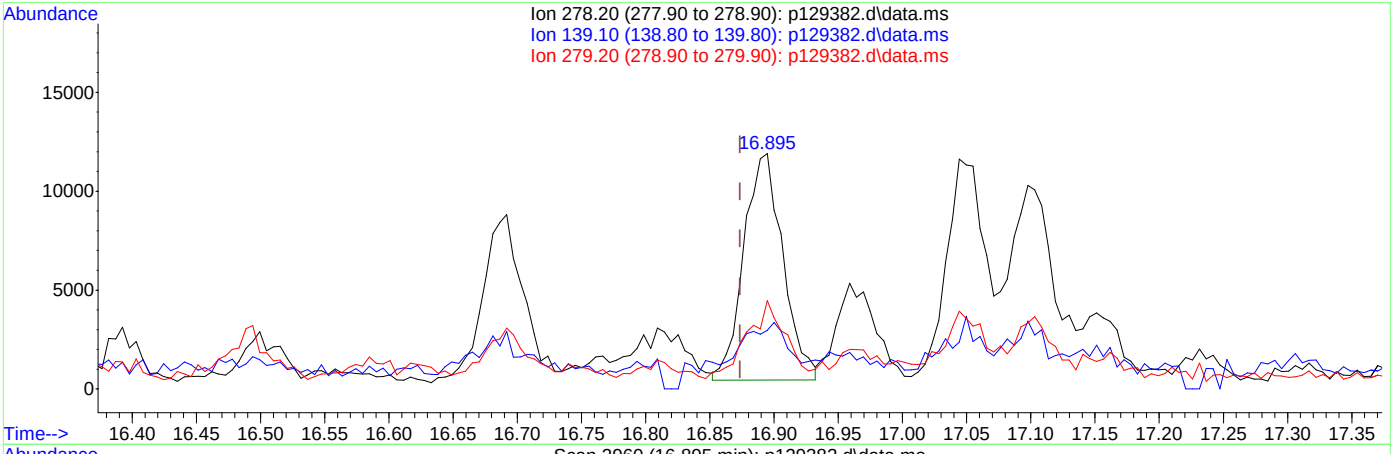
response 3579

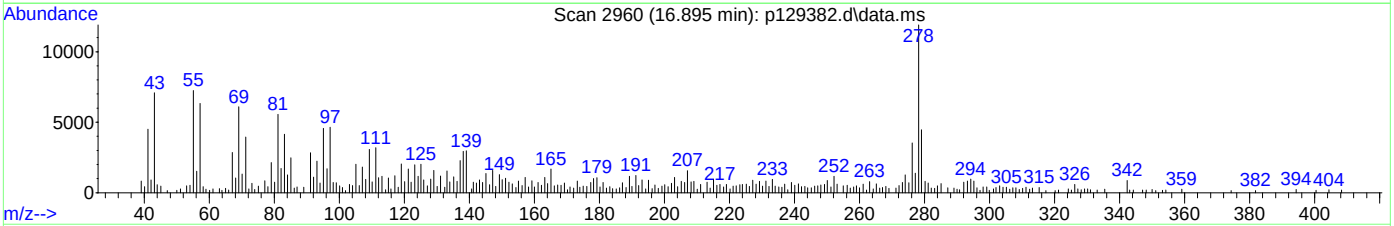
Ion	Exp%	Act%
105.10	100	100
120.10	20.70	9.57
77.10	90.40	105.47
0.00	0.00	0.00

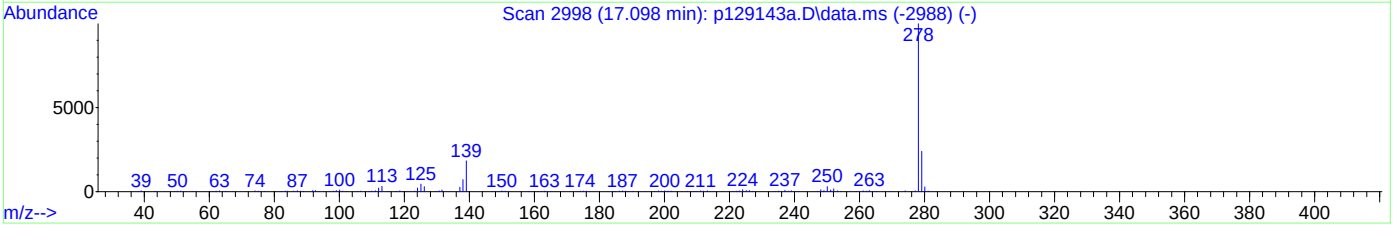
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129382.d
Acq On : 7 May 2019 8:06 pm
Operator : christc2
Sample : jc87093-11 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:03:44 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration







TIC: p129382.d\data.ms

(98) Dibenz[a,h]anthracene (t)

16.895min (+0.021) 2.28ppm

response 24206

Ion	Exp%	Act%
278.20	100	100
139.10	23.00	14.29
279.20	24.40	32.27
0.00	0.00	0.00

Manual Integrations
APPROVED
(compounds with "m" flag)
Nancy Ma
05/08/19 10:56

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129383.d
Acq On : 7 May 2019 8:33 pm
Operator : christc2
Sample : jc87093-12 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:45:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	169094	40.00	ppm	0.00
24) Naphthalene-d8	4.699	136	536654	40.00	ppm	0.00
47) Acenaphthene-d10	5.943	164	267912	40.00	ppm	0.00
69) Phenanthrene-d10	7.338	188	471682	40.00	ppm	0.01
83) Chrysene-d12	11.991	240	425992	40.00	ppm	0.03
91) Perylene-d12	14.924	264	442162	40.00	ppm	0.03
101) 1,4-Dichlorobenzene-d4b	3.764	152	169094	40.00	ppm	0.00
103) Phenanthrene-d10b	7.338	188	471682	40.00	ppm	0.01
105) Chrysene-d12b	11.991	240	425992	40.00	ppm	0.03
107) Naphthalene-d8b	4.699	136	536654	40.00	ppm	0.00
109) Acenaphthene-d10b	5.943	164	267912	40.00	ppm	0.00
111) Chrysene-d12d	11.991	240	425992	40.00	ppm	0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.807	112	167969	30.92	ppm	0.00
Spiked Amount 50.000			Recovery = 61.84%			
8) Phenol-d5	3.625	99	213792	30.99	ppm	0.00
Spiked Amount 50.000			Recovery = 61.98%			
25) Nitrobenzene-d5	4.186	82	195432	33.90	ppm	0.00
Spiked Amount 50.000			Recovery = 67.80%			
51) 2-Fluorobiphenyl	5.478	172	327983	38.64	ppm	0.00
Spiked Amount 50.000			Recovery = 77.28%			
73) 2,4,6-Tribromophenol	6.606	330	47713	30.40	ppm	0.00
Spiked Amount 50.000			Recovery = 60.80%			
85) Terphenyl-d14	9.966	244	331405	34.34	ppm	0.02
Spiked Amount 50.000			Recovery = 68.68%			
Target Compounds						Qvalue
21) 3&4-Methylphenol	4.175	108	19695	3.83	ppm	92
38) Naphthalene	4.715	128	350295	27.34	ppm	99
44) 2-Methylnaphthalene	5.211	141	73563	10.01	ppm	97
53) Biphenyl	5.543	154	17679	1.96	ppm	98
56) Acenaphthylene	5.836	152	60909	5.31	ppm	96
59) Acenaphthene	5.965	153	141113	20.03	ppm	98
62) Dibenzofuran	6.093	168	33184	3.11	ppm	92
66) Fluorene	6.376	166	108482	12.67	ppm	96
77) Phenanthrene	7.370	178	599788	48.79	ppm	99
78) Anthracene	7.428	178	182766	14.23	ppm	99
79) Carbazole	7.685	167	18677	1.51	ppm	89
81) Fluoranthene	9.165	202	568202	37.48	ppm	95
84) Pyrene	9.533	202	646255	43.82	ppm	99
87) Benzo[a]anthracene	11.975	228	295657	21.05	ppm	95
89) Chrysene	12.044	228	280088	22.65	ppm	98
93) Benzo[b]fluoranthene	14.197	252	291361	21.62	ppm	97
94) Benzo[k]fluoranthene	14.245	252	100096	8.83	ppm	97
95) Benzo[a]pyrene	14.801	252	254771	22.35	ppm	98
96) Indeno[1,2,3-cd]pyrene	16.825	276	132368	12.71	ppm	99
98) Dibenz[a,h]anthracene	16.895	278	35898m	3.38	ppm	
100) Benzo[g,h,i]perylene	17.237	276	133330	12.70	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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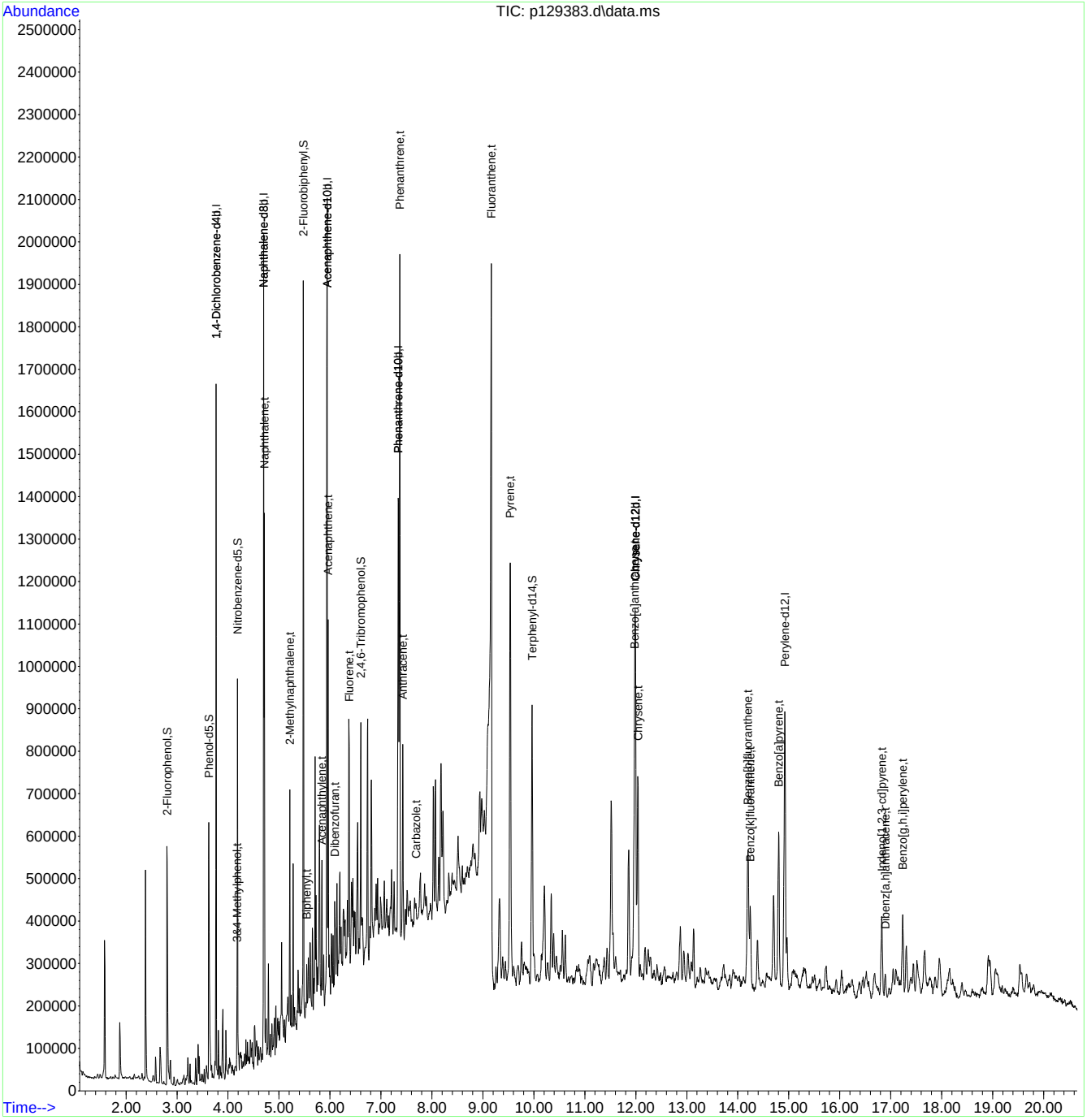
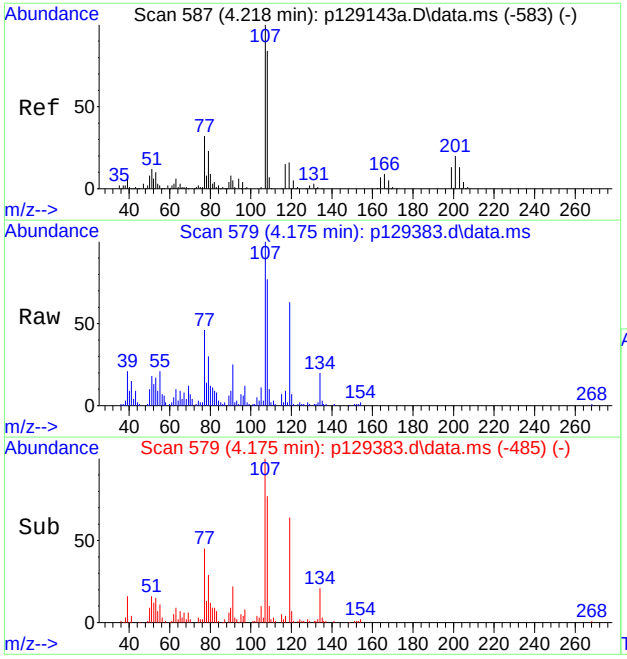
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129383.d
Acq On : 7 May 2019 8:33 pm
Operator : christc2
Sample : jc87093-12 Inst : MSVOAMSP
Misc : op20110,ep5856,30.7,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:45:25 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

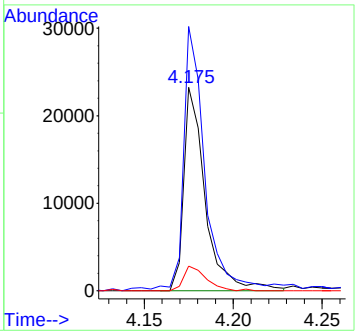


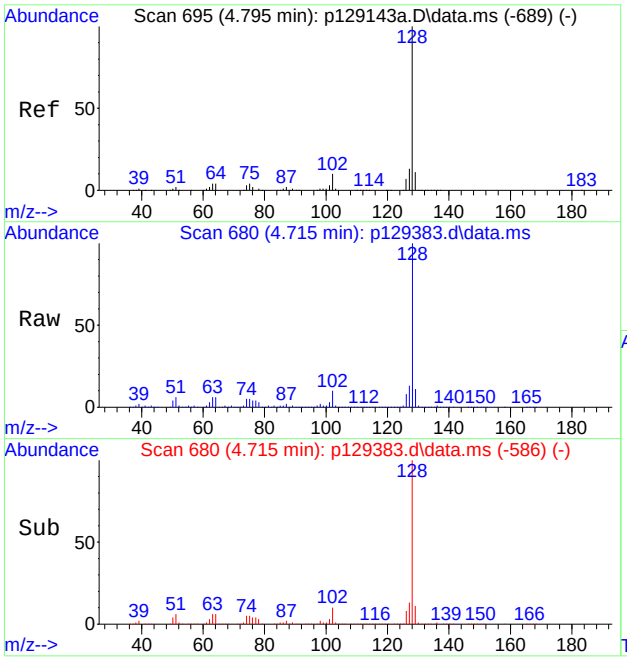


#21
3&4-Methylphenol
Concen: 3.83 ppm
RT: 4.175 min Scan# 579
Delta R.T. 0.000 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:108 Resp: 19695

Ion	Ratio	Lower	Upper
108	100		
107	128.2	89.5	149.5
90	12.2	0.0	39.8

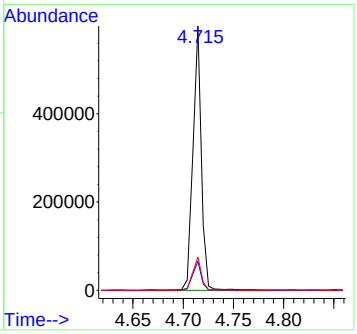




#38
Naphthalene
Concen: 27.34 ppm
RT: 4.715 min Scan# 680
Delta R.T. 0.000 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:128 Resp: 350295

Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	40.6
127	12.6	0.0	42.5



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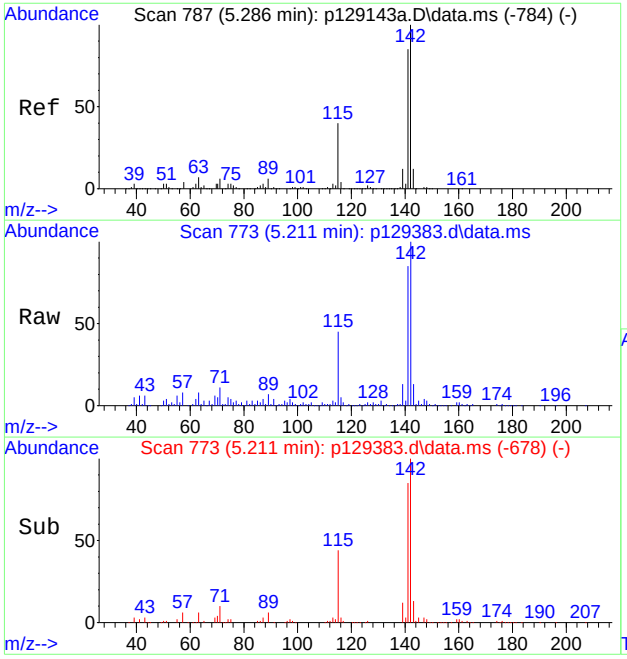
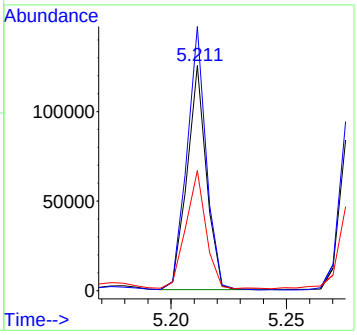
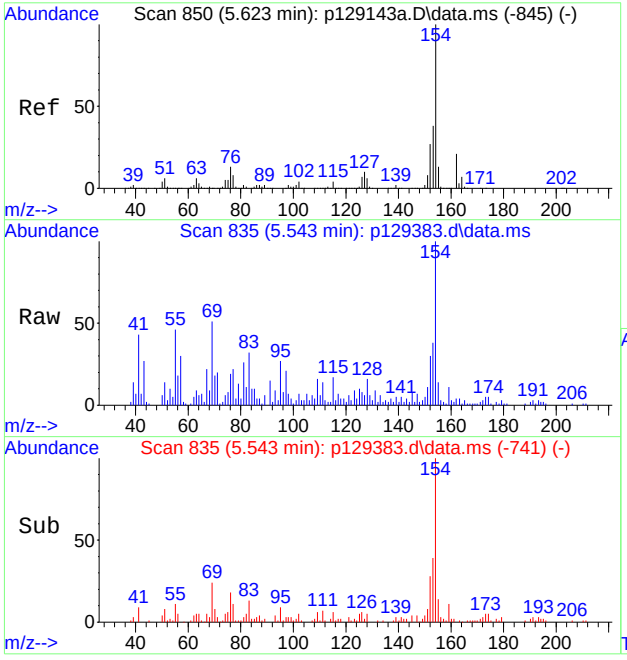


#44
2-Methylnaphthalene
Concen: 10.01 ppm
RT: 5.211 min Scan# 773
Delta R.T. 0.005 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:141 Resp: 73563

Ion	Ratio	Lower	Upper
141	100		
142	117.5	91.9	151.9
115	52.4	21.5	81.5

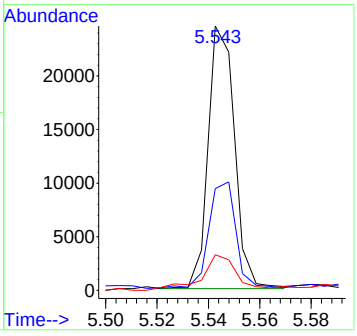




#53
Biphenyl
Concen: 1.96 ppm
RT: 5.543 min Scan# 835
Delta R.T. 0.000 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:154 Resp: 17679

Ion	Ratio	Lower	Upper
154	100		
153	37.9	9.3	69.3
155	12.4	0.0	43.0



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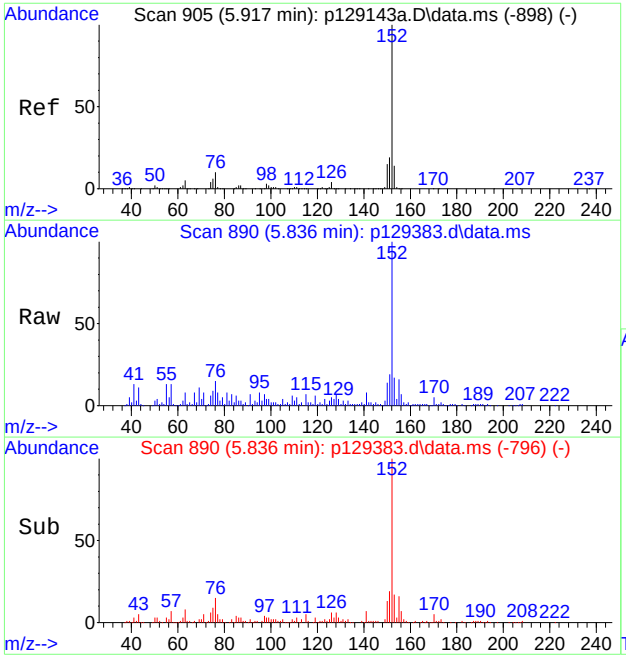
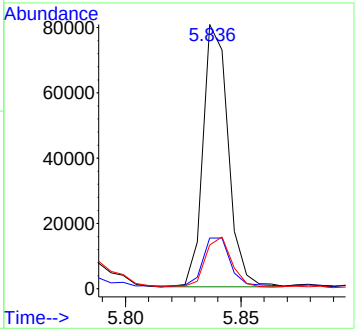
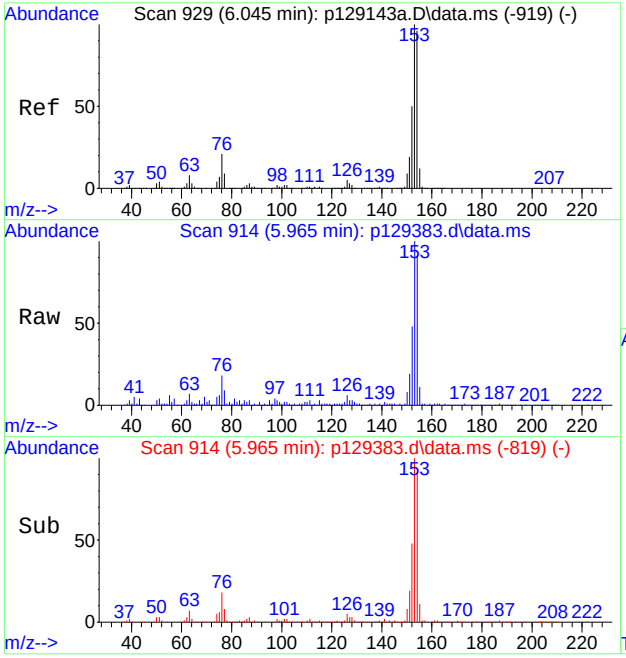


#56
Acenaphthylene
Concen: 5.31 ppm
RT: 5.836 min Scan# 890
Delta R.T. 0.000 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:152 Resp: 60909

Ion	Ratio	Lower	Upper
152	100		
151	18.3	0.0	49.2
153	16.0	0.0	43.0

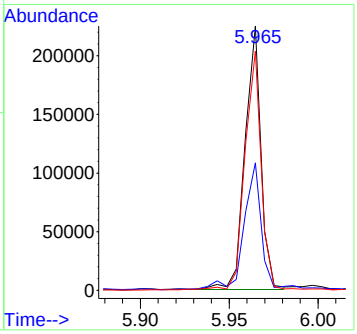




#59
Acenaphthene
Concen: 20.03 ppm
RT: 5.965 min Scan# 914
Delta R.T. 0.006 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:153 Resp: 141113

Ion	Ratio	Lower	Upper
153	100		
152	47.7	19.5	79.5
154	90.9	63.0	123.0



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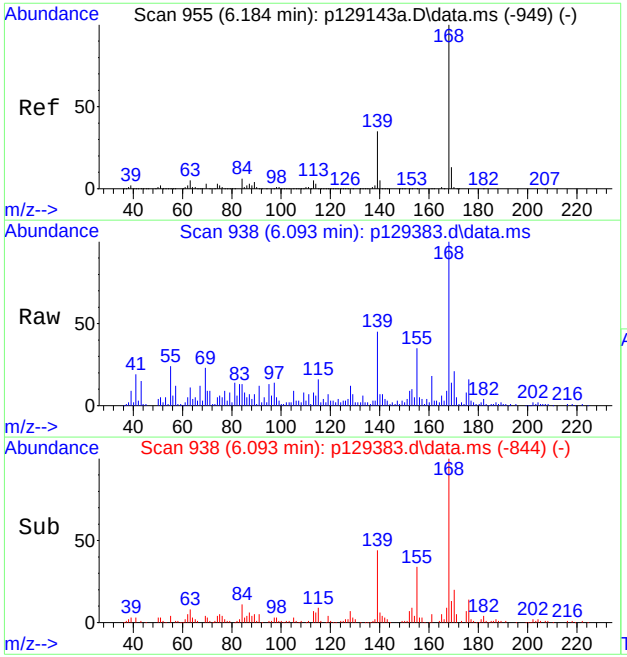
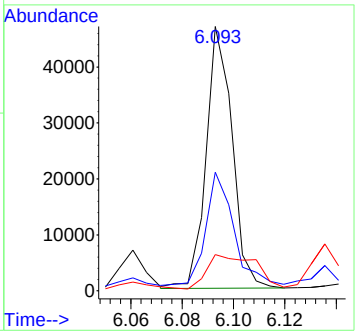
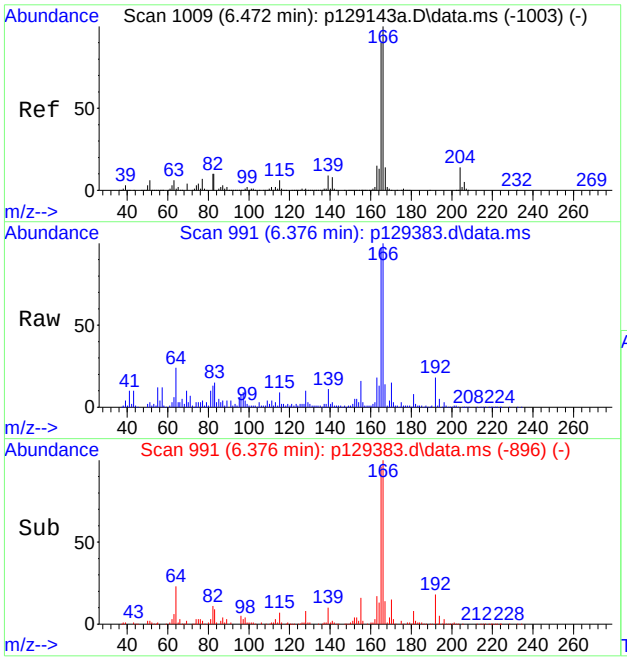


#62
Dibenzofuran
Concen: 3.11 ppm
RT: 6.093 min Scan# 938
Delta R.T. 0.000 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:168 Resp: 33184

Ion	Ratio	Lower	Upper
168	100		
139	43.2	7.2	67.2
169	12.4	0.0	43.3

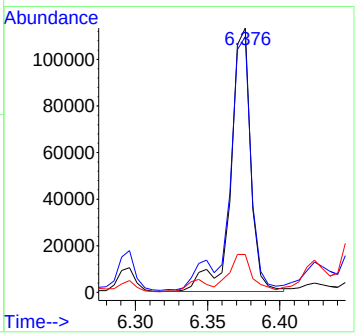




#66
Fluorene
Concen: 12.67 ppm
RT: 6.376 min Scan# 991
Delta R.T. 0.005 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:166 Resp: 108482

Ion	Ratio	Lower	Upper
166	100		
165	95.8	61.0	121.0
167	13.4	0.0	43.1



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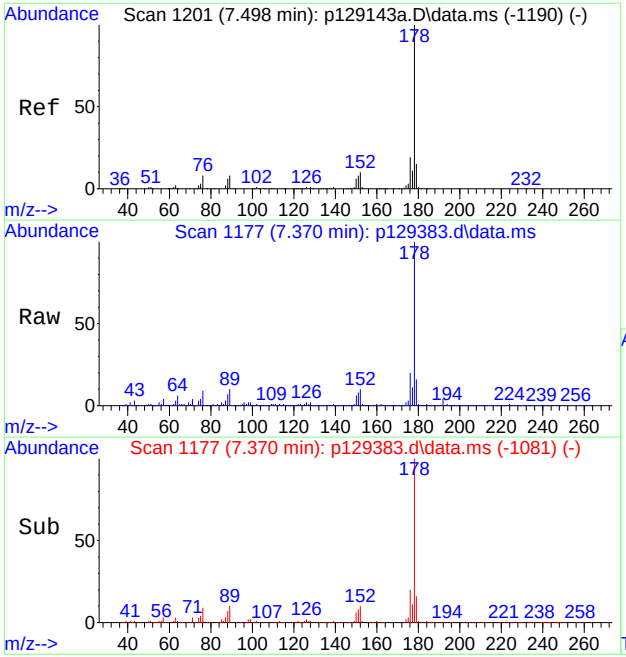
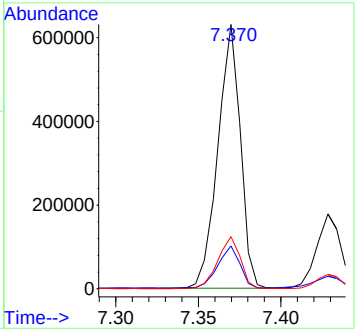
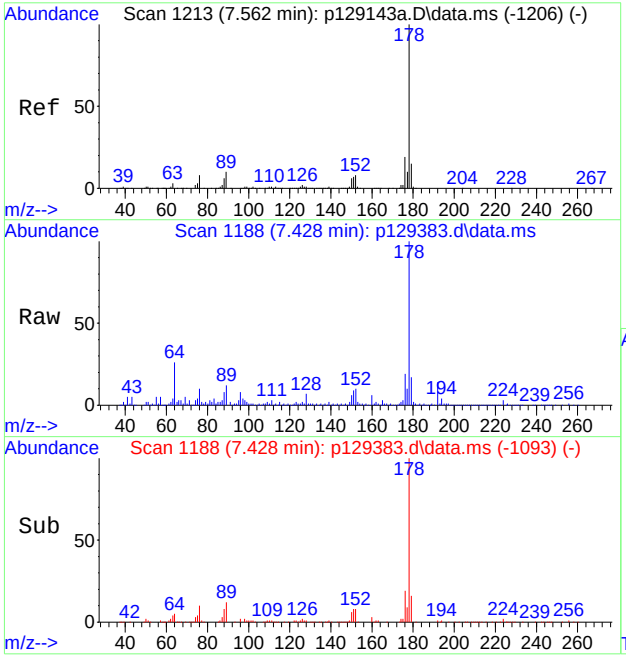


#77
Phenanthrene
Concen: 48.79 ppm
RT: 7.370 min Scan# 1177
Delta R.T. 0.011 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:178 Resp: 599788

Ion	Ratio	Lower	Upper
178	100		
179	15.9	0.0	45.5
176	19.7	0.0	49.9

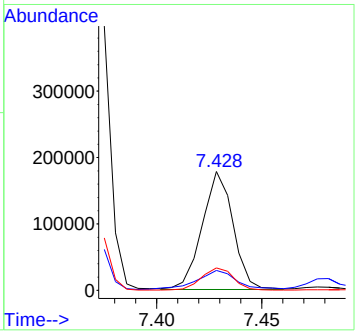


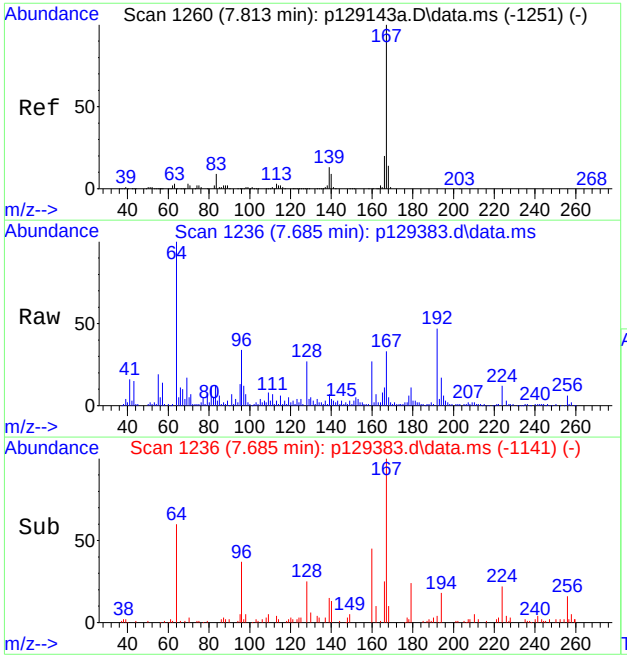


#78
Anthracene
Concen: 14.23 ppm
RT: 7.428 min Scan# 1188
Delta R.T. 0.005 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:178 Resp: 182766

Ion	Ratio	Lower	Upper
178	100		
179	15.4	0.0	45.8
176	18.9	0.0	48.4

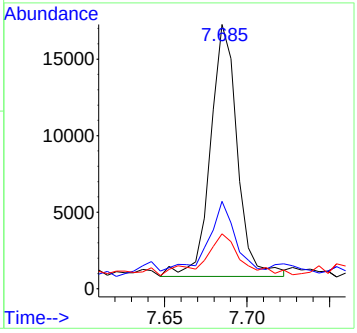


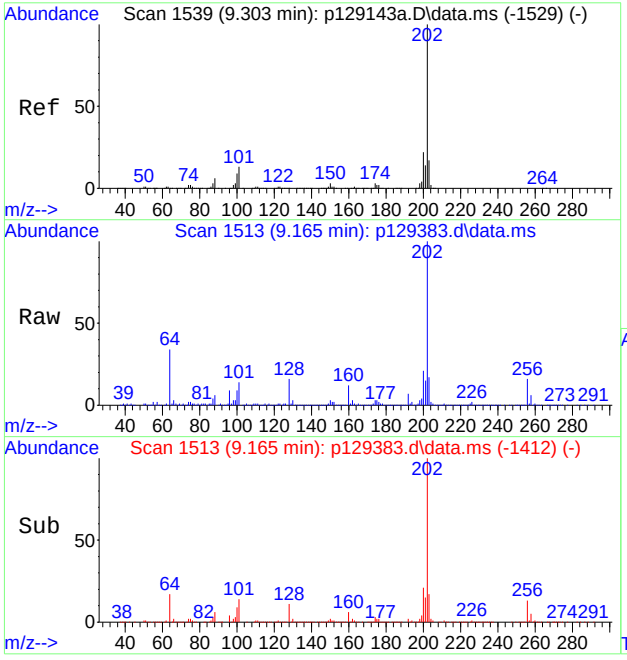


#79
Carbazole
Concen: 1.51 ppm
RT: 7.685 min Scan# 1236
Delta R.T. 0.006 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:167 Resp: 18677

Ion	Ratio	Lower	Upper
167	100		
166	26.5	0.0	49.7
139	15.6	0.0	43.8

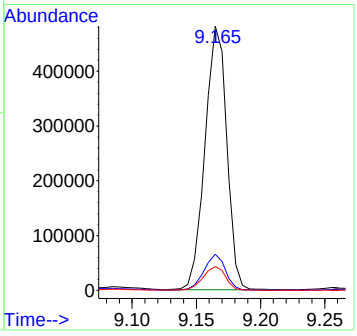




#81
Fluoranthene
Concen: 37.48 ppm
RT: 9.165 min Scan# 1513
Delta R.T. 0.038 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:202 Resp: 568202

Ion	Ratio	Lower	Upper
202	100		
101	13.6	0.0	45.1
100	8.9	0.0	41.2



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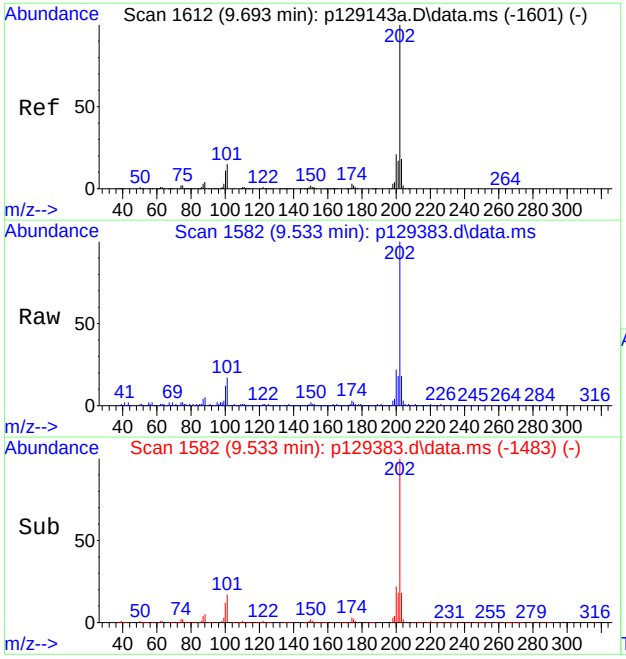
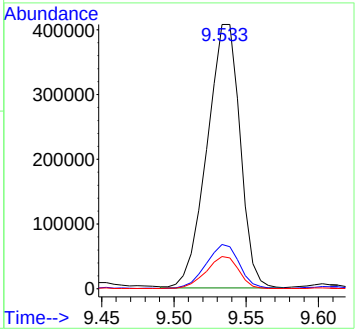
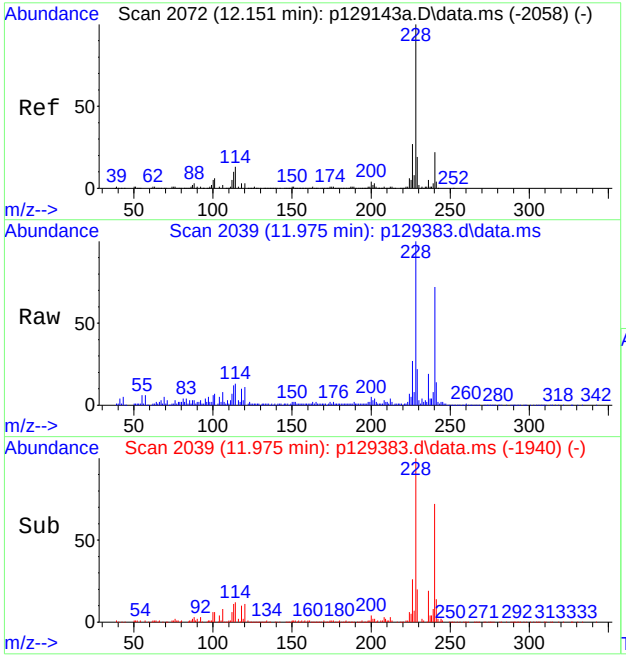


#84
Pyrene
Concen: 43.82 ppm
RT: 9.533 min Scan# 1582
Delta R.T. 0.027 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:202 Resp: 646255

Ion	Ratio	Lower	Upper
202	100		
101	16.7	0.0	46.9
100	12.2	0.0	42.7

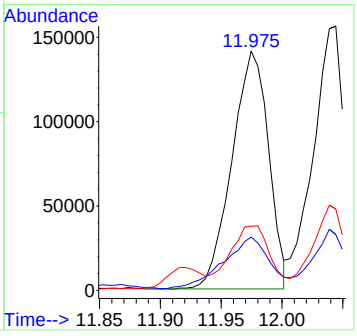




#87
Benzo[a]anthracene
Concen: 21.05 ppm
RT: 11.975 min Scan# 2039
Delta R.T. 0.027 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:228 Resp: 295657

Ion	Ratio	Lower	Upper
228	100		
229	20.5	0.0	49.8
226	24.0	0.0	57.8



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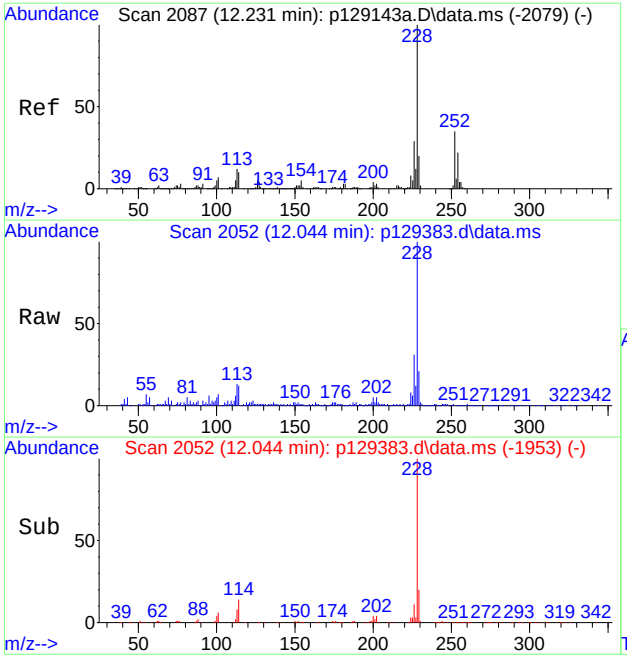
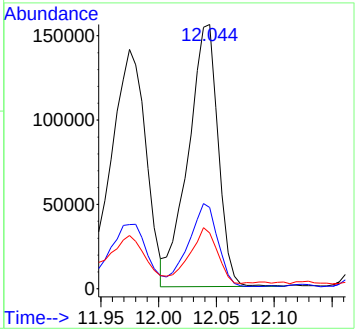
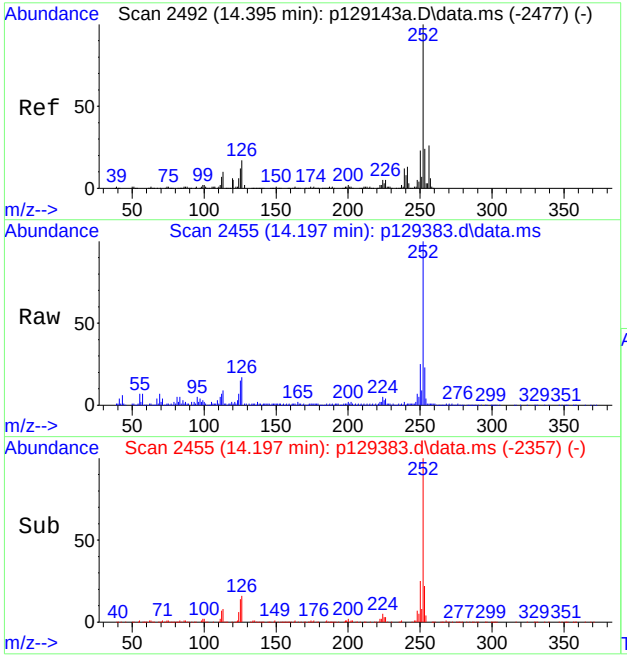


#89
Chrysene
Concen: 22.65 ppm
RT: 12.044 min Scan# 2052
Delta R.T. 0.027 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:228 Resp: 280088

Ion	Ratio	Lower	Upper
228	100		
226	29.6	0.0	59.4
229	18.5	0.0	50.5

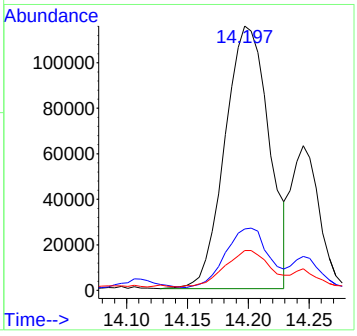




#93
Benzo[b]fluoranthene
Concen: 21.62 ppm
RT: 14.197 min Scan# 2455
Delta R.T. 0.022 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:252 Resp: 291361

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	52.9
125	13.5	0.0	42.3



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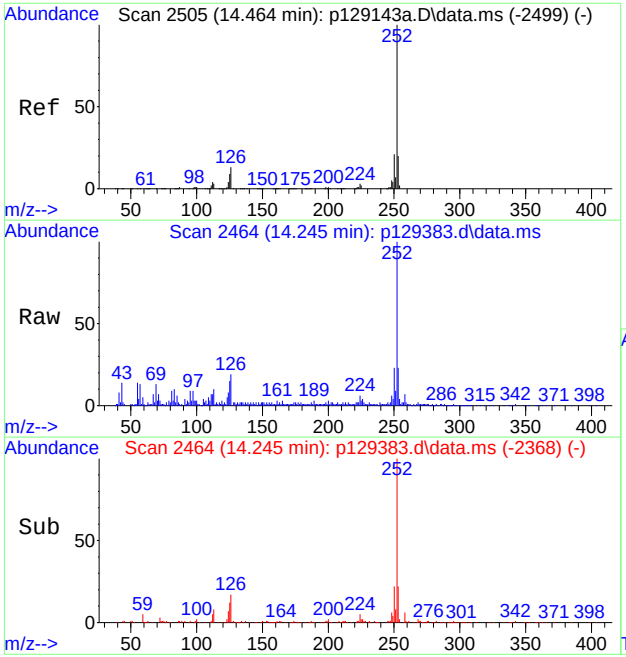
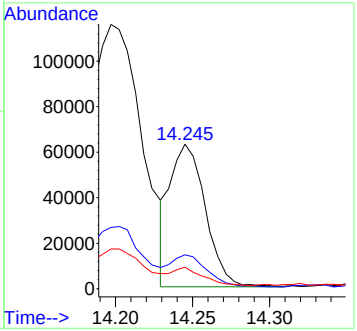
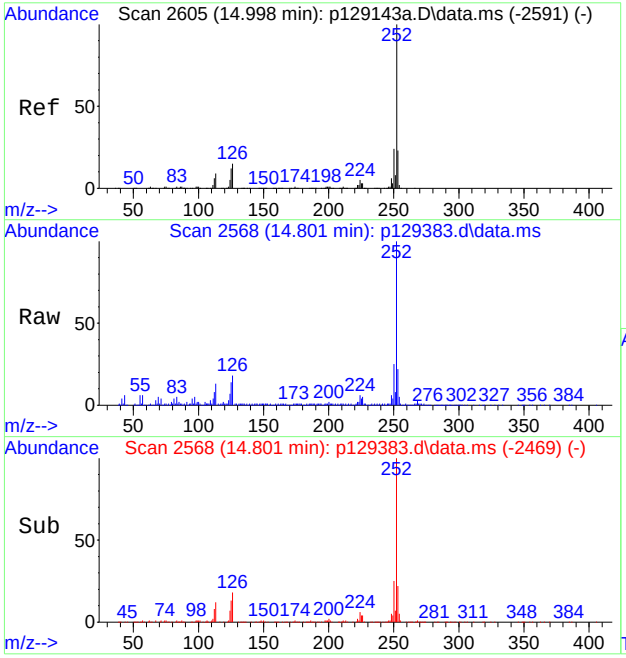


#94
Benzo[k]fluoranthene
Concen: 8.83 ppm
RT: 14.245 min Scan# 2464
Delta R.T. 0.011 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:252 Resp: 100096

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	51.7
125	12.0	0.0	40.5

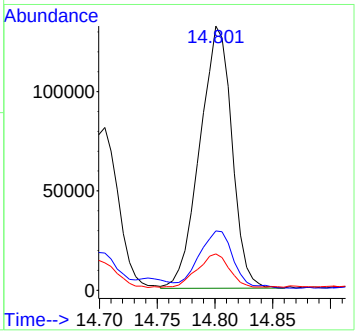




#95
Benzo[a]pyrene
Concen: 22.35 ppm
RT: 14.801 min Scan# 2568
Delta R.T. 0.027 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:252 Resp: 254771

Ion	Ratio	Lower	Upper
252	100		
253	20.2	0.0	51.6
125	12.8	0.0	43.5



9.1.20

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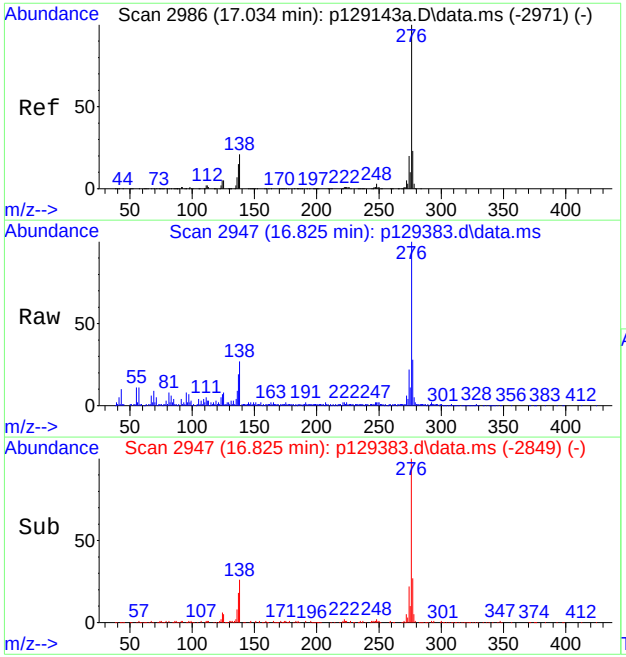
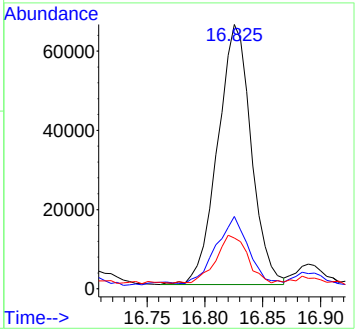
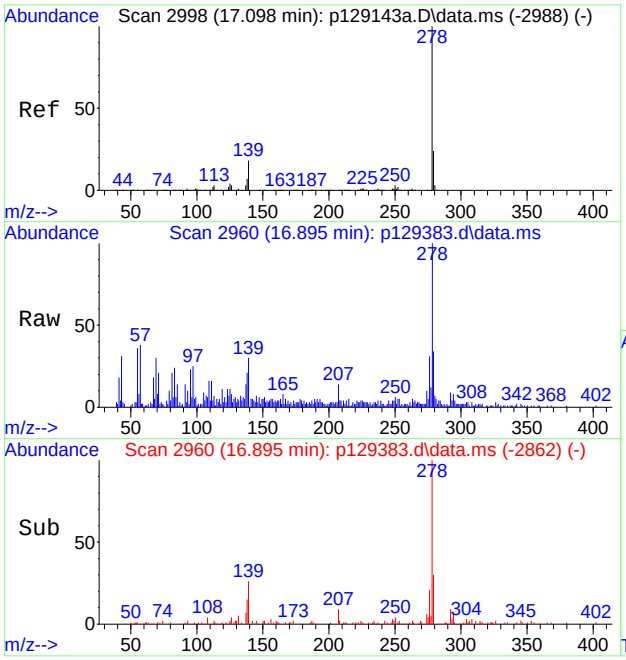


#96
Indeno[1,2,3-cd]pyrene
Concen: 12.71 ppm
RT: 16.825 min Scan# 2947
Delta R.T. 0.022 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:276 Resp: 132368

Ion	Ratio	Lower	Upper
276	100		
138	25.6	0.0	55.2
137	17.2	0.0	46.6

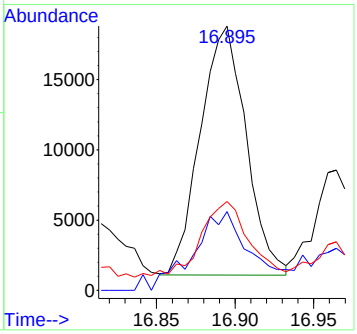




#98
Dibenz[a,h]anthracene
Concen: 3.38 ppm m
RT: 16.895 min Scan# 2960
Delta R.T. 0.022 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

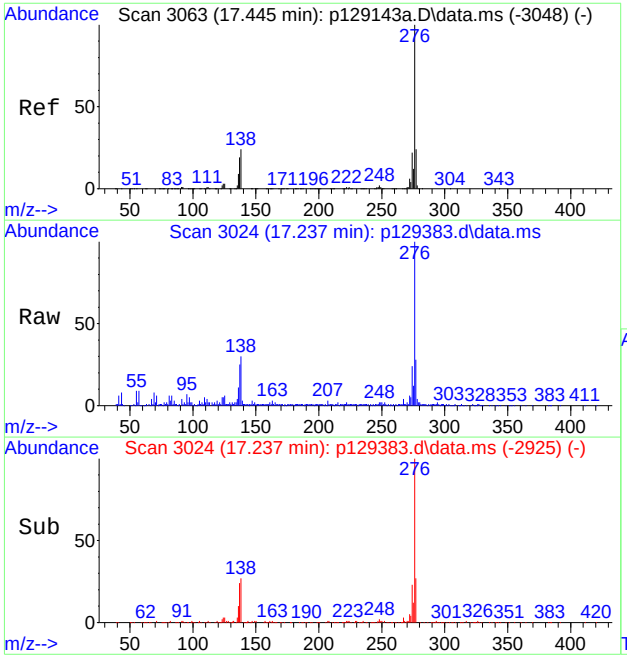
Tgt Ion:278 Resp: 35898

Ion	Ratio	Lower	Upper
278	100		
139	29.8	0.0	53.0
279	33.6	0.0	54.4



9.1.20

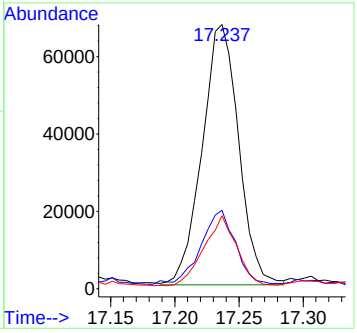
9



#100
Benzo[g,h,i]perylene
Concen: 12.70 ppm
RT: 17.237 min Scan# 3024
Delta R.T. 0.027 min
Lab File: p129383.d
Acq: 7 May 2019 8:33 pm

Tgt Ion:276 Resp: 133330

Ion	Ratio	Lower	Upper
276	100		
138	27.8	0.0	56.5
277	26.9	0.0	54.7



9.1.20

9

Manual Integration Approval Summary

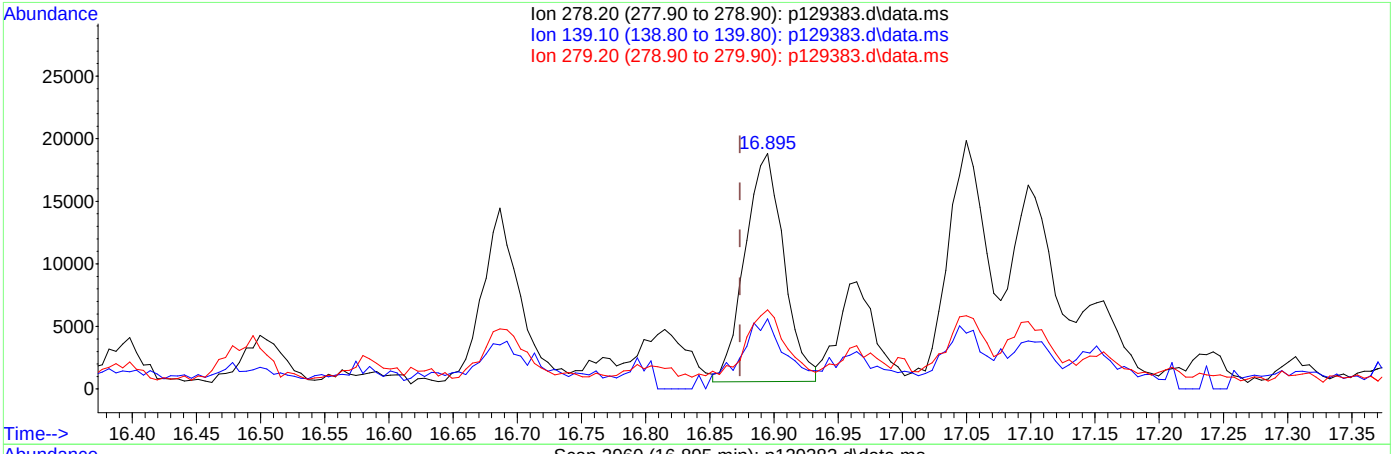
Sample Number:	JC87093-12	**Method:**	SW846 8270D
Lab FileID:	P129383.D	**Analyst approved:**	05/08/19 05:14 Michelle Co
Injection Time:	05/07/19 20:33	**Supervisor approved:**	05/08/19 10:56 Nancy Ma

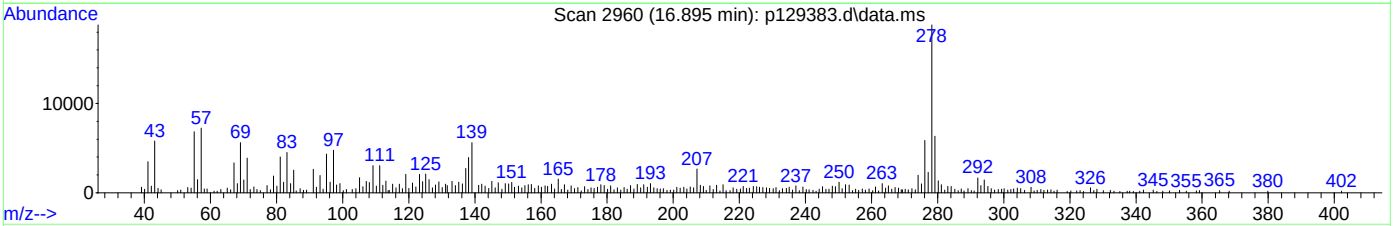
Parameter	CAS	Sig#	R.T. (min.)	Reason
Dibenzo(a,h)anthracene	53-70-3		16.89	Poor instrument integration

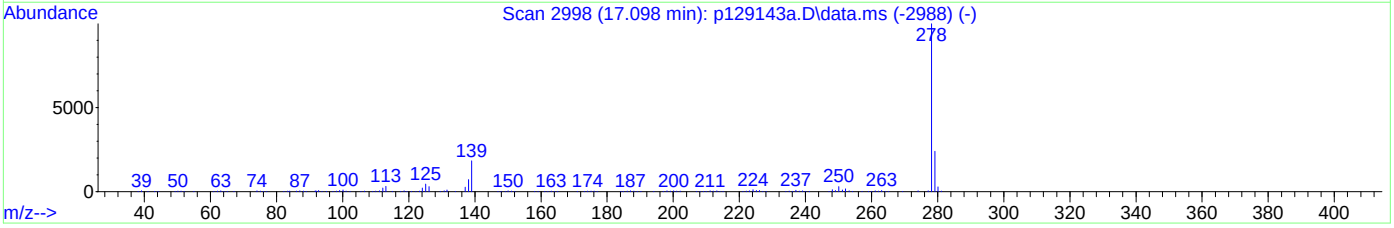
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129383.d
Acq On    :  7 May 2019   8:33 pm
Operator  : christc2
Sample    : jc87093-12                                Inst     : MSVOAMSP
Misc      : op20110,ep5856,30.7,,,1,1
ALS Vial  : 19   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:41:43 2019
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration
```







TIC: p129383.d\data.ms

(98) Dibenz[a,h]anthracene (t)

16.895min (+0.022) 3.61ppm

response 38324

Ion	Exp%	Act%
278.20	100	100
139.10	23.00	24.65
279.20	24.40	28.50
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129369.D
Acq On : 7 May 2019 2:13 pm
Operator : christc2
Sample : op20110-mb
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 15:00:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 15:00:17 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	3.763	152	192020	40.00 ppm	-0.07
24) Naphthalene-d8	4.693	136	659405	40.00 ppm	-0.09
47) Acenaphthene-d10	5.938	164	353720	40.00 ppm	-0.09
69) Phenanthrene-d10	7.327	188	618727	40.00 ppm	0.00
83) Chrysene-d12	11.964	240	530688	40.00 ppm	0.00
91) Perylene-d12	14.891	264	503785	40.00 ppm	-0.22
101) 1,4-Dichlorobenzene-d4b	3.763	152	192020	40.00 ppm	-0.07
103) Phenanthrene-d10b	7.327	188	618727	40.00 ppm	-0.12
105) Chrysene-d12b	11.964	240	530688	40.00 ppm	-0.18
107) Naphthalene-d8b	4.693	136	659405	40.00 ppm	-0.08
109) Acenaphthene-d10b	5.938	164	353720	40.00 ppm	-0.08
111) Chrysene-d12d	11.964	240	530688	40.00 ppm	-0.21
System Monitoring Compounds					
5) 2-Fluorophenol	2.802	112	239608	38.84 ppm	-0.05
Spiked Amount 50.000			Recovery = 77.68%		
8) Phenol-d5	3.619	99	308020	39.32 ppm	-0.03
Spiked Amount 50.000			Recovery = 78.64%		
25) Nitrobenzene-d5	4.185	82	294544	41.58 ppm	-0.08
Spiked Amount 50.000			Recovery = 83.16%		
51) 2-Fluorobiphenyl	5.478	172	482521	43.05 ppm	-0.07
Spiked Amount 50.000			Recovery = 86.10%		
73) 2,4,6-Tribromophenol	6.600	330	74044	35.96 ppm	-0.11
Spiked Amount 50.000			Recovery = 71.92%		
85) Terphenyl-d14	9.950	244	474922	39.50 ppm	-0.18
Spiked Amount 50.000			Recovery = 79.00%		

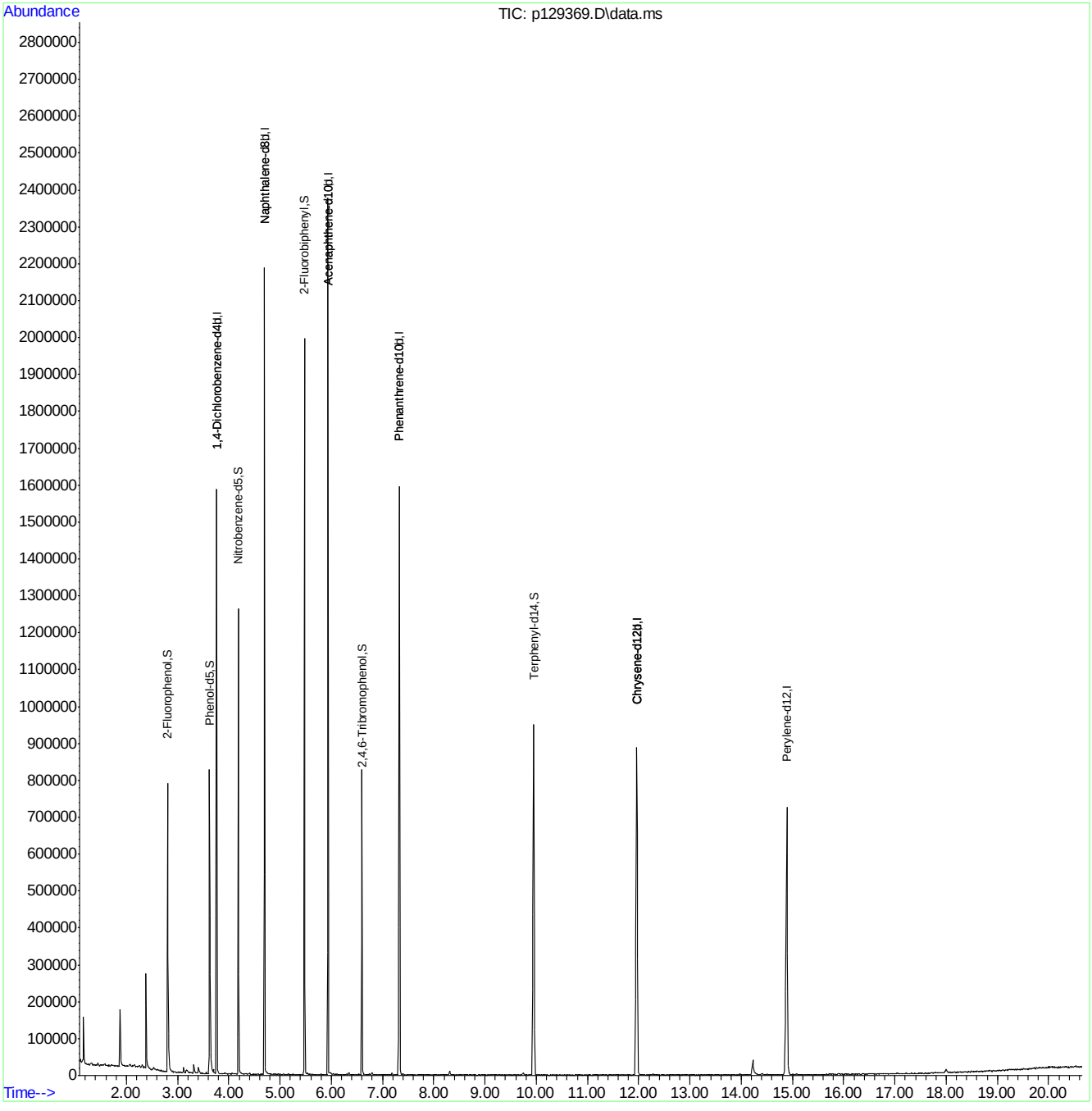
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129369.D
Acq On : 7 May 2019 2:13 pm
Operator : christc2
Sample : op20110-mb
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 07 15:00:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 15:00:17 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481789.D
Acq On : 10 May 2019 11:37 am
Operator : angelar
Sample : op20110-mb
Misc : op20110,e6p2588,30.0,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 10 12:03:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	510409	40.00	ppm	-0.04
24) Naphthalene-d8	5.177	136	1876568	40.00	ppm	-0.05
47) Acenaphthene-d10	6.851	164	987686	40.00	ppm	-0.06
69) Phenanthrene-d10	8.515	188	1786422	40.00	ppm	-0.06
83) Chrysene-d12	11.676	240	1561293	40.00	ppm	-0.06
91) Perylene-d12	13.275	264	1489418	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.209	152	510409	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.851	164	987686	40.00	ppm	-0.06
105) Phenanthrene-d10a	8.515	188	1786422	40.00	ppm	-0.06
109) Chrysene-d12a	11.676	240	1561293	40.00	ppm	-0.06
111) Naphthalene-d8a	5.177	136	1876568	40.00	ppm	-0.05
113) Phenanthrene-d10b	8.515	188	1786422	40.00	ppm	-0.06
115) Chrysene-d12b	11.676	240	1561293	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.236	112	607605	40.69	ppm	0.00
Spiked Amount 50.000			Recovery = 81.38%			
8) Phenol-d5	3.990	99	755179	41.42	ppm	-0.04
Spiked Amount 50.000			Recovery = 82.84%			
25) Nitrobenzene-d5	4.626	82	697729	44.68	ppm	-0.04
Spiked Amount 50.000			Recovery = 89.36%			
51) 2-Fluorobiphenyl	6.167	172	1395073	39.98	ppm	-0.05
Spiked Amount 50.000			Recovery = 79.96%			
73) 2,4,6-Tribromophenol	7.729	330	185506	32.27	ppm	-0.05
Spiked Amount 50.000			Recovery = 64.54%			
85) Terphenyl-d14	10.440	244	1444204	39.70	ppm	-0.04
Spiked Amount 50.000			Recovery = 79.40%			
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	

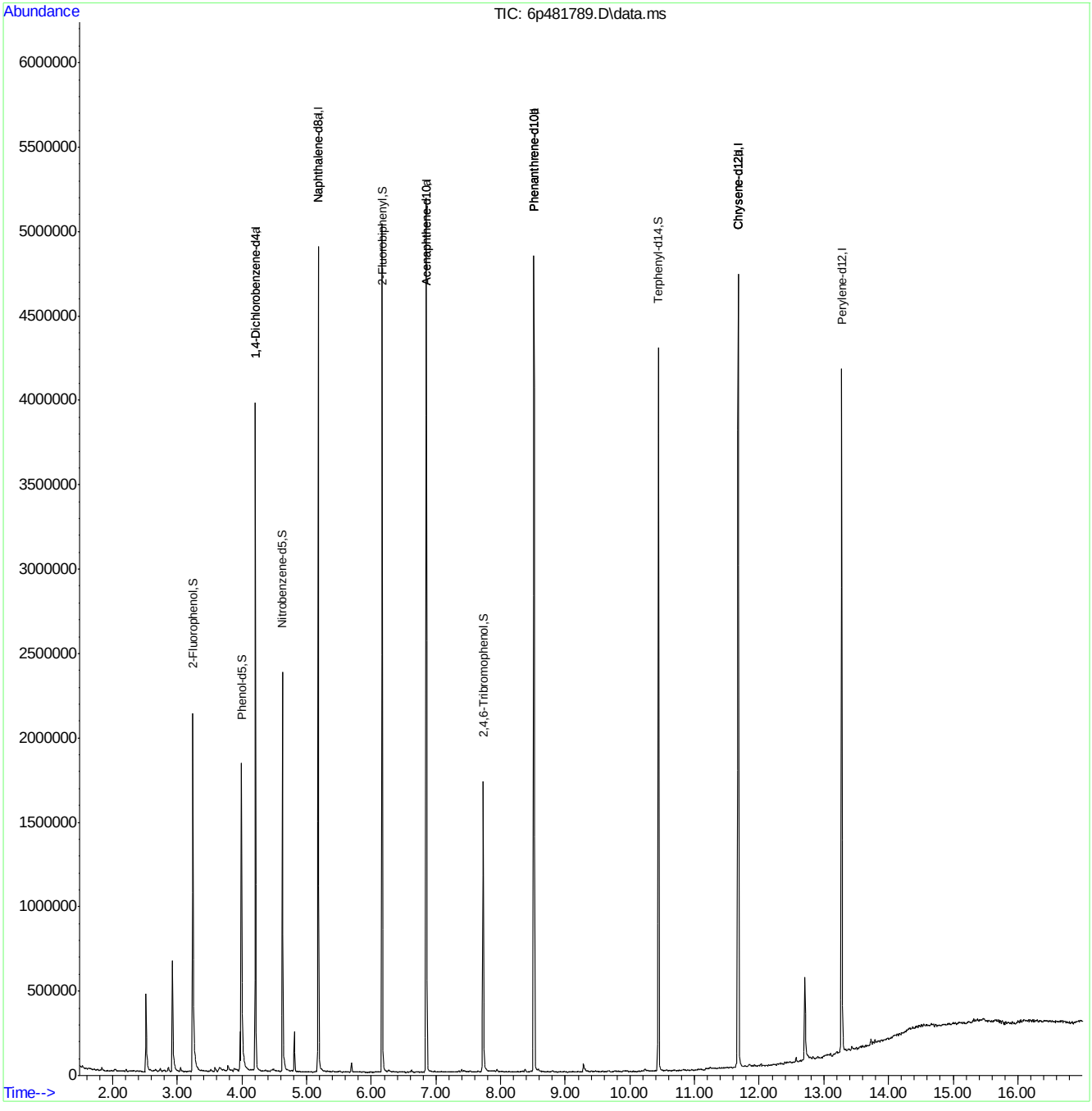
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481789.D
Acq On : 10 May 2019 11:37 am
Operator : angelar
Sample : op20110-mb
Misc : op20110,e6p2588,30.0,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 10 12:03:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration



M6P2562.M Fri May 10 12:03:28 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129370.D
Acq On : 7 May 2019 2:40 pm
Operator : christc2
Sample : op20110-bs
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 15:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 15:06:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.763	152	164210	40.00	ppm	-0.07
24) Naphthalene-d8	4.698	136	524726	40.00	ppm	-0.08
47) Acenaphthene-d10	5.938	164	297525	40.00	ppm	-0.09
69) Phenanthrene-d10	7.332	188	521331	40.00	ppm	0.00
83) Chrysene-d12	11.969	240	492289	40.00	ppm	0.00
91) Perylene-d12	14.891	264	453527	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4b	3.763	152	164210	40.00	ppm	-0.07
103) Phenanthrene-d10b	7.332	188	521331	40.00	ppm	-0.12
105) Chrysene-d12b	11.969	240	492289	40.00	ppm	-0.18
107) Naphthalene-d8b	4.698	136	524726	40.00	ppm	-0.07
109) Acenaphthene-d10b	5.938	164	297525	40.00	ppm	-0.08
111) Chrysene-d12d	11.969	240	492289	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	238740	45.25	ppm	-0.05
Spiked Amount 50.000			Recovery	=	90.50%	
8) Phenol-d5	3.619	99	297023	44.33	ppm	-0.03
Spiked Amount 50.000			Recovery	=	88.66%	
25) Nitrobenzene-d5	4.191	82	245179	43.49	ppm	-0.07
Spiked Amount 50.000			Recovery	=	86.98%	
51) 2-Fluorobiphenyl	5.478	172	418317	44.37	ppm	-0.07
Spiked Amount 50.000			Recovery	=	88.74%	
73) 2,4,6-Tribromophenol	6.606	330	68557	39.52	ppm	-0.10
Spiked Amount 50.000			Recovery	=	79.04%	
85) Terphenyl-d14	9.950	244	473317	42.44	ppm	-0.18
Spiked Amount 50.000			Recovery	=	84.88%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.183	88	90534	34.00	ppm	97
3) Pyridine	1.391	79	236934	46.95	ppm	97
4) N-Nitrosodimethylamine	1.375	42	130330	48.55	ppm	96
6) Indene	3.956	116	365555	42.51	ppm	96
7) Cumene	3.128	105	547624	39.01	ppm	96
9) Phenol	3.630	94	292400	40.05	ppm	80
10) Aniline	3.534	93	226087	63.60	ppm	96
11) bis(2-Chloroethyl)ether	3.587	93	228705	39.53	ppm	95
12) 2-Chlorophenol	3.641	128	217239	39.48	ppm	95
13) Decane	3.678	43	151911	37.46	ppm	99
14) 1,3-Dichlorobenzene	3.715	146	246654	38.11	ppm	98
15) 1,4-Dichlorobenzene	3.774	146	248357	39.62	ppm	99
16) Benzyl alcohol	3.918	108	128539	42.63	ppm	90
17) 1,2-Dichlorobenzene	3.886	146	248356	39.65	ppm	98
18) Acetophenone	4.079	105	305889	38.01	ppm	90
19) 2-Methylphenol	4.052	108	208209	40.77	ppm	99
20) 2,2'-oxybis(1-Chloropr...	3.998	121	59824	44.46	ppm #	75
21) 3&4-Methylphenol	4.175	108	212195	42.45	ppm	99
22) n-Nitroso-di-n-propyla...	4.100	70	145402	38.04	ppm	99
23) Hexachloroethane	4.132	201	97418	37.98	ppm	85
26) Nitrobenzene	4.202	77	240883	42.23	ppm	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129370.D
Acq On : 7 May 2019 2:40 pm
Operator : christc2
Sample : op20110-bs
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 15:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 15:06:19 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
27)	Quinoline	4.960	129	393909	41.41	ppm	99
28)	Isophorone	4.388	82	449610	45.91	ppm	99
29)	2-Nitrophenol	4.437	139	117945	45.66	ppm	81
30)	2,4-Dimethylphenol	4.527	107	240409	52.45	ppm	100
31)	Benzoic acid	4.693	105	174919	44.46	ppm	94
32)	bis(2-Chloroethoxy)met...	4.559	93	258184	45.52	ppm	99
33)	2,4-Dichlorophenol	4.650	162	190755	44.20	ppm	95
34)	2,6-Dichlorophenol	4.789	162	184529	43.78	ppm	97
36)	1,2,4-Trichlorobenzene	4.666	180	207921	42.86	ppm	98
38)	Naphthalene	4.714	128	565408	45.13	ppm	100
39)	4-Chloroaniline	4.784	127	112982	23.15	ppm	92
40)	2,3-Dichloroaniline	5.425	161	186400	34.29	ppm	99
41)	Caprolactam	5.062	55	86559	45.71	ppm	97
42)	Hexachlorobutadiene	4.816	225	132926	44.32	ppm	98
43)	4-Chloro-3-methylphenol	5.190	107	197911	43.59	ppm	93
44)	2-Methylnaphthalene	5.211	141	312378	43.49	ppm	98
45)	1-Methylnaphthalene	5.275	142	368539	39.61	ppm	97
46)	Dimethylnaphthalene	5.655	156	333803	40.13	ppm	99
48)	Hexachlorocyclopentadiene	5.329	237	238108	104.71	ppm	99
49)	2,4,6-Trichlorophenol	5.441	196	137651	46.68	ppm	99
50)	2,4,5-Trichlorophenol	5.494	196	136888	46.87	ppm	98
52)	2-Chloronaphthalene	5.553	162	364782	45.23	ppm	98
53)	Biphenyl	5.548	154	457160	45.59	ppm	98
54)	2-Nitroaniline	5.649	65	112986	42.50	ppm	81
55)	Dimethylphthalate	5.777	163	432069	41.56	ppm	100
56)	Acenaphthylene	5.836	152	551208	43.30	ppm	99
57)	2,6-Dinitrotoluene	5.820	165	93617	42.98	ppm	91
58)	3-Nitroaniline	5.943	138	56698	24.86	ppm	86
59)	Acenaphthene	5.964	153	344479	44.02	ppm	98
60)	2,4-Dinitrophenol	6.023	184	96615	68.75	ppm	88
61)	4-Nitrophenol	6.167	109	75107	45.99	ppm	90
62)	Dibenzofuran	6.093	168	494799	41.70	ppm	93
63)	2,4-Dinitrotoluene	6.114	165	121242	41.82	ppm	94
64)	2,3,4,6-Tetrachlorophenol	6.221	232	107489	41.98	ppm	89
65)	Diethylphthalate	6.312	149	452046	42.72	ppm	96
66)	Fluorene	6.370	166	422831	44.46	ppm	97
67)	4-Chlorophenyl-phenyle...	6.386	204	197412	41.98	ppm	92
68)	4-Nitroaniline	6.440	138	83034	38.10	ppm	89
70)	4,6-Dinitro-2-methylph...	6.456	198	72218	36.97	ppm	88
71)	n-Nitrosodiphenylamine	6.504	169	280257	41.48	ppm	98
72)	1,2-Diphenylhydrazine	6.525	77	532743	50.44	ppm	88
74)	4-Bromophenyl-phenylether	6.851	248	131673	41.55	ppm	95
75)	Hexachlorobenzene	6.905	284	144649	40.01	ppm	96
76)	Pentachlorophenol	7.161	266	88359	39.33	ppm	95
77)	Phenanthrene	7.364	178	571568	42.07	ppm	99
78)	Anthracene	7.423	178	600551	42.31	ppm	100
79)	Carbazole	7.679	167	547197	39.92	ppm	99
80)	Di-n-butylphthalate	8.283	149	807019	41.49	ppm	98
81)	Fluoranthene	9.132	202	686589	40.97	ppm	99
82)	Octadecane	7.316	57	244124	45.92	ppm	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129370.D
Acq On : 7 May 2019 2:40 pm
Operator : christc2
Sample : op20110-bs
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 15:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 15:06:19 2019
Response via : Initial Calibration

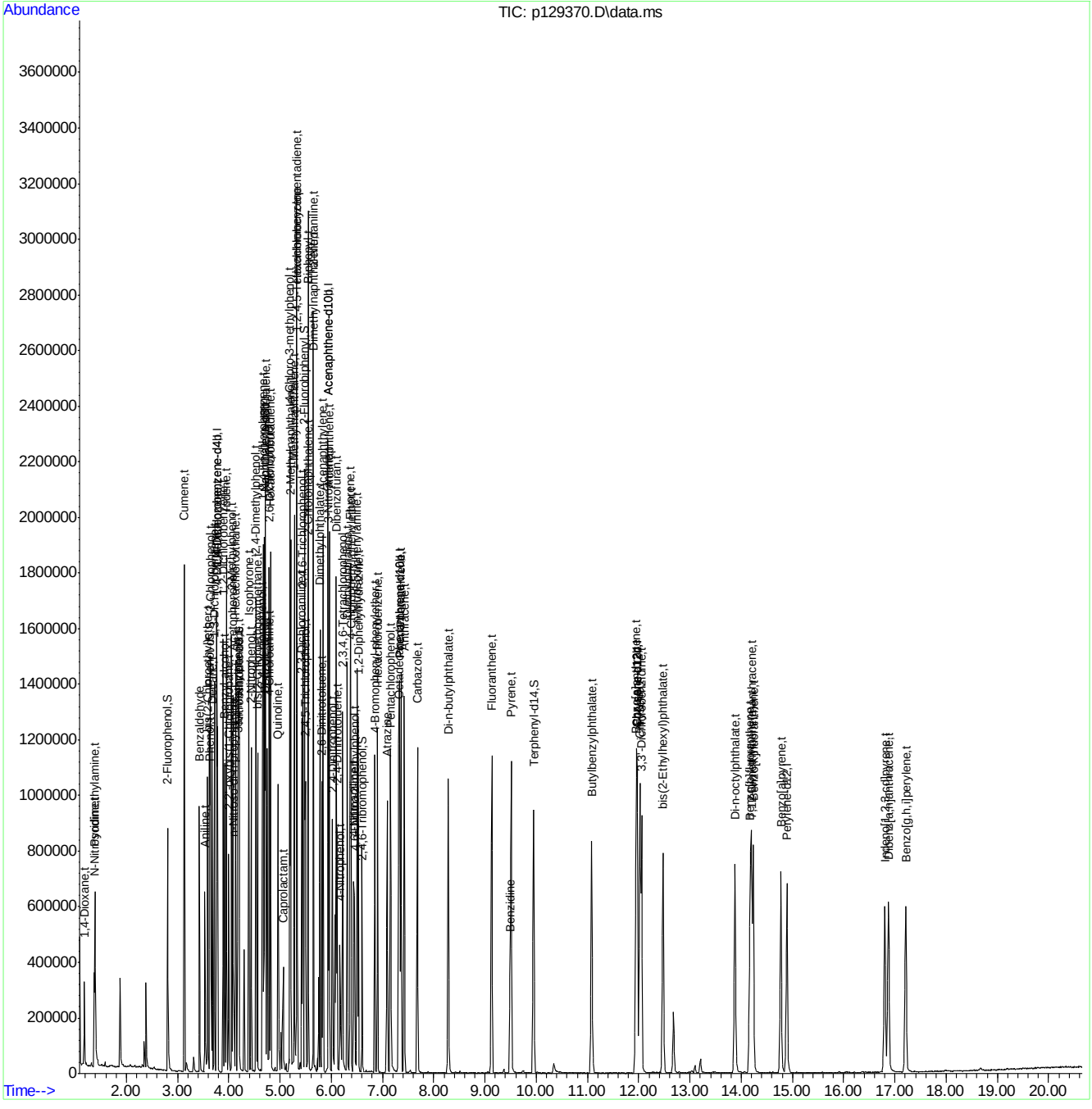
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
84)	Pyrene	9.512	202	686966	40.30	ppm	98
86)	Butylbenzylphthalate	11.082	149	360258	41.09	ppm	96
87)	Benzo[a]anthracene	11.953	228	605252	37.30	ppm	100
88)	3,3'-Dichlorobenzidine	12.055	252	333212	62.44	ppm	98
89)	Chrysene	12.023	228	547572	38.31	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.471	149	485225	41.38	ppm	98
92)	Di-n-octylphthalate	13.876	149	821855	46.88	ppm	99
93)	Benzo[b]fluoranthene	14.175	252	564395	40.83	ppm	97
94)	Benzo[k]fluoranthene	14.240	252	511499	43.98	ppm	99
95)	Benzo[a]pyrene	14.779	252	502211	42.96	ppm	97
96)	Indeno[1,2,3-cd]pyrene	16.804	276	457918	42.85	ppm	87
98)	Dibenz[a,h]anthracene	16.879	278	445601	40.90	ppm	98
99)	7,12-Dimethylbenz(a)an...	14.202	256	235150	37.73	ppm	98
100)	Benzo[g,h,i]perylene	17.215	276	474099	44.01	ppm	95
102)	Benzaldehyde	3.427	105	154078	35.94	ppm	97
104)	Atrazine	7.092	200	124918	44.56	ppm	98
106)	Benzidine	9.485	184	148268	14.49	ppm	99
110)	1,2,4,5-Tetrachloroben...	5.334	216	197578	45.15	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129370.D
Acq On : 7 May 2019 2:40 pm
Operator : christc2
Sample : op20110-bs
Misc : op20110,ep5856,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 07 15:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 15:06:19 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129374.d
Acq On : 7 May 2019 4:28 pm
Operator : christc2
Sample : op20110-ms Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:04:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	153344	40.00	ppm	0.00
24) Naphthalene-d8	4.699	136	484634	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	266878	40.00	ppm	0.00
69) Phenanthrene-d10	7.338	188	475598	40.00	ppm	0.01
83) Chrysene-d12	11.975	240	434661	40.00	ppm	0.02
91) Perylene-d12	14.902	264	431476	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4b	3.764	152	153344	40.00	ppm	0.00
103) Phenanthrene-d10b	7.338	188	475598	40.00	ppm	0.01
105) Chrysene-d12b	11.975	240	434661	40.00	ppm	0.02
107) Naphthalene-d8b	4.699	136	484634	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	266878	40.00	ppm	0.00
111) Chrysene-d12d	11.975	240	434661	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	190157	38.60	ppm	0.00
Spiked Amount 50.000			Recovery = 77.20%			
8) Phenol-d5	3.620	99	246564	39.41	ppm	0.00
Spiked Amount 50.000			Recovery = 78.82%			
25) Nitrobenzene-d5	4.186	82	205699	39.51	ppm	0.00
Spiked Amount 50.000			Recovery = 79.02%			
51) 2-Fluorobiphenyl	5.479	172	371318	43.91	ppm	0.00
Spiked Amount 50.000			Recovery = 87.82%			
73) 2,4,6-Tribromophenol	6.606	330	63207	39.94	ppm	0.00
Spiked Amount 50.000			Recovery = 79.88%			
85) Terphenyl-d14	9.955	244	420435	42.69	ppm	0.01
Spiked Amount 50.000			Recovery = 85.38%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.178	88	67525	27.16	ppm	96
3) Pyridine	1.386	79	170672	36.22	ppm	99
4) N-Nitrosodimethylamine	1.370	42	92415	36.86	ppm	94
6) Indene	3.956	116	298185	37.14	ppm	97
7) Cumene	3.128	105	438714	33.47	ppm	99
9) Phenol	3.630	94	199801	29.31	ppm	96
10) Aniline	3.534	93	176204	55.14	ppm	98
11) bis(2-Chloroethyl)ether	3.587	93	184762	34.20	ppm	98
12) 2-Chlorophenol	3.641	128	152735	29.72	ppm	93
13) Decane	3.678	43	127303	33.61	ppm	97
14) 1,3-Dichlorobenzene	3.716	146	193456	32.01	ppm	98
15) 1,4-Dichlorobenzene	3.780	146	194856	33.28	ppm	100
16) Benzyl alcohol	3.919	108	112319	40.04	ppm	96
17) 1,2-Dichlorobenzene	3.887	146	193755	33.13	ppm	98
18) Acetophenone	4.079	105	251641	33.48	ppm	98
19) 2-Methylphenol	4.052	108	146170	30.65	ppm	98
20) 2,2'-oxybis(1-Chloropr...	3.999	121	47330	37.67	ppm #	98
21) 3&4-Methylphenol	4.175	108	154672	33.13	ppm	95
22) n-Nitroso-di-n-propyla...	4.095	70	117227	32.84	ppm	98
23) Hexachloroethane	4.132	201	73493	30.68	ppm	95
26) Nitrobenzene	4.202	77	197407	37.47	ppm	95
27) Quinoline	4.960	129	334949	38.13	ppm	98
28) Isophorone	4.383	82	377571	41.74	ppm	98
29) 2-Nitrophenol	4.437	139	85244	35.73	ppm #	71
30) 2,4-Dimethylphenol	4.528	107	180688	42.68	ppm	99
31) Benzoic acid	4.677	105	75396	22.60	ppm	94
32) bis(2-Chloroethoxy)met...	4.560	93	213491	40.75	ppm	99
33) 2,4-Dichlorophenol	4.656	162	146634	36.79	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129374.d
Acq On : 7 May 2019 4:28 pm
Operator : christc2
Sample : op20110-ms Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:04:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
34) 2,6-Dichlorophenol	4.789	162	137633	35.36	ppm		98
36) 1,2,4-Trichlorobenzene	4.667	180	167143	37.30	ppm		97
38) Naphthalene	4.715	128	487778	42.15	ppm		100
39) 4-Chloroaniline	4.784	127	115072	25.53	ppm		96
40) 2,3-Dichloroaniline	5.425	161	178429	35.54	ppm		99
41) Caprolactam	5.041	55	72725	41.58	ppm		95
42) Hexachlorobutadiene	4.816	225	102815	37.11	ppm		100
43) 4-Chloro-3-methylphenol	5.190	107	156154	37.24	ppm		93
44) 2-Methylnaphthalene	5.212	141	265587	40.03	ppm		99
45) 1-Methylnaphthalene	5.281	142	312497	36.36	ppm		96
46) Dimethylnaphthalene	5.655	156	291220	37.91	ppm		99
48) Hexachlorocyclopentadiene	5.329	237	145502	71.33	ppm		98
49) 2,4,6-Trichlorophenol	5.441	196	108727	41.10	ppm		98
50) 2,4,5-Trichlorophenol	5.495	196	104653	39.95	ppm		96
52) 2-Chloronaphthalene	5.553	162	315511	43.62	ppm		96
53) Biphenyl	5.543	154	398914	44.35	ppm		98
54) 2-Nitroaniline	5.650	65	107023	44.88	ppm		96
55) Dimethylphthalate	5.778	163	396991	42.57	ppm		99
56) Acenaphthylene	5.837	152	498255	43.63	ppm		99
57) 2,6-Dinitrotoluene	5.821	165	85822	43.93	ppm		82
58) 3-Nitroaniline	5.943	138	67920	33.20	ppm		99
59) Acenaphthene	5.965	153	303350	43.22	ppm		99
60) 2,4-Dinitrophenol	6.018	184	50114	42.33	ppm	#	71
61) 4-Nitrophenol	6.173	109	51465	35.14	ppm		94
62) Dibenzofuran	6.093	168	457435	42.98	ppm		97
63) 2,4-Dinitrotoluene	6.114	165	111493	42.88	ppm		77
64) 2,3,4,6-Tetrachlorophenol	6.221	232	84120	36.63	ppm		96
65) Diethylphthalate	6.312	149	403450	42.50	ppm		99
66) Fluorene	6.371	166	379798	44.52	ppm		96
67) 4-Chlorophenyl-phenyle...	6.387	204	180456	42.78	ppm		94
68) 4-Nitroaniline	6.440	138	77975	39.89	ppm		95
70) 4,6-Dinitro-2-methylph...	6.456	198	46430	26.06	ppm		77
71) n-Nitrosodiphenylamine	6.504	169	255591	41.46	ppm		100
72) 1,2-Diphenylhydrazine	6.526	77	481300	49.95	ppm		98
74) 4-Bromophenyl-phenylether	6.852	248	115666	40.01	ppm		90
75) Hexachlorobenzene	6.905	284	124987	37.90	ppm		92
76) Pentachlorophenol	7.161	266	65731	32.91	ppm		99
77) Phenanthrene	7.364	178	526519	42.48	ppm		100
78) Anthracene	7.429	178	539144	41.64	ppm		99
79) Carbazole	7.685	167	500994	40.07	ppm		98
80) Di-n-butylphthalate	8.289	149	713983	40.24	ppm		100
81) Fluoranthene	9.138	202	579894	37.93	ppm		97
82) Octadecane	7.322	57	219293	45.21	ppm		97
84) Pyrene	9.517	202	628088	41.74	ppm		97
86) Butylbenzylphthalate	11.083	149	314341	40.61	ppm		98
87) Benzo[a]anthracene	11.953	228	524357	36.60	ppm		99
88) 3,3'-Dichlorobenzidine	12.060	252	338269	71.79	ppm		95
89) Chrysene	12.028	228	489116	38.76	ppm		98
90) bis(2-Ethylhexyl)phtha...	12.477	149	423414	40.90	ppm		97
92) Di-n-octylphthalate	13.882	149	719480	43.13	ppm		99
93) Benzo[b]fluoranthene	14.181	252	512912	39.00	ppm		99
94) Benzo[k]fluoranthene	14.245	252	461507	41.71	ppm		99
95) Benzo[a]pyrene	14.785	252	468056	42.08	ppm		99
96) Indeno[1,2,3-cd]pyrene	16.820	276	439978	43.28	ppm		99
98) Dibenz[a,h]anthracene	16.890	278	422346	40.75	ppm		97
99) 7,12-Dimethylbenz(a)an...	14.203	256	172054	29.45	ppm		97
100) Benzo[g,h,i]perylene	17.232	276	456436	44.54	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129374.d
Acq On : 7 May 2019 4:28 pm
Operator : christc2
Sample : op20110-ms Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:04:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzaldehyde	3.427	105	128561	32.11 ppm	96
104) Atrazine	7.092	200	105985	41.44 ppm	96
110) 1,2,4,5-Tetrachloroben...	5.334	216	167549	42.69 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

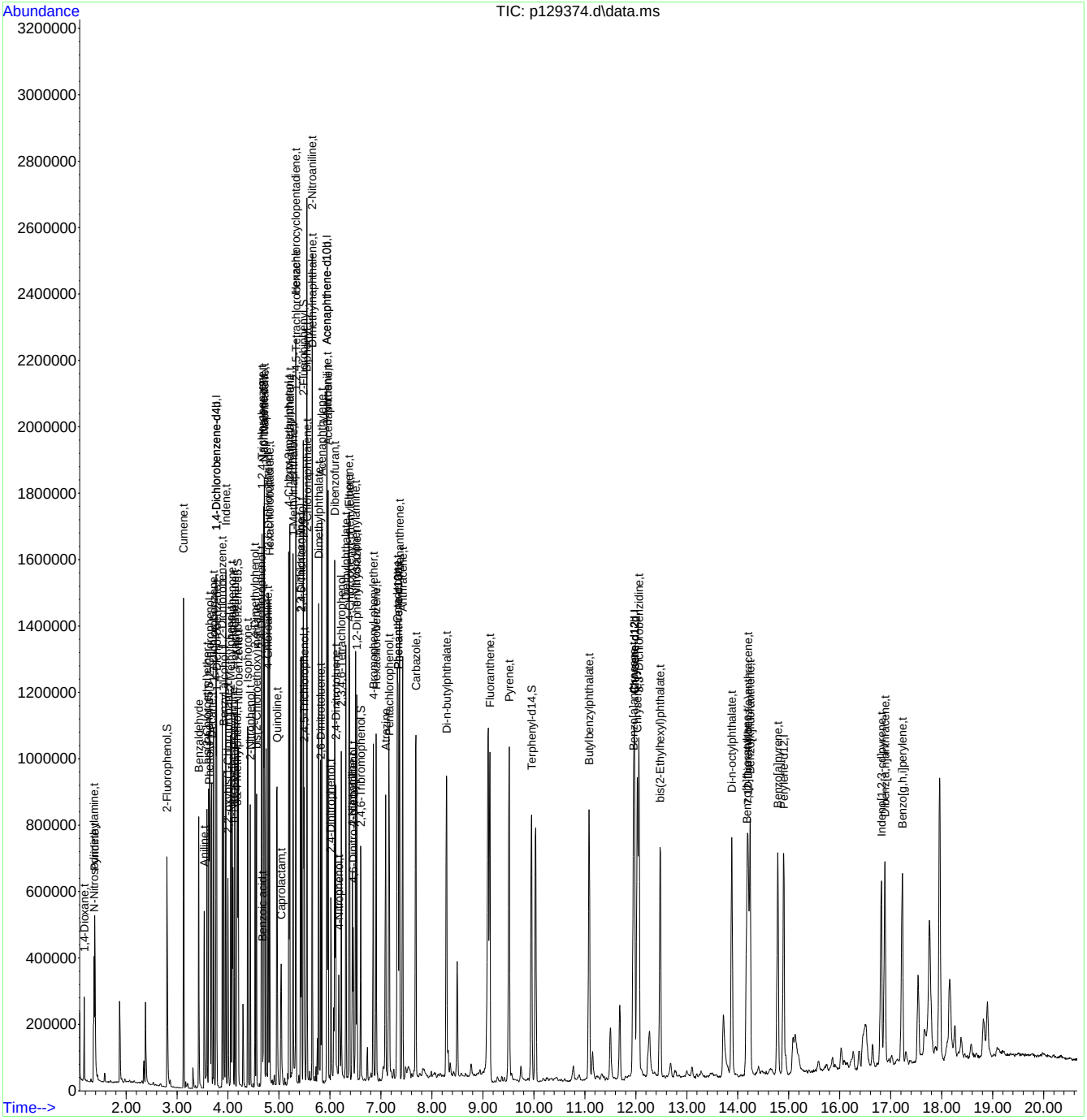
9.4.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129374.d
Acq On : 7 May 2019 4:28 pm
Operator : christc2
Sample : op20110-ms Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:04:59 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129375.d
Acq On : 7 May 2019 4:56 pm
Operator : christc2
Sample : op20110-msd Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:06:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.764	152	157674	40.00	ppm	0.00
24) Naphthalene-d8	4.699	136	501689	40.00	ppm	0.00
47) Acenaphthene-d10	5.938	164	282104	40.00	ppm	0.00
69) Phenanthrene-d10	7.338	188	487087	40.00	ppm	0.01
83) Chrysene-d12	11.975	240	445894	40.00	ppm	0.02
91) Perylene-d12	14.902	264	426745	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4b	3.764	152	157674	40.00	ppm	0.00
103) Phenanthrene-d10b	7.338	188	487087	40.00	ppm	0.01
105) Chrysene-d12b	11.975	240	445894	40.00	ppm	0.02
107) Naphthalene-d8b	4.699	136	501689	40.00	ppm	0.00
109) Acenaphthene-d10b	5.938	164	282104	40.00	ppm	0.00
111) Chrysene-d12d	11.975	240	445894	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	203314	40.13	ppm	0.00
Spiked Amount 50.000			Recovery = 80.26%			
8) Phenol-d5	3.619	99	256476	39.87	ppm	0.00
Spiked Amount 50.000			Recovery = 79.74%			
25) Nitrobenzene-d5	4.191	82	219438	40.72	ppm	0.00
Spiked Amount 50.000			Recovery = 81.44%			
51) 2-Fluorobiphenyl	5.479	172	369653	41.35	ppm	0.00
Spiked Amount 50.000			Recovery = 82.70%			
73) 2,4,6-Tribromophenol	6.606	330	60648	37.42	ppm	0.00
Spiked Amount 50.000			Recovery = 74.84%			
85) Terphenyl-d14	9.955	244	406774	40.26	ppm	0.01
Spiked Amount 50.000			Recovery = 80.52%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.178	88	75412	29.50	ppm	97
3) Pyridine	1.392	79	188399	38.88	ppm	99
4) N-Nitrosodimethylamine	1.376	42	99676	38.67	ppm	99
6) Indene	3.956	116	331413	40.14	ppm	98
7) Cumene	3.128	105	473793	35.15	ppm	98
9) Phenol	3.630	94	208076	29.68	ppm	97
10) Aniline	3.534	93	180213	54.90	ppm	99
11) bis(2-Chloroethyl)ether	3.587	93	195167	35.14	ppm	96
12) 2-Chlorophenol	3.646	128	163244	30.90	ppm	98
13) Decane	3.678	43	136113	34.95	ppm	99
14) 1,3-Dichlorobenzene	3.721	146	208493	33.55	ppm	99
15) 1,4-Dichlorobenzene	3.780	146	208989	34.72	ppm	98
16) Benzyl alcohol	3.919	108	116423	40.35	ppm	96
17) 1,2-Dichlorobenzene	3.892	146	203835	33.89	ppm	99
18) Acetophenone	4.079	105	268211	34.71	ppm	95
19) 2-Methylphenol	4.052	108	154416	31.49	ppm	99
20) 2,2'-oxybis(1-Chloropr...	3.999	121	52296	40.47	ppm #	91
21) 3&4-Methylphenol	4.180	108	159464	33.22	ppm	99
22) n-Nitroso-di-n-propyla...	4.095	70	124219	33.84	ppm	100
23) Hexachloroethane	4.132	201	79249	32.18	ppm	92
26) Nitrobenzene	4.202	77	205373	37.65	ppm	96
27) Quinoline	4.960	129	340511	37.44	ppm	99
28) Isophorone	4.389	82	392704	41.94	ppm	96
29) 2-Nitrophenol	4.437	139	90586	36.68	ppm #	70
30) 2,4-Dimethylphenol	4.533	107	183362	41.84	ppm	99
31) Benzoic acid	4.677	105	78575	22.73	ppm	96
32) bis(2-Chloroethoxy)met...	4.560	93	221104	40.77	ppm	97
33) 2,4-Dichlorophenol	4.656	162	145334	35.22	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129375.d
Acq On : 7 May 2019 4:56 pm
Operator : christc2
Sample : op20110-msd Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:06:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
34) 2,6-Dichlorophenol	4.789	162	143887	35.71	ppm	98
36) 1,2,4-Trichlorobenzene	4.667	180	178838	38.56	ppm	99
38) Naphthalene	4.715	128	516671	43.13	ppm	99
39) 4-Chloroaniline	4.784	127	116464	24.96	ppm	96
40) 2,3-Dichloroaniline	5.425	161	176867	34.03	ppm	98
41) Caprolactam	5.041	55	70661	39.03	ppm	96
42) Hexachlorobutadiene	4.816	225	111364	38.83	ppm	98
43) 4-Chloro-3-methylphenol	5.195	107	156913	36.15	ppm	84
44) 2-Methylnaphthalene	5.211	141	273432	39.82	ppm	99
45) 1-Methylnaphthalene	5.281	142	320905	36.07	ppm	97
46) Dimethylnaphthalene	5.655	156	300460	37.78	ppm	99
48) Hexachlorocyclopentadiene	5.329	237	139443	64.67	ppm	98
49) 2,4,6-Trichlorophenol	5.441	196	110376	39.47	ppm	98
50) 2,4,5-Trichlorophenol	5.495	196	102074	36.86	ppm	97
52) 2-Chloronaphthalene	5.553	162	316209	41.35	ppm	98
53) Biphenyl	5.548	154	397444	41.80	ppm	100
54) 2-Nitroaniline	5.650	65	106245	42.15	ppm	93
55) Dimethylphthalate	5.778	163	386015	39.16	ppm	99
56) Acenaphthylene	5.837	152	508586	42.13	ppm	100
57) 2,6-Dinitrotoluene	5.820	165	86636	41.95	ppm	83
58) 3-Nitroaniline	5.943	138	62075	28.70	ppm	99
59) Acenaphthene	5.965	153	304607	41.06	ppm	98
60) 2,4-Dinitrophenol	6.024	184	52686	42.14	ppm	90
61) 4-Nitrophenol	6.173	109	53633	34.64	ppm	93
62) Dibenzofuran	6.093	168	446701	39.70	ppm	97
63) 2,4-Dinitrotoluene	6.114	165	108072	39.32	ppm	80
64) 2,3,4,6-Tetrachlorophenol	6.221	232	82908	34.15	ppm	94
65) Diethylphthalate	6.312	149	401832	40.05	ppm	99
66) Fluorene	6.376	166	375510	41.65	ppm	99
67) 4-Chlorophenyl-phenyle...	6.387	204	174389	39.11	ppm	93
68) 4-Nitroaniline	6.440	138	74736	36.17	ppm	99
70) 4,6-Dinitro-2-methylph...	6.456	198	46056	25.24	ppm	68
71) n-Nitrosodiphenylamine	6.504	169	250810	39.73	ppm	99
72) 1,2-Diphenylhydrazine	6.526	77	469822	47.61	ppm	98
74) 4-Bromophenyl-phenylether	6.852	248	115619	39.05	ppm	89
75) Hexachlorobenzene	6.910	284	121733	36.04	ppm	98
76) Pentachlorophenol	7.167	266	65875	32.30	ppm	97
77) Phenanthrene	7.364	178	516475	40.69	ppm	100
78) Anthracene	7.428	178	526524	39.71	ppm	99
79) Carbazole	7.685	167	483461	37.75	ppm	98
80) Di-n-butylphthalate	8.289	149	699241	38.48	ppm	100
81) Fluoranthene	9.138	202	552340	35.28	ppm	96
82) Octadecane	7.322	57	220400	44.37	ppm	98
84) Pyrene	9.517	202	608305	39.40	ppm	97
86) Butylbenzylphthalate	11.083	149	305869	38.52	ppm	98
87) Benzo[a]anthracene	11.959	228	511543	34.80	ppm	99
88) 3,3'-Dichlorobenzidine	12.060	252	328450	67.95	ppm	98
89) Chrysene	12.028	228	471746	36.44	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.482	149	408279	38.45	ppm	99
92) Di-n-octylphthalate	13.882	149	689880	41.82	ppm	100
93) Benzo[b]fluoranthene	14.186	252	488246	37.53	ppm	98
94) Benzo[k]fluoranthene	14.245	252	440193	40.22	ppm	99
95) Benzo[a]pyrene	14.785	252	444906	40.45	ppm	99
96) Indeno[1,2,3-cd]pyrene	16.820	276	413692	41.15	ppm	98
98) Dibenz[a,h]anthracene	16.890	278	398111	38.84	ppm	97
99) 7,12-Dimethylbenz(a)an...	14.208	256	168016	29.10	ppm	96
100) Benzo[g,h,i]perylene	17.226	276	435147	42.93	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129375.d
Acq On : 7 May 2019 4:56 pm
Operator : christc2
Sample : op20110-msd Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:06:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) Benzaldehyde	3.427	105	137725	33.46 ppm	95
104) Atrazine	7.092	200	102512	39.14 ppm	90
110) 1,2,4,5-Tetrachloroben...	5.334	216	171678	41.38 ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

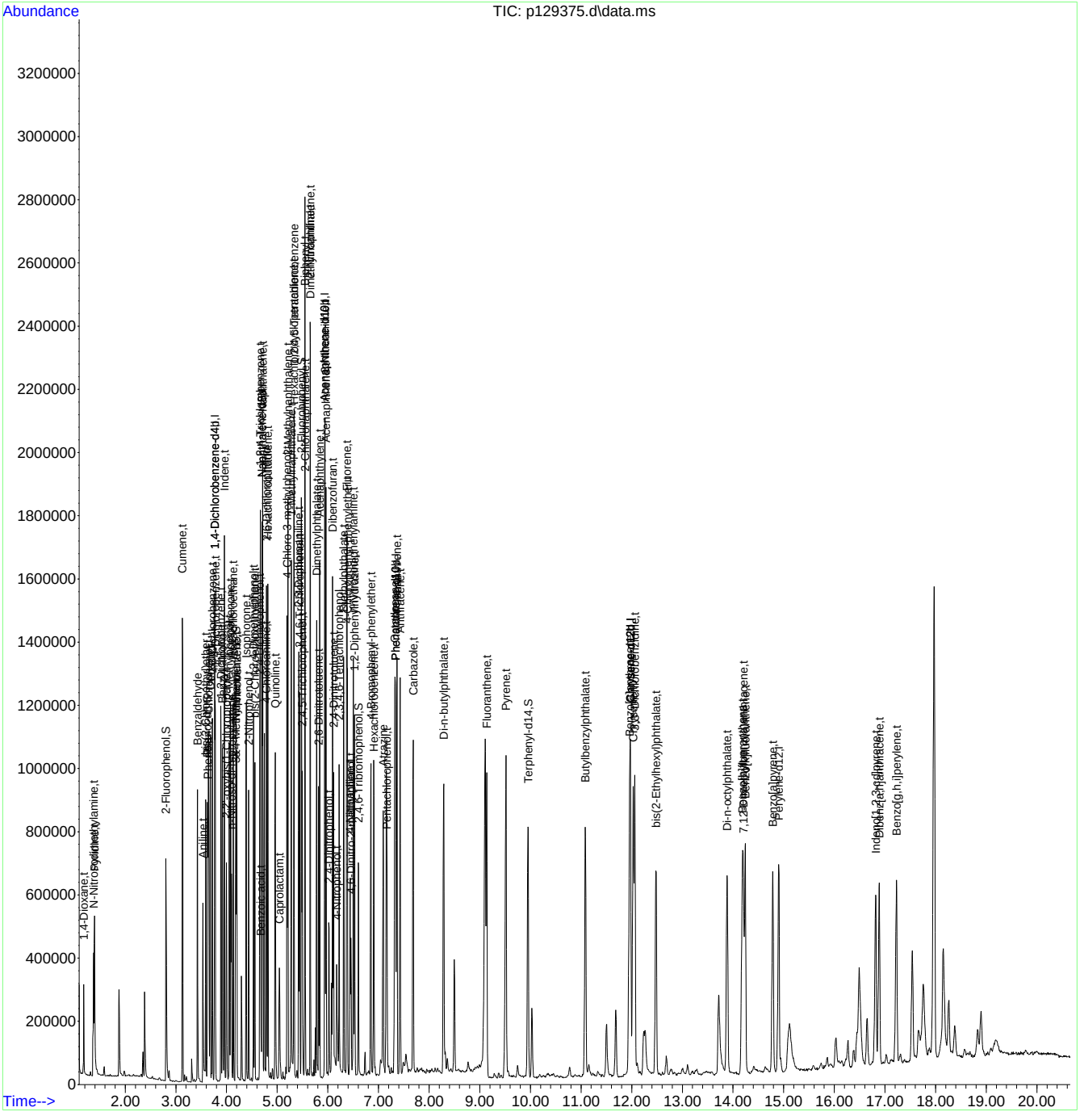
9.4.2

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\ep5856\
Data File : p129375.d
Acq On : 7 May 2019 4:56 pm
Operator : christc2
Sample : op20110-msd Inst : MSVOAMSP
Misc : op20110,ep5856,30.4,,,1,1
ALS Vial : 11 Sample Multiplier: 1

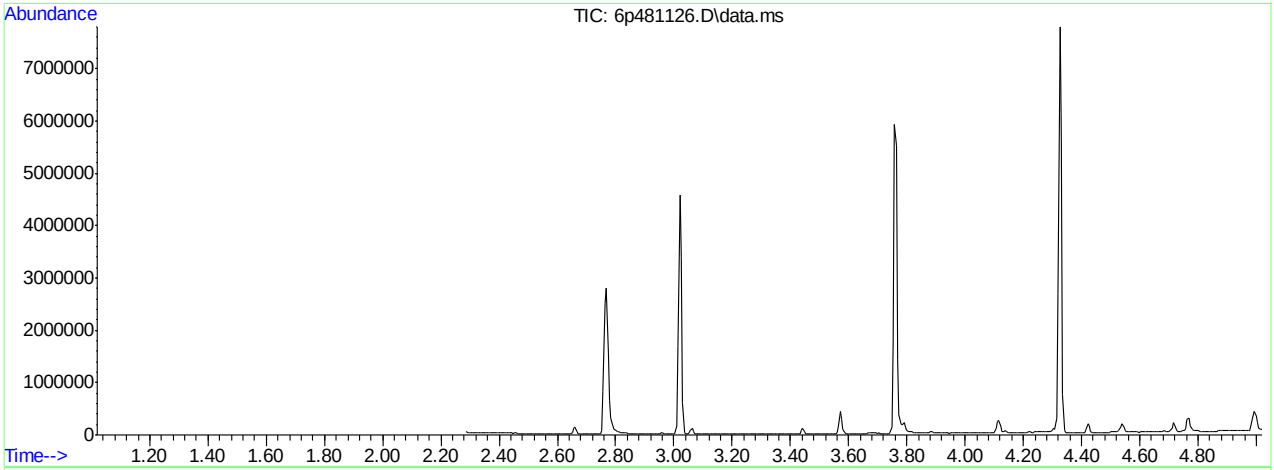
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 08 04:06:11 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 04:02:20 2019
Response via : Initial Calibration



DFTPP

Data File : C:\msdchem\1\DATA\E6P2562\6p481126.D Vial: 1
Acq On : 16 Apr 2019 9:34 am Operator: angelar
Sample : dftpp Inst : MS6P
Misc : op17006,e6p2562,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um



AutoFind: Scans 137, 138, 139; Background Corrected with Scan 132

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.3	133701	PASS
68	69	0.00	2	1.7	2251	PASS
69	198	0.00	100	36.9	136031	PASS
70	69	0.00	2	0.5	671	PASS
127	198	40	60	51.5	189621	PASS
197	198	0.00	1	0.1	428	PASS
198	198	100	100	100.0	368448	PASS
199	198	5	9	6.7	24693	PASS
275	198	10	30	28.0	103277	PASS
365	198	1	100	4.0	14732	PASS
441	443	0.10	100	81.7	39477	PASS
442	198	40	100	68.1	250821	PASS
443	442	17	23	19.3	48343	PASS

6p481126.D DFTPP6P.M Tue Apr 16 14:36:15 2019 ACLIMS

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	26	51.00	133701	63.00	5851	75.00	22738
36.90	826	52.00	7043	63.95	747	76.05	7738
38.00	1938	52.95	505	64.95	3339	76.95	164429
39.00	9763	55.00	393	66.00	145	78.00	11829
39.95	306	56.00	3608	67.00	107	79.00	10233
41.00	611	57.00	8621	67.95	2251	79.90	8233
41.80	127	57.95	570	69.00	136031	81.00	11711
42.05	324	58.95	326	69.95	671	81.90	2972
44.95	146	59.95	220	71.00	50	83.00	2708
49.05	1141	60.90	1974	72.95	877	83.90	198
50.00	34925	62.00	1902	74.00	14717	84.90	1694

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.95	3064	98.00	14492	109.00	1579	119.95	703
86.95	1633	99.00	11157	110.00	93232	120.80	132
87.95	668	100.00	1041	111.00	14016	121.95	3267
89.00	280	100.90	6472	111.95	1797	122.95	5323
90.90	2528	101.85	353	112.90	690	123.90	2295
92.00	3190	103.00	2352	113.90	132	124.95	2547
92.95	18235	103.90	4454	114.95	566	126.10	686
93.90	1197	104.95	4207	115.95	3284	127.00	189621
94.85	569	105.95	1271	116.95	39605	128.00	14058
96.00	810	107.00	50173	117.95	3113	128.95	70453
97.00	104	107.95	7869	118.95	365	129.95	5996

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.95	1251	141.95	2991	151.00	1070	161.00	4378
131.95	910	142.95	2109	151.90	754	161.95	1339
132.95	403	143.90	253	152.95	2848	162.95	337
133.95	1975	144.10	229	154.00	2222	163.95	422
134.95	5536	144.70	117	154.95	4830	164.90	3332
135.95	2099	145.00	443	156.00	8015	166.00	3174
136.95	2958	145.90	1720	156.95	1745	166.95	18386
137.95	680	146.95	4316	157.80	263	167.95	8738
138.95	468	147.90	10344	157.95	1445	168.95	1597
139.95	1026	148.90	2347	158.95	1344	169.80	256
140.95	9404	150.00	742	159.95	2666	170.05	441

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.75	428	180.95	4547	190.95	1905	201.20	643
171.00	343	182.00	841	191.90	4122	201.45	1963
171.85	1742	182.80	353	192.95	4815	202.95	2836
173.00	1984	183.00	167	193.95	1099	204.00	13498
174.00	3840	183.95	1242	194.80	416	205.00	22398
175.00	7304	185.00	6467	195.10	442	206.00	96040
176.00	2130	186.00	54237	196.00	10885	207.00	12162
176.95	3692	187.00	14540	196.70	428	207.95	3235
177.95	1291	187.95	1710	197.90	368448	208.85	1075
178.90	13551	188.95	3372	198.90	24693	209.95	1771
179.95	9555	189.85	534	199.95	2359	211.00	3471

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.60	171	224.00	51053	234.80	183	245.00	5361
212.95	365	225.00	12703	234.95	1320	246.00	8249
214.00	136	226.00	1680	235.90	1018	246.70	228
214.90	1296	226.90	21548	236.90	2140	246.95	1643

215.95	2386	227.95	3212	237.90	217	247.85	264
216.90	24713	228.95	4750	238.90	1070	249.00	1558
217.90	3022	229.95	584	239.95	807	250.00	308
218.95	372	230.90	1810	240.90	1278	251.00	536
221.00	18639	232.05	402	242.00	2986	251.95	396
221.60	2612	232.95	366	243.00	2940	252.95	762
222.95	4902	233.95	1524	244.00	40357	253.70	147

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
255.00	217101	269.85	318	282.95	1151	293.80	144
256.00	32189	270.95	441	283.80	187	294.00	254
257.00	2496	271.90	521	284.05	544	294.95	297
258.00	12771	273.00	6463	285.00	1293	296.00	30007
259.00	1967	274.00	17576	286.00	266	297.00	4006
259.80	233	275.00	103277	288.90	350	297.70	147
261.00	327	276.00	13924	289.85	329	297.90	179
263.80	336	277.00	8110	290.90	101	300.90	156
265.00	5214	277.95	1604	291.70	128	302.00	480
265.90	1124	278.90	267	292.00	157	303.00	3257
267.80	67	281.90	477	292.95	2146	304.05	836

Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
307.90	372	324.00	2165	340.95	1398	358.90	111
308.90	229	326.60	173	341.95	336	363.80	110
309.95	317	326.90	1678	345.95	2425	364.95	14732
312.90	162	328.00	962	346.95	361	365.95	2215
313.95	1880	328.80	100	350.90	116	369.95	240
314.95	3483	331.95	834	351.95	3314	371.00	908
316.00	1900	332.95	860	353.00	1935	372.00	6002
316.95	370	334.00	6215	353.80	281	373.05	1203
321.00	779	335.00	1820	354.00	2981	373.80	113
322.00	264	335.90	133	354.95	610	382.90	1158
323.00	9632	340.00	138	355.90	115	383.95	330

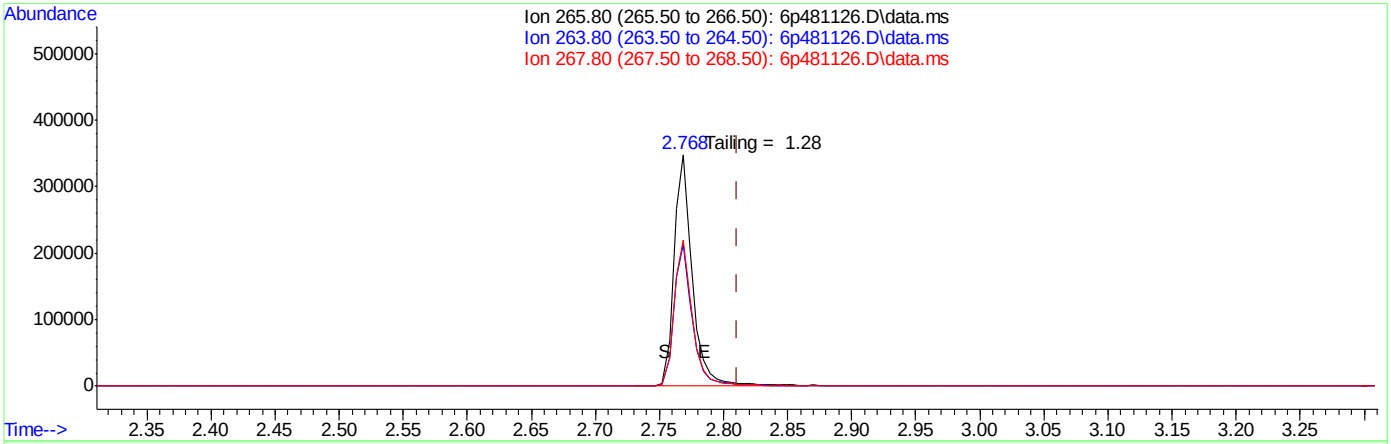
Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

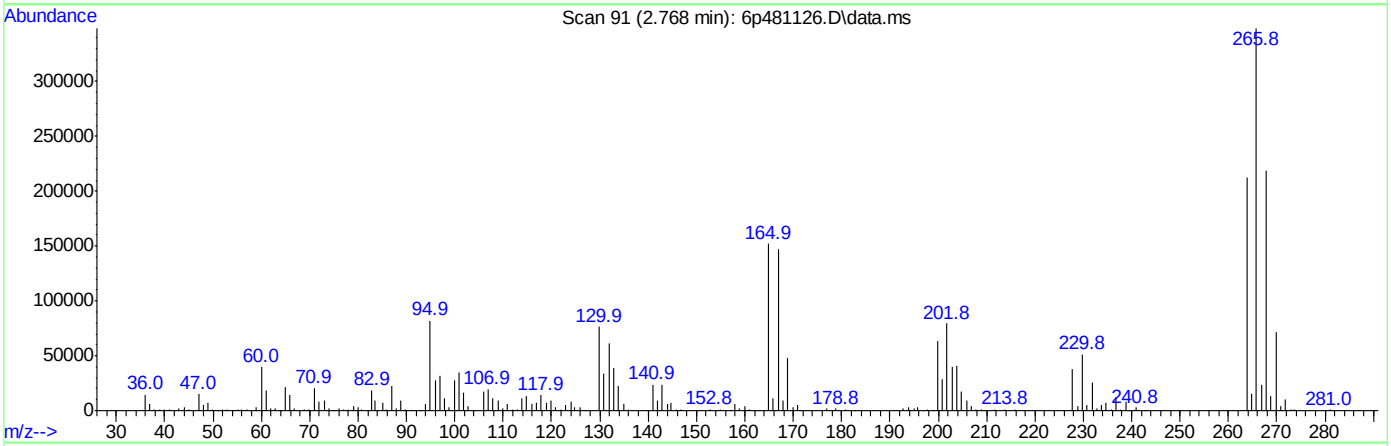
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
389.90	706	422.00	1455				
390.60	138	423.05	16779				
391.05	478	424.10	3728				
391.90	347	424.80	143				
401.00	310	425.10	374				
401.95	2390	441.10	39477				
402.95	2852	442.05	250821				
404.00	986	443.00	48343				
404.90	116	444.05	4468				
414.80	116						
421.00	2116						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481126.D
Acq On : 16 Apr 2019 9:34 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 09:40:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Apr 14 13:25:38 2019
Response via : Initial Calibration





TIC: 6p481126.D\data.ms

(1) Pentachlorophenol (t)

2.768min (-0.043) 0.00ng

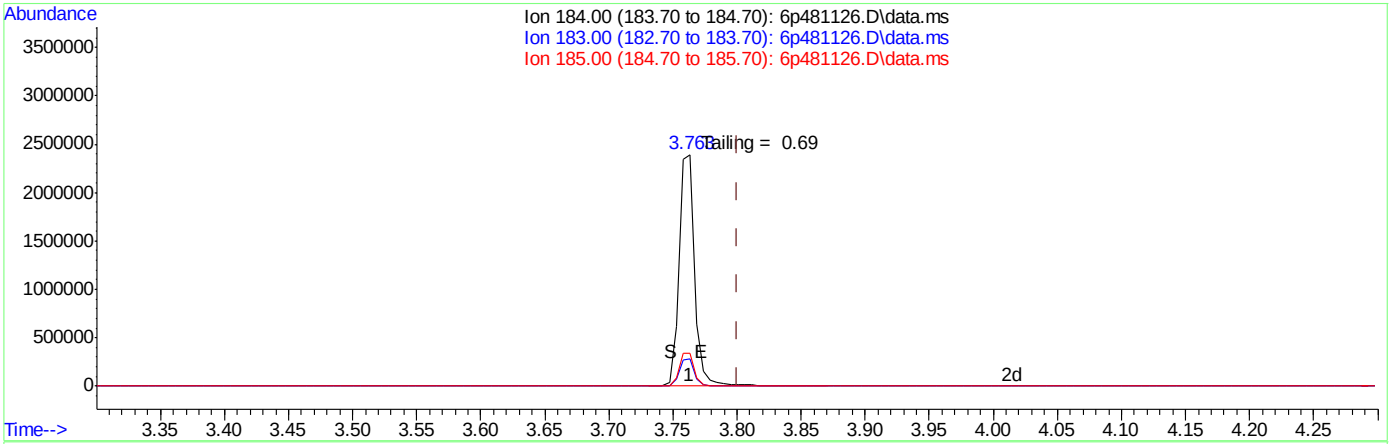
response 356010

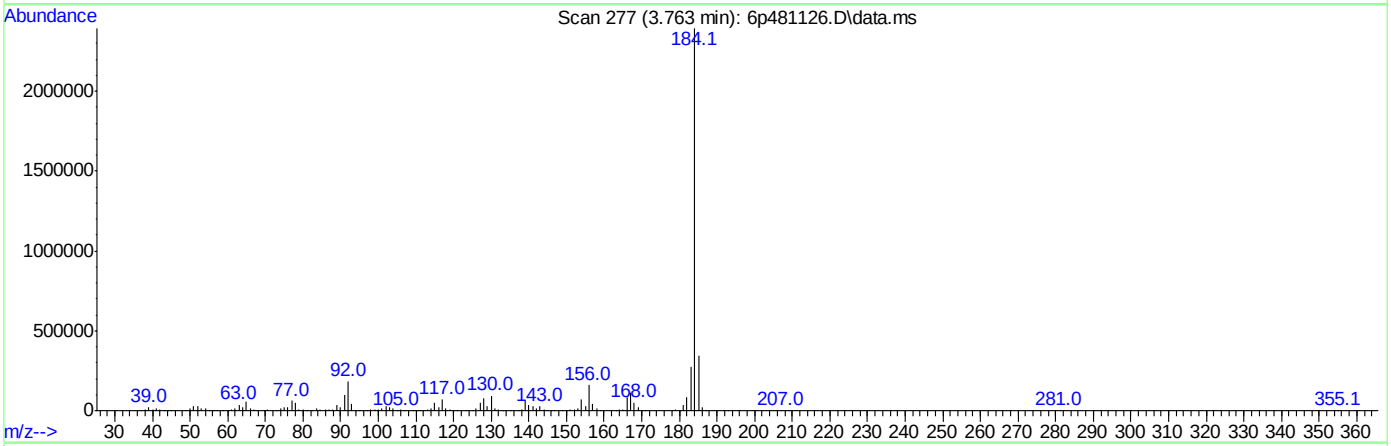
Ion	Exp%	Act%
265.80	100	100
263.80	60.10	61.11
267.80	65.70	62.85
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481126.D
Acq On    : 16 Apr 2019   9:34 am
Operator  : angelar
Sample    : dftpp
Misc      : op17006,e6p2562,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 16 09:40:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Apr 14 13:25:38 2019
Response via : Initial Calibration
```





(2) Benzidine (t)

3.763min (-0.037) 0.00ng

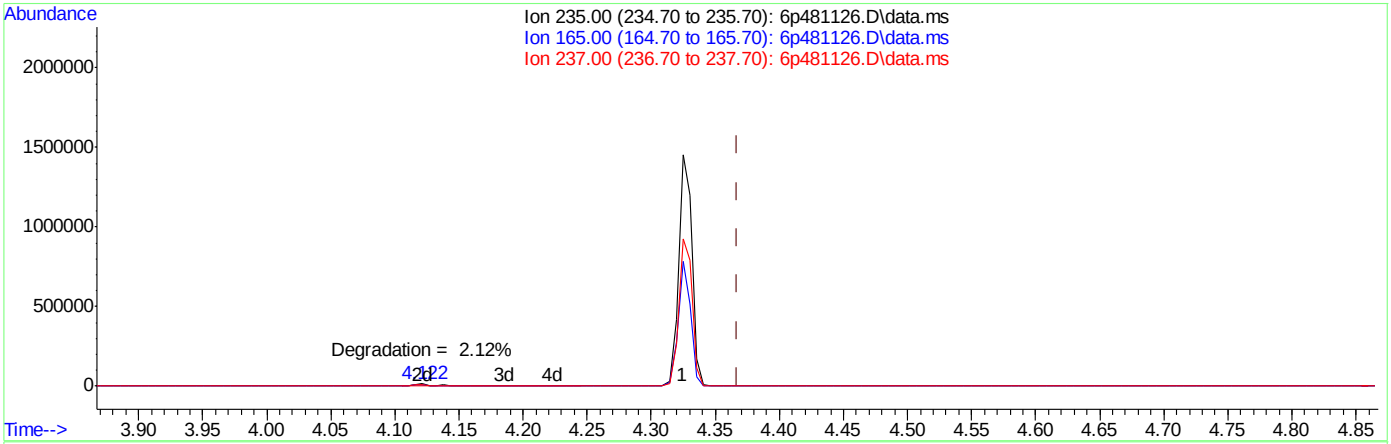
response 2079722

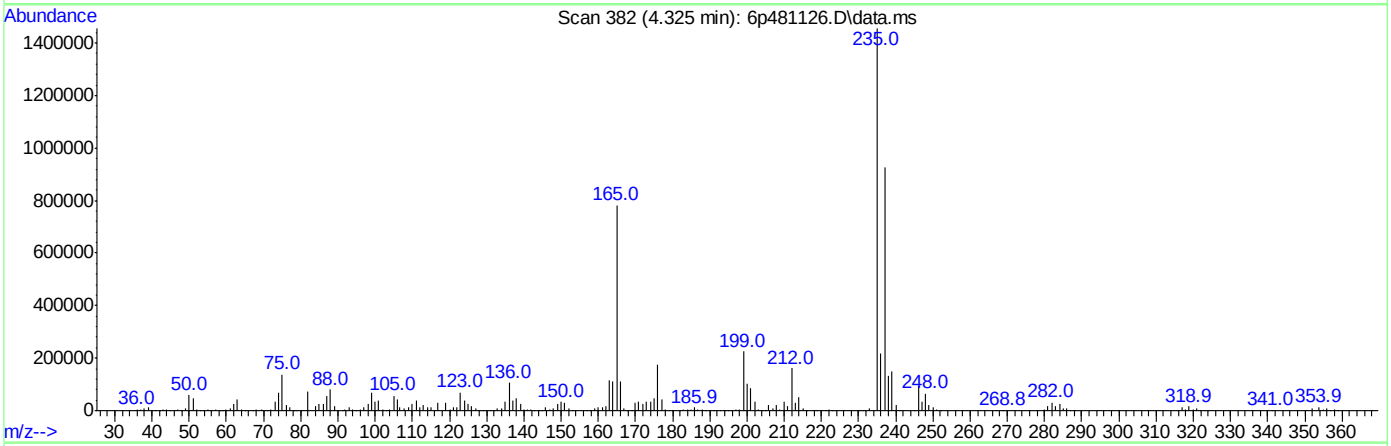
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	11.58
185.00	14.10	14.28
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481126.D
Acq On : 16 Apr 2019 9:34 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 09:40:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Apr 14 13:25:38 2019
Response via : Initial Calibration





TIC: 6p481126.D\data.ms

(3) PP-DDT (t)

4.325min (-0.043) 0.00ng

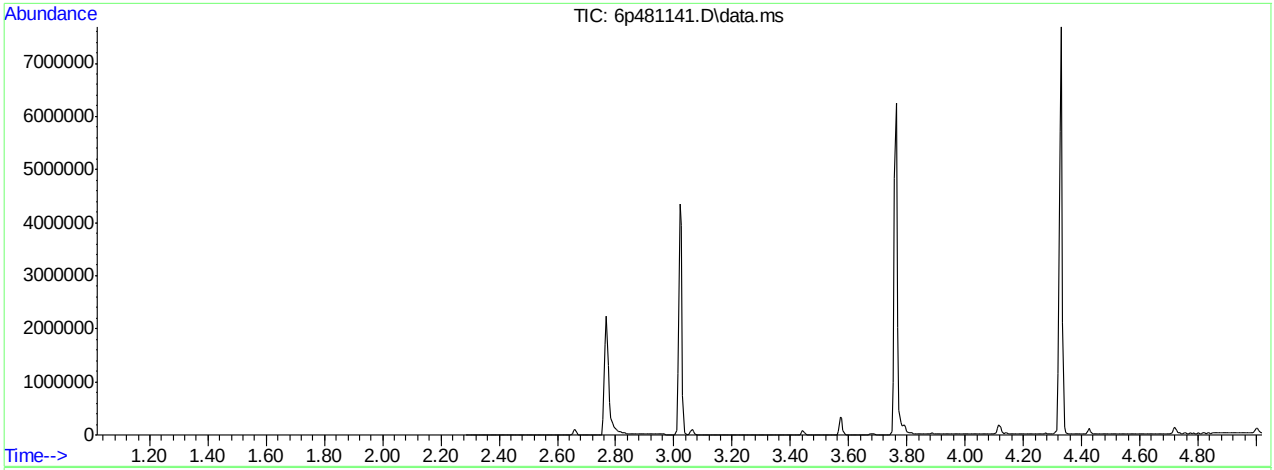
response 1056559

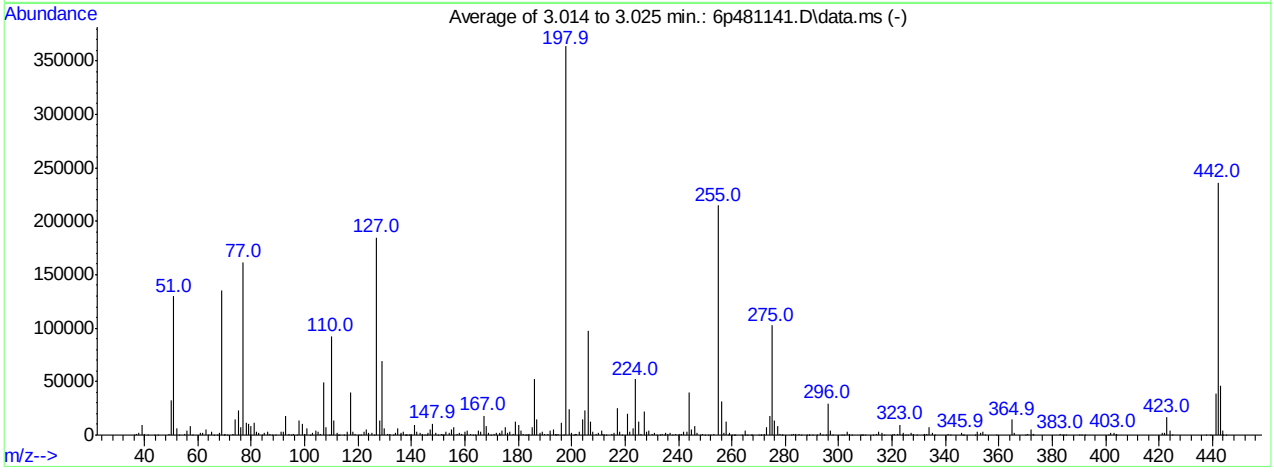
Ion	Exp%	Act%
235.00	100	100
165.00	53.40	50.71
237.00	64.90	64.39
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E6P2562\6p481141.D Vial: 1
Acq On : 16 Apr 2019 3:25 pm Operator: angelar
Sample : dftpp Inst : MS6P
Misc : op17006,e6p2563,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um





AutoFind: Scans 137, 138, 139; Background Corrected with Scan 133

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.7	129768	PASS
68	69	0.00	2	1.9	2510	PASS
69	198	0.00	100	37.3	135637	PASS
70	69	0.00	2	0.5	674	PASS
127	198	40	60	50.8	184520	PASS
197	198	0.00	1	0.1	403	PASS
198	198	100	100	100.0	363402	PASS
199	198	5	9	6.7	24236	PASS
275	198	10	30	28.2	102661	PASS
365	198	1	100	4.0	14598	PASS
441	443	0.10	100	85.7	39268	PASS
442	198	40	100	65.0	236114	PASS
443	442	17	23	19.4	45838	PASS

6p481141.D DFTPP6P.M Tue Apr 16 16:43:19 2019 ACLIMS

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	8	52.00	6487	65.90	138	77.00	161464
36.90	590	53.00	222	67.05	252	78.00	11161
38.00	1660	54.95	750	68.05	2510	78.95	10482
39.00	9933	56.00	3732	69.00	135637	79.95	8176
39.95	840	56.95	8060	69.80	153	80.95	11135
41.00	279	57.95	418	69.95	674	81.90	2804
43.90	212	60.95	1880	71.00	122	82.90	2539
44.95	258	61.95	1924	72.90	1131	83.95	353
49.00	977	63.00	5480	74.00	14645	84.95	1999
50.00	32600	64.05	519	75.00	23497	85.95	2965
51.00	129768	65.00	2695	76.05	7725	87.00	1538

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.90	534	99.90	1024	111.00	13577	122.00	3512
89.05	446	100.95	5860	111.95	1883	122.95	5238
90.95	2751	101.95	287	112.60	114	123.95	2186
91.95	2657	102.95	2232	112.95	301	124.95	1848
93.00	17405	103.95	4332	114.70	213	126.10	192
93.95	1233	104.95	3570	115.95	2963	127.00	184520
94.90	202	106.00	1228	117.00	39674	128.00	13879
95.90	723	107.00	49045	117.95	2829	129.00	69261
97.05	393	107.95	7754	118.95	572	129.95	6354
97.95	13709	109.00	251	119.95	434	130.95	1289
98.95	10880	110.00	92602	121.05	279	131.90	669

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.95	534	141.00	9361	151.00	1470	159.95	2802
133.90	1989	141.95	3409	151.50	141	160.95	4164
134.95	5882	143.00	2032	151.75	516	161.90	1070
135.80	328	143.90	683	152.10	159	163.05	270
135.95	1822	144.85	472	152.95	3363	163.95	445
136.95	2923	145.70	207	154.00	2398	164.90	3865
137.65	328	145.95	1643	155.00	4963	166.00	3133
137.90	311	146.90	4957	156.00	7778	167.00	18239
138.10	166	147.90	10626	156.95	1521	168.00	8780
138.95	365	148.95	2283	158.00	1756	168.95	1714
139.90	937	149.90	472	158.90	1585	169.85	535

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.90	643	181.00	4713	190.95	1318	200.70	296
171.95	1650	182.00	603	191.95	3939	201.40	1159
172.80	235	182.60	206	193.00	5146	201.65	939
172.95	1703	183.00	411	193.80	134	202.90	2899
173.95	4109	183.90	918	194.00	875	204.00	14394
175.00	7278	185.00	6905	194.90	577	205.00	22591
176.05	2290	186.00	52912	196.00	11387	206.00	97074
176.95	3517	187.00	14931	197.00	403	207.00	12328
177.95	1341	188.00	1620	197.90	363402	208.00	3220
178.90	13007	188.90	3502	198.90	24236	208.90	938
180.00	9237	189.90	572	199.95	2119	210.10	1847

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.00	3818	223.00	5916	233.95	1546	244.00	40369
211.60	578	224.00	52001	234.60	122	245.00	5804
211.90	244	225.00	12550	235.00	1690	246.00	8316
213.00	100	226.00	1594	235.90	1227	247.00	1847

214.95	1012	227.00	21775	236.90	1885	248.00	356
215.95	2080	227.95	3450	237.70	105	248.95	1367
216.90	24923	228.90	4595	238.95	801	249.90	162
217.90	3091	229.95	771	240.00	745	250.90	391
218.95	349	230.95	1818	241.00	1111	252.00	302
221.00	19906	231.95	456	241.95	2682	253.00	895
221.60	2772	232.90	531	243.00	2734	255.00	214853

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
256.00	31453	265.80	402	276.95	8123	289.00	148
257.00	2588	266.90	234	277.90	1388	289.95	386
257.90	12373	267.60	205	278.70	146	291.95	346
258.70	308	269.80	364	278.90	116	292.90	1858
258.90	1759	270.70	186	281.95	229	293.95	431
259.80	313	271.00	176	282.90	965	295.00	252
260.90	219	271.95	609	283.85	798	296.00	29912
261.10	184	273.00	6905	284.95	1560	297.00	4232
263.80	354	274.00	17871	285.95	342	297.90	256
264.80	448	275.00	102661	287.90	105	300.95	369
265.00	4722	276.00	13814	288.80	206	301.85	523

Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
303.00	3309	317.00	181	329.00	103	346.80	223
303.95	964	320.10	121	331.50	122	350.90	144
304.80	115	320.95	1166	331.95	594	352.00	3174
308.00	435	322.00	636	332.95	894	352.95	2131
308.70	134	323.00	9696	334.00	6916	354.00	3280
309.00	183	323.80	102	335.00	1842	354.95	462
309.95	521	324.05	1880	335.80	114	358.90	137
312.80	135	324.95	266	341.00	1128	364.95	14598
314.00	1298	325.90	112	341.95	250	365.90	2066
314.95	3254	326.90	1726	345.90	2264	370.05	360
316.00	2075	327.90	905	346.60	163	370.95	918

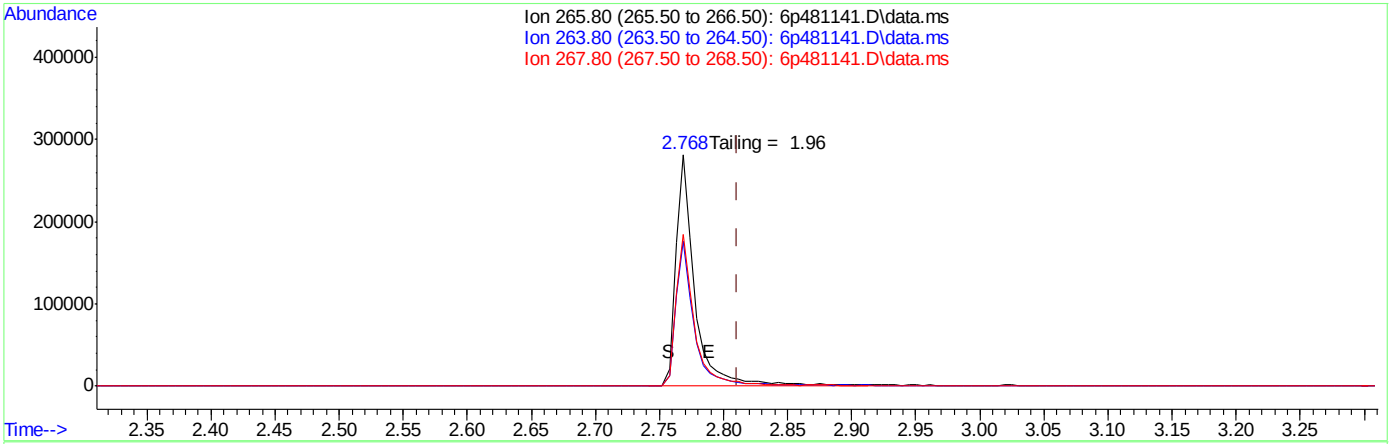
Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

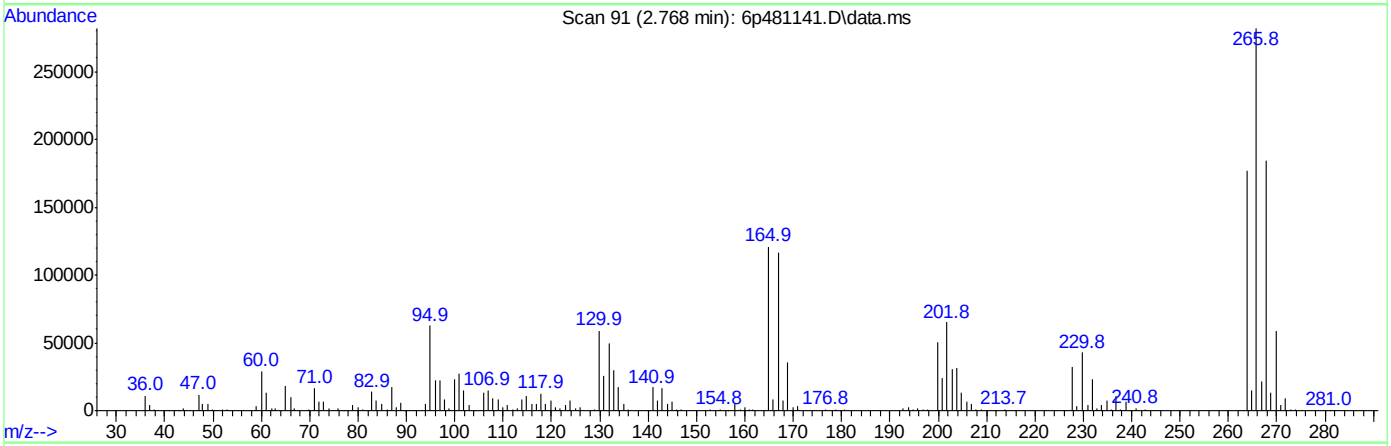
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
372.00	5216	402.00	1797	441.10	39268		
372.70	247	403.00	2568	442.00	236114		
373.05	1086	403.80	408	443.00	45838		
383.00	1275	404.00	765	443.80	153		
383.80	218	421.00	2245	444.00	3803		
384.10	142	422.00	2426	444.90	250		
384.90	106	423.00	16992				
390.00	530	424.00	3735				
390.95	334	424.85	318				
392.00	328	437.70	100				
401.00	281	439.30	256				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481141.D
Acq On : 16 Apr 2019 3:25 pm
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 15:31:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Apr 14 13:25:38 2019
Response via : Initial Calibration





TIC: 6p481141.D\data.ms

(1) Pentachlorophenol (t)

2.768min (-0.043) 0.00ng

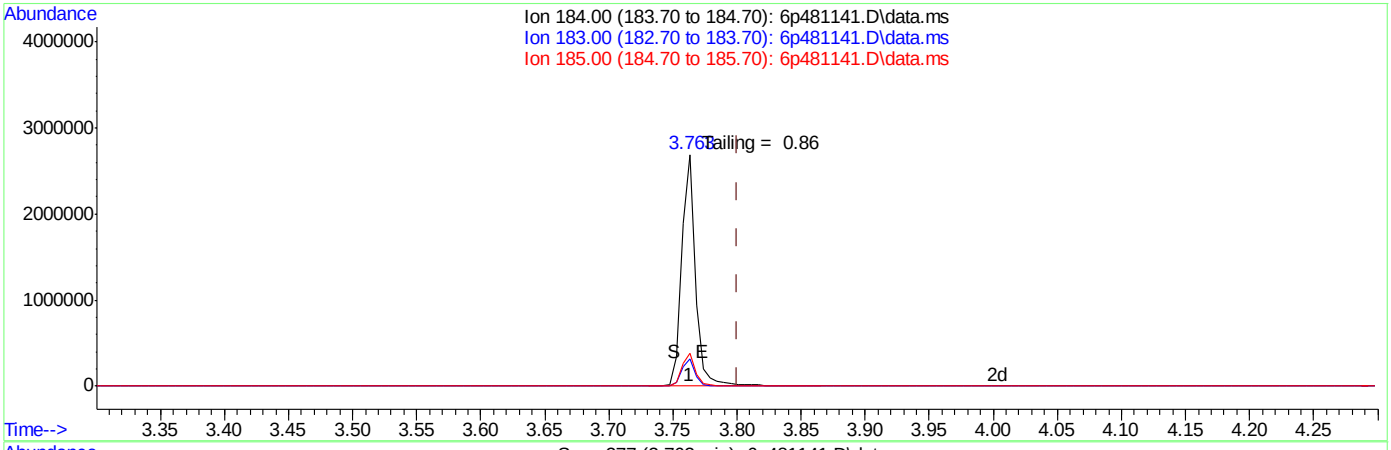
response 300355

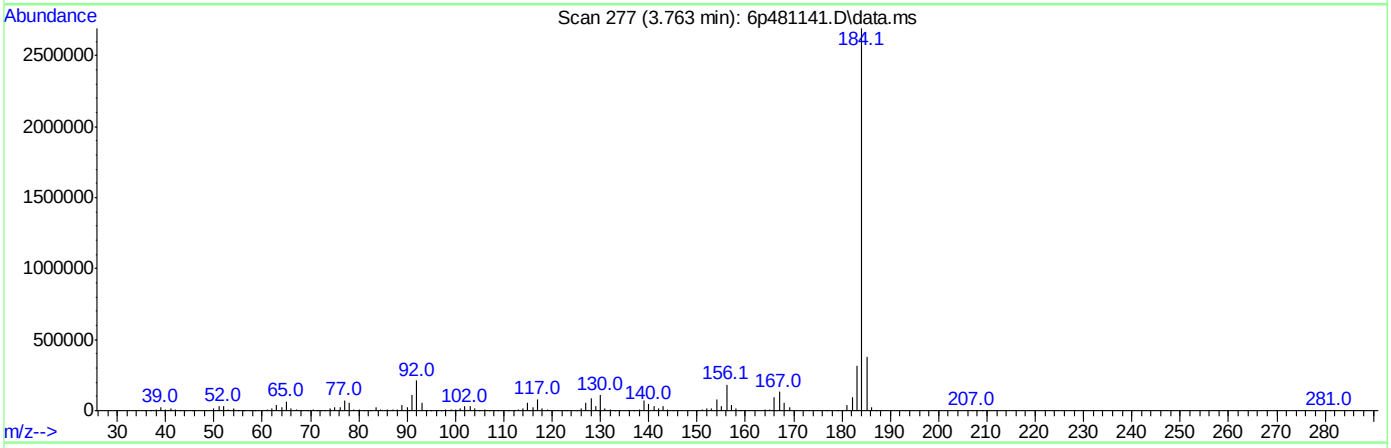
Ion	Exp%	Act%
265.80	100	100
263.80	60.10	62.72
267.80	65.70	65.50
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481141.D
Acq On    : 16 Apr 2019   3:25 pm
Operator  : angelar
Sample    : dftpp
Misc      : op17006,e6p2563,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 16 15:31:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Apr 14 13:25:38 2019
Response via : Initial Calibration
```





(2) Benzidine (t)

3.763min (-0.037) 0.00ng

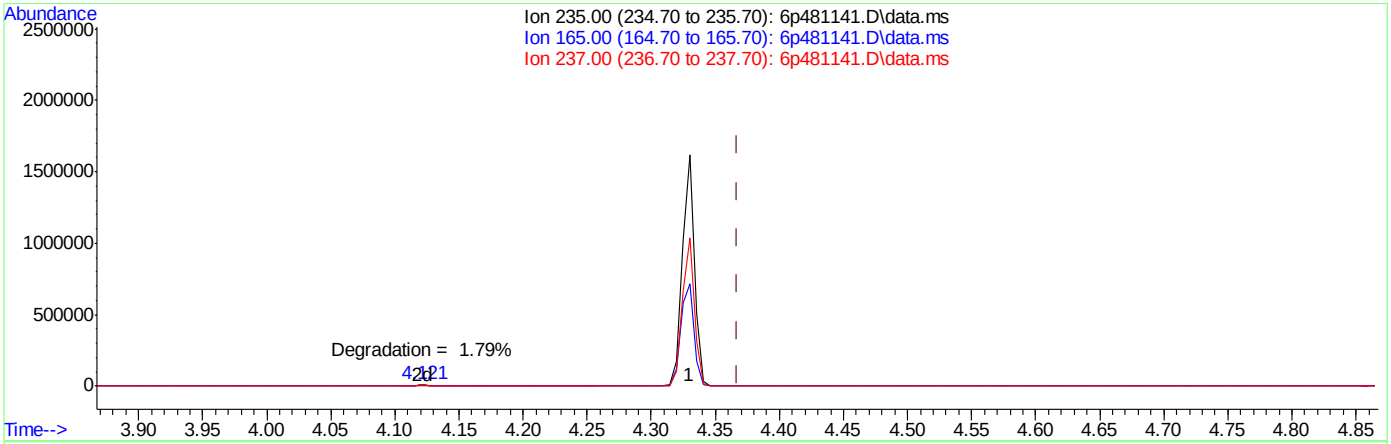
response 2078030

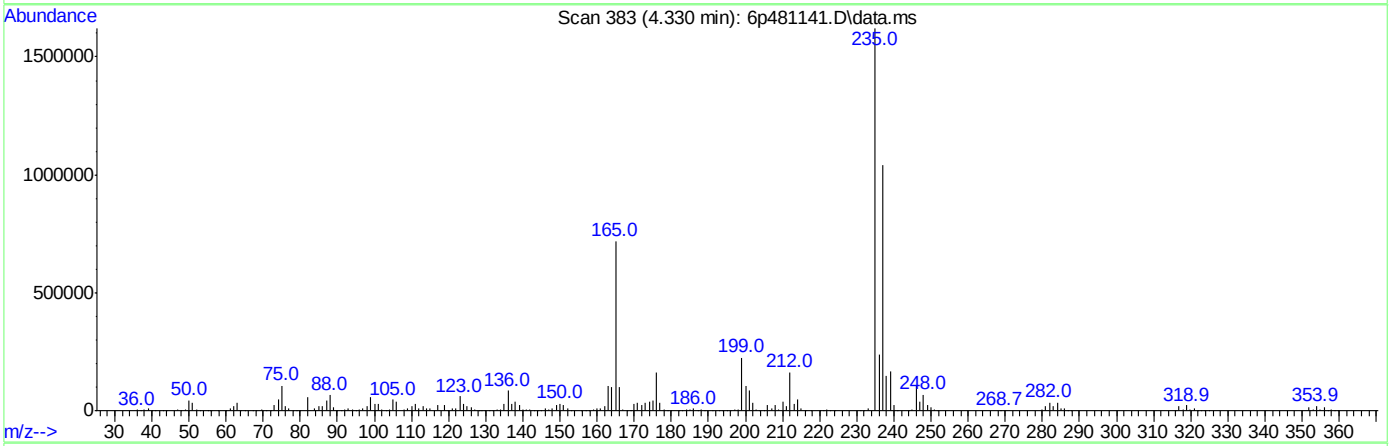
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	11.79
185.00	14.10	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481141.D
Acq On    : 16 Apr 2019   3:25 pm
Operator  : angelar
Sample    : dftpp
Misc      : op17006,e6p2563,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 16 15:31:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Apr 14 13:25:38 2019
Response via : Initial Calibration
```





TIC: 6p481141.D\data.ms

(3) PP-DDT (t)

4.330min (-0.037) 0.00ng

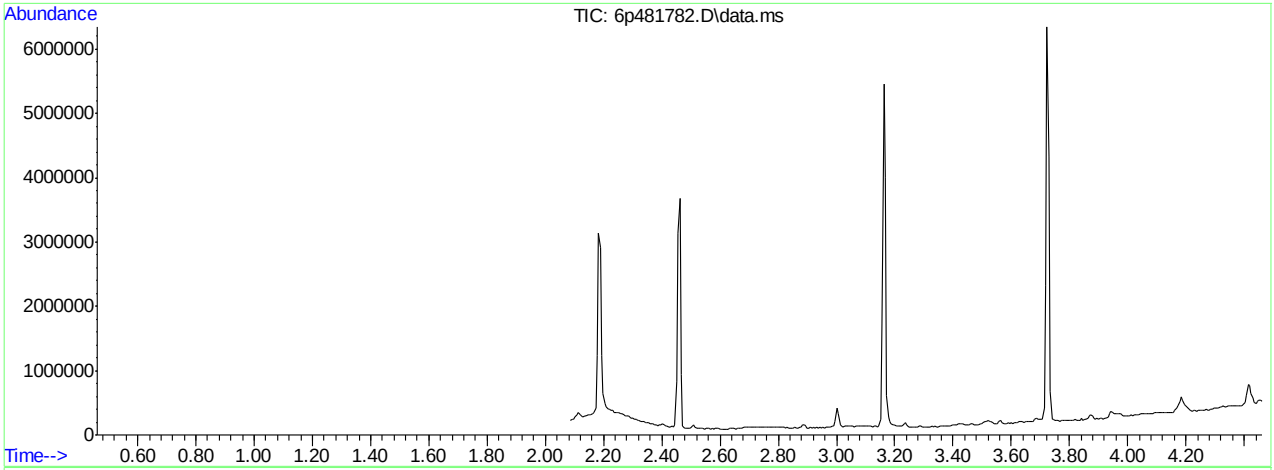
response 1083814

Ion	Exp%	Act%
235.00	100	100
165.00	53.40	48.06
237.00	64.90	64.09
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E6P2588\6p481782.D Vial: 1
Acq On : 10 May 2019 8:59 am Operator: angelar
Sample : dftpp Inst : MS6P
Misc : op17006,e6p2588,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um



AutoFind: Scans 70, 71, 72; Background Corrected with Scan 65

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.3	93631	PASS
68	69	0.00	2	1.2	1210	PASS
69	198	0.00	100	38.1	100922	PASS
70	69	0.00	2	0.4	379	PASS
127	198	40	60	55.0	145813	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	264920	PASS
199	198	5	9	6.8	18114	PASS
275	198	10	30	28.0	74194	PASS
365	198	1	100	4.6	12288	PASS
441	443	0.10	100	75.7	35856	PASS
442	198	40	100	94.4	250069	PASS
443	442	17	23	18.9	47370	PASS

6p481782.D DFTPP6P.M Fri May 10 10:32:16 2019 ACLIMS

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.90	1368	53.00	199	67.00	393	78.95	7071
39.00	6473	56.00	2838	68.00	1210	79.95	6371
40.00	107	57.00	6151	68.95	100922	80.95	9038
41.90	331	58.00	484	70.00	379	82.00	1804
43.00	31	59.00	60	70.95	70	82.95	2206
43.90	171	60.95	1387	73.00	990	85.00	1192
44.90	240	61.95	1462	74.00	10903	85.85	2452
48.95	360	63.00	3933	75.00	17489	87.00	904
50.00	24353	63.95	458	76.00	6106	87.90	719
50.95	93631	65.00	2170	77.00	118927	88.90	2
52.00	4806	65.90	125	77.95	7195	90.95	916

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.90	1868	102.00	207	112.95	625	123.95	1900
92.95	12558	102.90	1446	114.10	167	124.95	1394
94.00	983	103.90	3859	114.95	40	125.80	201
95.00	470	104.90	3071	115.95	2044	127.00	145813
96.00	452	105.95	964	116.90	27849	127.95	10774
97.05	47	106.95	39017	117.95	2263	128.90	54035
97.90	9765	108.00	6413	118.90	520	129.85	4905
98.90	8284	109.05	1626	119.90	557	131.00	893
99.90	987	109.90	69609	120.95	219	131.95	324
100.95	5180	110.95	10373	121.95	2934	132.95	160
101.80	301	111.95	1450	122.90	3704	133.90	1285

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.95	4751	144.90	339	154.00	810	163.70	155
135.90	1569	146.00	1484	155.00	3824	164.00	226
137.00	2495	147.00	3598	156.00	6517	164.90	2577
138.00	194	148.00	6882	157.00	797	166.00	2358
138.75	286	148.95	1396	157.60	156	167.00	13862
139.80	437	149.90	349	158.00	1548	168.00	6304
140.00	569	150.90	615	159.00	1415	169.00	901
140.90	7284	151.20	130	159.85	1857	169.20	114
141.90	2346	152.00	408	160.95	3749	169.95	334
142.90	1823	152.90	2071	161.80	580	170.90	599
144.00	698	153.80	1024	162.90	440	171.85	1007

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
172.95	1174	183.00	726	192.95	3956	205.00	16615
174.00	2344	183.90	981	194.00	922	206.00	69669
175.00	5652	184.95	4106	195.90	8129	206.95	8687
175.70	108	186.00	40148	197.90	264920	207.90	2231
175.95	1391	187.00	11007	198.85	18114	208.95	612
177.00	2385	187.95	1438	200.00	1820	209.90	953
177.90	921	188.95	2641	201.15	494	211.00	3099
178.90	10442	189.95	531	201.40	993	211.50	321
179.95	6675	190.80	776	202.00	599	213.15	541
180.95	3005	191.00	306	202.85	2071	214.80	1135
181.90	428	191.95	3171	204.00	9689	215.00	225

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.00	1782	226.90	16581	236.20	105	246.90	1543
216.90	18309	227.90	2724	236.90	1294	247.95	513
217.95	2560	228.90	3407	238.95	475	248.80	1034
218.90	153	229.95	693	240.00	719	249.00	263

219.20	226	230.95	1188	240.70	337	249.80	178
220.95	13513	231.80	136	241.00	936	250.05	220
221.90	2839	232.10	195	241.90	2354	250.90	652
223.00	4792	232.90	337	243.05	2358	252.00	542
224.00	38994	233.90	1081	244.00	29284	253.00	1106
225.00	10020	234.90	1183	244.95	3864	255.00	164229
226.00	1475	235.90	780	245.95	6377	256.00	24022

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
256.95	1585	267.50	137	277.85	1158	288.10	144
257.95	9874	268.00	103	280.95	66	288.75	500
258.90	1286	269.90	183	281.95	298	292.00	229
260.00	459	270.70	211	282.90	560	293.00	1917
260.80	177	271.05	480	283.70	322	293.95	620
261.00	135	271.90	835	283.85	766	294.85	160
263.00	130	272.95	5565	284.20	116	296.00	24758
263.90	616	274.00	12884	285.00	1591	297.00	2992
264.90	4191	275.00	74194	286.00	177	297.90	73
265.90	996	275.95	9636	286.20	138	300.10	154
267.10	118	276.95	6521	286.90	124	300.70	204

Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
302.00	937	315.95	1778	328.90	142	340.15	401
303.00	2702	320.20	131	329.05	392	341.00	1213
304.00	873	321.00	1063	331.10	127	342.05	519
305.00	112	321.85	542	331.30	120	343.90	107
308.70	110	323.00	7969	332.00	1046	345.85	1750
308.90	122	323.85	1166	332.60	132	346.95	386
309.90	153	324.10	596	332.95	819	350.80	194
311.05	252	325.30	175	334.00	5525	351.90	2831
313.05	509	326.80	613	335.00	1682	352.95	1974
314.00	1273	327.00	1478	336.00	315	353.95	2320
314.90	2951	328.00	1026	339.80	158	354.80	287

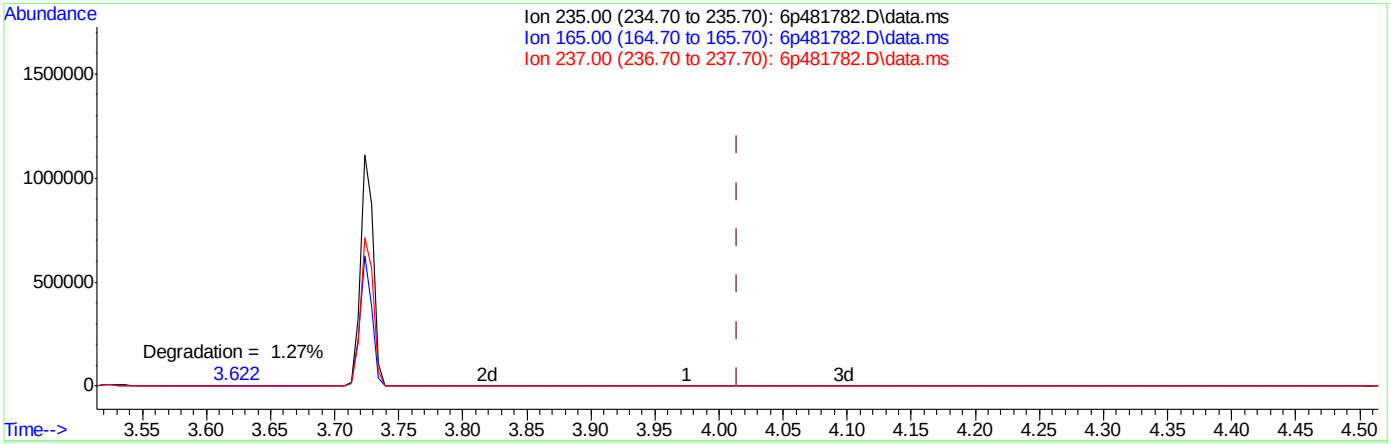
Average of 2.456 to 2.466 min.: 6p481782.D\data.ms
dftpp
Modified:subtracted

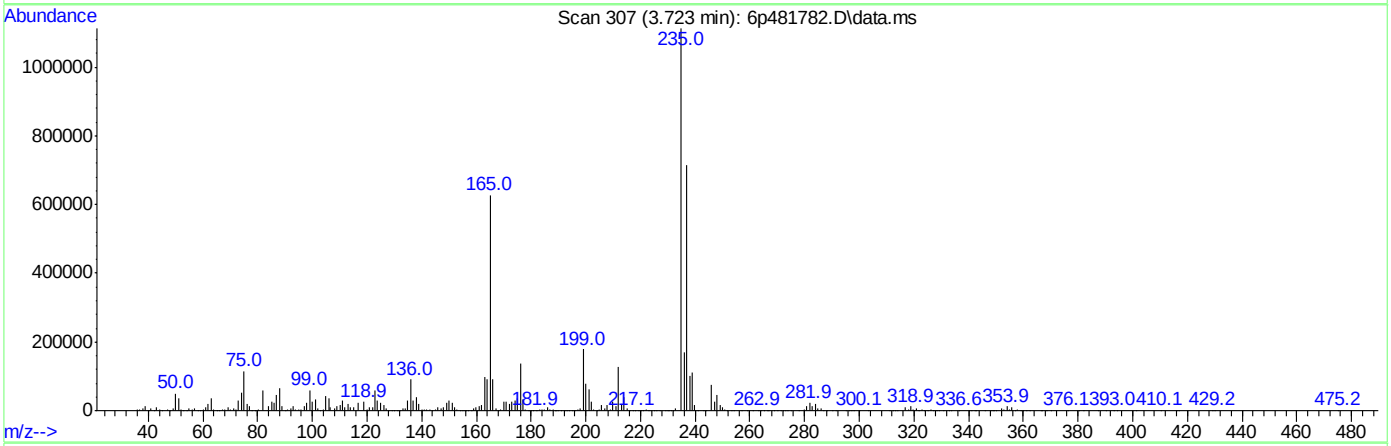
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
355.00	106	370.90	709	400.50	130	424.00	2869
358.90	173	372.00	5244	400.80	179	425.00	200
359.10	102	372.95	1259	401.10	154	427.30	150
361.00	159	373.90	286	401.95	1936	439.10	209
362.90	100	376.90	146	403.00	3335	439.50	130
363.70	261	381.30	101	403.95	811	441.00	35856
364.90	12288	383.00	1194	410.10	100	442.00	250069
365.80	493	383.95	565	414.80	122	443.00	47370
365.95	1114	390.05	675	421.00	2244	444.05	4170
367.05	244	390.90	344	422.00	2249	445.00	103
369.90	150	391.95	365	423.00	16203		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481782.D
Acq On : 10 May 2019 8:59 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 10 09:04:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Fri Apr 19 14:55:22 2019
Response via : Initial Calibration





TIC: 6p481782.D\data.ms

(3) PP-DDT (t)

3.723min (-0.291) 0.00ng m

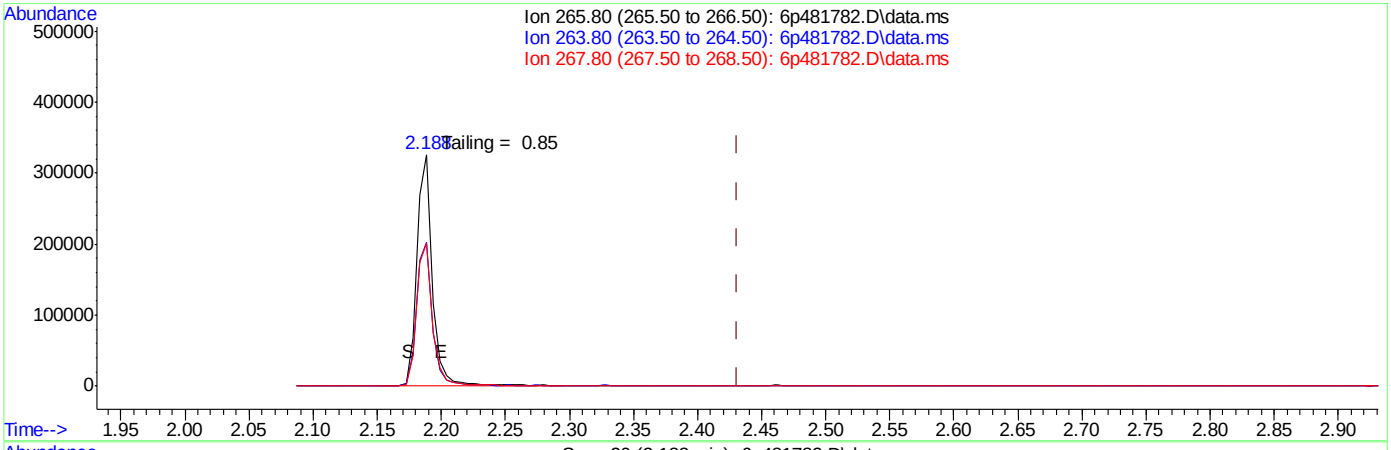
response 798788

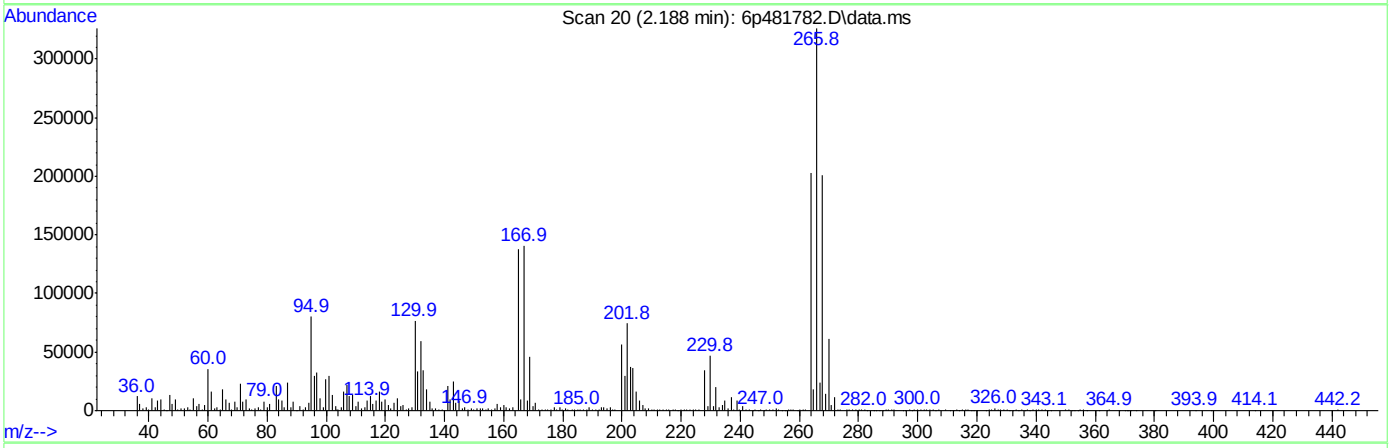
Ion	Exp%	Act%
235.00	100	100
165.00	48.50	0.24#
237.00	63.10	0.43#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481782.D
Acq On : 10 May 2019 8:59 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 10 10:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Fri Apr 19 14:55:22 2019
Response via : Initial Calibration





TIC: 6p481782.D\data.ms

(1) Pentachlorophenol (t)

2.188min (-0.243) 0.00ng

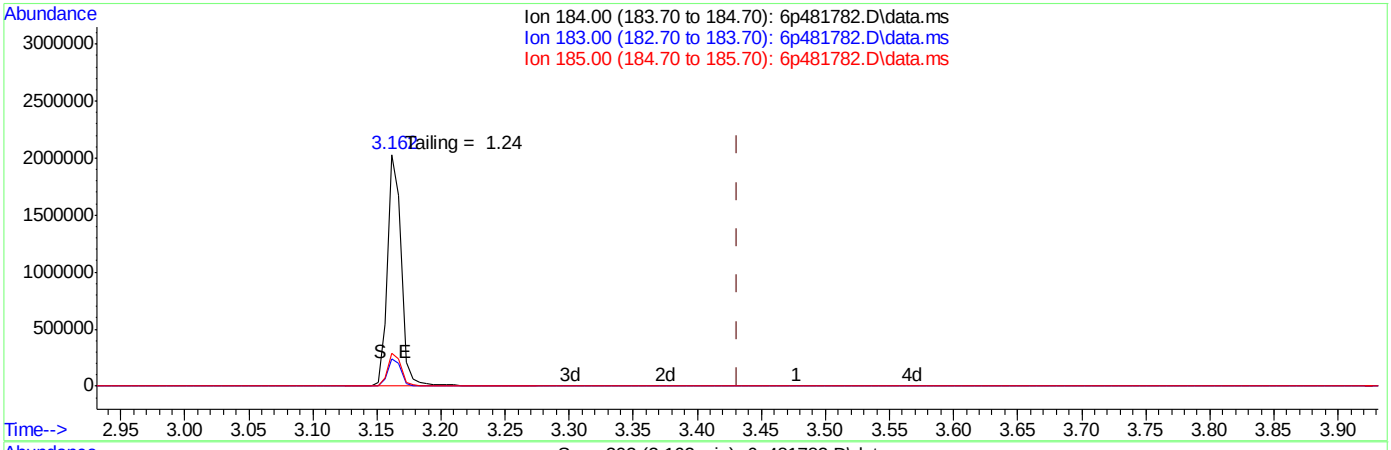
response 284548

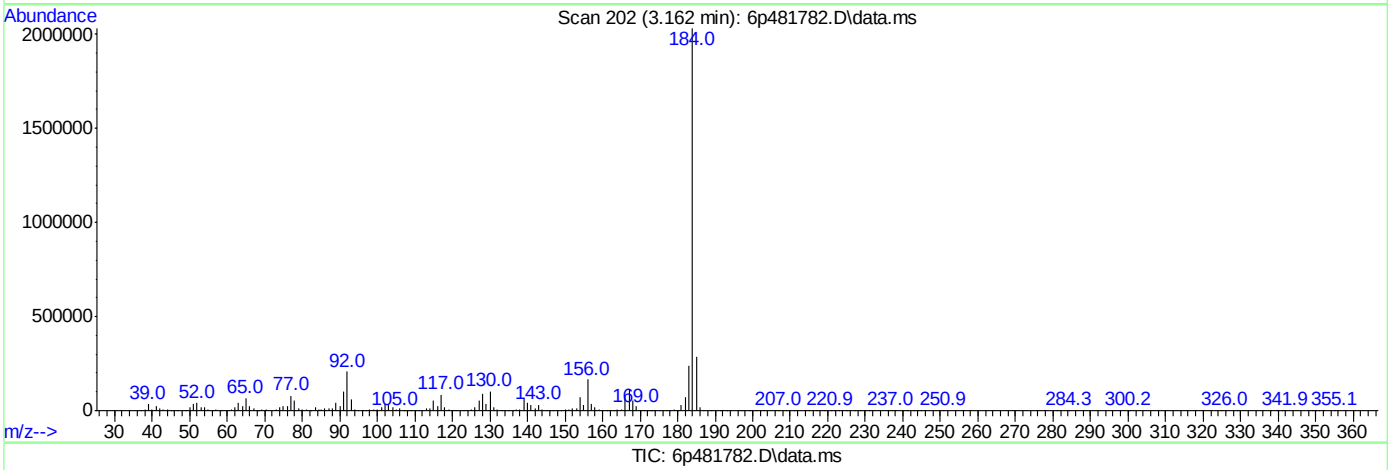
Ion	Exp%	Act%
265.80	100	100
263.80	63.30	62.06
267.80	63.40	61.35
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481782.D
Acq On    : 10 May 2019   8:59 am
Operator  : angelar
Sample    : dftpp
Misc      : op17006,e6p2588,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 10 10:11:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Fri Apr 19 14:55:22 2019
Response via : Initial Calibration
```





(2) Benzidine (t)

3.162min (-0.270) 0.00ng m

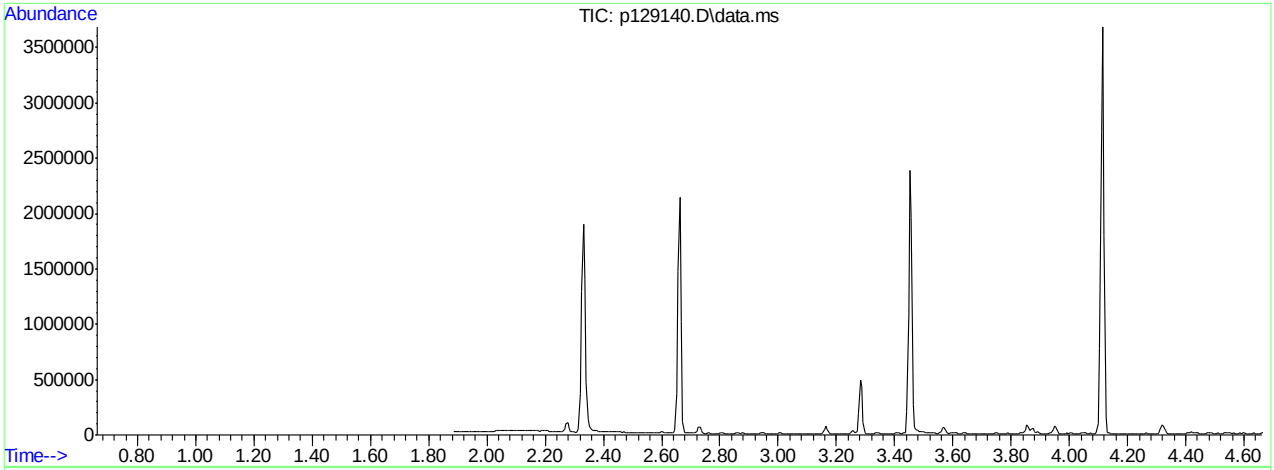
response 1527660

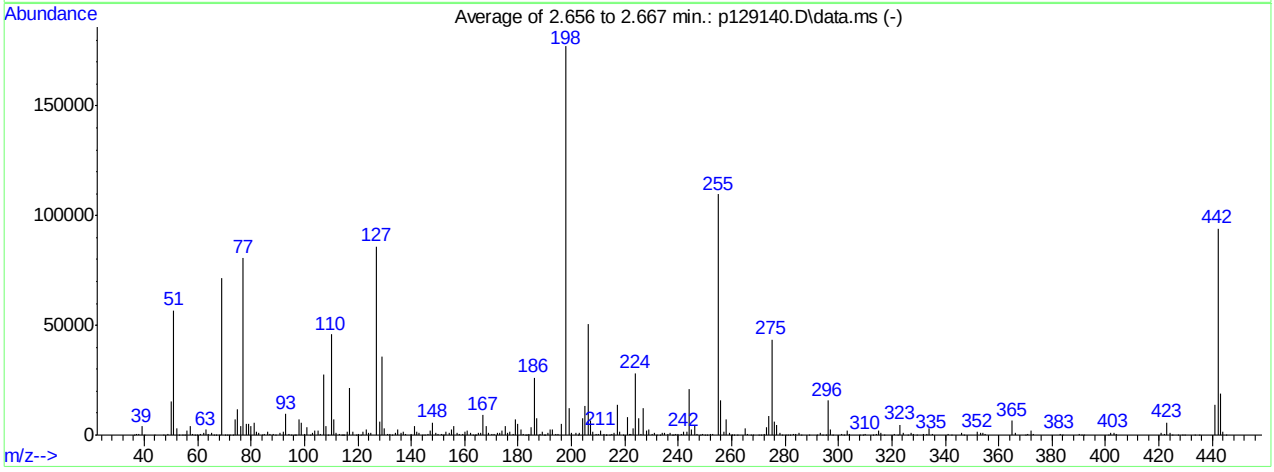
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	11.67
185.00	14.60	14.23
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\EP5844\p129140.D Vial: 1
Acq On : 23 Apr 2019 10:58 pm Operator: chriss2
Sample : dftpp Inst : MSVOAMSP
Misc : op13894,ep5844,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPPP.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um





AutoFind: Scans 145, 146, 147; Background Corrected with Scan 140

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.1	56915	PASS
68	69	0.00	2	0.3	179	PASS
69	198	0.00	100	40.4	71554	PASS
70	69	0.00	2	0.1	52	PASS
127	198	40	60	48.5	85866	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	177125	PASS
199	198	5	9	7.0	12424	PASS
275	198	10	30	24.5	43450	PASS
365	198	1	100	3.7	6536	PASS
441	443	0.10	100	72.9	13691	PASS
442	198	40	100	53.1	94040	PASS
443	442	17	23	20.0	18788	PASS

p129140.D DFTPPP.M Wed Apr 24 10:08:37 2019 ACLIMS

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	118	53.00	49	64.05	451	75.05	11848
37.10	289	54.15	151	65.10	1232	76.10	4127
38.05	574	55.00	202	66.20	193	77.05	80600
39.05	3880	56.05	1900	67.00	36	78.10	5083
40.00	18	57.05	3941	68.10	179	79.00	4885
44.00	169	58.00	300	69.00	71554	80.00	4016
47.00	56	59.10	55	70.10	52	81.05	5436
49.00	292	59.90	58	70.90	90	82.00	1393
50.10	15375	61.10	757	71.90	66	83.05	1170
51.05	56915	62.10	941	73.05	40	83.95	52
52.10	3027	63.10	2330	74.10	7092	85.00	753

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.05	1737	98.00	7374	109.00	94	119.20	237
87.00	678	99.00	5477	110.00	45973	120.00	338
88.10	426	100.00	456	111.00	7145	121.10	122
89.00	151	101.00	3578	111.95	910	122.00	1645
91.00	1073	102.05	3	113.00	370	123.00	2577
92.05	1381	103.00	995	114.00	62	124.00	1282
93.05	9650	104.00	2001	114.30	55	125.00	1285
94.00	710	105.05	1927	114.95	21	127.00	85866
95.00	24	106.05	422	116.10	1331	128.05	6351
96.10	76	107.00	27826	117.00	21490	129.00	35544
96.60	59	108.05	3894	118.00	1397	130.00	3030

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.95	593	142.95	788	153.00	1340	163.80	87
132.05	330	144.00	98	154.10	1032	164.10	95
133.00	209	145.05	230	155.10	2509	165.00	1158
134.05	1111	146.05	733	156.00	3938	166.00	1158
135.00	2571	147.10	2280	157.05	944	167.00	8974
136.00	1234	148.00	5868	157.95	616	168.00	4233
137.05	1398	149.00	1272	159.05	731	169.10	869
137.95	347	150.05	335	160.00	1467	170.05	342
140.00	444	151.10	756	161.00	2225	171.00	562
141.00	4222	151.70	164	162.05	802	172.10	831
142.00	1530	152.05	215	163.05	215	173.00	1129

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.05	2103	184.00	658	194.05	677	206.10	50800
175.10	4198	185.05	3632	194.95	473	207.00	6844
176.05	1288	186.10	26305	196.00	5335	208.00	1560
177.00	1642	187.05	7857	198.00	177125	209.05	712
178.00	668	188.10	767	199.00	12424	210.15	527
179.00	7078	189.00	1675	200.00	1286	211.00	2083
180.00	5267	189.80	72	201.50	898	212.00	314
181.00	2355	190.05	205	202.30	72	212.90	74
182.05	447	191.05	952	203.05	1239	213.15	154
182.95	241	192.00	2528	204.05	7565	214.20	57
183.20	77	193.00	2817	205.05	13435	215.00	502

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.00	1204	227.00	12483	237.80	57	248.05	196
217.00	13937	228.05	2143	238.00	65	249.05	696
218.05	1759	229.00	2659	239.00	592	250.00	242
219.10	234	230.00	395	240.05	474	250.95	190

221.05	8264	231.05	1195	241.00	733	251.95	308
221.80	444	232.00	253	242.10	1634	253.05	781
222.10	338	233.10	213	243.10	1593	255.00	109840
223.05	3296	234.10	792	244.10	21221	256.00	16072
224.10	28322	235.00	1049	245.05	2755	257.05	1433
225.10	7489	236.00	541	246.00	4531	258.00	7127
226.10	752	237.00	848	246.95	712	259.00	1265

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
259.90	82	273.05	3640	284.00	446	301.05	305
260.10	67	274.00	8840	285.00	931	302.10	241
260.95	184	275.00	43450	286.00	52	303.05	2010
262.00	53	276.05	6106	288.95	207	304.10	417
265.05	2878	277.00	4725	292.05	171	308.05	231
265.95	434	278.00	899	293.05	1177	309.10	69
267.00	61	278.90	106	293.90	204	310.10	373
267.90	93	280.20	51	295.10	189	313.00	70
270.05	115	281.10	103	296.00	15809	314.05	728
271.05	267	282.00	166	297.00	2325	315.00	1823
272.05	465	283.05	580	298.00	105	316.05	958

Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
316.95	178	334.05	3048	366.05	924	402.05	1110
320.95	444	335.05	726	370.10	153	403.00	1156
322.00	185	341.05	442	371.00	414	404.05	383
323.05	4672	342.10	75	372.05	2209	421.00	1030
324.05	847	345.95	940	373.05	692	422.05	720
326.00	70	346.95	132	383.00	703	423.00	5804
327.00	1006	352.05	1402	384.05	250	424.00	1224
328.00	537	353.05	1166	390.05	281	425.00	70
329.30	60	354.05	1222	390.95	184	427.10	55
331.95	344	354.95	285	391.90	121	428.95	109
333.00	451	365.00	6536	400.95	151	429.50	54

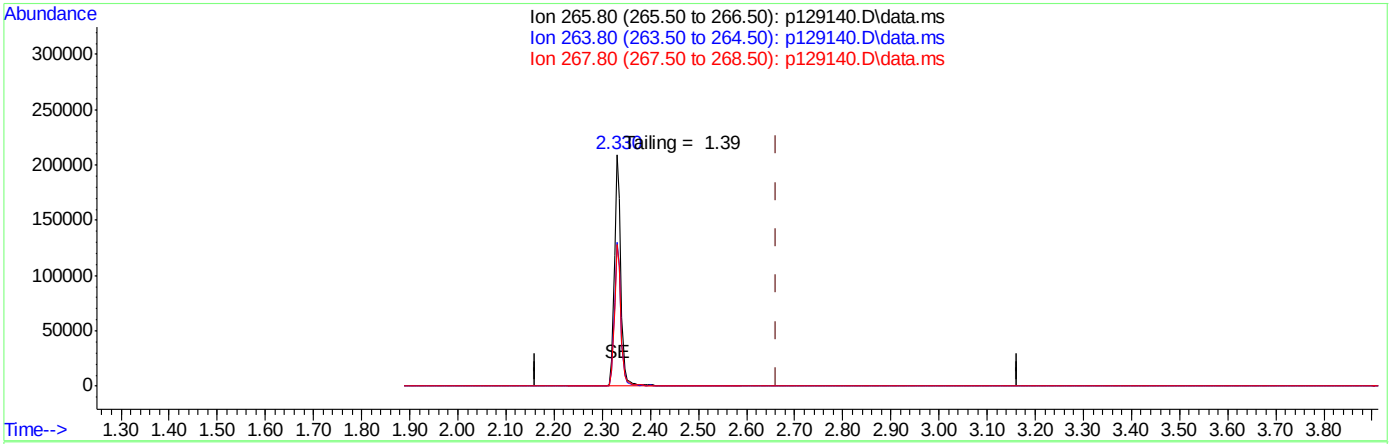
Average of 2.656 to 2.667 min.: p129140.D\data.ms
dftpp
Modified:subtracted

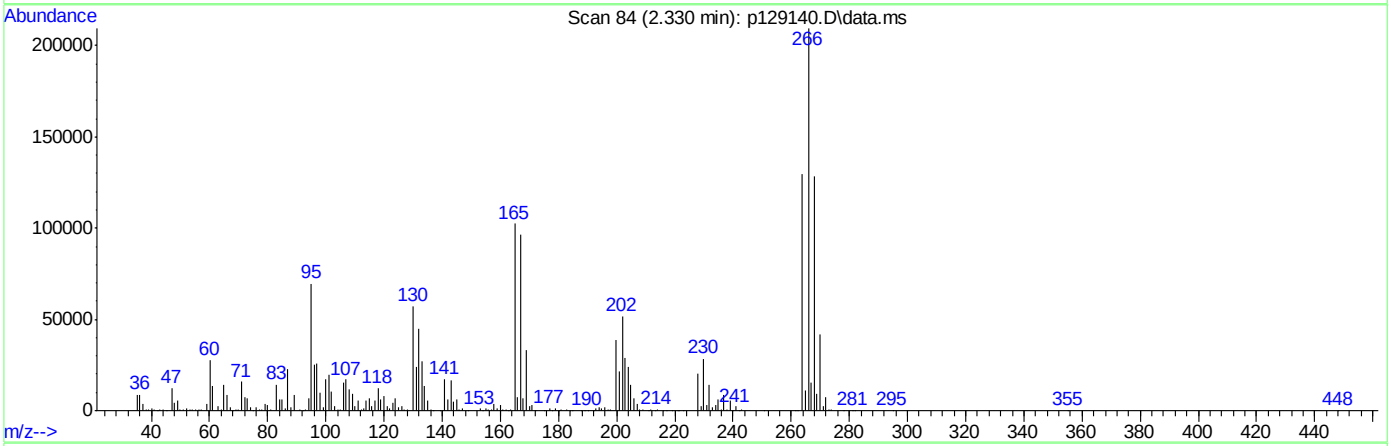
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
433.30	71						
435.00	89						
441.05	13691						
442.10	94040						
443.10	18788						
444.05	1688						
445.00	117						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129140.D
Acq On : 23 Apr 2019 10:58 pm
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 23 23:04:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129140.D\data.ms

(1) Pentachlorophenol (t)

2.330min (-0.332) 159.05ppb m

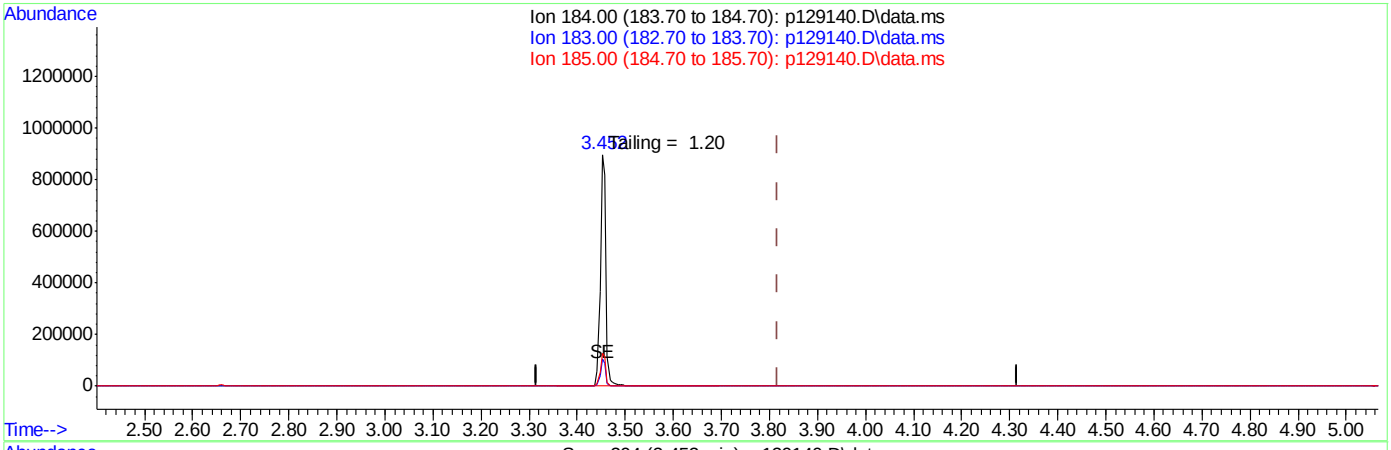
response 203495

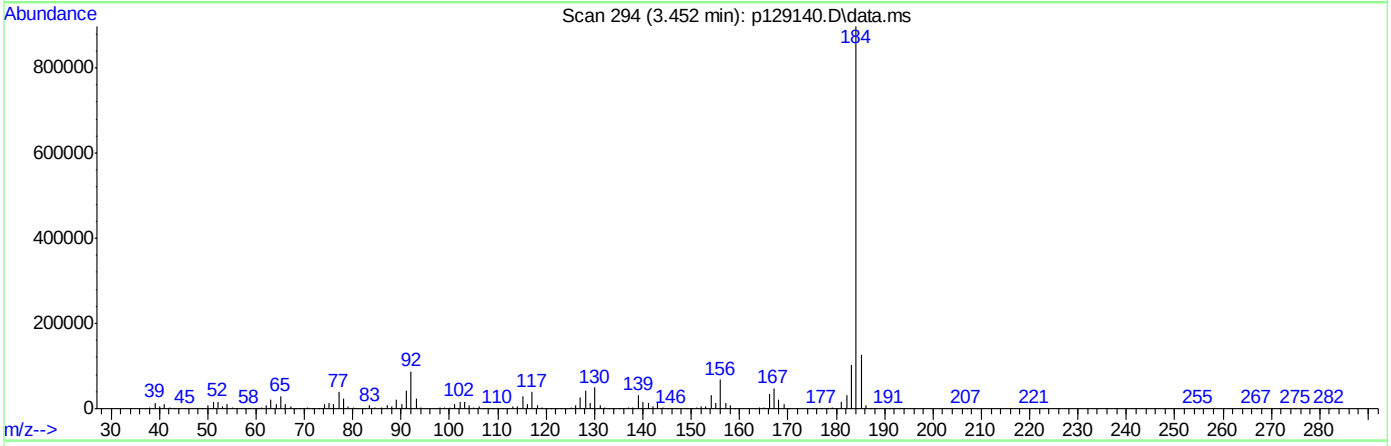
Ion	Exp%	Act%
265.80	100	100
263.80	63.90	61.95
267.80	66.90	61.19
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129140.D
Acq On    : 23 Apr 2019  10:58 pm
Operator  : chriss2
Sample    : dftpp
Misc      : op13894,ep5844,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 23 23:04:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title  : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration
```





TIC: p129140.D\data.ms

(2) Benzidine (t)

3.452min (-0.364) 46.08ppb m

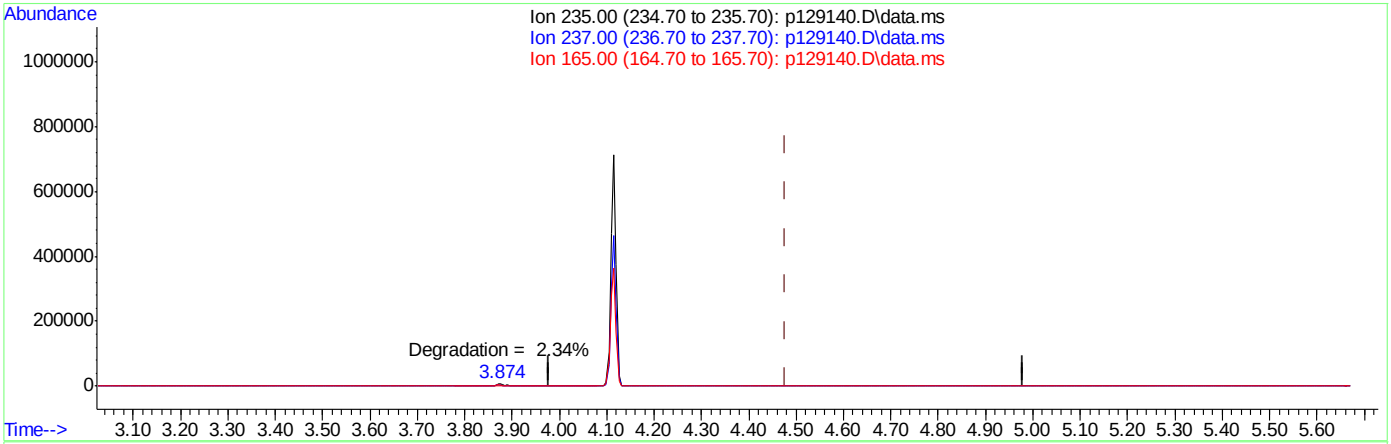
response 761757

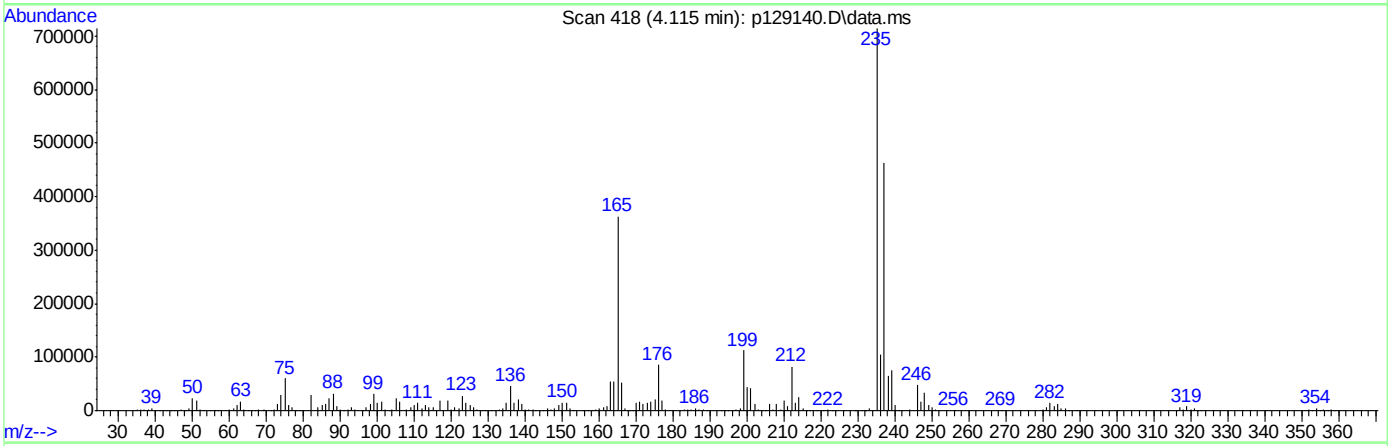
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	0.00
185.00	14.30	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129140.D
Acq On : 23 Apr 2019 10:58 pm
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 23 23:04:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129140.D\data.ms

(3) ddt

4.115min (-0.364) 74.14ppb m

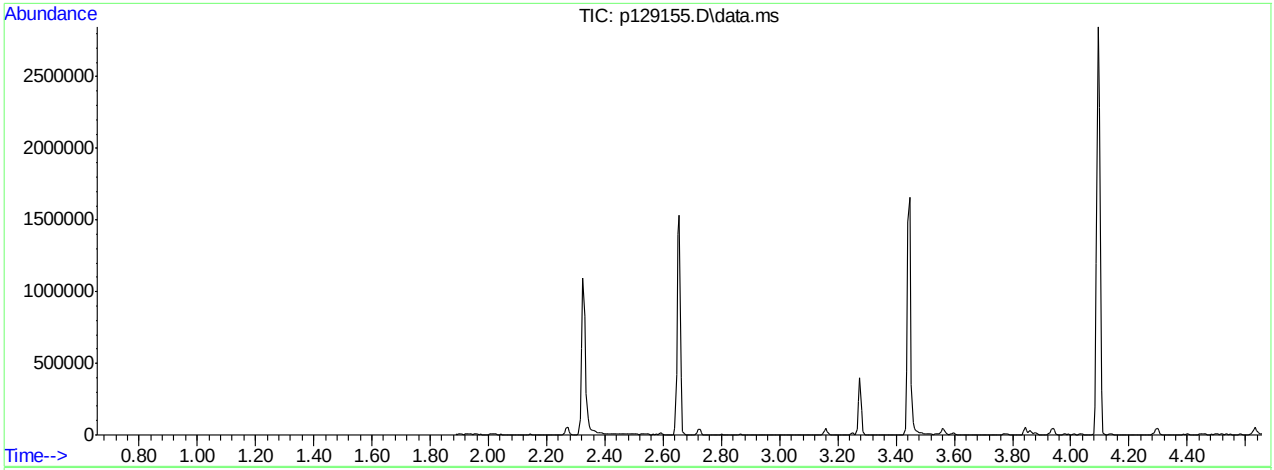
response 549755

Ion	Exp%	Act%
235.00	100	100
237.00	64.10	0.00#
165.00	38.80	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\EP5844\p129155.D Vial: 1
Acq On : 24 Apr 2019 8:17 am Operator: chriss2
Sample : dftpp Inst : MSVOAMSP
Misc : op13894,ep5845,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPPP.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um



AutoFind: Scans 144, 145, 146; Background Corrected with Scan 139

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.9	44871	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.3	55085	PASS
70	69	0.00	2	0.4	231	PASS
127	198	40	60	51.4	62498	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	121520	PASS
199	198	5	9	6.2	7568	PASS
275	198	10	30	24.9	30287	PASS
365	198	1	100	4.3	5190	PASS
441	443	0.10	100	86.3	9479	PASS
442	198	40	100	50.2	61008	PASS
443	442	17	23	18.0	10978	PASS

p129155.D DFTPPP.M Wed Apr 24 13:03:40 2019 ACLIMS

Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	221	55.10	516	69.00	55085	82.05	1023
38.05	629	56.10	1454	70.00	231	83.05	1029
39.10	3221	57.05	3305	73.10	121	84.10	83
40.10	141	58.00	123	74.10	5633	85.10	856
41.15	118	61.05	564	75.10	8968	86.10	1336
42.90	74	62.05	549	76.15	2992	87.05	618
45.10	54	63.10	1934	77.10	62161	88.10	229
49.05	399	64.10	255	78.10	3969	89.05	145
50.10	12541	65.10	707	79.10	3833	91.05	1096
51.10	44871	66.00	94	80.10	2929	92.10	1281
52.10	2459	67.00	126	81.10	4868	93.10	7488

Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.05	497	105.10	1613	116.05	966	129.10	25695
95.00	92	105.95	319	117.05	17947	130.00	2109
96.05	403	106.20	343	118.05	1138	131.05	478
96.90	72	107.10	20410	119.05	153	132.00	264
97.10	78	108.10	3075	120.05	281	132.60	62
98.10	5724	109.00	595	122.10	1292	132.90	56
99.10	4269	110.05	32347	123.10	1849	134.05	768
100.05	457	111.05	5140	124.00	906	135.00	2103
101.05	2535	112.05	505	125.05	960	136.10	856
103.00	862	113.00	257	127.10	62498	137.05	839
104.05	1647	115.20	59	128.10	5078	138.00	258

Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
139.05	151	150.10	241	160.00	1003	170.05	279
140.10	324	151.10	502	161.10	1544	171.00	309
141.00	3212	152.00	115	162.05	464	172.00	527
142.05	834	153.10	1273	163.05	136	173.05	857
143.00	649	154.05	896	163.90	85	174.10	1262
143.95	258	155.05	2085	164.15	189	175.10	2799
144.95	128	156.10	2839	164.95	1028	176.05	872
146.00	591	157.00	327	166.10	1090	177.05	1189
147.00	2004	157.15	302	167.10	6906	178.05	551
148.05	4456	158.00	432	168.05	3322	179.00	5476
149.00	949	159.00	473	169.05	477	180.05	3929

Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
181.10	1912	192.10	1701	203.05	976	215.00	421
182.15	329	193.05	2195	204.10	5256	216.05	930
183.00	150	193.95	296	205.10	9527	217.00	9581
184.00	608	194.60	68	206.10	37218	218.00	1097
185.10	2552	195.00	284	207.10	4675	219.10	70
186.10	20278	196.10	3729	208.05	1339	219.90	67
187.10	5574	198.00	121520	209.00	536	221.00	5010
188.05	669	199.00	7568	210.05	488	222.00	1200
189.00	1179	200.05	801	211.00	1625	223.05	2053
190.05	138	201.55	837	212.15	256	224.10	20603
191.00	622	202.10	111	213.10	109	225.10	4671

Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
226.10	405	237.05	648	248.05	132	258.10	5329
227.05	9697	238.10	99	249.05	613	259.05	698
228.00	1355	239.00	318	249.90	111	260.10	88
229.00	1813	240.05	208	250.95	176	261.00	113

230.00	304	241.10	553	252.10	244	264.10	124
231.05	631	242.10	1120	253.00	418	265.10	2494
231.90	59	243.10	1178	253.70	217	266.05	652
233.10	124	244.10	13997	254.00	423	270.20	68
234.05	642	245.10	1602	255.10	78381	270.95	166
235.00	733	246.00	3207	256.10	10849	271.40	74
235.95	471	247.00	856	257.05	860	271.95	176

Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
273.10	2490	292.00	208	307.90	123	327.00	571
274.05	5415	293.05	794	310.05	162	327.80	106
275.10	30287	294.10	170	311.00	79	328.10	183
276.05	4167	294.90	89	314.05	533	332.05	273
277.05	3032	296.05	12248	315.00	1156	333.10	336
278.05	571	297.05	1795	315.95	652	334.10	2110
283.10	429	297.90	83	317.10	68	335.05	582
284.05	242	300.90	121	321.05	386	336.00	57
285.10	673	302.05	238	322.10	149	341.05	407
287.90	54	303.10	1350	323.10	3350	342.00	69
290.10	70	304.05	419	324.05	618	346.00	850

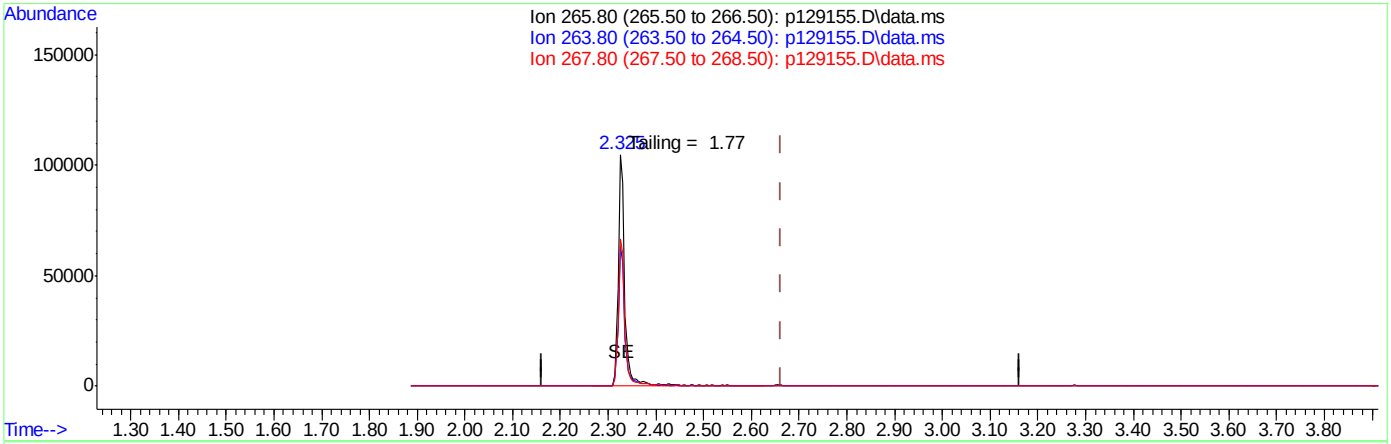
Average of 2.651 to 2.662 min.: p129155.D\data.ms
dftpp
Modified:subtracted

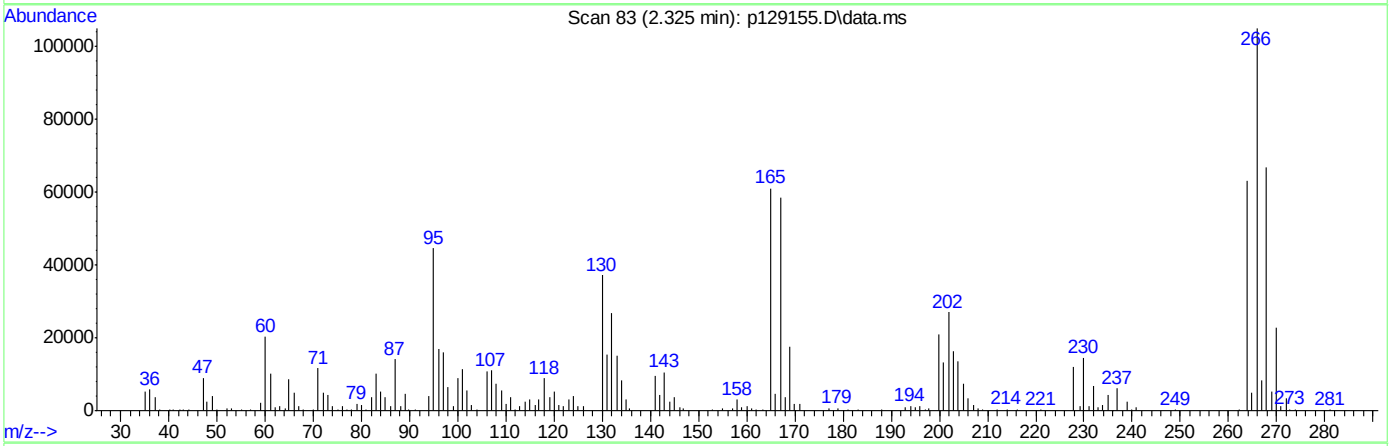
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
346.90	67	374.00	64	422.05	583	443.10	10978
352.05	804	383.00	454	423.05	3782	444.05	1221
353.05	707	384.00	67	424.10	699		
354.05	990	385.10	55	427.10	58		
355.10	85	389.95	173	429.00	88		
359.10	62	391.10	118	430.80	50		
365.05	5190	392.10	89	434.40	54		
366.00	854	402.05	717	434.70	50		
371.05	213	403.00	793	435.60	70		
372.00	1407	404.05	358	441.10	9479		
373.10	580	421.00	567	442.10	61008		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129155.D
Acq On : 24 Apr 2019 8:17 am
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 24 08:23:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129155.D\data.ms

(1) Pentachlorophenol (t)

2.325min (-0.338) 85.77ppb m

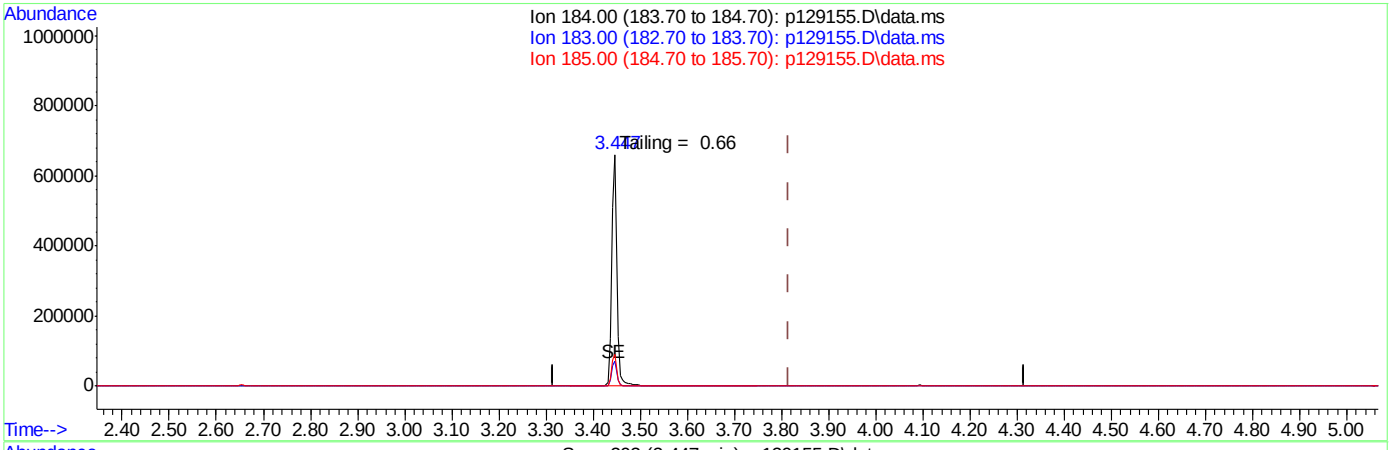
response 109739

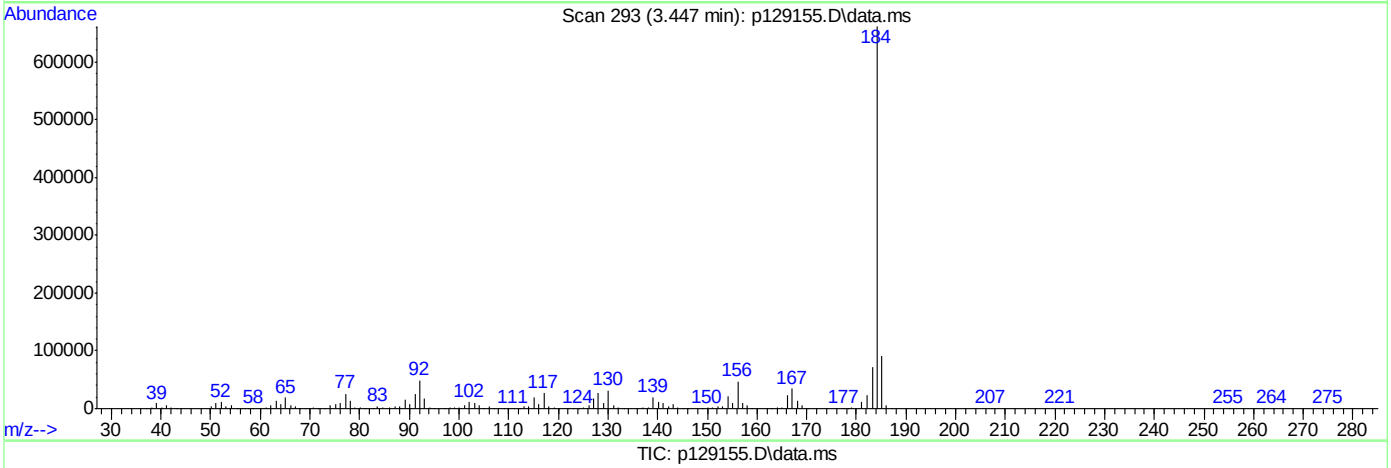
Ion	Exp%	Act%
265.80	100	100
263.80	63.90	60.00
267.80	66.90	63.53
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129155.D
Acq On    : 24 Apr 2019   8:17 am
Operator  : chriss2
Sample    : dftpp
Misc      : op13894,ep5845,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 24 08:23:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title  : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration
```





TIC: p129155.D\data.ms

(2) Benzidine (t)

3.447min (-0.370) 30.57ppb m

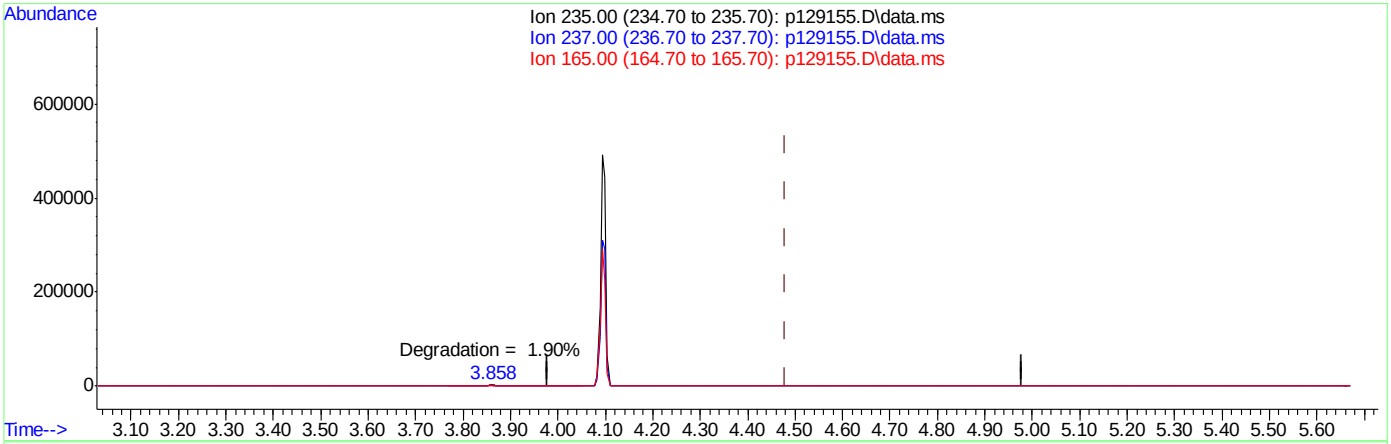
response 505348

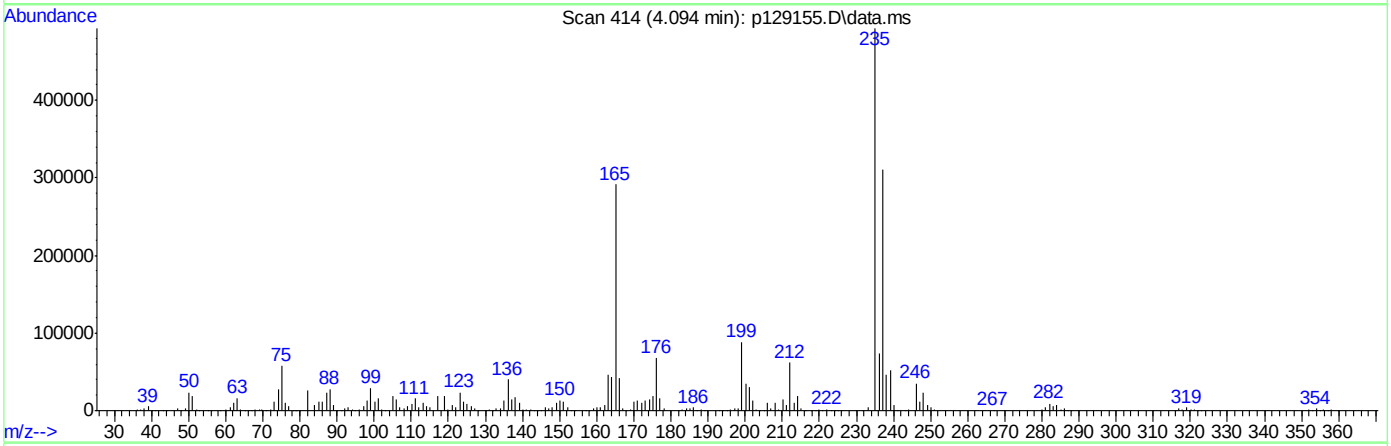
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	0.00
185.00	14.30	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129155.D
Acq On : 24 Apr 2019 8:17 am
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 24 08:23:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129155.D\data.ms

(3) ddt

4.094min (-0.386) 51.78ppb m

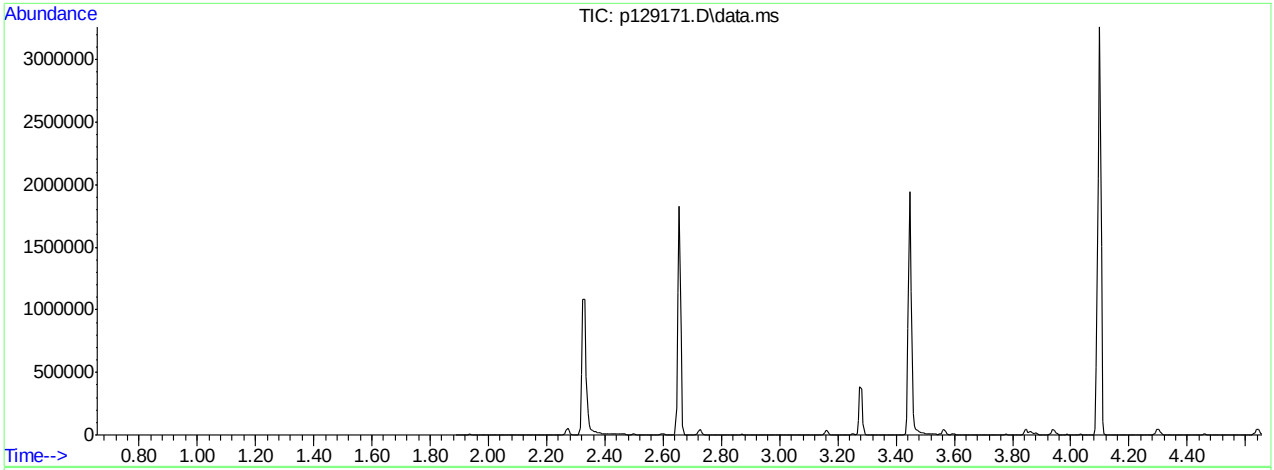
response 383904

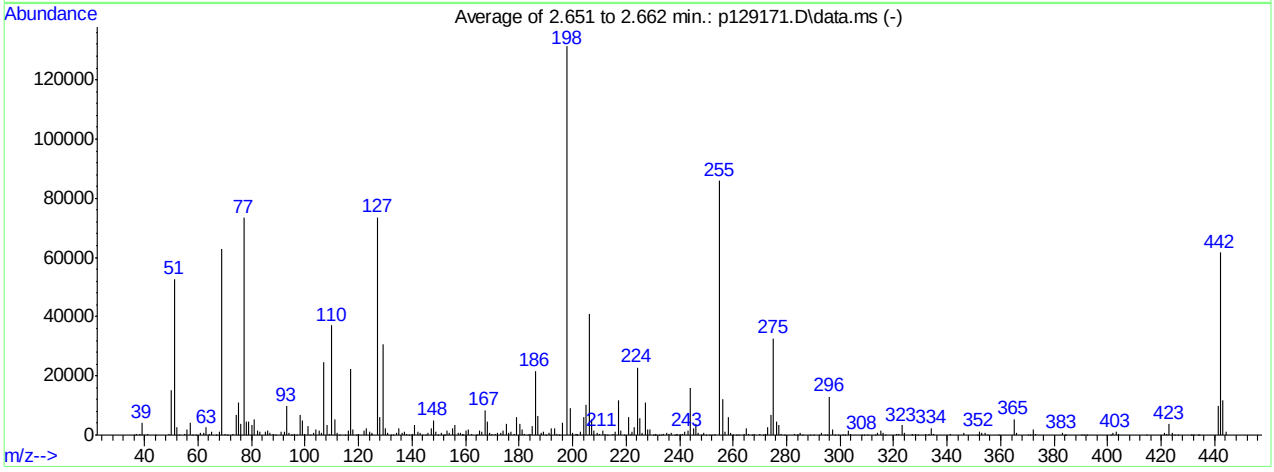
Ion	Exp%	Act%
235.00	100	100
237.00	64.10	0.00#
165.00	38.80	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\EP5844\p129171.D Vial: 1
Acq On : 24 Apr 2019 3:00 pm Operator: chriss2
Sample : dftpp Inst : MSVOAMSP
Misc : op13894,ep5846,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPPP.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um





AutoFind: Scans 144, 145, 146; Background Corrected with Scan 139

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	40.1	52650	PASS
68	69	0.00	2	1.8	1163	PASS
69	198	0.00	100	47.9	62917	PASS
70	69	0.00	2	0.5	336	PASS
127	198	40	60	56.0	73506	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	131282	PASS
199	198	5	9	7.0	9203	PASS
275	198	10	30	25.0	32757	PASS
365	198	1	100	4.1	5447	PASS
441	443	0.10	100	83.0	9758	PASS
442	198	40	100	46.9	61629	PASS
443	442	17	23	19.1	11757	PASS

p129171.D DFTPPP.M Thu Apr 25 07:51:18 2019 ACLIMS

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	50	53.00	76	66.90	58	79.05	4498
37.10	212	55.10	385	68.10	1163	80.05	3561
38.10	535	56.05	1732	69.05	62917	81.10	5396
39.10	4029	57.10	4174	70.10	336	82.05	1351
40.05	151	58.00	134	71.00	52	83.10	1204
41.10	272	59.00	56	73.15	578	85.05	998
44.10	98	61.05	596	74.10	6681	86.10	1609
49.10	476	62.05	947	75.10	11145	87.05	737
50.10	15079	63.10	2525	76.10	3632	88.15	317
51.10	52650	64.10	274	77.10	73296	88.90	125
52.10	2600	65.10	1217	78.10	4724	91.10	1115

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.10	1188	102.00	95	112.95	194	125.10	714
93.05	9751	103.00	915	115.00	51	127.10	73506
94.10	617	104.00	1885	116.05	1406	128.10	5922
95.00	196	105.10	1670	117.10	22356	129.05	30704
95.20	68	106.10	684	118.00	1785	130.05	2456
96.05	391	107.10	24615	119.05	166	131.00	605
96.95	189	108.10	3449	120.00	335	131.95	172
98.10	6886	109.10	328	122.05	1348	133.00	68
99.05	4790	110.05	37048	123.05	2334	134.05	888
100.05	443	111.10	5349	124.00	1037	135.00	2440
101.05	3189	112.05	681	124.90	292	136.10	918

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.10	1324	148.00	5024	158.05	642	168.05	4539
138.00	243	149.05	994	158.80	126	169.10	639
138.80	62	149.90	127	159.05	370	169.95	310
140.00	305	151.10	586	160.10	1381	171.00	411
141.00	3612	151.75	138	161.05	1787	172.00	654
142.10	985	152.05	158	162.10	535	173.05	813
143.00	878	153.10	1398	164.00	104	174.05	1627
144.00	159	154.05	723	164.20	90	175.10	3656
145.05	170	155.05	2167	165.05	1403	176.05	863
146.00	734	156.10	3360	166.05	993	177.05	1171
147.10	2117	157.10	671	167.10	8420	178.00	459

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
179.00	6018	190.05	201	201.55	435	212.05	409
180.10	3881	191.05	678	201.80	121	213.00	74
181.10	2087	192.05	2315	203.05	1289	214.95	485
182.10	240	193.10	2248	204.10	5948	216.10	1077
183.20	84	194.10	452	205.10	10125	217.00	11747
184.05	560	195.00	167	206.10	40781	218.00	1564
185.10	3038	196.00	4109	207.05	5161	219.10	160
186.10	21649	198.00	131282	208.05	1489	221.00	5916
187.10	6299	199.00	9203	209.10	709	221.80	404
188.05	625	200.05	655	210.15	314	222.10	1163
189.10	1135	201.20	488	211.10	1464	223.05	2600

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
224.10	22805	234.00	480	244.10	16103	256.10	12293
225.10	5634	235.00	694	245.10	2201	257.05	1001
226.05	611	235.95	452	246.05	3756	258.10	6189
227.10	11139	237.05	780	247.00	748	259.00	903

228.05	1759	238.00	63	248.00	150	260.00	64
229.05	2051	238.90	141	248.95	610	261.05	198
229.95	177	239.10	342	250.00	141	262.00	60
230.90	192	240.00	287	251.00	70	263.95	295
231.05	498	241.05	440	252.10	115	265.05	2271
232.10	64	242.05	1058	253.00	545	265.90	216
233.00	160	243.10	1491	255.05	85872	267.20	56

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
267.90	236	279.05	135	295.10	98	310.10	58
270.00	232	283.05	418	296.05	12949	313.00	71
271.00	94	283.90	70	297.05	1730	314.05	619
271.90	59	284.10	191	298.00	56	315.00	1533
272.15	238	285.05	621	299.10	63	316.10	692
273.00	2833	285.95	125	300.95	159	316.90	54
274.05	6737	289.00	123	301.95	172	321.00	267
275.10	32757	290.10	51	303.00	1452	322.05	271
276.05	4473	292.15	161	304.05	342	323.05	3292
277.10	3355	293.05	730	308.10	174	324.10	660
278.05	515	294.05	203	309.00	105	326.90	103

Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
327.05	458	353.00	665	384.00	62	422.10	559
328.10	457	354.05	752	384.20	66	423.00	3785
329.10	50	355.00	190	390.10	155	424.05	793
332.05	349	359.00	57	391.10	58	425.10	106
333.10	367	365.05	5447	392.10	51	426.40	70
334.10	2298	366.05	947	401.00	60	431.05	143
335.05	549	370.05	135	402.05	781	431.30	58
341.00	403	371.00	181	403.00	1018	432.10	80
346.00	769	372.10	1748	404.00	446	433.60	55
351.20	69	373.05	353	414.40	54	434.20	65
352.05	1267	383.05	629	421.00	765	441.10	9758

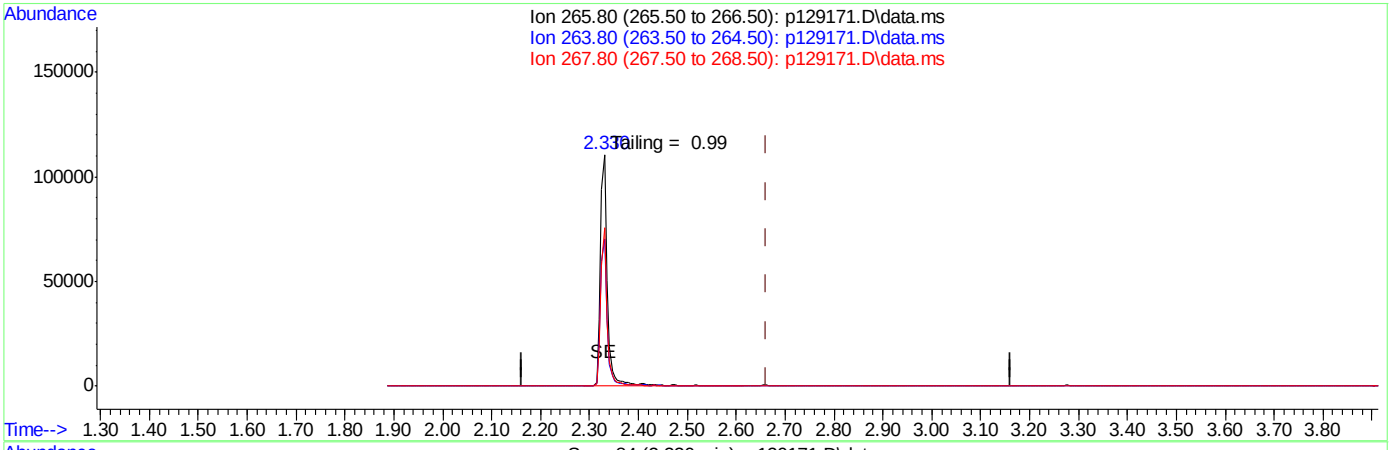
Average of 2.651 to 2.662 min.: p129171.D\data.ms
dftpp
Modified:subtracted

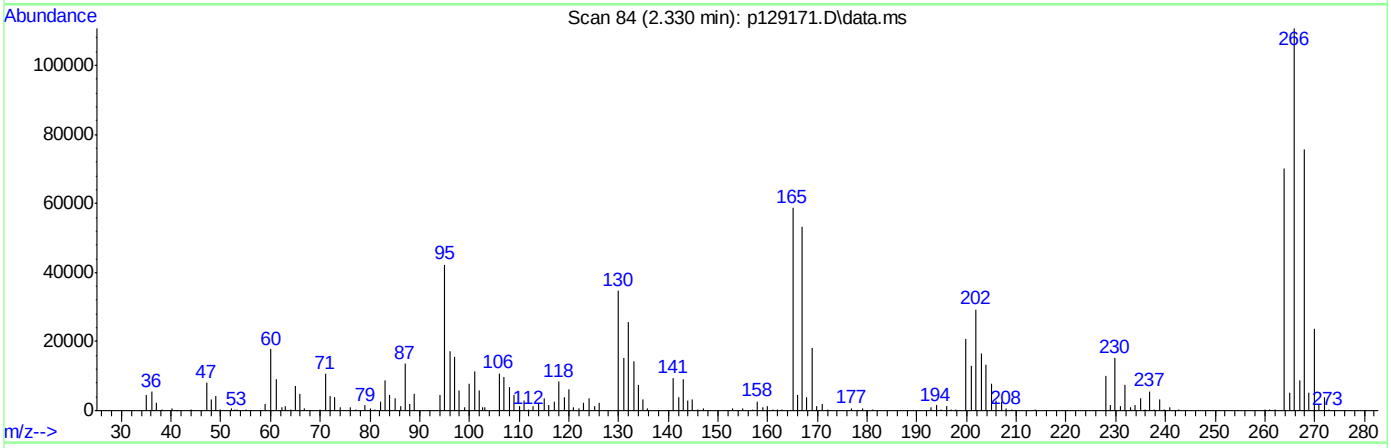
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
442.10	61629						
443.10	11757						
444.05	1183						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129171.D
Acq On : 24 Apr 2019 3:00 pm
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 24 15:06:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





(1) Pentachlorophenol (t)

2.330min (-0.333) 86.41ppb m

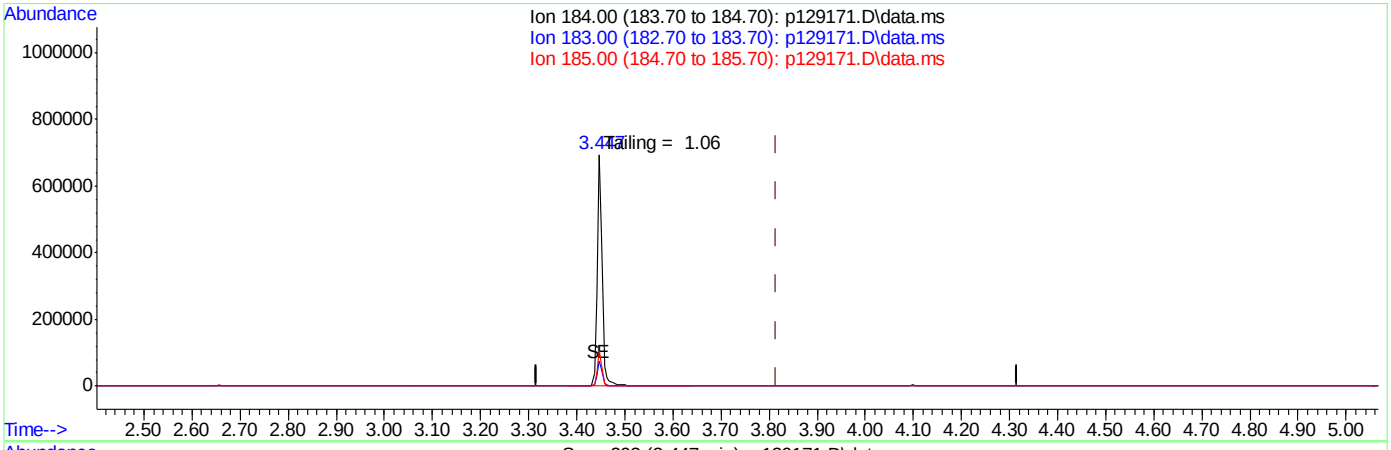
response 110554

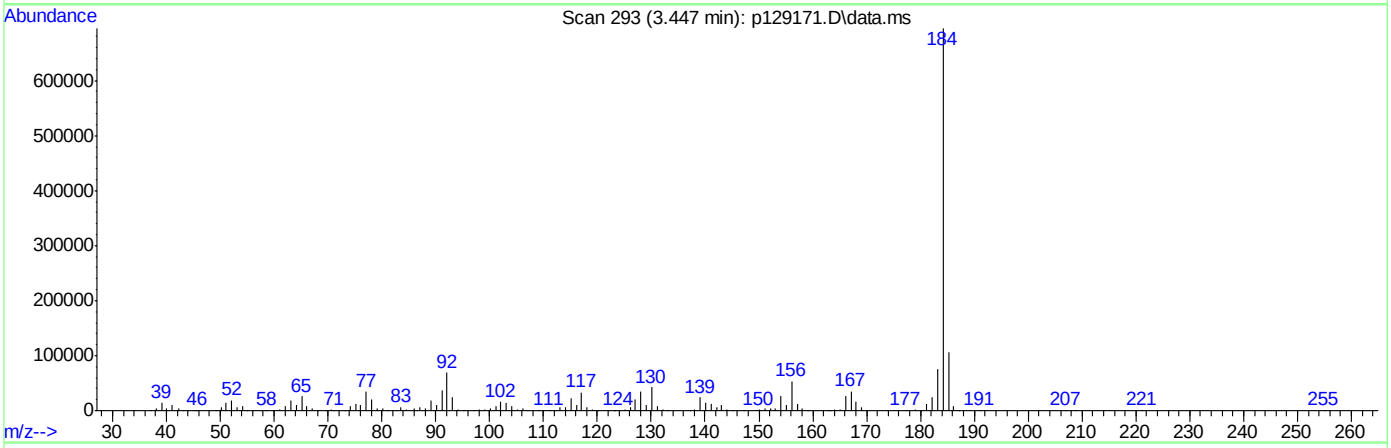
Ion	Exp%	Act%
265.80	100	100
263.80	63.90	63.33
267.80	66.90	68.45
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129171.D
Acq On : 24 Apr 2019 3:00 pm
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 24 15:06:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129171.D\data.ms

(2) Benzidine (t)

3.447min (-0.370) 31.77ppb m

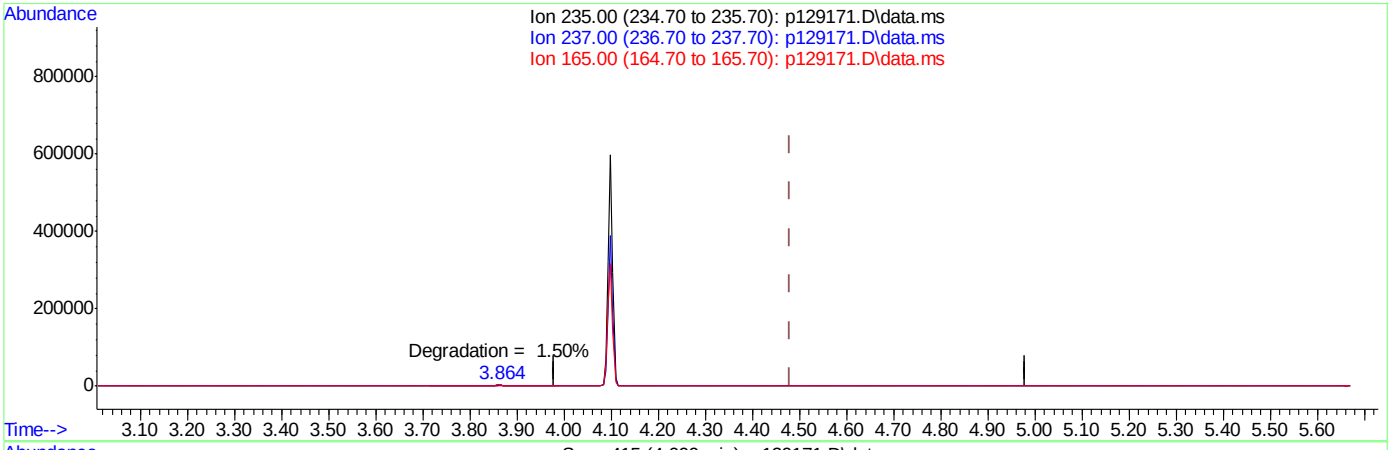
response 525148

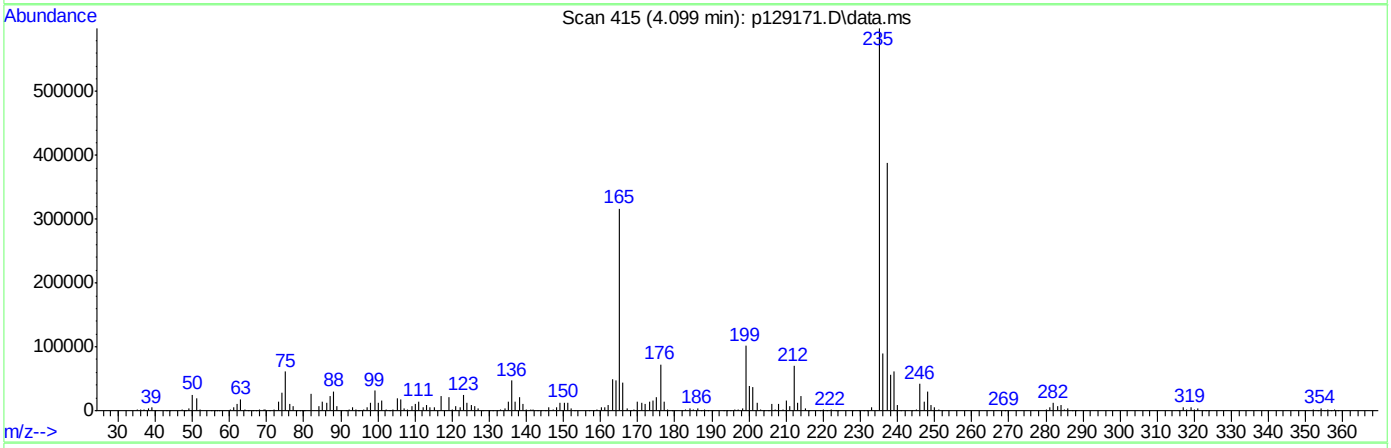
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	0.00
185.00	14.30	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129171.D
Acq On : 24 Apr 2019 3:00 pm
Operator : chriss2
Sample : dftpp
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 24 15:06:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129171.D\data.ms

(3) ddt

4.099min (-0.381) 56.78ppb m

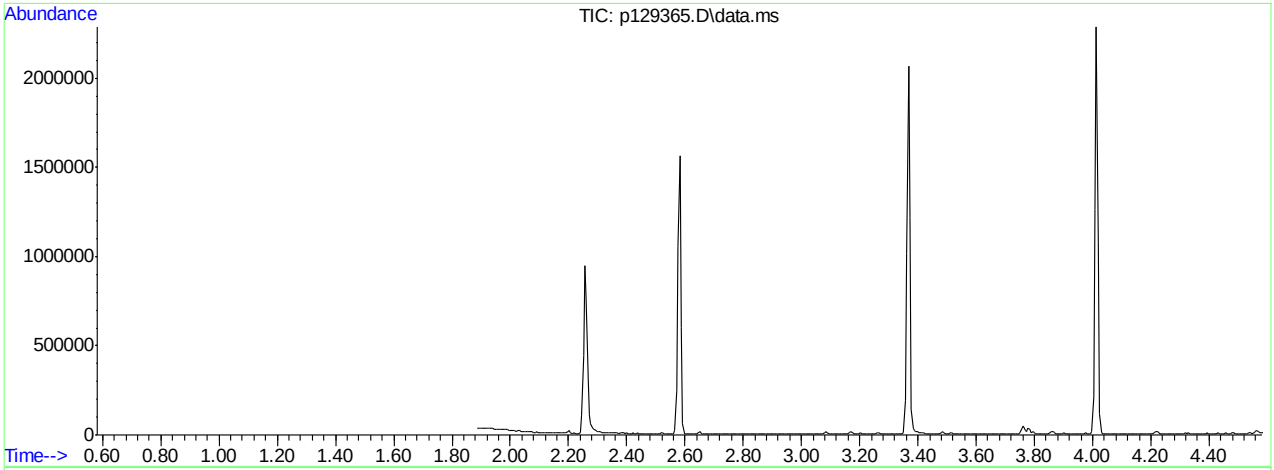
response 421040

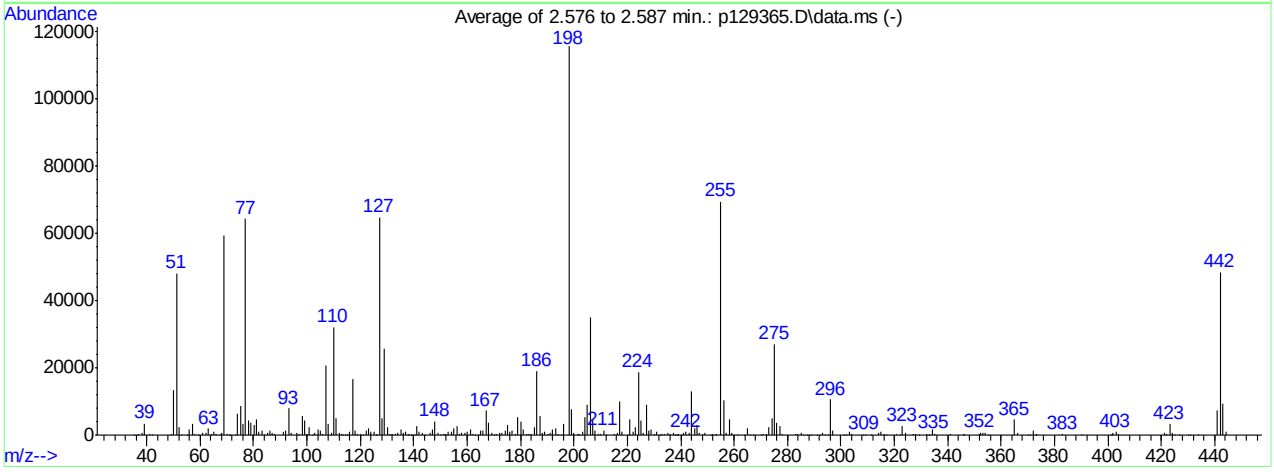
Ion	Exp%	Act%
235.00	100	100
237.00	64.10	0.00#
165.00	38.80	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\EP5856\p129365.D Vial: 1
Acq On : 7 May 2019 12:32 pm Operator: christc2
Sample : dftpp Inst : MSVOAMSP
Misc : op13894,ep5856,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPPP.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um





AutoFind: Scans 130, 131, 132; Background Corrected with Scan 125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	41.6	48117	PASS
68	69	0.00	2	1.3	747	PASS
69	198	0.00	100	51.4	59428	PASS
70	69	0.00	2	0.7	406	PASS
127	198	40	60	56.1	64885	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	115658	PASS
199	198	5	9	6.7	7801	PASS
275	198	10	30	23.5	27192	PASS
365	198	1	100	3.9	4550	PASS
441	443	0.10	100	77.0	7276	PASS
442	198	40	100	41.9	48488	PASS
443	442	17	23	19.5	9454	PASS

p129365.D DFTPPP.M Tue May 07 14:45:12 2019 ACLIMS

Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	79	53.05	177	66.15	223	77.05	64386
36.00	148	55.00	116	67.10	173	78.10	4297
37.05	284	56.00	1642	68.00	747	79.10	3683
38.10	688	57.00	3197	69.00	59428	80.05	3150
39.10	3341	58.00	233	70.10	406	81.05	4707
41.10	190	59.10	83	70.90	108	82.05	1178
42.10	56	61.10	660	71.10	67	83.05	1185
49.10	453	62.05	747	73.05	144	83.95	166
50.10	13239	63.10	1925	74.10	6383	85.05	830
51.10	48117	64.15	239	75.10	8622	86.10	1436
52.10	2433	65.10	906	76.10	3295	87.00	640

Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	259	101.00	2463	112.00	607	122.05	1240
91.05	1075	102.00	175	113.00	256	123.00	1904
92.05	1281	103.05	628	113.20	53	124.00	923
93.10	7922	104.00	1573	114.30	55	125.05	981
94.10	595	105.05	1301	115.00	83	125.80	145
96.05	570	106.00	472	116.10	1139	126.10	158
97.05	269	107.05	20827	117.05	16733	127.10	64885
98.10	5633	108.10	3265	118.05	1199	128.10	5005
99.10	4230	109.10	653	119.05	191	129.05	25772
99.80	64	110.00	32043	120.05	327	130.05	2291
100.05	317	111.05	5068	121.10	57	131.00	481

Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.05	292	141.05	2802	152.05	209	163.10	121
133.05	250	142.05	1085	153.05	1046	164.05	148
134.05	690	143.00	731	154.10	902	165.05	1324
135.05	1706	144.05	156	155.10	1880	166.00	1265
136.05	734	146.00	656	156.10	2778	167.00	7228
137.00	1001	147.05	1601	157.10	499	168.05	3560
137.90	167	148.00	4122	157.95	545	169.10	697
138.10	216	149.10	808	159.00	549	170.00	146
138.80	78	150.00	168	160.05	1091	170.95	300
139.20	71	151.05	445	161.05	1530	172.00	588
140.15	144	151.40	143	161.95	453	173.05	720

Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.10	1376	185.05	2348	196.05	3366	207.10	4588
175.10	2891	186.10	19046	198.00	115658	208.00	1339
176.05	909	187.10	5574	199.00	7801	209.05	377
177.00	1264	188.10	599	200.00	769	210.05	478
178.15	282	189.05	1082	201.40	263	211.05	1500
179.00	5278	190.05	274	201.60	336	212.00	98
180.05	3870	191.10	668	202.00	66	215.10	454
181.05	1581	192.00	1578	203.05	1094	216.10	728
182.05	196	193.00	1876	204.10	5296	217.00	9952
183.05	209	194.05	382	205.10	9049	218.00	1080
183.95	509	195.20	172	206.10	34920	220.30	87

Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
221.05	4736	232.10	97	241.05	593	253.00	309
222.00	1151	233.05	223	242.00	896	253.40	82
223.00	2204	233.95	495	243.10	725	255.00	69506
224.10	18862	235.00	592	244.10	12966	256.05	10500

225.05	4425	236.00	451	245.10	1913	257.05	829
226.10	544	237.05	707	246.05	2913	258.05	4841
227.00	9098	237.80	65	246.95	651	259.00	716
228.00	1440	238.10	70	248.00	201	260.00	133
229.00	1653	238.90	127	249.00	643	261.10	69
230.05	362	239.10	286	250.95	138	263.90	83
231.05	884	240.05	171	251.95	241	265.05	2101

Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
265.90	51	283.05	353	295.00	143	315.05	963
266.90	50	284.05	209	296.05	10561	316.00	491
270.10	86	285.10	597	297.00	1496	317.00	69
271.05	221	286.10	87	301.00	64	320.95	212
272.10	276	287.20	54	301.95	164	322.00	68
273.05	2238	288.20	73	303.05	1160	323.10	2747
274.00	5178	289.00	91	304.00	270	324.05	546
275.10	27192	290.80	61	308.10	65	327.00	504
276.05	3683	292.10	53	309.00	71	328.00	225
277.05	2820	293.05	714	311.00	51	329.00	68
278.05	482	294.05	175	314.00	549	332.05	213

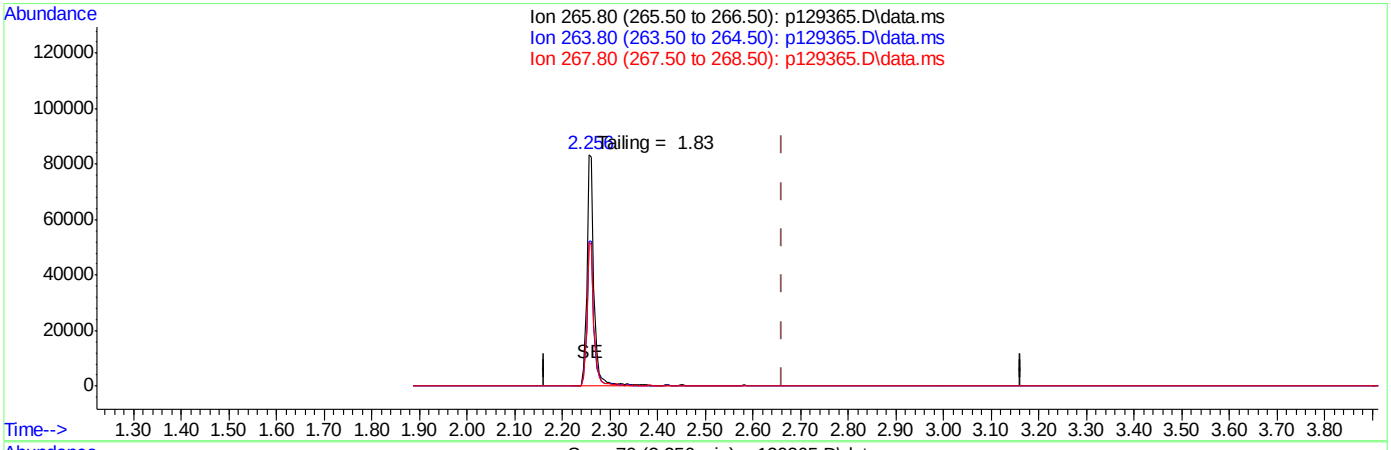
Average of 2.576 to 2.587 min.: p129365.D\data.ms
dftpp
Modified:subtracted

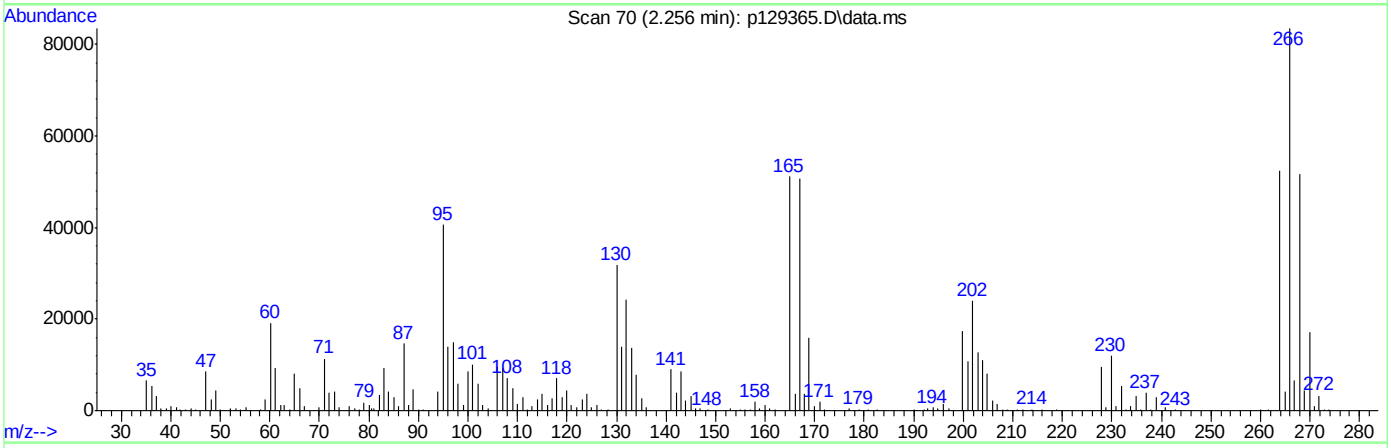
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
332.90	122	355.10	76	401.30	60	430.80	92
333.10	109	365.00	4550	402.00	520	433.90	71
334.05	1831	366.00	722	403.05	909	441.10	7276
335.00	510	370.00	62	404.00	235	442.10	48488
341.05	489	370.90	143	421.00	522	443.10	9454
345.90	423	372.05	1347	422.05	437	444.10	954
346.10	152	372.90	64	423.10	3311		
351.90	196	373.10	320	424.05	645		
352.15	679	383.05	301	425.10	70		
353.05	543	390.05	156	426.50	60		
354.05	757	401.00	54	430.00	66		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129365.D
Acq On : 7 May 2019 12:32 pm
Operator : christc2
Sample : dftpp
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:38:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





(1) Pentachlorophenol (t)

2.256min (-0.407) 70.02ppb m

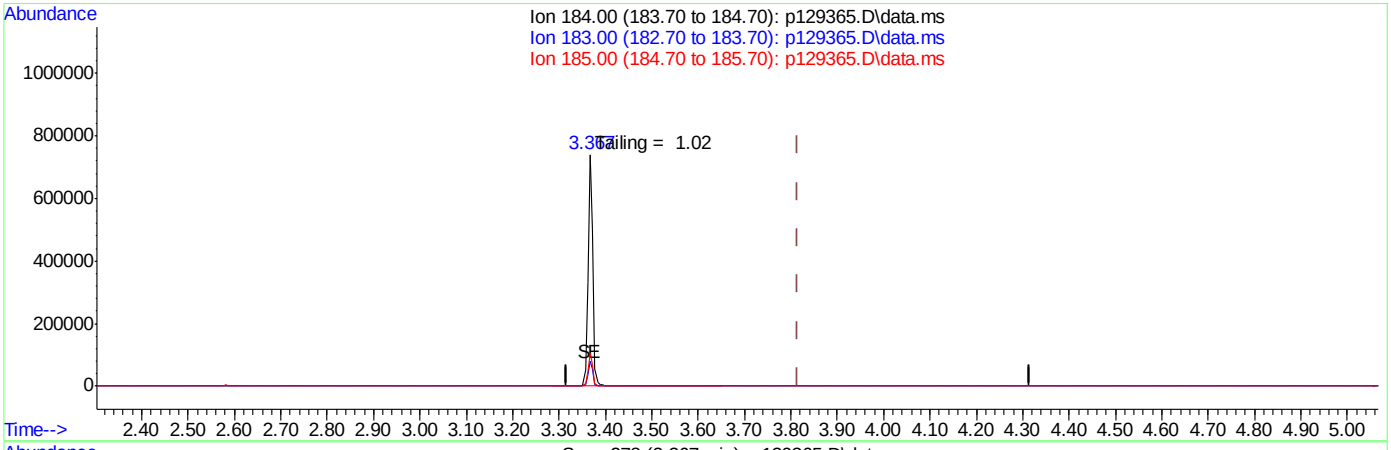
response 89594

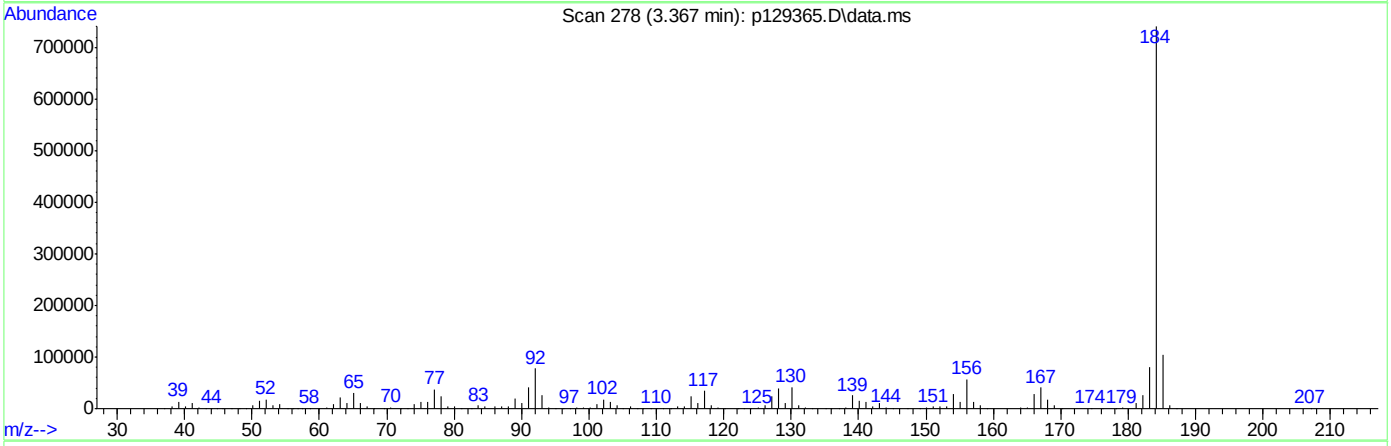
Ion	Exp%	Act%
265.80	100	100
263.80	63.90	62.73
267.80	66.90	61.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129365.D
Acq On : 7 May 2019 12:32 pm
Operator : christc2
Sample : dftpp
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:38:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129365.D\data.ms

(2) Benzidine (t)

3.367min (-0.450) 33.56ppb m

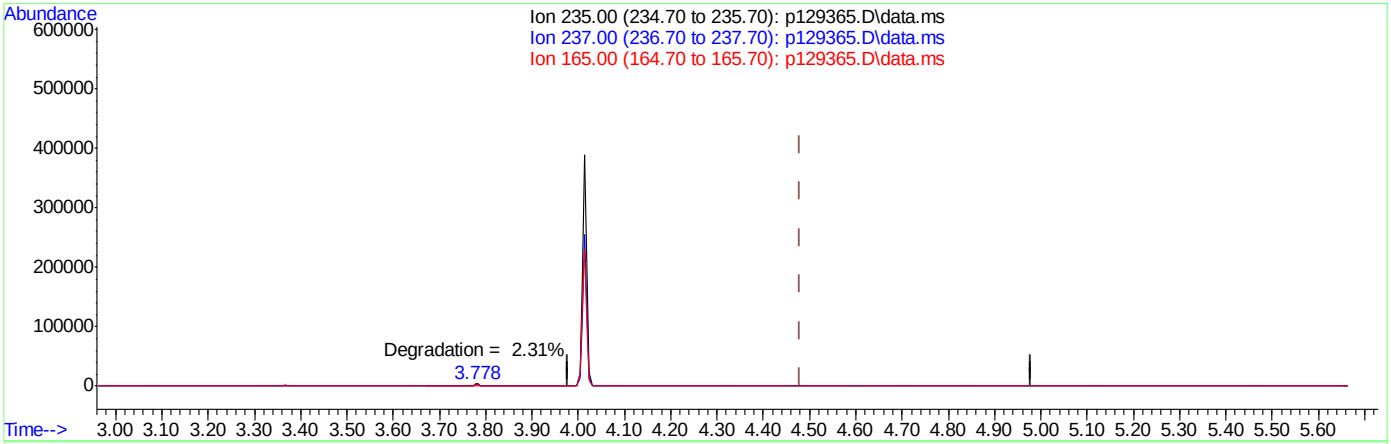
response 554808

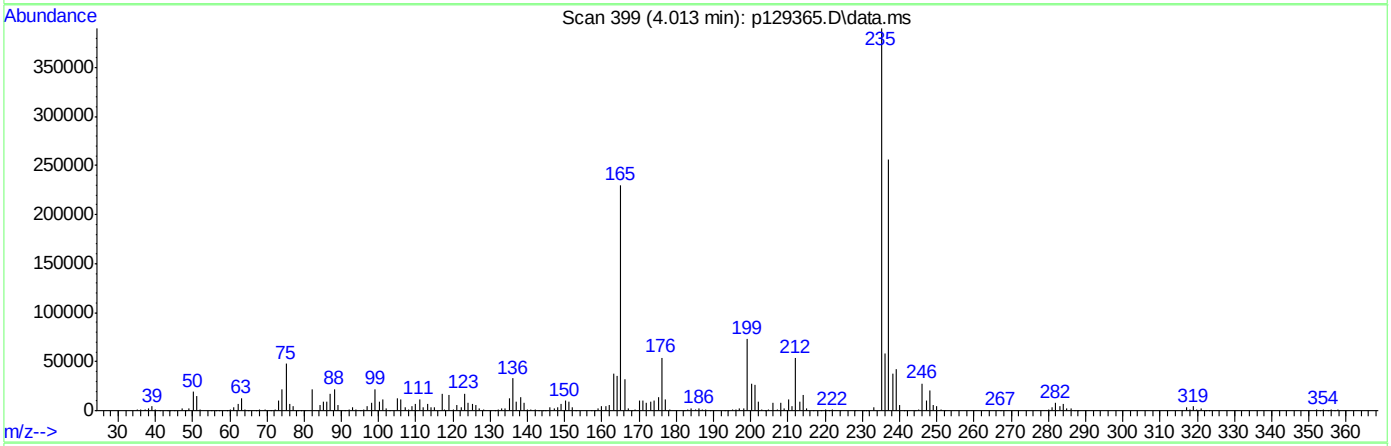
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	0.00
185.00	14.30	0.21
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129365.D
Acq On : 7 May 2019 12:32 pm
Operator : christc2
Sample : dftpp
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:38:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129365.D\data.ms

(3) ddt

4.013min (-0.466) 35.71ppb m

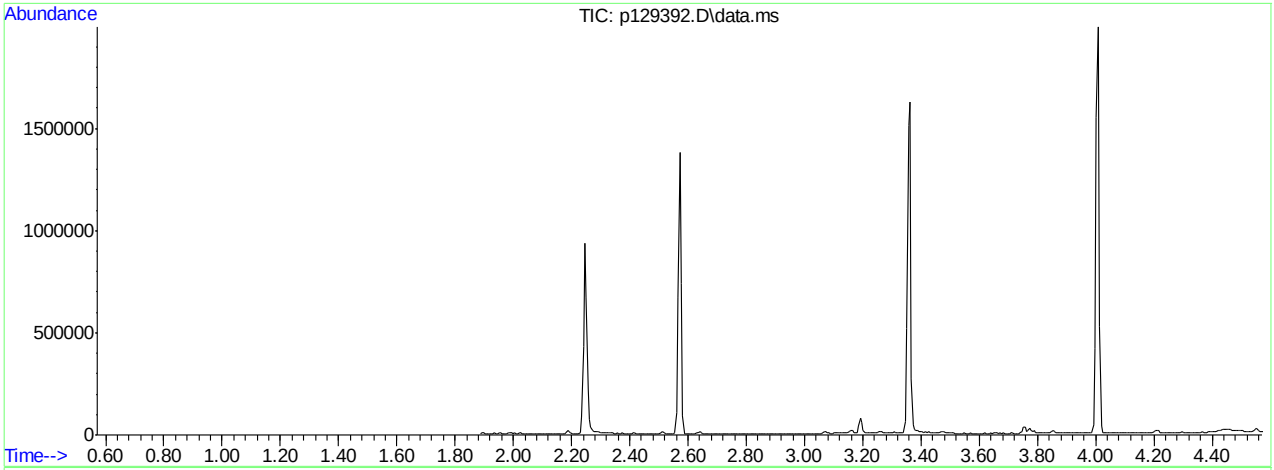
response 264764

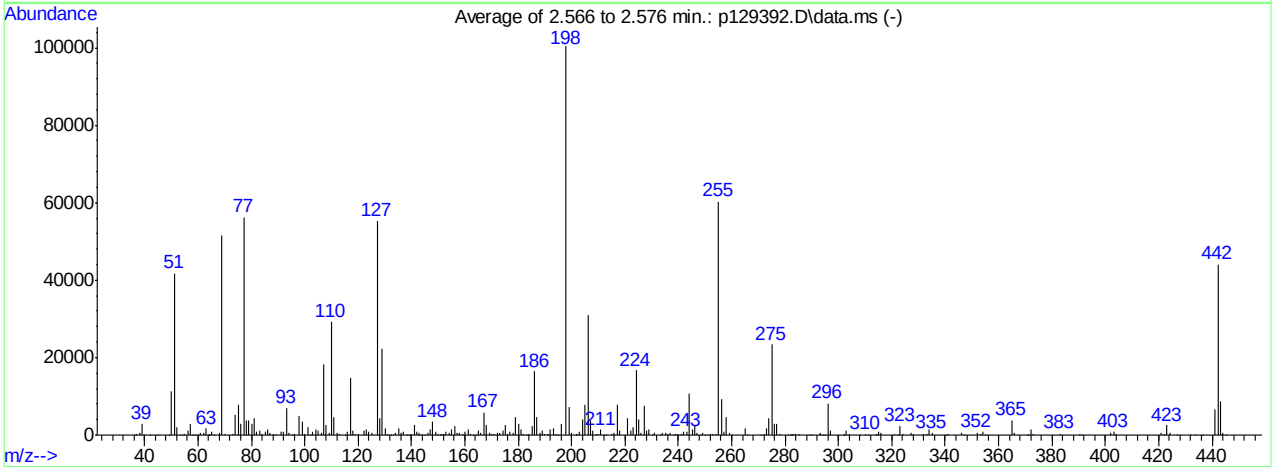
Ion	Exp%	Act%
235.00	100	100
237.00	64.10	0.00#
165.00	38.80	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\EP5857\p129392.D Vial: 1
Acq On : 8 May 2019 8:57 am Operator: angelar
Sample : dftpp Inst : MSVOAMSP
Misc : op13894,ep5857,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPPP.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um





AutoFind: Scans 128, 129, 130; Background Corrected with Scan 123

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	41.6	41709	PASS
68	69	0.00	2	1.1	548	PASS
69	198	0.00	100	51.3	51424	PASS
70	69	0.00	2	0.7	343	PASS
127	198	40	60	55.1	55240	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	100338	PASS
199	198	5	9	7.2	7234	PASS
275	198	10	30	23.2	23328	PASS
365	198	1	100	3.8	3766	PASS
441	443	0.10	100	76.1	6539	PASS
442	198	40	100	43.9	44069	PASS
443	442	17	23	19.5	8589	PASS

p129392.D DFTPPP.M Wed May 08 12:59:45 2019 ACLIMS

Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	72	53.20	51	64.05	252	77.10	56157
37.10	192	54.05	120	64.30	58	78.05	3700
38.05	534	55.00	259	65.10	977	79.05	3637
39.05	2829	56.10	1111	66.10	55	80.05	2884
40.05	40	57.05	2911	68.10	548	81.10	4383
42.10	80	57.95	144	69.00	51424	82.05	978
45.00	138	58.90	65	70.15	343	83.00	1169
49.05	118	60.10	64	73.05	186	83.95	195
50.10	11436	61.05	557	74.10	5107	85.10	789
51.10	41709	62.10	611	75.10	7963	86.00	1414
52.10	2091	63.10	1666	76.10	2996	87.00	611

Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.05	267	101.10	2072	112.00	621	125.05	712
89.20	79	101.90	100	113.05	196	127.10	55240
91.00	751	103.00	740	115.10	133	128.05	4249
92.00	904	104.00	1450	116.05	906	129.00	22368
93.10	7034	105.05	1284	117.10	14656	130.00	1811
94.10	503	106.05	521	118.05	1216	131.05	272
95.20	55	107.10	18231	119.05	273	132.10	53
96.10	387	108.05	2694	120.00	289	133.05	116
98.05	4944	109.10	455	122.05	1087	134.05	726
99.00	3559	110.00	29157	123.10	1504	135.05	1676
100.05	414	111.05	4676	124.00	783	136.10	688

Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.00	900	147.05	1503	155.05	1513	166.05	613
138.10	135	148.00	3383	156.05	2329	167.00	5878
139.10	78	149.10	809	157.10	466	168.05	2710
139.95	212	150.05	221	157.95	537	169.10	626
141.00	2619	150.90	73	159.00	363	170.00	167
142.00	934	151.10	341	160.00	852	171.05	252
142.80	124	151.70	155	161.10	1589	172.00	571
143.00	574	151.90	157	162.00	279	173.00	608
144.15	263	152.10	89	163.00	79	174.10	1153
145.10	77	153.00	946	164.20	130	175.05	2517
146.05	580	154.05	689	165.05	1278	176.15	443

Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.95	891	188.00	494	199.00	7234	210.10	309
178.05	458	189.00	1087	200.05	698	211.05	1332
179.00	4533	190.05	378	201.40	139	212.00	87
180.00	2865	191.00	349	202.00	198	213.05	118
181.05	1547	191.20	135	203.05	947	215.05	341
181.95	248	192.05	1379	204.10	4015	216.05	725
183.10	57	193.10	1854	205.10	7759	217.00	7763
184.10	361	194.05	269	206.10	30890	218.05	1120
185.05	2410	195.00	108	207.10	3663	221.05	4253
186.10	16373	196.00	2832	208.00	1080	222.00	1047
187.10	4615	198.00	100338	209.05	349	223.05	1915

Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
224.10	16742	235.95	442	247.05	643	258.05	4544
225.10	4074	237.05	621	248.10	71	259.10	732
226.00	532	238.10	63	249.00	561	260.10	50
227.05	7575	238.95	215	250.10	63	265.05	1723

228.00	1098	240.00	254	251.10	101	265.95	58
229.00	1572	241.05	432	252.00	198	270.90	99
230.10	61	242.05	920	253.05	278	272.00	231
230.95	697	243.05	940	254.00	345	273.00	1726
233.10	62	244.10	10862	255.05	60317	274.05	4370
234.05	674	245.10	1594	256.10	9304	275.05	23328
235.05	608	246.00	2529	257.00	751	276.05	2942

Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
277.00	2776	292.90	115	310.10	130	328.05	251
278.00	361	293.05	488	311.10	56	332.00	201
281.10	50	293.95	130	314.10	333	333.00	207
282.00	76	295.00	85	314.70	70	334.10	1402
282.30	69	296.05	8199	315.00	932	335.00	528
282.70	69	297.05	1284	316.00	486	340.10	67
283.05	179	301.80	55	321.10	173	341.00	239
284.10	174	302.10	76	322.05	144	346.00	558
285.05	278	303.05	1117	323.10	2419	347.00	71
289.00	87	304.05	322	324.10	402	352.00	711
290.00	61	308.00	58	327.00	575	353.10	427

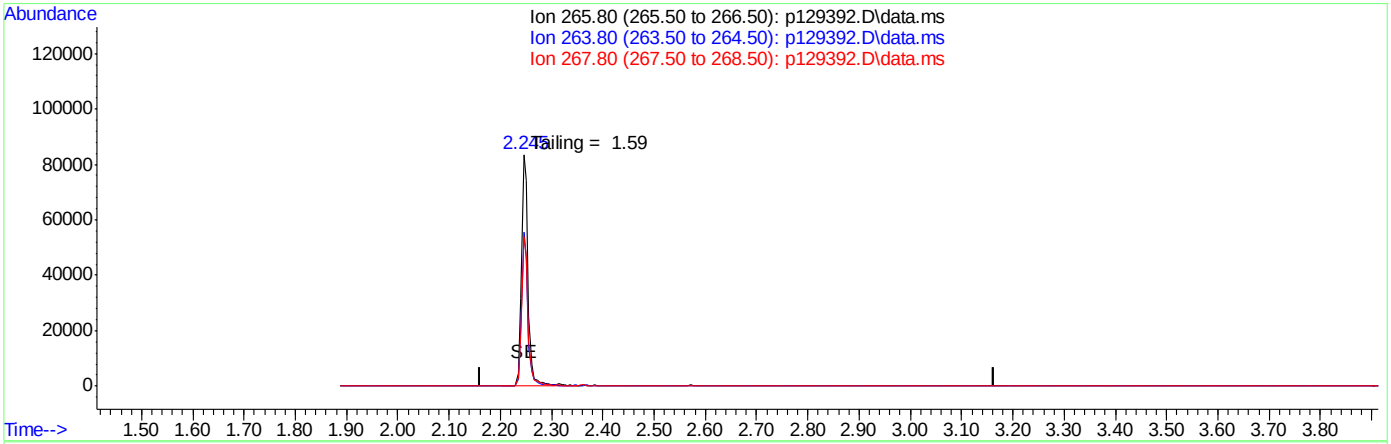
Average of 2.566 to 2.576 min.: p129392.D\data.ms
dftpp
Modified:subtracted

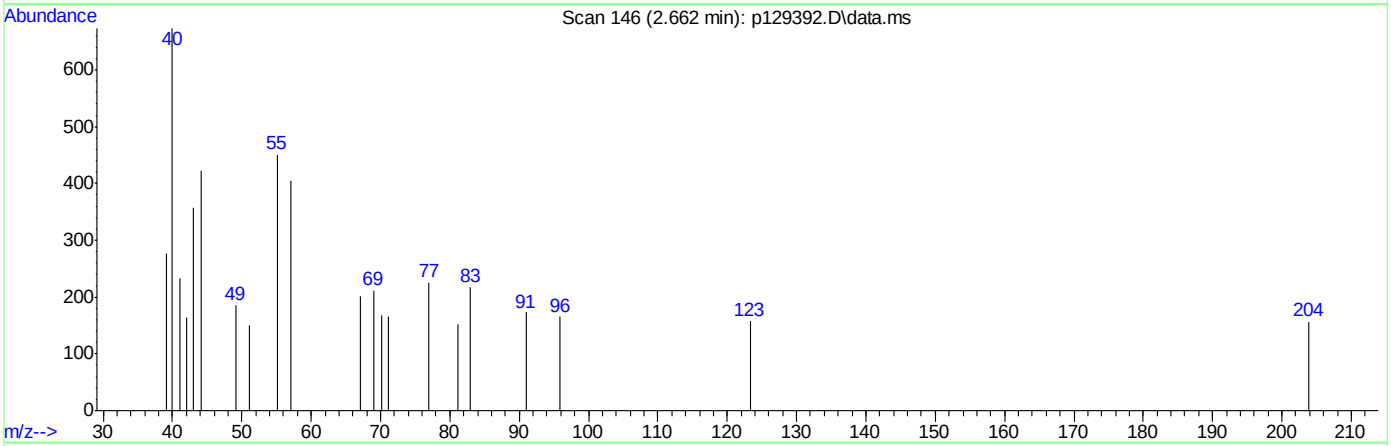
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
354.05	742	402.05	454	441.10	6539		
355.10	52	403.10	761	442.10	44069		
365.00	3766	404.05	245	443.10	8589		
366.05	588	421.00	476	444.10	661		
370.90	105	422.10	279	445.10	91		
371.10	109	423.10	2606				
372.05	1320	424.05	693				
373.05	275	426.60	57				
383.00	355	431.80	70				
390.10	77	433.50	71				
391.10	77	436.40	60				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129392.D
Acq On : 8 May 2019 8:57 am
Operator : angelar
Sample : dftpp
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 09:02:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129392.D\data.ms

(1) Pentachlorophenol (t)

2.663min (-2.663) 0.00ppb

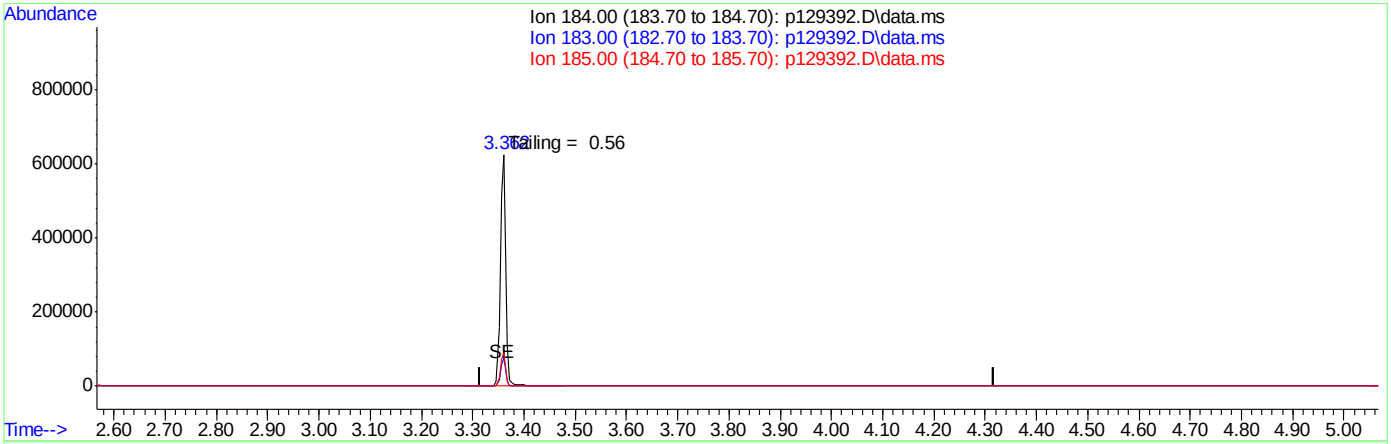
response 0

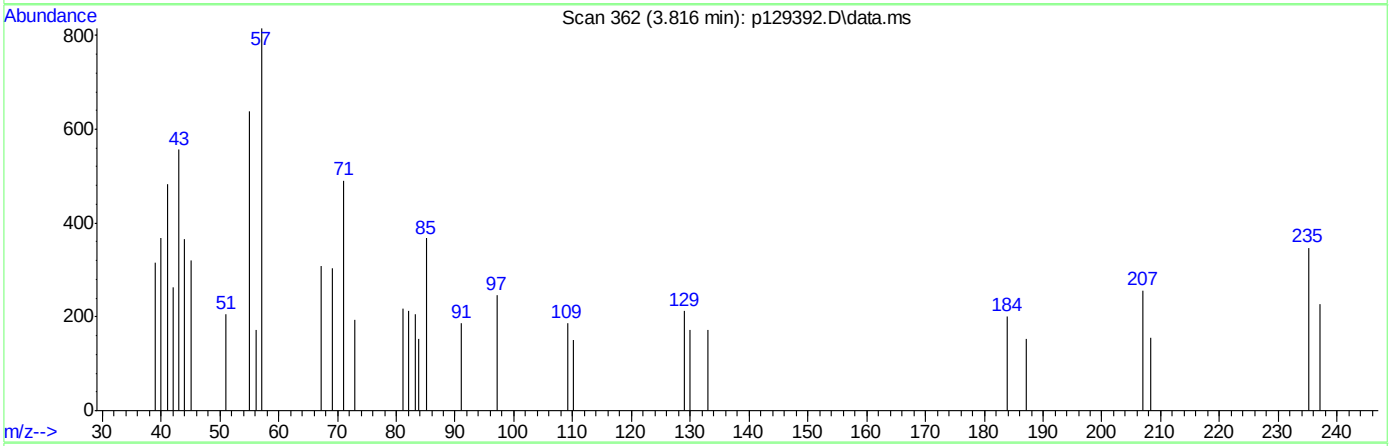
Ion	Exp%	Act%
265.80	100	0.00
263.80	63.90	0.00#
267.80	66.90	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129392.D
Acq On : 8 May 2019 8:57 am
Operator : angelar
Sample : dftpp
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 09:02:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129392.D\data.ms

(2) Benzidine (t)

3.817min 0.00ppb d

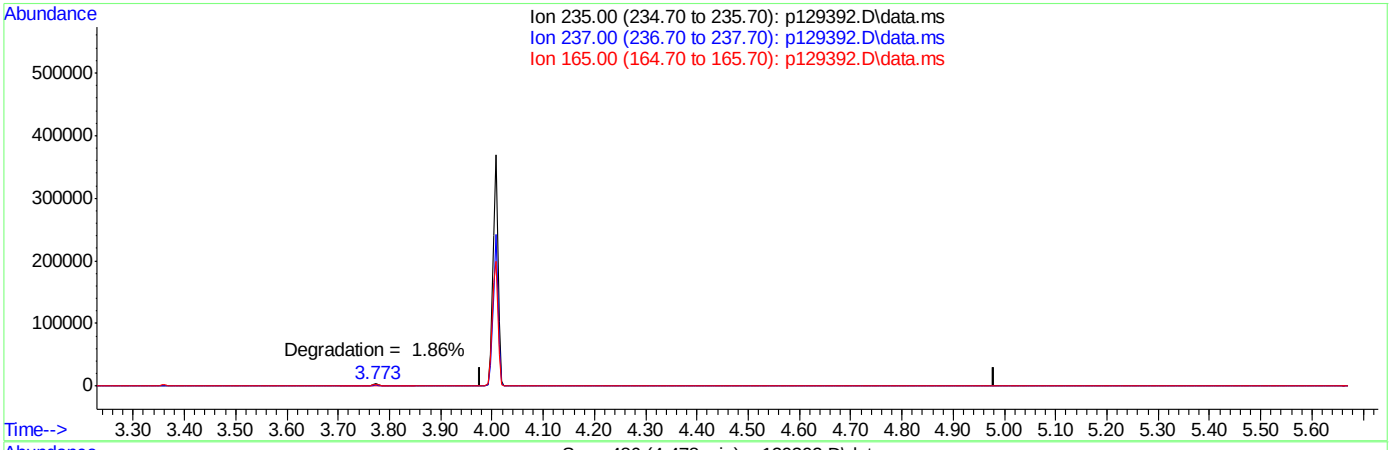
response 0

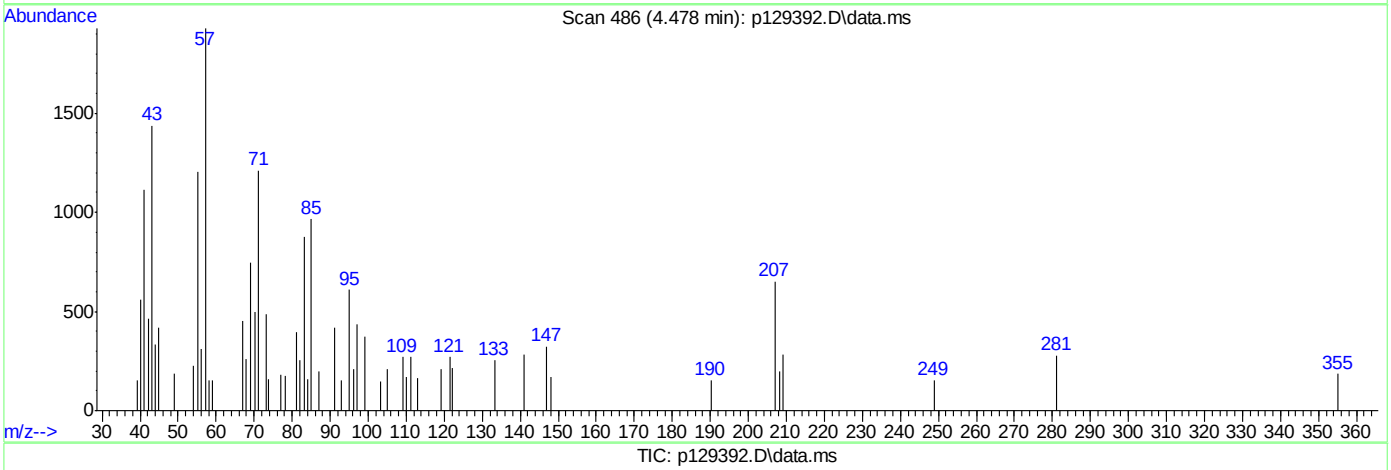
Ion	Exp%	Act%
184.00	100	0.00
183.00	11.70	0.00
185.00	14.30	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129392.D
Acq On    :  8 May 2019   8:57 am
Operator  : angelar
Sample    : dftpp
Misc      : op13894,ep5857,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 08 09:02:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title  : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration
```





TIC: p129392.D\data.ms

(3) ddt

4.479min (-4.479) 0.00ppb

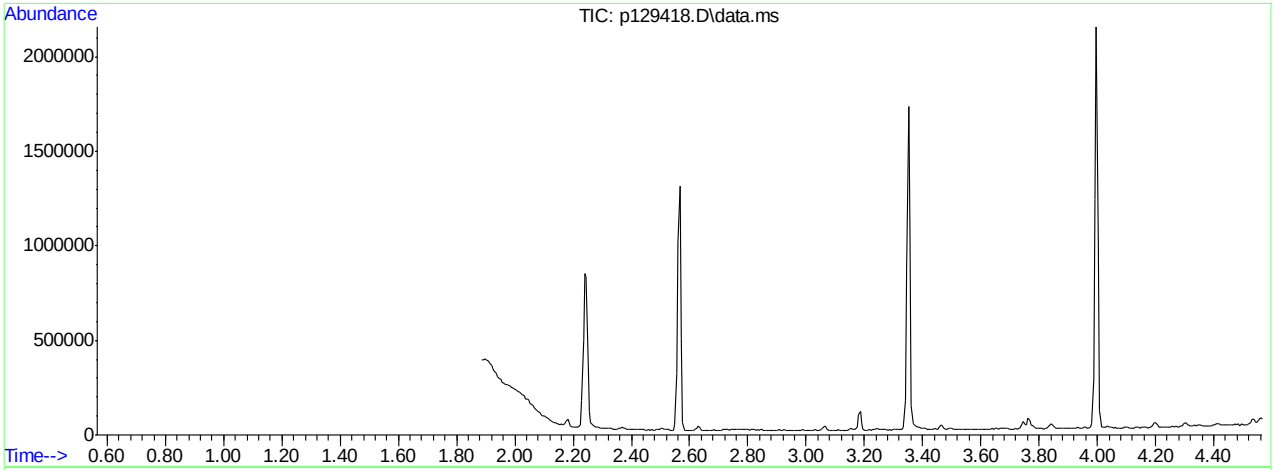
response 0

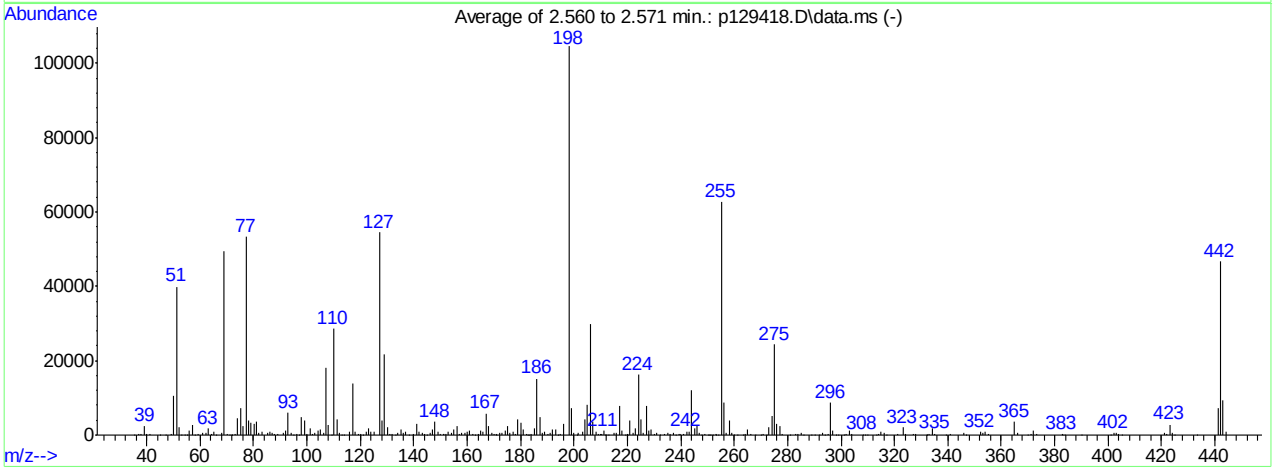
Ion	Exp%	Act%
235.00	100	0.00
237.00	64.10	0.00#
165.00	38.80	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\EP5858\p129418.D Vial: 1
Acq On : 9 May 2019 9:12 am Operator: angelar
Sample : dftpp Inst : MSVOAMSP
Misc : op13894,ep5858,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPPP.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um





AutoFind: Scans 127, 128, 129; Background Corrected with Scan 122

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.1	39859	PASS
68	69	0.00	2	1.1	543	PASS
69	198	0.00	100	47.2	49347	PASS
70	69	0.00	2	0.5	238	PASS
127	198	40	60	52.2	54496	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	104493	PASS
199	198	5	9	7.0	7300	PASS
275	198	10	30	23.3	24337	PASS
365	198	1	100	3.4	3594	PASS
441	443	0.10	100	77.2	7304	PASS
442	198	40	100	44.6	46642	PASS
443	442	17	23	20.3	9459	PASS

p129418.D DFTPPP.M Thu May 09 10:11:35 2019 ACLIMS

Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	60	52.10	2079	64.10	355	75.05	7174
37.15	231	53.00	102	65.10	787	76.10	2451
38.00	383	54.10	98	66.05	125	77.10	53320
39.10	2482	55.10	79	68.10	543	78.10	3836
40.05	175	56.00	1260	69.00	49347	79.05	3382
41.10	172	57.10	2720	70.10	238	80.10	2996
45.00	102	57.95	144	70.90	80	81.10	3750
46.90	80	59.10	173	71.80	62	82.05	742
49.00	249	61.05	734	72.00	111	83.00	832
50.10	10523	62.05	699	73.05	209	85.05	493
51.05	39859	63.00	1713	74.10	4577	86.00	1016

Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.10	664	99.10	3795	110.00	28497	122.00	960
87.95	257	100.10	384	111.10	4211	123.00	1694
88.95	183	101.05	1878	112.05	613	124.05	895
91.05	740	102.05	215	113.05	156	125.05	842
92.00	1194	103.05	566	113.90	62	127.10	54496
93.00	5948	104.00	1283	116.05	877	128.05	3975
94.00	522	105.05	1537	117.05	13840	129.00	21594
95.10	38	106.10	577	118.05	926	130.10	2007
96.20	339	107.05	18053	119.05	203	131.00	415
97.05	137	108.05	2839	120.05	323	132.05	313
98.00	4896	109.05	13	121.10	116	133.00	97

Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.00	760	146.05	578	156.10	2315	167.10	5845
135.05	1583	147.00	1480	157.00	446	168.00	2333
136.00	687	148.00	3498	158.05	492	169.10	464
137.00	855	149.00	789	159.00	502	170.00	228
138.05	119	149.95	283	160.05	1012	170.90	132
140.00	321	151.00	188	161.00	1352	171.05	201
141.05	2879	151.20	304	162.10	242	172.05	489
142.10	925	152.15	240	163.10	114	173.00	706
143.00	732	153.05	990	164.05	233	174.05	1125
144.05	197	154.10	700	165.00	1104	175.05	2314
145.00	65	155.05	1497	166.05	895	176.05	620

Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.00	1021	187.10	4870	199.00	7300	210.00	325
178.10	360	188.05	554	200.05	645	210.30	166
179.00	4351	189.05	949	201.00	146	211.00	1143
180.05	3351	190.00	174	201.55	641	211.70	78
181.05	1550	191.10	470	203.10	956	212.10	63
182.10	246	192.05	1615	204.10	4232	213.00	67
182.70	66	193.10	1667	205.10	8219	215.10	524
183.05	151	194.00	109	206.10	29887	216.00	735
184.05	366	195.00	250	207.10	3595	217.00	7958
185.10	1935	196.05	3015	208.05	1056	218.05	1168
186.10	15108	198.00	104493	209.10	377	219.10	66

Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
219.90	55	229.95	197	242.10	979	252.10	75
220.15	239	231.10	617	243.00	789	253.00	225
221.00	3940	232.05	154	244.10	12052	253.20	62
222.05	679	234.05	462	245.10	1767	254.00	119

223.05	1847	235.10	508	246.05	2835	255.10	62597
224.10	16239	236.05	455	247.00	595	256.05	8866
225.05	4269	237.10	704	247.90	72	257.00	553
226.00	521	238.00	59	249.00	284	258.05	4033
227.05	7846	239.15	277	250.10	110	259.05	641
228.05	1149	239.95	209	250.80	56	260.10	156
229.00	1468	241.05	459	251.10	84	261.10	55

Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
263.10	59	276.00	2959	293.05	612	308.00	130
263.90	183	277.05	2524	293.90	158	309.00	82
265.00	1601	278.05	348	295.10	226	310.00	122
266.00	417	281.00	116	296.05	8610	313.20	87
267.90	68	283.00	354	297.05	1283	314.10	383
270.00	142	284.00	198	298.00	70	315.00	957
271.00	188	285.05	536	299.00	74	316.05	514
271.90	158	286.00	50	301.10	80	317.10	50
273.00	2170	288.90	50	302.00	182	321.15	194
274.10	5108	290.00	71	303.05	1126	323.10	2046
275.10	24337	292.00	59	304.05	364	324.05	385

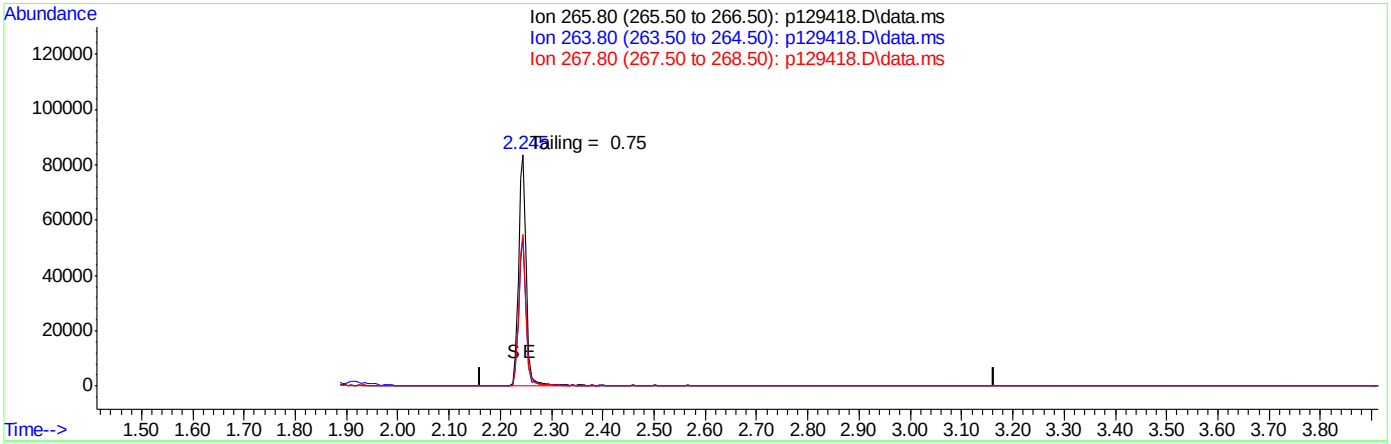
Average of 2.560 to 2.571 min.: p129418.D\data.ms
dftpp
Modified:subtracted

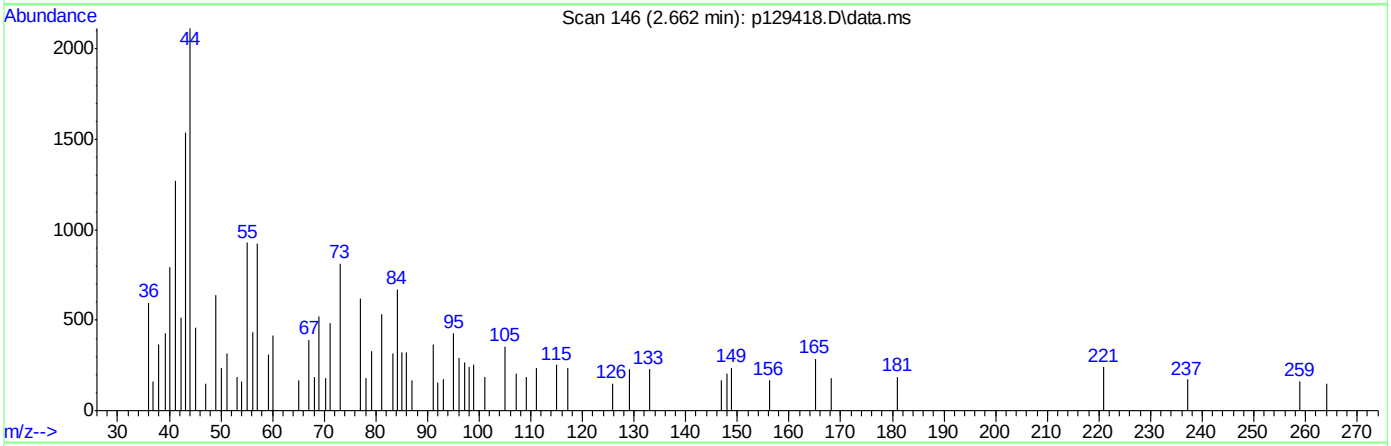
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
327.00	435	352.10	812	383.10	148	424.05	518
328.05	318	353.05	488	383.90	72	424.80	52
332.00	127	354.05	879	390.10	70	433.10	63
332.20	74	355.05	169	401.00	130	441.10	7304
333.05	313	365.00	3594	402.05	554	442.10	46642
334.10	1843	366.05	554	403.05	529	443.10	9459
335.10	440	370.10	57	404.05	236	444.05	901
339.20	54	371.05	247	405.20	50		
341.10	300	372.05	1284	421.00	588		
346.00	637	373.05	366	422.00	342		
347.00	112	382.90	206	423.05	2851		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129418.D
Acq On : 9 May 2019 9:12 am
Operator : angelar
Sample : dftpp
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 09:18:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129418.D\data.ms

(1) Pentachlorophenol (t)

2.663min (-2.663) 0.00ppb

response 0

Ion	Exp%	Act%
265.80	100	0.00
263.80	63.90	0.00#
267.80	66.90	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129418.D
Acq On    :  9 May 2019   9:12 am
Operator  : angelar
Sample    : dftpp
Misc      : op13894,ep5858,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 09 09:18:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title  : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration
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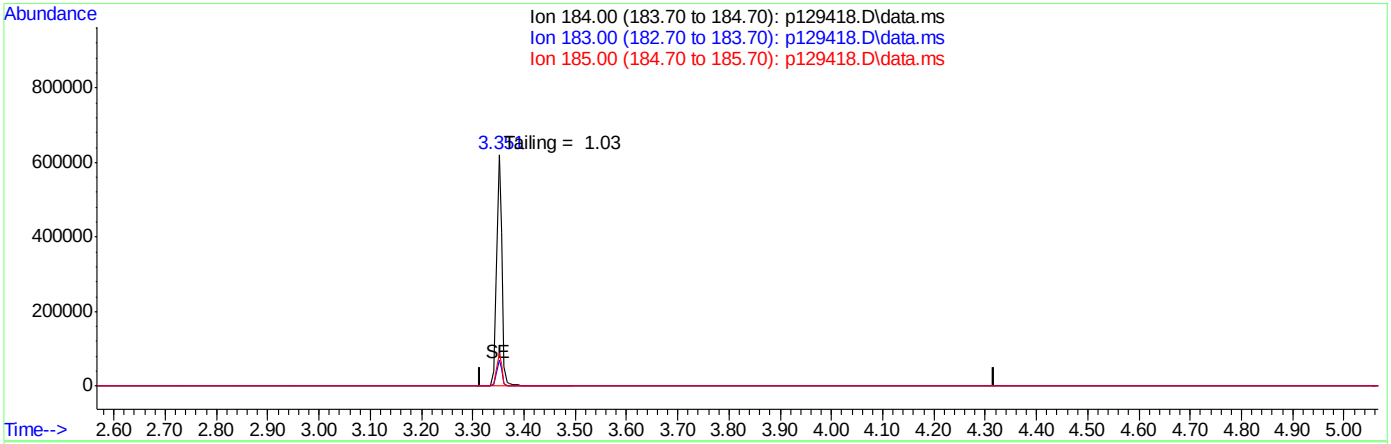
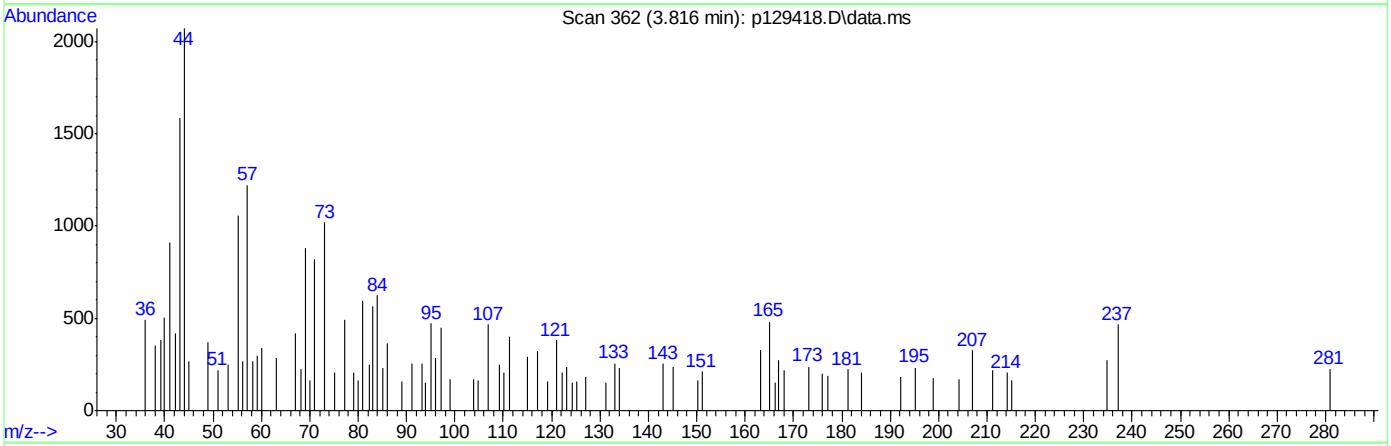




TIC: p129418.D\data.ms

(2) Benzidine (t)

3.817min 0.00ppb d

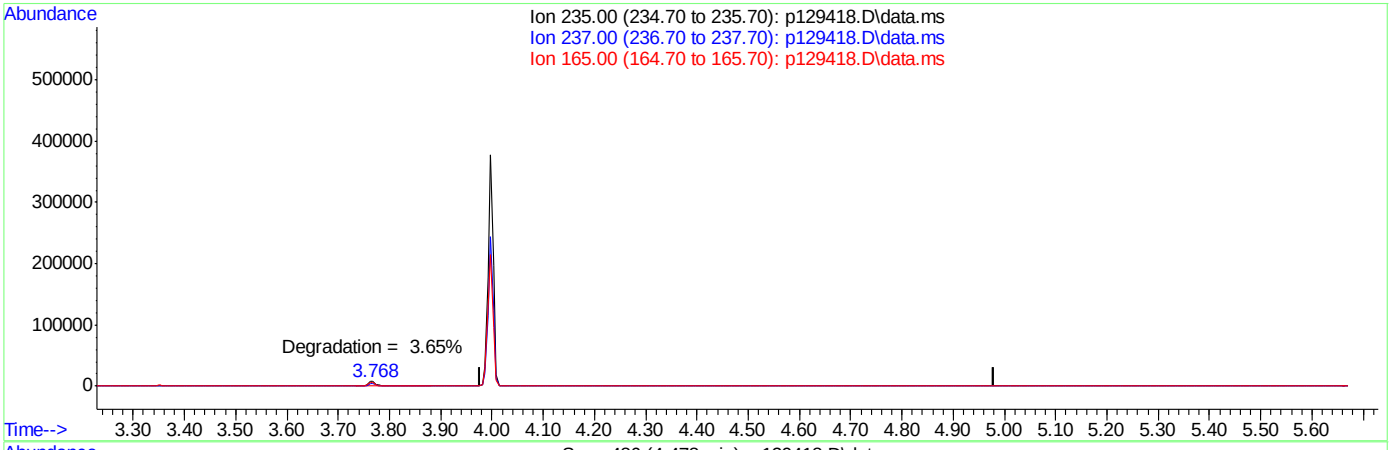
response 0

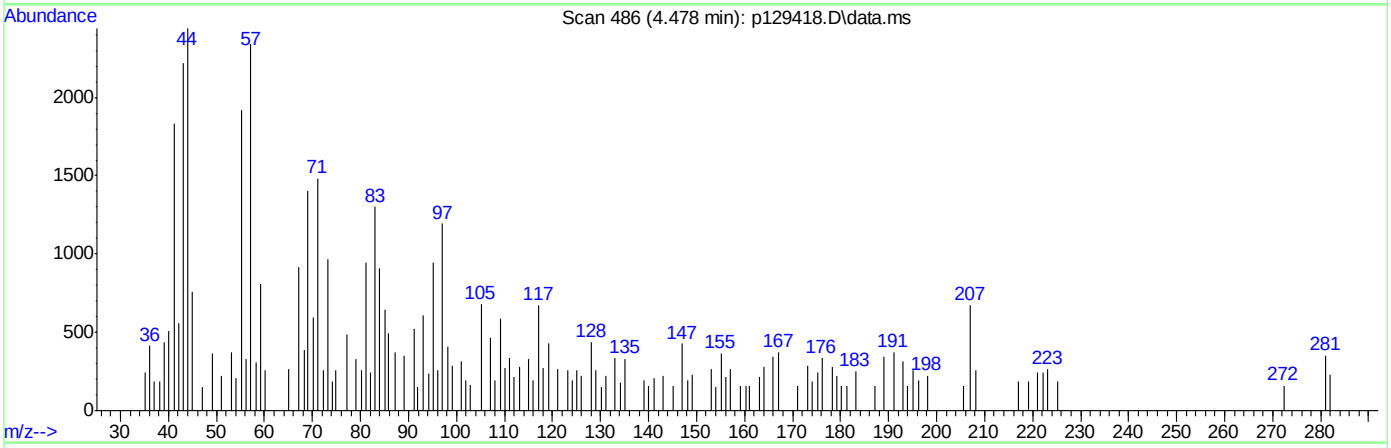
Ion	Exp%	Act%
184.00	100	0.00
183.00	11.70	0.00
185.00	14.30	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129418.D
Acq On : 9 May 2019 9:12 am
Operator : angelar
Sample : dftpp
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 09:18:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPP.M
Quant Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
QLast Update : Tue Dec 11 00:35:57 2018
Response via : Initial Calibration





TIC: p129418.D\data.ms

(3) ddt

4.479min (-4.479) 0.00ppb

response 0

Ion	Exp%	Act%
235.00	100	0.00
237.00	64.10	0.00#
165.00	38.80	0.00#
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/17/19 13:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481127.D
Acq On : 16 Apr 2019 9:55 am
Operator : angelar
Sample : ic2562-100
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 16 14:55:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	613533	40.00	ppm	0.00
24) Naphthalene-d8	5.313	136	2607399	40.00	ppm	0.00
47) Acenaphthene-d10	6.998	164	1582803	40.00	ppm	0.00
69) Phenanthrene-d10	8.672	188	2976109	40.00	ppm	0.00
83) Chrysene-d12	11.833	240	2774341	40.00	ppm	0.00
91) Perylene-d12	13.422	264	3216467	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	613533	40.00	ppm	0.00
103) Acenaphthene-d10a	6.998	164	1582803	40.00	ppm	0.00
105) Phenanthrene-d10a	8.672	188	2976109	40.00	ppm	0.00
109) Chrysene-d12a	11.833	240	2774341	40.00	ppm	0.00
111) Naphthalene-d8a	5.313	136	2607399	40.00	ppm	0.00
113) Phenanthrene-d10b	8.672	188	2976109	40.00	ppm	0.00
115) Chrysene-d12b	11.833	240	2774341	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.350	112	1943687	95.56	ppm	0.00
Spiked Amount 50.000			Recovery = 191.12%			
8) Phenol-d5	4.099	99	2114417	92.93	ppm	0.00
Spiked Amount 50.000			Recovery = 185.86%			
25) Nitrobenzene-d5	4.746	82	2039707	91.59	ppm	0.00
Spiked Amount 50.000			Recovery = 183.18%			
51) 2-Fluorobiphenyl	6.313	172	5142966	92.86	ppm	0.00
Spiked Amount 50.000			Recovery = 185.72%			
73) 2,4,6-Tribromophenol	7.886	330	1081368	107.65	ppm	0.00
Spiked Amount 50.000			Recovery = 215.30%			
85) Terphenyl-d14	10.598	244	6569782	98.12	ppm	0.00
Spiked Amount 50.000			Recovery = 196.24%			
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	791273	94.65	ppm	99
3) Pyridine	2.104	79	1900721	96.20	ppm	99
4) N-Nitrosodimethylamine	2.077	74	1109627	96.69	ppm	99
6) Indene	4.511	116	3063422	91.23	ppm	99
7) Cumene	3.719	105	4267241	89.90	ppm	98
9) Phenol	4.110	94	2502528	90.85	ppm	99
10) Aniline	4.088	93	2005208	87.67	ppm	97
11) bis(2-Chloroethyl)ether	4.136	93	1801018	96.15	ppm	99
12) 2-Chlorophenol	4.185	128	2075615	93.08	ppm	96
13) Decane	4.217	43	1384001	87.77	ppm	99
14) 1,3-Dichlorobenzene	4.281	146	2262217	92.87	ppm	99
15) 1,4-Dichlorobenzene	4.334	146	2290148	92.06	ppm	99
16) Benzyl alcohol	4.452	108	1155496	93.37	ppm	96
17) 1,2-Dichlorobenzene	4.447	146	2096906	91.66	ppm	99
18) Acetophenone	4.639	105	2753249	94.24	ppm	96
19) 2-Methylphenol	4.548	108	1761942	93.81	ppm	96
20) 2,2'-oxybis(1-Chloropr...	4.532	121	654340	96.62	ppm	92
21) 3&4-Methylphenol	4.661	108	1904974	94.10	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481127.D
Acq On : 16 Apr 2019 9:55 am
Operator : angelar
Sample : ic2562-100
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 16 14:55:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.645	70	1212844	93.82	ppm		96
23) Hexachloroethane	4.693	201	891774	99.02	ppm		96
26) Nitrobenzene	4.762	77	2028961	90.29	ppm		97
27) Quinoline	5.666	129	4746936	94.96	ppm		99
28) Isophorone	4.955	82	3412387	90.11	ppm		92
29) 2-Nitrophenol	5.008	139	1234941	88.03	ppm		89
30) 2,4-Dimethylphenol	5.062	107	2067797	95.95	ppm		99
31) Benzoic acid	5.254	105	2055995	96.84	ppm		99
32) bis(2-Chloroethoxy)met...	5.121	93	2161958	89.78	ppm		99
33) 2,4-Dichlorophenol	5.217	162	1912789	92.11	ppm		99
34) 2,6-Dichlorophenol	5.399	162	1871485	92.80	ppm		99
35) 1,3,5-Trichlorobenzene	5.014	180	2076474	89.80	ppm		99
36) 1,2,4-Trichlorobenzene	5.270	180	2111251	93.24	ppm		98
37) 1,2,3-Trichlorobenzene	5.458	180	2130900	94.55	ppm		98
38) Naphthalene	5.329	128	5808075	87.17	ppm		99
39) 4-Chloroaniline	5.393	127	2436913	90.96	ppm		99
40) 2,3-Dichloroaniline	6.228	161	2375642	93.26	ppm		97
41) Caprolactam	5.757	55	902513m	99.57	ppm		
42) Hexachlorobutadiene	5.441	225	1246298	95.71	ppm		99
43) 4-Chloro-3-methylphenol	5.859	107	2043053	95.57	ppm		96
44) 2-Methylnaphthalene	5.950	141	3486347	90.59	ppm		99
45) 1-Methylnaphthalene	6.046	141	3826040	90.40	ppm		99
46) Dimethylnaphthalene	6.570	156	4246053	92.03	ppm		99
48) Hexachlorocyclopentadiene	6.105	237	2359800	213.29	ppm		97
49) 2,4,6-Trichlorophenol	6.244	196	1582473	100.46	ppm		99
50) 2,4,5-Trichlorophenol	6.297	196	1696422	99.52	ppm		99
52) 2-Chloronaphthalene	6.431	162	4331834	92.42	ppm		99
53) Biphenyl	6.415	154	5477034	91.22	ppm		99
54) 2-Nitroaniline	6.554	65	1230070	92.91	ppm		97
55) Dimethylphthalate	6.747	163	5221627	94.90	ppm		99
56) Acenaphthylene	6.854	152	6676702	91.61	ppm		99
57) 2,6-Dinitrotoluene	6.811	165	1320260	97.66	ppm		95
58) 3-Nitroaniline	6.993	138	1412808	95.67	ppm		95
59) Acenaphthene	7.041	153	4391123	91.43	ppm		96
60) 2,4-Dinitrophenol	7.116	184	1783438	204.65	ppm		99
61) 4-Nitrophenol	7.233	109	691793	94.95	ppm	#	36
62) Dibenzofuran	7.228	168	6111348	92.77	ppm		99
63) 2,4-Dinitrotoluene	7.255	165	1822937	98.18	ppm		98
64) 2,3,4,6-Tetrachlorophenol	7.383	232	1452847	102.53	ppm		96
65) Diethylphthalate	7.522	149	5117909	94.46	ppm		99
66) Fluorene	7.608	166	4983343	91.76	ppm		99
67) 4-Chlorophenyl-phenyle...	7.613	204	2681450	96.32	ppm		96
68) 4-Nitroaniline	7.688	138	1445768	98.14	ppm		99
70) 4,6-Dinitro-2-methylph...	7.720	198	1258836	100.13	ppm		95
71) n-Nitrosodiphenylamine	7.763	169	3954072	94.54	ppm		99
72) 1,2-Diphenylhydrazine	7.800	77	4185320	88.49	ppm		88
74) 4-Bromophenyl-phenylether	8.169	248	1666933	98.76	ppm		97
75) Hexachlorobenzene	8.244	284	1993101	101.82	ppm		90
76) Pentachlorophenol	8.490	266	2648354	211.16	ppm		100
77) Phenanthrene	8.704	178	7323566	92.72	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481127.D
Acq On : 16 Apr 2019 9:55 am
Operator : angelar
Sample : ic2562-100
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 16 14:55:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

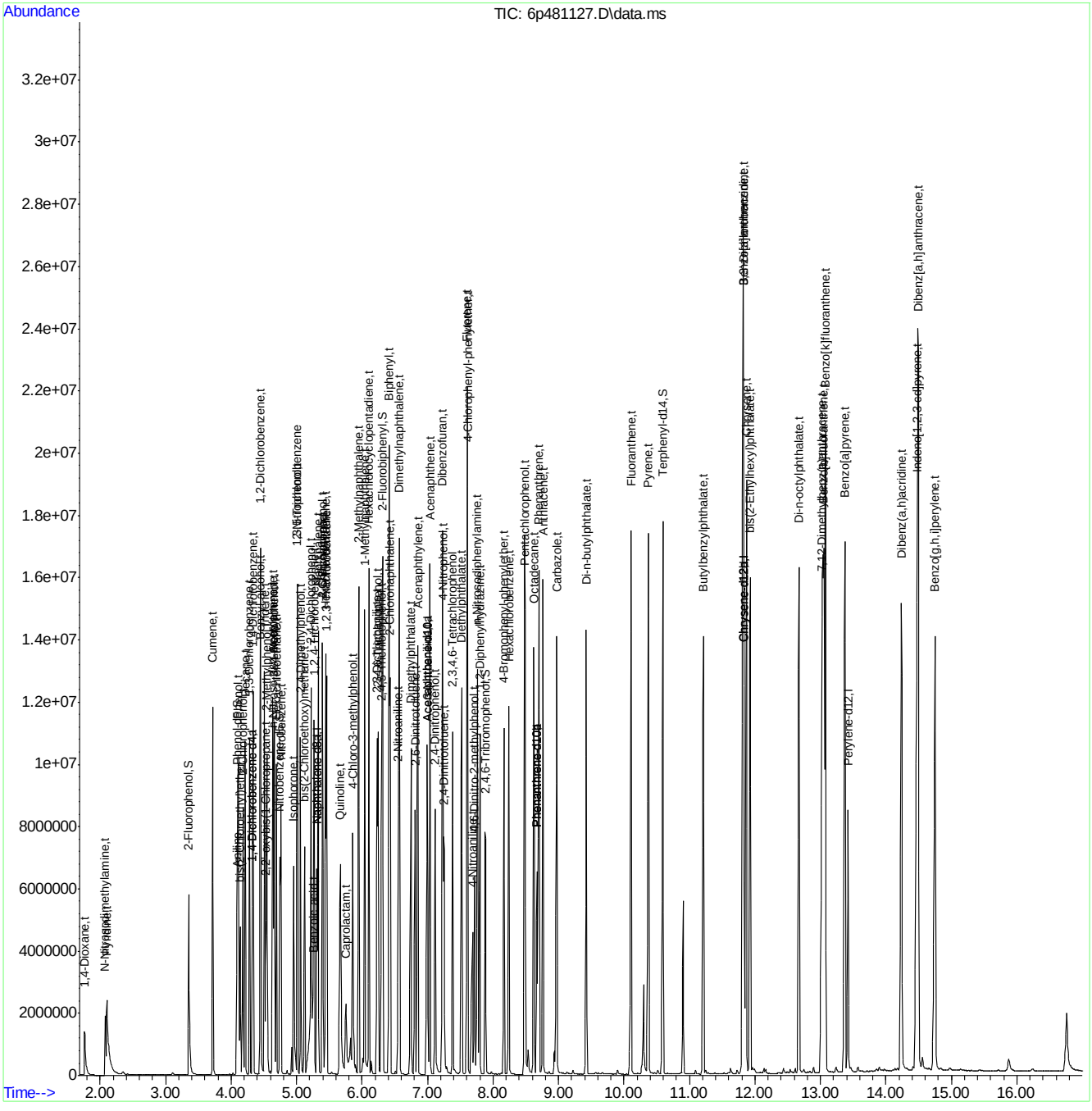
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	8.763	178	7514799	92.87	ppm	99
79)	Carbazole	8.977	167	7070145	90.54	ppm	99
80)	Di-n-butylphthalate	9.426	149	8425861	89.61	ppm	99
81)	Fluoranthene	10.111	202	8344438	92.33	ppm	97
82)	Octadecane	8.624	57	2321579	86.70	ppm	98
84)	Pyrene	10.373	202	8774501	93.49	ppm	97
86)	Butylbenzylphthalate	11.213	149	4086063	93.50	ppm	98
87)	Benzo[a]anthracene	11.822	228	8530208	93.08	ppm	98
88)	3,3'-Dichlorobenzidine	11.822	252	3543359	94.44	ppm	99
89)	Chrysene	11.871	228	8519442	95.61	ppm	98
90)	bis(2-Ethylhexyl)phtha...	11.929	149	5668359	93.31	ppm	96
92)	Di-n-octylphthalate	12.673	149	9348421	88.98	ppm	99
93)	Benzo[b]fluoranthene	13.053	252	11469513	108.86	ppm	97
94)	Benzo[k]fluoranthene	13.079	252	7799944	81.70	ppm	94
95)	Benzo[a]pyrene	13.374	252	8681115	98.21	ppm	98
96)	Indeno[1,2,3-cd]pyrene	14.481	276	11790407	97.79	ppm	97
97)	Dibenz(a,h)acridine	14.240	279	8832591	98.98	ppm	99
98)	Dibenz[a,h]anthracene	14.497	278	10410151	96.41	ppm	96
99)	7,12-Dimethylbenz(a)an...	13.026	256	4715958	100.54	ppm	99
100)	Benzo[g,h,i]perylene	14.753	276	9115784	99.01	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481127.D
Acq On : 16 Apr 2019 9:55 am
Operator : angelar
Sample : ic2562-100
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 16 14:55:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	E6P2562-IC2562	**Method:**	SW846 8270D
Lab FileID:	6P481127.D	**Analyst approved:**	04/16/19 16:37 Ying Li
Injection Time:	04/16/19 09:55	**Supervisor approved:**	04/17/19 13:32 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.76	Split peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481127.D
Acq On    : 16 Apr 2019   9:55 am
Operator  : angelar
Sample    : ic2562-100
Misc      : op17006,e6p2562,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: Apr 16 14:48:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title  : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:46:32 2019
Response via : Initial Calibration
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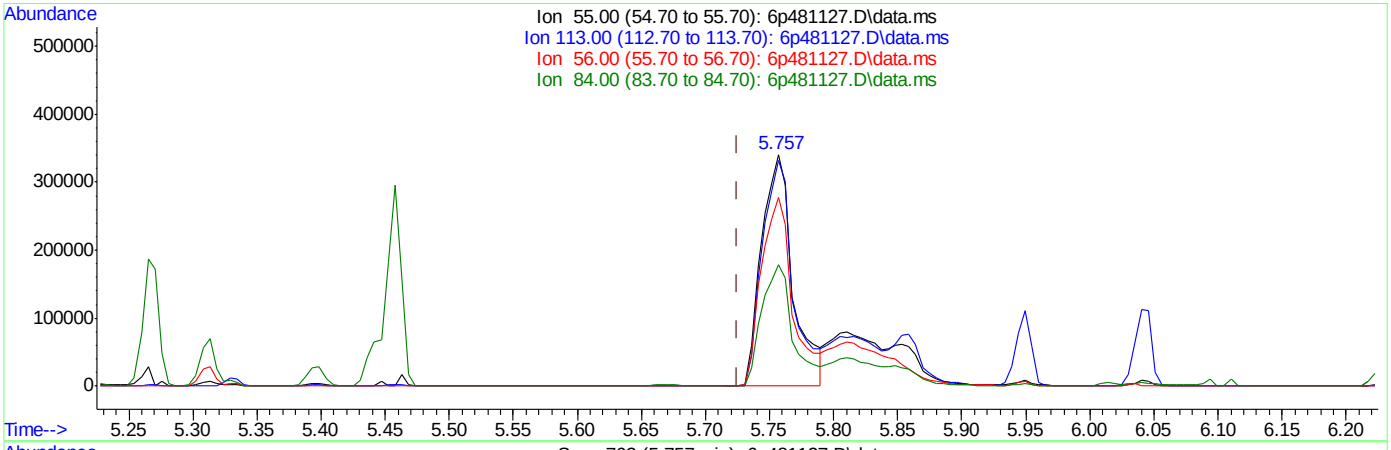
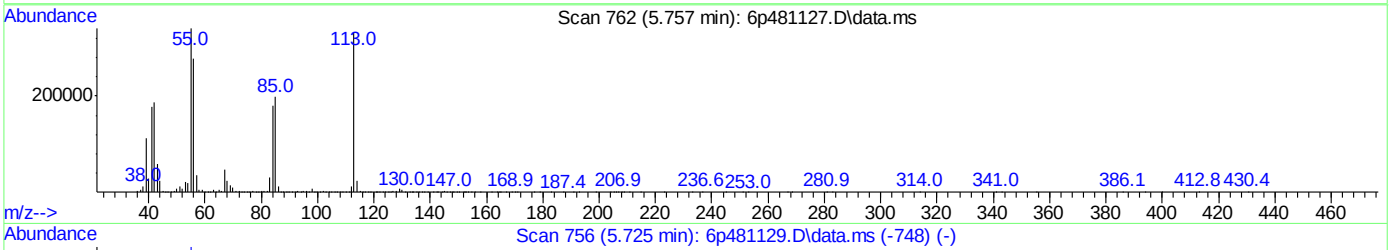
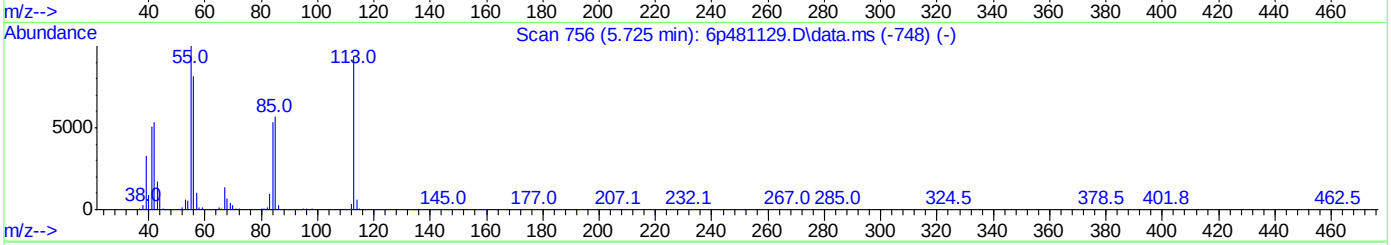






TIC: 6p481127.D\data.ms

(41) Caprolactam (t)

5.757min (+0.032) 64.91ppm

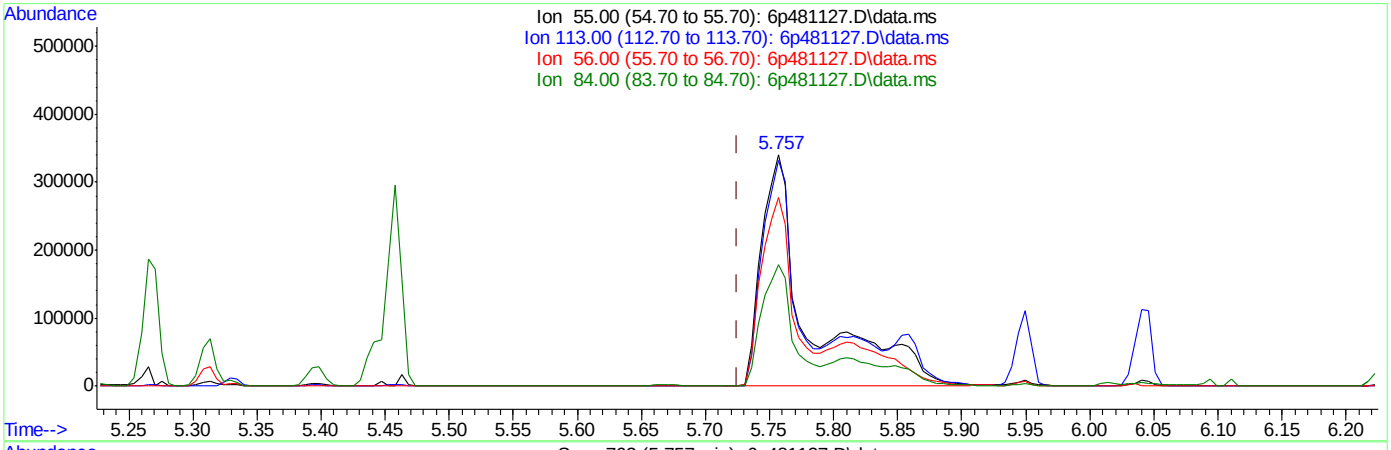
response 588350

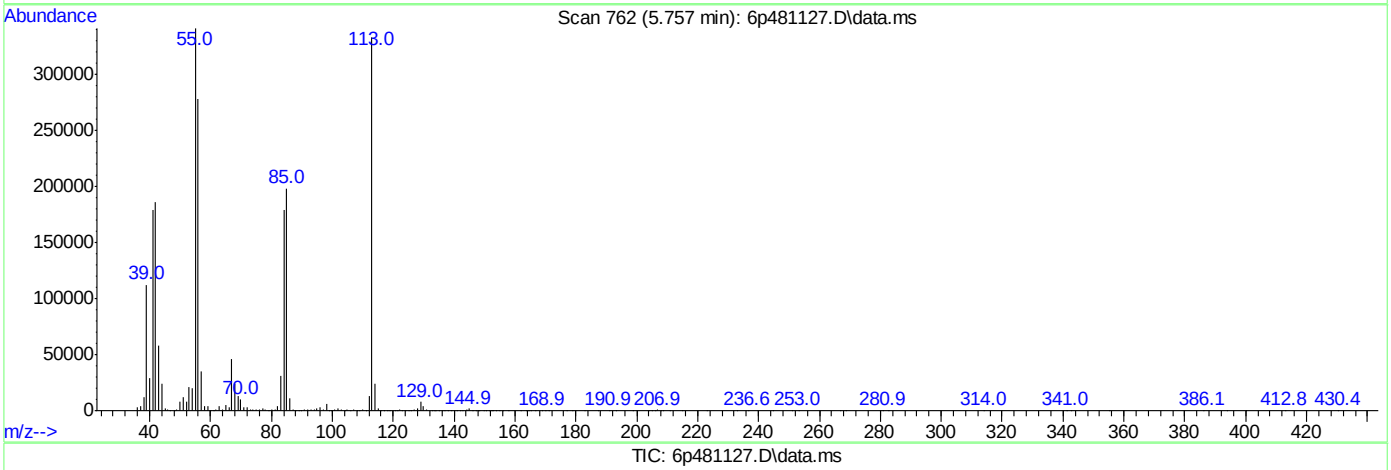
Ion	Exp%	Act%
55.00	100	100
113.00	94.10	97.58
56.00	81.20	81.22
84.00	53.30	52.74

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481127.D
Acq On : 16 Apr 2019 9:55 am
Operator : angelar
Sample : ic2562-100
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 16 14:54:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration





TIC: 6p481127.D\data.ms

(41) Caprolactam (t)

5.757min (+0.032) 99.57ppm m

response 902513

Ion	Exp%	Act%
55.00	100	100
113.00	94.10	97.54
56.00	81.20	81.63
84.00	53.30	52.53

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/17/19 13:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481128.D
Acq On : 16 Apr 2019 10:18 am
Operator : angelar
Sample : ic2562-80
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 16 14:57:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	649694	40.00	ppm	0.00
24) Naphthalene-d8	5.313	136	2664099	40.00	ppm	0.00
47) Acenaphthene-d10	6.998	164	1620626	40.00	ppm	0.00
69) Phenanthrene-d10	8.672	188	2987029	40.00	ppm	0.00
83) Chrysene-d12	11.833	240	2767078	40.00	ppm	0.00
91) Perylene-d12	13.422	264	3177934	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	649694	40.00	ppm	0.00
103) Acenaphthene-d10a	6.998	164	1620626	40.00	ppm	0.00
105) Phenanthrene-d10a	8.672	188	2987029	40.00	ppm	0.00
109) Chrysene-d12a	11.833	240	2767078	40.00	ppm	0.00
111) Naphthalene-d8a	5.313	136	2664099	40.00	ppm	0.00
113) Phenanthrene-d10b	8.672	188	2987029	40.00	ppm	0.00
115) Chrysene-d12b	11.833	240	2767078	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.356	112	1681251	78.06	ppm	0.00
Spiked Amount 50.000			Recovery	=	156.12%	
8) Phenol-d5	4.099	99	1842301	76.47	ppm	0.00
Spiked Amount 50.000			Recovery	=	152.94%	
25) Nitrobenzene-d5	4.746	82	1727238	75.91	ppm	0.00
Spiked Amount 50.000			Recovery	=	151.82%	
51) 2-Fluorobiphenyl	6.313	172	4315206	76.09	ppm	0.00
Spiked Amount 50.000			Recovery	=	152.18%	
73) 2,4,6-Tribromophenol	7.881	330	832877	82.61	ppm	0.00
Spiked Amount 50.000			Recovery	=	165.22%	
85) Terphenyl-d14	10.592	244	5379179	80.55	ppm	0.00
Spiked Amount 50.000			Recovery	=	161.10%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.767	88	695290	78.54	ppm	100
3) Pyridine	2.104	79	1669180	79.78	ppm	99
4) N-Nitrosodimethylamine	2.083	74	963775	79.30	ppm	98
6) Indene	4.511	116	2681986	75.43	ppm	99
7) Cumene	3.719	105	3769942	75.00	ppm	98
9) Phenol	4.110	94	2183887	74.87	ppm	98
10) Aniline	4.088	93	1844726	76.17	ppm	98
11) bis(2-Chloroethyl)ether	4.142	93	1540158	77.65	ppm	98
12) 2-Chlorophenol	4.185	128	1806011	76.49	ppm	97
13) Decane	4.217	43	1237810	74.13	ppm	98
14) 1,3-Dichlorobenzene	4.281	146	1992010	77.22	ppm	99
15) 1,4-Dichlorobenzene	4.334	146	1996044	75.77	ppm	100
16) Benzyl alcohol	4.447	108	985326	75.19	ppm	93
17) 1,2-Dichlorobenzene	4.447	146	1817690	75.03	ppm	100
18) Acetophenone	4.634	105	2346403	75.84	ppm	98
19) 2-Methylphenol	4.543	108	1519907	76.42	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.532	121	564849	78.77	ppm	96
21) 3&4-Methylphenol	4.661	108	1640319	76.52	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481128.D
Acq On : 16 Apr 2019 10:18 am
Operator : angelar
Sample : ic2562-80
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 16 14:57:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.645	70	1038272	75.84	ppm		99
23) Hexachloroethane	4.693	201	761132	79.81	ppm		99
26) Nitrobenzene	4.762	77	1729266	75.31	ppm		97
27) Quinoline	5.661	129	3965632	77.64	ppm		99
28) Isophorone	4.949	82	2905100	75.08	ppm		98
29) 2-Nitrophenol	5.008	139	1064291	74.25	ppm		89
30) 2,4-Dimethylphenol	5.062	107	1715415	77.90	ppm		98
31) Benzoic acid	5.228	105	1733862	79.93	ppm		99
32) bis(2-Chloroethoxy)met...	5.121	93	1849285	75.16	ppm		100
33) 2,4-Dichlorophenol	5.217	162	1624934	76.58	ppm		98
34) 2,6-Dichlorophenol	5.399	162	1564939	75.95	ppm		98
35) 1,3,5-Trichlorobenzene	5.014	180	1800816	76.22	ppm		99
36) 1,2,4-Trichlorobenzene	5.270	180	1783552	77.09	ppm		97
37) 1,2,3-Trichlorobenzene	5.458	180	1788473	77.66	ppm		99
38) Naphthalene	5.329	128	5040459	74.04	ppm		99
39) 4-Chloroaniline	5.393	127	2046596	74.77	ppm		99
40) 2,3-Dichloroaniline	6.228	161	2022327	77.70	ppm		99
41) Caprolactam	5.746	55	712268m	76.91	ppm		
42) Hexachlorobutadiene	5.442	225	1051704	79.05	ppm		99
43) 4-Chloro-3-methylphenol	5.859	107	1680136	76.92	ppm		99
44) 2-Methylnaphthalene	5.950	141	2953886	75.12	ppm		99
45) 1-Methylnaphthalene	6.041	141	3256629	75.31	ppm		99
46) Dimethylnaphthalene	6.570	156	3570219	75.74	ppm		99
48) Hexachlorocyclopentadiene	6.105	237	1936914	170.99	ppm		98
49) 2,4,6-Trichlorophenol	6.244	196	1289246	79.93	ppm		100
50) 2,4,5-Trichlorophenol	6.292	196	1397960	80.10	ppm		100
52) 2-Chloronaphthalene	6.426	162	3672791	76.53	ppm		98
53) Biphenyl	6.410	154	4671438	75.99	ppm		99
54) 2-Nitroaniline	6.554	65	1037214	76.51	ppm		98
55) Dimethylphthalate	6.741	163	4314009	76.58	ppm		99
56) Acenaphthylene	6.848	152	5643859	75.63	ppm		99
57) 2,6-Dinitrotoluene	6.805	165	1097469	79.29	ppm		99
58) 3-Nitroaniline	6.993	138	1183555	78.27	ppm		92
59) Acenaphthene	7.035	153	3713723	75.52	ppm		98
60) 2,4-Dinitrophenol	7.116	184	1435732	160.91	ppm		94
61) 4-Nitrophenol	7.228	109	573591	76.89	ppm	#	76
62) Dibenzofuran	7.228	168	5102675	75.65	ppm		98
63) 2,4-Dinitrotoluene	7.249	165	1492438	78.51	ppm		92
64) 2,3,4,6-Tetrachlorophenol	7.383	232	1173841	80.90	ppm		96
65) Diethylphthalate	7.517	149	4283636	77.22	ppm		100
66) Fluorene	7.602	166	4223990	75.96	ppm		98
67) 4-Chlorophenyl-phenyle...	7.613	204	2241791	78.65	ppm		96
68) 4-Nitroaniline	7.683	138	1192377	79.05	ppm		99
70) 4,6-Dinitro-2-methylph...	7.715	198	1008464	79.92	ppm		90
71) n-Nitrosodiphenylamine	7.763	169	3257337	77.60	ppm		99
72) 1,2-Diphenylhydrazine	7.795	77	3527845	74.31	ppm		94
74) 4-Bromophenyl-phenylether	8.169	248	1347918	79.57	ppm		96
75) Hexachlorobenzene	8.239	284	1610437	81.97	ppm		96
76) Pentachlorophenol	8.485	266	2117518	168.22	ppm		99
77) Phenanthrene	8.704	178	6128160	77.30	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481128.D
Acq On : 16 Apr 2019 10:18 am
Operator : angelar
Sample : ic2562-80
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 16 14:57:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

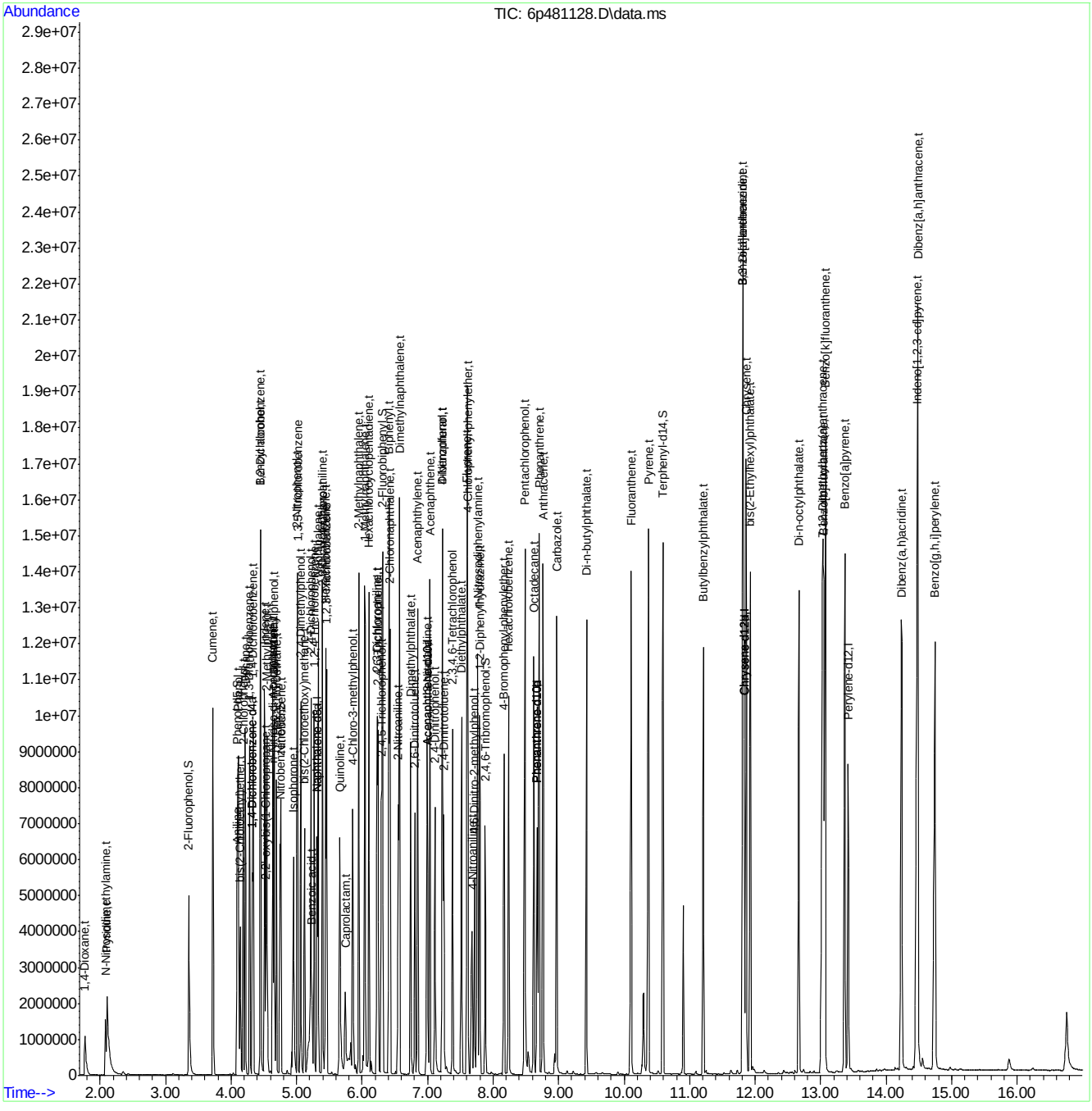
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78)	Anthracene	8.763	178	6251958	76.98 ppm	100
79)	Carbazole	8.972	167	5965556	76.12 ppm	99
80)	Di-n-butylphthalate	9.426	149	7039425	74.59 ppm	100
81)	Fluoranthene	10.111	202	6844826	75.46 ppm	99
82)	Octadecane	8.624	57	1975430	73.51 ppm	98
84)	Pyrene	10.373	202	7220767	77.14 ppm	99
86)	Butylbenzylphthalate	11.213	149	3387283	77.71 ppm	96
87)	Benzo[a]anthracene	11.817	228	7061489	77.26 ppm	98
88)	3,3'-Dichlorobenzidine	11.817	252	2954647	78.95 ppm	98
89)	Chrysene	11.865	228	6927394	77.95 ppm	99
90)	bis(2-Ethylhexyl)phtha...	11.924	149	4653089	76.80 ppm	98
92)	Di-n-octylphthalate	12.668	149	7807035	75.21 ppm	99
93)	Benzo[b]fluoranthene	13.047	252	8964744	86.12 ppm	98
94)	Benzo[k]fluoranthene	13.074	252	6707171	71.10 ppm	97
95)	Benzo[a]pyrene	13.368	252	6907883	79.10 ppm	98
96)	Indeno[1,2,3-cd]pyrene	14.475	276	9464237	79.45 ppm	98
97)	Dibenz(a,h)acridine	14.240	279	7056092	80.03 ppm	99
98)	Dibenz[a,h]anthracene	14.486	278	8500526	79.68 ppm	99
99)	7,12-Dimethylbenz(a)an...	13.026	256	3737090	80.64 ppm	100
100)	Benzo[g,h,i]perylene	14.748	276	7251009	79.71 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481128.D
Acq On : 16 Apr 2019 10:18 am
Operator : angelar
Sample : ic2562-80
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 16 14:57:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration



Manual Integration Approval Summary

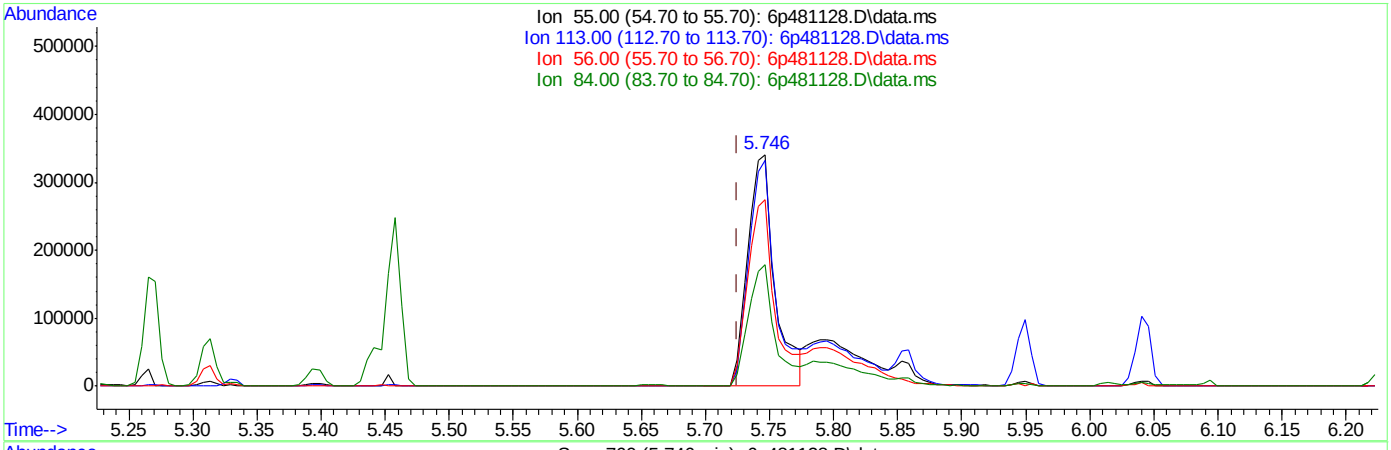
Sample Number:	E6P2562-IC2562	**Method:**	SW846 8270D
Lab FileID:	6P481128.D	**Analyst approved:**	04/16/19 16:37 Ying Li
Injection Time:	04/16/19 10:18	**Supervisor approved:**	04/17/19 13:32 Kristi Schollenberger

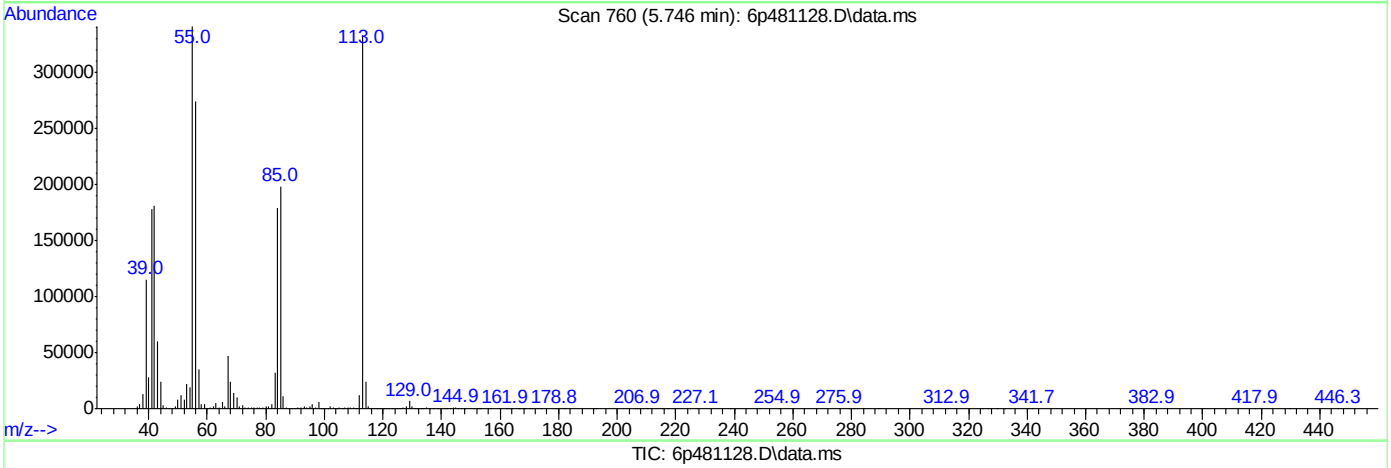
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.75	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481128.D
Acq On : 16 Apr 2019 10:18 am
Operator : angelar
Sample : ic2562-80
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 16 14:55:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration





TIC: 6p481128.D\data.ms

(41) Caprolactam (t)

5.746min (+0.021) 54.30ppm

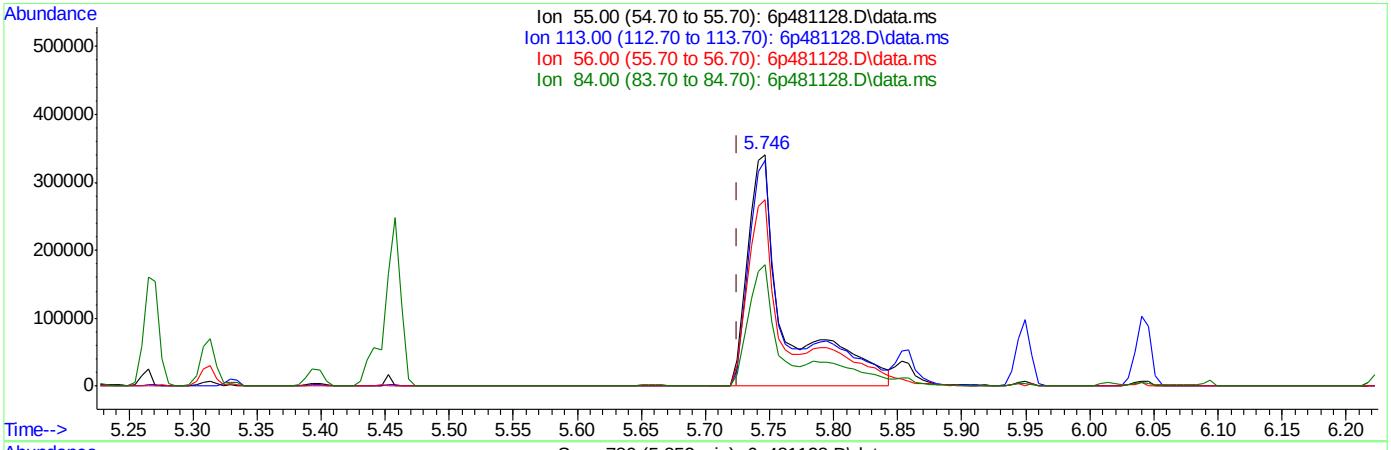
response 502856

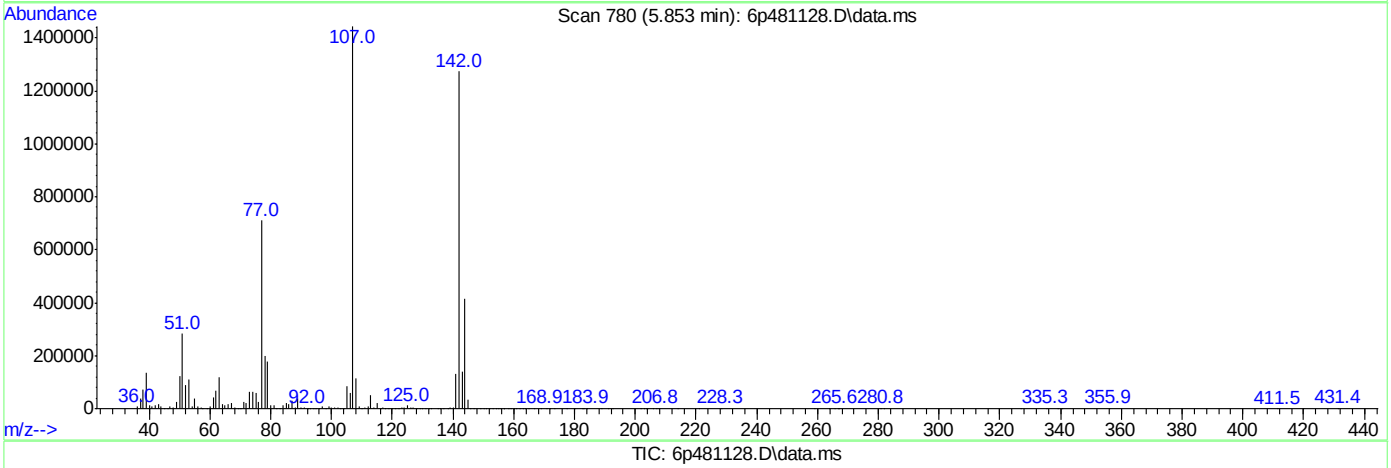
Ion	Exp%	Act%
55.00	100	100
113.00	94.10	97.26
56.00	81.20	80.01
84.00	53.30	52.62

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481128.D
Acq On : 16 Apr 2019 10:18 am
Operator : angelar
Sample : ic2562-80
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 16 14:57:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration





TIC: 6p481128.D\data.ms

(41) Caprolactam (t)

5.746min (+0.021) 76.91ppm m

response 712268

Ion	Exp%	Act%
55.00	100	100
113.00	94.10	97.52
56.00	81.20	80.44
84.00	53.30	52.56

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/17/19 13:32

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481129.D
Acq On : 16 Apr 2019 10:42 am
Operator : angelar
Sample : icc2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 16 14:47:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:46:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	659412	40.00	ppm	0.00
24) Naphthalene-d8	5.313	136	2666768	40.00	ppm	0.00
47) Acenaphthene-d10	6.998	164	1636147	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	3019329	40.00	ppm	0.00
83) Chrysene-d12	11.828	240	2863260	40.00	ppm	0.00
91) Perylene-d12	13.422	264	3289772	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	659412	40.00	ppm	0.00
103) Acenaphthene-d10a	6.998	164	1636147	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	3019329	40.00	ppm	0.00
109) Chrysene-d12a	11.828	240	2863260	40.00	ppm	0.00
111) Naphthalene-d8a	5.313	136	2666768	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	3019329	40.00	ppm	0.00
115) Chrysene-d12b	11.828	240	2863260	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.356	112	1092991	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
8) Phenol-d5	4.099	99	1222662	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
25) Nitrobenzene-d5	4.741	82	1138873	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
51) 2-Fluorobiphenyl	6.308	172	2862685	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
73) 2,4,6-Tribromophenol	7.881	330	509553	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
85) Terphenyl-d14	10.592	244	3455137	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.772	88	449256	50.00	ppm	100
3) Pyridine	2.109	79	1061727	50.00	ppm	100
4) N-Nitrosodimethylamine	2.083	74	616743	50.00	ppm	100
6) Indene	4.511	116	1804411	50.00	ppm	100
7) Cumene	3.719	105	2550731	50.00	ppm	100
9) Phenol	4.104	94	1480283	50.00	ppm	100
10) Aniline	4.088	93	1229102	50.00	ppm	100
11) bis(2-Chloroethyl)ether	4.137	93	1006559	50.00	ppm	100
12) 2-Chlorophenol	4.179	128	1198277	50.00	ppm	100
13) Decane	4.217	43	847384	50.00	ppm	100
14) 1,3-Dichlorobenzene	4.281	146	1309046	50.00	ppm	100
15) 1,4-Dichlorobenzene	4.334	146	1336820	50.00	ppm	100
16) Benzyl alcohol	4.447	108	665010	50.00	ppm	100
17) 1,2-Dichlorobenzene	4.447	146	1229428	50.00	ppm	100
18) Acetophenone	4.629	105	1570008	50.00	ppm	100
19) 2-Methylphenol	4.543	108	1009298	50.00	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.532	121	363921	50.00	ppm	100
21) 3&4-Methylphenol	4.655	108	1087852	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481129.D
Acq On : 16 Apr 2019 10:42 am
Operator : angelar
Sample : icc2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 16 14:47:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:46:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.639	70	694729	50.00	ppm	100
23) Hexachloroethane	4.693	201	483977	50.00	ppm	100
26) Nitrobenzene	4.757	77	1143974	49.77	ppm	100
27) Quinoline	5.650	129	2556324	50.00	ppm	100
28) Isophorone	4.944	82	1936539	50.00	ppm	100
29) 2-Nitrophenol	5.008	139	717415	50.00	ppm	100
30) 2,4-Dimethylphenol	5.056	107	1102121	50.00	ppm	100
31) Benzoic acid	5.217	105	1085662	50.00	ppm	100
32) bis(2-Chloroethoxy)met...	5.121	93	1231490	50.00	ppm	100
33) 2,4-Dichlorophenol	5.212	162	1061947	50.00	ppm	100
34) 2,6-Dichlorophenol	5.393	162	1031299	50.00	ppm	100
35) 1,3,5-Trichlorobenzene	5.014	180	1182478	50.00	ppm	100
36) 1,2,4-Trichlorobenzene	5.265	180	1157924	50.00	ppm	100
37) 1,2,3-Trichlorobenzene	5.458	180	1152560	50.00	ppm	100
38) Naphthalene	5.329	128	3407493	50.00	ppm	100
39) 4-Chloroaniline	5.388	127	1370046	50.00	ppm	100
40) 2,3-Dichloroaniline	6.228	161	1302668	50.00	ppm	100
41) Caprolactam	5.725	55	464639m	50.12	ppm	
42) Hexachlorobutadiene	5.442	225	665888	50.00	ppm	100
43) 4-Chloro-3-methylphenol	5.853	107	1093173	50.00	ppm	100
44) 2-Methylnaphthalene	5.944	141	1968006	50.00	ppm	100
45) 1-Methylnaphthalene	6.041	141	2164246	50.00	ppm	100
46) Dimethylnaphthalene	6.565	156	2359373	50.00	ppm	100
48) Hexachlorocyclopentadiene	6.105	237	1143643	100.00	ppm	100
49) 2,4,6-Trichlorophenol	6.239	196	814165	50.00	ppm	100
50) 2,4,5-Trichlorophenol	6.287	196	881006	50.00	ppm	100
52) 2-Chloronaphthalene	6.426	162	2422576	50.00	ppm	100
53) Biphenyl	6.404	154	3103232	50.00	ppm	100
54) 2-Nitroaniline	6.549	65	684306	50.00	ppm	100
55) Dimethylphthalate	6.736	163	2843742	50.00	ppm	100
56) Acenaphthylene	6.848	152	3767075	50.00	ppm	100
57) 2,6-Dinitrotoluene	6.800	165	698712	50.00	ppm	100
58) 3-Nitroaniline	6.982	138	763278	50.00	ppm	100
59) Acenaphthene	7.035	153	2482179	50.00	ppm	100
60) 2,4-Dinitrophenol	7.105	184	900820	100.00	ppm	100
61) 4-Nitrophenol	7.223	109	376571	50.00	ppm	100
62) Dibenzofuran	7.223	168	3404717	50.00	ppm	100
63) 2,4-Dinitrotoluene	7.244	165	959614	50.00	ppm	100
64) 2,3,4,6-Tetrachlorophenol	7.378	232	732399	50.00	ppm	100
65) Diethylphthalate	7.511	149	2800198	50.00	ppm	100
66) Fluorene	7.602	166	2806942	50.00	ppm	100
67) 4-Chlorophenyl-phenyle...	7.608	204	1438879	50.00	ppm	100
68) 4-Nitroaniline	7.667	138	761390	50.00	ppm	100
70) 4,6-Dinitro-2-methylph...	7.704	198	637735	50.00	ppm	100
71) n-Nitrosodiphenylamine	7.758	169	2121489	50.00	ppm	100
72) 1,2-Diphenylhydrazine	7.790	77	2399262	50.00	ppm	100
74) 4-Bromophenyl-phenylether	8.164	248	856172	50.00	ppm	100
75) Hexachlorobenzene	8.234	284	992993	50.00	ppm	100
76) Pentachlorophenol	8.480	266	1272380	100.00	ppm	100
77) Phenanthrene	8.699	178	4006509	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481129.D
Acq On : 16 Apr 2019 10:42 am
Operator : angelar
Sample : icc2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 16 14:47:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:46:32 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	8.758	178	4104749	50.00	ppm	100
79)	Carbazole	8.966	167	3961027	50.00	ppm	100
80)	Di-n-butylphthalate	9.421	149	4769895	50.00	ppm	100
81)	Fluoranthene	10.106	202	4584283	50.00	ppm	100
82)	Octadecane	8.619	57	1358263	50.00	ppm	100
84)	Pyrene	10.368	202	4843268	50.00	ppm	100
86)	Butylbenzylphthalate	11.207	149	2255116	50.00	ppm	100
87)	Benzo[a]anthracene	11.812	228	4728991	50.00	ppm	100
88)	3,3'-Dichlorobenzidine	11.812	252	1936211	50.00	ppm	100
89)	Chrysene	11.860	228	4598229	50.00	ppm	100
90)	bis(2-Ethylhexyl)phtha...	11.924	149	3134815	50.00	ppm	100
92)	Di-n-octylphthalate	12.662	149	5372786	50.00	ppm	100
93)	Benzo[b]fluoranthene	13.037	252	5388154	50.00	ppm	100
94)	Benzo[k]fluoranthene	13.063	252	4882548	50.00	ppm	100
95)	Benzo[a]pyrene	13.363	252	4520458	50.00	ppm	100
96)	Indeno[1,2,3-cd]pyrene	14.465	276	6166033	50.00	ppm	100
97)	Dibenz(a,h)acridine	14.229	279	4563556	50.00	ppm	100
98)	Dibenz[a,h]anthracene	14.475	278	5521959	50.00	ppm	100
99)	7,12-Dimethylbenz(a)an...	13.021	256	2398681	50.00	ppm	100
100)	Benzo[g,h,i]perylene	14.738	276	4708568	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

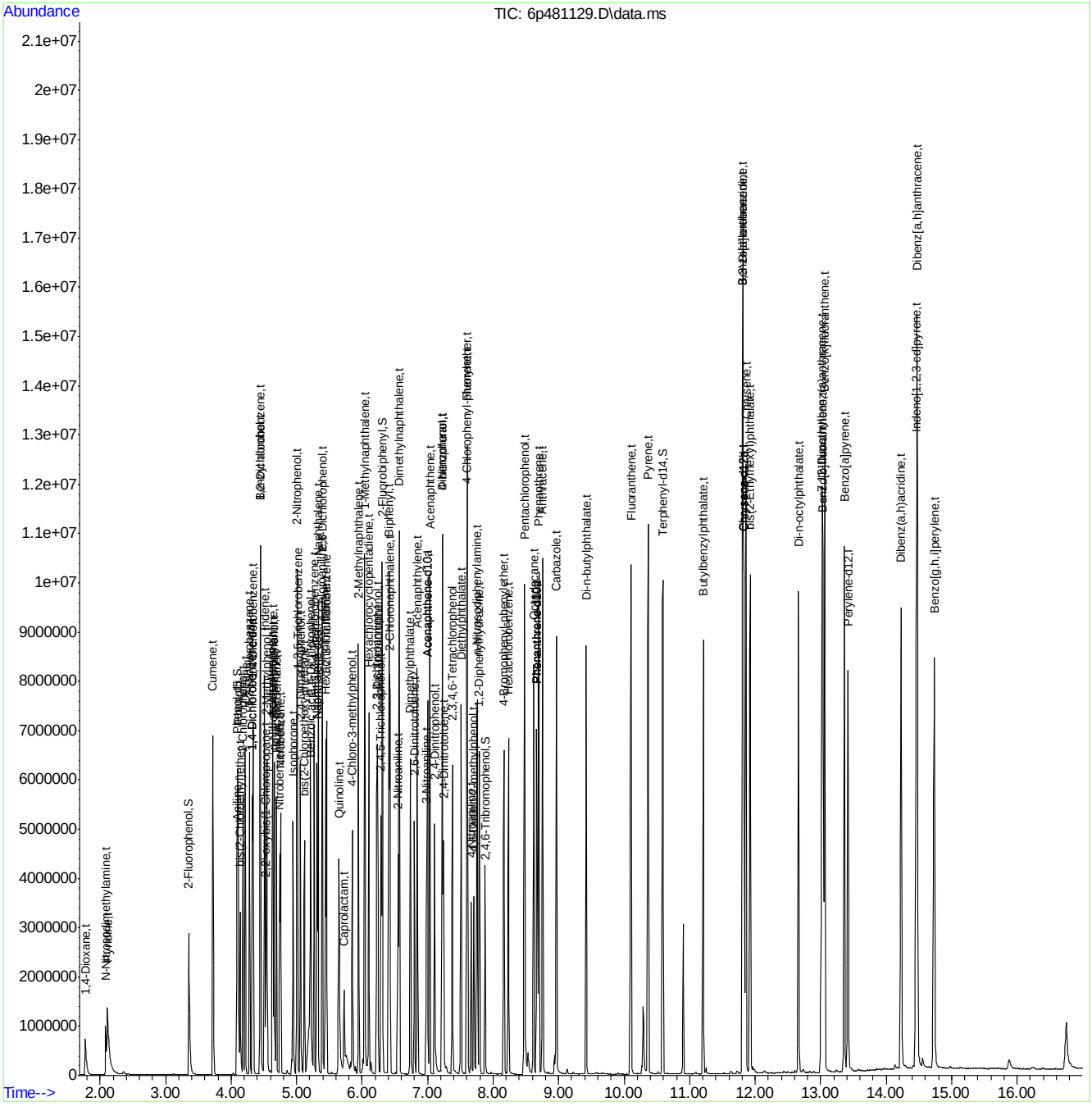
9.6.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481129.D
Acq On : 16 Apr 2019 10:42 am
Operator : angelar
Sample : icc2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 16 14:47:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:46:32 2019
Response via : Initial Calibration



Manual Integration Approval Summary

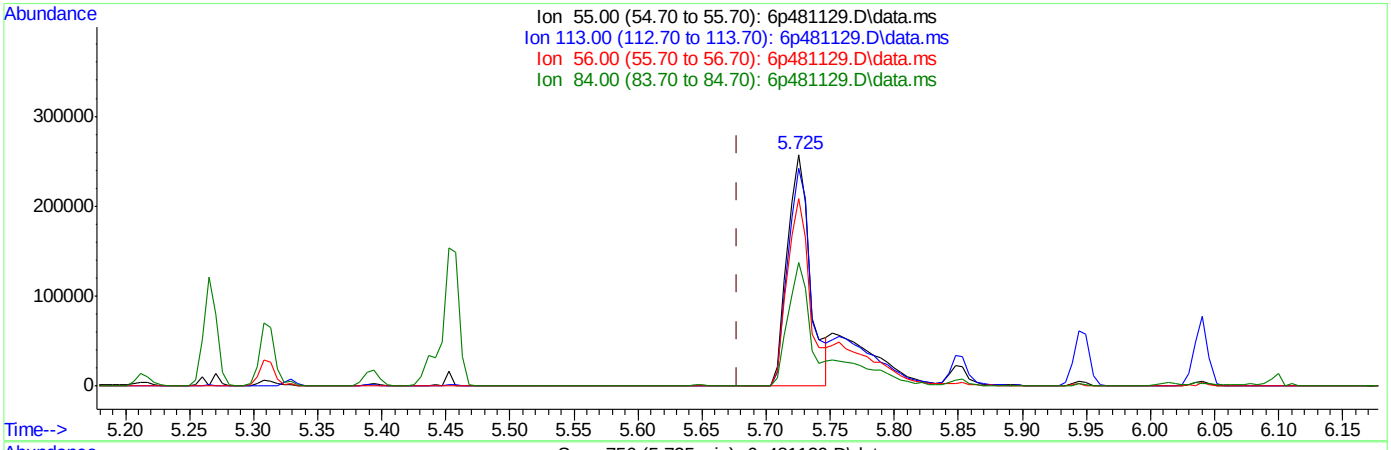
Sample Number:	E6P2562-ICC2562	**Method:**	SW846 8270D
Lab FileID:	6P481129.D	**Analyst approved:**	04/16/19 16:37 Ying Li
Injection Time:	04/16/19 10:42	**Supervisor approved:**	04/17/19 13:32 Kristi Schollenberger

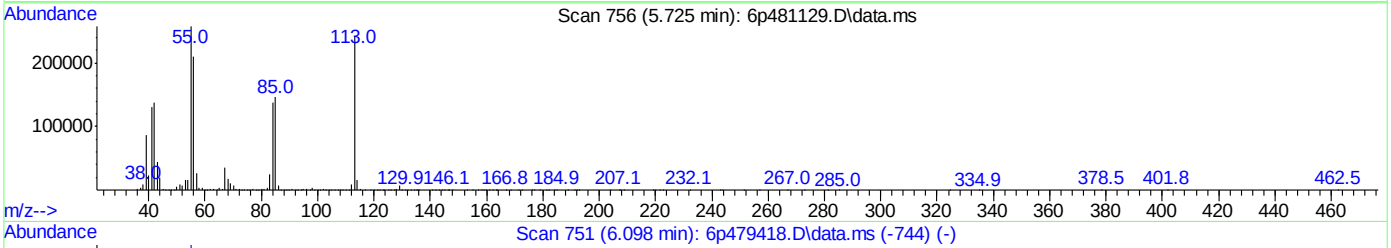
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.73	Split peak

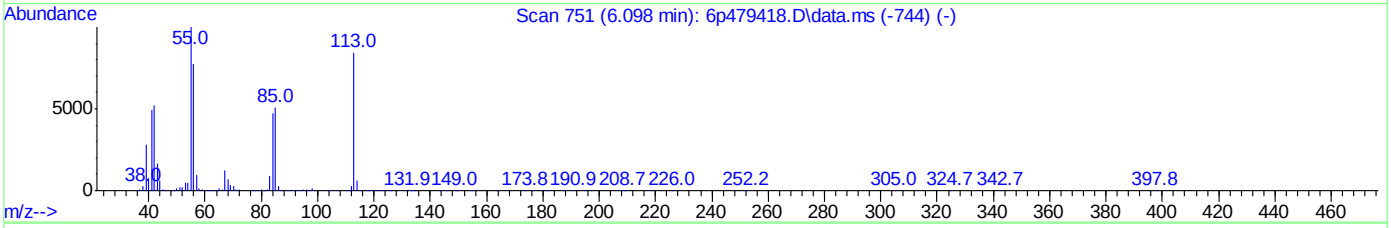
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481129.D
Acq On : 16 Apr 2019 10:42 am
Operator : angelar
Sample : icc2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 16 10:59:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 15 15:48:41 2019
QLast Update : Mon Apr 15 15:48:41 2019
Response via : Initial Calibration







TIC: 6p481129.D\data.ms

(41) Caprolactam (t)

5.725min (+0.047) 36.82ppm

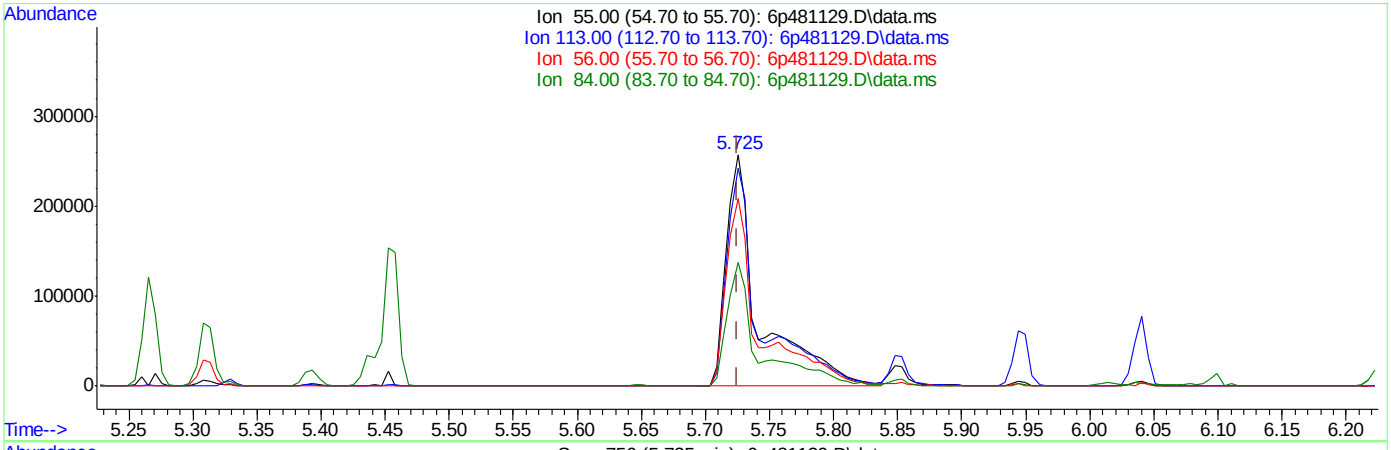
response 315558

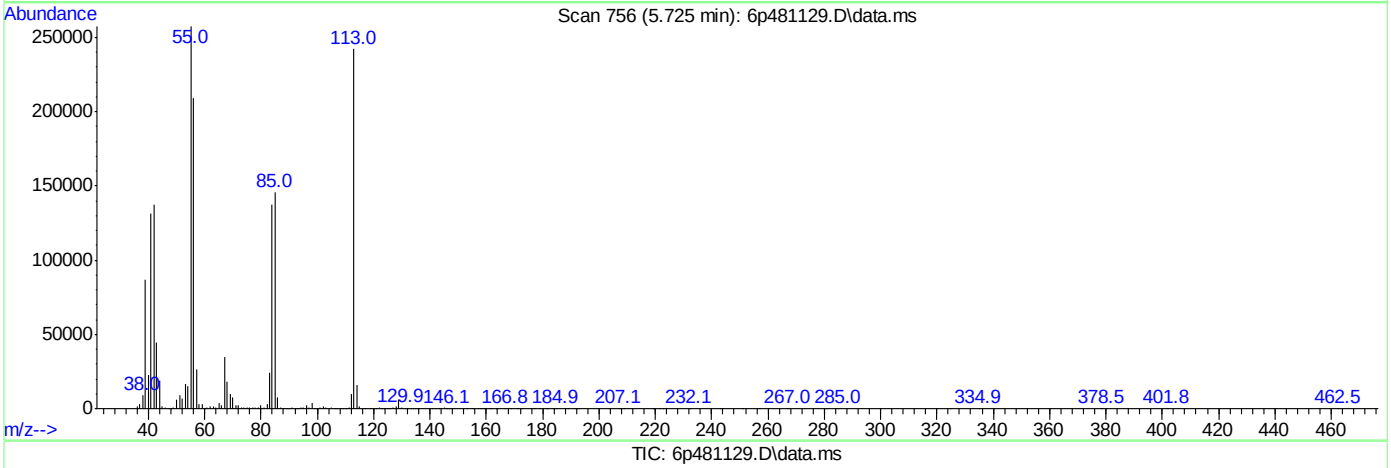
Ion	Exp%	Act%
55.00	100	100
113.00	84.50	94.56
56.00	77.10	81.25
84.00	47.50	53.60

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481129.D
Acq On    : 16 Apr 2019  10:42 am
Operator  : angelar
Sample    : icc2562-50
Misc      : op17006,e6p2562,1000,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: Apr 16 14:46:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title  : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:46:32 2019
QLast Update : Tue Apr 16 14:46:32 2019
Response via : Initial Calibration
```





TIC: 6p481129.D\data.ms

(41) Caprolactam (t)

5.725min (0.000) 50.12ppm m

response 464639

Ion	Exp%	Act%
55.00	100	100
113.00	94.10	94.08
56.00	81.20	81.21
84.00	53.30	53.34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481130.D
Acq On : 16 Apr 2019 11:06 am
Operator : angelar
Sample : ic2562-25
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 16 15:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	744927	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2963509	40.00	ppm	0.00
47) Acenaphthene-d10	6.998	164	1813941	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	3317167	40.00	ppm	0.00
83) Chrysene-d12	11.823	240	3059037	40.00	ppm	0.00
91) Perylene-d12	13.422	264	3498921	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	744927	40.00	ppm	0.00
103) Acenaphthene-d10a	6.998	164	1813941	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	3317167	40.00	ppm	0.00
109) Chrysene-d12a	11.823	240	3059037	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2963509	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	3317167	40.00	ppm	0.00
115) Chrysene-d12b	11.823	240	3059037	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.356	112	596105	24.14	ppm	0.00
Spiked Amount 50.000			Recovery = 48.28%			
8) Phenol-d5	4.094	99	703096	25.45	ppm	0.00
Spiked Amount 50.000			Recovery = 50.90%			
25) Nitrobenzene-d5	4.741	82	636641	25.15	ppm	0.00
Spiked Amount 50.000			Recovery = 50.30%			
51) 2-Fluorobiphenyl	6.308	172	1616889	25.47	ppm	0.00
Spiked Amount 50.000			Recovery = 50.94%			
73) 2,4,6-Tribromophenol	7.875	330	260162	23.24	ppm	0.00
Spiked Amount 50.000			Recovery = 46.48%			
85) Terphenyl-d14	10.587	244	1809565	24.51	ppm	0.00
Spiked Amount 50.000			Recovery = 49.02%			
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.773	88	247076	24.34	ppm	98
3) Pyridine	2.109	79	595707	24.83	ppm	99
4) N-Nitrosodimethylamine	2.088	74	356419	25.58	ppm	98
6) Indene	4.511	116	1034229	25.37	ppm	99
7) Cumene	3.719	105	1470858	25.52	ppm	100
9) Phenol	4.105	94	848643	25.37	ppm	96
10) Aniline	4.088	93	725263	26.12	ppm	98
11) bis(2-Chloroethyl)ether	4.137	93	577858	25.41	ppm	98
12) 2-Chlorophenol	4.179	128	666130	24.60	ppm	99
13) Decane	4.217	43	501490	26.19	ppm	100
14) 1,3-Dichlorobenzene	4.281	146	742043	25.09	ppm	99
15) 1,4-Dichlorobenzene	4.335	146	754813	24.99	ppm	99
16) Benzyl alcohol	4.441	108	370749	24.68	ppm	97
17) 1,2-Dichlorobenzene	4.447	146	710303	25.57	ppm	100
18) Acetophenone	4.629	105	892734	25.17	ppm	97
19) 2-Methylphenol	4.538	108	576629	25.29	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.532	121	203911	24.80	ppm	91
21) 3&4-Methylphenol	4.655	108	623892	25.38	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481130.D
Acq On : 16 Apr 2019 11:06 am
Operator : angelar
Sample : ic2562-25
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 16 15:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22)	n-Nitroso-di-n-propyla...	4.634	70	402046	25.61	ppm		98
23)	Hexachloroethane	4.693	201	265651	24.29	ppm		99
26)	Nitrobenzene	4.757	77	656171	25.69	ppm		97
27)	Quinoline	5.634	129	1396723	24.58	ppm		100
28)	Isophorone	4.939	82	1110644	25.80	ppm		98
29)	2-Nitrophenol	5.003	139	396778	24.88	ppm		80
30)	2,4-Dimethylphenol	5.057	107	584803	23.87	ppm		97
31)	Benzoic acid	5.196	105	562783	23.32	ppm		99
32)	bis(2-Chloroethoxy)met...	5.115	93	689828	25.20	ppm		98
33)	2,4-Dichlorophenol	5.212	162	585942	24.83	ppm		99
34)	2,6-Dichlorophenol	5.394	162	569920	24.86	ppm		99
35)	1,3,5-Trichlorobenzene	5.008	180	673315	25.62	ppm		97
36)	1,2,4-Trichlorobenzene	5.265	180	638143	24.80	ppm		99
37)	1,2,3-Trichlorobenzene	5.452	180	644773	25.17	ppm		99
38)	Naphthalene	5.329	128	1956362	25.83	ppm		99
39)	4-Chloroaniline	5.388	127	789728	25.94	ppm		98
40)	2,3-Dichloroaniline	6.223	161	725548	25.06	ppm		98
41)	Caprolactam	5.704	55	254994	24.75	ppm		99
42)	Hexachlorobutadiene	5.436	225	365295	24.68	ppm		99
43)	4-Chloro-3-methylphenol	5.843	107	599841	24.69	ppm		92
44)	2-Methylnaphthalene	5.944	141	1115940	25.51	ppm		97
45)	1-Methylnaphthalene	6.041	141	1242943	25.84	ppm		98
46)	Dimethylnaphthalene	6.565	156	1331720	25.40	ppm		99
48)	Hexachlorocyclopentadiene	6.100	237	528789	41.71	ppm		97
49)	2,4,6-Trichlorophenol	6.233	196	442233	24.50	ppm		98
50)	2,4,5-Trichlorophenol	6.281	196	474704	24.30	ppm		99
52)	2-Chloronaphthalene	6.420	162	1353741	25.20	ppm		99
53)	Biphenyl	6.404	154	1776189	25.81	ppm		99
54)	2-Nitroaniline	6.543	65	380589	25.08	ppm		100
55)	Dimethylphthalate	6.736	163	1572573	24.94	ppm		99
56)	Acenaphthylene	6.843	152	2133000	25.54	ppm		99
57)	2,6-Dinitrotoluene	6.795	165	372735	24.06	ppm		99
58)	3-Nitroaniline	6.977	138	405482	23.96	ppm		100
59)	Acenaphthene	7.030	153	1399548	25.43	ppm		95
60)	2,4-Dinitrophenol	7.100	184	446556	44.71	ppm		95
61)	4-Nitrophenol	7.217	109	199879	23.94	ppm	#	78
62)	Dibenzofuran	7.217	168	1937520	25.66	ppm		97
63)	2,4-Dinitrotoluene	7.239	165	523357	24.60	ppm		91
64)	2,3,4,6-Tetrachlorophenol	7.378	232	386627	23.81	ppm		95
65)	Diethylphthalate	7.506	149	1573379	25.34	ppm		99
66)	Fluorene	7.597	166	1579515	25.38	ppm		100
67)	4-Chlorophenyl-phenyle...	7.608	204	787891	24.70	ppm		99
68)	4-Nitroaniline	7.656	138	406219	24.06	ppm		99
70)	4,6-Dinitro-2-methylph...	7.699	198	327501	23.37	ppm		99
71)	n-Nitrosodiphenylamine	7.752	169	1182388	25.36	ppm		100
72)	1,2-Diphenylhydrazine	7.790	77	1365317	25.90	ppm		96
74)	4-Bromophenyl-phenylether	8.159	248	462445	24.58	ppm		94
75)	Hexachlorobenzene	8.234	284	532293	24.40	ppm		97
76)	Pentachlorophenol	8.480	266	641334	45.88	ppm		99
77)	Phenanthrene	8.694	178	2220856	25.23	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481130.D
Acq On : 16 Apr 2019 11:06 am
Operator : angelar
Sample : ic2562-25
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 16 15:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	8.752	178	2323190	25.76	ppm	99
79)	Carbazole	8.961	167	2195685	25.23	ppm	99
80)	Di-n-butylphthalate	9.421	149	2650667	25.29	ppm	98
81)	Fluoranthene	10.100	202	2505664	24.88	ppm	99
82)	Octadecane	8.619	57	790137	26.47	ppm	99
84)	Pyrene	10.362	202	2636645	25.48	ppm	100
86)	Butylbenzylphthalate	11.202	149	1213382	25.18	ppm	98
87)	Benzo[a]anthracene	11.807	228	2492142	24.66	ppm	99
88)	3,3'-Dichlorobenzidine	11.807	252	991548	23.97	ppm	99
89)	Chrysene	11.855	228	2399150	24.42	ppm	98
90)	bis(2-Ethylhexyl)phtha...	11.919	149	1687844	25.20	ppm	98
92)	Di-n-octylphthalate	12.657	149	2905886	25.43	ppm	99
93)	Benzo[b]fluoranthene	13.026	252	2799509	24.43	ppm	99
94)	Benzo[k]fluoranthene	13.053	252	2408099	23.19	ppm	97
95)	Benzo[a]pyrene	13.358	252	2310903	24.03	ppm	99
96)	Indeno[1,2,3-cd]pyrene	14.459	276	3058270	23.32	ppm	97
97)	Dibenz(a,h)acridine	14.224	279	2272446	23.41	ppm	98
98)	Dibenz[a,h]anthracene	14.465	278	2676075	22.78	ppm	97
99)	7,12-Dimethylbenz(a)an...	13.015	256	1123514	22.02	ppm	99
100)	Benzo[g,h,i]perylene	14.727	276	2355120	23.51	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

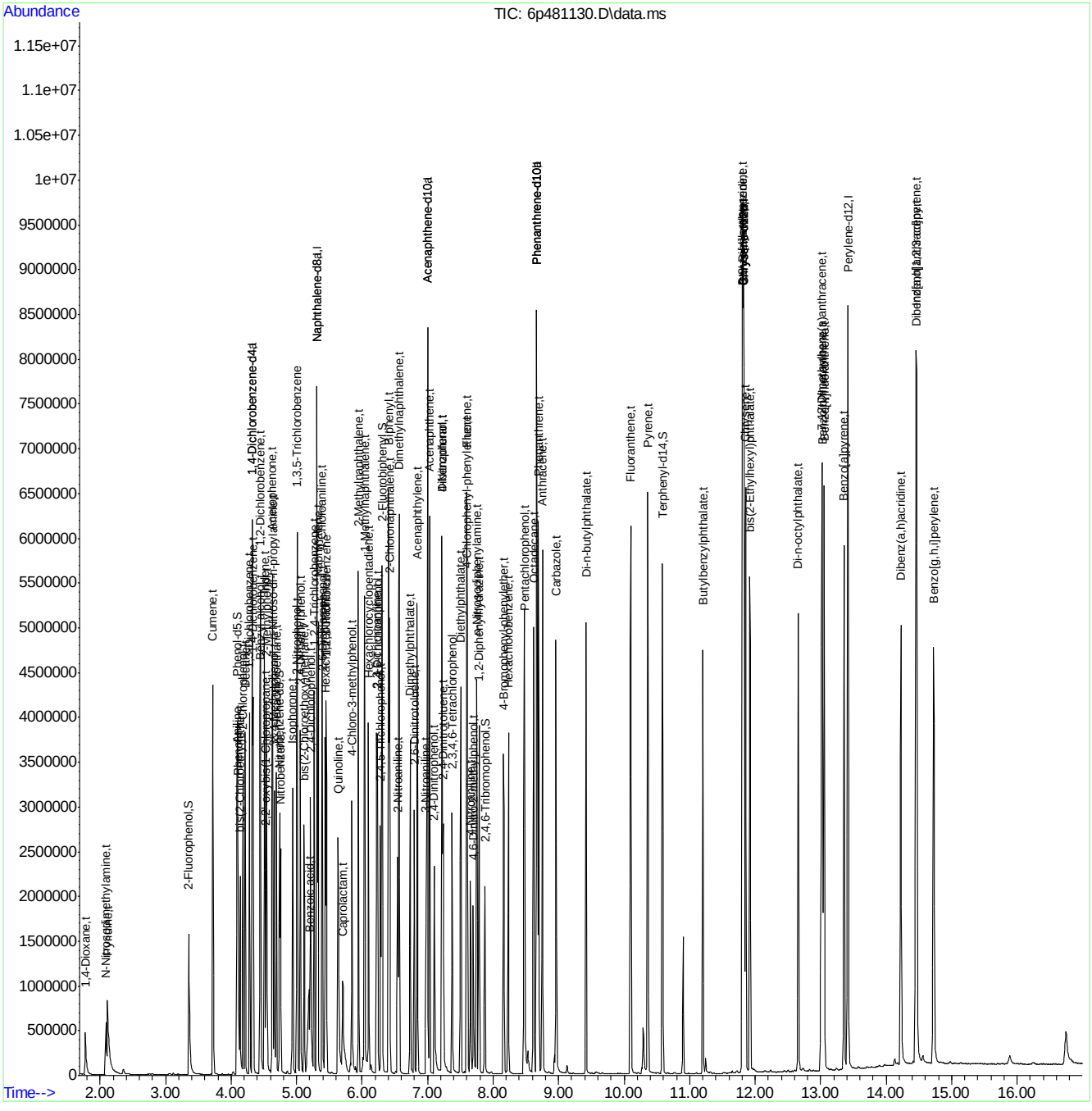
9.6.4

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481130.D
Acq On : 16 Apr 2019 11:06 am
Operator : angelar
Sample : ic2562-25
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 16 15:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 14:54:14 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481131.D
Acq On : 16 Apr 2019 11:30 am
Operator : angelar
Sample : ic2562-10
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 16 15:01:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	780578	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	3059709	40.00	ppm	0.00
47) Acenaphthene-d10	6.998	164	1878971	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	3459841	40.00	ppm	0.00
83) Chrysene-d12	11.823	240	3265635	40.00	ppm	0.00
91) Perylene-d12	13.422	264	3801424	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	780578	40.00	ppm	0.00
103) Acenaphthene-d10a	6.998	164	1878971	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	3459841	40.00	ppm	0.00
109) Chrysene-d12a	11.823	240	3265635	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	3059709	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	3459841	40.00	ppm	0.00
115) Chrysene-d12b	11.823	240	3265635	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.361	112	239181	9.24	ppm	0.00
Spiked Amount 50.000			Recovery	=	18.48%	
8) Phenol-d5	4.094	99	294995	10.19	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.38%	
25) Nitrobenzene-d5	4.741	82	269566	10.31	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.62%	
51) 2-Fluorobiphenyl	6.303	172	689296	10.48	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.96%	
73) 2,4,6-Tribromophenol	7.870	330	103031	8.82	ppm	-0.01
Spiked Amount 50.000			Recovery	=	17.64%	
85) Terphenyl-d14	10.587	244	759312	9.63	ppm	0.00
Spiked Amount 50.000			Recovery	=	19.26%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.778	88	105339	9.90	ppm	98
3) Pyridine	2.120	79	248250	9.88	ppm	95
4) N-Nitrosodimethylamine	2.093	74	146608	10.04	ppm	97
6) Indene	4.511	116	440430	10.31	ppm	99
7) Cumene	3.719	105	637669	10.56	ppm	99
9) Phenol	4.104	94	358014	10.22	ppm	98
10) Aniline	4.088	93	339977	11.68	ppm	99
11) bis(2-Chloroethyl)ether	4.137	93	242186	10.16	ppm	99
12) 2-Chlorophenol	4.179	128	283123	9.98	ppm	99
13) Decane	4.217	43	219845	10.96	ppm	99
14) 1,3-Dichlorobenzene	4.281	146	318249	10.27	ppm	98
15) 1,4-Dichlorobenzene	4.334	146	321952	10.17	ppm	99
16) Benzyl alcohol	4.441	108	147134	9.35	ppm	92
17) 1,2-Dichlorobenzene	4.447	146	305718	10.50	ppm	98
18) Acetophenone	4.629	105	380095	10.23	ppm	95
19) 2-Methylphenol	4.538	108	243622	10.20	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.532	121	85748	9.95	ppm #	85
21) 3&4-Methylphenol	4.655	108	256759	9.97	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481131.D
Acq On : 16 Apr 2019 11:30 am
Operator : angelar
Sample : ic2562-10
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 16 15:01:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.629	70	172402	10.48	ppm		92
23) Hexachloroethane	4.693	201	111930	9.77	ppm		98
26) Nitrobenzene	4.752	77	277176	10.51	ppm		95
27) Quinoline	5.623	129	583782	9.95	ppm		99
28) Isophorone	4.939	82	475836	10.71	ppm		97
29) 2-Nitrophenol	5.003	139	165085	10.03	ppm		85
30) 2,4-Dimethylphenol	5.056	107	214958	8.50	ppm		97
31) Benzoic acid	5.169	105	196482	7.89	ppm		98
32) bis(2-Chloroethoxy)met...	5.115	93	296076	10.48	ppm		99
33) 2,4-Dichlorophenol	5.212	162	243725	10.00	ppm		97
34) 2,6-Dichlorophenol	5.388	162	237195	10.02	ppm		99
35) 1,3,5-Trichlorobenzene	5.008	180	280983	10.36	ppm		99
36) 1,2,4-Trichlorobenzene	5.265	180	266004	10.01	ppm		97
37) 1,2,3-Trichlorobenzene	5.452	180	264454	10.00	ppm		97
38) Naphthalene	5.324	128	845810	10.82	ppm		98
39) 4-Chloroaniline	5.383	127	349564	11.12	ppm		99
40) 2,3-Dichloroaniline	6.223	161	297497	9.95	ppm		98
41) Caprolactam	5.688	55	104436	9.82	ppm		98
42) Hexachlorobutadiene	5.436	225	151594	9.92	ppm		99
43) 4-Chloro-3-methylphenol	5.843	107	248457	9.90	ppm		97
44) 2-Methylnaphthalene	5.944	141	476948	10.56	ppm		97
45) 1-Methylnaphthalene	6.035	141	530439	10.68	ppm		100
46) Dimethylnaphthalene	6.559	156	553449	10.22	ppm		99
48) Hexachlorocyclopentadiene	6.099	237	167913	12.78	ppm		98
49) 2,4,6-Trichlorophenol	6.233	196	183033	9.79	ppm		98
50) 2,4,5-Trichlorophenol	6.281	196	192356	9.51	ppm		100
52) 2-Chloronaphthalene	6.415	162	574180	10.32	ppm		96
53) Biphenyl	6.399	154	750315	10.53	ppm		98
54) 2-Nitroaniline	6.538	65	155821	9.91	ppm		91
55) Dimethylphthalate	6.731	163	663995	10.17	ppm		100
56) Acenaphthylene	6.843	152	901144	10.42	ppm		99
57) 2,6-Dinitrotoluene	6.795	165	154194	9.61	ppm		96
58) 3-Nitroaniline	6.971	138	170509	9.73	ppm		96
59) Acenaphthene	7.030	153	592481	10.39	ppm		98
60) 2,4-Dinitrophenol	7.100	184	155181	15.00	ppm		98
61) 4-Nitrophenol	7.217	109	79457	9.19	ppm	#	23
62) Dibenzofuran	7.217	168	826497	10.57	ppm		92
63) 2,4-Dinitrotoluene	7.233	165	218898	9.93	ppm		80
64) 2,3,4,6-Tetrachlorophenol	7.372	232	154214	9.17	ppm		96
65) Diethylphthalate	7.501	149	665101	10.34	ppm		98
66) Fluorene	7.597	166	683062	10.59	ppm		99
67) 4-Chlorophenyl-phenyle...	7.608	204	334148	10.11	ppm		97
68) 4-Nitroaniline	7.651	138	165917	9.49	ppm		98
70) 4,6-Dinitro-2-methylph...	7.699	198	128303	8.78	ppm		98
71) n-Nitrosodiphenylamine	7.747	169	499130	10.27	ppm		99
72) 1,2-Diphenylhydrazine	7.784	77	584710	10.63	ppm		98
74) 4-Bromophenyl-phenylether	8.159	248	187571	9.56	ppm		96
75) Hexachlorobenzene	8.228	284	217631	9.56	ppm		95
76) Pentachlorophenol	8.474	266	241526	16.57	ppm		99
77) Phenanthrene	8.694	178	969860	10.56	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481131.D
Acq On : 16 Apr 2019 11:30 am
Operator : angelar
Sample : ic2562-10
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 16 15:01:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78) Anthracene	8.752	178	988020	10.50 ppm	98
79) Carbazole	8.961	167	939392	10.35 ppm	99
80) Di-n-butylphthalate	9.416	149	1134753	10.38 ppm	98
81) Fluoranthene	10.100	202	1072732	10.21 ppm	99
82) Octadecane	8.613	57	339764	10.91 ppm	98
84) Pyrene	10.362	202	1123066	10.17 ppm	99
86) Butylbenzylphthalate	11.202	149	503391	9.79 ppm	97
87) Benzo[a]anthracene	11.806	228	1059461	9.82 ppm	99
88) 3,3'-Dichlorobenzidine	11.806	252	405106	9.17 ppm	98
89) Chrysene	11.849	228	1016466	9.69 ppm	100
90) bis(2-Ethylhexyl)phtha...	11.919	149	704268	9.85 ppm	97
92) Di-n-octylphthalate	12.657	149	1207200	9.72 ppm	99
93) Benzo[b]fluoranthene	13.021	252	1145377	9.20 ppm	98
94) Benzo[k]fluoranthene	13.047	252	1057620	9.37 ppm	96
95) Benzo[a]pyrene	13.358	252	968866	9.27 ppm	99
96) Indeno[1,2,3-cd]pyrene	14.454	276	1270627	8.92 ppm	97
97) Dibenz(a,h)acridine	14.224	279	947084	8.98 ppm	97
98) Dibenz[a,h]anthracene	14.465	278	1103314	8.65 ppm	97
99) 7,12-Dimethylbenz(a)an...	13.010	256	395168	7.13 ppm	99
100) Benzo[g,h,i]perylene	14.722	276	983172	9.04 ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

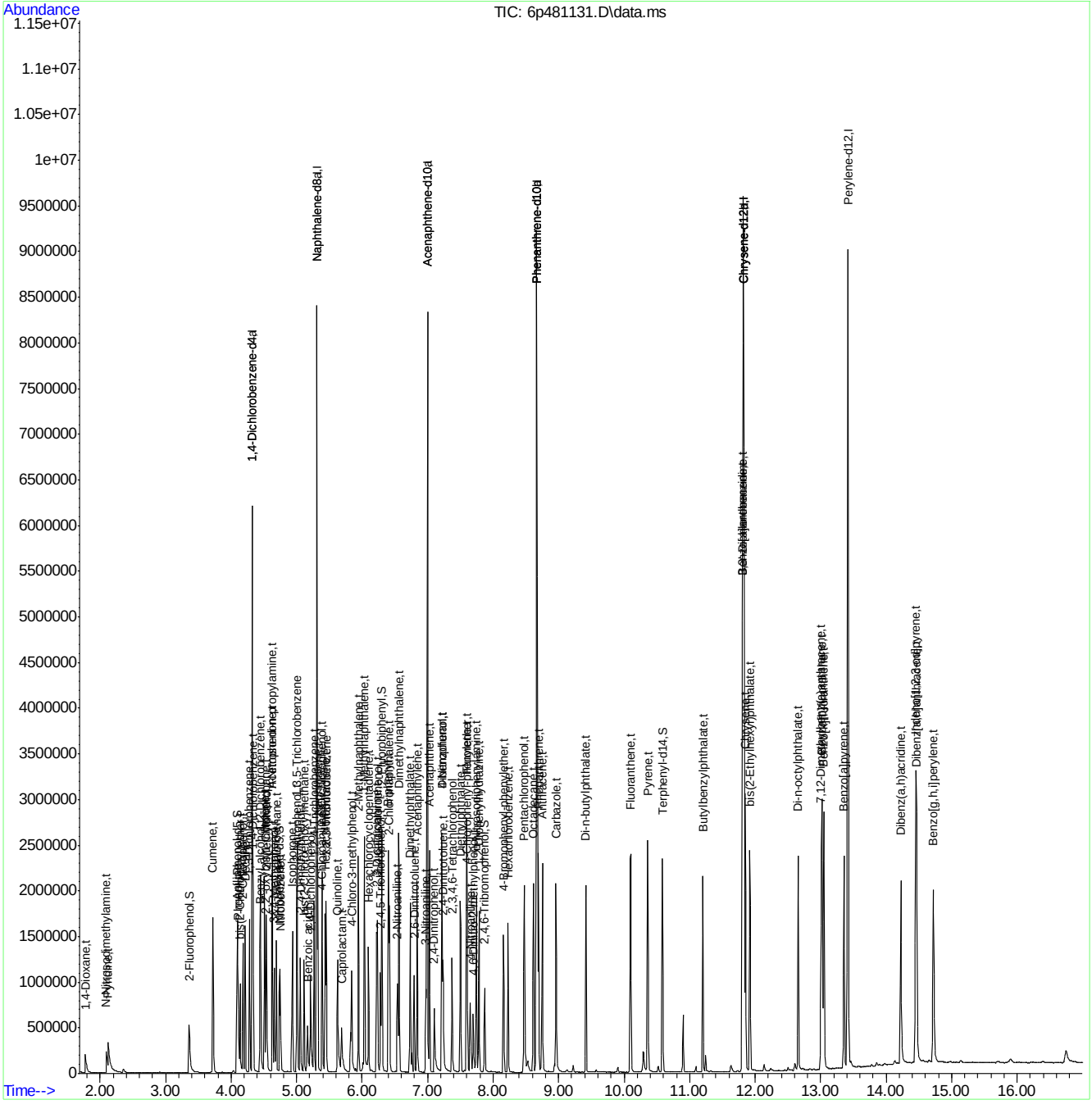
9.6.5

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481131.D
Acq On : 16 Apr 2019 11:30 am
Operator : angelar
Sample : ic2562-10
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 16 15:01:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 14:54:14 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481132.D
Acq On : 16 Apr 2019 11:54 am
Operator : angelar
Sample : ic2562-5
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 16 16:27:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	745232	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2877119	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1779867	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	3273697	40.00	ppm	0.00
83) Chrysene-d12	11.823	240	3018550	40.00	ppm	0.00
91) Perylene-d12	13.417	264	3544251	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	745232	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1779867	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	3273697	40.00	ppm	0.00
109) Chrysene-d12a	11.823	240	3018550	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2877119	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	3273697	40.00	ppm	0.00
115) Chrysene-d12b	11.823	240	3018550	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.366	112	105888	4.29	ppm	0.01
Spiked Amount 50.000			Recovery	=	8.58%	
8) Phenol-d5	4.099	99	136733	4.95	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.90%	
25) Nitrobenzene-d5	4.741	82	123698	5.03	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.06%	
51) 2-Fluorobiphenyl	6.303	172	323414	5.19	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.38%	
73) 2,4,6-Tribromophenol	7.870	330	44161	4.00	ppm	-0.01
Spiked Amount 50.000			Recovery	=	8.00%	
85) Terphenyl-d14	10.582	244	344681	4.73	ppm	-0.01
Spiked Amount 50.000			Recovery	=	9.46%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.783	88	48192	4.75	ppm	98
3) Pyridine	2.136	79	99215	4.13	ppm	98
4) N-Nitrosodimethylamine	2.104	74	64329	4.61	ppm	96
6) Indene	4.511	116	209894	5.15	ppm	98
7) Cumene	3.719	105	297495	5.16	ppm	98
9) Phenol	4.105	94	165582	4.95	ppm	92
10) Aniline	4.088	93	164464	5.92	ppm	99
11) bis(2-Chloroethyl)ether	4.137	93	113472	4.99	ppm	99
12) 2-Chlorophenol	4.185	128	131686	4.86	ppm	95
13) Decane	4.217	43	103815	5.42	ppm	98
14) 1,3-Dichlorobenzene	4.281	146	147901	5.00	ppm	98
15) 1,4-Dichlorobenzene	4.335	146	150268	4.97	ppm	96
16) Benzyl alcohol	4.447	108	66391	4.42	ppm	97
17) 1,2-Dichlorobenzene	4.447	146	139476	5.02	ppm	100
18) Acetophenone	4.629	105	177326	5.00	ppm	97
19) 2-Methylphenol	4.538	108	110936	4.86	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.532	121	40208	4.89	ppm	90
21) 3&4-Methylphenol	4.655	108	113351	4.61	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481132.D
Acq On : 16 Apr 2019 11:54 am
Operator : angelar
Sample : ic2562-5
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 16 16:27:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.629	70	78812	5.02	ppm		93
23) Hexachloroethane	4.693	201	51503	4.71	ppm		98
26) Nitrobenzene	4.757	77	129378	5.22	ppm		100
27) Quinoline	5.624	129	266641	4.83	ppm		98
28) Isophorone	4.939	82	220274	5.27	ppm		97
29) 2-Nitrophenol	5.008	139	73791	4.77	ppm		63
30) 2,4-Dimethylphenol	5.057	107	88914	3.74	ppm		96
32) bis(2-Chloroethoxy)met...	5.115	93	139409	5.25	ppm		99
33) 2,4-Dichlorophenol	5.217	162	110781	4.83	ppm		97
34) 2,6-Dichlorophenol	5.394	162	108921	4.89	ppm		98
35) 1,3,5-Trichlorobenzene	5.008	180	131718	5.16	ppm		98
36) 1,2,4-Trichlorobenzene	5.265	180	124630	4.99	ppm		97
37) 1,2,3-Trichlorobenzene	5.452	180	124756	5.02	ppm		97
38) Naphthalene	5.324	128	399504	5.43	ppm		97
39) 4-Chloroaniline	5.388	127	162571	5.50	ppm		97
40) 2,3-Dichloroaniline	6.223	161	137083	4.88	ppm		97
41) Caprolactam	5.682	55	46280	4.63	ppm		96
42) Hexachlorobutadiene	5.436	225	70114	4.88	ppm		98
43) 4-Chloro-3-methylphenol	5.843	107	109627	4.65	ppm	#	27
44) 2-Methylnaphthalene	5.944	141	220912	5.20	ppm		96
45) 1-Methylnaphthalene	6.035	141	252508	5.41	ppm		98
46) Dimethylnaphthalene	6.560	156	261601	5.14	ppm		99
48) Hexachlorocyclopentadiene	6.100	237	56881	4.57	ppm		97
49) 2,4,6-Trichlorophenol	6.233	196	80763	4.56	ppm		98
50) 2,4,5-Trichlorophenol	6.281	196	83830	4.37	ppm		99
52) 2-Chloronaphthalene	6.415	162	268801	5.10	ppm		97
53) Biphenyl	6.399	154	350483	5.19	ppm		98
54) 2-Nitroaniline	6.538	65	69354	4.66	ppm		93
55) Dimethylphthalate	6.731	163	310678	5.02	ppm		98
56) Acenaphthylene	6.843	152	416636	5.08	ppm		98
57) 2,6-Dinitrotoluene	6.790	165	67343	4.43	ppm		95
58) 3-Nitroaniline	6.977	138	75116	4.52	ppm		100
59) Acenaphthene	7.025	153	278293	5.15	ppm		99
60) 2,4-Dinitrophenol	7.105	184	52782	5.39	ppm		96
61) 4-Nitrophenol	7.233	109	34380	4.20	ppm	#	1
62) Dibenzofuran	7.217	168	387930	5.24	ppm		84
63) 2,4-Dinitrotoluene	7.233	165	96526	4.62	ppm		71
64) 2,3,4,6-Tetrachlorophenol	7.378	232	68407	4.29	ppm		97
65) Diethylphthalate	7.501	149	307454	5.05	ppm		98
66) Fluorene	7.592	166	311493	5.10	ppm		98
67) 4-Chlorophenyl-phenyle...	7.608	204	156260	4.99	ppm		96
68) 4-Nitroaniline	7.651	138	71921	4.34	ppm		95
70) 4,6-Dinitro-2-methylph...	7.699	198	46481	3.36	ppm		93
71) n-Nitrosodiphenylamine	7.747	169	228403	4.96	ppm		100
72) 1,2-Diphenylhydrazine	7.784	77	269999	5.19	ppm		98
74) 4-Bromophenyl-phenylether	8.159	248	85601	4.61	ppm		96
75) Hexachlorobenzene	8.228	284	99602	4.63	ppm		99
76) Pentachlorophenol	8.480	266	93981	6.81	ppm		99
77) Phenanthrene	8.688	178	445733	5.13	ppm		99
78) Anthracene	8.752	178	456742	5.13	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481132.D
Acq On : 16 Apr 2019 11:54 am
Operator : angelar
Sample : ic2562-5
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 16 16:27:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

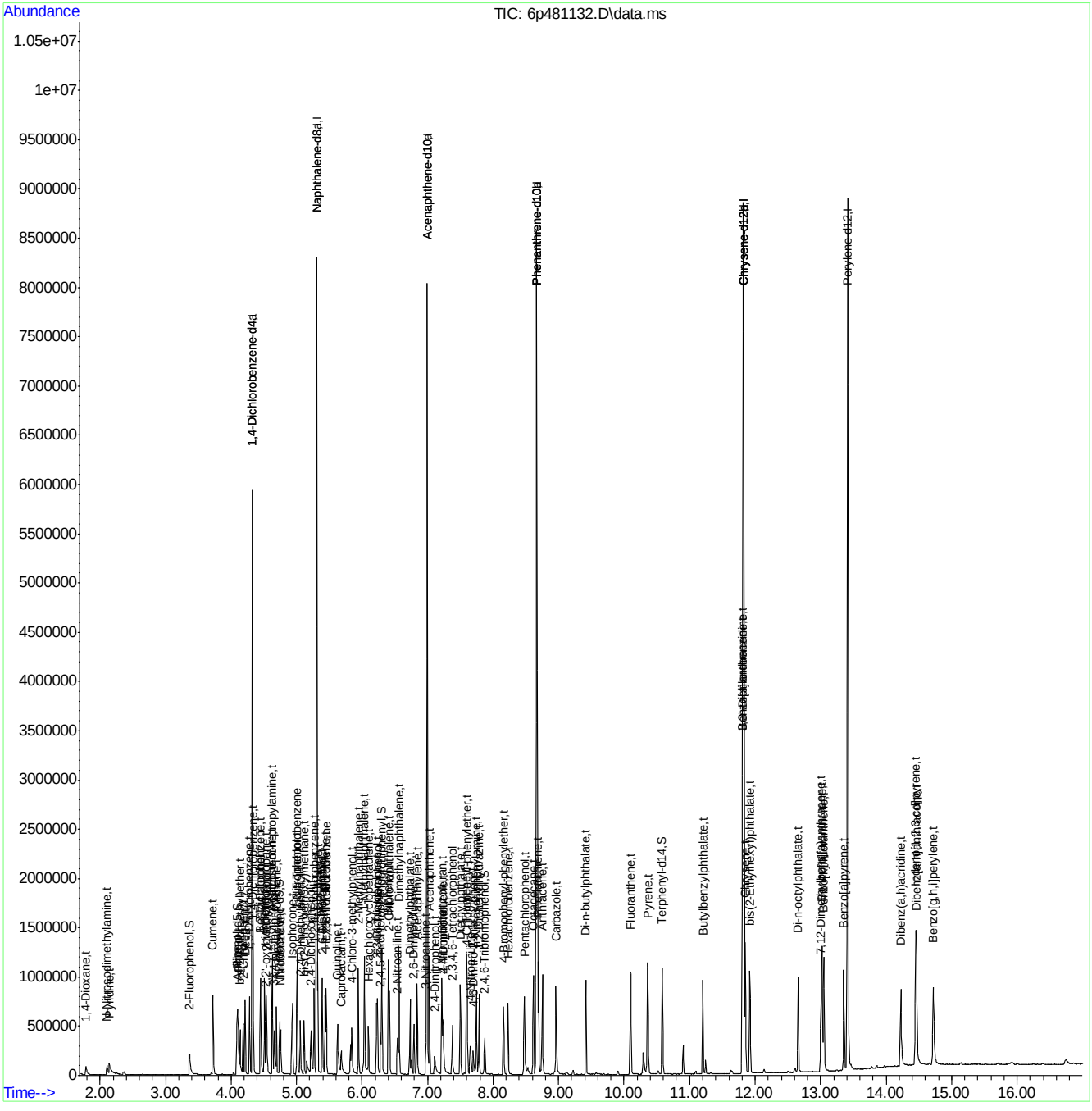
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79)	Carbazole	8.961	167	428668	4.99	ppm	99
80)	Di-n-butylphthalate	9.416	149	500617	4.84	ppm	98
81)	Fluoranthene	10.100	202	486038	4.89	ppm	99
82)	Octadecane	8.613	57	157053	5.33	ppm	98
84)	Pyrene	10.362	202	507717	4.97	ppm	98
86)	Butylbenzylphthalate	11.202	149	218765	4.60	ppm	98
87)	Benzo[a]anthracene	11.807	228	471496	4.73	ppm	99
88)	3,3'-Dichlorobenzidine	11.807	252	170184	4.17	ppm	96
89)	Chrysene	11.849	228	479348	4.94	ppm	97
90)	bis(2-Ethylhexyl)phtha...	11.919	149	304604	4.61	ppm	98
92)	Di-n-octylphthalate	12.657	149	504385	4.36	ppm	98
93)	Benzo[b]fluoranthene	13.021	252	486576	4.19	ppm	98
94)	Benzo[k]fluoranthene	13.047	252	497243	4.73	ppm	96
95)	Benzo[a]pyrene	13.358	252	426109	4.37	ppm	98
96)	Indeno[1,2,3-cd]pyrene	14.454	276	549789	4.14	ppm	94
97)	Dibenz(a,h)acridine	14.224	279	405491	4.12	ppm	98
98)	Dibenz[a,h]anthracene	14.465	278	488550	4.11	ppm	96
99)	7,12-Dimethylbenz(a)an...	13.005	256	141217	2.73	ppm	99
100)	Benzo[g,h,i]perylene	14.722	276	433449	4.27	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481132.D
Acq On : 16 Apr 2019 11:54 am
Operator : angelar
Sample : ic2562-5
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 16 16:27:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481133.D
Acq On : 16 Apr 2019 12:18 pm
Operator : angelar
Sample : ic2562-2
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 16 16:28:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	686002	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2689608	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1609873	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2957358	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	2711262	40.00	ppm	0.00
91) Perylene-d12	13.416	264	3200801	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	686002	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1609873	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2957358	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	2711262	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2689608	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2957358	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	2711262	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.372	112	33457	1.47	ppm	0.02
Spiked Amount 50.000			Recovery	=	2.94%	
8) Phenol-d5	4.104	99	46694	1.84	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.68%	
25) Nitrobenzene-d5	4.746	82	45324	1.97	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.94%	
51) 2-Fluorobiphenyl	6.303	172	117865	2.09	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.18%	
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
85) Terphenyl-d14	10.587	244	120805	1.85	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.70%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.783	88	17389	1.86	ppm	87
3) Pyridine	2.174	79	32780	1.48	ppm	88
4) N-Nitrosodimethylamine	2.120	74	22800	1.78	ppm	94
6) Indene	4.511	116	76360	2.03	ppm	99
7) Cumene	3.725	105	111146	2.09	ppm	97
9) Phenol	4.115	94	58771	1.91	ppm	95
10) Aniline	4.094	93	55211	2.16	ppm	96
11) bis(2-Chloroethyl)ether	4.142	93	43154	2.06	ppm	97
12) 2-Chlorophenol	4.185	128	44870	1.80	ppm	96
13) Decane	4.211	43	39621	2.25	ppm	91
14) 1,3-Dichlorobenzene	4.281	146	54335	1.99	ppm	94
15) 1,4-Dichlorobenzene	4.334	146	55564	2.00	ppm	95
16) Benzyl alcohol	4.452	108	23203	1.68	ppm	90
17) 1,2-Dichlorobenzene	4.452	146	50954	1.99	ppm	98
18) Acetophenone	4.629	105	63584	1.95	ppm	98
19) 2-Methylphenol	4.543	108	39223	1.87	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.532	121	14288	1.89	ppm	87
21) 3&4-Methylphenol	4.666	108	40009	1.77	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481133.D
Acq On : 16 Apr 2019 12:18 pm
Operator : angelar
Sample : ic2562-2
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 16 16:28:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.629	70	28105	1.94	ppm		87
23) Hexachloroethane	4.693	201	17788	1.77	ppm		96
26) Nitrobenzene	4.757	77	46061	1.99	ppm		92
27) Quinoline	5.629	129	90842	1.76	ppm		98
28) Isophorone	4.939	82	78913	2.02	ppm		97
29) 2-Nitrophenol	5.014	139	23819	1.65	ppm		83
32) bis(2-Chloroethoxy)met...	5.115	93	50298	2.02	ppm		98
33) 2,4-Dichlorophenol	5.228	162	36101	1.69	ppm		94
34) 2,6-Dichlorophenol	5.394	162	38123	1.83	ppm		95
35) 1,3,5-Trichlorobenzene	5.008	180	48303	2.03	ppm		98
36) 1,2,4-Trichlorobenzene	5.265	180	46756	2.00	ppm		95
37) 1,2,3-Trichlorobenzene	5.452	180	45077	1.94	ppm		94
38) Naphthalene	5.324	128	146092	2.13	ppm		99
39) 4-Chloroaniline	5.394	127	58298	2.11	ppm		96
40) 2,3-Dichloroaniline	6.223	161	50005	1.90	ppm		95
41) Caprolactam	5.682	55	14706	1.57	ppm		86
42) Hexachlorobutadiene	5.436	225	24786	1.85	ppm		96
43) 4-Chloro-3-methylphenol	5.848	107	37474	1.70	ppm	#	26
44) 2-Methylnaphthalene	5.944	141	79319	2.00	ppm		98
45) 1-Methylnaphthalene	6.035	141	93707	2.15	ppm		94
46) Dimethylnaphthalene	6.559	156	91169	1.92	ppm		99
48) Hexachlorocyclopentadiene	6.100	237	9979	0.89	ppm		94
49) 2,4,6-Trichlorophenol	6.239	196	27218	1.70	ppm		98
50) 2,4,5-Trichlorophenol	6.292	196	28078	1.62	ppm		98
52) 2-Chloronaphthalene	6.420	162	96470	2.02	ppm		99
53) Biphenyl	6.404	154	127936	2.09	ppm		97
54) 2-Nitroaniline	6.543	65	21945	1.63	ppm	#	84
55) Dimethylphthalate	6.731	163	109760	1.96	ppm		99
56) Acenaphthylene	6.843	152	146912	1.98	ppm		99
57) 2,6-Dinitrotoluene	6.795	165	21664	1.58	ppm		98
58) 3-Nitroaniline	6.982	138	23906	1.59	ppm	#	86
59) Acenaphthene	7.025	153	99483	2.04	ppm		99
60) 2,4-Dinitrophenol	7.126	184	10596	1.20	ppm	#	68
61) 4-Nitrophenol	7.255	109	8043	1.09	ppm	#	1
62) Dibenzofuran	7.217	168	139935	2.09	ppm		84
63) 2,4-Dinitrotoluene	7.244	165	29813	1.58	ppm		90
64) 2,3,4,6-Tetrachlorophenol	7.378	232	23236	1.61	ppm		95
65) Diethylphthalate	7.501	149	106984	1.94	ppm		95
66) Fluorene	7.597	166	111343	2.02	ppm		96
67) 4-Chlorophenyl-phenyle...	7.608	204	55373	1.96	ppm		96
70) 4,6-Dinitro-2-methylph...	7.709	198	11351	0.91	ppm		92
71) n-Nitrosodiphenylamine	7.747	169	80758	1.94	ppm		96
72) 1,2-Diphenylhydrazine	7.784	77	92206	1.96	ppm		99
74) 4-Bromophenyl-phenylether	8.159	248	29512	1.76	ppm		88
75) Hexachlorobenzene	8.228	284	34420	1.77	ppm		88
76) Pentachlorophenol	8.480	266	27580	2.21	ppm		98
77) Phenanthrene	8.688	178	164257	2.09	ppm		98
78) Anthracene	8.752	178	155924	1.94	ppm		99
79) Carbazole	8.966	167	149401	1.93	ppm		98
80) Di-n-butylphthalate	9.416	149	165896	1.78	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481133.D
Acq On : 16 Apr 2019 12:18 pm
Operator : angelar
Sample : ic2562-2
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 16 16:28:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
81) Fluoranthene	10.100	202	165236	1.84 ppm	98
82) Octadecane	8.613	57	54062	2.03 ppm	97
84) Pyrene	10.362	202	180114	1.96 ppm	99
86) Butylbenzylphthalate	11.202	149	68859	1.61 ppm	96
87) Benzo[a]anthracene	11.807	228	167454	1.87 ppm	99
88) 3,3'-Dichlorobenzidine	11.807	252	55110	1.50 ppm	95
89) Chrysene	11.849	228	169572	1.95 ppm	97
90) bis(2-Ethylhexyl)phtha...	11.919	149	91972	1.55 ppm	97
92) Di-n-octylphthalate	12.657	149	144948	1.39 ppm	98
93) Benzo[b]fluoranthene	13.021	252	172303	1.64 ppm	96
94) Benzo[k]fluoranthene	13.047	252	164189	1.73 ppm	94
95) Benzo[a]pyrene	13.358	252	142092	1.62 ppm	98
96) Indeno[1,2,3-cd]pyrene	14.454	276	186793	1.56 ppm	82
97) Dibenz(a,h)acridine	14.224	279	133092	1.50 ppm	98
98) Dibenz[a,h]anthracene	14.465	278	166269	1.55 ppm	95
100) Benzo[g,h,i]perylene	14.727	276	152019	1.66 ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

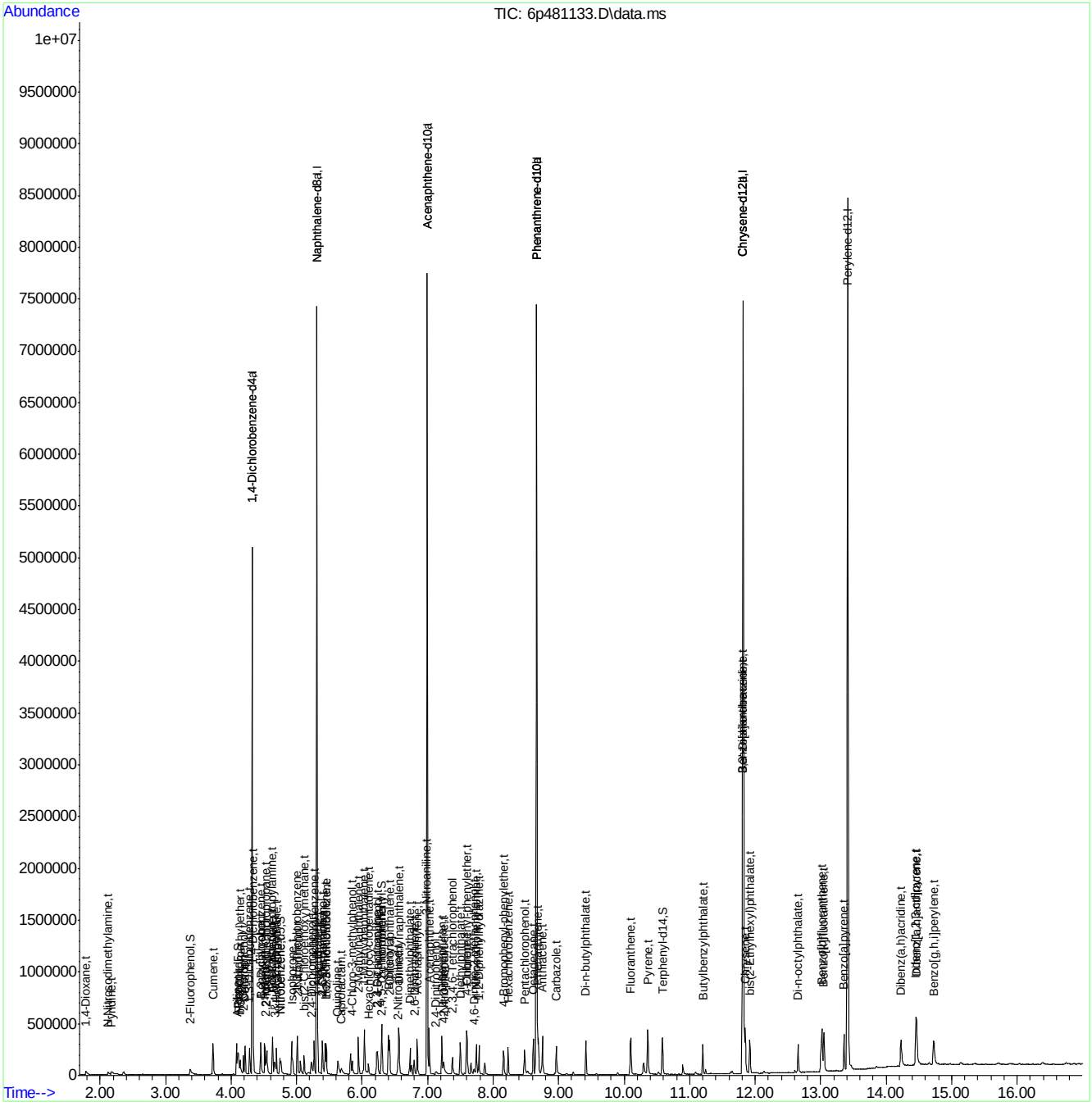
9.6.7

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481133.D
Acq On : 16 Apr 2019 12:18 pm
Operator : angelar
Sample : ic2562-2
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 16 16:28:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481134.D
Acq On : 16 Apr 2019 12:42 pm
Operator : angelar
Sample : ic2562-1
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 16 16:29:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	661210	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2591434	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1554441	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2861397	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	2611176	40.00	ppm	0.00
91) Perylene-d12	13.416	264	3054739	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	661210	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1554441	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2861397	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	2611176	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2591434	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2861397	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	2611176	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.382	112	14147	0.65	ppm	0.03
Spiked Amount 50.000			Recovery	=	1.30%	
8) Phenol-d5	4.110	99	21475	0.88	ppm	0.01
Spiked Amount 50.000			Recovery	=	1.76%	
25) Nitrobenzene-d5	4.746	82	19907	0.90	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.80%	
51) 2-Fluorobiphenyl	6.303	172	56848	1.05	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.10%	
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
85) Terphenyl-d14	10.587	244	58052	0.92	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.84%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.783	88	8628	0.96	ppm	97
3) Pyridine	2.211	79	11070	0.52	ppm	84
4) N-Nitrosodimethylamine	2.125	74	8256	0.67	ppm	88
6) Indene	4.516	116	35425	0.98	ppm	99
7) Cumene	3.725	105	53198	1.04	ppm	98
9) Phenol	4.120	94	27996	0.94	ppm	92
11) bis(2-Chloroethyl)ether	4.142	93	18627	0.92	ppm	98
12) 2-Chlorophenol	4.195	128	20872	0.87	ppm	96
13) Decane	4.217	43	18774	1.10	ppm	98
14) 1,3-Dichlorobenzene	4.286	146	26779	1.02	ppm	91
15) 1,4-Dichlorobenzene	4.334	146	29014	1.08	ppm	88
17) 1,2-Dichlorobenzene	4.452	146	25223	1.02	ppm	96
18) Acetophenone	4.634	105	28821	0.92	ppm	95
19) 2-Methylphenol	4.548	108	16958	0.84	ppm	87
20) 2,2'-oxybis(1-Chloropr...	4.532	121	6913	0.95	ppm	90
21) 3&4-Methylphenol	4.671	108	16706	0.77	ppm	82
22) n-Nitroso-di-n-propyla...	4.634	70	13354	0.96	ppm	92
23) Hexachloroethane	4.693	201	8848	0.91	ppm	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481134.D
Acq On : 16 Apr 2019 12:42 pm
Operator : angelar
Sample : ic2562-1
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 16 16:29:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
26)	Nitrobenzene	4.762	77	20210	0.90	ppm		92
27)	Quinoline	5.645	129	40957	0.82	ppm		99
28)	Isophorone	4.939	82	36266	0.96	ppm		95
29)	2-Nitrophenol	5.019	139	10855	0.78	ppm		93
32)	bis(2-Chloroethoxy)met...	5.121	93	22031	0.92	ppm		94
33)	2,4-Dichlorophenol	5.233	162	16988	0.82	ppm		96
34)	2,6-Dichlorophenol	5.399	162	17714	0.88	ppm		100
35)	1,3,5-Trichlorobenzene	5.014	180	23653	1.03	ppm		94
36)	1,2,4-Trichlorobenzene	5.265	180	22308	0.99	ppm		98
37)	1,2,3-Trichlorobenzene	5.458	180	22002	0.98	ppm		93
38)	Naphthalene	5.324	128	72273	1.09	ppm		99
39)	4-Chloroaniline	5.399	127	27141	1.02	ppm		97
40)	2,3-Dichloroaniline	6.228	161	23641	0.93	ppm		98
41)	Caprolactam	5.693	55	6433	0.71	ppm		84
42)	Hexachlorobutadiene	5.436	225	12598	0.97	ppm		95
43)	4-Chloro-3-methylphenol	5.853	107	17162	0.81	ppm	#	26
44)	2-Methylnaphthalene	5.950	141	39141	1.02	ppm		92
45)	1-Methylnaphthalene	6.041	141	42484	1.01	ppm		97
46)	Dimethylnaphthalene	6.565	156	47031	1.03	ppm		95
49)	2,4,6-Trichlorophenol	6.238	196	11982	0.77	ppm		93
50)	2,4,5-Trichlorophenol	6.297	196	12852	0.77	ppm		95
52)	2-Chloronaphthalene	6.420	162	46708	1.01	ppm		98
53)	Biphenyl	6.404	154	60991	1.03	ppm		97
54)	2-Nitroaniline	6.549	65	9160	0.70	ppm		84
55)	Dimethylphthalate	6.731	163	52845	0.98	ppm		98
56)	Acenaphthylene	6.843	152	69770	0.97	ppm		99
57)	2,6-Dinitrotoluene	6.795	165	9160	0.69	ppm		93
58)	3-Nitroaniline	6.993	138	9499	0.65	ppm	#	1
59)	Acenaphthene	7.025	153	47265	1.00	ppm		97
62)	Dibenzofuran	7.217	168	67168	1.04	ppm		86
63)	2,4-Dinitrotoluene	7.249	165	12438	0.68	ppm		97
64)	2,3,4,6-Tetrachlorophenol	7.383	232	9544	0.69	ppm		91
65)	Diethylphthalate	7.501	149	50833	0.96	ppm		100
66)	Fluorene	7.597	166	52984	0.99	ppm		97
67)	4-Chlorophenyl-phenyle...	7.608	204	26061	0.95	ppm		95
71)	n-Nitrosodiphenylamine	7.747	169	37950	0.94	ppm		98
72)	1,2-Diphenylhydrazine	7.784	77	42838	0.94	ppm		98
74)	4-Bromophenyl-phenylether	8.159	248	13902	0.86	ppm		92
75)	Hexachlorobenzene	8.233	284	16799	0.89	ppm		96
77)	Phenanthrene	8.688	178	80649	1.06	ppm		98
78)	Anthracene	8.752	178	74342	0.96	ppm		99
79)	Carbazole	8.966	167	68334	0.91	ppm		99
80)	Di-n-butylphthalate	9.416	149	72746	0.80	ppm		98
81)	Fluoranthene	10.100	202	78585	0.90	ppm		97
82)	Octadecane	8.613	57	25275	0.98	ppm		97
84)	Pyrene	10.362	202	85418	0.97	ppm		99
86)	Butylbenzylphthalate	11.202	149	27713	0.67	ppm		83
87)	Benzo[a]anthracene	11.806	228	83521	0.97	ppm		94
88)	3,3'-Dichlorobenzidine	11.812	252	24221	0.69	ppm		83
89)	Chrysene	11.849	228	78945	0.94	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481134.D
Acq On : 16 Apr 2019 12:42 pm
Operator : angelar
Sample : ic2562-1
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 16 16:29:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
90) bis(2-Ethylhexyl)phtha...	11.919	149	38307	0.67 ppm	92
93) Benzo[b]fluoranthene	13.021	252	73810	0.74 ppm	98
94) Benzo[k]fluoranthene	13.053	252	82287	0.91 ppm	97
95) Benzo[a]pyrene	13.357	252	64023	0.76 ppm	94
96) Indeno[1,2,3-cd]pyrene	14.459	276	85814	0.75 ppm	98
97) Dibenz(a,h)acridine	14.229	279	59092	0.70 ppm	99
98) Dibenz[a,h]anthracene	14.465	278	76409	0.75 ppm	93
100) Benzo[g,h,i]perylene	14.732	276	68890	0.79 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

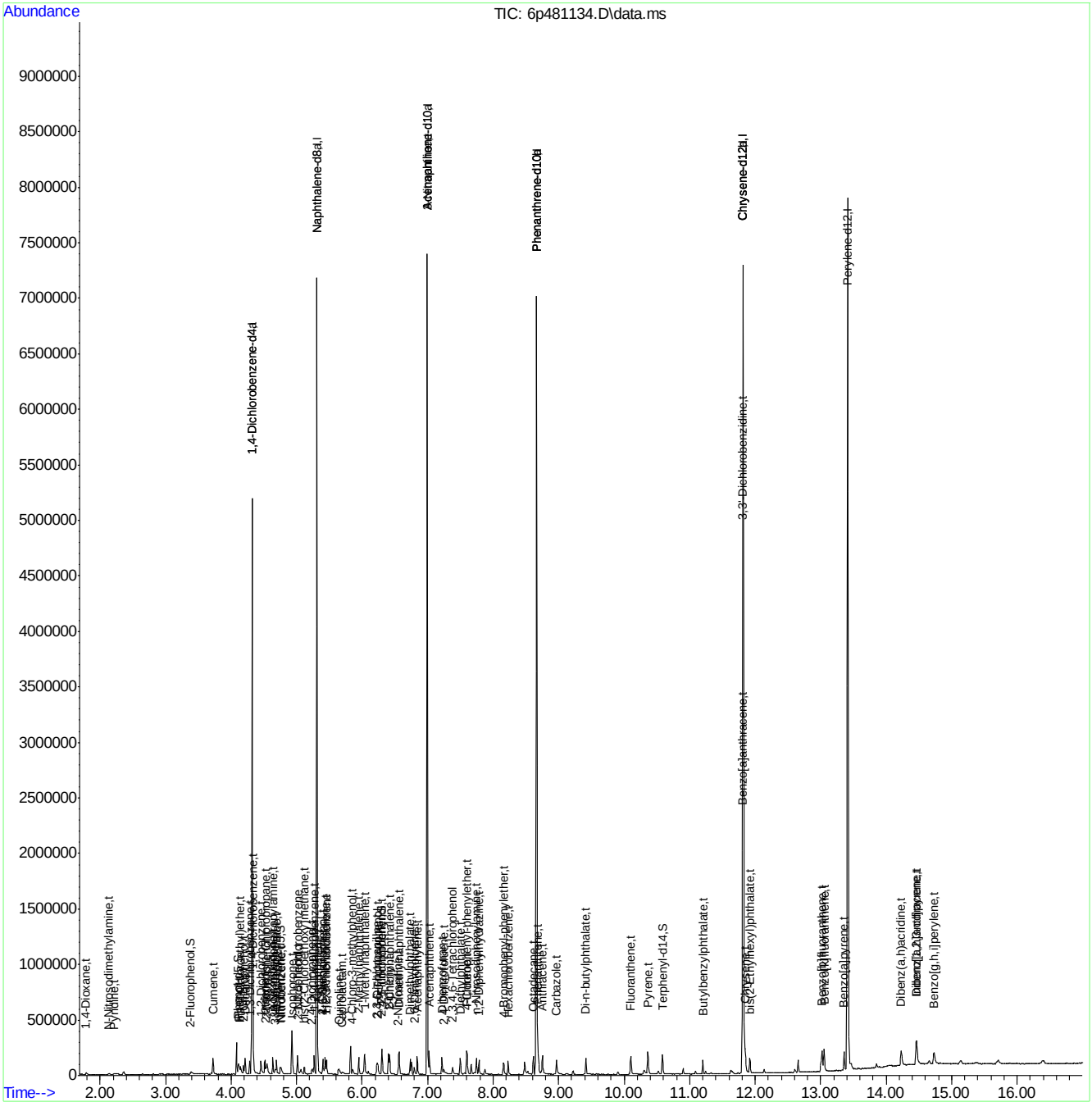
9.6.8

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481134.D
Acq On : 16 Apr 2019 12:42 pm
Operator : angelar
Sample : ic2562-1
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 16 16:29:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:01:13 2019
QLast Update : Tue Apr 16 15:01:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481135.D
Acq On : 16 Apr 2019 1:06 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 16 15:42:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	531418	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2113367	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1272076	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2255478	40.00	ppm	0.00
83) Chrysene-d12	11.823	240	1942871	40.00	ppm	0.00
91) Perylene-d12	13.416	264	2204772	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	531418	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1272076	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2255478	40.00	ppm	0.00
109) Chrysene-d12a	11.823	240	1942871	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2113367	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2255478	40.00	ppm	0.00
115) Chrysene-d12b	11.823	240	1942871	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	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%			
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	2.099	74	481129	51.87	ppm	99
11) bis(2-Chloroethyl)ether	4.137	93	796542	49.62	ppm	99
14) 1,3-Dichlorobenzene	4.281	146	998503	47.67	ppm	100
15) 1,4-Dichlorobenzene	4.334	146	1051327	49.04	ppm	99
17) 1,2-Dichlorobenzene	4.447	146	975325	49.53	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.532	121	333063	58.19	ppm	94
22) n-Nitroso-di-n-propyla...	4.629	70	562913	50.95	ppm	95
23) Hexachloroethane	4.693	201	366729	49.02	ppm	99
26) Nitrobenzene	4.752	77	858600	47.98	ppm	95
28) Isophorone	4.934	82	1530298	50.04	ppm	98
32) bis(2-Chloroethoxy)met...	5.115	93	944612	49.16	ppm	100
36) 1,2,4-Trichlorobenzene	5.265	180	872412	48.27	ppm	99
38) Naphthalene	5.329	128	2673743	48.58	ppm	99
42) Hexachlorobutadiene	5.436	225	503478	48.95	ppm	98
52) 2-Chloronaphthalene	6.420	162	1753056	46.73	ppm	98
55) Dimethylphthalate	6.736	163	2015588	46.26	ppm	99
56) Acenaphthylene	6.843	152	2787475	48.15	ppm	100
57) 2,6-Dinitrotoluene	6.795	165	463934	47.09	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481135.D
Acq On : 16 Apr 2019 1:06 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 16 15:42:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration

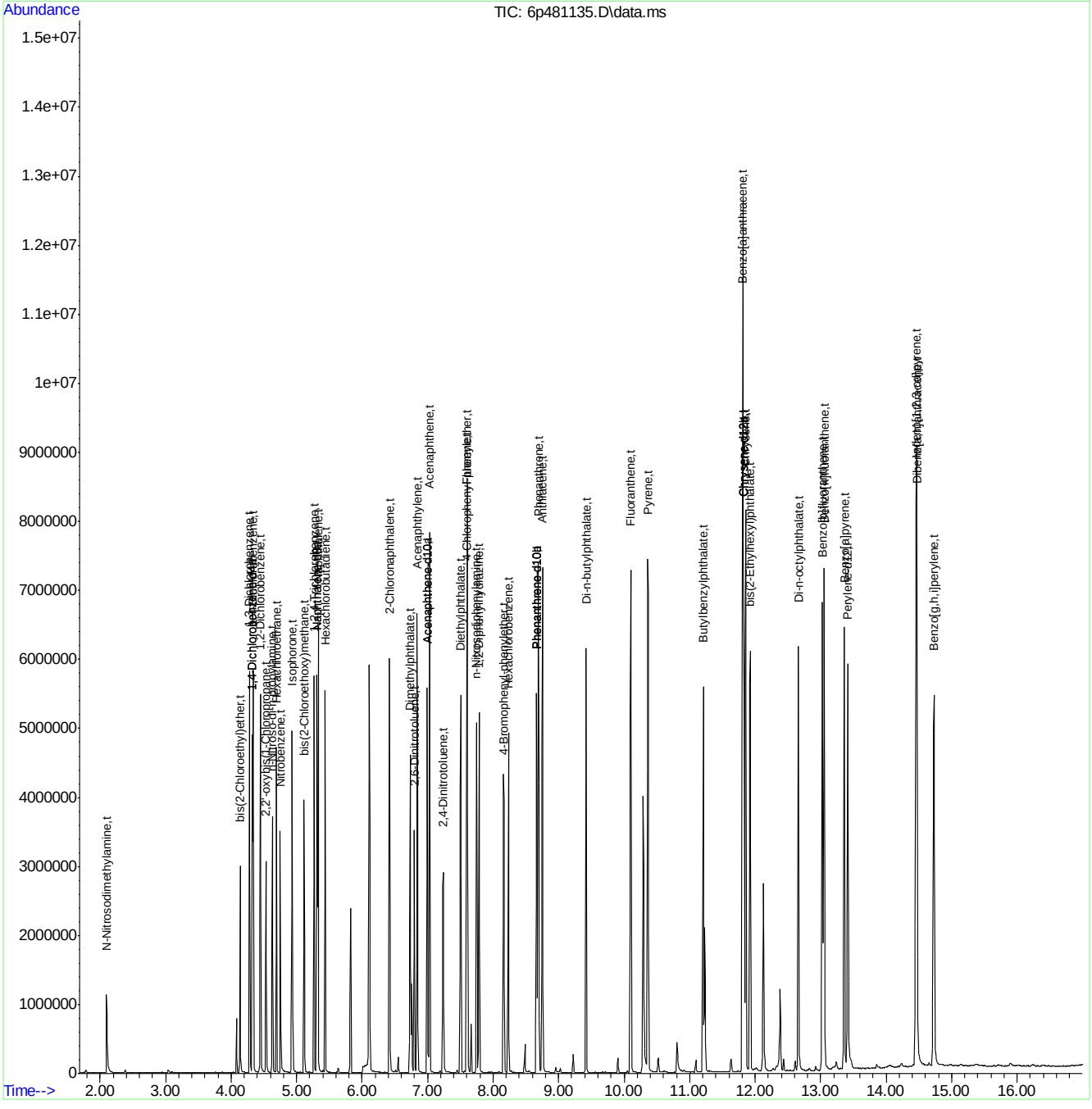
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
59)	Acenaphthene	7.030	153	1766949	45.98	ppm	100
63)	2,4-Dinitrotoluene	7.239	165	626568	45.79	ppm	98
65)	Diethylphthalate	7.506	149	1973162	45.93	ppm	99
66)	Fluorene	7.597	166	2045365	47.08	ppm	99
67)	4-Chlorophenyl-phenyle...	7.608	204	1037651	47.12	ppm	99
71)	n-Nitrosodiphenylamine	7.747	169	1415004	45.41	ppm	100
72)	1,2-Diphenylhydrazine	7.790	77	1745959	49.49	ppm	94
74)	4-Bromophenyl-phenylether	8.164	248	606033	50.00	ppm	98
75)	Hexachlorobenzene	8.234	284	675564	47.45	ppm	98
77)	Phenanthrene	8.694	178	2841831	46.93	ppm	99
78)	Anthracene	8.752	178	2966883	48.85	ppm	99
80)	Di-n-butylphthalate	9.421	149	3243429	48.30	ppm	99
81)	Fluoranthene	10.100	202	3151566	47.90	ppm	98
84)	Pyrene	10.362	202	3276986	50.63	ppm	100
86)	Butylbenzylphthalate	11.207	149	1441645	51.68	ppm	99
87)	Benzo[a]anthracene	11.812	228	2955986	47.77	ppm	99
89)	Chrysene	11.855	228	2940569	48.46	ppm	98
90)	bis(2-Ethylhexyl)phtha...	11.924	149	2022050	52.43	ppm	99
92)	Di-n-octylphthalate	12.662	149	3374163	51.38	ppm	98
93)	Benzo[b]fluoranthene	13.026	252	2925494	43.44	ppm	98
94)	Benzo[k]fluoranthene	13.053	252	3089671	51.83	ppm	98
95)	Benzo[a]pyrene	13.363	252	2790875	50.44	ppm	99
96)	Indeno[1,2,3-cd]pyrene	14.459	276	3521423	47.67	ppm	99
98)	Dibenz[a,h]anthracene	14.470	278	3024026	46.19	ppm	98
100)	Benzo[g,h,i]perylene	14.732	276	2857667	49.60	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481135.D
Acq On : 16 Apr 2019 1:06 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 16 15:42:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481136.D
Acq On : 16 Apr 2019 1:29 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 16 15:41:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration

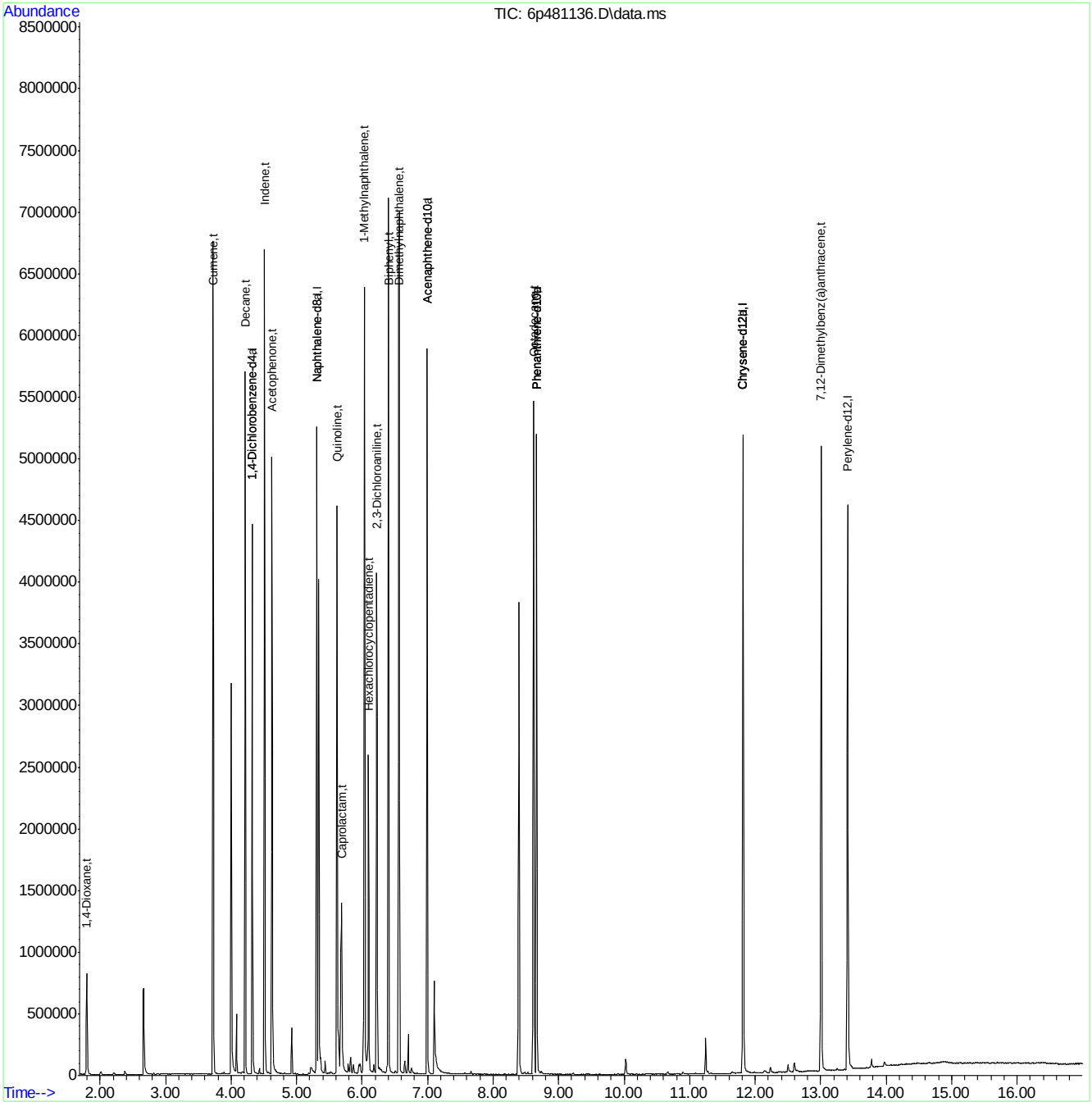
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	520182	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2005705	40.00	ppm	0.00
47) Acenaphthene-d10	6.992	164	1185681	40.00	ppm	0.00
69) Phenanthrene-d10	8.661	188	2067155	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1766202	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	1848264	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	520182	40.00	ppm	0.00
103) Acenaphthene-d10a	6.992	164	1185681	40.00	ppm	0.00
105) Phenanthrene-d10a	8.661	188	2067155	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1766202	40.00	ppm	-0.01
111) Naphthalene-d8a	5.308	136	2005705	40.00	ppm	0.00
113) Phenanthrene-d10b	8.661	188	2067155	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1766202	40.00	ppm	-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	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%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.794	88	320512	46.80	ppm	99
6) Indene	4.511	116	1450104	51.41	ppm	99
7) Cumene	3.724	105	1876058	46.43	ppm	99
13) Decane	4.217	43	619449	44.87	ppm	100
18) Acetophenone	4.623	105	1129436	46.72	ppm	98
27) Quinoline	5.618	129	1703770	46.82	ppm	99
40) 2,3-Dichloroaniline	6.222	161	816796	42.96	ppm	98
41) Caprolactam	5.687	55	283754	44.25	ppm	97
45) 1-Methylnaphthalene	6.035	141	1474123	44.66	ppm	99
46) Dimethylnaphthalene	6.565	156	1637534	46.63	ppm	99
48) Hexachlorocyclopentadiene	6.099	237	323971	44.53	ppm	99
53) Biphenyl	6.404	154	2169137	47.83	ppm	100
82) Octadecane	8.618	57	900000	48.39	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.010	256	1127698	42.79	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481136.D
Acq On : 16 Apr 2019 1:29 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 16 15:41:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration



M6P2562.M Tue Apr 16 16:33:10 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481137.D
Acq On : 16 Apr 2019 1:53 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 16 15:44:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	510073	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1930613	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1099720	40.00	ppm	0.00
69) Phenanthrene-d10	8.661	188	1950054	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1585691	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	1692162	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	510073	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1099720	40.00	ppm	0.00
105) Phenanthrene-d10a	8.661	188	1950054	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1585691	40.00	ppm	-0.01
111) Naphthalene-d8a	5.308	136	1930613	40.00	ppm	0.00
113) Phenanthrene-d10b	8.661	188	1950054	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1585691	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.356	112	743971	49.86	ppm	0.00
Spiked Amount 50.000			Recovery	=	99.72%	
8) Phenol-d5	4.094	99	893684	49.05	ppm	0.00
Spiked Amount 50.000			Recovery	=	98.10%	
25) Nitrobenzene-d5	4.735	82	705826	43.93	ppm	0.00
Spiked Amount 50.000			Recovery	=	87.86%	
51) 2-Fluorobiphenyl	6.303	172	1865954	48.03	ppm	0.00
Spiked Amount 50.000			Recovery	=	96.06%	
73) 2,4,6-Tribromophenol	7.870	330	281290	44.83	ppm	-0.01
Spiked Amount 50.000			Recovery	=	89.66%	
85) Terphenyl-d14	10.587	244	2024695	54.81	ppm	0.00
Spiked Amount 50.000			Recovery	=	109.62%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.11

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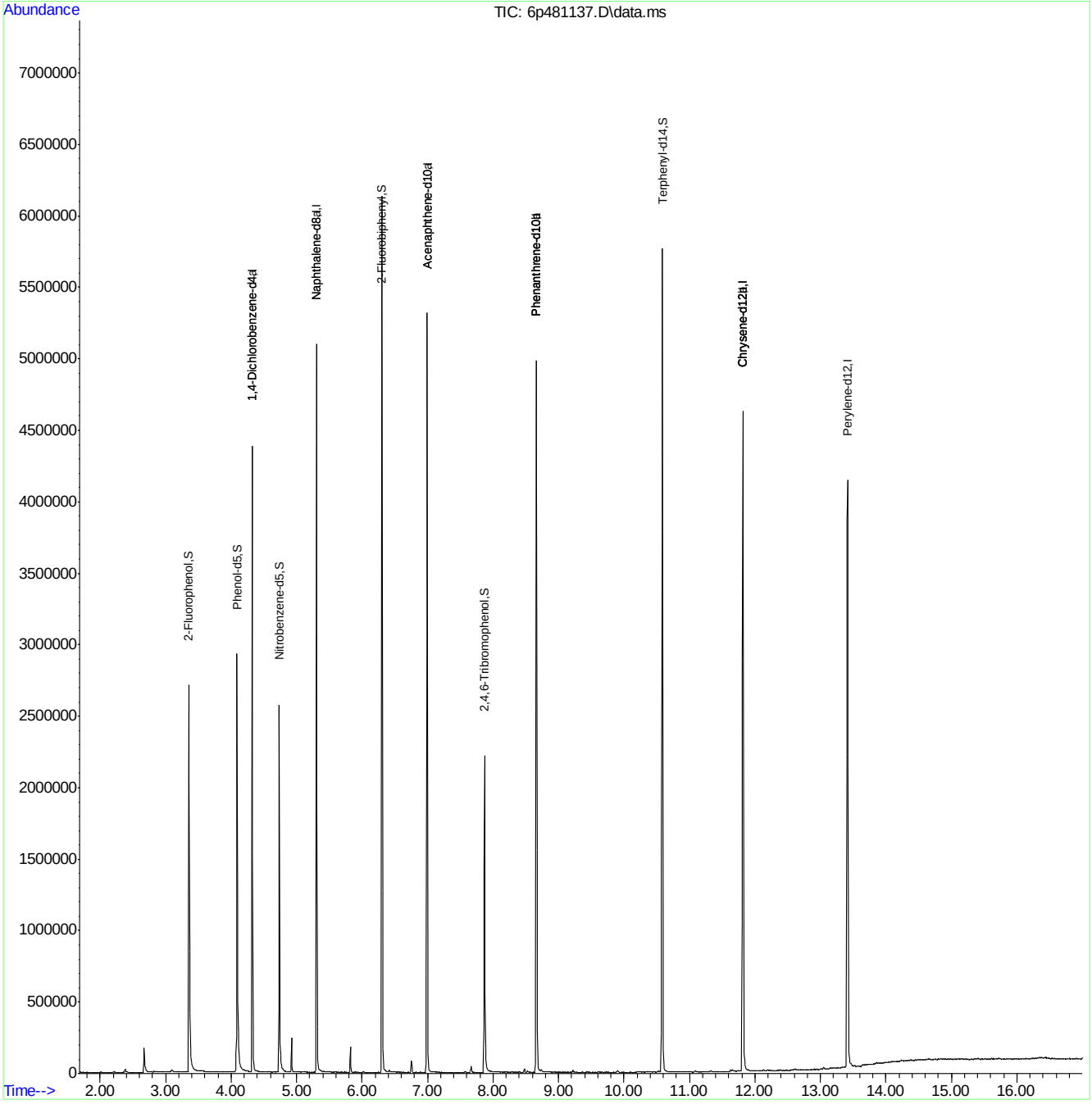
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481137.D
Acq On : 16 Apr 2019 1:53 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 16 15:44:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 15:28:32 2019
QLast Update : Tue Apr 16 15:28:32 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481138.D
Acq On : 16 Apr 2019 2:18 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 16 16:07:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:03:24 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration

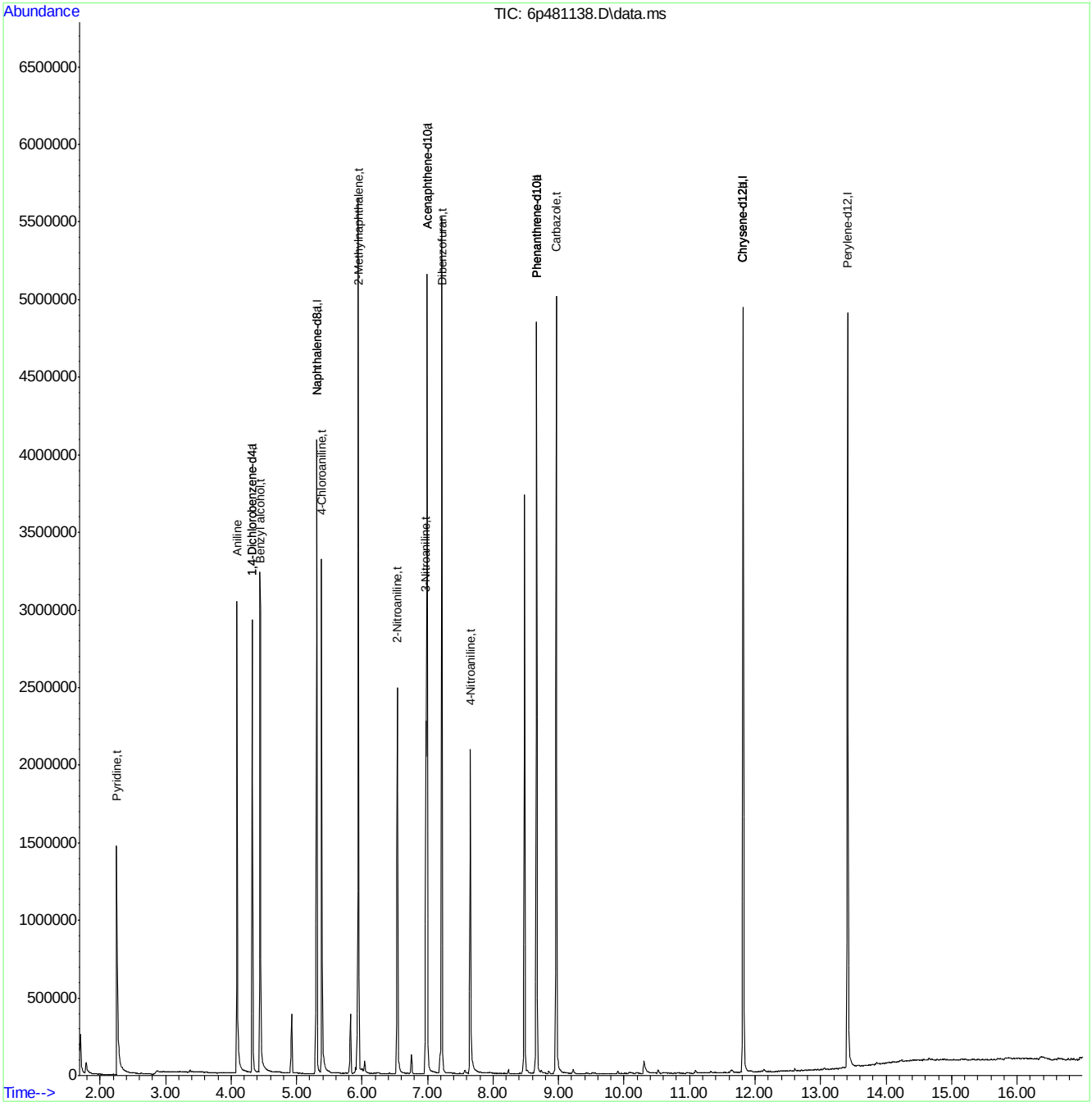
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	448130	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1829213	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1141242	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2027182	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1783494	40.00	ppm	-0.01
91) Perylene-d12	13.417	264	1954586	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	448130	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1141242	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2027182	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1783494	40.00	ppm	-0.01
111) Naphthalene-d8a	5.308	136	1829213	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2027182	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1783494	40.00	ppm	-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%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
3) Pyridine	2.254	79	664372	49.51	ppm	99
10) Aniline	4.088	93	1079189	61.90	ppm	96
16) Benzyl alcohol	4.447	108	492793	58.56	ppm	99
39) 4-Chloroaniline	5.383	127	950239	49.52	ppm	99
44) 2-Methylnaphthalene	5.944	141	1327785	49.28	ppm	97
54) 2-Nitroaniline	6.538	65	375990	42.98	ppm	95
58) 3-Nitroaniline	6.977	138	458455	47.70	ppm	98
62) Dibenzofuran	7.217	168	2323757	48.40	ppm	86
68) 4-Nitroaniline	7.651	138	450250	44.24	ppm	97
79) Carbazole	8.966	167	2370531	45.88	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481138.D
Acq On : 16 Apr 2019 2:18 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 16 16:07:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:03:24 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481139.D
Acq On : 16 Apr 2019 2:42 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 16 16:11:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	476048	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1859811	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1055252	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	1916616	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1609600	40.00	ppm	-0.01
91) Perylene-d12	13.411	264	1634981	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.324	152	476048	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1055252	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	1916616	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1609600	40.00	ppm	-0.01
111) Naphthalene-d8a	5.308	136	1859811	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	1916616	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1609600	40.00	ppm	-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	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	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
9) Phenol	4.104	94	972542	46.86	ppm	89
12) 2-Chlorophenol	4.179	128	866798	52.67	ppm	99
19) 2-Methylphenol	4.532	108	726813	52.03	ppm	98
21) 3&4-Methylphenol	4.650	108	768771	52.34	ppm	99
29) 2-Nitrophenol	5.003	139	501730	54.49	ppm #	70
30) 2,4-Dimethylphenol	5.051	107	809889	57.62	ppm	98
31) Benzoic acid	5.201	105	546548	38.48	ppm	99
33) 2,4-Dichlorophenol	5.206	162	738938	53.18	ppm	99
34) 2,6-Dichlorophenol	5.388	162	750510	54.54	ppm	98
43) 4-Chloro-3-methylphenol	5.832	107	724761	50.82	ppm	96
49) 2,4,6-Trichlorophenol	6.233	196	560725	56.96	ppm	99
50) 2,4,5-Trichlorophenol	6.271	196	590326	56.38	ppm	99
60) 2,4-Dinitrophenol	7.100	184	238987	44.88	ppm	93
61) 4-Nitrophenol	7.207	109	214925	47.19	ppm #	1
64) 2,3,4,6-Tetrachlorophenol	7.373	232	451819	52.73	ppm	98
70) 4,6-Dinitro-2-methylph...	7.693	198	361914	48.90	ppm	97
76) Pentachlorophenol	8.474	266	401504	52.25	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481139.D
Acq On : 16 Apr 2019 2:42 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 16 16:11:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

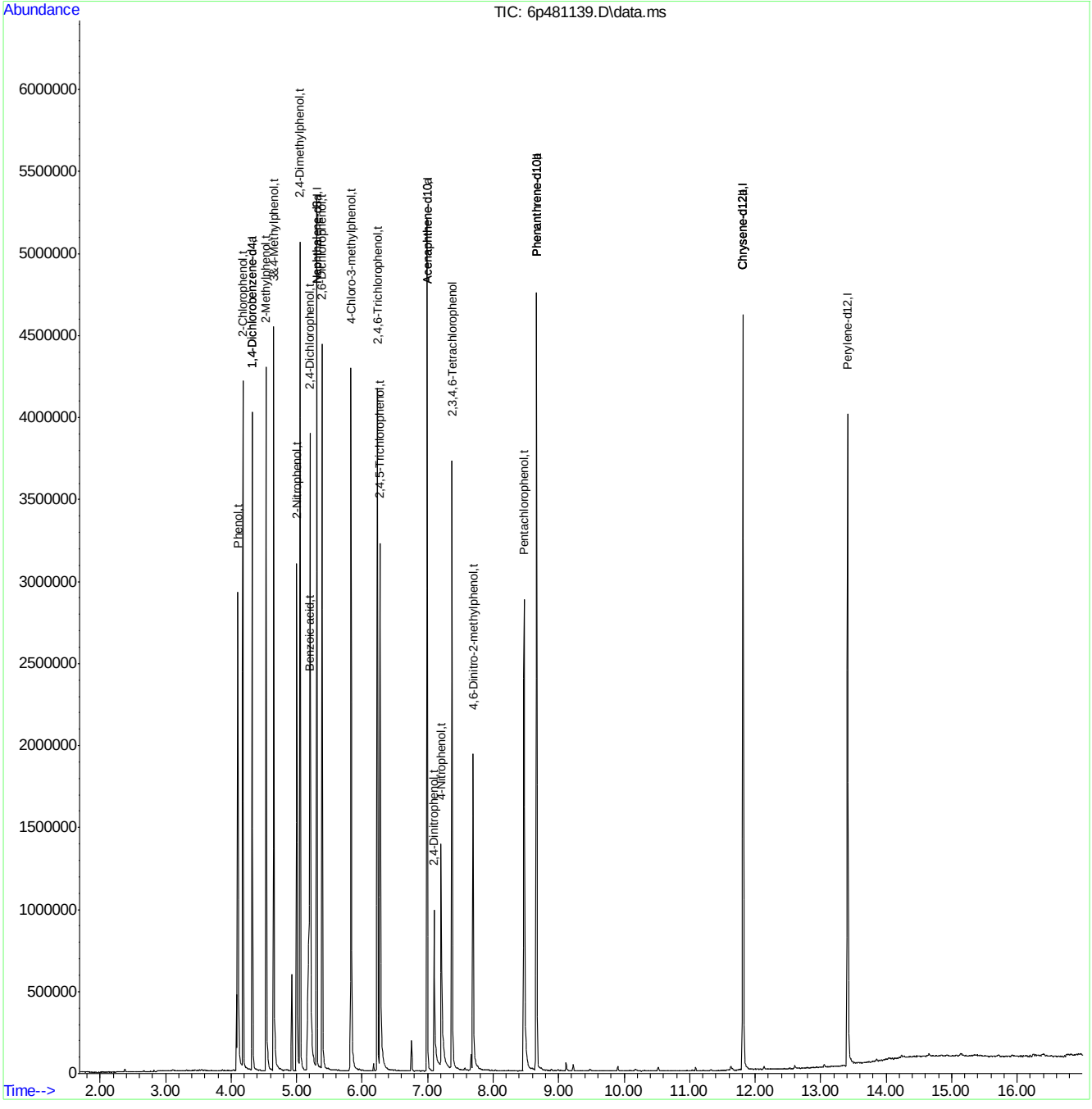
9.6.13

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481139.D
Acq On : 16 Apr 2019 2:42 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 16 16:11:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481140.D
Acq On : 16 Apr 2019 3:06 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 16 16:13:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.324	152	682838	40.00 ppm	0.00
24) Naphthalene-d8	5.308	136	2709058	40.00 ppm	0.00
47) Acenaphthene-d10	6.993	164	1558710	40.00 ppm	0.00
69) Phenanthrene-d10	8.667	188	3047126	40.00 ppm	0.00
83) Chrysene-d12	11.823	240	3314872	40.00 ppm	0.00
91) Perylene-d12	13.422	264	3599888	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	682838	40.00 ppm	0.00
103) Acenaphthene-d10a	6.993	164	1558710	40.00 ppm	0.00
105) Phenanthrene-d10a	8.667	188	3047126	40.00 ppm	0.00
109) Chrysene-d12a	11.823	240	3314872	40.00 ppm	0.00
111) Naphthalene-d8a	5.308	136	2709058	40.00 ppm	0.00
113) Phenanthrene-d10b	8.667	188	3047126	40.00 ppm	0.00
115) Chrysene-d12b	11.823	240	3314872	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	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%	
106) 1-chlorooctadecane	0.000	57	0d	0.00 ppm	
107) o-terphenyl	0.000	230	0	0.00 ppm	
Target Compounds					Qvalue
88) 3,3'-Dichlorobenzidine	11.812	252	2018236	50.88 ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.14

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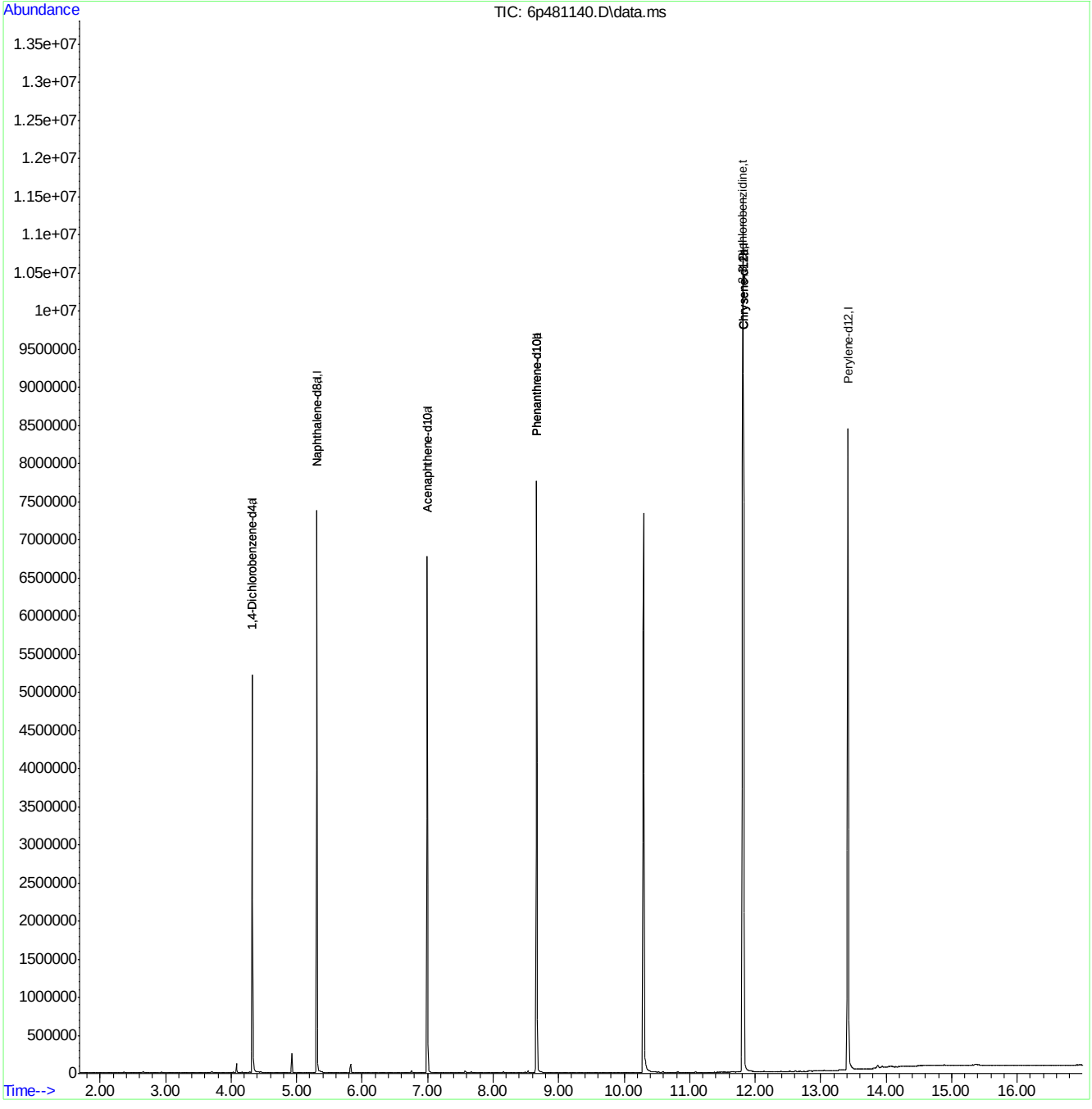
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481140.D
Acq On : 16 Apr 2019 3:06 pm
Operator : angelar
Sample : icv2562-50
Misc : op17006,e6p2562,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 16 16:13:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:05:20 2019
QLast Update : Tue Apr 16 16:05:20 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481142.D
Acq On : 16 Apr 2019 3:39 pm
Operator : angelar
Sample : ic2563-100
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 16 16:49:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:46:49 2019
QLast Update : Tue Apr 16 16:46:49 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	469055	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1909884	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1103992	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2094446	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1849692	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	2245607	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	469055	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1103992	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2094446	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1849692	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	1909884	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2094446	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1849692	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	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%	
106) 1-chlorooctadecane	10.047	57	1224154	88.21	ppm	0.00
107) o-terphenyl	9.148	230	3108702	97.03	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.003	105	1192562	94.73	ppm	94
104) 1,2,4,5-Tetrachloroben...	6.116	216	1502353	99.08	ppm	99
108) Atrazine	8.405	215	613453	100.27	ppm	98
112) Hydroquinone	5.730	110	1567553	97.83	ppm	98
114) Pentachloronitrobenzene	8.485	295	281723	103.49	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

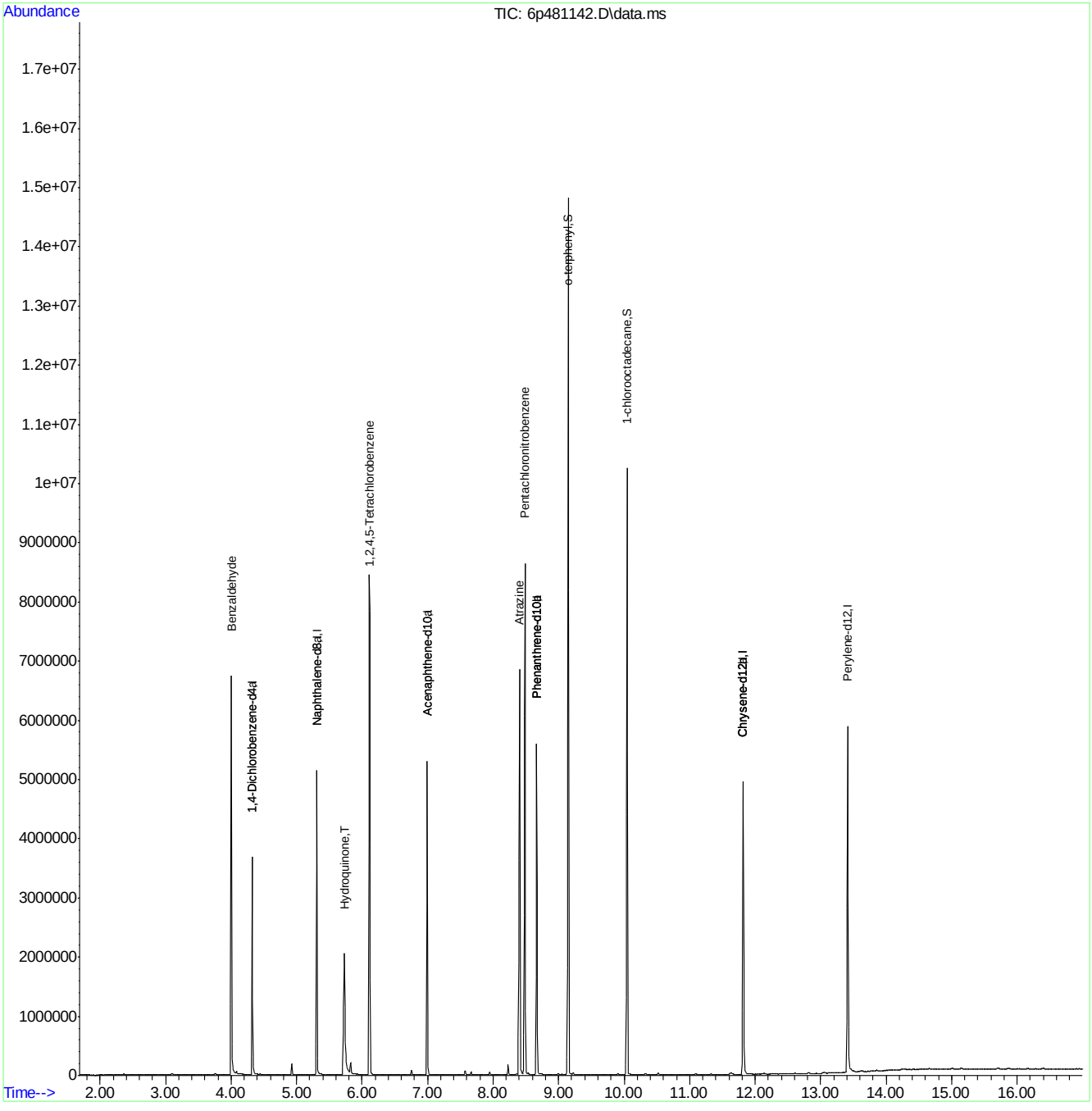
9.6.15

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481142.D
Acq On : 16 Apr 2019 3:39 pm
Operator : angelar
Sample : ic2563-100
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 16 16:49:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:46:49 2019
QLast Update : Tue Apr 16 16:46:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481143.D
Acq On : 16 Apr 2019 4:03 pm
Operator : angelar
Sample : ic2563-80
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 16 16:51:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:46:49 2019
QLast Update : Tue Apr 16 16:46:49 2019
Response via : Initial Calibration

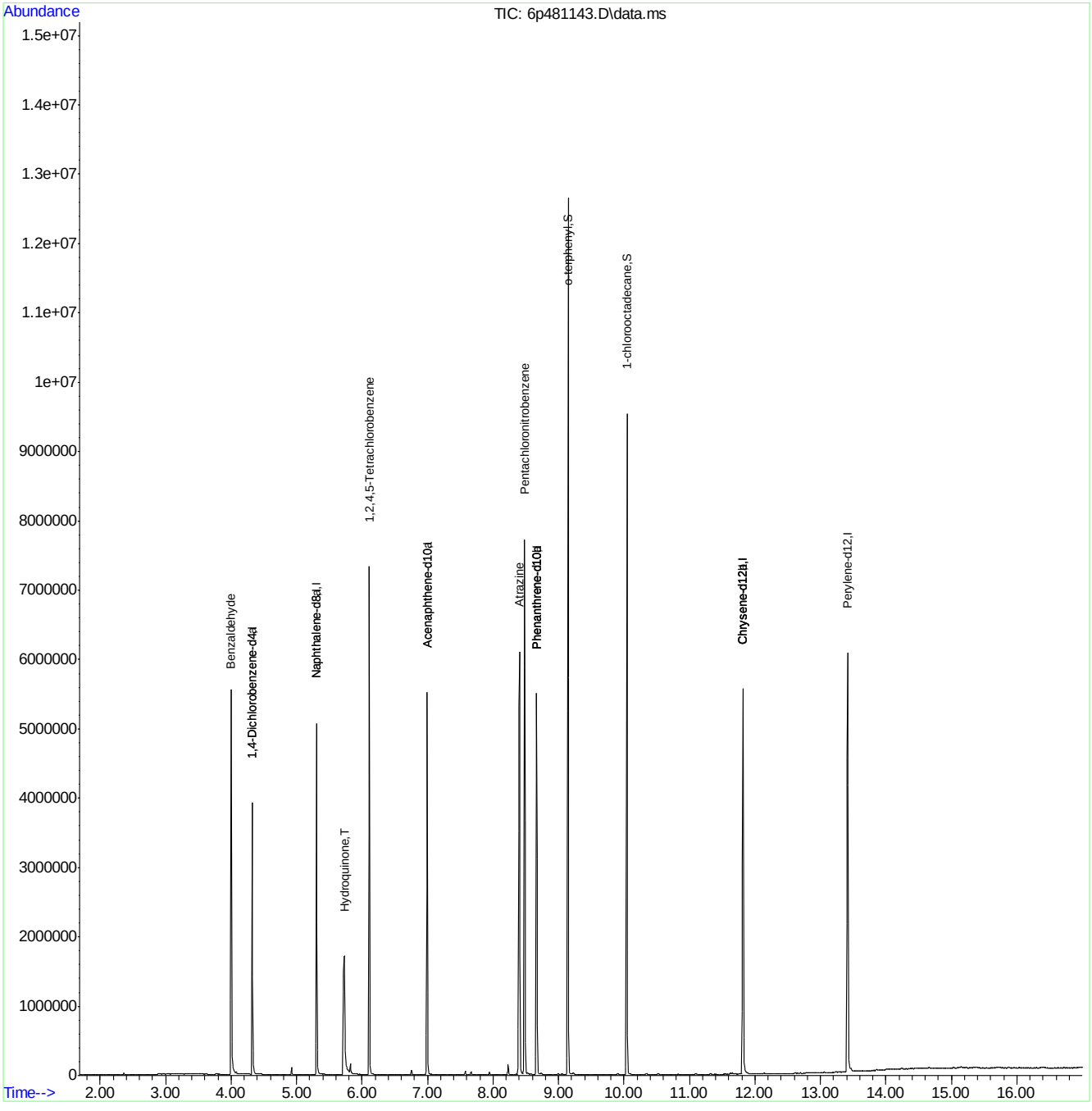
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	494986	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1933033	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1159503	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2079029	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1959697	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	2274908	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	494986	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1159503	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2079029	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1959697	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	1933033	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2079029	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1959697	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	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%	
106) 1-chlorooctadecane	10.047	57	1111049	80.66	ppm	0.00
107) o-terphenyl	9.148	230	2649988	83.32	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.003	105	1009924	76.02	ppm	93
104) 1,2,4,5-Tetrachloroben...	6.110	216	1251665	78.59	ppm	100
108) Atrazine	8.405	215	494417	81.41	ppm	94
112) Hydroquinone	5.730	110	1278687	78.85	ppm	96
114) Pentachloronitrobenzene	8.485	295	229889	85.07	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481143.D
Acq On : 16 Apr 2019 4:03 pm
Operator : angelar
Sample : ic2563-80
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 16 16:51:27 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 16:46:49 2019
QLast Update : Tue Apr 16 16:46:49 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481144.D
Acq On : 16 Apr 2019 4:27 pm
Operator : angelar
Sample : icc2563-50
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 16 17:35:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration

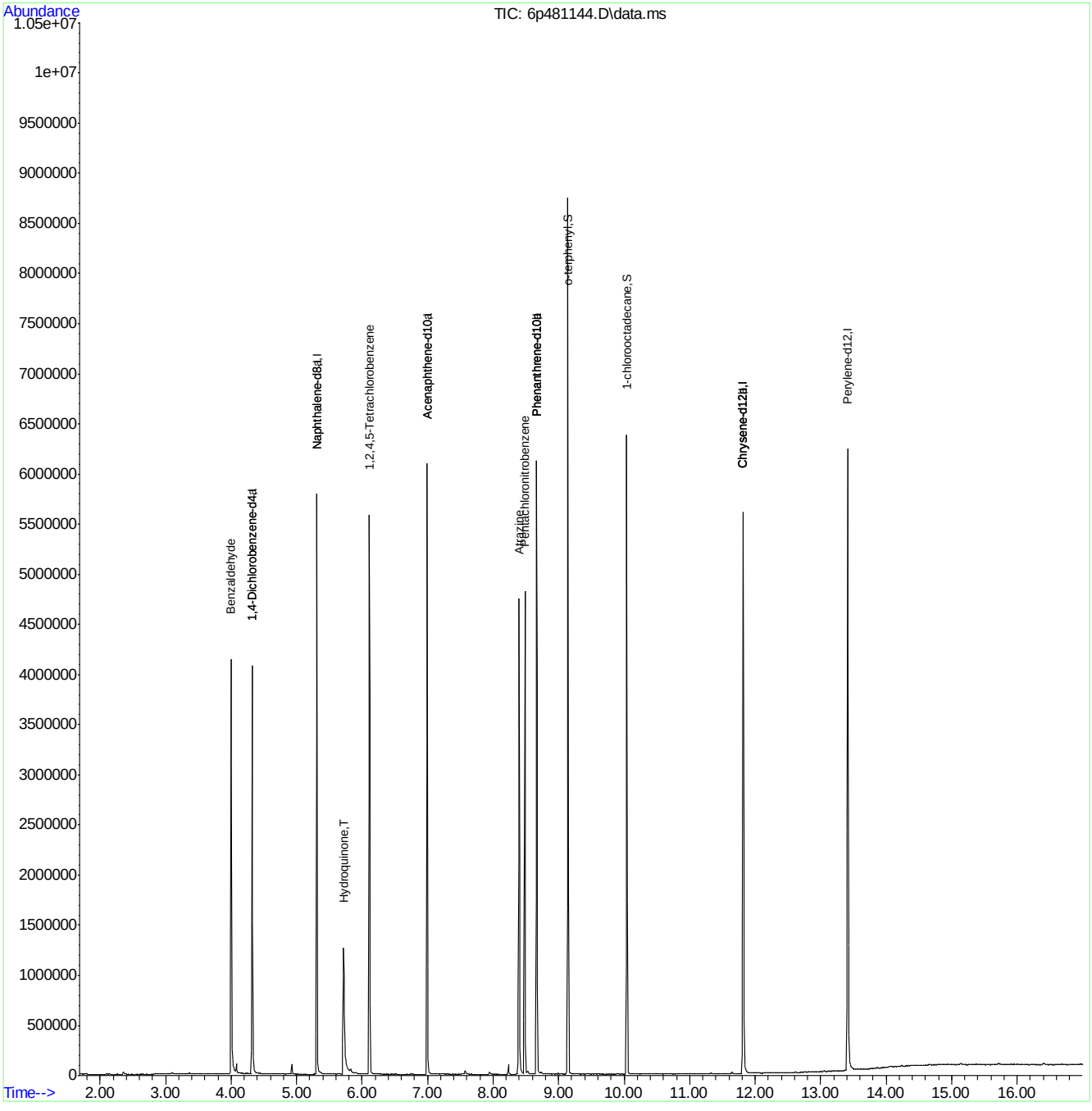
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	533044	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2085894	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1245669	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2303521	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	2064916	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	2392626	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	533044	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1245669	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2303521	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	2064916	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2085894	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2303521	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	2064916	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	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%			
106) 1-chlorooctadecane	10.041	57	763119	50.00	ppm	0.00
107) o-terphenyl	9.143	230	1761914	50.00	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	3.998	105	715355	50.00	ppm	100
104) 1,2,4,5-Tetrachloroben...	6.110	216	855470	50.00	ppm	100
108) Atrazine	8.399	215	336431	50.00	ppm	100
112) Hydroquinone	5.714	110	874983	50.00	ppm	100
114) Pentachloronitrobenzene	8.485	295	149701	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481144.D
Acq On : 16 Apr 2019 4:27 pm
Operator : angelar
Sample : icc2563-50
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 16 17:35:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481145.D
Acq On : 16 Apr 2019 4:51 pm
Operator : angelar
Sample : ic2563-25
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 16 17:36:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration

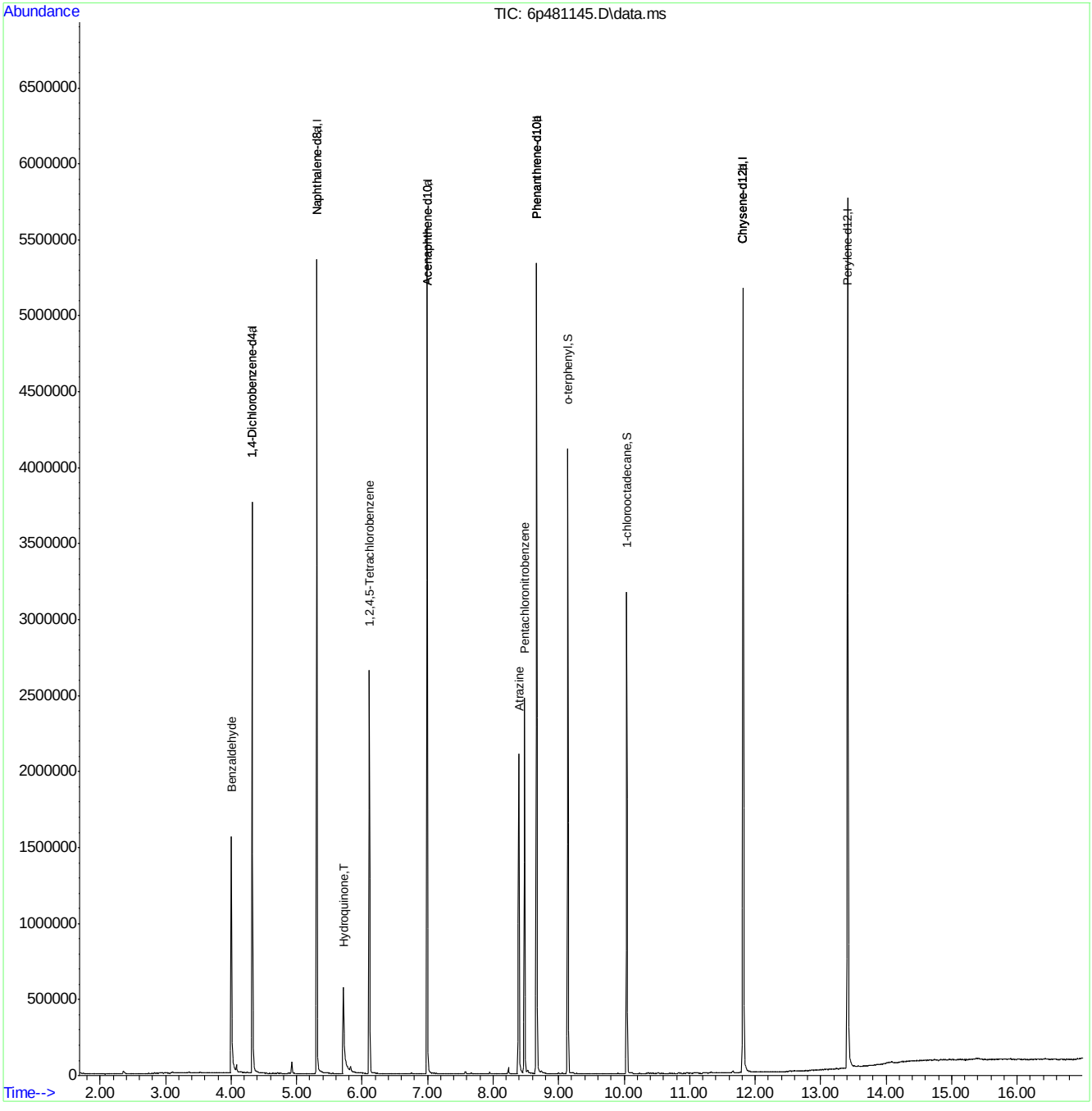
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	495898	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1968505	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1133606	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2062681	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1815575	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	2128773	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	495898	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1133606	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2062681	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1815575	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	1968505	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2062681	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1815575	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	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%			
106) 1-chlorooctadecane	10.041	57	365207	26.72	ppm	0.00
107) o-terphenyl	9.143	230	801894	25.41	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.003	105	345677	25.97	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.110	216	402776	25.87	ppm	99
108) Atrazine	8.394	215	148311	24.62	ppm	98
112) Hydroquinone	5.714	110	381902	23.12	ppm	98
114) Pentachloronitrobenzene	8.480	295	66768	24.90	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481145.D
Acq On : 16 Apr 2019 4:51 pm
Operator : angelar
Sample : ic2563-25
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 16 17:36:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481146.D
Acq On : 16 Apr 2019 5:15 pm
Operator : angelar
Sample : ic2563-10
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 16 17:37:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration

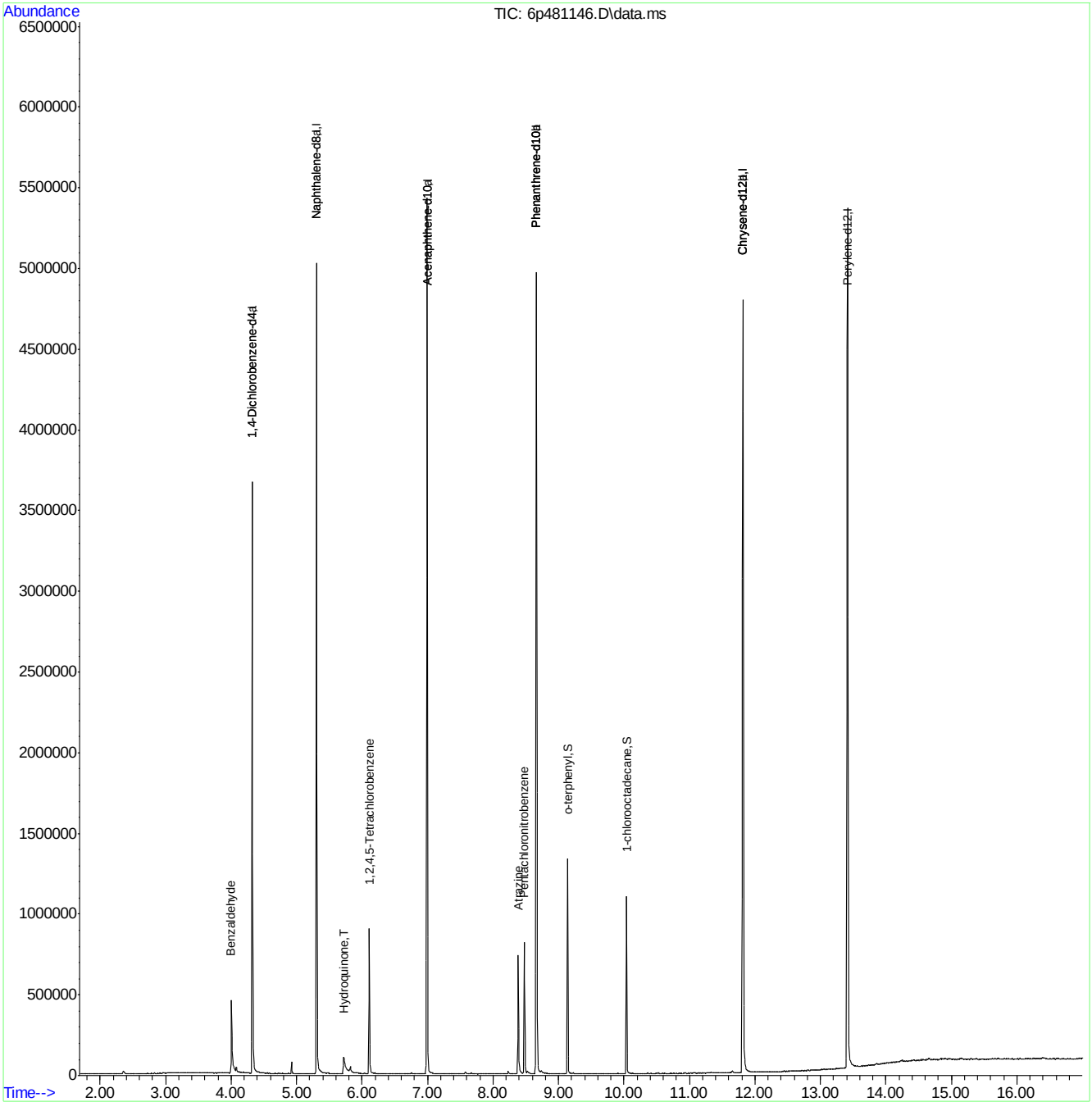
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	469498	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1866839	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1069558	40.00	ppm	0.00
69) Phenanthrene-d10	8.661	188	1942833	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1687959	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	1971401	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	469498	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1069558	40.00	ppm	0.00
105) Phenanthrene-d10a	8.661	188	1942833	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1687959	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	1866839	40.00	ppm	0.00
113) Phenanthrene-d10b	8.661	188	1942833	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1687959	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	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%	
106) 1-chlorooctadecane	10.041	57	120464	9.36	ppm	0.00
107) o-terphenyl	9.143	230	271160	9.12	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.003	105	115379	9.16	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.110	216	141657	9.64	ppm	98
108) Atrazine	8.389	215	47887	8.44	ppm	97
112) Hydroquinone	5.720	110	107625	6.87	ppm	97
114) Pentachloronitrobenzene	8.480	295	20276	8.03	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481146.D
Acq On : 16 Apr 2019 5:15 pm
Operator : angelar
Sample : ic2563-10
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 16 17:37:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481147.D
Acq On : 16 Apr 2019 5:39 pm
Operator : angelar
Sample : ic2563-5
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 17 08:43:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	490109	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1929031	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1098959	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	1990100	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1701947	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	1984162	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	490109	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1098959	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	1990100	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1701947	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	1929031	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	1990100	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1701947	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	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%	
106) 1-chlorooctadecane	10.041	57	57661	4.37	ppm	0.00
107) o-terphenyl	9.143	230	139225	4.57	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.008	105	55790	4.24	ppm	99
104) 1,2,4,5-Tetrachloroben...	6.110	216	72248	4.79	ppm	99
108) Atrazine	8.389	215	22720	3.91	ppm	93
112) Hydroquinone	5.752	110	36357	2.25	ppm	97
114) Pentachloronitrobenzene	8.485	295	9732	3.76	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

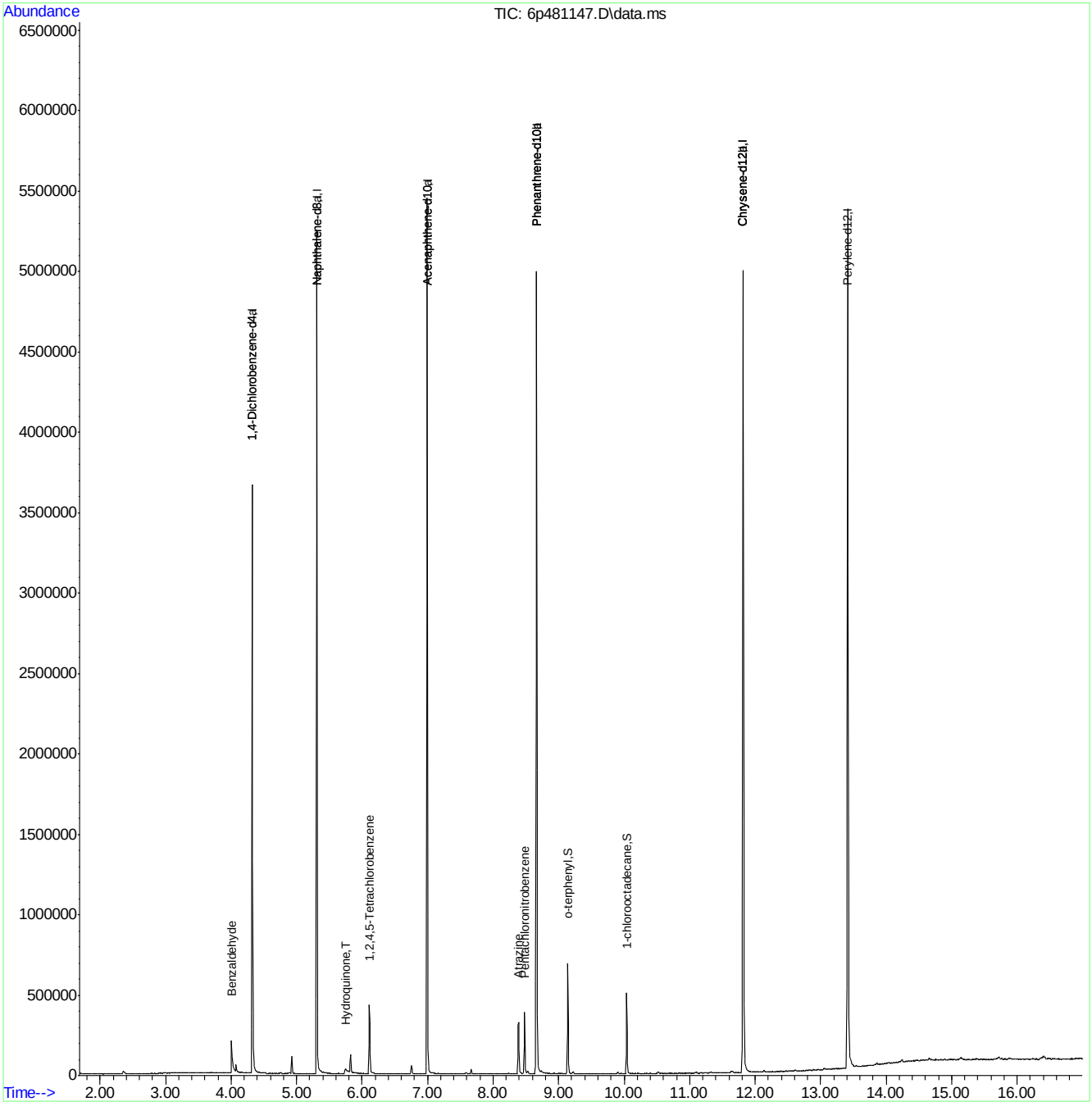
9.6.20

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481147.D
Acq On : 16 Apr 2019 5:39 pm
Operator : angelar
Sample : ic2563-5
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 17 08:43:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481148.D
Acq On : 16 Apr 2019 6:03 pm
Operator : angelar
Sample : ic2563-2
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 17 08:45:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	492889	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1937587	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1111339	40.00	ppm	0.00
69) Phenanthrene-d10	8.662	188	1982759	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	1690897	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	1919779	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	492889	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1111339	40.00	ppm	0.00
105) Phenanthrene-d10a	8.662	188	1982759	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	1690897	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	1937587	40.00	ppm	0.00
113) Phenanthrene-d10b	8.662	188	1982759	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	1690897	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	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%	
106) 1-chlorooctadecane	10.041	57	19824	1.51	ppm	0.00
107) o-terphenyl	9.143	230	53453	1.76	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.019	105	23152	1.75	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.116	216	28348	1.86	ppm	96
108) Atrazine	8.389	215	7134	1.23	ppm	90
114) Pentachloronitrobenzene	8.485	295	3297	1.28	ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

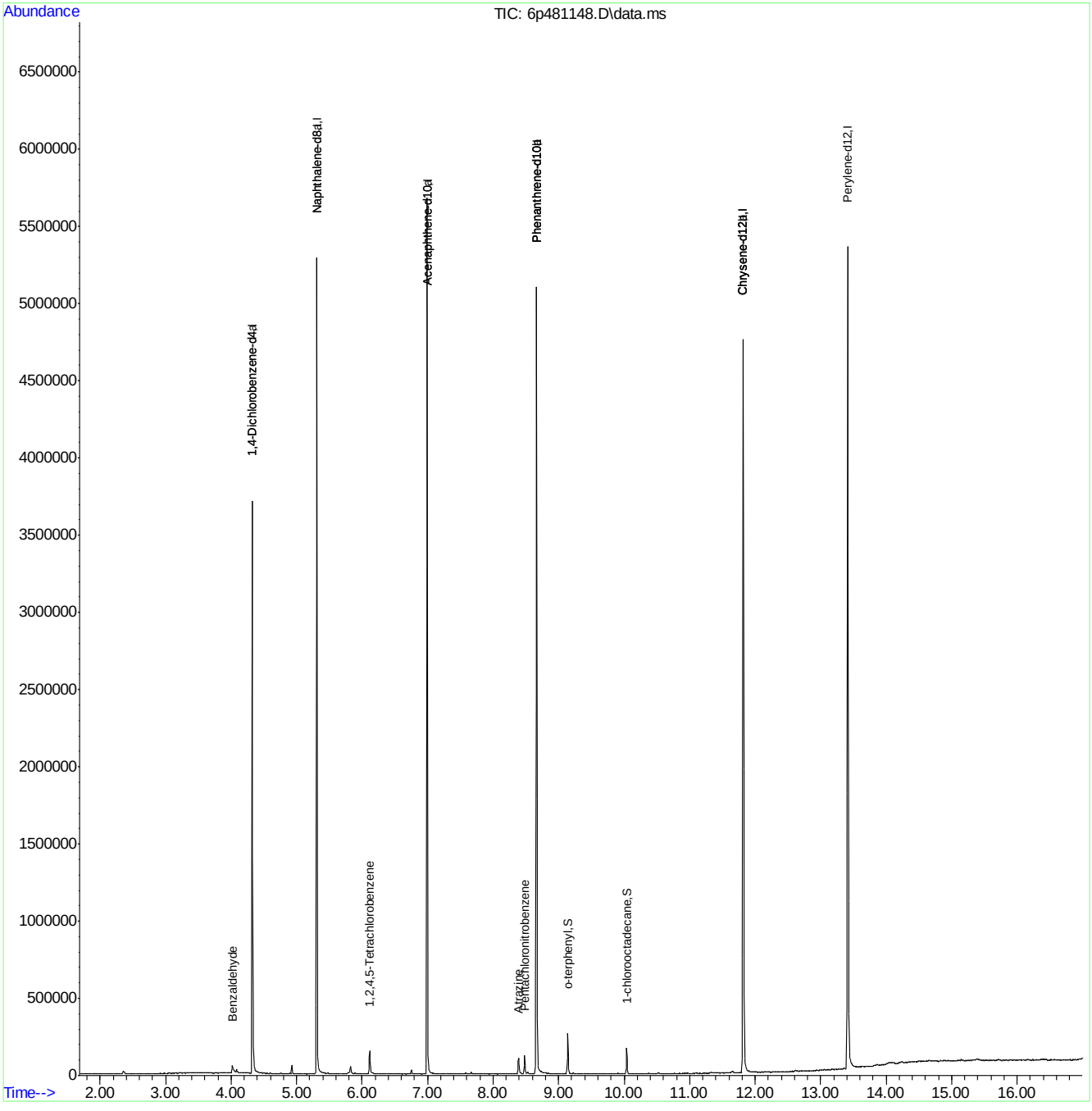
9.6.21

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481148.D
Acq On : 16 Apr 2019 6:03 pm
Operator : angelar
Sample : ic2563-2
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 17 08:45:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/17/19 13:47

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481149.D
Acq On : 16 Apr 2019 6:28 pm
Operator : angelar
Sample : ic2563-1
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 17 08:47:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	524942	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2083688	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1216670	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2218794	40.00	ppm	0.00
83) Chrysene-d12	11.823	240	1988582	40.00	ppm	0.00
91) Perylene-d12	13.417	264	2280538	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	524942	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1216670	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2218794	40.00	ppm	0.00
109) Chrysene-d12a	11.823	240	1988582	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2083688	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2218794	40.00	ppm	0.00
115) Chrysene-d12b	11.823	240	1988582	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	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%	
106) 1-chlorooctadecane	10.042	57	10149	0.69	ppm	0.00
107) o-terphenyl	9.143	230	30286	0.89	ppm	0.00
Target Compounds						Qvalue
102) Benzaldehyde	4.030	105	11587m	0.82	ppm	
104) 1,2,4,5-Tetrachloroben...	6.116	216	15312	0.92	ppm	96
108) Atrazine	8.389	215	3970	0.61	ppm #	68
114) Pentachloronitrobenzene	8.485	295	1659	0.58	ppm #	70

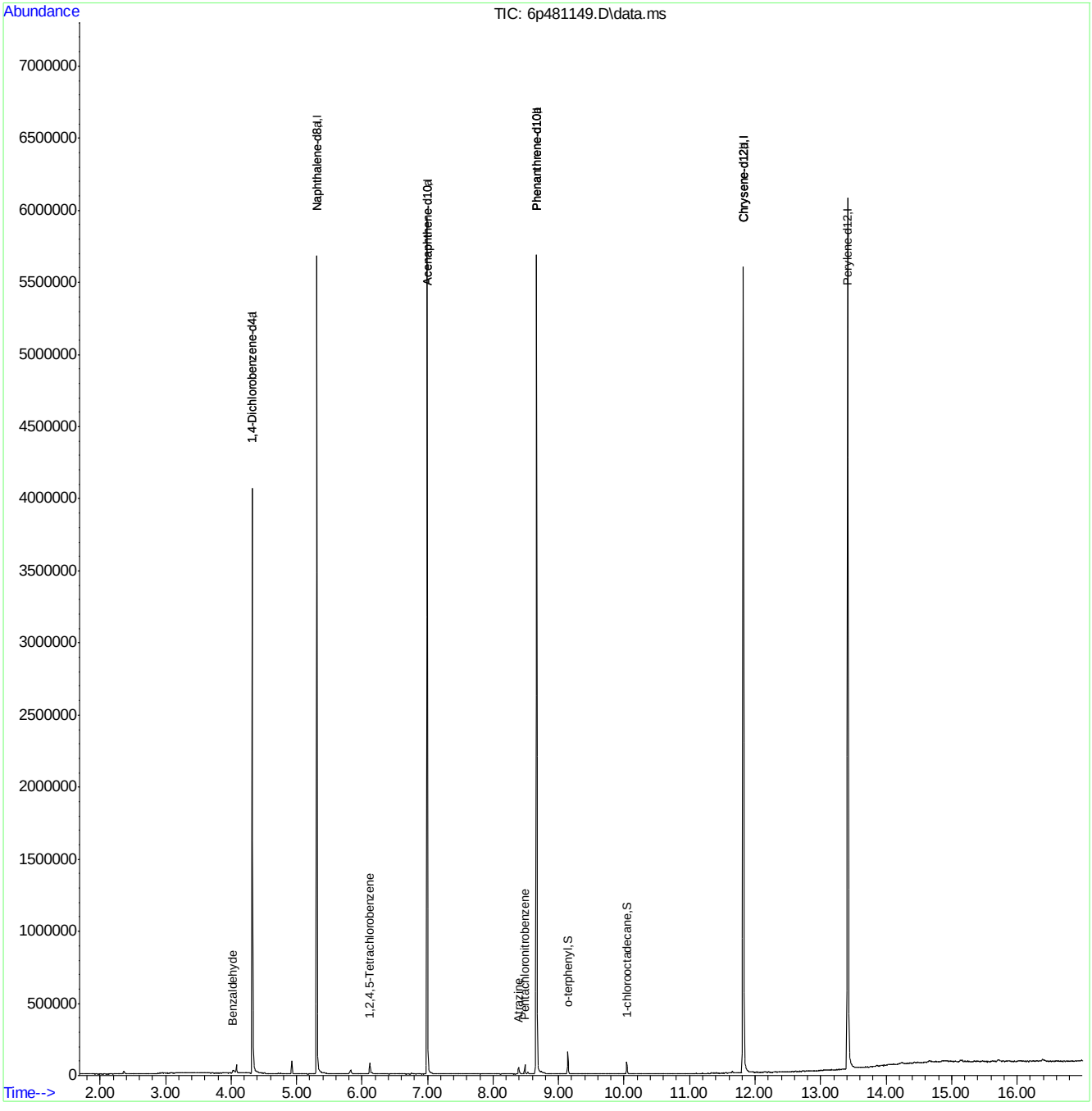
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.22
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481149.D
Acq On : 16 Apr 2019 6:28 pm
Operator : angelar
Sample : ic2563-1
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 17 08:47:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration



Manual Integration Approval Summary

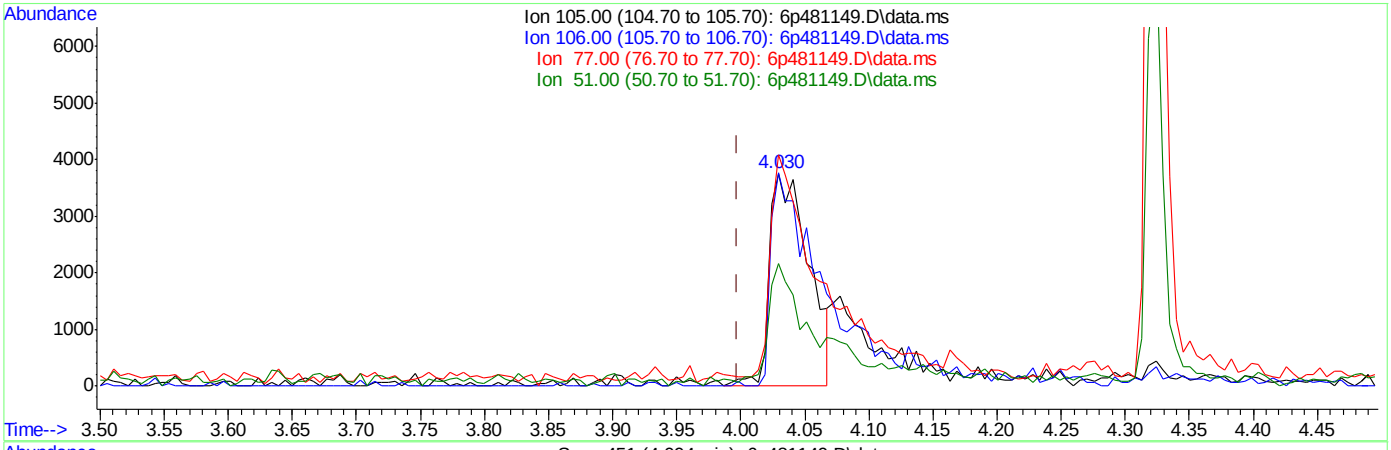
Sample Number:	E6P2563-IC2563	**Method:**	SW846 8270D
Lab FileID:	6P481149.D	**Analyst approved:**	04/17/19 09:11 Ying Li
Injection Time:	04/16/19 18:28	**Supervisor approved:**	04/17/19 13:47 Kristi Schollenberger

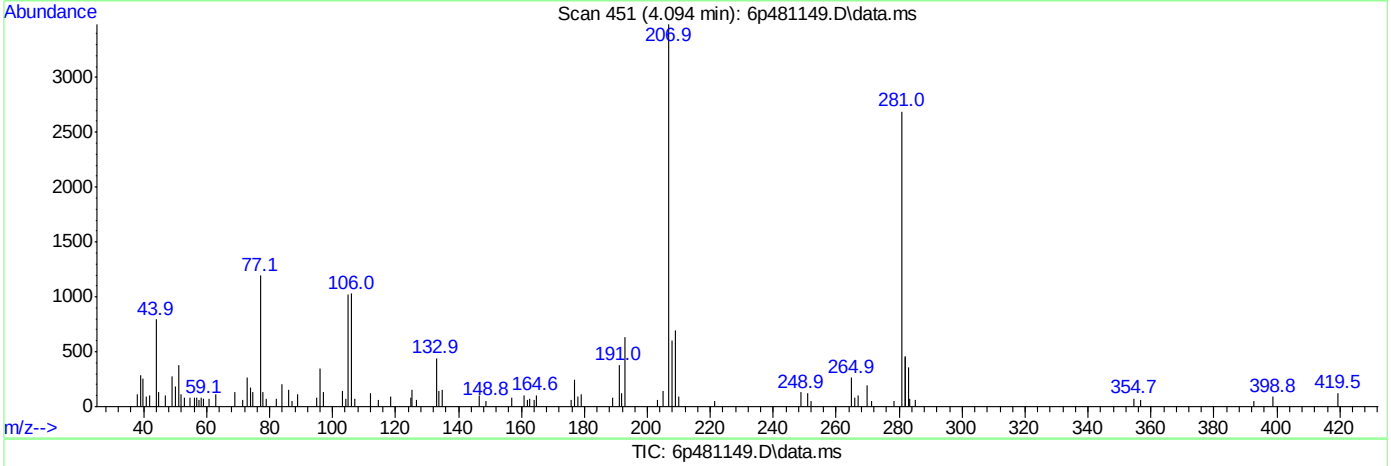
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzaldehyde	100-52-7		4.03	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481149.D
Acq On : 16 Apr 2019 6:28 pm
Operator : angelar
Sample : ic2563-1
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 16 18:45:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration





TIC: 6p481149.D\data.ms

(102) Benzaldehyde

4.030min (+0.032) 0.57ppm

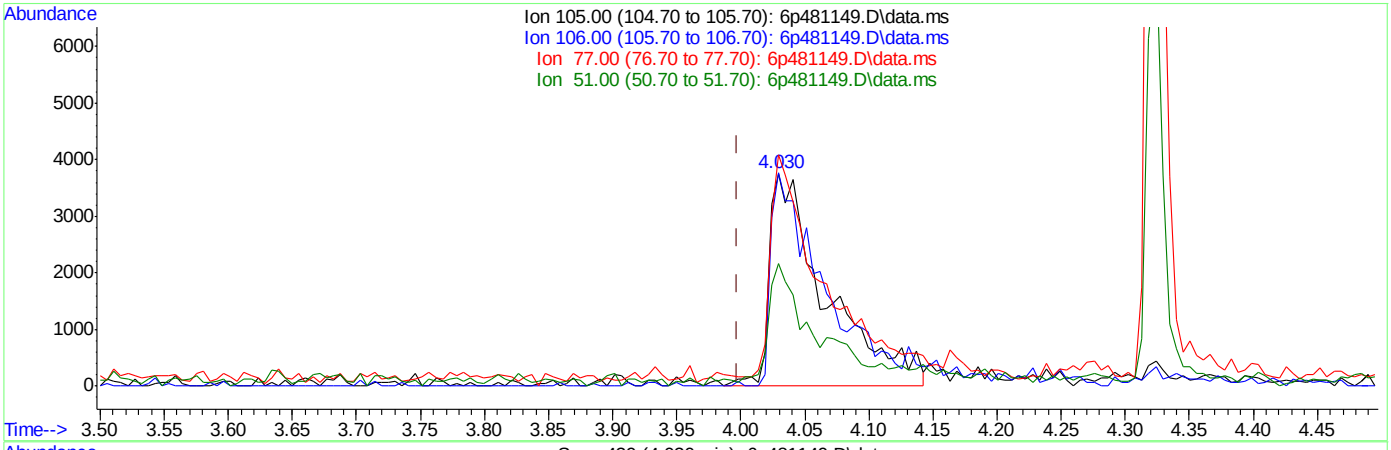
response 7980

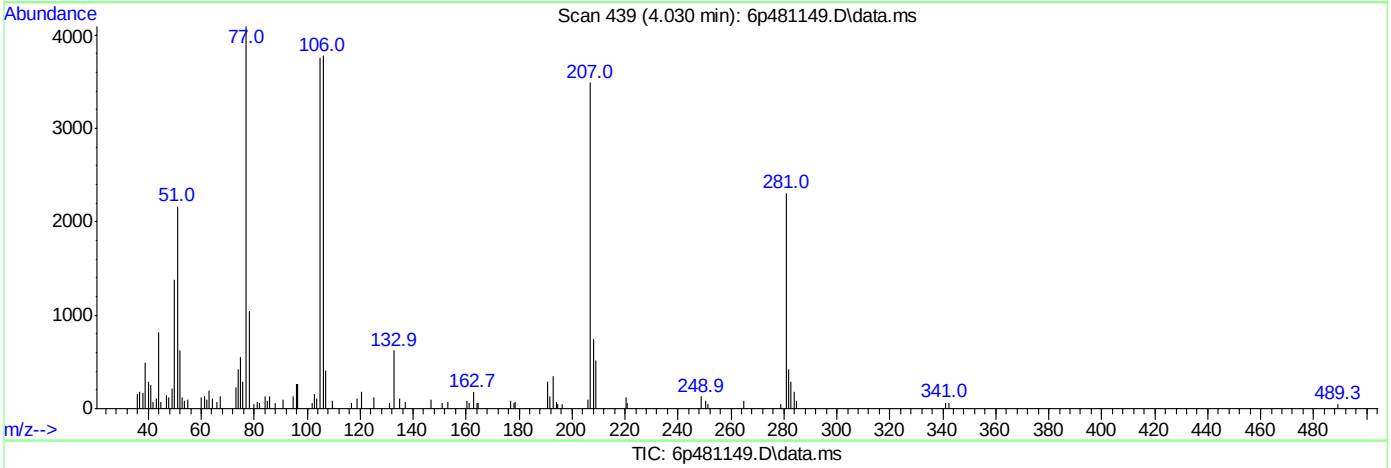
Ion	Exp%	Act%
105.00	100	100
106.00	102.50	96.85
77.00	100.50	100.75
51.00	48.00	54.56

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481149.D
Acq On : 16 Apr 2019 6:28 pm
Operator : angelar
Sample : ic2563-1
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 16 18:45:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Apr 16 17:34:12 2019
QLast Update : Tue Apr 16 17:34:12 2019
Response via : Initial Calibration





TIC: 6p481149.D\data.ms

(102) Benzaldehyde

4.030min (+0.032) 0.82ppm m

response 11587

Ion	Exp%	Act%
105.00	100	100
106.00	102.50	100.72
77.00	100.50	109.06
51.00	48.00	57.73

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481150.D
Acq On : 16 Apr 2019 6:52 pm
Operator : angelar
Sample : icv2563-50
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 17 09:03:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 08:57:32 2019
QLast Update : Wed Apr 17 09:00:59 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	547737	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2162604	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1317782	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2463908	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	2141196	40.00	ppm	-0.01
91) Perylene-d12	13.417	264	2485766	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	547737	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1317782	40.00	ppm	0.00
105) Phenanthrene-d10a	8.667	188	2463908	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	2141196	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2162604	40.00	ppm	0.00
113) Phenanthrene-d10b	8.667	188	2463908	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	2141196	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	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%			
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
102) Benzaldehyde	4.003	105	736053	54.14	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.110	216	863576	49.10	ppm	99
108) Atrazine	8.400	215	360337	49.87	ppm	99
114) Pentachloronitrobenzene	8.485	295	128354	42.56	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

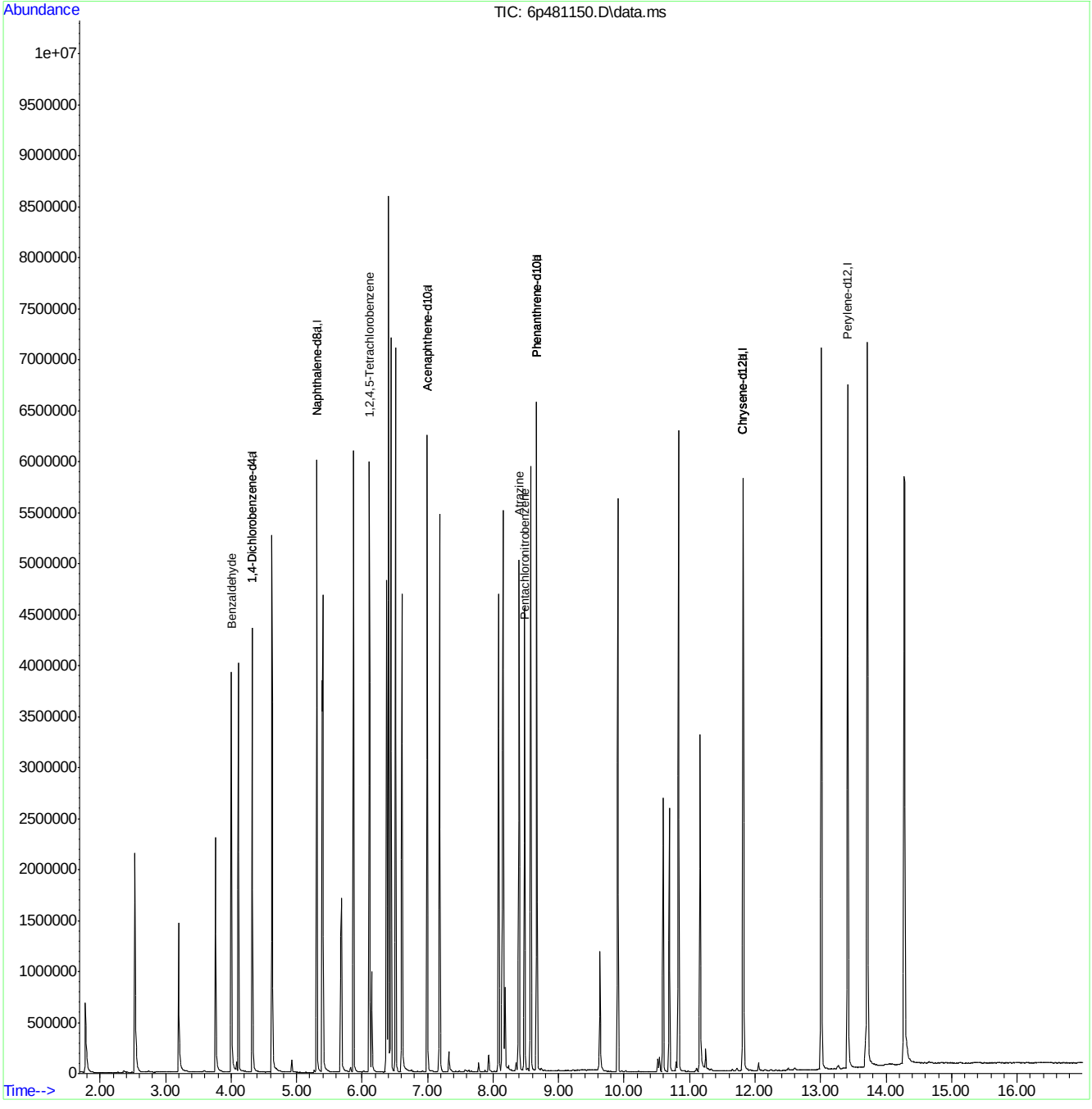
9.6.23

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481150.D
Acq On : 16 Apr 2019 6:52 pm
Operator : angelar
Sample : icv2563-50
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 17 09:03:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 08:57:32 2019
QLast Update : Wed Apr 17 09:00:59 2019
Response via : Initial Calibration



M6P2562.M Wed Apr 17 09:03:21 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481151.D
Acq On : 16 Apr 2019 7:16 pm
Operator : angelar
Sample : icv2563-50
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 17 09:04:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Wed Apr 17 09:00:59 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	503646	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2001178	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1073633	40.00	ppm	0.00
69) Phenanthrene-d10	8.662	188	2140755	40.00	ppm	0.00
83) Chrysene-d12	11.817	240	2056041	40.00	ppm	-0.01
91) Perylene-d12	13.416	264	2150790	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.324	152	503646	40.00	ppm	0.00
103) Acenaphthene-d10a	6.993	164	1073633	40.00	ppm	0.00
105) Phenanthrene-d10a	8.662	188	2140755	40.00	ppm	0.00
109) Chrysene-d12a	11.817	240	2056041	40.00	ppm	0.00
111) Naphthalene-d8a	5.308	136	2001178	40.00	ppm	0.00
113) Phenanthrene-d10b	8.662	188	2140755	40.00	ppm	0.00
115) Chrysene-d12b	11.817	240	2056041	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	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%			
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
112) Hydroquinone	5.714	110	806354	52.48	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

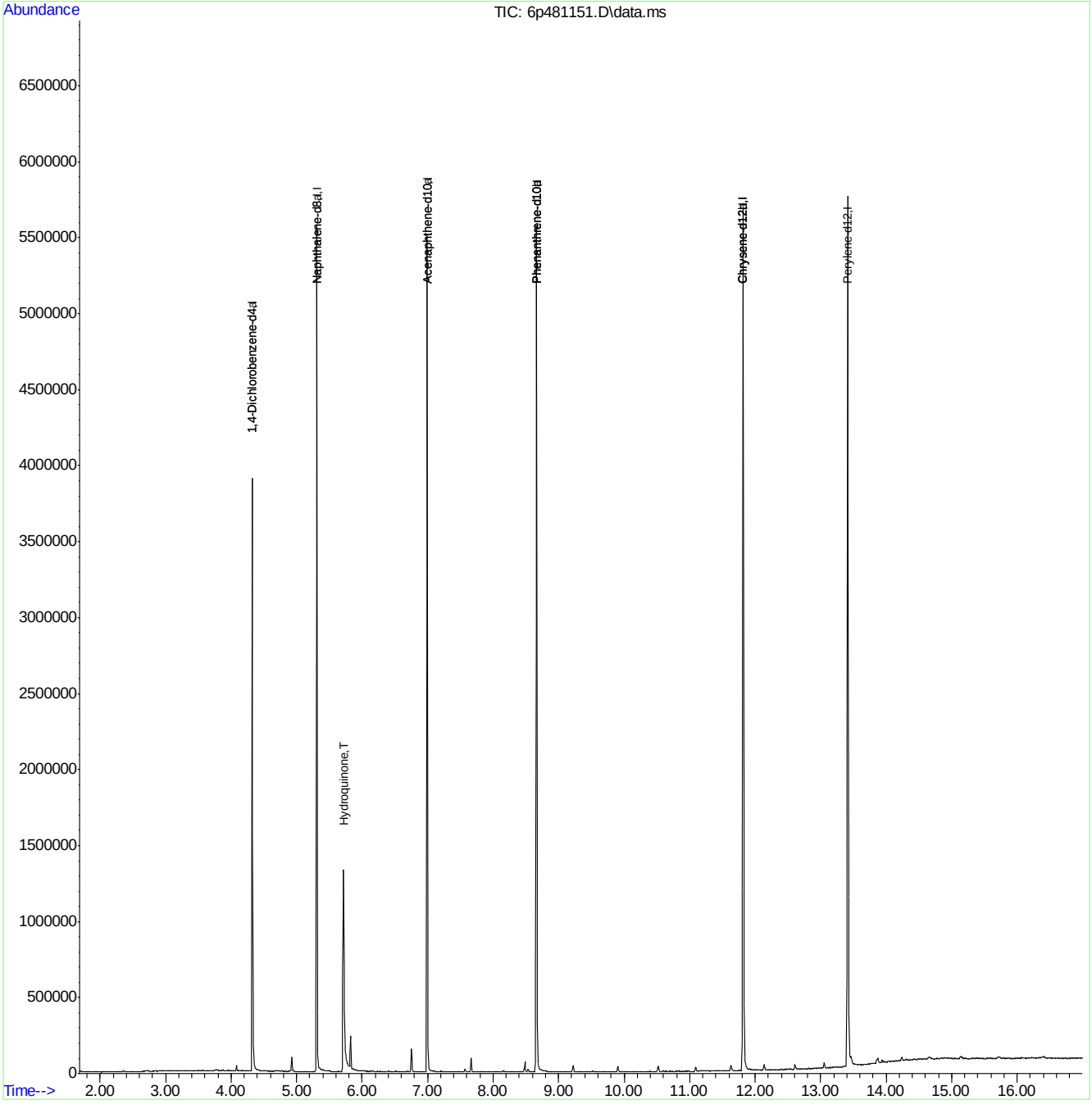
9.6.24

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2562\
Data File : 6p481151.D
Acq On : 16 Apr 2019 7:16 pm
Operator : angelar
Sample : icv2563-50
Misc : op17006,e6p2563,1000,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 17 09:04:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Wed Apr 17 09:00:59 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/10/19 12:55

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481783.D
Acq On : 10 May 2019 9:11 am
Operator : angelar
Sample : cc2562-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 10:34:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	553833	40.00	ppm	-0.04
24) Naphthalene-d8	5.188	136	2315101	40.00	ppm	-0.04
47) Acenaphthene-d10	6.857	164	1363428	40.00	ppm	-0.05
69) Phenanthrene-d10	8.526	188	2439898	40.00	ppm	-0.05
83) Chrysene-d12	11.692	240	2093121	40.00	ppm	-0.04
91) Perylene-d12	13.291	264	2208009	40.00	ppm	-0.04
101) 1,4-Dichlorobenzene-d4a	4.209	152	553833	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.857	164	1363428	40.00	ppm	-0.05
105) Phenanthrene-d10a	8.526	188	2439898	40.00	ppm	-0.05
109) Chrysene-d12a	11.692	240	2093121	40.00	ppm	-0.04
111) Naphthalene-d8a	5.188	136	2315101	40.00	ppm	-0.04
113) Phenanthrene-d10b	8.526	188	2439898	40.00	ppm	-0.05
115) Chrysene-d12b	11.692	240	2093121	40.00	ppm	-0.04
System Monitoring Compounds						
5) 2-Fluorophenol	3.236	112	928562	57.31	ppm	0.00
Spiked Amount 50.000			Recovery	=	114.62%	
8) Phenol-d5	3.990	99	1162002	58.74	ppm	-0.04
Spiked Amount 50.000			Recovery	=	117.48%	
25) Nitrobenzene-d5	4.632	82	1109354	57.58	ppm	-0.03
Spiked Amount 50.000			Recovery	=	115.16%	
51) 2-Fluorobiphenyl	6.172	172	2446127	50.78	ppm	-0.05
Spiked Amount 50.000			Recovery	=	101.56%	
73) 2,4,6-Tribromophenol	7.739	330	355479	45.28	ppm	-0.04
Spiked Amount 50.000			Recovery	=	90.56%	
85) Terphenyl-d14	10.451	244	2509500	51.46	ppm	-0.03
Spiked Amount 50.000			Recovery	=	102.92%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.621	88	425003	58.29	ppm	96
3) Pyridine	1.936	79	1011544	61.00	ppm	97
4) N-Nitrosodimethylamine	1.915	74	570753	59.05	ppm	97
6) Indene	4.397	116	1675267	55.79	ppm	100
7) Cumene	3.600	105	2454969	57.06	ppm	99
9) Phenol	4.001	94	1278195	52.94	ppm	92
10) Aniline	3.974	93	1252154	58.11	ppm	92
11) bis(2-Chloroethyl)ether	4.027	93	914381	54.66	ppm	98
12) 2-Chlorophenol	4.070	128	1023818	53.47	ppm	97
13) Decane	4.102	43	836856	56.94	ppm	99
14) 1,3-Dichlorobenzene	4.167	146	1121951	51.40	ppm	99
15) 1,4-Dichlorobenzene	4.220	146	1144468	51.22	ppm	99
16) Benzyl alcohol	4.338	108	644240	61.95	ppm	96
17) 1,2-Dichlorobenzene	4.332	146	1087381	52.98	ppm	100
18) Acetophenone	4.520	105	1490772	57.92	ppm	97
19) 2-Methylphenol	4.439	108	940657	57.88	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.423	121	324178	54.35	ppm	86
21) 3&4-Methylphenol	4.552	108	993445	58.13	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481783.D
Acq On : 10 May 2019 9:11 am
Operator : angelar
Sample : cc2562-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 10:34:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.530	70	675458	58.66 ppm	95
23) Hexachloroethane	4.573	201	375609	48.17 ppm	85
26) Nitrobenzene	4.643	77	1108178	56.53 ppm	90
27) Quinoline	5.514	129	2182770	51.97 ppm	97
28) Isophorone	4.830	82	1879414	56.10 ppm	97
29) 2-Nitrophenol	4.889	139	630209	54.98 ppm	91
30) 2,4-Dimethylphenol	4.947	107	1125035	64.30 ppm	95
31) Benzoic acid	5.119	105	913242	51.66 ppm	92
32) bis(2-Chloroethoxy)met...	5.001	93	1218194	57.88 ppm	98
33) 2,4-Dichlorophenol	5.097	162	866479	50.10 ppm	96
34) 2,6-Dichlorophenol	5.274	162	869348	50.75 ppm	98
35) 1,3,5-Trichlorobenzene	4.894	180	965067	47.09 ppm	98
36) 1,2,4-Trichlorobenzene	5.145	180	897579	45.33 ppm	98
37) 1,2,3-Trichlorobenzene	5.333	180	908447	46.10 ppm	97
38) Naphthalene	5.204	128	3115939	51.68 ppm	99
39) 4-Chloroaniline	5.268	127	1264644	52.07 ppm	98
40) 2,3-Dichloroaniline	6.097	161	1077003	49.08 ppm	97
41) Caprolactam	5.616	55	430742m	58.20 ppm	
42) Hexachlorobutadiene	5.311	225	512208	45.46 ppm	99
43) 4-Chloro-3-methylphenol	5.734	107	1010934	56.95 ppm	88
44) 2-Methylnaphthalene	5.814	141	1753105	51.41 ppm	97
45) 1-Methylnaphthalene	5.905	141	1990749	52.25 ppm	98
46) Dimethylnaphthalene	6.434	156	2025735	49.97 ppm	98
48) Hexachlorocyclopentadiene	5.969	237	685462	74.82 ppm	98
49) 2,4,6-Trichlorophenol	6.113	196	619683	48.72 ppm	99
50) 2,4,5-Trichlorophenol	6.167	196	671440	49.63 ppm	99
52) 2-Chloronaphthalene	6.290	162	1986545	49.40 ppm	95
53) Biphenyl	6.274	154	2741314	52.56 ppm	99
54) 2-Nitroaniline	6.418	65	647398	61.94 ppm	85
55) Dimethylphthalate	6.606	163	2372966	50.81 ppm	99
56) Acenaphthylene	6.707	152	3360424	54.16 ppm	99
57) 2,6-Dinitrotoluene	6.675	165	577750	54.71 ppm	87
58) 3-Nitroaniline	6.857	138	640654	55.79 ppm	91
59) Acenaphthene	6.894	153	2174573	52.79 ppm	99
60) 2,4-Dinitrophenol	6.991	184	651346	89.12 ppm	93
61) 4-Nitrophenol	7.114	109	333149	56.61 ppm	90
62) Dibenzofuran	7.082	168	2902160	50.60 ppm	90
63) 2,4-Dinitrotoluene	7.124	165	780528	53.22 ppm	83
64) 2,3,4,6-Tetrachlorophenol	7.247	232	516887	46.69 ppm	93
65) Diethylphthalate	7.381	149	2419416	52.54 ppm	98
66) Fluorene	7.461	166	2414678	51.86 ppm	99
67) 4-Chlorophenyl-phenyle...	7.472	204	1132281	47.97 ppm	94
68) 4-Nitroaniline	7.542	138	589817	48.51 ppm	90
70) 4,6-Dinitro-2-methylph...	7.590	198	458102	48.62 ppm	85
71) n-Nitrosodiphenylamine	7.616	169	1729274	51.30 ppm	99
72) 1,2-Diphenylhydrazine	7.654	77	2320536	60.80 ppm	98
74) 4-Bromophenyl-phenylether	8.023	248	623589	47.56 ppm	88
75) Hexachlorobenzene	8.098	284	728217	47.28 ppm	95
76) Pentachlorophenol	8.349	266	879544	86.44 ppm	98
77) Phenanthrene	8.558	178	3466481	52.92 ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481783.D
Acq On : 10 May 2019 9:11 am
Operator : angelar
Sample : cc2562-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 10:34:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

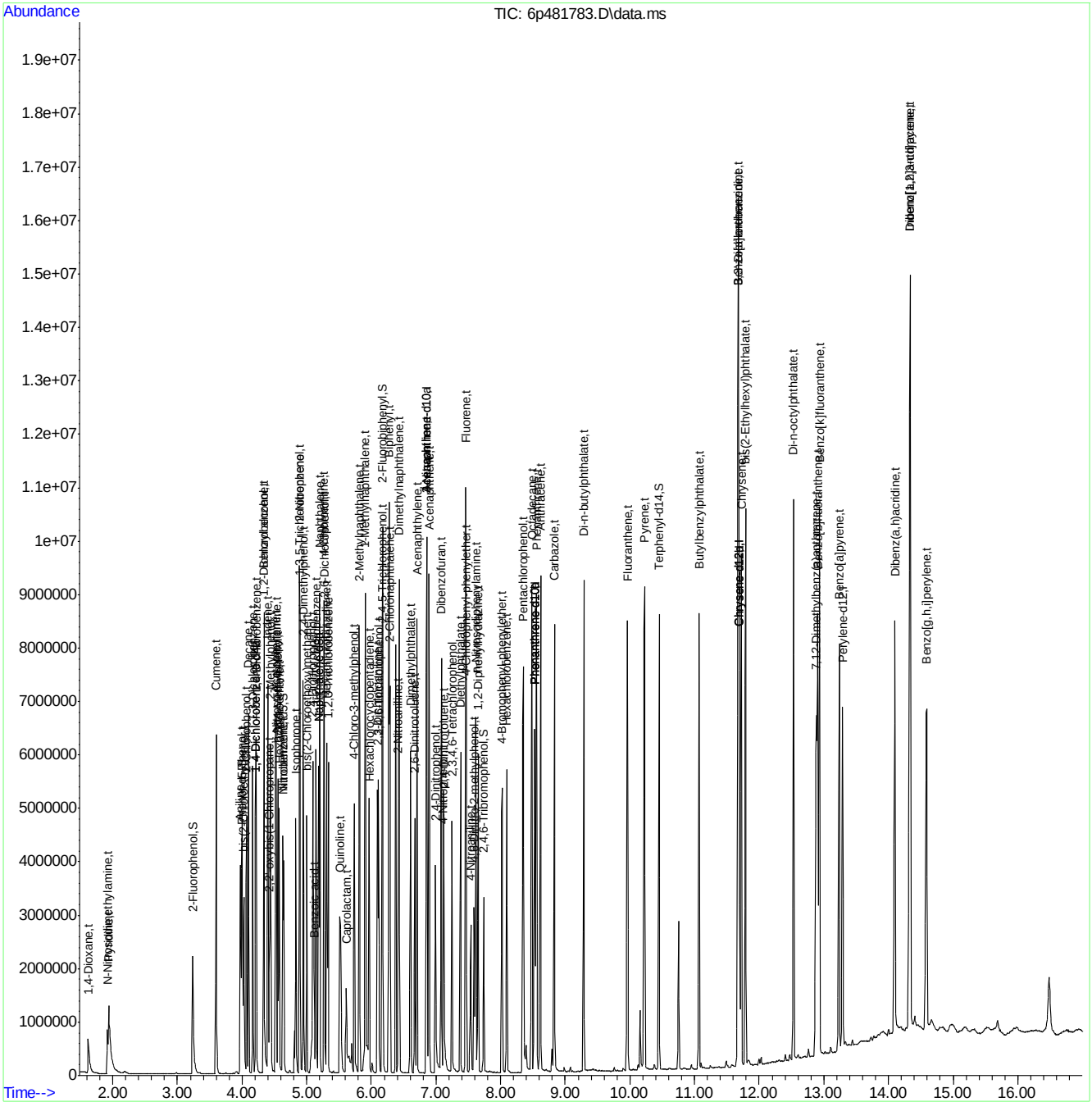
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78)	Anthracene	8.617	178	3566167	54.28 ppm	100
79)	Carbazole	8.831	167	3295691	52.99 ppm	99
80)	Di-n-butylphthalate	9.285	149	4558228	62.75 ppm	98
81)	Fluoranthene	9.964	202	3638049	51.12 ppm	98
82)	Octadecane	8.483	57	1540773	70.18 ppm	98
84)	Pyrene	10.227	202	3833374	54.97 ppm	99
86)	Butylbenzylphthalate	11.072	149	2035322	67.72 ppm	94
87)	Benzo[a]anthracene	11.676	228	3655482	54.83 ppm	100
88)	3,3'-Dichlorobenzidine	11.676	252	1483339	59.22 ppm	99
89)	Chrysene	11.724	228	3304807	50.55 ppm	99
90)	bis(2-Ethylhexyl)phtha...	11.788	149	2926089	70.43 ppm	99
92)	Di-n-octylphthalate	12.532	149	5017691	76.29 ppm	99
93)	Benzo[b]fluoranthene	12.906	252	3733608	55.36 ppm	98
94)	Benzo[k]fluoranthene	12.933	252	3406335	57.06 ppm	98
95)	Benzo[a]pyrene	13.238	252	3085844	55.69 ppm	97
96)	Indeno[1,2,3-cd]pyrene	14.334	276	4365109	59.00 ppm	98
97)	Dibenz(a,h)acridine	14.099	279	3141223	57.81 ppm	99
98)	Dibenz[a,h]anthracene	14.334	278	4065859	62.02 ppm	97
99)	7,12-Dimethylbenz(a)an...	12.885	256	1618498	50.87 ppm	99
100)	Benzo[g,h,i]perylene	14.591	276	3132819	54.30 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481783.D
Acq On : 10 May 2019 9:11 am
Operator : angelar
Sample : cc2562-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 10:34:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration



Manual Integration Approval Summary

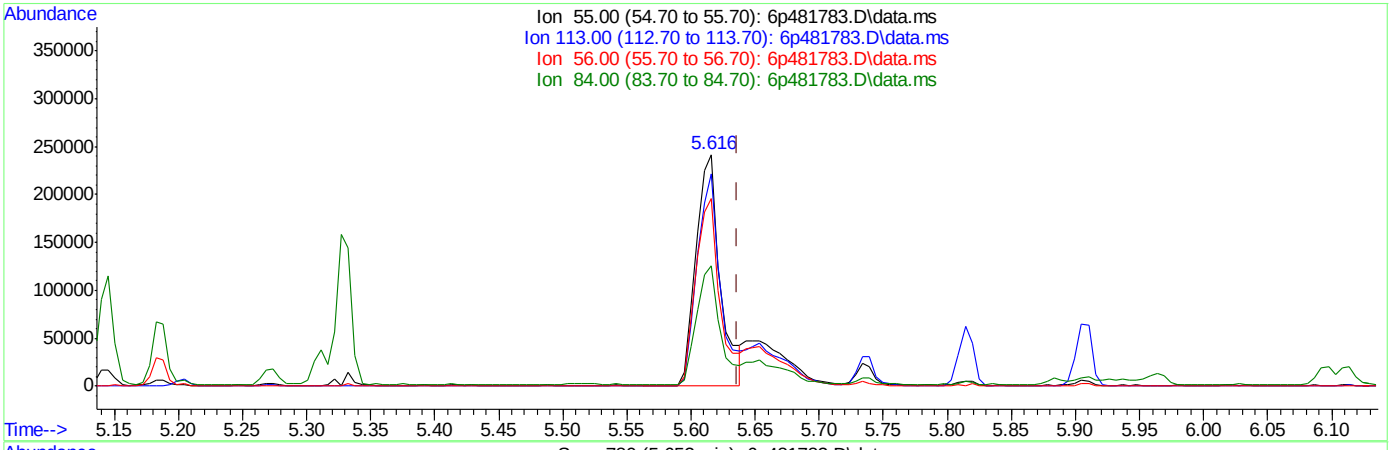
Sample Number:	E6P2588-CC2562	**Method:**	SW846 8270D
Lab FileID:	6P481783.D	**Analyst approved:**	05/10/19 10:38 Ying Li
Injection Time:	05/10/19 09:11	**Supervisor approved:**	05/10/19 12:55 Kristi Schollenberger

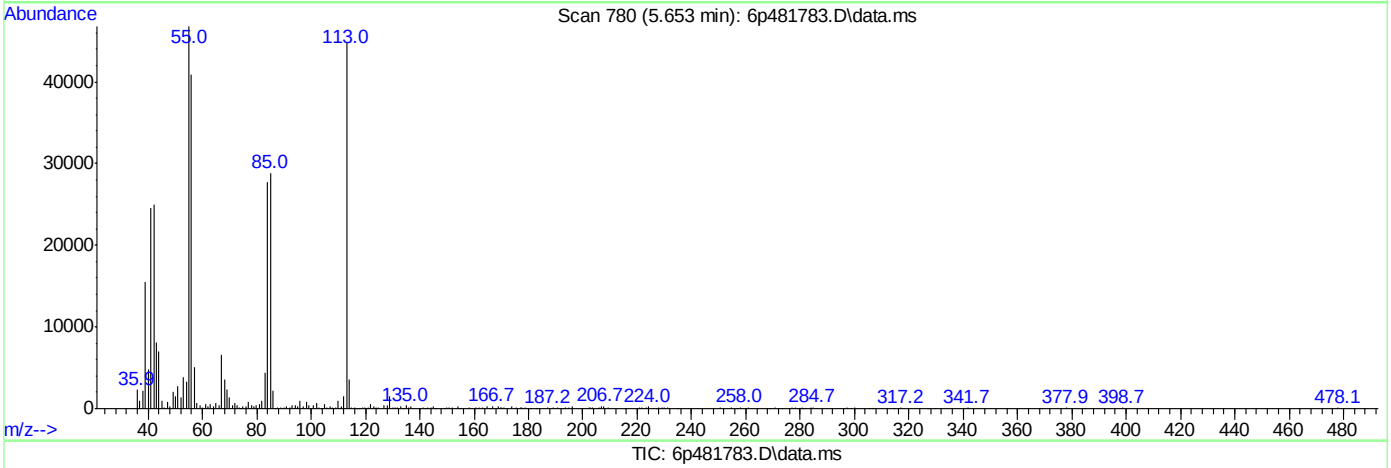
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.62	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481783.D
Acq On : 10 May 2019 9:11 am
Operator : angelar
Sample : cc2562-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 09:28:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration





TIC: 6p481783.D\data.ms

(41) Caprolactam (t)

5.616min (-0.020) 42.90ppm

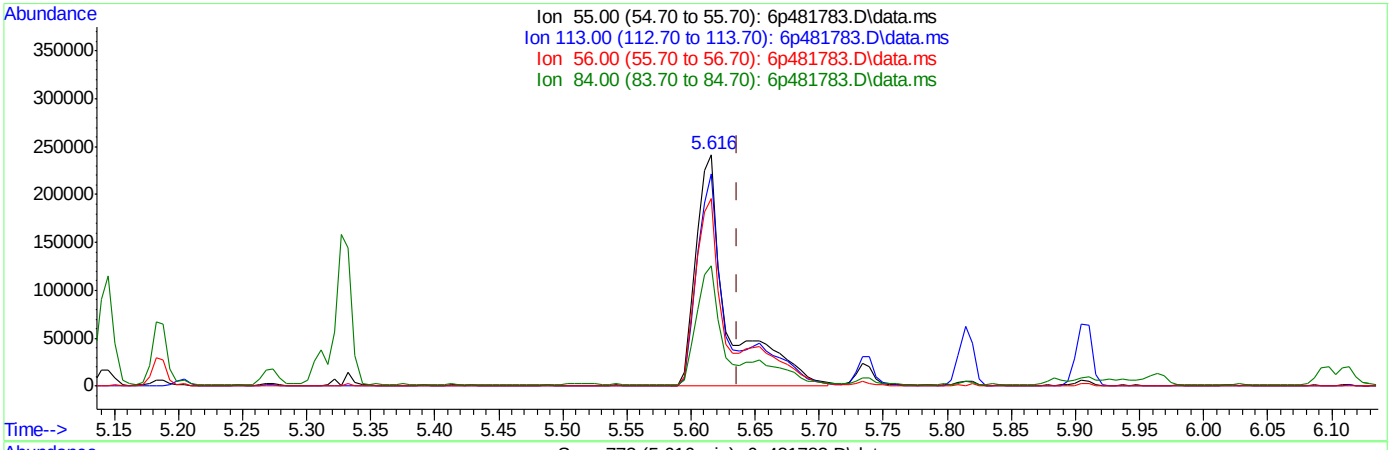
response 317504

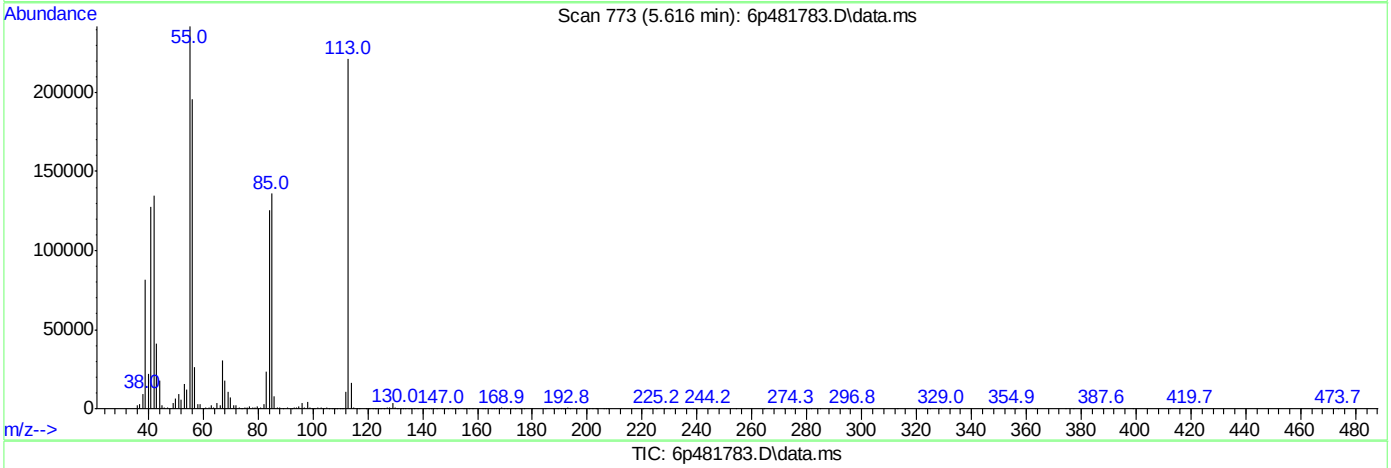
Ion	Exp%	Act%
55.00	100	100
113.00	94.10	92.01
56.00	81.20	80.98
84.00	53.30	51.65

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481783.D
Acq On : 10 May 2019 9:11 am
Operator : angelar
Sample : cc2562-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 10 09:28:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration





TIC: 6p481783.D\data.ms

(41) Caprolactam (t)

5.616min (-0.020) 58.20ppm m

response 430742

Ion	Exp%	Act%
55.00	100	100
113.00	94.10	91.40
56.00	81.20	80.84
84.00	53.30	51.93

9.6.25.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481784.D
Acq On : 10 May 2019 9:35 am
Operator : angelar
Sample : cc2563-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 10 10:35:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.209	152	506757	40.00	ppm	-0.04
24) Naphthalene-d8	5.183	136	2014017	40.00	ppm	-0.05
47) Acenaphthene-d10	6.852	164	1154270	40.00	ppm	-0.06
69) Phenanthrene-d10	8.520	188	2139358	40.00	ppm	-0.06
83) Chrysene-d12	11.681	240	1687711	40.00	ppm	-0.05
91) Perylene-d12	13.281	264	1879577	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.209	152	506757	40.00	ppm	-0.04
103) Acenaphthene-d10a	6.852	164	1154270	40.00	ppm	-0.06
105) Phenanthrene-d10a	8.520	188	2139358	40.00	ppm	-0.06
109) Chrysene-d12a	11.681	240	1687711	40.00	ppm	-0.05
111) Naphthalene-d8a	5.183	136	2014017	40.00	ppm	-0.05
113) Phenanthrene-d10b	8.520	188	2139358	40.00	ppm	-0.06
115) Chrysene-d12b	11.681	240	1687711	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	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%			
106) 1-chlorooctadecane	9.900	57	843370	65.98	ppm	-0.04
107) o-terphenyl	9.002	230	1614926	51.75	ppm	-0.05
Target Compounds						Qvalue
102) Benzaldehyde	3.883	105	768562	61.11	ppm	98
104) 1,2,4,5-Tetrachloroben...	5.980	216	730642	47.42	ppm	99
108) Atrazine	8.264	215	311984	49.73	ppm	81
112) Hydroquinone	5.611	110	1001002	64.73	ppm	97
114) Pentachloronitrobenzene	8.344	295	124365	47.50	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

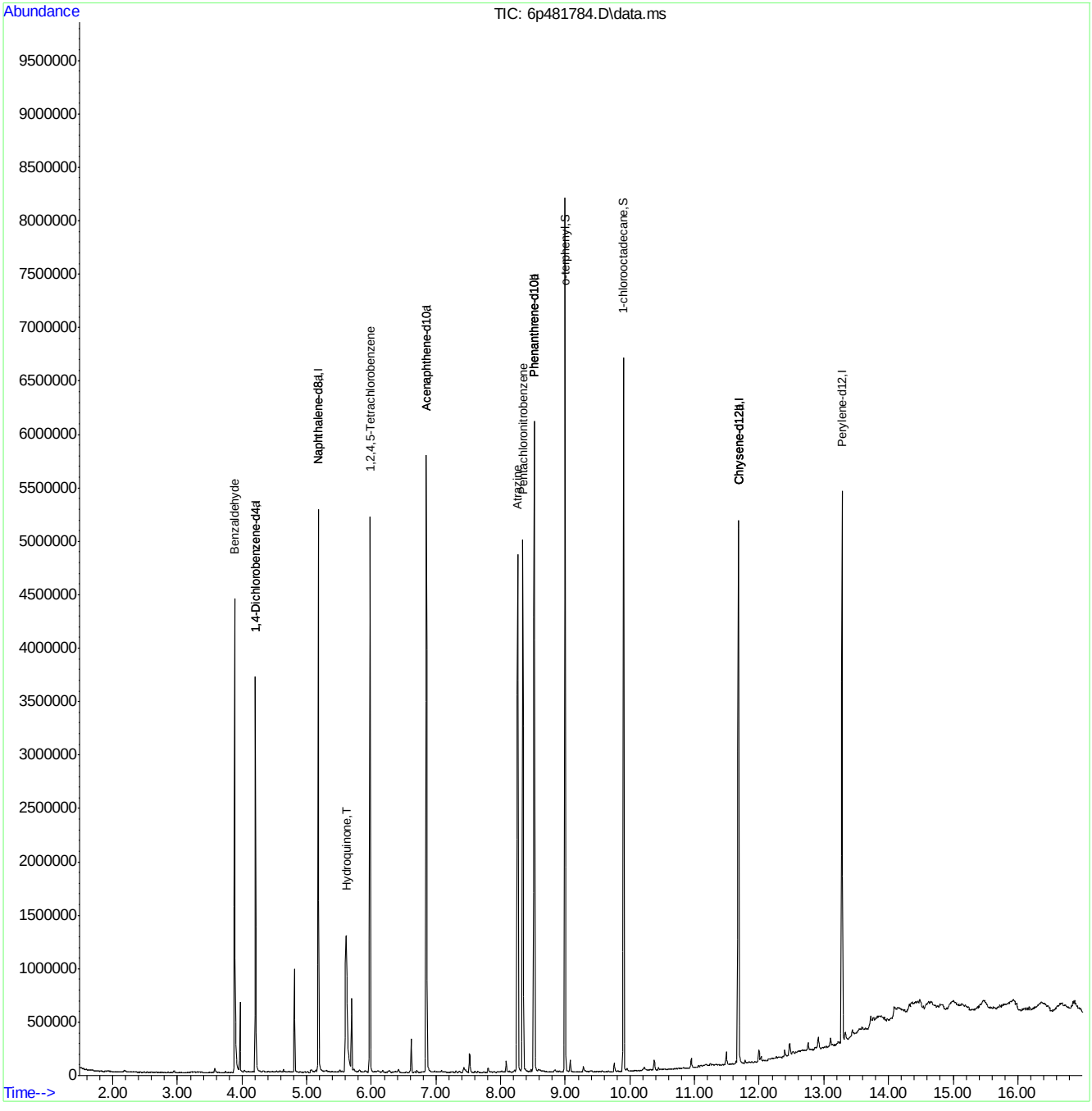
9.6.26

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2588\
Data File : 6p481784.D
Acq On : 10 May 2019 9:35 am
Operator : angelar
Sample : cc2563-50
Misc : op17006,e6p2588,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 10 10:35:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon May 06 09:58:38 2019
QLast Update : Mon May 06 09:58:38 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/30/19 18:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 11:22:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.844	152	191052	40.00	ppm	0.00
24) Naphthalene-d8	4.779	136	704654	40.00	ppm	0.00
47) Acenaphthene-d10	6.023	164	494907	40.00	ppm	0.00
69) Phenanthrene-d10	7.471	188	831444	40.00	ppm	0.00
83) Chrysene-d12	12.199	240	860081	40.00	ppm	0.03
91) Perylene-d12	15.132	264	968307	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4A	3.844	152	191052	40.00	ppm	0.00
111) Naphthalene-d8A	4.779	136	704654	40.00	ppm	0.00
120) Acenaphthene-d10A	6.023	164	494907	40.00	ppm	0.00
131) Phenanthrene-d10A	7.471	188	831444	40.00	ppm	0.00
146) Chrysene-d12A	12.199	240	860081	40.00	ppm	0.03
153) Perylene-d12A	15.132	264	968307	40.00	ppm	0.02
157) 1,4-Dichlorobenzene-d4b	3.844	152	191052	40.00	ppm	0.00
159) Phenanthrene-d10b	7.471	188	831444	40.00	ppm	0.00
161) Chrysene-d12b	12.199	240	860081	40.00	ppm	0.03
163) Naphthalene-d8b	4.779	136	704654	40.00	ppm	0.00
165) Acenaphthene-d10b	6.023	164	494907	40.00	ppm	0.00
167) Naphthalene-d8c	4.779	136	704654	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.844	152	191052	40.00	ppm	0.00
174) Chrysene-d12c	12.199	240	860081	40.00	ppm	0.03
176) Chrysene-d12d	12.199	240	860081	40.00	ppm	0.03
178) Naphthalene-d8d	4.779	136	704654	40.00	ppm	0.00
180) Chrysene-d12D	12.199	240	860081	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.845	112	738478	102.29	ppm	0.00
Spiked Amount 50.000			Recovery	=	204.58%	
8) Phenol-d5	3.657	99	806372	91.05	ppm	0.00
Spiked Amount 50.000			Recovery	=	182.10%	
25) Nitrobenzene-d5	4.276	82	716479	91.95	ppm	0.01
Spiked Amount 50.000			Recovery	=	183.90%	
51) 2-Fluorobiphenyl	5.559	172	1303863	81.49	ppm	0.00
Spiked Amount 50.000			Recovery	=	162.98%	
73) 2,4,6-Tribromophenol	6.718	330	329089	110.16	ppm	0.01
Spiked Amount 50.000			Recovery	=	220.32%	
85) Terphenyl-d14	10.142	244	2080648	99.30	ppm	0.02
Spiked Amount 50.000			Recovery	=	198.60%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.205	88	323431	101.12	ppm	97
3) Pyridine	1.461	79	668102	122.49	ppm	98
4) N-Nitrosodimethylamine	1.424	42	349141	104.42	ppm	97
6) Indene	4.036	116	951380	89.47	ppm	98
7) Cumene	3.208	105	1532779	88.17	ppm	97
9) Phenol	3.673	94	834990	89.36	ppm	83
10) Aniline	3.614	93	487326	146.02	ppm	97
11) bis(2-Chloroethyl)ether	3.662	93	645165	84.24	ppm	93
12) 2-Chlorophenol	3.710	128	659212	96.05	ppm	96
13) Decane	3.753	43	385520	84.77	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 11:22:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
14)	1,3-Dichlorobenzene	3.801	146	704623	91.41	ppm		97
15)	1,4-Dichlorobenzene	3.854	146	690861	90.32	ppm		98
16)	Benzyl alcohol	3.999	108	378129	104.76	ppm		93
17)	1,2-Dichlorobenzene	3.967	146	710732	93.60	ppm		100
18)	Acetophenone	4.164	105	929649	95.94	ppm		98
19)	2-Methylphenol	4.111	108	606344	97.62	ppm		98
20)	2,2'-oxybis(1-Chloropr...	4.079	121	157775	96.73	ppm	#	86
21)	3&4-Methylphenol	4.228	108	602763	97.16	ppm		98
22)	n-Nitroso-di-n-propyla...	4.196	70	417770	93.04	ppm		94
23)	Hexachloroethane	4.212	201	285811	92.41	ppm		98
26)	Nitrobenzene	4.287	77	688279	91.76	ppm		98
27)	Quinoline	5.088	129	1397927	101.75	ppm		98
28)	Isophorone	4.479	82	1240381	91.62	ppm		97
29)	2-Nitrophenol	4.522	139	337539	85.89	ppm		89
30)	2,4-Dimethylphenol	4.597	107	673750	95.13	ppm		93
31)	Benzoic acid	4.816	105	530432m	98.57	ppm		
32)	bis(2-Chloroethoxy)met...	4.640	93	729395	90.78	ppm		98
33)	2,4-Dichlorophenol	4.720	162	646381	100.20	ppm		97
34)	2,6-Dichlorophenol	4.864	162	574813	93.00	ppm		97
35)	1,3,5-Trichlorobenzene	4.522	180	633849	86.75	ppm		98
36)	1,2,4-Trichlorobenzene	4.747	180	641020	92.79	ppm		99
37)	1,2,3-Trichlorobenzene	4.907	180	568028	87.26	ppm		99
38)	Naphthalene	4.800	128	1617241	89.03	ppm		99
39)	4-Chloroaniline	4.864	127	589201	91.26	ppm		98
40)	2,3-Dichloroaniline	5.500	161	762640	97.00	ppm		98
41)	Caprolactam	5.190	55	214924	75.60	ppm		97
42)	Hexachlorobutadiene	4.896	225	368094	85.40	ppm		98
43)	4-Chloro-3-methylphenol	5.259	107	628357	92.83	ppm		96
44)	2-Methylnaphthalene	5.291	141	897762	87.43	ppm		98
45)	1-Methylnaphthalene	5.361	142	1212177	92.42	ppm		98
46)	Dimethylnaphthalene	5.740	156	1097275	90.80	ppm		97
48)	Hexachlorocyclopentadiene	5.409	237	776571	178.10	ppm		97
49)	2,4,6-Trichlorophenol	5.521	196	485225	94.62	ppm		99
50)	2,4,5-Trichlorophenol	5.564	196	463339	86.94	ppm		95
52)	2-Chloronaphthalene	5.639	162	1105914	79.95	ppm		97
53)	Biphenyl	5.628	154	1373104	79.00	ppm		100
54)	2-Nitroaniline	5.735	65	334609	76.16	ppm		98
55)	Dimethylphthalate	5.863	163	1640498	91.74	ppm		99
56)	Acenaphthylene	5.922	152	1941271	90.33	ppm		100
57)	2,6-Dinitrotoluene	5.906	165	361252	92.13	ppm		97
58)	3-Nitroaniline	6.034	138	378617	94.55	ppm		98
59)	Acenaphthene	6.055	153	1153648	84.84	ppm		97
60)	2,4-Dinitrophenol	6.120	184	518293	215.00	ppm		88
61)	4-Nitrophenol	6.221	109	283878	96.98	ppm		95
62)	Dibenzofuran	6.189	168	1896993	92.39	ppm		97
63)	2,4-Dinitrotoluene	6.210	165	497082	97.89	ppm		95
64)	2,3,4,6-Tetrachlorophenol	6.317	232	489792	100.43	ppm		96
65)	Diethylphthalate	6.419	149	1635679	90.78	ppm		99
66)	Fluorene	6.483	166	1391201	83.71	ppm		99
67)	4-Chlorophenyl-phenyle...	6.488	204	713663	86.73	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 11:22:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
68)	4-Nitroaniline	6.568	138	383029	97.72	ppm	95
70)	4,6-Dinitro-2-methylph...	6.584	198	351509	104.85	ppm	91
71)	n-Nitrosodiphenylamine	6.616	169	1112237	97.10	ppm	97
72)	1,2-Diphenylhydrazine	6.643	77	1519598	92.32	ppm	98
74)	4-Bromophenyl-phenylether	6.974	248	561083	99.92	ppm	96
75)	Hexachlorobenzene	7.038	284	622782	99.80	ppm	89
76)	Pentachlorophenol	7.289	266	825530	209.58	ppm	99
77)	Phenanthrene	7.508	178	2220378	95.88	ppm	98
78)	Anthracene	7.578	178	2314869	97.38	ppm	100
79)	Carbazole	7.829	167	2296459	99.42	ppm	99
80)	Di-n-butylphthalate	8.443	149	3145285	93.69	ppm	99
81)	Fluoranthene	9.325	202	2876338	98.59	ppm	98
82)	Octadecane	7.450	57	725090	84.60	ppm	99
84)	Pyrene	9.715	202	2908955	92.19	ppm	99
86)	Butylbenzylphthalate	11.280	149	1488905	91.63	ppm	93
87)	Benzo[a]anthracene	12.172	228	2898140	98.80	ppm	99
88)	3,3'-Dichlorobenzidine	12.263	252	1064716	100.66	ppm	97
89)	Chrysene	12.252	228	2574365	96.63	ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.674	149	2035563	91.45	ppm	96
92)	Di-n-octylphthalate	14.101	149	3691873	86.03	ppm	99
93)	Benzo[b]fluoranthene	14.459	252	3549654	107.40	ppm	97
94)	Benzo[k]fluoranthene	14.512	252	2199190m	84.70	ppm	
95)	Benzo[a]pyrene	15.036	252	2687614	98.36	ppm	99
96)	Indeno[1,2,3-cd]pyrene	17.076	276	2660586	105.37	ppm	99
97)	Dibenz(a,h)acridine	16.724	279	2552314	103.02	ppm	100
98)	Dibenz[a,h]anthracene	17.146	278	2758710	108.79	ppm	100
99)	7,12-Dimethylbenz(a)an...	14.469	256	1335464	98.93	ppm	97
100)	Benzo[g,h,i]perylene	17.493	276	2601007	104.64	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

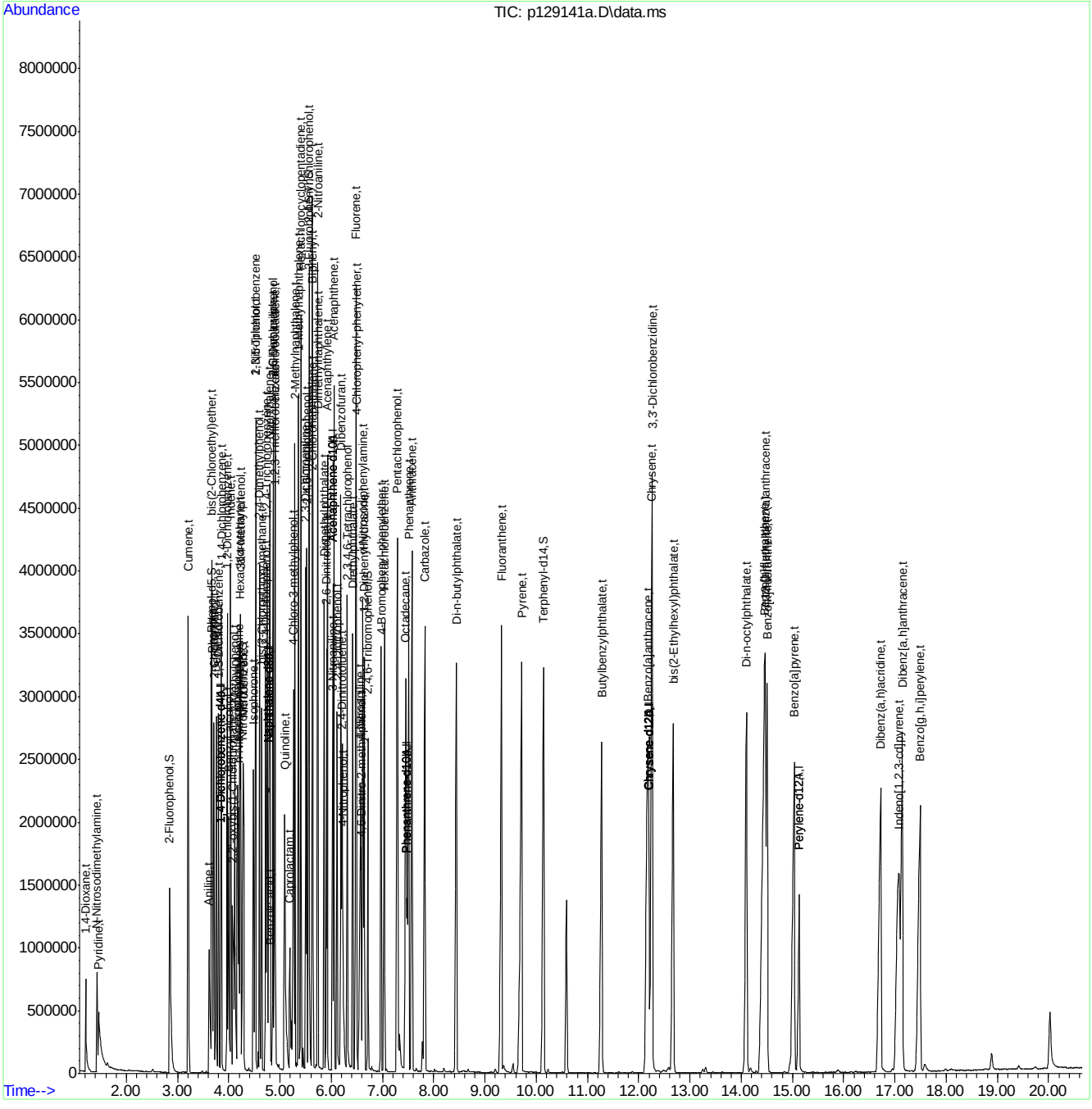
9.6.27

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 11:22:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration



Manual Integration Approval Summary

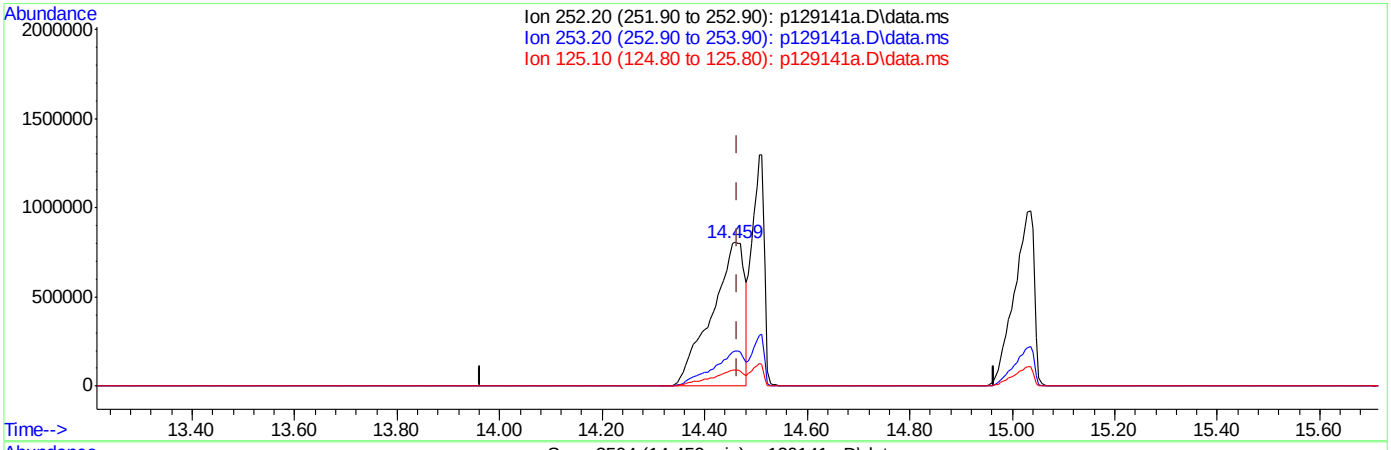
Sample Number:	EP5844-IC5844	**Method:**	SW846 8270D
Lab FileID:	P129141A.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 02:03	**Supervisor approved:**	04/30/19 18:25 Kristi Schollenberger

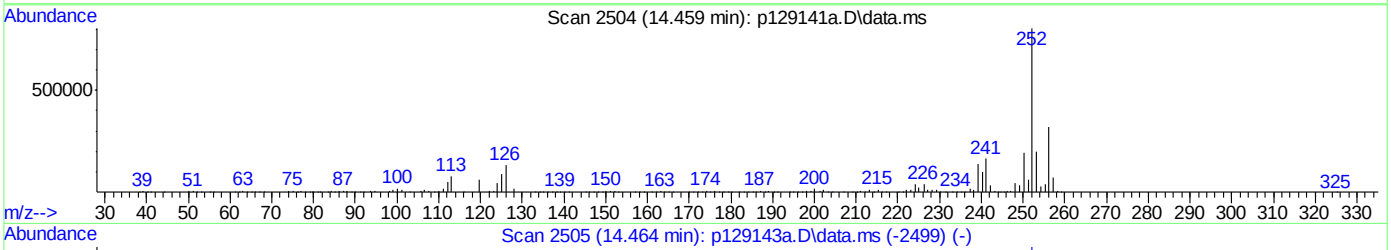
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		4.82	Split peak
Benzo(k)fluoranthene	207-08-9		14.51	Overlapping peak

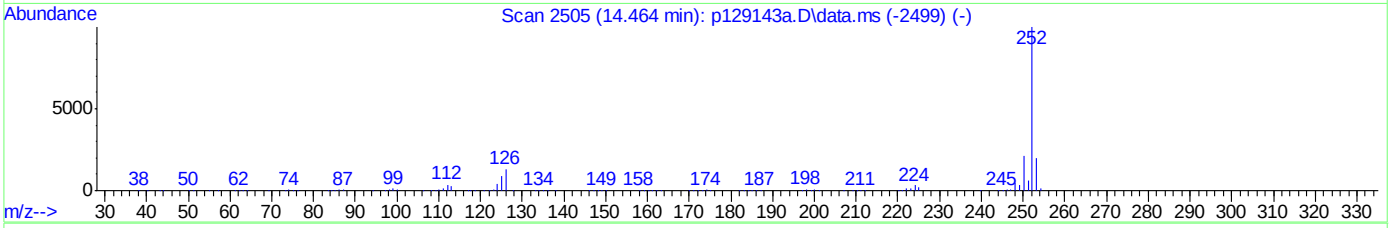
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 24 10:33:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 10:30:27 2019
Response via : Initial Calibration







TIC: p129141a.D\data.ms

(94) Benzo[k]fluoranthene (t)

14.459min (-0.005) 136.71ppm

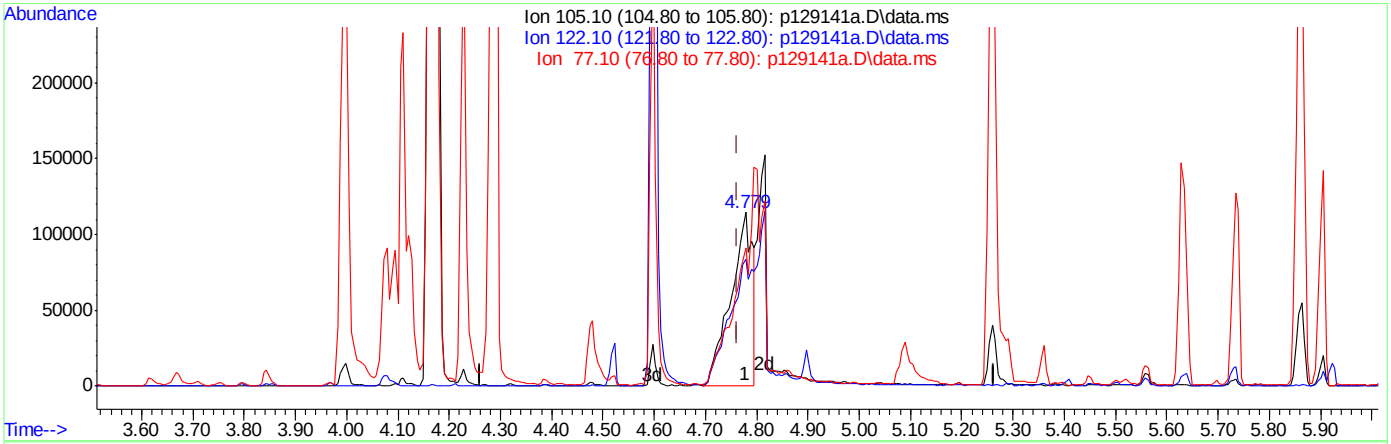
response 3549654

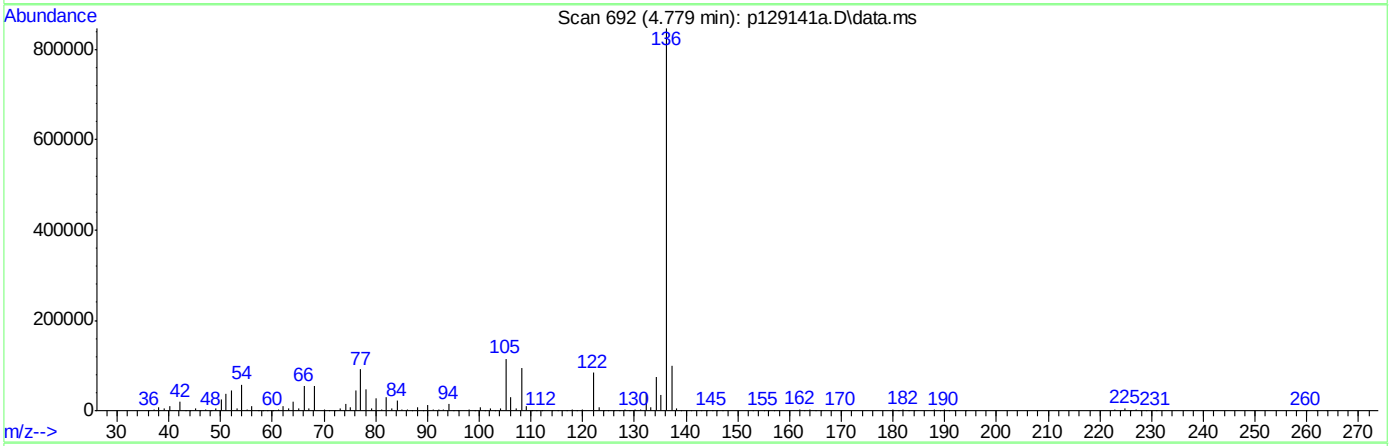
Ion	Exp%	Act%
252.20	100	100
253.20	20.80	25.16
125.10	9.70	11.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 24 10:40:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 10:37:10 2019
Response via : Initial Calibration





TIC: p129141a.D\data.ms

(31) Benzoic acid (t)

4.779min (+0.016) 62.92ppm

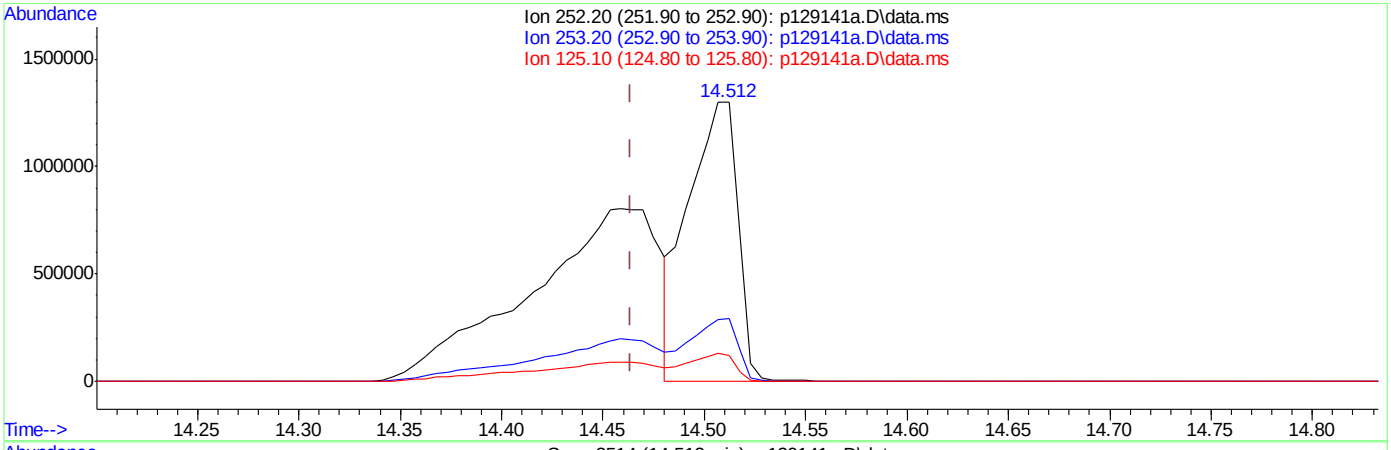
response 338588

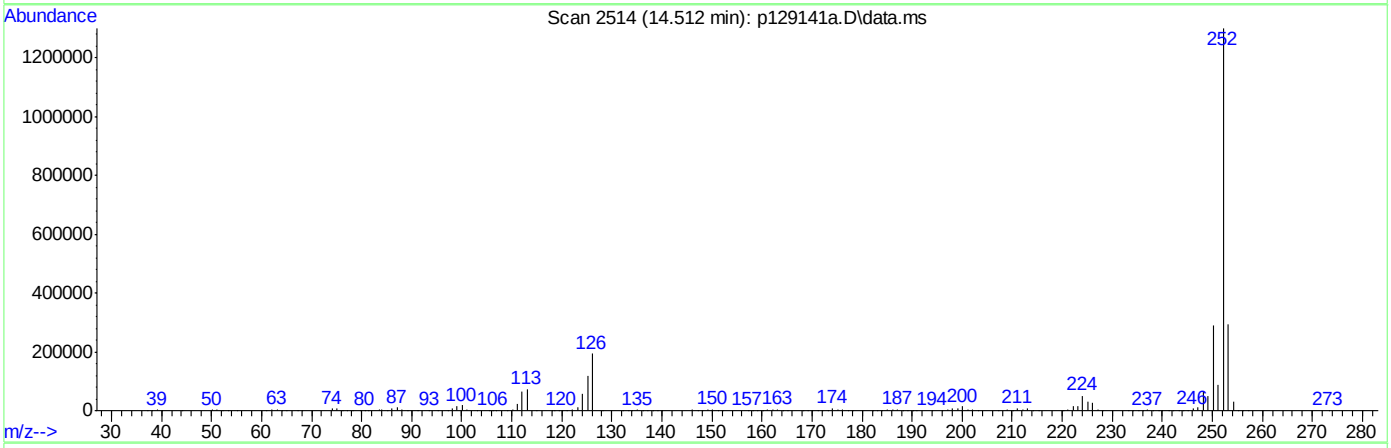
Ion	Exp%	Act%
105.10	100	100
122.10	67.60	65.69
77.10	76.90	26.59#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 11:17:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration





TIC: p129141a.D\data.ms

(94) Benzo[k]fluoranthene (t)

14.512min (+0.048) 84.70ppm m

response 2199190

Ion	Exp%	Act%
252.20	100	100
253.20	20.80	22.63
125.10	9.70	9.16
0.00	0.00	0.00

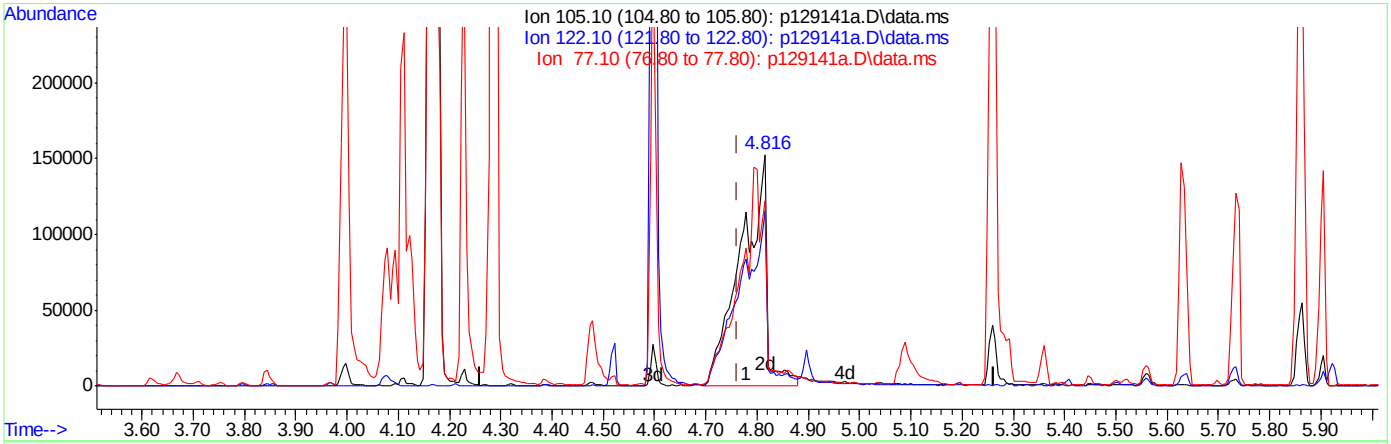
9.6.27.4

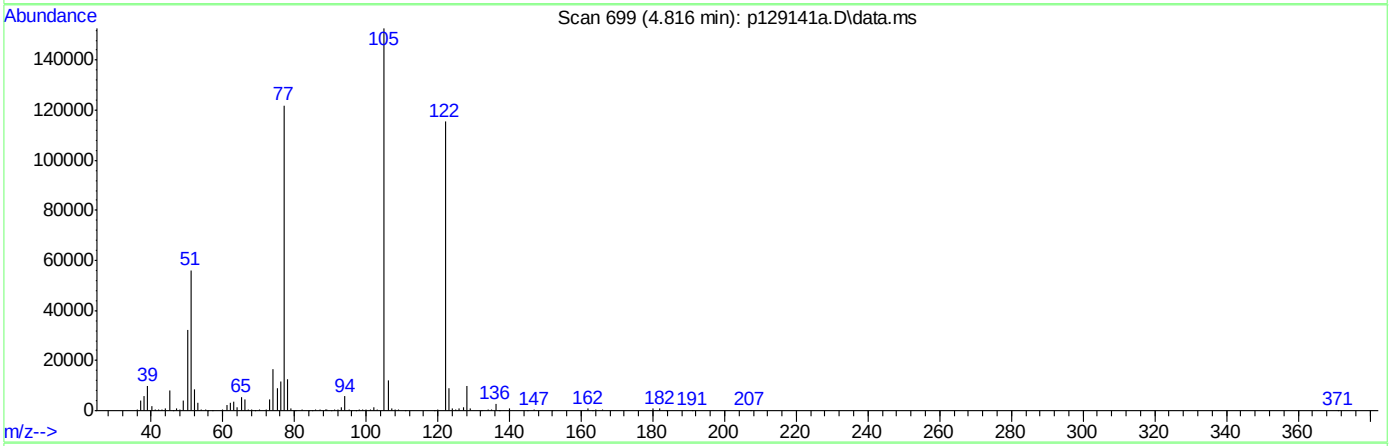
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129141a.D
Acq On : 24 Apr 2019 2:03 am
Operator : chriss2
Sample : ic5844-100
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 26 11:20:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration





TIC: p129141a.D\data.ms

(31) Benzoic acid (t)

4.816min (+0.054) 98.57ppm m

response 530432

Ion	Exp%	Act%
105.10	100	100
122.10	67.60	75.54
77.10	76.90	79.82
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/30/19 18:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129142a.D
Acq On : 24 Apr 2019 2:30 am
Operator : chriss2
Sample : ic5844-80
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 11:24:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.844	152	200840	40.00	ppm	0.00
24) Naphthalene-d8	4.779	136	715801	40.00	ppm	0.00
47) Acenaphthene-d10	6.023	164	477015	40.00	ppm	0.00
69) Phenanthrene-d10	7.471	188	798369	40.00	ppm	0.00
83) Chrysene-d12	12.188	240	766927	40.00	ppm	0.02
91) Perylene-d12	15.121	264	789531	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4A	3.844	152	200840	40.00	ppm	0.00
111) Naphthalene-d8A	4.779	136	715801	40.00	ppm	0.00
120) Acenaphthene-d10A	6.023	164	477015	40.00	ppm	0.00
131) Phenanthrene-d10A	7.471	188	798369	40.00	ppm	0.00
146) Chrysene-d12A	12.188	240	766927	40.00	ppm	0.02
153) Perylene-d12A	15.121	264	789531	40.00	ppm	0.01
157) 1,4-Dichlorobenzene-d4b	3.844	152	200840	40.00	ppm	0.00
159) Phenanthrene-d10b	7.471	188	798369	40.00	ppm	0.00
161) Chrysene-d12b	12.188	240	766927	40.00	ppm	0.02
163) Naphthalene-d8b	4.779	136	715801	40.00	ppm	0.00
165) Acenaphthene-d10b	6.023	164	477015	40.00	ppm	0.00
167) Naphthalene-d8c	4.779	136	715801	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.844	152	200840	40.00	ppm	0.00
174) Chrysene-d12c	12.188	240	766927	40.00	ppm	0.02
176) Chrysene-d12d	12.188	240	766927	40.00	ppm	0.02
178) Naphthalene-d8d	4.779	136	715801	40.00	ppm	0.00
180) Chrysene-d12D	12.188	240	766927	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	2.850	112	611606	80.59	ppm	0.00
Spiked Amount 50.000			Recovery	=	161.18%	
8) Phenol-d5	3.657	99	676229	72.63	ppm	0.00
Spiked Amount 50.000			Recovery	=	145.26%	
25) Nitrobenzene-d5	4.271	82	594084	75.06	ppm	0.00
Spiked Amount 50.000			Recovery	=	150.12%	
51) 2-Fluorobiphenyl	5.559	172	1093470	70.91	ppm	0.00
Spiked Amount 50.000			Recovery	=	141.82%	
73) 2,4,6-Tribromophenol	6.713	330	250545	87.34	ppm	0.00
Spiked Amount 50.000			Recovery	=	174.68%	
85) Terphenyl-d14	10.137	244	1570255	84.04	ppm	0.01
Spiked Amount 50.000			Recovery	=	168.08%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.210	88	278772	82.91	ppm	99
3) Pyridine	1.461	79	486544	84.85	ppm	98
4) N-Nitrosodimethylamine	1.429	42	279889	79.63	ppm	97
6) Indene	4.036	116	822624	73.59	ppm	99
7) Cumene	3.208	105	1361450	74.50	ppm	97
9) Phenol	3.667	94	719098	73.21	ppm	89
10) Aniline	3.614	93	395011	112.59	ppm	97
11) bis(2-Chloroethyl)ether	3.662	93	554204	68.84	ppm	96
12) 2-Chlorophenol	3.710	128	544885	75.52	ppm	95
13) Decane	3.753	43	349553	73.12	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129142a.D
Acq On : 24 Apr 2019 2:30 am
Operator : chriss2
Sample : ic5844-80
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 11:24:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
14) 1,3-Dichlorobenzene	3.796	146	616250	76.05 ppm	99
15) 1,4-Dichlorobenzene	3.854	146	603302	75.03 ppm	98
16) Benzyl alcohol	3.993	108	306753	80.84 ppm	95
17) 1,2-Dichlorobenzene	3.967	146	618945	77.54 ppm	99
18) Acetophenone	4.164	105	763535	74.95 ppm	100
19) 2-Methylphenol	4.106	108	498918	76.41 ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.074	121	132809	77.46 ppm	97
21) 3&4-Methylphenol	4.223	108	493541	75.68 ppm	100
22) n-Nitroso-di-n-propyla...	4.191	70	346107	73.32 ppm	96
23) Hexachloroethane	4.212	201	249754	76.82 ppm	98
26) Nitrobenzene	4.287	77	564115	74.04 ppm	99
27) Quinoline	5.083	129	1114260	79.84 ppm	98
28) Isophorone	4.474	82	1031712	75.02 ppm	97
29) 2-Nitrophenol	4.517	139	278683	69.81 ppm	96
30) 2,4-Dimethylphenol	4.597	107	560463	77.90 ppm	92
31) Benzoic acid	4.795	105	431248m	78.89 ppm	
32) bis(2-Chloroethoxy)met...	4.634	93	627413	76.87 ppm	99
33) 2,4-Dichlorophenol	4.715	162	524955	80.11 ppm	99
34) 2,6-Dichlorophenol	4.864	162	468060	74.55 ppm	97
35) 1,3,5-Trichlorobenzene	4.522	180	554075	74.65 ppm	98
36) 1,2,4-Trichlorobenzene	4.747	180	531351	75.72 ppm	98
37) 1,2,3-Trichlorobenzene	4.907	180	494941	74.85 ppm	97
38) Naphthalene	4.795	128	1351734	73.25 ppm	99
39) 4-Chloroaniline	4.864	127	508832	77.58 ppm	98
40) 2,3-Dichloroaniline	5.500	161	611337	76.55 ppm	96
41) Caprolactam	5.179	55	204900	70.95 ppm	94
42) Hexachlorobutadiene	4.896	225	313764	71.66 ppm	98
43) 4-Chloro-3-methylphenol	5.259	107	519159	75.50 ppm	96
44) 2-Methylnaphthalene	5.292	141	765431	73.38 ppm	97
45) 1-Methylnaphthalene	5.361	142	1013016	76.04 ppm	98
46) Dimethylnaphthalene	5.735	156	888496	72.38 ppm	97
48) Hexachlorocyclopentadiene	5.409	237	659921	157.03 ppm	97
49) 2,4,6-Trichlorophenol	5.516	196	391514	79.21 ppm	99
50) 2,4,5-Trichlorophenol	5.559	196	383070	74.58 ppm	98
52) 2-Chloronaphthalene	5.633	162	964723	72.36 ppm	98
53) Biphenyl	5.628	154	1151718	68.75 ppm	100
54) 2-Nitroaniline	5.730	65	277208	65.46 ppm	99
55) Dimethylphthalate	5.858	163	1333434	77.37 ppm	99
56) Acenaphthylene	5.922	152	1519868	73.38 ppm	100
57) 2,6-Dinitrotoluene	5.901	165	288304	76.28 ppm	100
58) 3-Nitroaniline	6.029	138	295605	76.59 ppm	97
59) Acenaphthene	6.050	153	995135	75.93 ppm	95
60) 2,4-Dinitrophenol	6.114	184	400907	172.55 ppm	79
61) 4-Nitrophenol	6.216	109	222729	78.95 ppm	96
62) Dibenzofuran	6.189	168	1518247	76.72 ppm	100
63) 2,4-Dinitrotoluene	6.205	165	383218	78.30 ppm	94
64) 2,3,4,6-Tetrachlorophenol	6.312	232	376242	80.04 ppm	98
65) Diethylphthalate	6.419	149	1314293	75.68 ppm	99
66) Fluorene	6.478	166	1164643	72.70 ppm	99
67) 4-Chlorophenyl-phenyle...	6.488	204	592774	74.74 ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129142a.D
Acq On : 24 Apr 2019 2:30 am
Operator : chriss2
Sample : ic5844-80
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 11:24:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
68)	4-Nitroaniline	6.558	138	293797	77.76	ppm	98
70)	4,6-Dinitro-2-methylph...	6.574	198	265807	82.57	ppm	96
71)	n-Nitrosodiphenylamine	6.611	169	876371	79.68	ppm	99
72)	1,2-Diphenylhydrazine	6.638	77	1247025	78.90	ppm	99
74)	4-Bromophenyl-phenylether	6.969	248	449893	83.44	ppm	98
75)	Hexachlorobenzene	7.033	284	487393	81.34	ppm	91
76)	Pentachlorophenol	7.284	266	632404	167.20	ppm	99
77)	Phenanthrene	7.503	178	1751109	78.75	ppm	99
78)	Anthracene	7.573	178	1813832	79.46	ppm	99
79)	Carbazole	7.824	167	1747469	78.79	ppm	99
80)	Di-n-butylphthalate	8.433	149	2493183	77.34	ppm	99
81)	Fluoranthene	9.320	202	2213484	79.01	ppm	96
82)	Octadecane	7.450	57	609345	74.04	ppm	98
84)	Pyrene	9.704	202	2210000	78.55	ppm	99
86)	Butylbenzylphthalate	11.270	149	1142220	78.83	ppm	96
87)	Benzo[a]anthracene	12.162	228	2083351	79.65	ppm	98
88)	3,3'-Dichlorobenzidine	12.252	252	761116	80.70	ppm	99
89)	Chrysene	12.247	228	1893611	79.71	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.669	149	1571888	79.19	ppm	99
92)	Di-n-octylphthalate	14.085	149	2773506	79.27	ppm	100
93)	Benzo[b]fluoranthene	14.437	252	2316387	85.95	ppm	98
94)	Benzo[k]fluoranthene	14.486	252	1564816	73.91	ppm	98
95)	Benzo[a]pyrene	15.014	252	1781071	79.94	ppm	97
96)	Indeno[1,2,3-cd]pyrene	17.050	276	1634854	79.41	ppm	99
97)	Dibenz(a,h)acridine	16.703	279	1623485	80.37	ppm	100
98)	Dibenz[a,h]anthracene	17.119	278	1679661	81.24	ppm	100
99)	7,12-Dimethylbenz(a)an...	14.448	256	916553	83.27	ppm	96
100)	Benzo[g,h,i]perylene	17.467	276	1573169	77.62	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

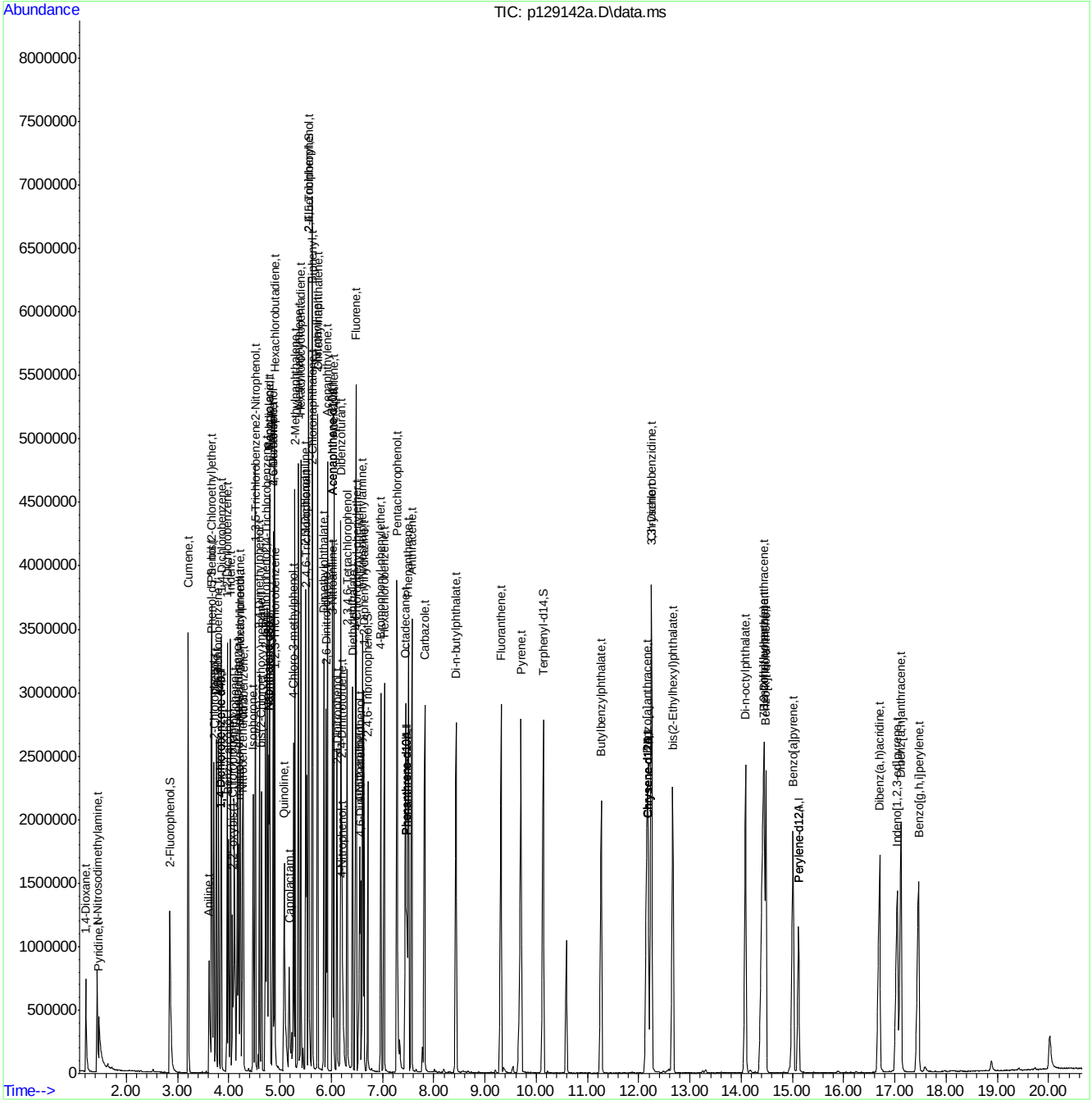
9.6.28

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129142a.D
Acq On : 24 Apr 2019 2:30 am
Operator : chriss2
Sample : ic5844-80
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 11:24:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration



Manual Integration Approval Summary

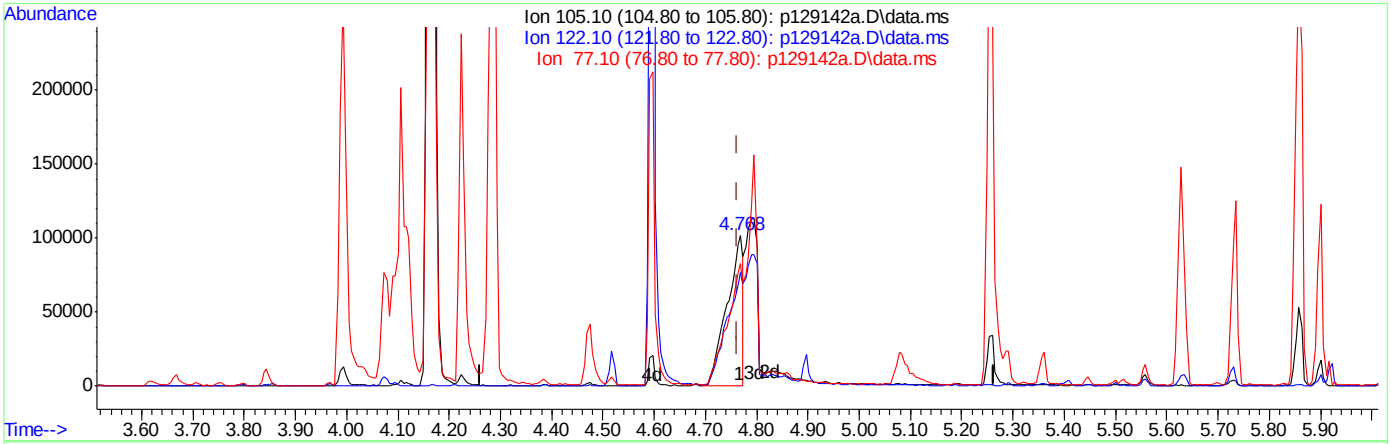
Sample Number:	EP5844-IC5844	**Method:**	SW846 8270D
Lab FileID:	P129142A.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 02:30	**Supervisor approved:**	04/30/19 18:25 Kristi Schollenberger

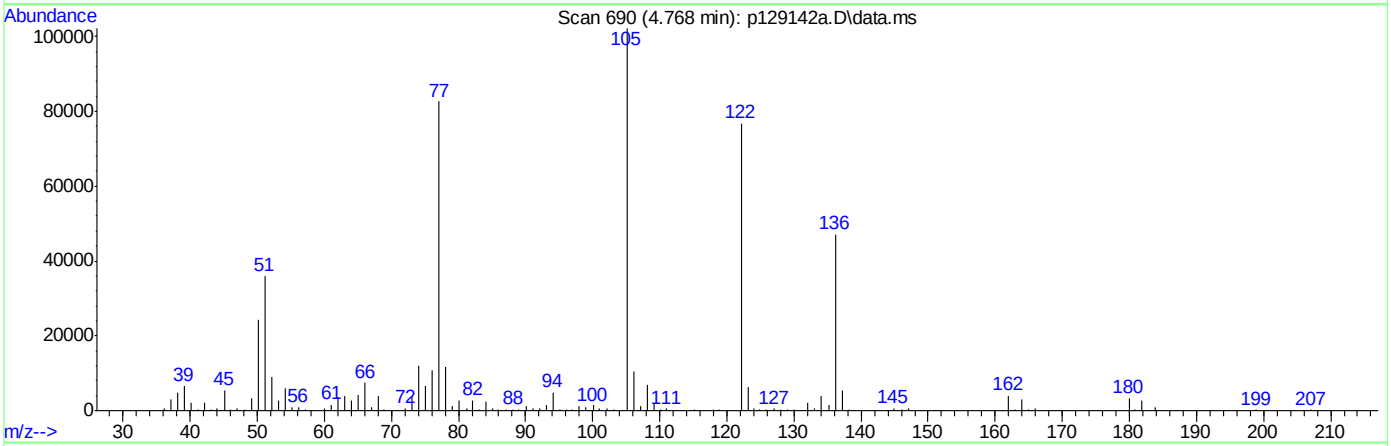
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		4.79	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129142a.D
Acq On : 24 Apr 2019 2:30 am
Operator : chriss2
Sample : ic5844-80
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 24 10:40:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 10:37:10 2019
Response via : Initial Calibration





TIC: p129142a.D\data.ms

(31) Benzoic acid (t)

4.768min (+0.005) 40.62ppm

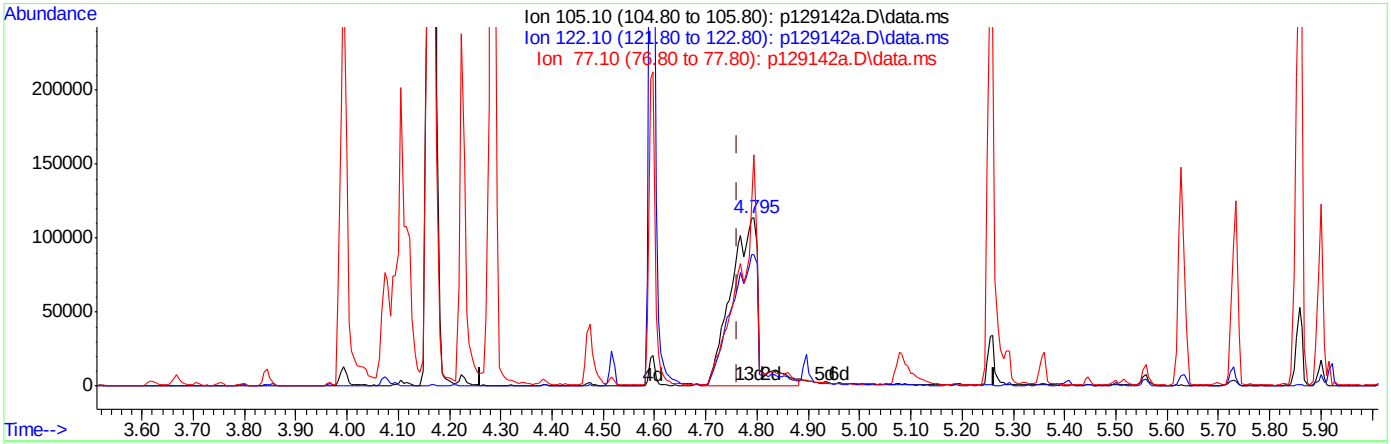
response 222046

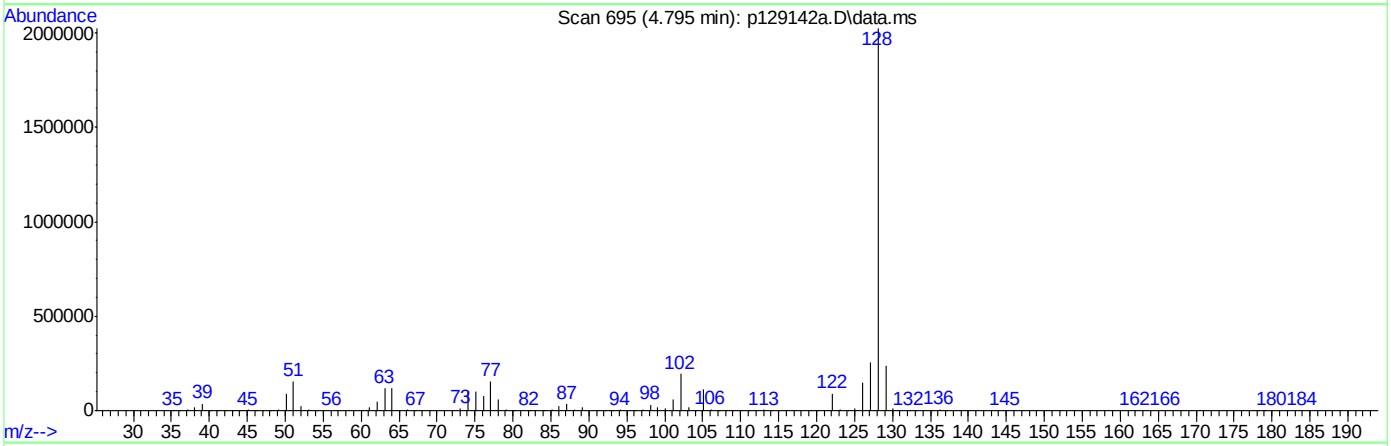
Ion	Exp%	Act%
105.10	100	100
122.10	67.60	71.39
77.10	76.90	80.57
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129142a.D
Acq On : 24 Apr 2019 2:30 am
Operator : chriss2
Sample : ic5844-80
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 26 11:22:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration





TIC: p129142a.D\data.ms

(31) Benzoic acid (t)

4.795min (+0.033) 78.89ppm m

response 431248

Ion	Exp%	Act%
105.10	100	100
122.10	67.60	78.45
77.10	76.90	137.61#
0.00	0.00	0.00

9.6.28.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129143a.D
Acq On : 24 Apr 2019 2:57 am
Operator : chriss2
Sample : icc5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 11:17:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	172694	40.00	ppm	0.00
24) Naphthalene-d8	4.779	136	626042	40.00	ppm	0.00
47) Acenaphthene-d10	6.023	164	418345	40.00	ppm	0.00
69) Phenanthrene-d10	7.466	188	714817	40.00	ppm	0.00
83) Chrysene-d12	12.172	240	703644	40.00	ppm	0.00
91) Perylene-d12	15.111	264	732175	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.838	152	172694	40.00	ppm	0.00
111) Naphthalene-d8A	4.779	136	626042	40.00	ppm	0.00
120) Acenaphthene-d10A	6.023	164	418345	40.00	ppm	0.00
131) Phenanthrene-d10A	7.466	188	714817	40.00	ppm	0.00
146) Chrysene-d12A	12.172	240	703644	40.00	ppm	0.00
153) Perylene-d12A	15.111	264	732175	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.838	152	172694	40.00	ppm	0.00
159) Phenanthrene-d10b	7.466	188	714817	40.00	ppm	0.00
161) Chrysene-d12b	12.172	240	703644	40.00	ppm	0.00
163) Naphthalene-d8b	4.779	136	626042	40.00	ppm	0.00
165) Acenaphthene-d10b	6.023	164	418345	40.00	ppm	0.00
167) Naphthalene-d8c	4.779	136	626042	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	172694	40.00	ppm	0.00
174) Chrysene-d12c	12.172	240	703644	40.00	ppm	0.00
176) Chrysene-d12d	12.172	240	703644	40.00	ppm	0.00
178) Naphthalene-d8d	4.779	136	626042	40.00	ppm	0.00
180) Chrysene-d12D	12.172	240	703644	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.850	112	326284	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
8) Phenol-d5	3.651	99	400276	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
25) Nitrobenzene-d5	4.266	82	346137	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
51) 2-Fluorobiphenyl	5.553	172	676221	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
73) 2,4,6-Tribromophenol	6.707	330	128421	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
85) Terphenyl-d14	10.126	244	857119	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.210	88	144554	50.00	ppm	100
3) Pyridine	1.482	79	246518	50.00	ppm	100
4) N-Nitrosodimethylamine	1.424	42	151118	50.00	ppm	100
6) Indene	4.031	116	480602	50.00	ppm	100
7) Cumene	3.208	105	785725	50.00	ppm	100
9) Phenol	3.662	94	426332	50.48	ppm	100
10) Aniline	3.619	93	150839	50.00	ppm	100
11) bis(2-Chloroethyl)ether	3.662	93	350410	50.62	ppm	100
12) 2-Chlorophenol	3.705	128	310198	50.00	ppm	100
13) Decane	3.753	43	205542	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129143a.D
Acq On : 24 Apr 2019 2:57 am
Operator : chriss2
Sample : icc5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 11:17:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
14) 1,3-Dichlorobenzene	3.796	146	348379	50.00	ppm	100
15) 1,4-Dichlorobenzene	3.854	146	345696	50.00	ppm	100
16) Benzyl alcohol	3.988	108	163138	50.00	ppm	100
17) 1,2-Dichlorobenzene	3.967	146	343166	50.00	ppm	100
18) Acetophenone	4.159	105	437954	50.00	ppm	100
19) 2-Methylphenol	4.105	108	280734	50.00	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.073	121	73715	50.00	ppm	100
21) 3&4-Methylphenol	4.218	108	280374	50.00	ppm	100
22) n-Nitroso-di-n-propyla...	4.180	70	202943	50.00	ppm	100
23) Hexachloroethane	4.212	201	139777	50.00	ppm	100
26) Nitrobenzene	4.282	77	333889	50.10	ppm	100
27) Quinoline	5.062	129	610329	50.00	ppm	100
28) Isophorone	4.463	82	601377	50.00	ppm	100
29) 2-Nitrophenol	4.511	139	174582	50.00	ppm	100
30) 2,4-Dimethylphenol	4.586	107	314804	50.03	ppm	100
31) Benzoic acid	4.763	105	239052	50.00	ppm	100
32) bis(2-Chloroethoxy)met...	4.634	93	356859	49.99	ppm	100
33) 2,4-Dichlorophenol	4.715	162	286557	50.00	ppm	100
34) 2,6-Dichlorophenol	4.859	162	274563	50.00	ppm	100
35) 1,3,5-Trichlorobenzene	4.517	180	324582	50.00	ppm	100
36) 1,2,4-Trichlorobenzene	4.741	180	306876	50.00	ppm	100
37) 1,2,3-Trichlorobenzene	4.901	180	289178	50.00	ppm	100
38) Naphthalene	4.795	128	806937	50.00	ppm	100
39) 4-Chloroaniline	4.859	127	286811	50.00	ppm	100
40) 2,3-Dichloroaniline	5.494	161	349246	50.00	ppm	100
41) Caprolactam	5.147	55	126291	50.00	ppm	100
42) Hexachlorobutadiene	4.896	225	191466	50.00	ppm	100
43) 4-Chloro-3-methylphenol	5.249	107	300703	50.00	ppm	100
44) 2-Methylnaphthalene	5.286	141	456130	50.00	ppm	100
45) 1-Methylnaphthalene	5.356	142	587149	50.39	ppm	100
46) Dimethylnaphthalene	5.730	156	536838	50.00	ppm	100
48) Hexachlorocyclopentadiene	5.404	237	368567	100.00	ppm	100
49) 2,4,6-Trichlorophenol	5.511	196	216751	50.00	ppm	100
50) 2,4,5-Trichlorophenol	5.553	196	228079	50.63	ppm	100
52) 2-Chloronaphthalene	5.628	162	584641	50.00	ppm	100
53) Biphenyl	5.623	154	734585	50.00	ppm	100
54) 2-Nitroaniline	5.724	65	185695	50.00	ppm	100
55) Dimethylphthalate	5.852	163	755769	50.00	ppm	100
56) Acenaphthylene	5.917	152	908286	50.00	ppm	100
57) 2,6-Dinitrotoluene	5.895	165	165726	50.00	ppm	100
58) 3-Nitroaniline	6.018	138	169454	50.06	ppm	100
59) Acenaphthene	6.045	153	574701	50.00	ppm	100
60) 2,4-Dinitrophenol	6.103	184	203769	100.00	ppm	100
61) 4-Nitrophenol	6.210	109	125136	50.58	ppm	100
62) Dibenzofuran	6.184	168	867769	50.00	ppm	100
63) 2,4-Dinitrotoluene	6.200	165	214613	50.00	ppm	100
64) 2,3,4,6-Tetrachlorophenol	6.306	232	206125	50.00	ppm	100
65) Diethylphthalate	6.408	149	761530	50.00	ppm	100
66) Fluorene	6.472	166	702441	50.00	ppm	100
67) 4-Chlorophenyl-phenyle...	6.483	204	347769	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129143a.D
Acq On : 24 Apr 2019 2:57 am
Operator : chriss2
Sample : icc5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 11:17:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
68)	4-Nitroaniline	6.536	138	165669	50.00	ppm	100
70)	4,6-Dinitro-2-methylph...	6.558	198	144111	50.00	ppm	100
71)	n-Nitrosodiphenylamine	6.600	169	492407	50.00	ppm	100
72)	1,2-Diphenylhydrazine	6.632	77	708995	50.10	ppm	100
74)	4-Bromophenyl-phenylether	6.964	248	241387	50.00	ppm	100
75)	Hexachlorobenzene	7.022	284	268245	50.00	ppm	100
76)	Pentachlorophenol	7.279	266	338651	100.00	ppm	100
77)	Phenanthrene	7.498	178	995471	50.00	ppm	100
78)	Anthracene	7.562	178	1021855	50.00	ppm	100
79)	Carbazole	7.813	167	992906	50.00	ppm	100
80)	Di-n-butylphthalate	8.427	149	1443071	50.00	ppm	100
81)	Fluoranthene	9.303	202	1254145	50.00	ppm	100
82)	Octadecane	7.444	57	368446	50.00	ppm	100
84)	Pyrene	9.693	202	1290684	50.00	ppm	100
86)	Butylbenzylphthalate	11.259	149	664678	50.00	ppm	100
87)	Benzo[a]anthracene	12.151	228	1199857	50.00	ppm	100
88)	3,3'-Dichlorobenzidine	12.242	252	432683	50.00	ppm	100
89)	Chrysene	12.231	228	1089839	50.00	ppm	100
90)	bis(2-Ethylhexyl)phtha...	12.658	149	910528	50.00	ppm	100
92)	Di-n-octylphthalate	14.069	149	1622375	50.00	ppm	100
93)	Benzo[b]fluoranthene	14.395	252	1249586	50.00	ppm	100
94)	Benzo[k]fluoranthene	14.464	252	981629	50.00	ppm	100
95)	Benzo[a]pyrene	14.998	252	1033049	50.00	ppm	100
96)	Indeno[1,2,3-cd]pyrene	17.034	276	954579	50.00	ppm	100
97)	Dibenz(a,h)acridine	16.686	279	936675	50.00	ppm	100
98)	Dibenz[a,h]anthracene	17.098	278	963311	50.24	ppm	100
99)	7,12-Dimethylbenz(a)an...	14.421	256	510356	50.00	ppm	100
100)	Benzo[g,h,i]perylene	17.445	276	935242	49.76	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

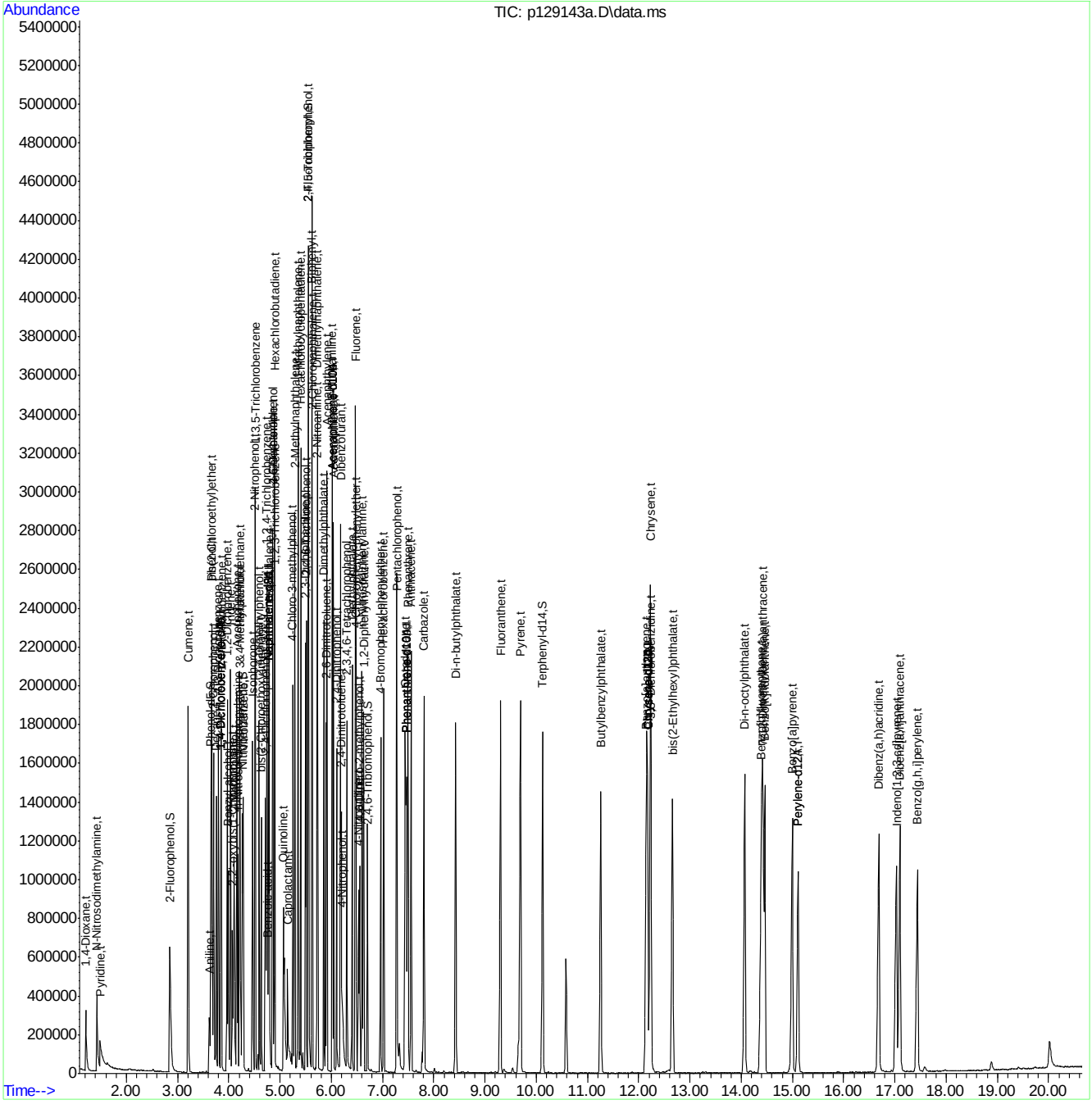
9.6.29

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129143a.D
Acq On : 24 Apr 2019 2:57 am
Operator : chriss2
Sample : icc5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 11:17:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/30/19 18:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129144a.D
Acq On : 24 Apr 2019 3:24 am
Operator : chriss2
Sample : ic5844-25
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 11:26:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	244244	40.00	ppm	0.00
24) Naphthalene-d8	4.779	136	876767	40.00	ppm	0.00
47) Acenaphthene-d10	6.023	164	548162	40.00	ppm	0.00
69) Phenanthrene-d10	7.460	188	962861	40.00	ppm	0.00
83) Chrysene-d12	12.172	240	903620	40.00	ppm	0.00
91) Perylene-d12	15.110	264	932161	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.838	152	244244	40.00	ppm	0.00
111) Naphthalene-d8A	4.779	136	876767	40.00	ppm	0.00
120) Acenaphthene-d10A	6.023	164	548162	40.00	ppm	0.00
131) Phenanthrene-d10A	7.460	188	962861	40.00	ppm	0.00
146) Chrysene-d12A	12.172	240	903620	40.00	ppm	0.00
153) Perylene-d12A	15.110	264	932161	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.838	152	244244	40.00	ppm	0.00
159) Phenanthrene-d10b	7.460	188	962861	40.00	ppm	0.00
161) Chrysene-d12b	12.172	240	903620	40.00	ppm	0.00
163) Naphthalene-d8b	4.779	136	876767	40.00	ppm	0.00
165) Acenaphthene-d10b	6.023	164	548162	40.00	ppm	0.00
167) Naphthalene-d8c	4.779	136	876767	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	244244	40.00	ppm	0.00
174) Chrysene-d12c	12.172	240	903620	40.00	ppm	0.00
176) Chrysene-d12d	12.172	240	903620	40.00	ppm	0.00
178) Naphthalene-d8d	4.779	136	876767	40.00	ppm	0.00
180) Chrysene-d12D	12.172	240	903620	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.845	112	214544	23.25	ppm	0.00
Spiked Amount 50.000			Recovery = 46.50%			
8) Phenol-d5	3.651	99	266748	23.56	ppm	0.00
Spiked Amount 50.000			Recovery = 47.12%			
25) Nitrobenzene-d5	4.266	82	234363	24.17	ppm	0.00
Spiked Amount 50.000			Recovery = 48.34%			
51) 2-Fluorobiphenyl	5.553	172	467440	26.38	ppm	0.00
Spiked Amount 50.000			Recovery = 52.76%			
73) 2,4,6-Tribromophenol	6.702	330	82624	23.88	ppm	0.00
Spiked Amount 50.000			Recovery = 47.76%			
85) Terphenyl-d14	10.121	244	536551	24.37	ppm	0.00
Spiked Amount 50.000			Recovery = 48.74%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.215	88	100781	24.65	ppm	98
3) Pyridine	1.472	79	180051	25.82	ppm	97
4) N-Nitrosodimethylamine	1.429	42	110988	25.96	ppm	100
6) Indene	4.031	116	325693	23.96	ppm	97
7) Cumene	3.208	105	549129	24.71	ppm	99
9) Phenol	3.657	94	287197	24.04	ppm	95
10) Aniline	3.614	93	128527	30.12	ppm	95
11) bis(2-Chloroethyl)ether	3.662	93	239035	24.41	ppm	95
12) 2-Chlorophenol	3.705	128	208479	23.76	ppm	99
13) Decane	3.748	43	154359	26.55	ppm	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129144a.D
Acq On : 24 Apr 2019 3:24 am
Operator : chriss2
Sample : ic5844-25
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 11:26:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
14) 1,3-Dichlorobenzene	3.796	146	246456	25.01 ppm	99
15) 1,4-Dichlorobenzene	3.854	146	233481	23.88 ppm	97
16) Benzyl alcohol	3.983	108	105308	22.82 ppm	97
17) 1,2-Dichlorobenzene	3.967	146	239853	24.71 ppm	98
18) Acetophenone	4.159	105	296523	23.94 ppm	97
19) 2-Methylphenol	4.100	108	194993	24.56 ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.073	121	50513	24.23 ppm	96
21) 3&4-Methylphenol	4.218	108	187290	23.62 ppm	100
22) n-Nitroso-di-n-propyla...	4.175	70	137038	23.87 ppm	99
23) Hexachloroethane	4.212	201	96274	24.35 ppm	96
26) Nitrobenzene	4.276	77	234783	25.16 ppm	94
27) Quinoline	5.051	129	398233m	23.29 ppm	
28) Isophorone	4.458	82	420054	24.94 ppm	97
29) 2-Nitrophenol	4.511	139	119448	24.43 ppm	93
30) 2,4-Dimethylphenol	4.586	107	203524	23.10 ppm	97
31) Benzoic acid	4.741	105	153085	22.86 ppm	91
32) bis(2-Chloroethoxy)met...	4.629	93	239628	23.97 ppm	100
33) 2,4-Dichlorophenol	4.714	162	189431	23.60 ppm	98
34) 2,6-Dichlorophenol	4.859	162	184735	24.02 ppm	99
35) 1,3,5-Trichlorobenzene	4.517	180	223305	24.56 ppm	99
36) 1,2,4-Trichlorobenzene	4.741	180	211641	24.62 ppm	98
37) 1,2,3-Trichlorobenzene	4.896	180	199413	24.62 ppm	97
38) Naphthalene	4.789	128	527115	23.32 ppm	100
39) 4-Chloroaniline	4.853	127	196489	24.46 ppm	93
40) 2,3-Dichloroaniline	5.494	161	227790	23.29 ppm	98
41) Caprolactam	5.131	55	84169	23.79 ppm	97
42) Hexachlorobutadiene	4.891	225	131496	24.52 ppm	98
43) 4-Chloro-3-methylphenol	5.243	107	197676	23.47 ppm	98
44) 2-Methylnaphthalene	5.286	141	312688	24.47 ppm	100
45) 1-Methylnaphthalene	5.356	142	403046	24.70 ppm	99
46) Dimethylnaphthalene	5.730	156	356734	23.72 ppm	98
48) Hexachlorocyclopentadiene	5.404	237	236943	49.06 ppm	97
49) 2,4,6-Trichlorophenol	5.510	196	144727	25.48 ppm	99
50) 2,4,5-Trichlorophenol	5.553	196	153091	25.94 ppm	98
52) 2-Chloronaphthalene	5.628	162	391444	25.55 ppm	98
53) Biphenyl	5.623	154	503514	26.16 ppm	98
54) 2-Nitroaniline	5.719	65	128477	26.40 ppm	85
55) Dimethylphthalate	5.852	163	492719	24.88 ppm	98
56) Acenaphthylene	5.916	152	604132	25.38 ppm	98
57) 2,6-Dinitrotoluene	5.890	165	103592	23.85 ppm	86
58) 3-Nitroaniline	6.013	138	112121	25.28 ppm	90
59) Acenaphthene	6.045	153	370899	24.63 ppm	98
60) 2,4-Dinitrophenol	6.098	184	120792	45.24 ppm	93
61) 4-Nitrophenol	6.210	109	78453	24.20 ppm	83
62) Dibenzofuran	6.178	168	572434	25.17 ppm	97
63) 2,4-Dinitrotoluene	6.194	165	139036	24.72 ppm	92
64) 2,3,4,6-Tetrachlorophenol	6.301	232	126428	23.40 ppm	92
65) Diethylphthalate	6.403	149	501132	25.11 ppm	98
66) Fluorene	6.467	166	464305	25.22 ppm	100
67) 4-Chlorophenyl-phenyle...	6.477	204	229745	25.21 ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129144a.D
Acq On : 24 Apr 2019 3:24 am
Operator : chriss2
Sample : ic5844-25
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 11:26:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
68)	4-Nitroaniline	6.526	138	101892	23.47	ppm	95
70)	4,6-Dinitro-2-methylph...	6.552	198	90380	23.28	ppm	98
71)	n-Nitrosodiphenylamine	6.600	169	321495	24.24	ppm	99
72)	1,2-Diphenylhydrazine	6.627	77	476957	25.02	ppm	96
74)	4-Bromophenyl-phenylether	6.958	248	151870	23.35	ppm	95
75)	Hexachlorobenzene	7.017	284	170393	23.58	ppm	93
76)	Pentachlorophenol	7.273	266	206844	45.34	ppm	98
77)	Phenanthrene	7.492	178	634119	23.65	ppm	99
78)	Anthracene	7.557	178	666530	24.21	ppm	99
79)	Carbazole	7.808	167	642078	24.00	ppm	100
80)	Di-n-butylphthalate	8.422	149	942924	24.25	ppm	98
81)	Fluoranthene	9.298	202	802257	23.74	ppm	99
82)	Octadecane	7.439	57	252541	25.44	ppm	98
84)	Pyrene	9.688	202	817288	24.65	ppm	98
86)	Butylbenzylphthalate	11.253	149	425754	24.94	ppm	98
87)	Benzo[a]anthracene	12.146	228	744181	24.15	ppm	98
88)	3,3'-Dichlorobenzidine	12.231	252	263197	23.68	ppm	99
89)	Chrysene	12.220	228	679462	24.27	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.653	149	579828	24.79	ppm	100
92)	Di-n-octylphthalate	14.058	149	1019397	24.68	ppm	97
93)	Benzo[b]fluoranthene	14.379	252	722534	22.71	ppm	97
94)	Benzo[k]fluoranthene	14.443	252	653444	26.14	ppm	98
95)	Benzo[a]pyrene	14.988	252	624465	23.74	ppm	97
96)	Indeno[1,2,3-cd]pyrene	17.018	276	575966	23.70	ppm	95
97)	Dibenz(a,h)acridine	16.676	279	563919	23.64	ppm	97
98)	Dibenz[a,h]anthracene	17.087	278	580465	23.78	ppm	99
99)	7,12-Dimethylbenz(a)an...	14.400	256	286526	22.05	ppm	98
100)	Benzo[g,h,i]perylene	17.429	276	572820	23.94	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

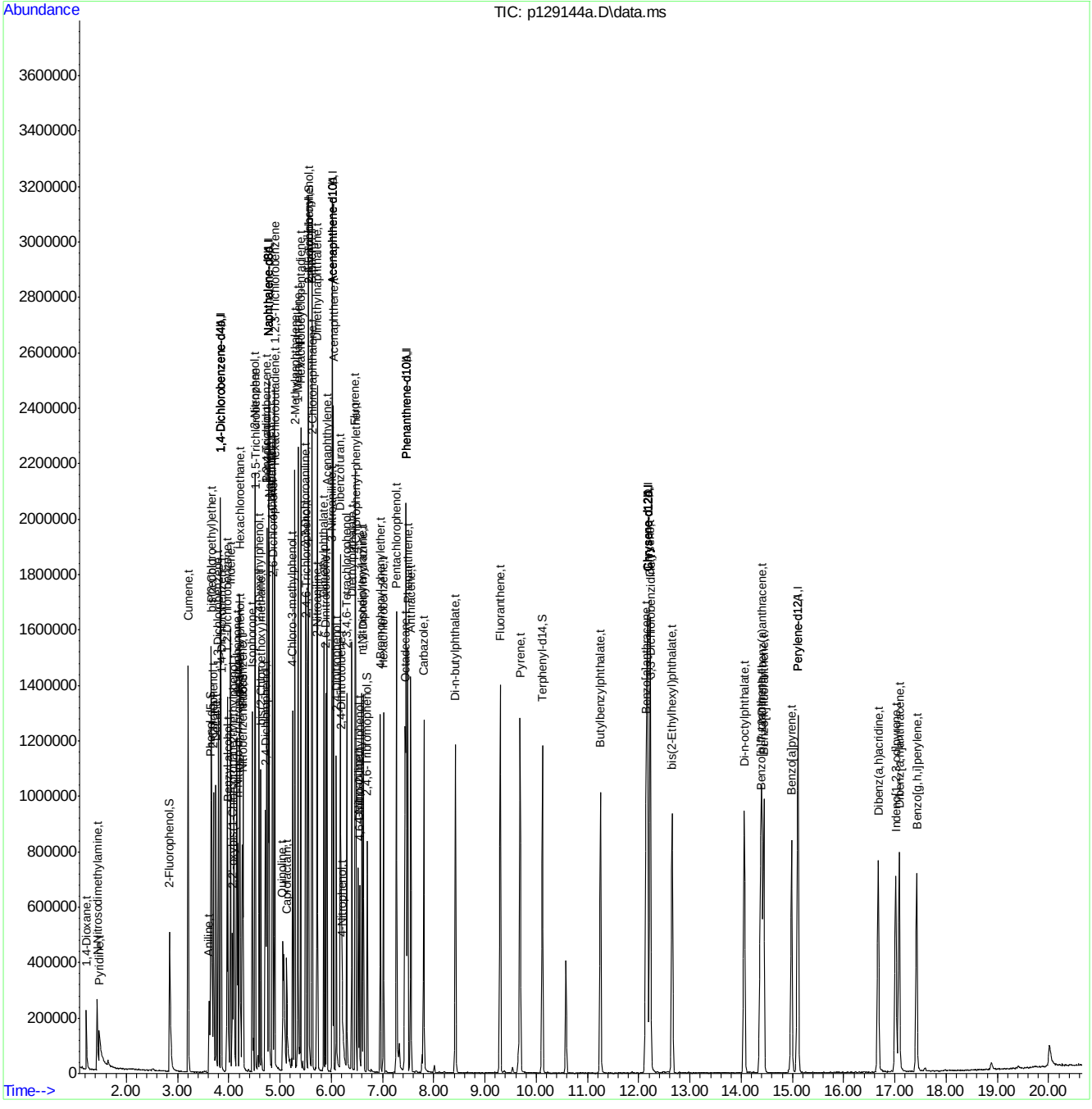
9.6.30

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129144a.D
Acq On : 24 Apr 2019 3:24 am
Operator : chriss2
Sample : ic5844-25
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 11:26:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration



Manual Integration Approval Summary

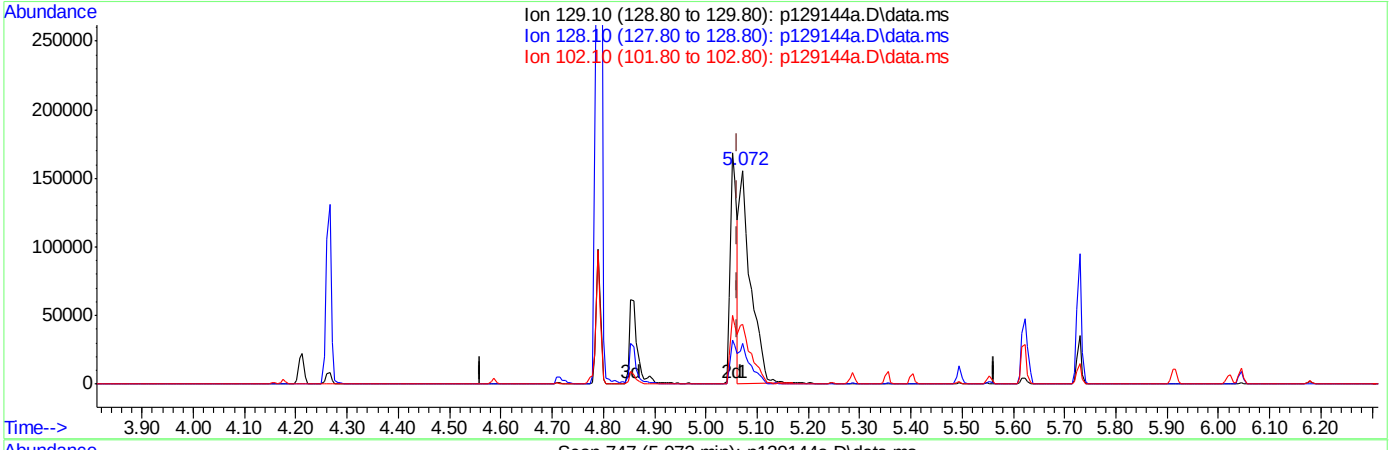
Sample Number:	EP5844-IC5844	**Method:**	SW846 8270D
Lab FileID:	P129144A.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 03:24	**Supervisor approved:**	04/30/19 18:25 Kristi Schollenberger

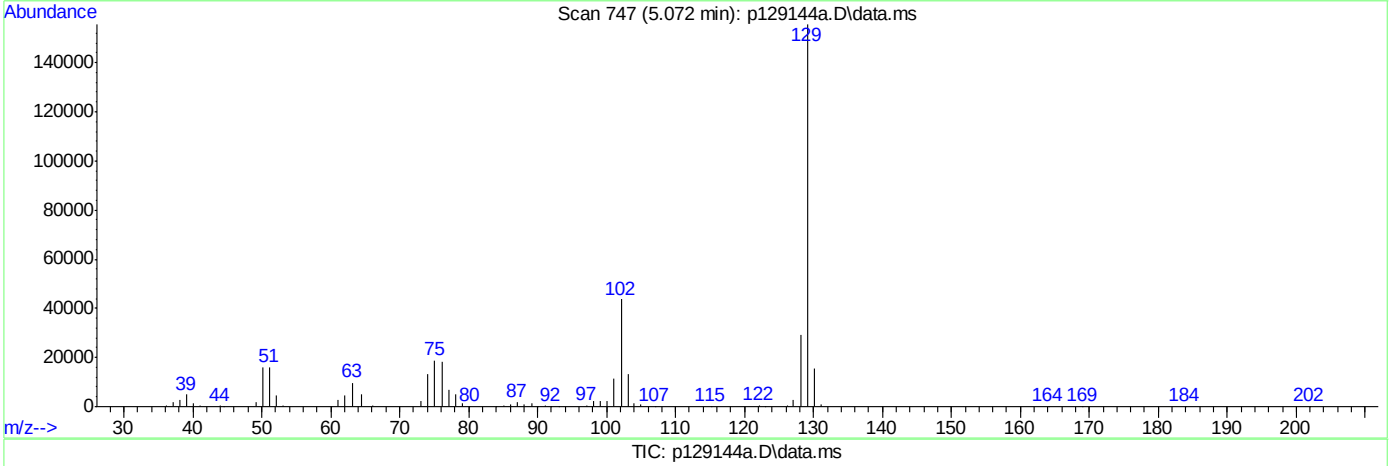
Parameter	CAS	Sig#	R.T. (min.)	Reason
Quinoline	91-22-5		5.05	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129144a.D
Acq On : 24 Apr 2019 3:24 am
Operator : chriss2
Sample : ic5844-25
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 24 10:43:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 10:37:10 2019
Response via : Initial Calibration





TIC: p129144a.D\data.ms

(27) Quinoline (t)

5.072min (+0.011) 13.78ppm

response 235617

Ion	Exp%	Act%
129.10	100	100
128.10	17.80	19.10
102.10	29.70	26.80
0.00	0.00	0.00

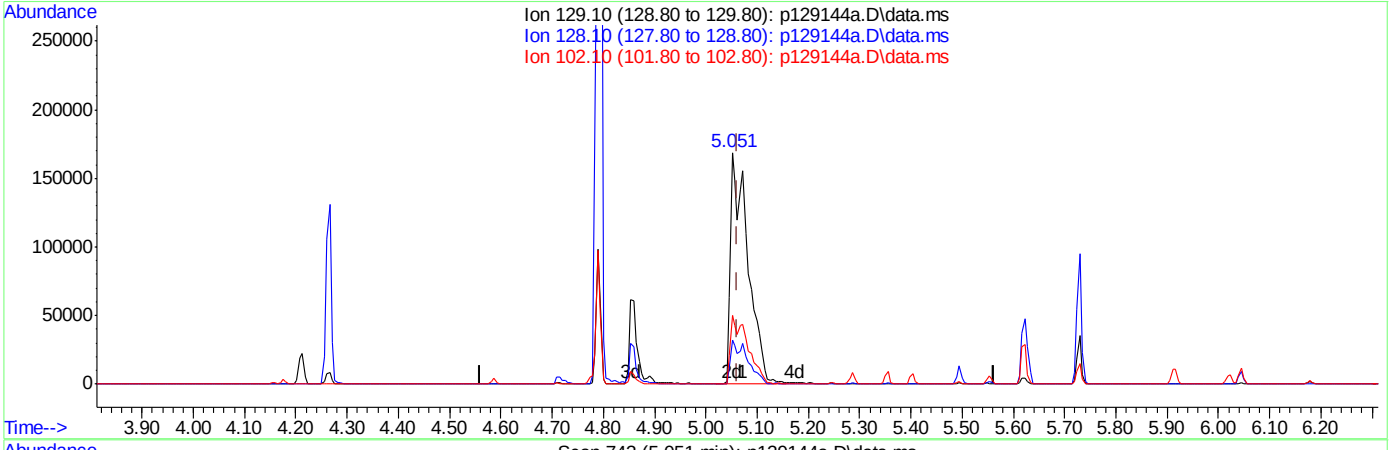
9.6.30.2

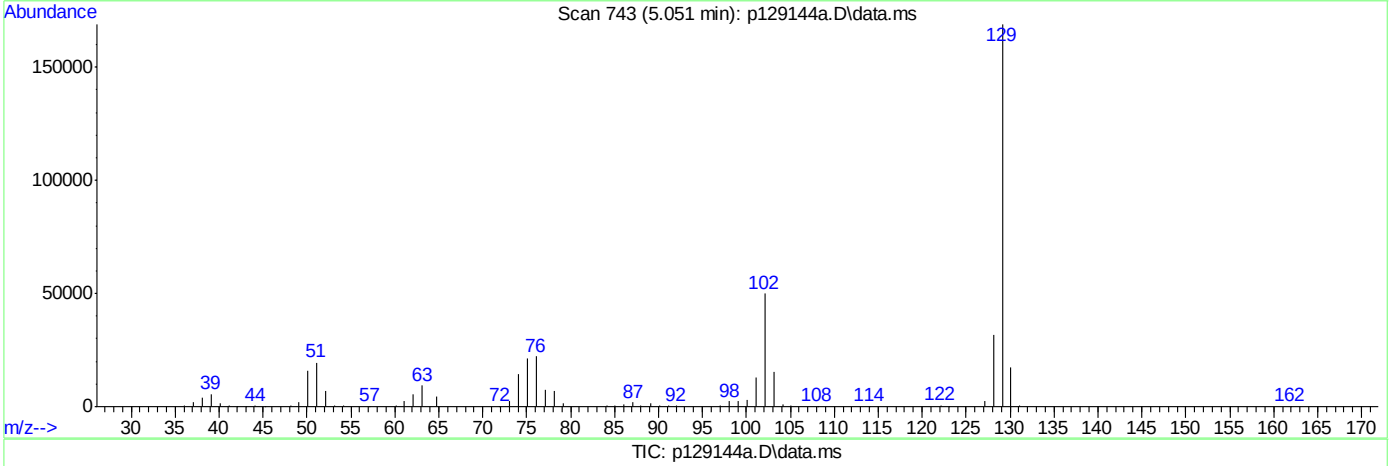
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129144a.D
Acq On : 24 Apr 2019 3:24 am
Operator : chriss2
Sample : ic5844-25
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 11:24:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration





TIC: p129144a.D\data.ms

(27) Quinoline (t)

5.051min (-0.011) 23.29ppm m

response 398233

Ion	Exp%	Act%
129.10	100	100
128.10	17.80	18.88
102.10	29.70	29.50
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129145a.D
Acq On : 24 Apr 2019 3:51 am
Operator : chriss2
Sample : ic5844-10
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 11:30:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	246850	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	914688	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	569912	40.00	ppm	0.00
69) Phenanthrene-d10	7.460	188	1047583	40.00	ppm	0.00
83) Chrysene-d12	12.167	240	1052978	40.00	ppm	0.00
91) Perylene-d12	15.111	264	1138537	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.838	152	246850	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	914688	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	569912	40.00	ppm	0.00
131) Phenanthrene-d10A	7.460	188	1047583	40.00	ppm	0.00
146) Chrysene-d12A	12.167	240	1052978	40.00	ppm	0.00
153) Perylene-d12A	15.111	264	1138537	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.838	152	246850	40.00	ppm	0.00
159) Phenanthrene-d10b	7.460	188	1047583	40.00	ppm	0.00
161) Chrysene-d12b	12.167	240	1052978	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	914688	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	569912	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	914688	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	246850	40.00	ppm	0.00
174) Chrysene-d12c	12.167	240	1052978	40.00	ppm	0.00
176) Chrysene-d12d	12.167	240	1052978	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	914688	40.00	ppm	0.00
180) Chrysene-d12D	12.167	240	1052978	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.839	112	77746	8.33	ppm	-0.01
Spiked Amount 50.000			Recovery = 16.66%			
8) Phenol-d5	3.646	99	105705	9.24	ppm	0.00
Spiked Amount 50.000			Recovery = 18.48%			
25) Nitrobenzene-d5	4.260	82	103296	10.21	ppm	0.00
Spiked Amount 50.000			Recovery = 20.42%			
51) 2-Fluorobiphenyl	5.553	172	195015	10.58	ppm	0.00
Spiked Amount 50.000			Recovery = 21.16%			
73) 2,4,6-Tribromophenol	6.697	330	32886	8.74	ppm	-0.01
Spiked Amount 50.000			Recovery = 17.48%			
85) Terphenyl-d14	10.116	244	230688	8.99	ppm	-0.01
Spiked Amount 50.000			Recovery = 17.98%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.210	88	39603	9.58	ppm	91
3) Pyridine	1.445	79	87135	12.36	ppm	95
4) N-Nitrosodimethylamine	1.429	42	42503	9.84	ppm	94
6) Indene	4.031	116	131264	9.55	ppm	96
7) Cumene	3.208	105	217416	9.68	ppm	97
9) Phenol	3.657	94	113537	9.40	ppm	94
10) Aniline	3.603	93	109312	25.35	ppm	94
11) bis(2-Chloroethyl)ether	3.662	93	90185	9.11	ppm	86
12) 2-Chlorophenol	3.700	128	83636	9.43	ppm	96
13) Decane	3.748	43	63120	10.74	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129145a.D
Acq On : 24 Apr 2019 3:51 am
Operator : chriss2
Sample : ic5844-10
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 11:30:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
14) 1,3-Dichlorobenzene	3.790	146	99885	10.03	ppm		98
15) 1,4-Dichlorobenzene	3.849	146	94564	9.57	ppm		98
16) Benzyl alcohol	3.977	108	44697	9.58	ppm		93
17) 1,2-Dichlorobenzene	3.967	146	94111	9.59	ppm		96
18) Acetophenone	4.154	105	123229	9.84	ppm		94
19) 2-Methylphenol	4.095	108	79067	9.85	ppm		99
20) 2,2'-oxybis(1-Chloropr...	4.068	121	21290	10.10	ppm		94
21) 3&4-Methylphenol	4.212	108	81282	10.14	ppm		96
22) n-Nitroso-di-n-propyla...	4.170	70	59334	10.23	ppm		100
23) Hexachloroethane	4.212	201	39192	9.81	ppm		97
26) Nitrobenzene	4.271	77	103366	10.62	ppm		90
27) Quinoline	5.035	129	162720	9.12	ppm		99
28) Isophorone	4.453	82	177084	10.08	ppm		95
29) 2-Nitrophenol	4.512	139	47402	9.29	ppm		76
30) 2,4-Dimethylphenol	4.581	107	68728	7.48	ppm		99
31) Benzoic acid	4.704	105	38600	5.53	ppm		94
32) bis(2-Chloroethoxy)met...	4.629	93	103010	9.88	ppm		100
33) 2,4-Dichlorophenol	4.709	162	76757	9.17	ppm		97
34) 2,6-Dichlorophenol	4.853	162	73454	9.16	ppm		97
35) 1,3,5-Trichlorobenzene	4.512	180	89964	9.49	ppm		98
36) 1,2,4-Trichlorobenzene	4.741	180	86695	9.67	ppm		99
37) 1,2,3-Trichlorobenzene	4.896	180	81965	9.70	ppm		97
38) Naphthalene	4.789	128	220487	9.35	ppm		100
39) 4-Chloroaniline	4.853	127	92808	11.07	ppm		97
40) 2,3-Dichloroaniline	5.495	161	95278	9.34	ppm		98
41) Caprolactam	5.105	55	36584	9.91	ppm		97
42) Hexachlorobutadiene	4.891	225	53493	9.56	ppm		98
43) 4-Chloro-3-methylphenol	5.238	107	80606	9.17	ppm		98
44) 2-Methylnaphthalene	5.286	141	127014	9.53	ppm		95
45) 1-Methylnaphthalene	5.350	142	163314	9.59	ppm		94
46) Dimethylnaphthalene	5.724	156	148966	9.50	ppm		93
48) Hexachlorocyclopentadiene	5.404	237	77564	15.45	ppm		97
49) 2,4,6-Trichlorophenol	5.505	196	57626	9.76	ppm		97
50) 2,4,5-Trichlorophenol	5.548	196	60227	9.81	ppm		94
52) 2-Chloronaphthalene	5.623	162	164152	10.31	ppm		95
53) Biphenyl	5.617	154	203886	10.19	ppm		97
54) 2-Nitroaniline	5.714	65	58142	11.49	ppm	#	74
55) Dimethylphthalate	5.847	163	205848	10.00	ppm		99
56) Acenaphthylene	5.911	152	257676	10.41	ppm		99
57) 2,6-Dinitrotoluene	5.885	165	43043	9.53	ppm		76
58) 3-Nitroaniline	6.013	138	48283	10.47	ppm		96
59) Acenaphthene	6.039	153	155382	9.92	ppm		97
60) 2,4-Dinitrophenol	6.093	184	39410	14.20	ppm		76
61) 4-Nitrophenol	6.210	109	32049	9.51	ppm		96
62) Dibenzofuran	6.178	168	236758	10.01	ppm		95
63) 2,4-Dinitrotoluene	6.189	165	60408	10.33	ppm		80
64) 2,3,4,6-Tetrachlorophenol	6.301	232	51260	9.13	ppm		92
65) Diethylphthalate	6.397	149	215361	10.38	ppm		97
66) Fluorene	6.467	166	194772	10.18	ppm		96
67) 4-Chlorophenyl-phenyle...	6.478	204	93535	9.87	ppm		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129145a.D
Acq On : 24 Apr 2019 3:51 am
Operator : chriss2
Sample : ic5844-10
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 11:30:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
68)	4-Nitroaniline	6.515	138	45200	10.01 ppm	91
70)	4,6-Dinitro-2-methylph...	6.542	198	34535	8.18 ppm	76
71)	n-Nitrosodiphenylamine	6.590	169	132598	9.19 ppm	97
72)	1,2-Diphenylhydrazine	6.622	77	220519	10.63 ppm	89
74)	4-Bromophenyl-phenylether	6.958	248	61627	8.71 ppm	94
75)	Hexachlorobenzene	7.017	284	70748	9.00 ppm	98
76)	Pentachlorophenol	7.268	266	71665	14.44 ppm	98
77)	Phenanthrene	7.487	178	268795	9.21 ppm	99
78)	Anthracene	7.546	178	279918	9.35 ppm	99
79)	Carbazole	7.802	167	275950	9.48 ppm	100
80)	Di-n-butylphthalate	8.422	149	396345	9.37 ppm	99
81)	Fluoranthene	9.293	202	342659	9.32 ppm	97
82)	Octadecane	7.434	57	111315	10.31 ppm	95
84)	Pyrene	9.678	202	358665	9.28 ppm	99
86)	Butylbenzylphthalate	11.248	149	191063	9.60 ppm	99
87)	Benzo[a]anthracene	12.135	228	335336	9.34 ppm	98
88)	3,3'-Dichlorobenzidine	12.226	252	114223	8.82 ppm	97
89)	Chrysene	12.210	228	297788	9.13 ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.648	149	253691	9.31 ppm	100
92)	Di-n-octylphthalate	14.053	149	452507	8.97 ppm	98
93)	Benzo[b]fluoranthene	14.368	252	334514	8.61 ppm	98
94)	Benzo[k]fluoranthene	14.427	252	299498	9.81 ppm	98
95)	Benzo[a]pyrene	14.977	252	288405	8.98 ppm	99
96)	Indeno[1,2,3-cd]pyrene	17.007	276	272702	9.19 ppm	95
97)	Dibenz(a,h)acridine	16.665	279	261469	8.98 ppm	97
98)	Dibenz[a,h]anthracene	17.077	278	268436	9.00 ppm	99
99)	7,12-Dimethylbenz(a)an...	14.389	256	106728	6.72 ppm	97
100)	Benzo[g,h,i]perylene	17.413	276	273714	9.37 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

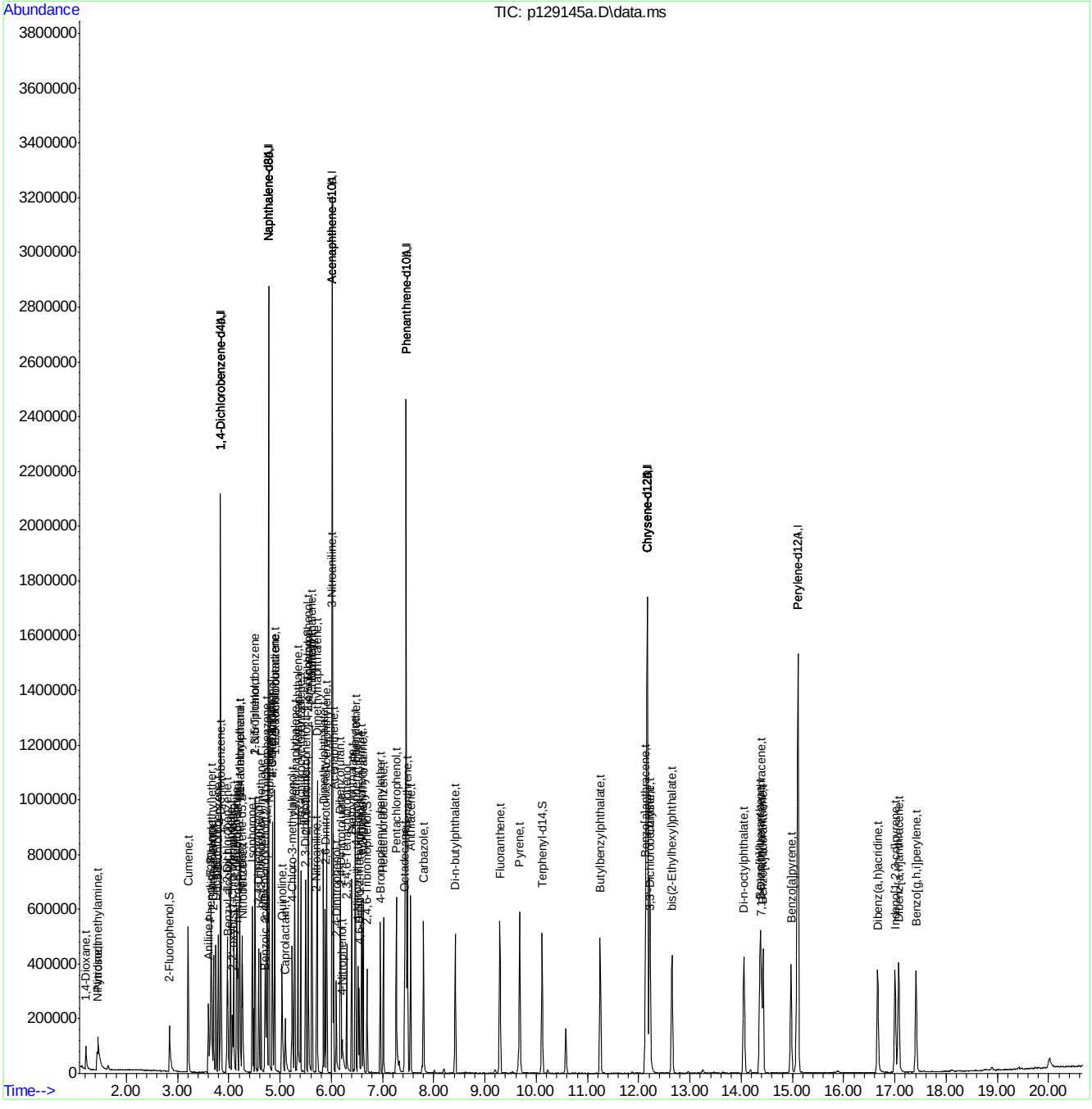
9.6.31

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129145a.D
Acq On : 24 Apr 2019 3:51 am
Operator : chriss2
Sample : ic5844-10
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 11:30:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:15:43 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/30/19 18:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129146a.D
Acq On : 24 Apr 2019 4:18 am
Operator : chriss2
Sample : ic5844-5
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 11:35:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.839	152	233437	40.00	ppm	0.00
24) Naphthalene-d8	4.774	136	863051	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	540608	40.00	ppm	0.00
69) Phenanthrene-d10	7.461	188	1004865	40.00	ppm	0.00
83) Chrysene-d12	12.167	240	993848	40.00	ppm	0.00
91) Perylene-d12	15.111	264	1118417	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.839	152	233437	40.00	ppm	0.00
111) Naphthalene-d8A	4.774	136	863051	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	540608	40.00	ppm	0.00
131) Phenanthrene-d10A	7.461	188	1004865	40.00	ppm	0.00
146) Chrysene-d12A	12.167	240	993848	40.00	ppm	0.00
153) Perylene-d12A	15.111	264	1118417	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.839	152	233437	40.00	ppm	0.00
159) Phenanthrene-d10b	7.461	188	1004865	40.00	ppm	0.00
161) Chrysene-d12b	12.167	240	993848	40.00	ppm	0.00
163) Naphthalene-d8b	4.774	136	863051	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	540608	40.00	ppm	0.00
167) Naphthalene-d8c	4.774	136	863051	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.839	152	233437	40.00	ppm	0.00
174) Chrysene-d12c	12.167	240	993848	40.00	ppm	0.00
176) Chrysene-d12d	12.167	240	993848	40.00	ppm	0.00
178) Naphthalene-d8d	4.774	136	863051	40.00	ppm	0.00
180) Chrysene-d12D	12.167	240	993848	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.845	112	32624	3.70	ppm	0.00
Spiked Amount 50.000			Recovery	=	7.40%	
8) Phenol-d5	3.646	99	46471	4.29	ppm	0.00
Spiked Amount 50.000			Recovery	=	8.58%	
25) Nitrobenzene-d5	4.261	82	47032	4.93	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.86%	
51) 2-Fluorobiphenyl	5.548	172	89418	5.12	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.24%	
73) 2,4,6-Tribromophenol	6.697	330	13825	3.83	ppm	-0.01
Spiked Amount 50.000			Recovery	=	7.66%	
85) Terphenyl-d14	10.116	244	102133	4.22	ppm	-0.01
Spiked Amount 50.000			Recovery	=	8.44%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.210	88	16715	4.28	ppm	94
3) Pyridine	1.445	79	41868	6.28	ppm	99
4) N-Nitrosodimethylamine	1.429	42	16811	4.11	ppm	97
6) Indene	4.031	116	60850	4.68	ppm	97
7) Cumene	3.203	105	98222	4.62	ppm	98
9) Phenol	3.657	94	50230	4.40	ppm	93
10) Aniline	3.604	93	55655	13.65	ppm	92
11) bis(2-Chloroethyl)ether	3.662	93	37349	3.99	ppm	95
12) 2-Chlorophenol	3.700	128	37875	4.52	ppm	90
13) Decane	3.748	43	30296	5.45	ppm	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129146a.D
Acq On : 24 Apr 2019 4:18 am
Operator : chriss2
Sample : ic5844-5
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 11:35:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
14) 1,3-Dichlorobenzene	3.791	146	47766	5.07	ppm		99
15) 1,4-Dichlorobenzene	3.849	146	44143	4.72	ppm		95
16) Benzyl alcohol	3.978	108	18501	4.19	ppm		85
17) 1,2-Dichlorobenzene	3.967	146	42763	4.61	ppm		99
18) Acetophenone	4.154	105	57821	4.88	ppm		89
19) 2-Methylphenol	4.095	108	33445	4.41	ppm		94
20) 2,2'-oxybis(1-Chloropr...	4.068	121	9294	4.66	ppm	#	82
21) 3&4-Methylphenol	4.213	108	34213	4.51	ppm		98
22) n-Nitroso-di-n-propyla...	4.165	70	28007	5.10	ppm		92
23) Hexachloroethane	4.207	201	17989	4.76	ppm		83
26) Nitrobenzene	4.271	77	49909	5.43	ppm		87
27) Quinoline	5.035	129	74002	4.40	ppm		97
28) Isophorone	4.453	82	80284	4.84	ppm		98
29) 2-Nitrophenol	4.512	139	22271	4.63	ppm	#	74
30) 2,4-Dimethylphenol	4.581	107	26795	3.09	ppm		99
31) Benzoic acid	4.693	105	11273m	1.71	ppm		
32) bis(2-Chloroethoxy)met...	4.624	93	47320	4.81	ppm		97
33) 2,4-Dichlorophenol	4.715	162	34261	4.34	ppm		96
34) 2,6-Dichlorophenol	4.854	162	33883	4.48	ppm		96
35) 1,3,5-Trichlorobenzene	4.512	180	40662	4.54	ppm		97
36) 1,2,4-Trichlorobenzene	4.742	180	38975	4.61	ppm		100
37) 1,2,3-Trichlorobenzene	4.896	180	38832	4.87	ppm		98
38) Naphthalene	4.790	128	99792	4.49	ppm		99
39) 4-Chloroaniline	4.848	127	44281	5.60	ppm		89
40) 2,3-Dichloroaniline	5.495	161	44290	4.60	ppm		95
41) Caprolactam	5.094	55	16989	4.88	ppm		97
42) Hexachlorobutadiene	4.891	225	24233	4.59	ppm		98
43) 4-Chloro-3-methylphenol	5.238	107	36319	4.38	ppm		93
44) 2-Methylnaphthalene	5.286	141	59988	4.77	ppm		95
45) 1-Methylnaphthalene	5.351	142	76231	4.75	ppm		96
46) Dimethylnaphthalene	5.724	156	68161	4.61	ppm		94
48) Hexachlorocyclopentadiene	5.404	237	27599	5.79	ppm		98
49) 2,4,6-Trichlorophenol	5.505	196	26352	4.70	ppm		97
50) 2,4,5-Trichlorophenol	5.554	196	25018	4.30	ppm		97
52) 2-Chloronaphthalene	5.623	162	77413	5.12	ppm		96
53) Biphenyl	5.618	154	92102	4.85	ppm		98
54) 2-Nitroaniline	5.714	65	26644	5.55	ppm		81
55) Dimethylphthalate	5.847	163	93871	4.81	ppm		98
56) Acenaphthylene	5.911	152	118824	5.06	ppm		99
57) 2,6-Dinitrotoluene	5.885	165	19441	4.54	ppm		84
58) 3-Nitroaniline	6.008	138	20181	4.61	ppm	#	66
59) Acenaphthene	6.040	153	71451	4.81	ppm		96
60) 2,4-Dinitrophenol	6.098	184	13775	5.23	ppm	#	61
61) 4-Nitrophenol	6.227	109	12456	3.90	ppm		96
62) Dibenzofuran	6.179	168	106205	4.74	ppm		92
63) 2,4-Dinitrotoluene	6.189	165	27544	4.97	ppm		85
64) 2,3,4,6-Tetrachlorophenol	6.301	232	21327	4.00	ppm		93
65) Diethylphthalate	6.392	149	98820	5.02	ppm		97
66) Fluorene	6.462	166	88011	4.85	ppm		99
67) 4-Chlorophenyl-phenyle...	6.478	204	43508	4.84	ppm		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129146a.D
Acq On : 24 Apr 2019 4:18 am
Operator : chriss2
Sample : ic5844-5
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 11:35:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
68)	4-Nitroaniline	6.510	138	19989	4.67	ppm	80
70)	4,6-Dinitro-2-methylph...	6.542	198	15112	3.73	ppm	88
71)	n-Nitrosodiphenylamine	6.590	169	61491	4.44	ppm	96
72)	1,2-Diphenylhydrazine	6.622	77	102725	5.16	ppm	91
74)	4-Bromophenyl-phenylether	6.953	248	27024	3.98	ppm	80
75)	Hexachlorobenzene	7.017	284	31416	4.17	ppm	95
76)	Pentachlorophenol	7.268	266	28877	6.07	ppm	95
77)	Phenanthrene	7.482	178	123229	4.40	ppm	99
78)	Anthracene	7.546	178	132112	4.60	ppm	99
79)	Carbazole	7.797	167	128199	4.59	ppm	98
80)	Di-n-butylphthalate	8.417	149	181070	4.46	ppm	99
81)	Fluoranthene	9.288	202	152264	4.32	ppm	98
82)	Octadecane	7.434	57	50787	4.90	ppm	93
84)	Pyrene	9.678	202	164102	4.50	ppm	97
86)	Butylbenzylphthalate	11.248	149	84120	4.48	ppm	89
87)	Benzo[a]anthracene	12.135	228	157299	4.64	ppm	100
88)	3,3'-Dichlorobenzidine	12.226	252	50462	4.13	ppm	95
89)	Chrysene	12.205	228	137715	4.47	ppm	97
90)	bis(2-Ethylhexyl)phtha...	12.643	149	114374	4.45	ppm	98
92)	Di-n-octylphthalate	14.048	149	202862	4.09	ppm	96
93)	Benzo[b]fluoranthene	14.363	252	148561	3.89	ppm	95
94)	Benzo[k]fluoranthene	14.416	252	146190	4.87	ppm	98
95)	Benzo[a]pyrene	14.972	252	135091	4.28	ppm	95
96)	Indeno[1,2,3-cd]pyrene	16.997	276	125836	4.31	ppm	90
97)	Dibenz(a,h)acridine	16.660	279	115360	4.03	ppm	98
98)	Dibenz[a,h]anthracene	17.066	278	127839	4.36	ppm	96
99)	7,12-Dimethylbenz(a)an...	14.379	256	39989	2.56	ppm	96
100)	Benzo[g,h,i]perylene	17.408	276	129013	4.49	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

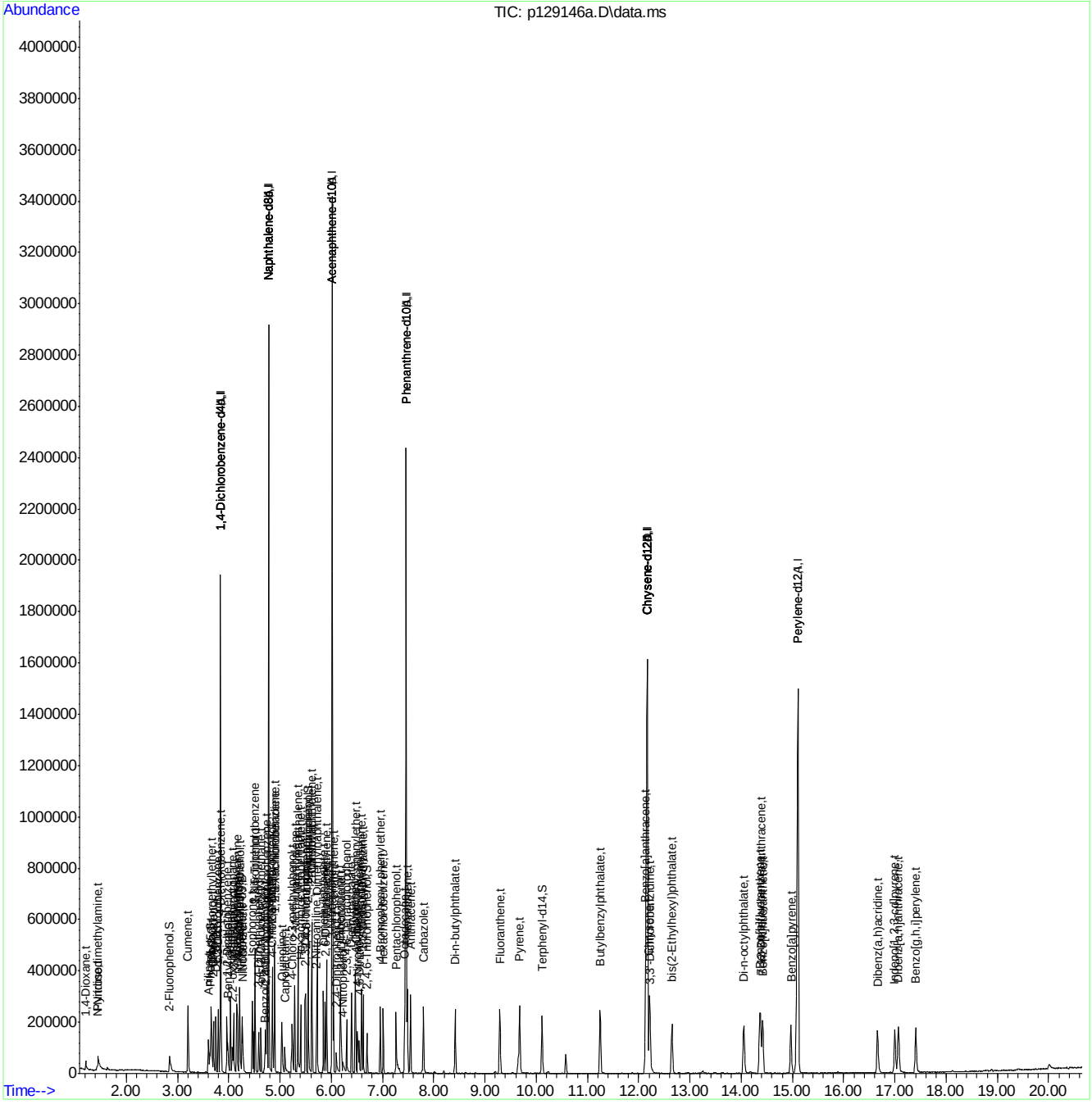
9.6.32

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129146a.D
Acq On : 24 Apr 2019 4:18 am
Operator : chriss2
Sample : ic5844-5
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 11:35:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration



Manual Integration Approval Summary

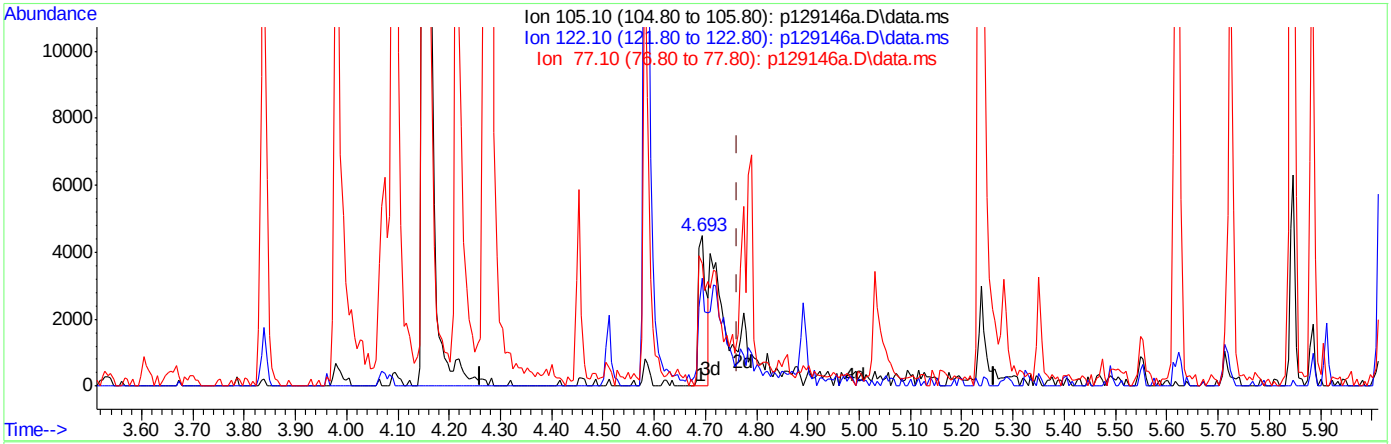
Sample Number:	EP5844-IC5844	**Method:**	SW846 8270D
Lab FileID:	P129146A.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 04:18	**Supervisor approved:**	04/30/19 18:25 Kristi Schollenberger

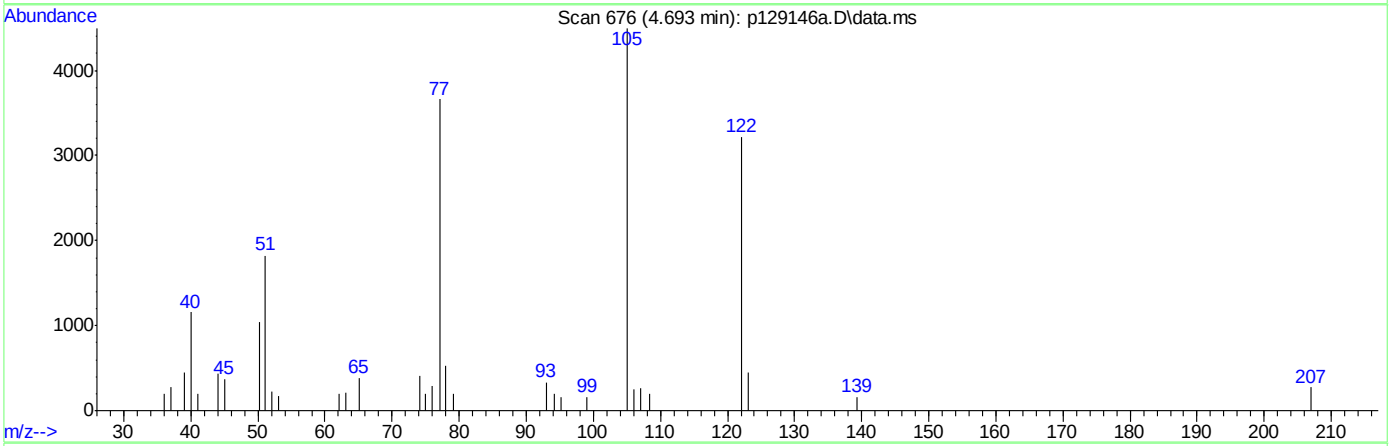
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		4.69	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129146a.D
Acq On : 24 Apr 2019 4:18 am
Operator : chriss2
Sample : ic5844-5
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 24 11:21:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 11:19:50 2019
Response via : Initial Calibration





TIC: p129146a.D\data.ms

(31) Benzoic acid (t)

4.693min (-0.069) 0.70ppm

response 4620

Ion	Exp%	Act%
105.10	100	100
122.10	67.60	64.36
77.10	76.90	62.38
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129146a.D
Acq On : 24 Apr 2019 4:18 am
Operator : chriss2
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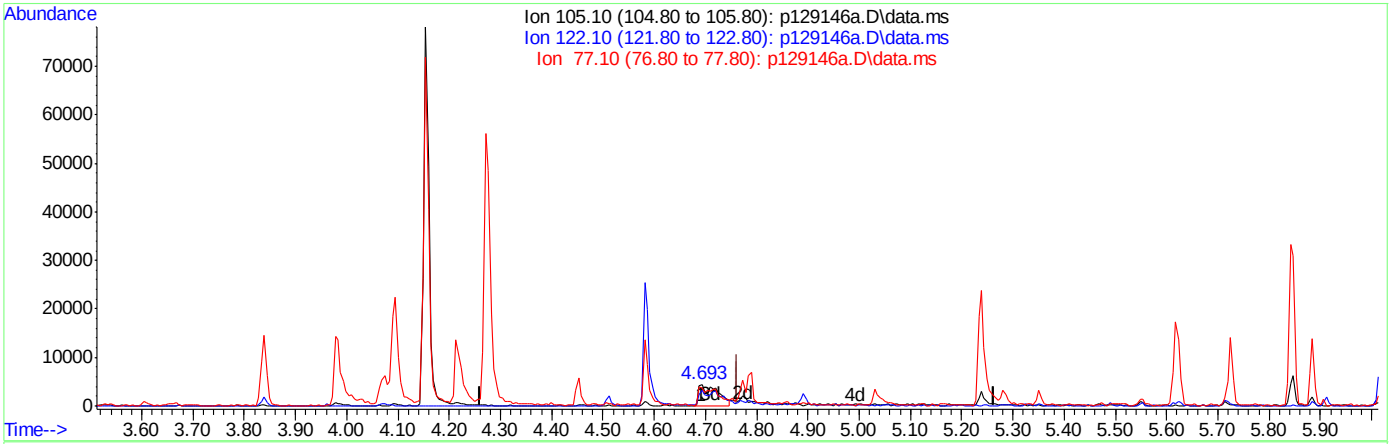
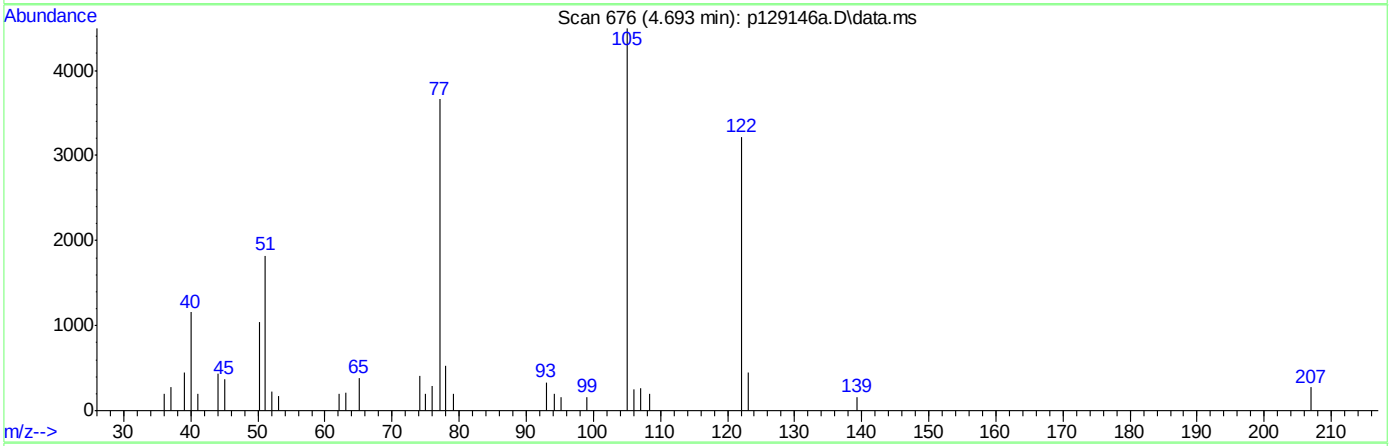
QLast Update : Wed Apr 24 11:19:50 2019
Response via : Initial Calibration





TIC: p129146a.D\data.ms

(31) Benzoic acid (t)

4.693min (-0.069) 1.71ppm m

response 11273

Ion	Exp%	Act%
105.10	100	100
122.10	67.60	71.62
77.10	76.90	81.47
0.00	0.00	0.00

P129147.D

Manual Integrations APPROVED (compounds with "m" flag)

Kristi Schollenberger 04/30/19 18:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129147.D
Acq On : 24 Apr 2019 4:45 am
Operator : chriss2
Sample : ic5844-2
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 11:45:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	215705	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	819276	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	500270	40.00	ppm	0.00
69) Phenanthrene-d10	7.460	188	930794	40.00	ppm	0.00
83) Chrysene-d12	12.162	240	898814	40.00	ppm	-0.01
91) Perylene-d12	15.110	264	1003108	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.838	152	215705	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	819276	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	500270	40.00	ppm	0.00
131) Phenanthrene-d10A	7.460	188	930794	40.00	ppm	0.00
146) Chrysene-d12A	12.162	240	898814	40.00	ppm	-0.01
153) Perylene-d12A	15.110	264	1003108	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.838	152	215705	40.00	ppm	0.00
159) Phenanthrene-d10b	7.460	188	930794	40.00	ppm	0.00
161) Chrysene-d12b	12.162	240	898814	40.00	ppm	-0.01
163) Naphthalene-d8b	4.773	136	819276	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	500270	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	819276	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	215705	40.00	ppm	0.00
174) Chrysene-d12c	12.162	240	898814	40.00	ppm	-0.01
176) Chrysene-d12d	12.162	240	898814	40.00	ppm	-0.01
178) Naphthalene-d8d	4.773	136	819276	40.00	ppm	0.00
180) Chrysene-d12D	12.162	240	898814	40.00	ppm	-0.04
System Monitoring Compounds						
5) 2-Fluorophenol	2.855	112	10975	1.35	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.70%	
8) Phenol-d5	3.651	99	15488	1.55	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.10%	
25) Nitrobenzene-d5	4.260	82	17764	1.96	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.92%	
51) 2-Fluorobiphenyl	5.553	172	32757	2.03	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.06%	
73) 2,4,6-Tribromophenol	6.696	330	4645	1.39	ppm	-0.01
Spiked Amount 50.000			Recovery	=	2.78%	
85) Terphenyl-d14	10.110	244	35974	1.64	ppm	-0.02
Spiked Amount 50.000			Recovery	=	3.28%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.215	88	6569	1.82	ppm	88
3) Pyridine	1.461	79	12254	1.99	ppm	96
4) N-Nitrosodimethylamine	1.440	42	5615	1.49	ppm	81
6) Indene	4.031	116	22248	1.85	ppm	90
7) Cumene	3.208	105	35218	1.79	ppm	98
9) Phenol	3.662	94	17986	1.70	ppm	88
10) Aniline	3.609	93	19458	5.16	ppm	96
11) bis(2-Chloroethyl)ether	3.667	93	14251	1.65	ppm	97
12) 2-Chlorophenol	3.705	128	14177	1.83	ppm	92
13) Decane	3.747	43	11903	2.32	ppm	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129147.D
Acq On : 24 Apr 2019 4:45 am
Operator : chriss2
Sample : ic5844-2
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 11:45:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
14) 1,3-Dichlorobenzene	3.796	146	16937	1.95	ppm		91
15) 1,4-Dichlorobenzene	3.849	146	16173	1.87	ppm		93
16) Benzyl alcohol	3.988	108	5744	1.41	ppm		90
17) 1,2-Dichlorobenzene	3.966	146	16571	1.93	ppm		93
18) Acetophenone	4.159	105	21588	1.97	ppm		96
19) 2-Methylphenol	4.095	108	12304	1.75	ppm		87
20) 2,2'-oxybis(1-Chloropr...	4.073	121	3250	1.76	ppm	#	80
21) 3&4-Methylphenol	4.223	108	13301	1.90	ppm		97
22) n-Nitroso-di-n-propyla...	4.170	70	10458	2.06	ppm	#	87
23) Hexachloroethane	4.212	201	6877	1.97	ppm		94
26) Nitrobenzene	4.276	77	18982	2.18	ppm		90
27) Quinoline	5.035	129	26631	1.67	ppm		99
28) Isophorone	4.453	82	30370	1.93	ppm		93
29) 2-Nitrophenol	4.511	139	6853	1.50	ppm	#	47
32) bis(2-Chloroethoxy)met...	4.629	93	16683	1.79	ppm		98
33) 2,4-Dichlorophenol	4.720	162	10397	1.39	ppm		93
34) 2,6-Dichlorophenol	4.853	162	12366	1.72	ppm		98
35) 1,3,5-Trichlorobenzene	4.511	180	14793	1.74	ppm		94
36) 1,2,4-Trichlorobenzene	4.741	180	14604	1.82	ppm		98
37) 1,2,3-Trichlorobenzene	4.896	180	14012	1.85	ppm		89
38) Naphthalene	4.789	128	39755	1.88	ppm		98
39) 4-Chloroaniline	4.853	127	15136	2.02	ppm		87
40) 2,3-Dichloroaniline	5.494	161	15849	1.73	ppm		96
41) Caprolactam	5.094	55	5986	1.81	ppm		88
42) Hexachlorobutadiene	4.891	225	9330	1.86	ppm		92
43) 4-Chloro-3-methylphenol	5.238	107	13370	1.70	ppm		80
44) 2-Methylnaphthalene	5.286	141	22328	1.87	ppm		99
45) 1-Methylnaphthalene	5.350	142	28216	1.85	ppm		92
46) Dimethylnaphthalene	5.724	156	24933	1.77	ppm		91
49) 2,4,6-Trichlorophenol	5.505	196	9321	1.80	ppm		94
50) 2,4,5-Trichlorophenol	5.558	196	9535	1.77	ppm		96
52) 2-Chloronaphthalene	5.623	162	28204	2.02	ppm		89
53) Biphenyl	5.617	154	34314	1.95	ppm		97
54) 2-Nitroaniline	5.719	65	10279	2.31	ppm	#	77
55) Dimethylphthalate	5.847	163	34470	1.91	ppm		98
56) Acenaphthylene	5.911	152	43232	1.99	ppm		98
57) 2,6-Dinitrotoluene	5.884	165	6947	1.75	ppm		67
58) 3-Nitroaniline	6.013	138	7726	1.91	ppm	#	26
59) Acenaphthene	6.039	153	26410	1.92	ppm		98
60) 2,4-Dinitrophenol	6.109	184	1813	0.74	ppm	#	62
61) 4-Nitrophenol	6.242	109	4911m	1.66	ppm		
62) Dibenzofuran	6.178	168	38630	1.86	ppm		90
63) 2,4-Dinitrotoluene	6.189	165	9031	1.76	ppm		70
64) 2,3,4,6-Tetrachlorophenol	6.301	232	7588	1.54	ppm		96
65) Diethylphthalate	6.392	149	34891	1.92	ppm		94
66) Fluorene	6.461	166	31895	1.90	ppm		99
67) 4-Chlorophenyl-phenyle...	6.477	204	15699	1.89	ppm		89
68) 4-Nitroaniline	6.520	138	6162	1.56	ppm		91
71) n-Nitrosodiphenylamine	6.590	169	22328	1.74	ppm		96
72) 1,2-Diphenylhydrazine	6.622	77	39201	2.13	ppm		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129147.D
Acq On : 24 Apr 2019 4:45 am
Operator : chriss2
Sample : ic5844-2
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 11:45:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
74)	4-Bromophenyl-phenylether	6.953	248	9507	1.51 ppm	85
75)	Hexachlorobenzene	7.012	284	11869	1.70 ppm	83
76)	Pentachlorophenol	7.268	266	6976	1.58 ppm	91
77)	Phenanthrene	7.482	178	46301	1.79 ppm	97
78)	Anthracene	7.546	178	48383	1.82 ppm	97
79)	Carbazole	7.802	167	45530	1.76 ppm	98
80)	Di-n-butylphthalate	8.417	149	63740	1.70 ppm	99
81)	Fluoranthene	9.287	202	54128	1.66 ppm	99
82)	Octadecane	7.434	57	19366	2.02 ppm	93
84)	Pyrene	9.677	202	59922	1.82 ppm	97
86)	Butylbenzylphthalate	11.243	149	29175	1.72 ppm	91
87)	Benzo[a]anthracene	12.140	228	56355	1.84 ppm	95
88)	3,3'-Dichlorobenzidine	12.226	252	16449	1.49 ppm	97
89)	Chrysene	12.204	228	48245	1.73 ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.648	149	38063	1.64 ppm	94
92)	Di-n-octylphthalate	14.053	149	64640	1.45 ppm	93
93)	Benzo[b]fluoranthene	14.363	252	51674	1.51 ppm	97
94)	Benzo[k]fluoranthene	14.416	252	50092	1.86 ppm	96
95)	Benzo[a]pyrene	14.972	252	47243	1.67 ppm	99
96)	Indeno[1,2,3-cd]pyrene	16.996	276	40559	1.55 ppm	91
97)	Dibenz(a,h)acridine	16.660	279	38961	1.52 ppm	94
98)	Dibenz[a,h]anthracene	17.071	278	42944	1.63 ppm	97
99)	7,12-Dimethylbenz(a)an...	14.379	256	13204	0.94 ppm	94
100)	Benzo[g,h,i]perylene	17.413	276	43770	1.70 ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

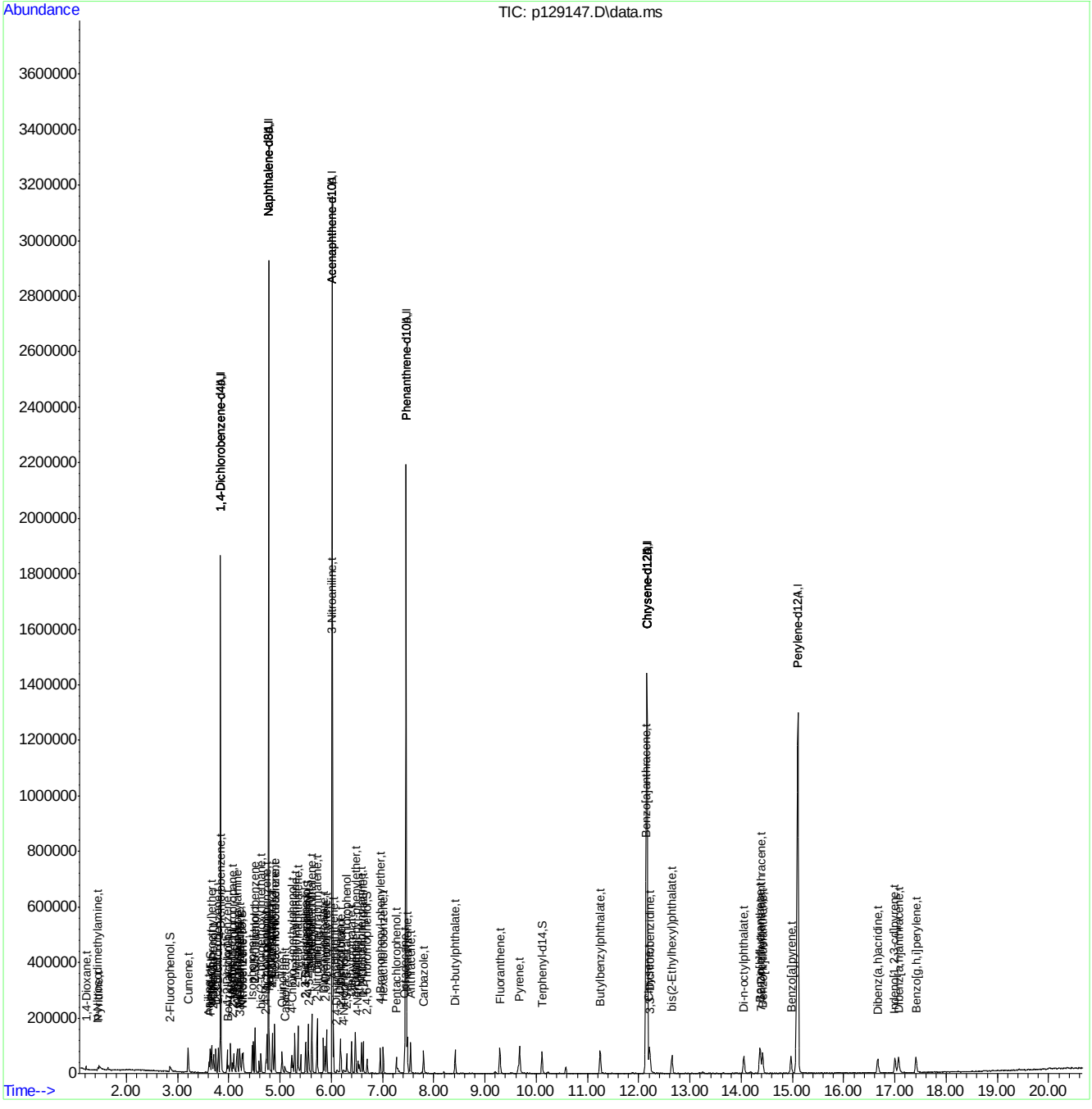
9.6.33

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129147.D
Acq On : 24 Apr 2019 4:45 am
Operator : chriss2
Sample : ic5844-2
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 11:45:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration



Manual Integration Approval Summary

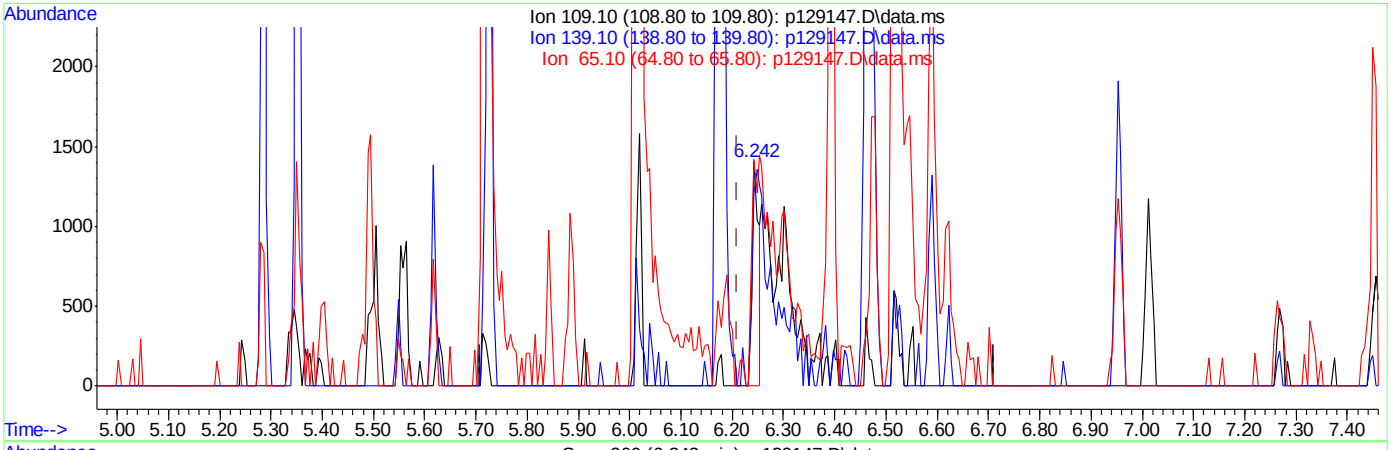
Sample Number:	EP5844-IC5844	**Method:**	SW846 8270D
Lab FileID:	P129147.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 04:45	**Supervisor approved:**	04/30/19 18:25 Kristi Schollenberger

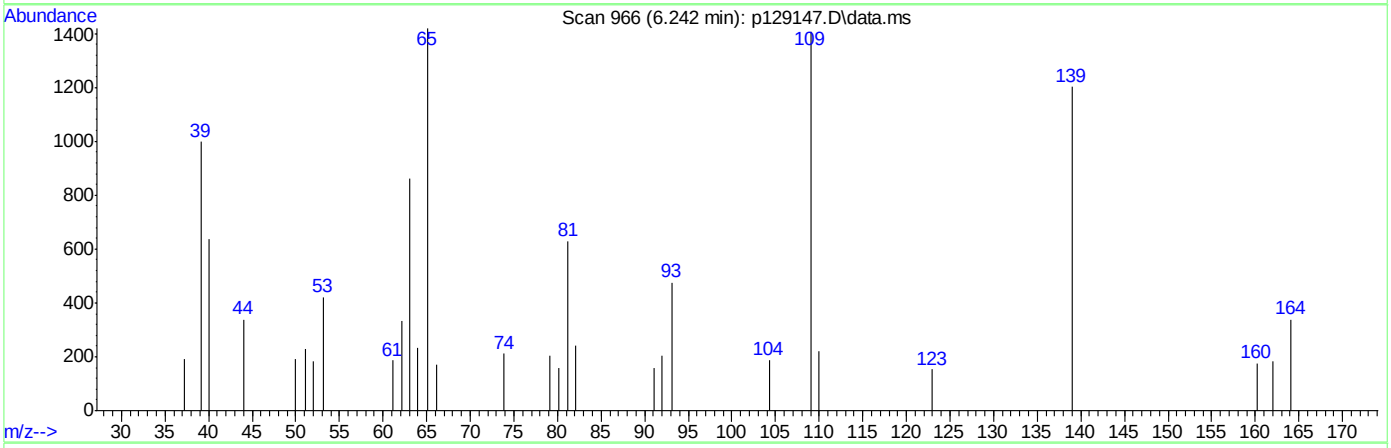
Parameter	CAS	Sig#	R.T. (min.)	Reason
4-Nitrophenol	100-02-7		6.24	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129147.D
Acq On : 24 Apr 2019 4:45 am
Operator : chriss2
Sample : ic5844-2
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 24 11:25:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 11:23:42 2019
Response via : Initial Calibration





TIC: p129147.D\data.ms

(61) 4-Nitrophenol (t)

6.242min (+0.032) 0.43ppm

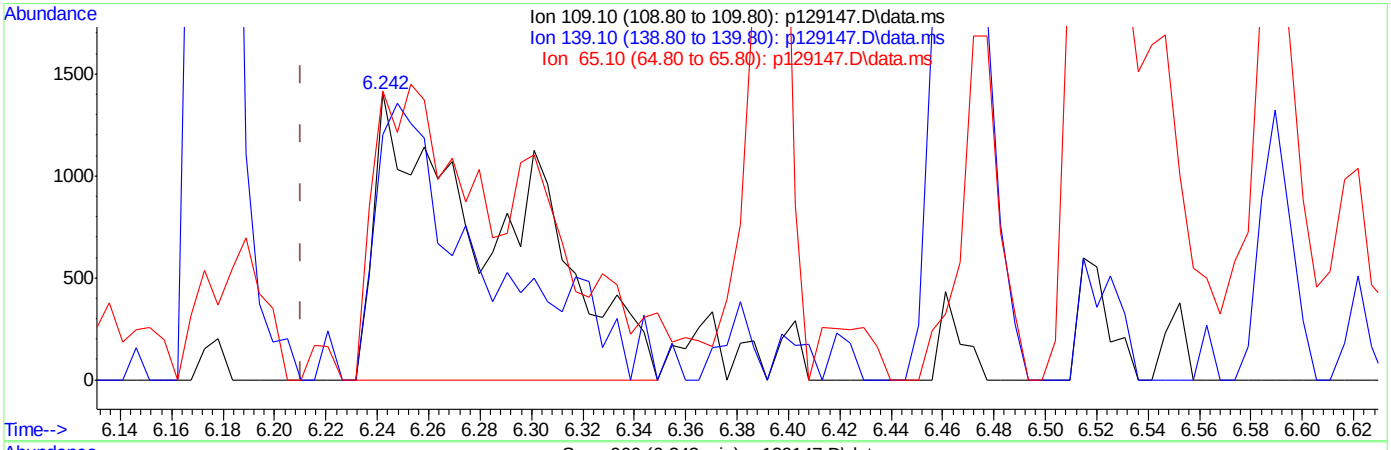
response 1270

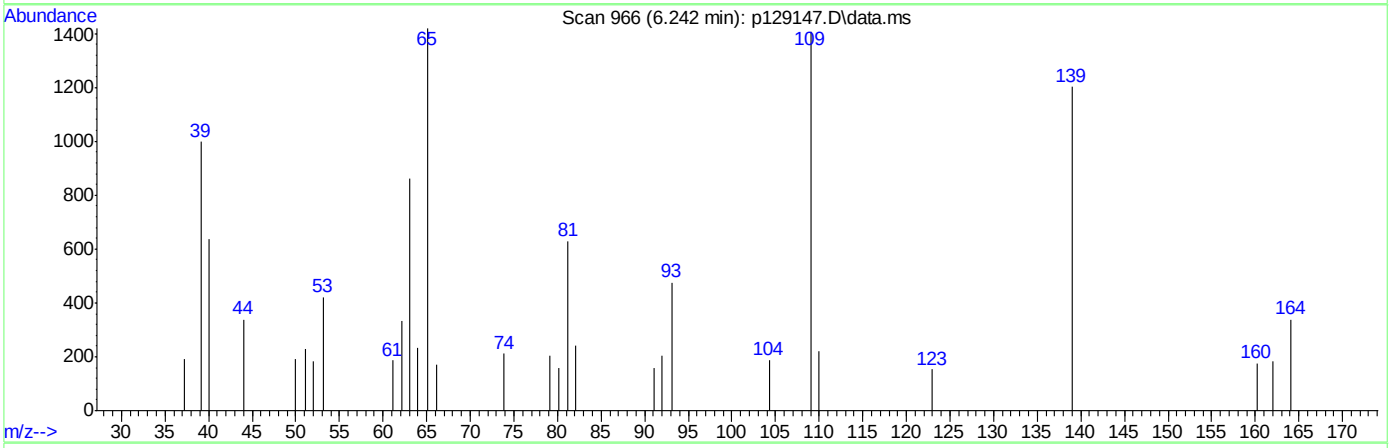
Ion	Exp%	Act%
109.10	100	100
139.10	99.10	63.38#
65.10	97.00	76.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129147.D
Acq On : 24 Apr 2019 4:45 am
Operator : chriss2
Sample : ic5844-2
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 24 11:25:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 11:23:42 2019
Response via : Initial Calibration





TIC: p129147.D\data.ms

(61) 4-Nitrophenol (t)

6.242min (+0.032) 1.66ppm m

response 4911

Ion	Exp%	Act%
109.10	100	100
139.10	99.10	85.55
65.10	97.00	101.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/30/19 18:25

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129148.D
Acq On : 24 Apr 2019 5:12 am
Operator : chriss2
Sample : ic5844-1
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 11:52:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.839	152	241163	40.00	ppm	0.00
24) Naphthalene-d8	4.774	136	884401	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	528405	40.00	ppm	0.00
69) Phenanthrene-d10	7.461	188	939189	40.00	ppm	0.00
83) Chrysene-d12	12.162	240	840981	40.00	ppm	-0.01
91) Perylene-d12	15.105	264	894276	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.839	152	241163	40.00	ppm	0.00
111) Naphthalene-d8A	4.774	136	884401	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	528405	40.00	ppm	0.00
131) Phenanthrene-d10A	7.461	188	939189	40.00	ppm	0.00
146) Chrysene-d12A	12.162	240	840981	40.00	ppm	-0.01
153) Perylene-d12A	15.105	264	894276	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.839	152	241163	40.00	ppm	0.00
159) Phenanthrene-d10b	7.461	188	939189	40.00	ppm	0.00
161) Chrysene-d12b	12.162	240	840981	40.00	ppm	-0.01
163) Naphthalene-d8b	4.774	136	884401	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	528405	40.00	ppm	0.00
167) Naphthalene-d8c	4.774	136	884401	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.839	152	241163	40.00	ppm	0.00
174) Chrysene-d12c	12.162	240	840981	40.00	ppm	-0.01
176) Chrysene-d12d	12.162	240	840981	40.00	ppm	-0.01
178) Naphthalene-d8d	4.774	136	884401	40.00	ppm	0.00
180) Chrysene-d12D	12.162	240	840981	40.00	ppm	-0.04
System Monitoring Compounds						
5) 2-Fluorophenol	2.861	112	5426	0.60	ppm	0.01
Spiked Amount 50.000			Recovery	=	1.20%	
8) Phenol-d5	3.662	99	8085	0.72	ppm	0.01
Spiked Amount 50.000			Recovery	=	1.44%	
25) Nitrobenzene-d5	4.266	82	9390	0.96	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.92%	
51) 2-Fluorobiphenyl	5.553	172	16917	0.99	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.98%	
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
85) Terphenyl-d14	10.116	244	17565	0.86	ppm	-0.01
Spiked Amount 50.000			Recovery	=	1.72%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.221	88	4003	0.99	ppm	99
3) Pyridine	1.477	79	5544m	0.81	ppm	
4) N-Nitrosodimethylamine	1.456	42	3564	0.84	ppm #	60
6) Indene	4.031	116	12547	0.93	ppm	88
7) Cumene	3.208	105	20290	0.92	ppm	92
9) Phenol	3.668	94	9662	0.82	ppm	89
10) Aniline	3.609	93	11120	2.64	ppm	97
11) bis(2-Chloroethyl)ether	3.668	93	7783	0.81	ppm	89
12) 2-Chlorophenol	3.710	128	7332	0.85	ppm	84
13) Decane	3.748	43	6617	1.15	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129148.D
Acq On : 24 Apr 2019 5:12 am
Operator : chriss2
Sample : ic5844-1
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 11:52:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
14) 1,3-Dichlorobenzene	3.796	146	9332	0.96	ppm		96
15) 1,4-Dichlorobenzene	3.849	146	9603	0.99	ppm		97
16) Benzyl alcohol	3.999	108	2023	0.44	ppm		79
17) 1,2-Dichlorobenzene	3.967	146	8979	0.94	ppm		98
18) Acetophenone	4.159	105	11359	0.93	ppm		99
19) 2-Methylphenol	4.100	108	7797	0.99	ppm		92
20) 2,2'-oxybis(1-Chloropr...	4.074	121	1954	0.95	ppm	#	84
21) 3&4-Methylphenol	4.223	108	6043	0.77	ppm		95
22) n-Nitroso-di-n-propyla...	4.170	70	5933	1.05	ppm		92
23) Hexachloroethane	4.213	201	3683	0.94	ppm		98
26) Nitrobenzene	4.277	77	10193	1.08	ppm		88
27) Quinoline	5.041	129	14907	0.86	ppm		96
28) Isophorone	4.453	82	16635	0.98	ppm		95
29) 2-Nitrophenol	4.517	139	3689	0.75	ppm	#	68
32) bis(2-Chloroethoxy)met...	4.629	93	9226	0.91	ppm		95
33) 2,4-Dichlorophenol	4.731	162	6177	0.76	ppm		82
34) 2,6-Dichlorophenol	4.859	162	6455	0.83	ppm		97
35) 1,3,5-Trichlorobenzene	4.517	180	8771	0.96	ppm		99
36) 1,2,4-Trichlorobenzene	4.741	180	7698	0.89	ppm		94
37) 1,2,3-Trichlorobenzene	4.896	180	7350	0.90	ppm		94
38) Naphthalene	4.790	128	20475	0.90	ppm		97
39) 4-Chloroaniline	4.859	127	8294	1.02	ppm		83
40) 2,3-Dichloroaniline	5.495	161	8386	0.85	ppm		99
41) Caprolactam	5.099	55	2459	0.69	ppm		72
42) Hexachlorobutadiene	4.891	225	5089	0.94	ppm		93
43) 4-Chloro-3-methylphenol	5.244	107	6391	0.75	ppm		83
44) 2-Methylnaphthalene	5.286	141	11630	0.90	ppm		90
45) 1-Methylnaphthalene	5.350	142	15105	0.92	ppm		92
46) Dimethylnaphthalene	5.724	156	13274	0.88	ppm		94
49) 2,4,6-Trichlorophenol	5.505	196	4826	0.88	ppm		89
50) 2,4,5-Trichlorophenol	5.564	196	4072	0.72	ppm		94
52) 2-Chloronaphthalene	5.623	162	14306	0.97	ppm		90
53) Biphenyl	5.618	154	18873	1.02	ppm		97
54) 2-Nitroaniline	5.719	65	4691	1.00	ppm	#	78
55) Dimethylphthalate	5.847	163	18007	0.94	ppm		98
56) Acenaphthylene	5.911	152	22910	1.00	ppm		96
57) 2,6-Dinitrotoluene	5.885	165	3455	0.83	ppm	#	65
58) 3-Nitroaniline	6.018	138	3164	0.74	ppm	#	1
59) Acenaphthene	6.040	153	13938	0.96	ppm		94
62) Dibenzofuran	6.178	168	20205	0.92	ppm		93
63) 2,4-Dinitrotoluene	6.195	165	4037	0.74	ppm		79
64) 2,3,4,6-Tetrachlorophenol	6.301	232	2925	0.56	ppm	#	70
65) Diethylphthalate	6.392	149	18421	0.96	ppm		94
66) Fluorene	6.462	166	16379	0.92	ppm		90
67) 4-Chlorophenyl-phenyle...	6.478	204	7881	0.90	ppm		89
68) 4-Nitroaniline	6.526	138	3338	0.80	ppm		89
71) n-Nitrosodiphenylamine	6.590	169	11802	0.91	ppm		98
72) 1,2-Diphenylhydrazine	6.622	77	20719	1.11	ppm		88
74) 4-Bromophenyl-phenylether	6.958	248	5081	0.80	ppm		91
75) Hexachlorobenzene	7.012	284	5997	0.85	ppm		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129148.D
Acq On : 24 Apr 2019 5:12 am
Operator : chriss2
Sample : ic5844-1
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 11:52:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77)	Phenanthrene	7.482	178	23582	0.90	ppm	98
78)	Anthracene	7.546	178	24669	0.92	ppm	97
79)	Carbazole	7.803	167	23077	0.88	ppm	95
80)	Di-n-butylphthalate	8.417	149	31887	0.84	ppm	99
81)	Fluoranthene	9.288	202	25731	0.78	ppm	99
82)	Octadecane	7.434	57	10692	1.10	ppm	92
84)	Pyrene	9.678	202	28471	0.92	ppm	96
86)	Butylbenzylphthalate	11.248	149	14720	0.93	ppm	95
87)	Benzo[a]anthracene	12.140	228	28736	1.00	ppm	93
88)	3,3'-Dichlorobenzidine	12.226	252	6591	0.64	ppm	90
89)	Chrysene	12.199	228	23198	0.89	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.648	149	18012	0.83	ppm	92
92)	Di-n-octylphthalate	14.048	149	27657	0.70	ppm	95
93)	Benzo[b]fluoranthene	14.363	252	21174	0.69	ppm	95
94)	Benzo[k]fluoranthene	14.422	252	22709	0.95	ppm	94
95)	Benzo[a]pyrene	14.977	252	19860	0.79	ppm	92
96)	Indeno[1,2,3-cd]pyrene	17.007	276	15795	0.68	ppm	89
97)	Dibenz(a,h)acridine	16.665	279	15042	0.66	ppm	94
98)	Dibenz[a,h]anthracene	17.077	278	16106	0.69	ppm	91
99)	7,12-Dimethylbenz(a)an...	14.384	256	5567	0.45	ppm	81
100)	Benzo[g,h,i]perylene	17.413	276	17155	0.75	ppm	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

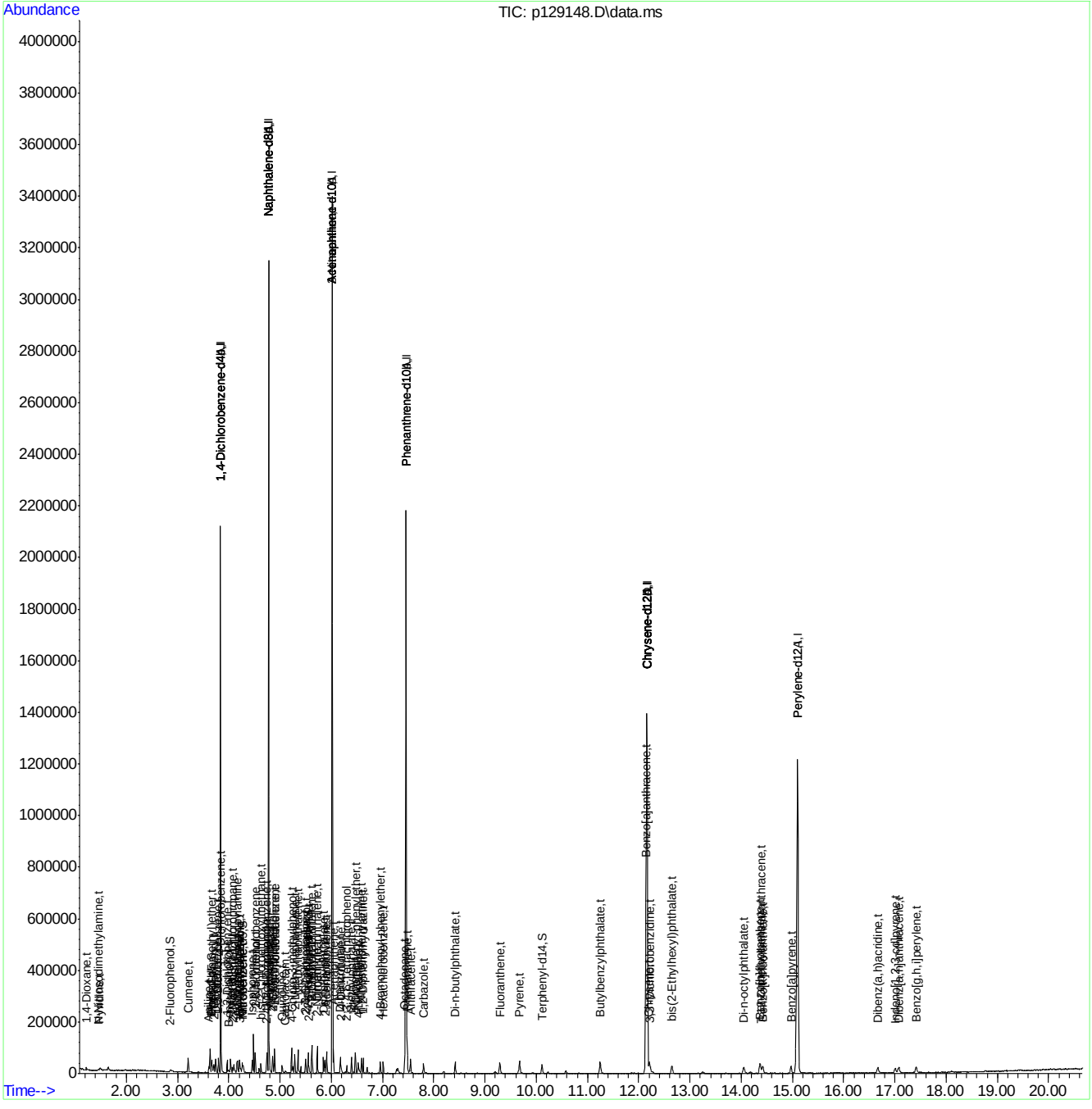
9.6.34

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129148.D
Acq On : 24 Apr 2019 5:12 am
Operator : chriss2
Sample : ic5844-1
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 11:52:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:33:45 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	EP5844-IC5844	**Method:**	SW846 8270D
Lab FileID:	P129148.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 05:12	**Supervisor approved:**	04/30/19 18:25 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyridine	110-86-1		1.48	Poor instrument integration

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129149.D
Acq On : 24 Apr 2019 5:39 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 12:04:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.844	152	197414	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	677399	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	409543	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	735116	40.00	ppm	-0.01
83) Chrysene-d12	12.167	240	598043	40.00	ppm	0.00
91) Perylene-d12	15.100	264	609662	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.844	152	197306	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	677399	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	409543	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	735116	40.00	ppm	-0.01
146) Chrysene-d12A	12.167	240	598043	40.00	ppm	0.00
153) Perylene-d12A	15.100	264	609662	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.844	152	197414	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	735116	40.00	ppm	-0.01
161) Chrysene-d12b	12.167	240	598043	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	677399	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	409543	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	677399	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.844	152	197414	40.00	ppm	0.00
174) Chrysene-d12c	12.167	240	598043	40.00	ppm	0.00
176) Chrysene-d12d	12.167	240	598043	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	677399	40.00	ppm	0.00
180) Chrysene-d12D	12.167	240	598043	40.00	ppm	-0.03
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%			
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	1.466	42	161109	49.92	ppm	99
11) bis(2-Chloroethyl)ether	3.662	93	335510	48.24	ppm	91
14) 1,3-Dichlorobenzene	3.796	146	395076	50.78	ppm	100
15) 1,4-Dichlorobenzene	3.854	146	376835	50.00	ppm	99
17) 1,2-Dichlorobenzene	3.966	146	359873	47.79	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.073	121	91205	56.38	ppm	96
22) n-Nitroso-di-n-propyla...	4.170	70	224287	48.81	ppm	98
23) Hexachloroethane	4.212	201	144800	46.96	ppm	98
26) Nitrobenzene	4.276	77	348901	47.38	ppm	99
28) Isophorone	4.453	82	638237	50.48	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129149.D
Acq On : 24 Apr 2019 5:39 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 12:04:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32)	bis(2-Chloroethoxy)met...	4.629	93	387929	52.98	ppm	99
36)	1,2,4-Trichlorobenzene	4.741	180	325674	52.00	ppm	99
38)	Naphthalene	4.789	128	825463	51.03	ppm	99
42)	Hexachlorobutadiene	4.891	225	205265	53.01	ppm	98
48)	Hexachlorocyclopentadiene	5.404	237	178344	56.98	ppm	99
52)	2-Chloronaphthalene	5.628	162	616445	55.53	ppm	97
55)	Dimethylphthalate	5.852	163	697717	48.75	ppm	99
56)	Acenaphthylene	5.916	152	868839	49.58	ppm	100
57)	2,6-Dinitrotoluene	5.890	165	142938	47.68	ppm	89
59)	Acenaphthene	6.045	153	526535	48.88	ppm	97
63)	2,4-Dinitrotoluene	6.194	165	192417	48.22	ppm	93
65)	Diethylphthalate	6.403	149	707669	48.58	ppm	98
66)	Fluorene	6.467	166	651025	49.73	ppm	98
67)	4-Chlorophenyl-phenyle...	6.477	204	309950	47.88	ppm	94
71)	n-Nitrosodiphenylamine	6.595	169	430567	45.19	ppm	99
72)	1,2-Diphenylhydrazine	6.627	77	667694	44.84	ppm	96
74)	4-Bromophenyl-phenylether	6.958	248	210302	47.06	ppm	96
75)	Hexachlorobenzene	7.022	284	225647	44.27	ppm	97
77)	Phenanthrene	7.487	178	895306	46.73	ppm	100
78)	Anthracene	7.556	178	909814	45.46	ppm	99
80)	Di-n-butylphthalate	8.422	149	1206426	43.99	ppm	99
81)	Fluoranthene	9.298	202	1067015	45.16	ppm	100
84)	Pyrene	9.688	202	1032449	49.86	ppm	99
86)	Butylbenzylphthalate	11.259	149	537876	50.50	ppm	99
87)	Benzo[a]anthracene	12.145	228	937297	47.54	ppm	98
89)	Chrysene	12.220	228	857725	49.40	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.653	149	716584	50.31	ppm	100
92)	Di-n-octylphthalate	14.058	149	1239245	52.58	ppm	99
93)	Benzo[b]fluoranthene	14.379	252	843973	45.42	ppm	99
94)	Benzo[k]fluoranthene	14.443	252	800892	51.23	ppm	97
95)	Benzo[a]pyrene	14.988	252	801519	51.00	ppm	99
96)	Indeno[1,2,3-cd]pyrene	17.018	276	736143	51.25	ppm	94
98)	Dibenz[a,h]anthracene	17.087	278	698638	47.71	ppm	98
100)	Benzo[g,h,i]perylene	17.434	276	734122	50.70	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

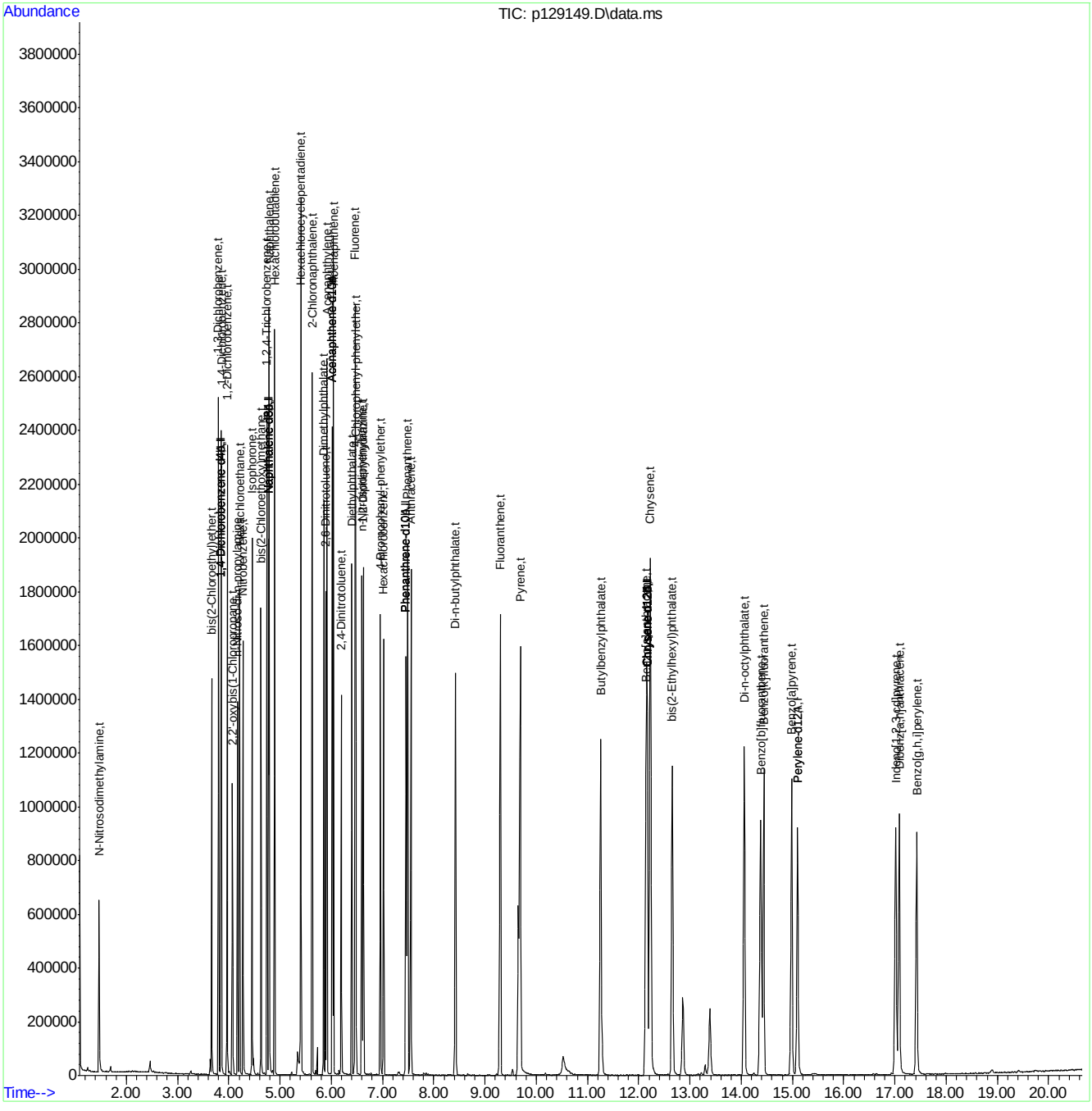
9.6.35

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129149.D
Acq On : 24 Apr 2019 5:39 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 12:04:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129150.D
Acq On : 24 Apr 2019 6:06 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 12:26:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	199016	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	748336	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	422054	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	712748	40.00	ppm	-0.01
83) Chrysene-d12	12.151	240	664621	40.00	ppm	-0.02
91) Perylene-d12	15.094	264	657654	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	199016	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	748336	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	422054	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	712748	40.00	ppm	-0.01
146) Chrysene-d12A	12.151	240	664621	40.00	ppm	-0.02
153) Perylene-d12A	15.094	264	657654	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	199016	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	712748	40.00	ppm	-0.01
161) Chrysene-d12b	12.151	240	664621	40.00	ppm	-0.02
163) Naphthalene-d8b	4.773	136	748336	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	422054	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	748336	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	199016	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	664621	40.00	ppm	-0.02
176) Chrysene-d12d	12.151	240	664621	40.00	ppm	-0.02
178) Naphthalene-d8d	4.773	136	748336	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	664621	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	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%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.253	88	148167	45.92	ppm	99
6) Indene	4.031	116	563511	54.07	ppm	98
7) Cumene	3.213	105	812723	47.77	ppm	99
13) Decane	3.753	43	235244	47.86	ppm	98
18) Acetophenone	4.154	105	455621	46.71	ppm	97
27) Quinoline	5.030	129	590732	43.55	ppm	99
40) 2,3-Dichloroaniline	5.494	161	295910	38.17	ppm	97
41) Caprolactam	5.110	55	112540	41.67	ppm	98
45) 1-Methylnaphthalene	5.356	142	580960	43.78	ppm	99
46) Dimethylnaphthalene	5.729	156	532476	44.89	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129150.D
Acq On : 24 Apr 2019 6:06 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 12:26:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
53) Biphenyl	5.617	154	717475	50.44 ppm	98
82) Octadecane	7.439	57	350428	48.21 ppm	99
99) 7,12-Dimethylbenz(a)an...	14.389	256	347878	38.46 ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

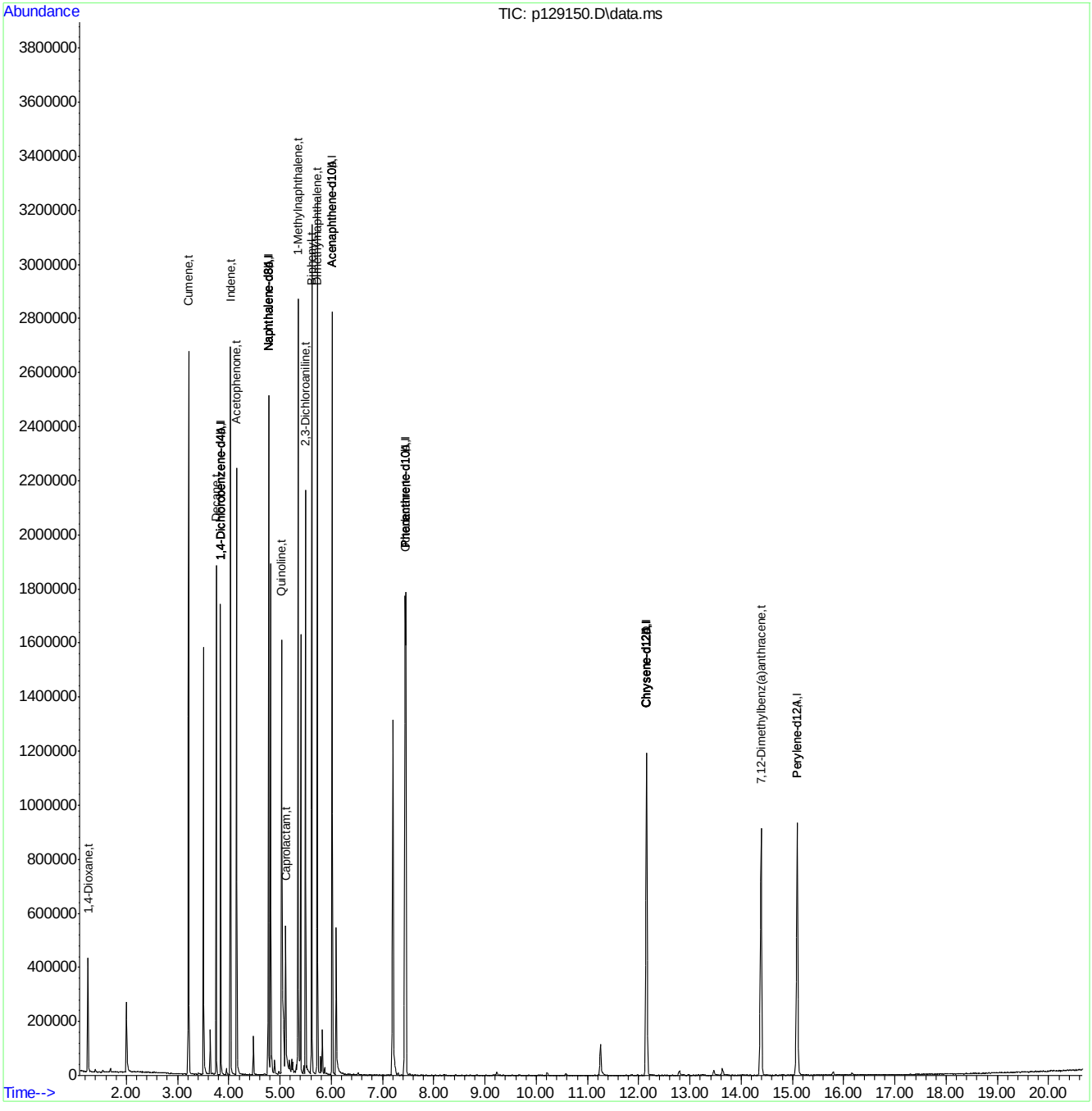
9.6.36

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129150.D
Acq On : 24 Apr 2019 6:06 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 12:26:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 04/30/19 18:33

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129151.D
Acq On : 24 Apr 2019 6:33 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 12:30:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.844	152	136563	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	568014	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	357371	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	669301	40.00	ppm	-0.01
83) Chrysene-d12	12.151	240	645461	40.00	ppm	-0.02
91) Perylene-d12	15.095	264	705503	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.844	152	136563	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	568014	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	357371	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	669301	40.00	ppm	-0.01
146) Chrysene-d12A	12.151	240	645461	40.00	ppm	-0.02
153) Perylene-d12A	15.095	264	705503	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.844	152	136563	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	669301	40.00	ppm	-0.01
161) Chrysene-d12b	12.151	240	645461	40.00	ppm	-0.02
163) Naphthalene-d8b	4.773	136	568014	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	357371	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	568014	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.844	152	136563	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	645461	40.00	ppm	-0.02
176) Chrysene-d12d	12.151	240	645461	40.00	ppm	-0.02
178) Naphthalene-d8d	4.773	136	568014	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	645461	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	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%			
Target Compounds						Qvalue
3) Pyridine	1.621	79	205130m	48.88	ppm	
10) Aniline	3.625	93	234846	75.17	ppm	91
16) Benzyl alcohol	3.988	108	161795	62.80	ppm	92
39) 4-Chloroaniline	4.853	127	248144	46.98	ppm	95
44) 2-Methylnaphthalene	5.286	141	389336	50.07	ppm	98
54) 2-Nitroaniline	5.719	65	169511	53.08	ppm	89
58) 3-Nitroaniline	6.013	138	143401	52.34	ppm	94
62) Dibenzofuran	6.178	168	705226	49.48	ppm	96
68) 4-Nitroaniline	6.520	138	147086	56.19	ppm	92
79) Carbazole	7.808	167	855677	48.63	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129151.D
Acq On : 24 Apr 2019 6:33 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 12:30:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

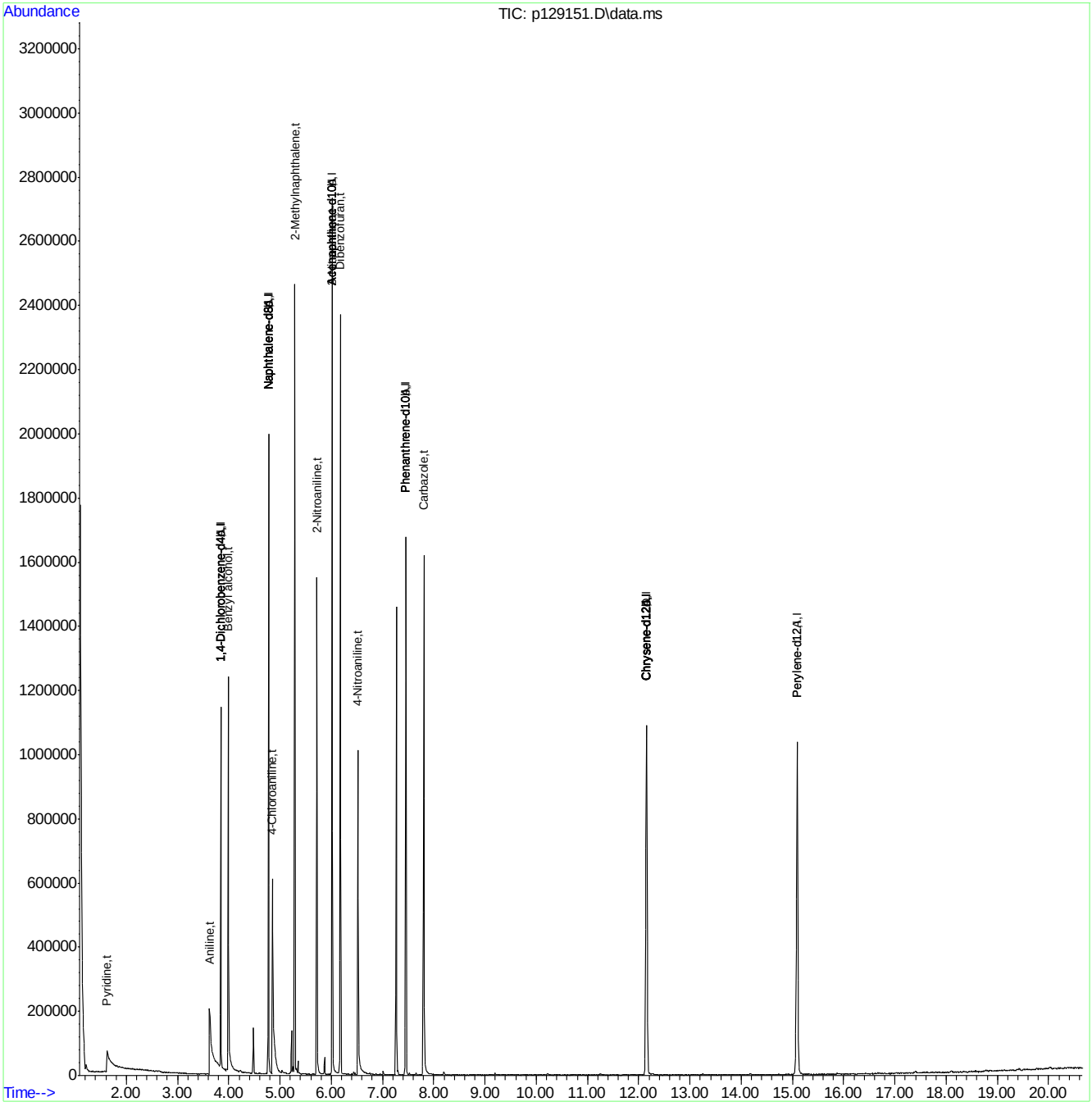
9.6.37

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129151.D
Acq On : 24 Apr 2019 6:33 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 12:30:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	EP5844-ICV5844	**Method:**	SW846 8270D
Lab FileID:	P129151.D	**Analyst approved:**	04/26/19 12:39 Ying Li
Injection Time:	04/24/19 06:33	**Supervisor approved:**	04/30/19 18:33 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyridine	110-86-1		1.62	Poor instrument integration

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129151.D
Acq On    : 24 Apr 2019   6:33 am
Operator  : chriss2
Sample    : icv5844-50
Misc      : op13894,ep5844,1000,,,1,1
ALS Vial  : 12   Sample Multiplier: 1

Quant Time: Apr 24 12:04:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 11:46:30 2019
Response via : Initial Calibration
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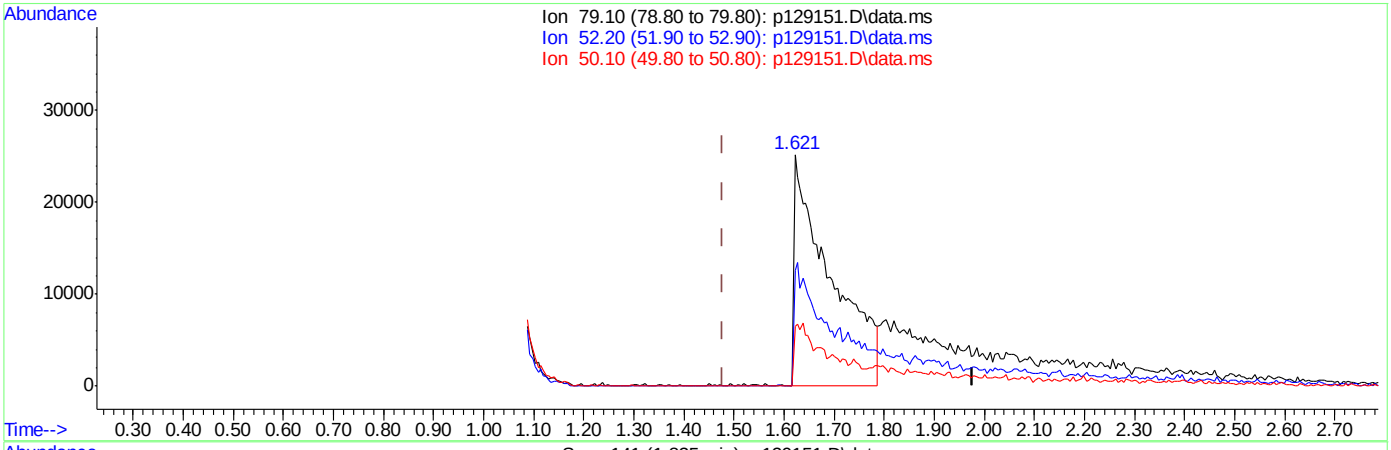
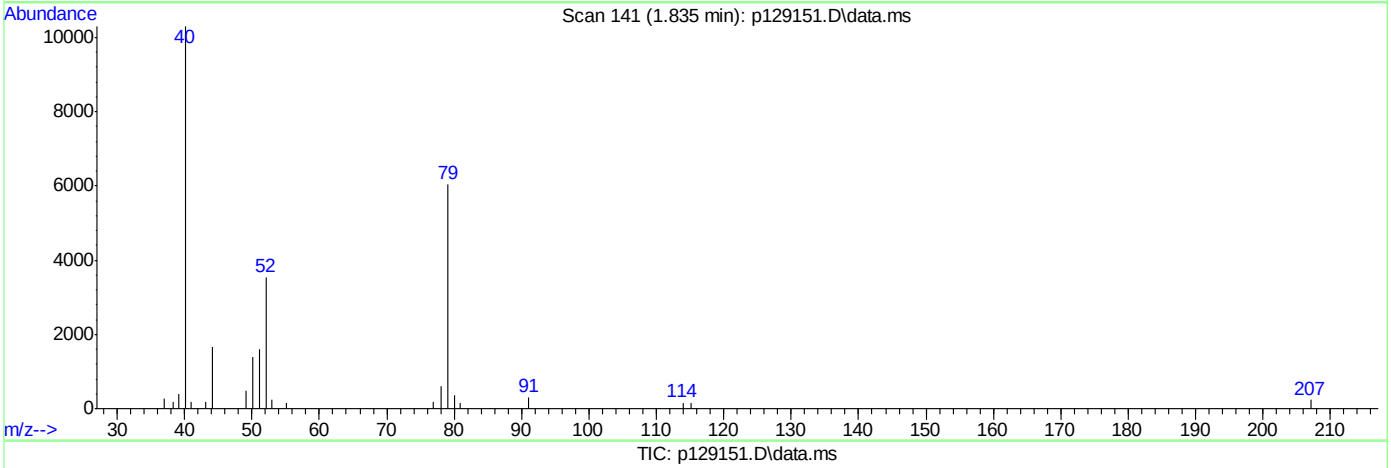




TIC: p129151.D\data.ms

(3) Pyridine (t)

1.621min (+0.144) 30.54ppm

response 128164

Ion	Exp%	Act%
79.10	100	100
52.20	52.70	48.94
50.10	28.10	24.53
0.00	0.00	0.00

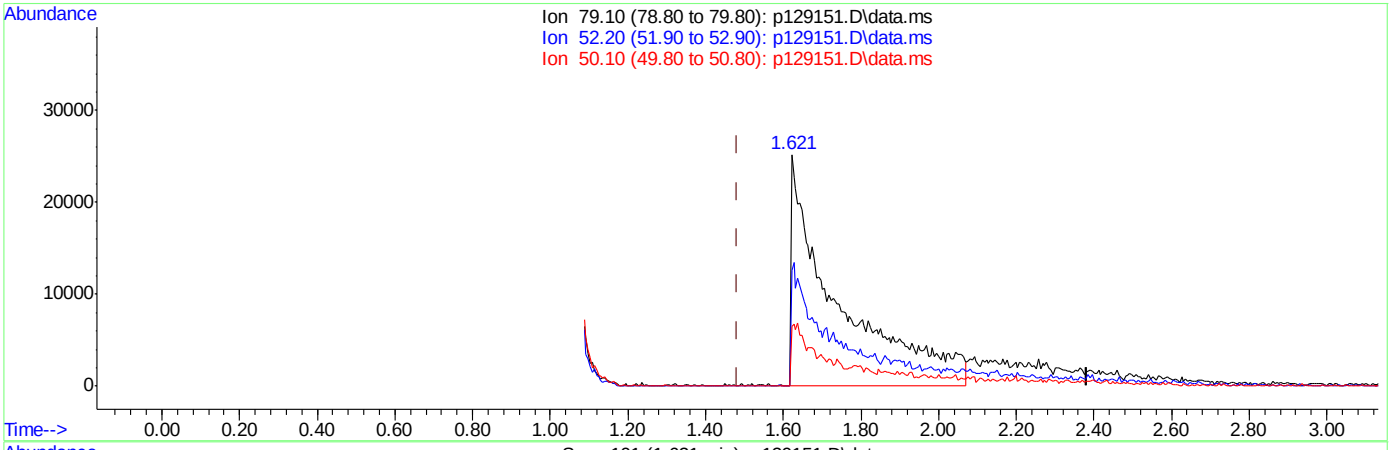
9.6.37.2

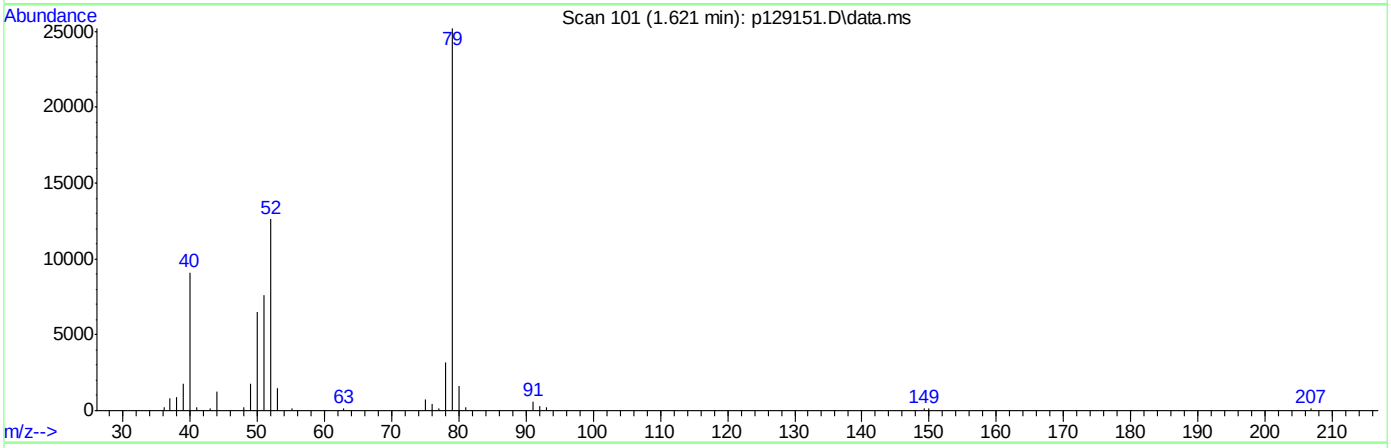
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129151.D
Acq On : 24 Apr 2019 6:33 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 12:08:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration





TIC: p129151.D\data.ms

(3) Pyridine (t)

1.621min (+0.139) 48.88ppm m

response 205130

Ion	Exp%	Act%
79.10	100	100
52.20	52.70	50.11
50.10	28.10	25.76
0.00	0.00	0.00

9.6.37.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129152.D
Acq On : 24 Apr 2019 7:00 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 26 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.839	152	195738	40.00	ppm	0.00
24) Naphthalene-d8	4.774	136	640309	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	414776	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	706105	40.00	ppm	-0.01
83) Chrysene-d12	12.151	240	612362	40.00	ppm	-0.02
91) Perylene-d12	15.095	264	610953	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.839	152	195738	40.00	ppm	0.00
111) Naphthalene-d8A	4.774	136	640309	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	414776	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	706105	40.00	ppm	-0.01
146) Chrysene-d12A	12.151	240	612362	40.00	ppm	-0.02
153) Perylene-d12A	15.095	264	610953	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.839	152	195738	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	706105	40.00	ppm	-0.01
161) Chrysene-d12b	12.151	240	612362	40.00	ppm	-0.02
163) Naphthalene-d8b	4.774	136	640309	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	414776	40.00	ppm	0.00
167) Naphthalene-d8c	4.774	136	640309	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.839	152	195738	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	612362	40.00	ppm	-0.02
176) Chrysene-d12d	12.151	240	612362	40.00	ppm	-0.02
178) Naphthalene-d8d	4.774	136	640309	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	612362	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	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%			
Target Compounds						Qvalue
9) Phenol	3.657	94	456539	52.46	ppm	83
12) 2-Chlorophenol	3.700	128	344446	52.51	ppm	99
19) 2-Methylphenol	4.090	108	327560	53.82	ppm	99
21) 3&4-Methylphenol	4.213	108	330651	55.49	ppm	96
29) 2-Nitrophenol	4.512	139	190058	60.30	ppm	77
30) 2,4-Dimethylphenol	4.581	107	335637	60.00	ppm	96
31) Benzoic acid	4.752	105	227810	47.29	ppm	96
33) 2,4-Dichlorophenol	4.704	162	293364	55.71	ppm	98
34) 2,6-Dichlorophenol	4.854	162	287021	55.81	ppm	98
43) 4-Chloro-3-methylphenol	5.228	107	305223	55.09	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129152.D
Acq On : 24 Apr 2019 7:00 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 26 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) 2,4,6-Trichlorophenol	5.505	196	245936	59.82 ppm	98
50) 2,4,5-Trichlorophenol	5.537	196	229948	56.47 ppm	99
60) 2,4-Dinitrophenol	6.093	184	89410	47.75 ppm	84
61) 4-Nitrophenol	6.200	109	122523	53.82 ppm	96
64) 2,3,4,6-Tetrachlorophenol	6.296	232	190599	53.40 ppm	90
70) 4,6-Dinitro-2-methylph...	6.542	198	138364	52.30 ppm	94
76) Pentachlorophenol	7.268	266	174036	55.00 ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

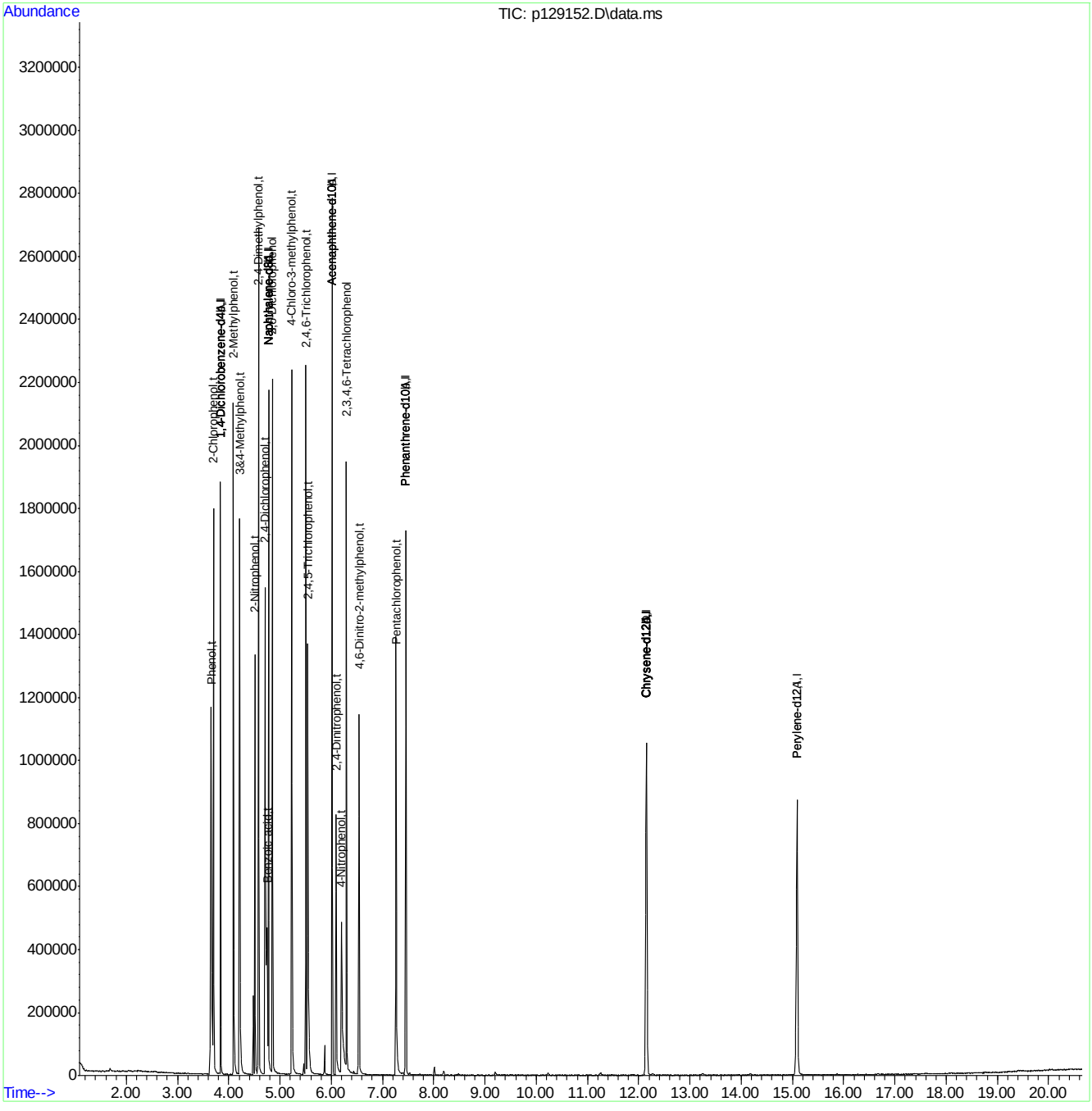
9.6.38

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129152.D
Acq On : 24 Apr 2019 7:00 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 26 12:15:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 11:57:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129153.D
Acq On : 24 Apr 2019 7:27 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 24 12:22:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 12:16:58 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	203642	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	749585	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	428649	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	730561	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	595442	40.00	ppm	-0.01
91) Perylene-d12	15.094	264	622547	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	203642	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	749585	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	428649	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	730561	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	595442	40.00	ppm	-0.01
153) Perylene-d12A	15.094	264	622547	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	203642	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	730561	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	595442	40.00	ppm	-0.01
163) Naphthalene-d8b	4.773	136	749585	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	428649	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	749585	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	203642	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	595442	40.00	ppm	-0.01
176) Chrysene-d12d	12.151	240	595442	40.00	ppm	-0.01
178) Naphthalene-d8d	4.773	136	749585	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	595442	40.00	ppm	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol	2.845	112	327387	50.04	ppm	-0.02
Spiked Amount 50.000			Recovery = 100.08%			
8) Phenol-d5	3.646	99	406658	48.94	ppm	-0.02
Spiked Amount 50.000			Recovery = 97.88%			
25) Nitrobenzene-d5	4.260	82	392186	48.72	ppm	0.00
Spiked Amount 50.000			Recovery = 97.44%			
51) 2-Fluorobiphenyl	5.553	172	712111	52.43	ppm	0.00
Spiked Amount 50.000			Recovery = 104.86%			
73) 2,4,6-Tribromophenol	6.696	330	114314	47.02	ppm	0.00
Spiked Amount 50.000			Recovery = 94.04%			
85) Terphenyl-d14	10.121	244	756816	56.10	ppm	0.00
Spiked Amount 50.000			Recovery = 112.20%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

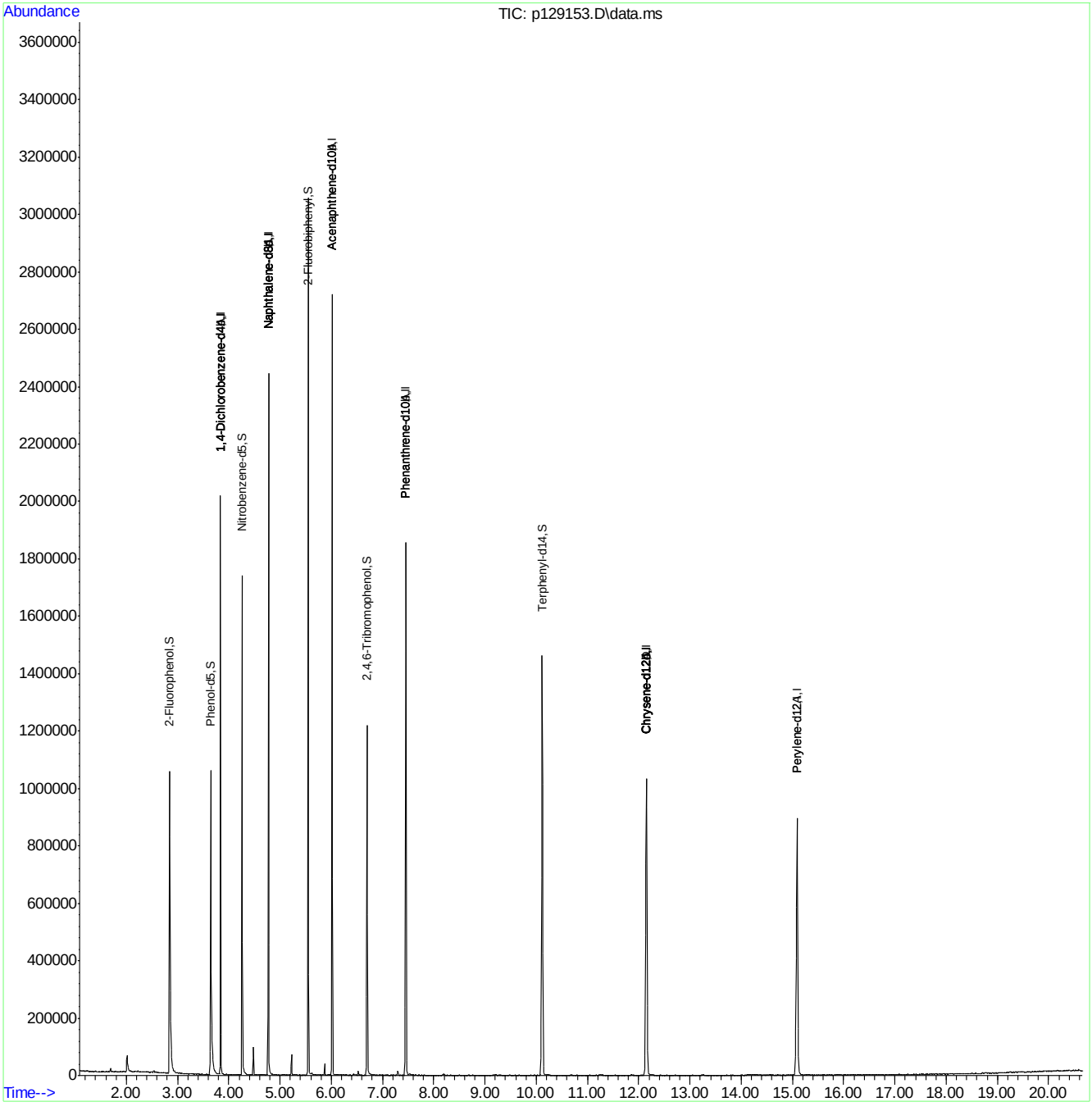
9.6.39

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129153.D
Acq On : 24 Apr 2019 7:27 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 24 12:22:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 12:16:58 2019
Response via : Initial Calibration



MP5844.M Wed Apr 24 12:22:46 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129154.D
Acq On : 24 Apr 2019 7:54 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 24 12:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 12:16:58 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	285496	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	1073380	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	630304	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	1183192	40.00	ppm	0.00
83) Chrysene-d12	12.162	240	1153020	40.00	ppm	0.00
91) Perylene-d12	15.105	264	1153296	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.838	152	285496	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	1073380	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	630304	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	1183192	40.00	ppm	0.00
146) Chrysene-d12A	12.162	240	1153020	40.00	ppm	0.00
153) Perylene-d12A	15.105	264	1153296	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.838	152	285496	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	1183192	40.00	ppm	0.00
161) Chrysene-d12b	12.162	240	1153020	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	1073380	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	630304	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	1073380	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	285496	40.00	ppm	0.00
174) Chrysene-d12c	12.162	240	1153020	40.00	ppm	0.00
176) Chrysene-d12d	12.162	240	1153020	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	1073380	40.00	ppm	0.00
180) Chrysene-d12D	12.162	240	1153020	40.00	ppm	-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	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%			
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	12.242	252	662094	52.97	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

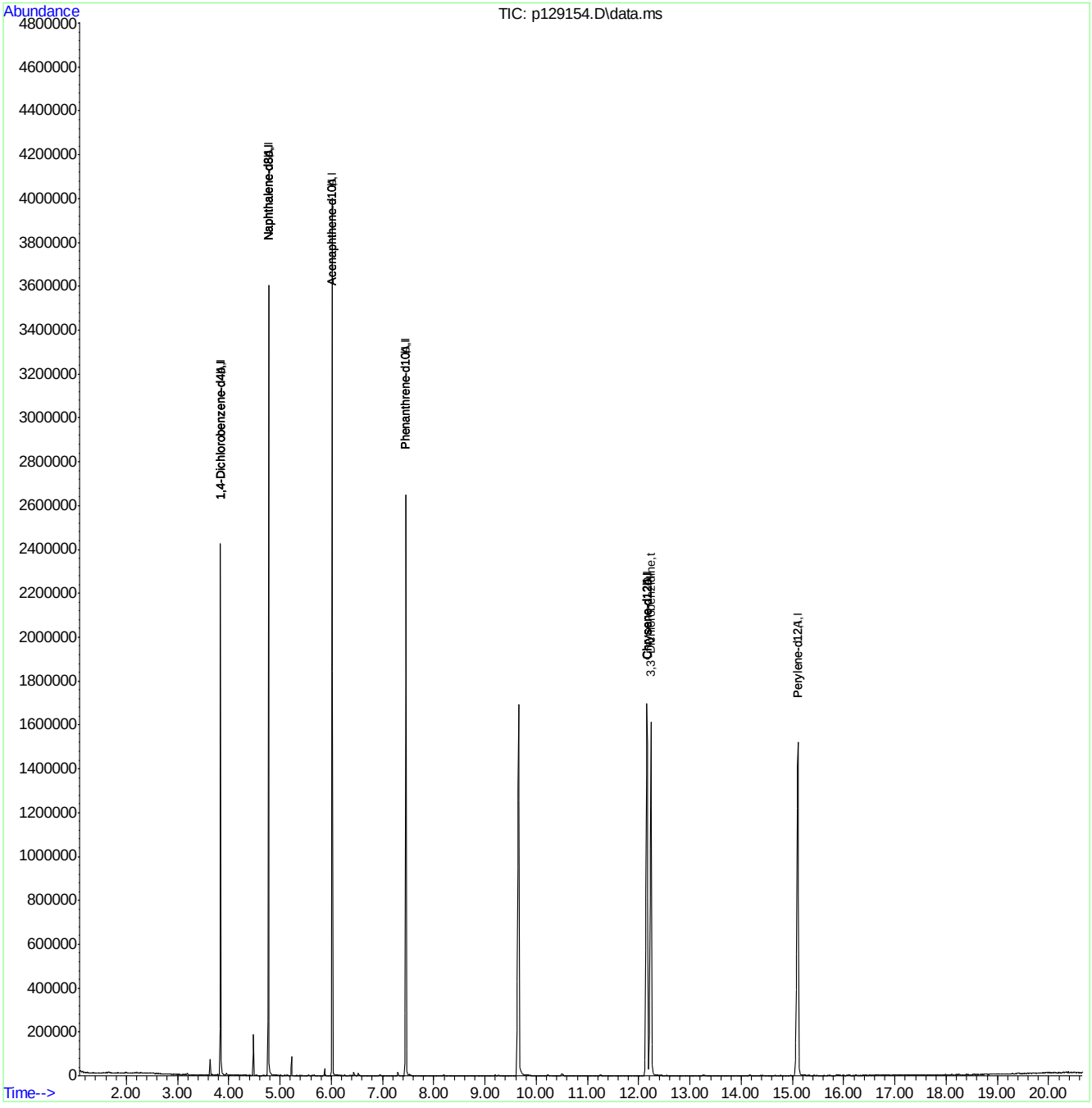
9.6.40

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129154.D
Acq On : 24 Apr 2019 7:54 am
Operator : chriss2
Sample : icv5844-50
Misc : op13894,ep5844,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 24 12:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 12:16:58 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129156.D
Acq On : 24 Apr 2019 8:30 am
Operator : chriss2
Sample : ic5845-100
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 24 13:10:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	171215	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	642717	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	354974	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	562977	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	481919	40.00	ppm	-0.01
91) Perylene-d12	15.089	264	505956	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	171215	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	642717	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	354974	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	562977	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	481919	40.00	ppm	-0.01
153) Perylene-d12A	15.089	264	505956	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	171215	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	562977	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	481919	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	642717	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	354974	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	642717	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	171215	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	481919	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	481919	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	642717	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	481919	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.502	105	464882	97.19	ppm	95
160) Atrazine	7.215	200	323993	102.78	ppm	93
164) Hydroquinone	5.168	110	452342	104.09	ppm	99
166) 1,2,4,5-Tetrachloroben...	5.409	216	555369	98.51	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

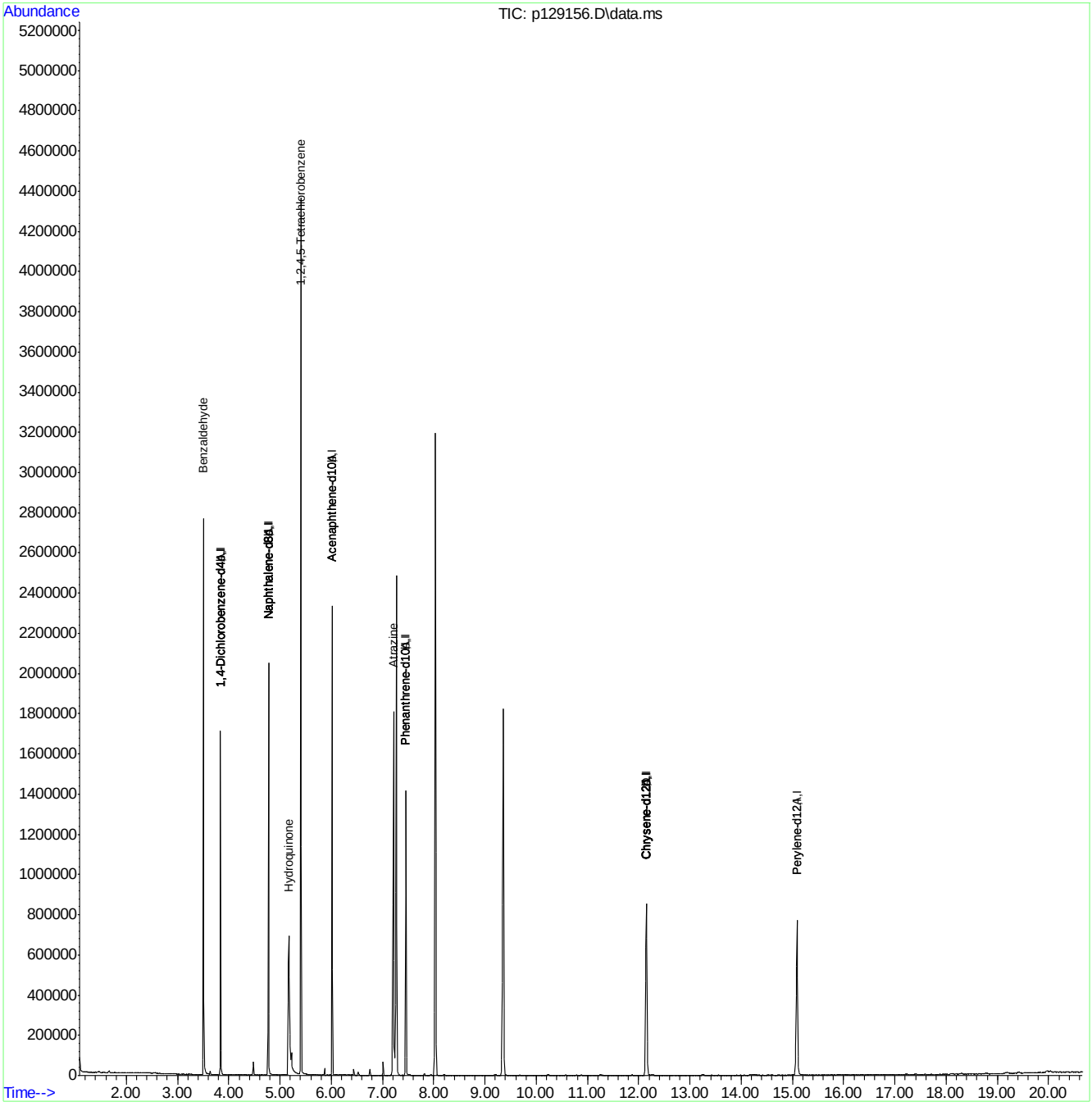
9.6.41

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129156.D
Acq On : 24 Apr 2019 8:30 am
Operator : chriss2
Sample : ic5845-100
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 24 13:10:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129157.D
Acq On : 24 Apr 2019 8:57 am
Operator : chriss2
Sample : ic5845-80
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 24 13:16:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

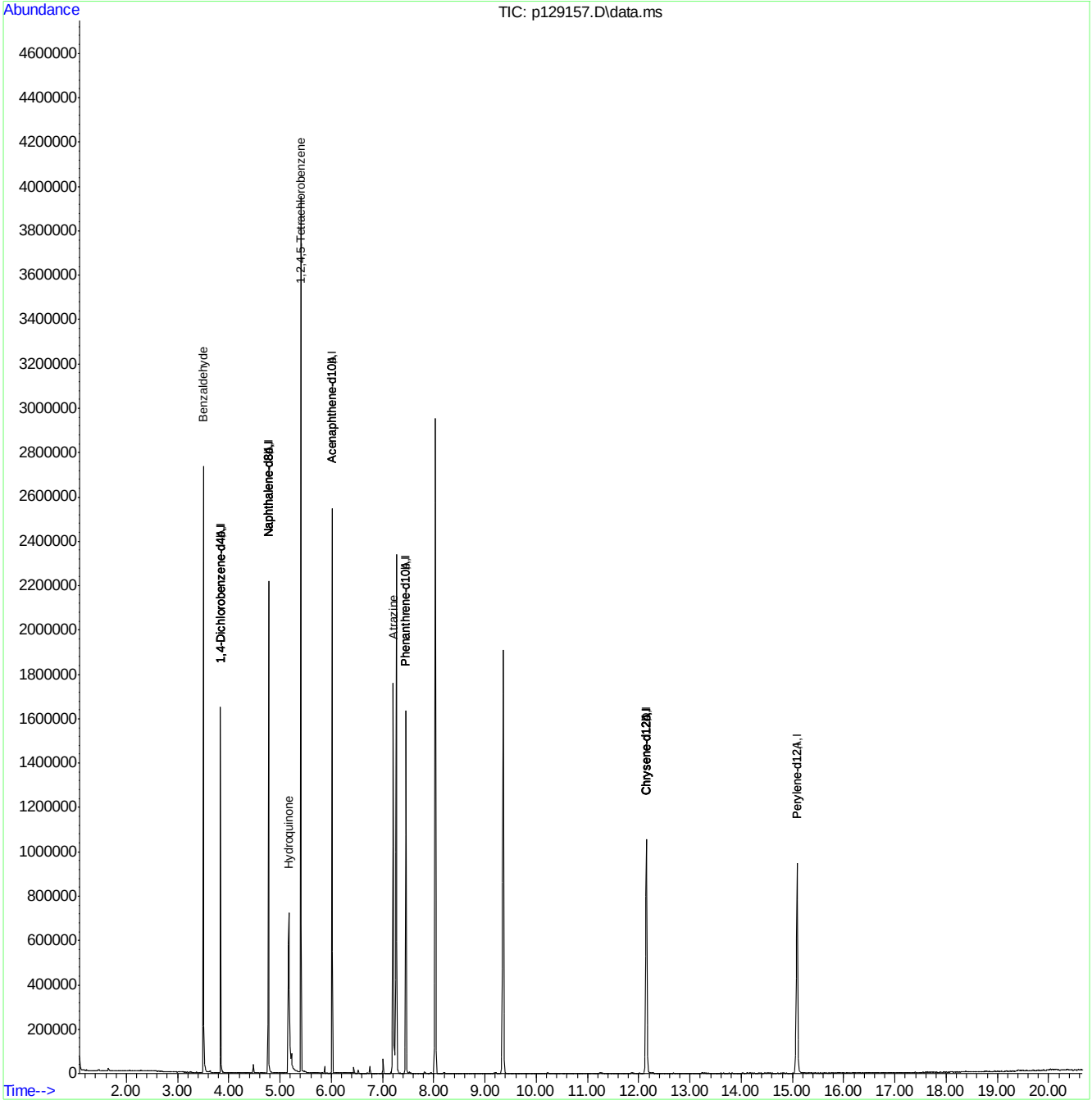
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	177371	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	684705	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	395958	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	654368	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	605474	40.00	ppm	-0.01
91) Perylene-d12	15.094	264	642486	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	177371	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	684705	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	395958	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	654368	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	605474	40.00	ppm	-0.01
153) Perylene-d12A	15.094	264	642486	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	177371	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	654368	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	605474	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	684705	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	395958	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	684705	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	177371	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	605474	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	605474	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	684705	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	605474	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.502	105	396692	80.06	ppm	99
160) Atrazine	7.209	200	310587	84.76	ppm	99
164) Hydroquinone	5.168	110	423582	91.50	ppm	98
166) 1,2,4,5-Tetrachloroben...	5.409	216	486565	77.37	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129157.D
Acq On : 24 Apr 2019 8:57 am
Operator : chriss2
Sample : ic5845-80
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 24 13:16:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



MP5844.M Wed Apr 24 13:16:20 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129158.D
Acq On : 24 Apr 2019 9:24 am
Operator : chriss2
Sample : icc5845-50
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 24 13:08:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	177030	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	674318	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	385184	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	622561	40.00	ppm	0.00
83) Chrysene-d12	12.145	240	538051	40.00	ppm	-0.02
91) Perylene-d12	15.094	264	559568	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	177030	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	674318	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	385184	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	622561	40.00	ppm	0.00
146) Chrysene-d12A	12.145	240	538051	40.00	ppm	-0.02
153) Perylene-d12A	15.094	264	559568	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	177030	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	622561	40.00	ppm	0.00
161) Chrysene-d12b	12.145	240	538051	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	674318	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	385184	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	674318	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	177030	40.00	ppm	0.00
174) Chrysene-d12c	12.145	240	538051	40.00	ppm	0.00
176) Chrysene-d12d	12.145	240	538051	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	674318	40.00	ppm	0.00
180) Chrysene-d12D	12.145	240	538051	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.502	105	247278	50.00	ppm	100
160) Atrazine	7.204	200	174303	50.00	ppm	100
164) Hydroquinone	5.163	110	227962	50.00	ppm	100
166) 1,2,4,5-Tetrachloroben...	5.409	216	305883	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

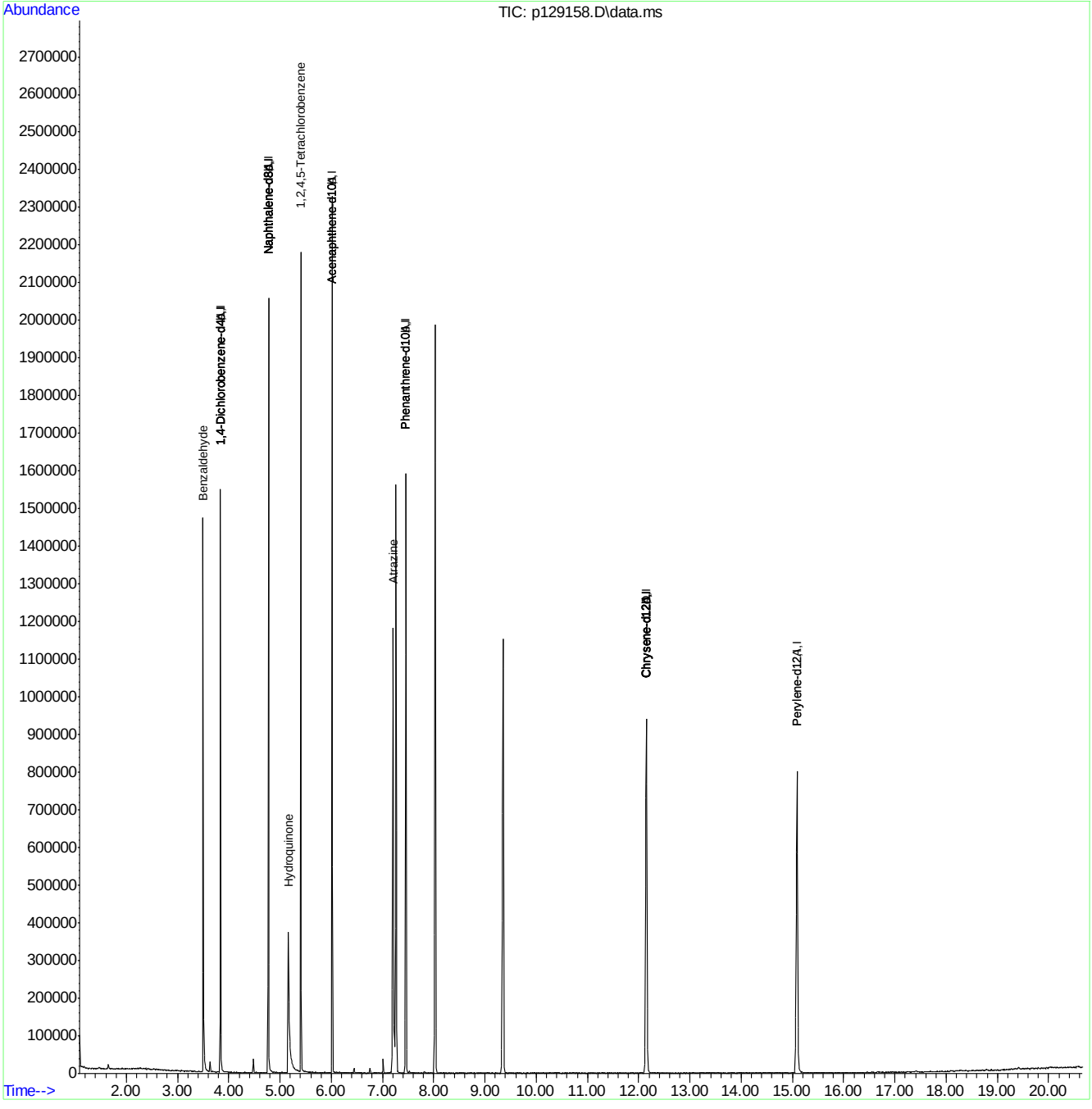
9.6.43

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129158.D
Acq On : 24 Apr 2019 9:24 am
Operator : chriss2
Sample : icc5845-50
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 24 13:08:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



MP5844.M Wed Apr 24 13:08:55 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129159.D
Acq On : 24 Apr 2019 9:51 am
Operator : chriss2
Sample : ic5845-25
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 24 13:17:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

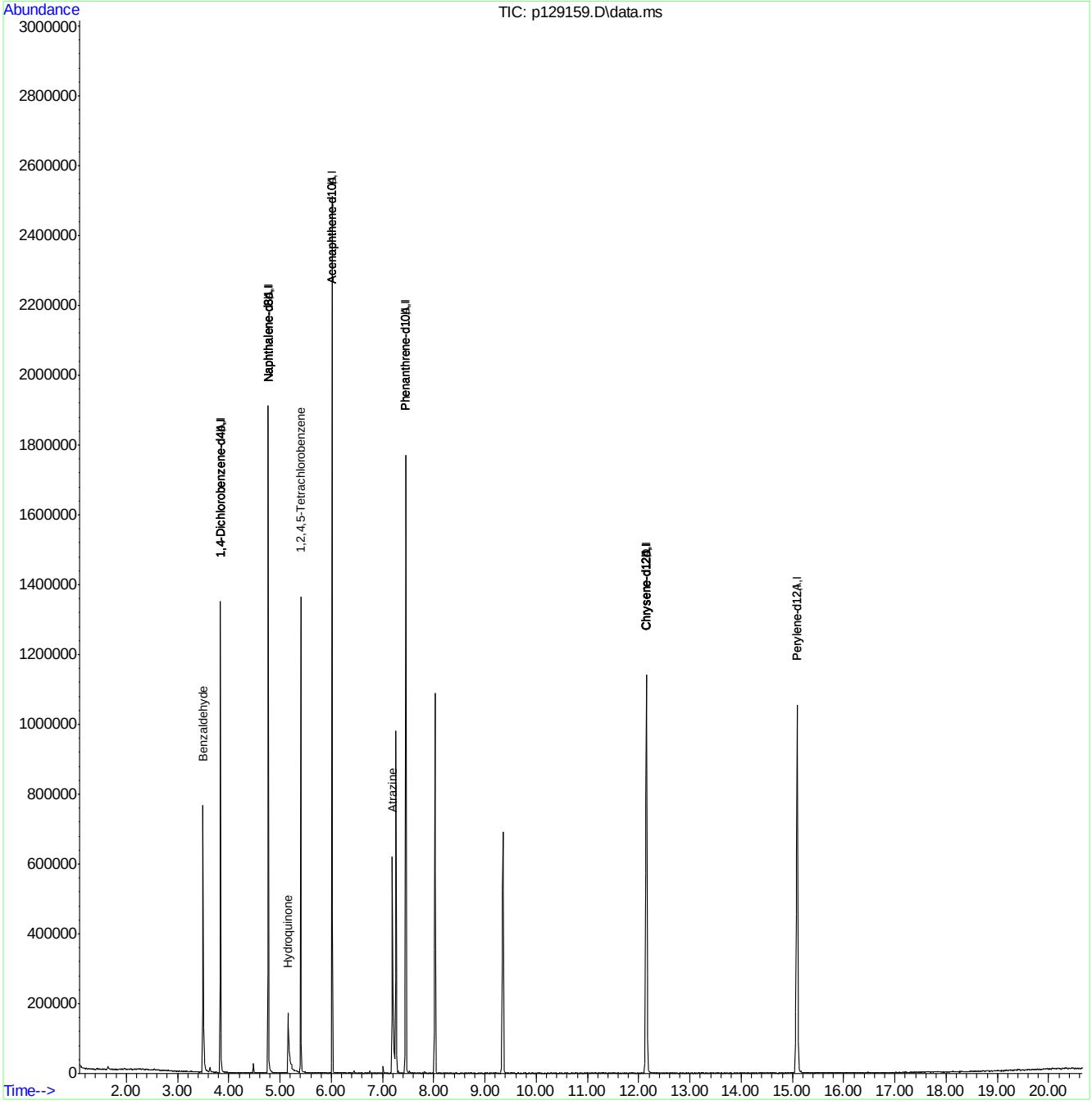
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	177933	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	670390	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	415737	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	711622	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	655781	40.00	ppm	-0.01
91) Perylene-d12	15.095	264	737857	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	177933	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	670390	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	415737	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	711622	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	655781	40.00	ppm	-0.01
153) Perylene-d12A	15.095	264	737857	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	177933	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	711622	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	655781	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	670390	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	415737	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	670390	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	177933	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	655781	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	655781	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	670390	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	655781	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.497	105	132271	26.61	ppm	92
160) Atrazine	7.193	200	104008	26.10	ppm	93
164) Hydroquinone	5.158	110	111008	24.49	ppm	96
166) 1,2,4,5-Tetrachloroben...	5.404	216	159653	24.18	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129159.D
Acq On : 24 Apr 2019 9:51 am
Operator : chriss2
Sample : ic5845-25
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 24 13:17:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



MP5844.M Wed Apr 24 13:17:54 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129160.D
Acq On : 24 Apr 2019 10:18 am
Operator : chriss2
Sample : ic5845-10
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 24 13:19:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

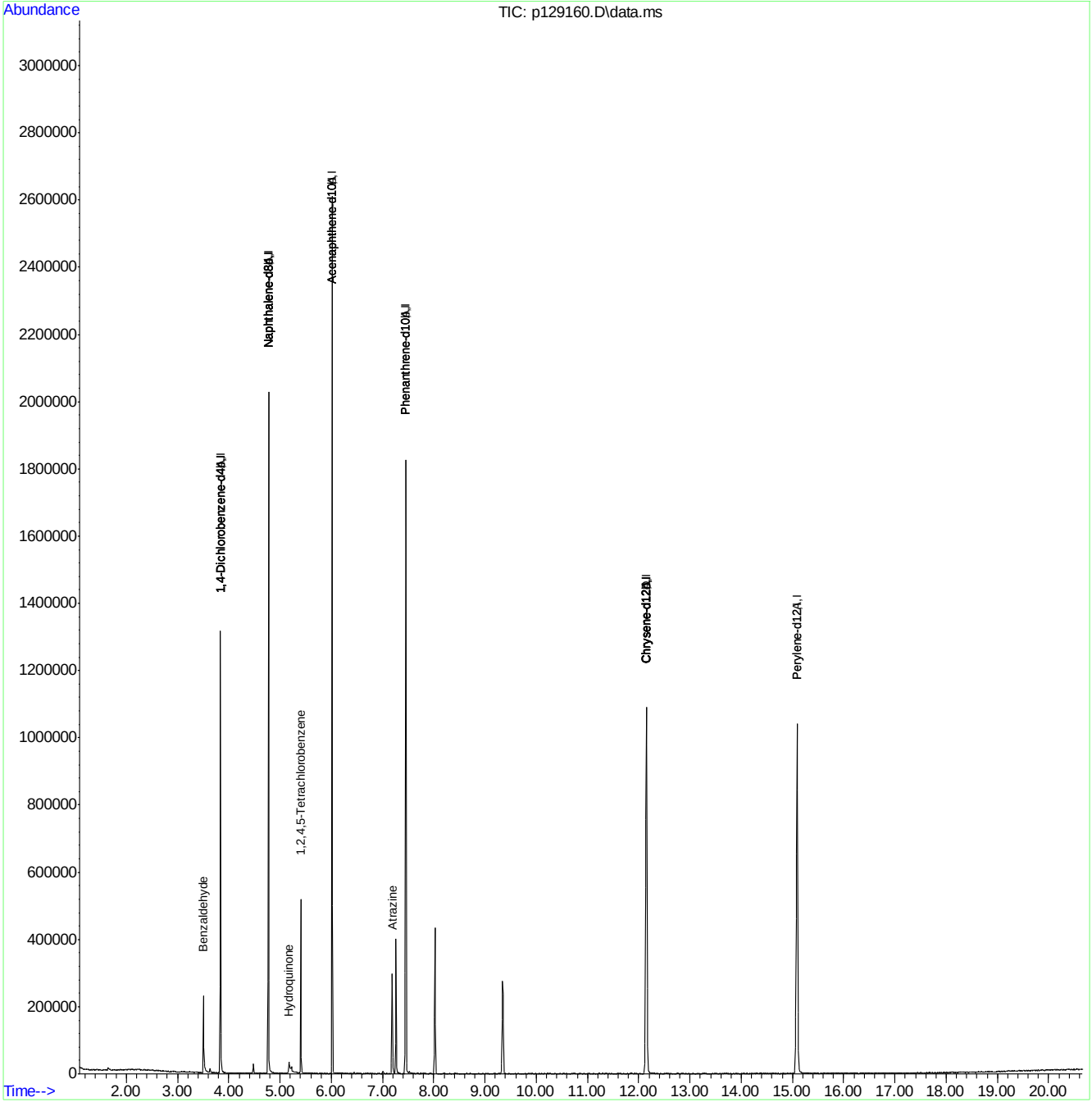
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	175127	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	689176	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	415652	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	714239	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	637339	40.00	ppm	-0.01
91) Perylene-d12	15.094	264	702480	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	175127	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	689176	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	415652	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	714239	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	637339	40.00	ppm	-0.01
153) Perylene-d12A	15.094	264	702480	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	175127	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	714239	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	637339	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	689176	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	415652	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	689176	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	175127	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	637339	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	637339	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	689176	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	637339	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.502	105	46103	9.42	ppm	96
160) Atrazine	7.188	200	37204	9.30	ppm	98
164) Hydroquinone	5.168	110	35833	7.69	ppm	96
166) 1,2,4,5-Tetrachloroben...	5.404	216	59211	8.97	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129160.D
Acq On : 24 Apr 2019 10:18 am
Operator : chriss2
Sample : ic5845-10
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 24 13:19:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129161.D
Acq On : 24 Apr 2019 10:45 am
Operator : chriss2
Sample : ic5845-5
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 24 13:21:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

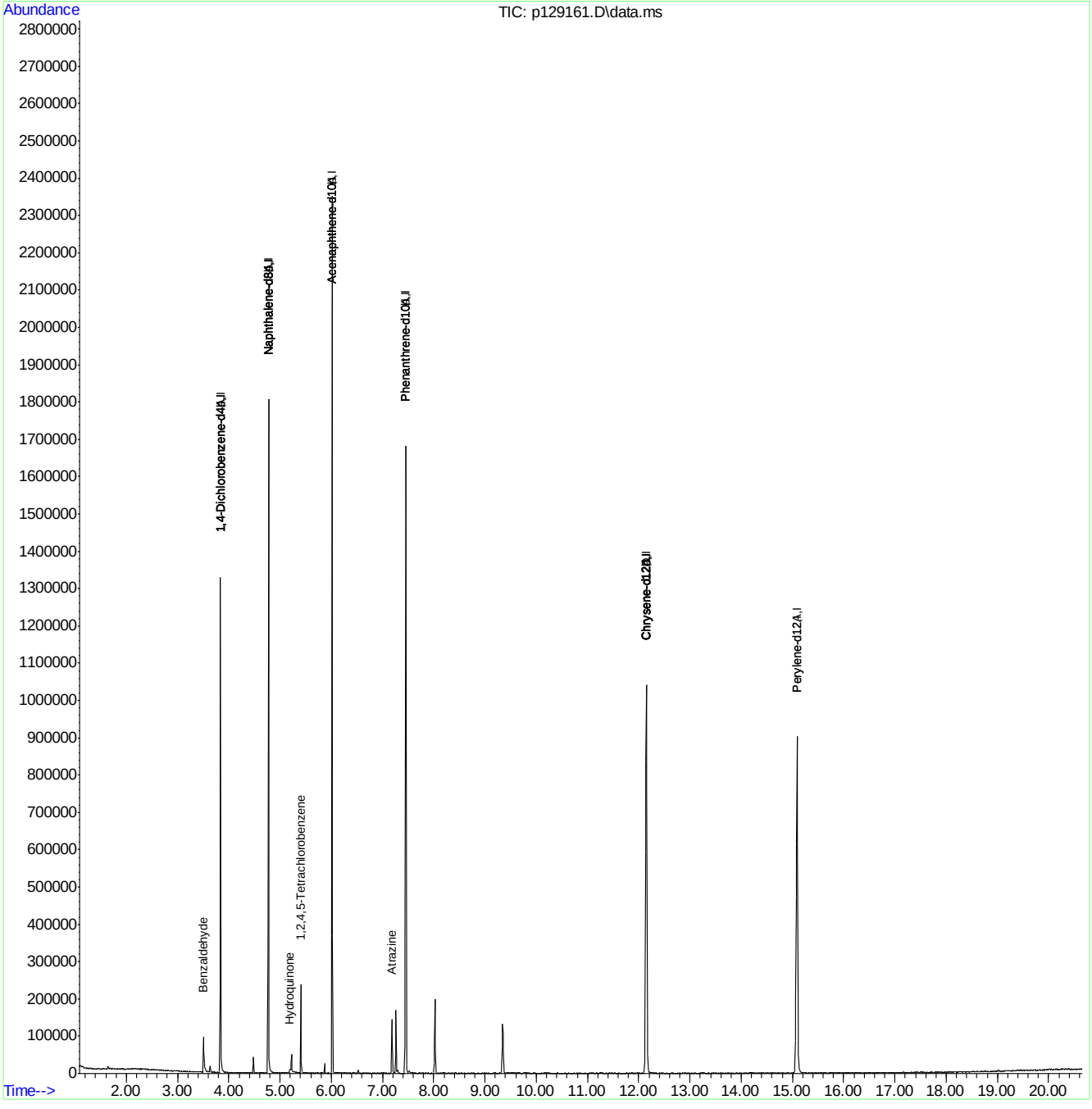
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	172727	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	645801	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	392062	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	661073	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	581322	40.00	ppm	-0.01
91) Perylene-d12	15.089	264	629717	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	172727	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	645801	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	392062	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	661073	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	581322	40.00	ppm	-0.01
153) Perylene-d12A	15.089	264	629717	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	172727	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	661073	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	581322	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	645801	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	392062	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	645801	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	172727	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	581322	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	581322	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	645801	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	581322	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.507	105	22878	4.74	ppm	90
160) Atrazine	7.183	200	16932	4.57	ppm	93
164) Hydroquinone	5.190	110	12691	2.91	ppm	87
166) 1,2,4,5-Tetrachloroben...	5.404	216	28113	4.51	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129161.D
Acq On : 24 Apr 2019 10:45 am
Operator : chriss2
Sample : ic5845-5
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 24 13:21:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



MP5844.M Wed Apr 24 13:21:21 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129162.D
Acq On : 24 Apr 2019 11:12 am
Operator : chriss2
Sample : ic5845-2
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 24 13:22:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	177629	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	645534	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	384470	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	663057	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	569249	40.00	ppm	-0.01
91) Perylene-d12	15.089	264	612119	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	177629	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	645534	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	384470	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	663057	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	569249	40.00	ppm	-0.01
153) Perylene-d12A	15.089	264	612119	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	177629	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	663057	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	569249	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	645534	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	384470	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	645534	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	177629	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	569249	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	569249	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	645534	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	569249	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.512	105	8241	1.66	ppm	88
160) Atrazine	7.183	200	6428	1.73	ppm	83
166) 1,2,4,5-Tetrachloroben...	5.409	216	10652	1.74	ppm	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

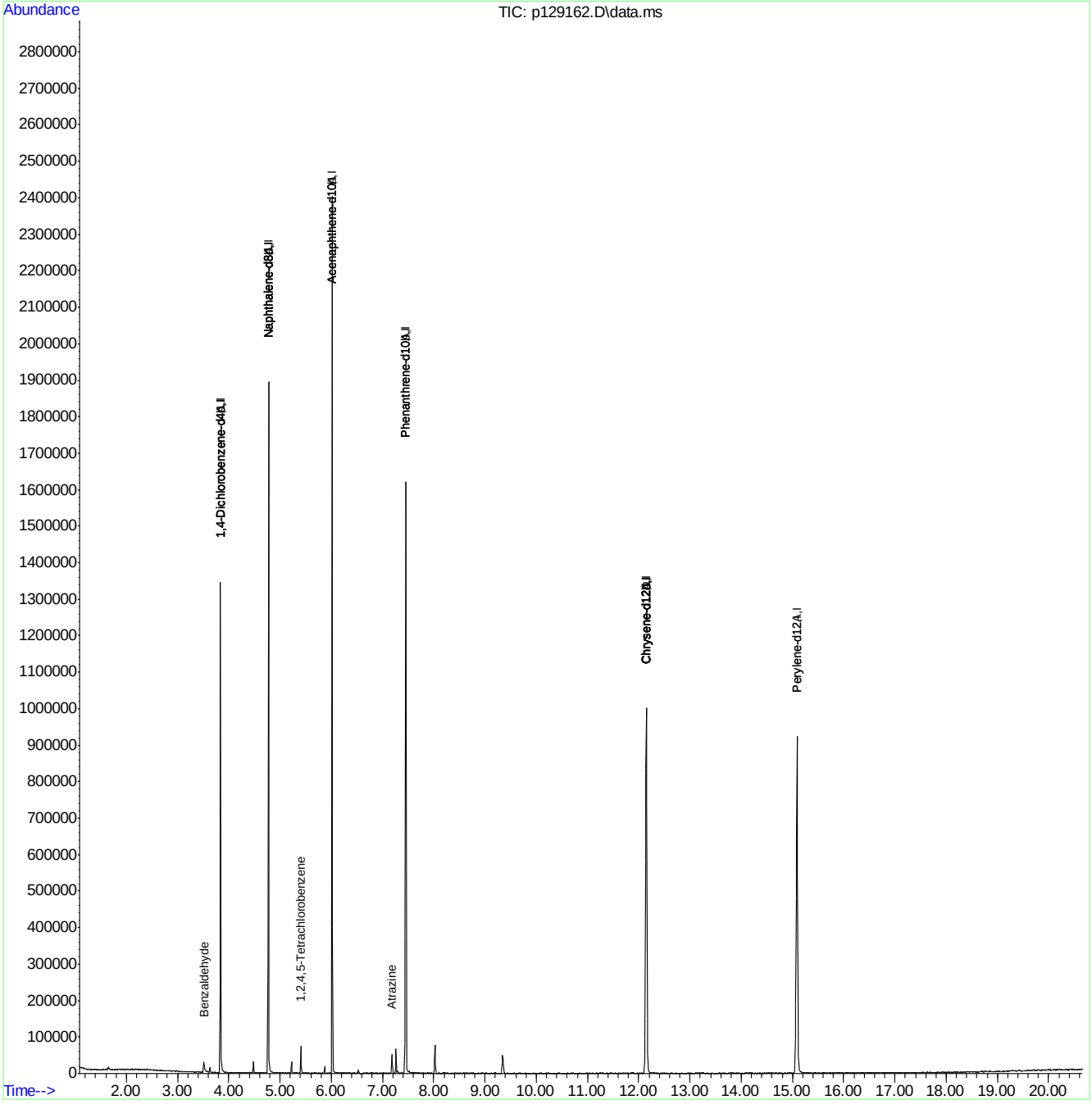
9.6.47

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129162.D
Acq On : 24 Apr 2019 11:12 am
Operator : chriss2
Sample : ic5845-2
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 24 13:22:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129163.D
Acq On : 24 Apr 2019 11:39 am
Operator : chriss2
Sample : ic5845-1
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 24 13:24:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	174523	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	641673	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	385568	40.00	ppm	0.00
69) Phenanthrene-d10	7.450	188	655614	40.00	ppm	-0.01
83) Chrysene-d12	12.146	240	549928	40.00	ppm	-0.02
91) Perylene-d12	15.089	264	588132	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	174523	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	641673	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	385568	40.00	ppm	0.00
131) Phenanthrene-d10A	7.450	188	655614	40.00	ppm	-0.01
146) Chrysene-d12A	12.146	240	549928	40.00	ppm	-0.02
153) Perylene-d12A	15.089	264	588132	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	174523	40.00	ppm	0.00
159) Phenanthrene-d10b	7.450	188	655614	40.00	ppm	0.00
161) Chrysene-d12b	12.146	240	549928	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	641673	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	385568	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	641673	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	174523	40.00	ppm	0.00
174) Chrysene-d12c	12.146	240	549928	40.00	ppm	0.00
176) Chrysene-d12d	12.146	240	549928	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	641673	40.00	ppm	0.00
180) Chrysene-d12D	12.146	240	549928	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.518	105	3502	0.72	ppm	81
160) Atrazine	7.183	200	3085	0.84	ppm	84
166) 1,2,4,5-Tetrachloroben...	5.409	216	5002	0.82	ppm	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

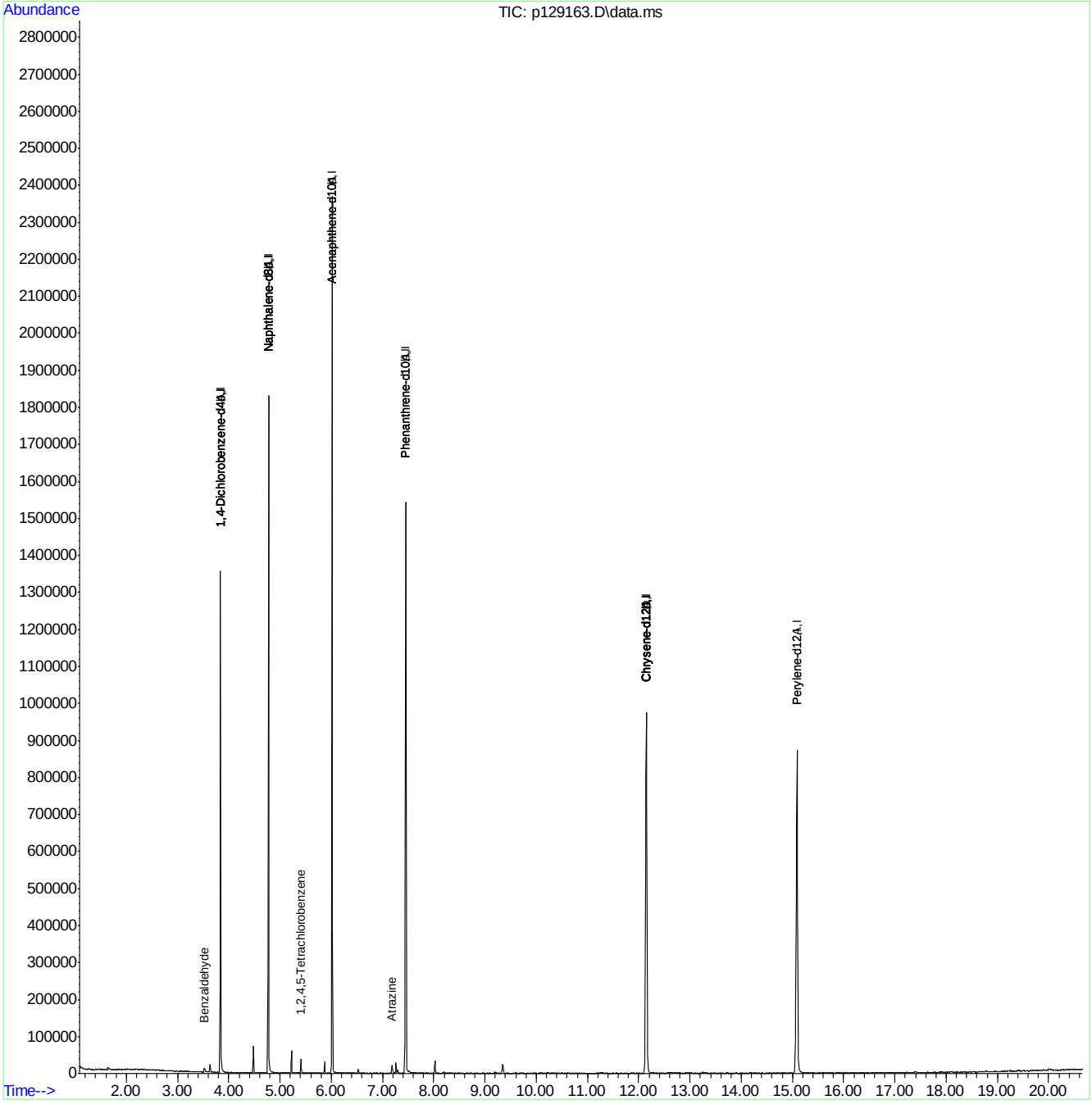
9.6.48

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129163.D
Acq On : 24 Apr 2019 11:39 am
Operator : chriss2
Sample : ic5845-1
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 24 13:24:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:07:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129164.D
Acq On : 24 Apr 2019 12:07 pm
Operator : chriss2
Sample : icv5845-50
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 24 13:40:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:36:52 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	148014	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	587196	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	347389	40.00	ppm	0.00
69) Phenanthrene-d10	7.460	188	579149	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	571152	40.00	ppm	-0.01
91) Perylene-d12	15.094	264	626300	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	148014	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	587196	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	347389	40.00	ppm	0.00
131) Phenanthrene-d10A	7.460	188	579149	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	571152	40.00	ppm	-0.01
153) Perylene-d12A	15.094	264	626300	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	148014	40.00	ppm	0.00
159) Phenanthrene-d10b	7.460	188	579149	40.00	ppm	0.01
161) Chrysene-d12b	12.151	240	571152	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	587196	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	347389	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	587196	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	148014	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	571152	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	571152	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	587196	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	571152	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	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	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%			
Target Compounds						Qvalue
158) Benzaldehyde	3.496	105	219733	56.86	ppm	95
160) Atrazine	7.199	200	172212	55.30	ppm	96
166) 1,2,4,5-Tetrachloroben...	5.409	216	266906	52.24	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

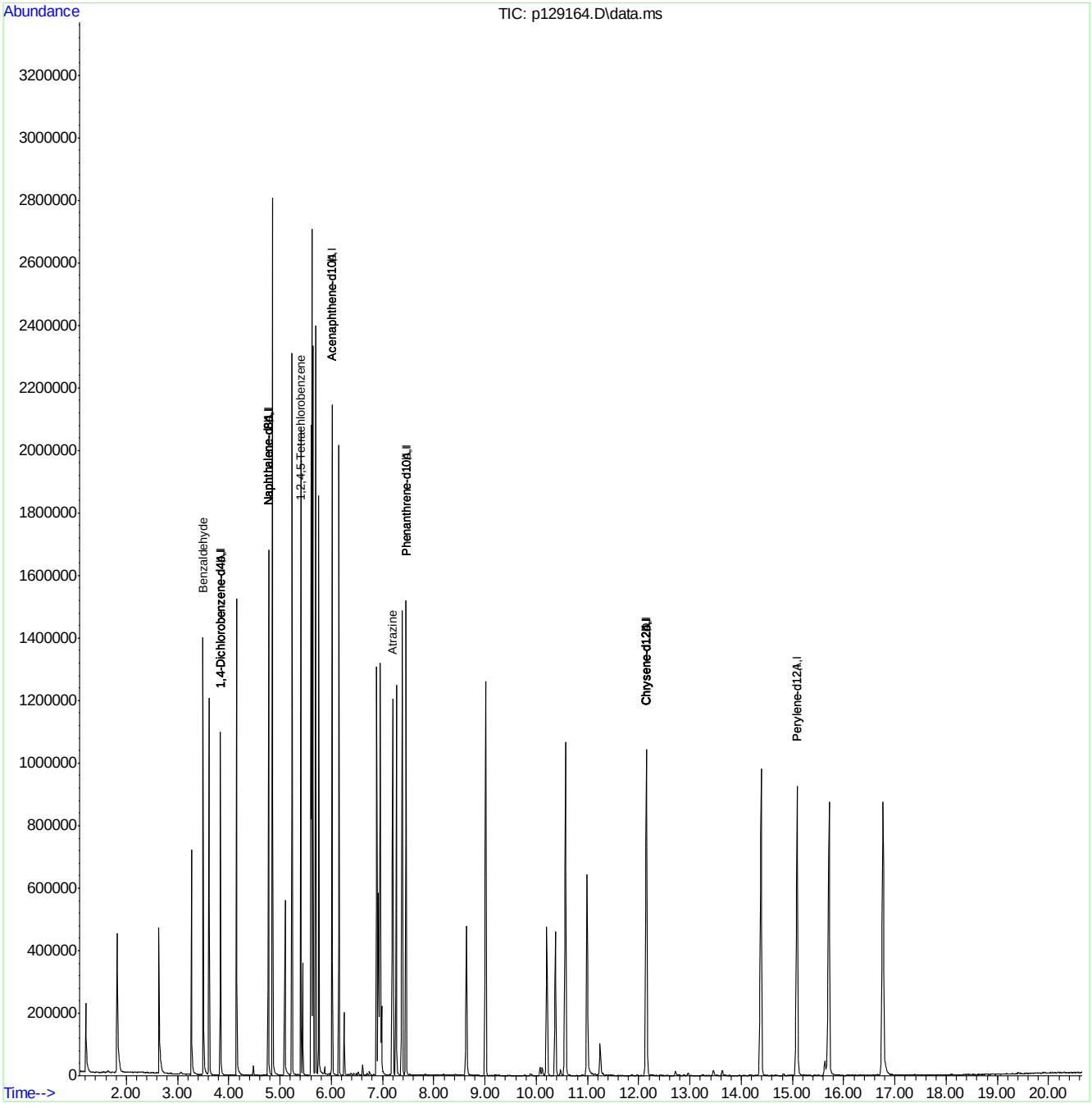
9.6.49

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129164.D
Acq On : 24 Apr 2019 12:07 pm
Operator : chriss2
Sample : icv5845-50
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 24 13:40:56 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:36:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129165.D
Acq On : 24 Apr 2019 12:34 pm
Operator : chriss2
Sample : icv5845-50
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 24 13:38:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:36:52 2019
Response via : Initial Calibration

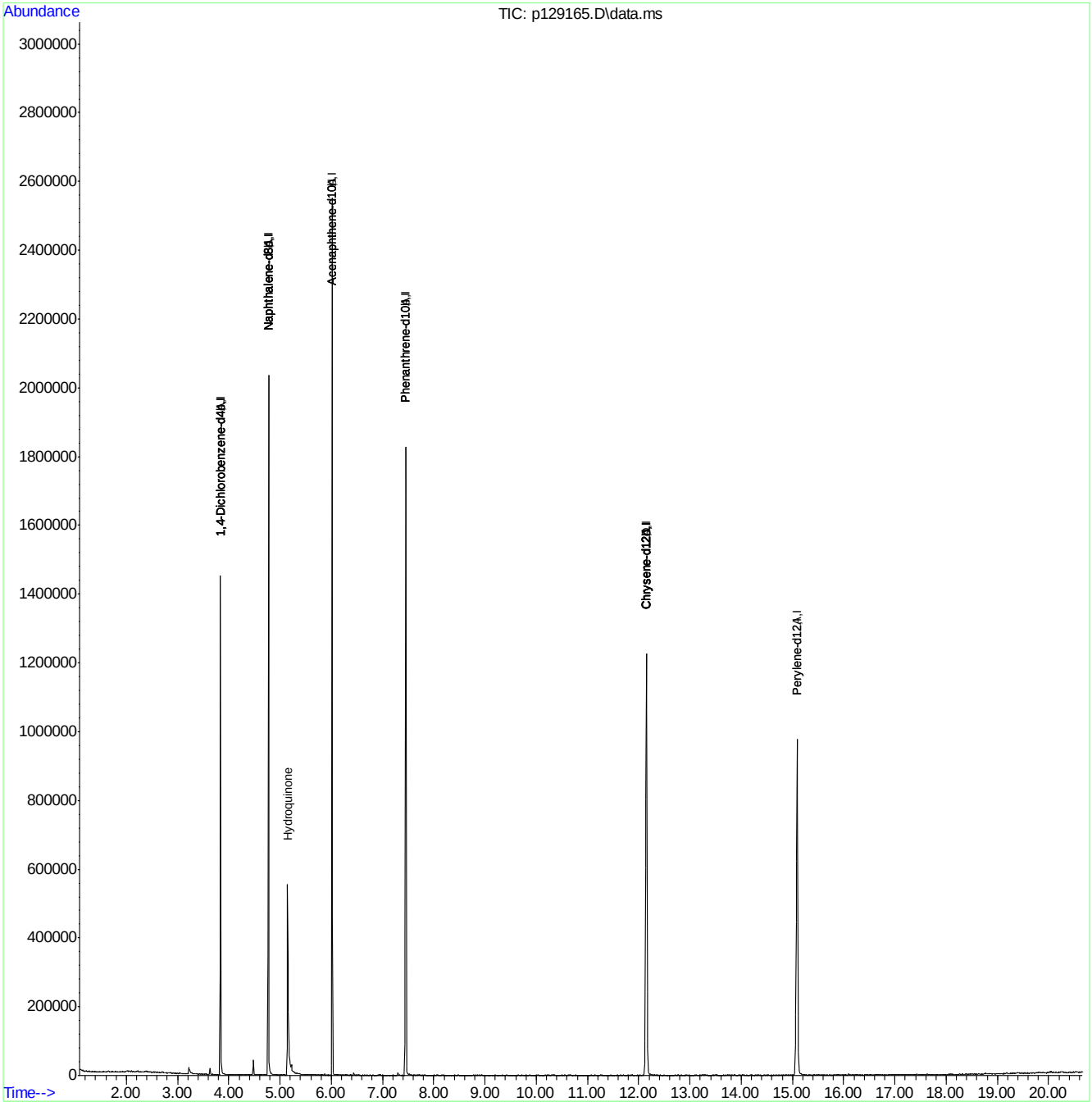
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	190781	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	716565	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	393484	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	750925	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	709061	40.00	ppm	-0.01
91) Perylene-d12	15.095	264	686144	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	190781	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	716565	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	393484	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	750925	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	709061	40.00	ppm	-0.01
153) Perylene-d12A	15.095	264	686144	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	190781	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	750925	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	709061	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	716565	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	393484	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	716565	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	190781	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	709061	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	709061	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	716565	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	709061	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	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%			
Target Compounds						Qvalue
164) Hydroquinone	5.147	110	287569	60.16	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129165.D
Acq On : 24 Apr 2019 12:34 pm
Operator : chriss2
Sample : icv5845-50
Misc : op13894,ep5845,1000,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 24 13:38:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Apr 24 13:36:52 2019
Response via : Initial Calibration



MP5844.M Wed Apr 24 13:38:51 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129172.D
Acq On : 24 Apr 2019 4:08 pm
Operator : chriss2
Sample : ic5846-100
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 25 07:56:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

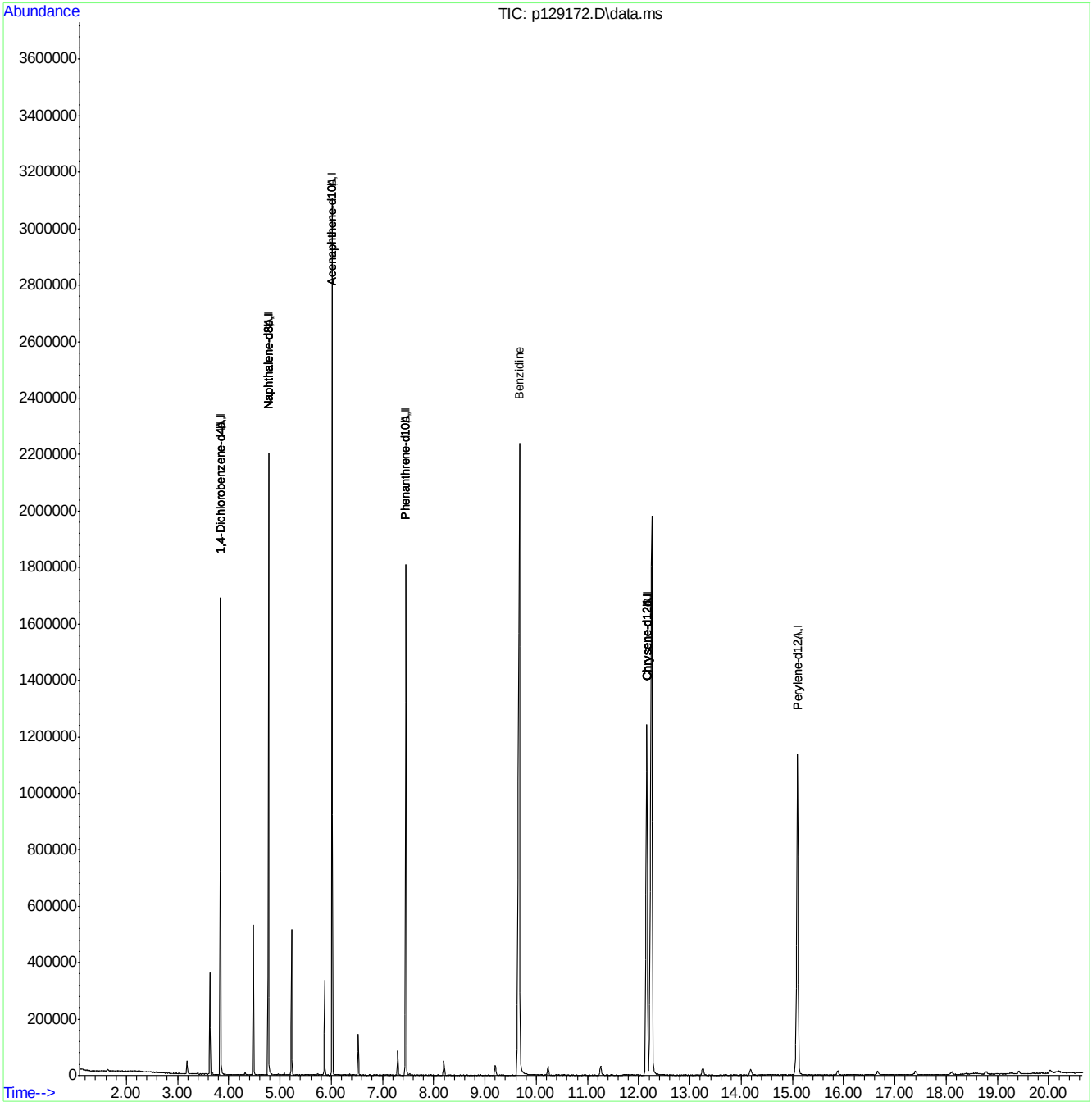
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.833	152	199530	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	745138	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	443806	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	792679	40.00	ppm	0.00
83) Chrysene-d12	12.156	240	723836	40.00	ppm	0.00
91) Perylene-d12	15.100	264	803486	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.833	152	199530	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	745138	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	443806	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	792679	40.00	ppm	0.00
146) Chrysene-d12A	12.156	240	723836	40.00	ppm	0.00
153) Perylene-d12A	15.100	264	803486	40.00	ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.833	152	199530	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	792679	40.00	ppm	0.00
161) Chrysene-d12b	12.156	240	723836	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	745138	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	443806	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	745138	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.833	152	199530	40.00	ppm	0.00
174) Chrysene-d12c	12.156	240	723836	40.00	ppm	0.01
176) Chrysene-d12d	12.156	240	723836	40.00	ppm	0.01
178) Naphthalene-d8d	4.773	136	745138	40.00	ppm	0.00
180) Chrysene-d12D	12.156	240	723836	40.00	ppm	-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	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%			
Target Compounds						Qvalue
162) Benzidine	9.672	184	1691840	106.22	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129172.D
Acq On : 24 Apr 2019 4:08 pm
Operator : chriss2
Sample : ic5846-100
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 25 07:56:14 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129173.D
Acq On : 24 Apr 2019 4:35 pm
Operator : chriss2
Sample : ic5846-80
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 25 07:57:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

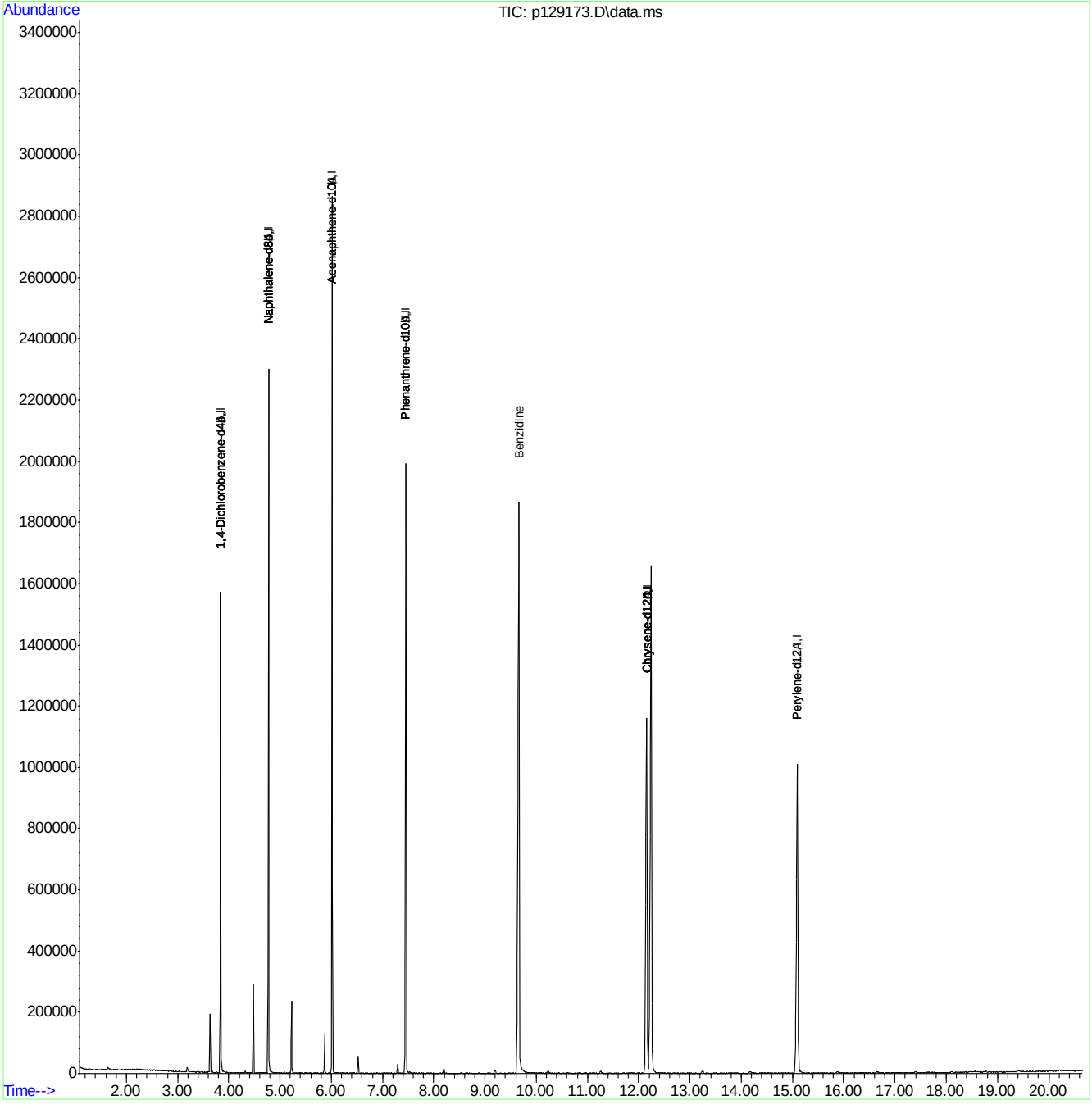
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	196743	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	747002	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	447513	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	776326	40.00	ppm	0.00
83) Chrysene-d12	12.156	240	683340	40.00	ppm	0.00
91) Perylene-d12	15.094	264	732599	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	196743	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	747002	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	447513	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	776326	40.00	ppm	0.00
146) Chrysene-d12A	12.156	240	683340	40.00	ppm	0.00
153) Perylene-d12A	15.094	264	732599	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	196743	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	776326	40.00	ppm	0.00
161) Chrysene-d12b	12.156	240	683340	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	747002	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	447513	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	747002	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	196743	40.00	ppm	0.00
174) Chrysene-d12c	12.156	240	683340	40.00	ppm	0.01
176) Chrysene-d12d	12.156	240	683340	40.00	ppm	0.01
178) Naphthalene-d8d	4.773	136	747002	40.00	ppm	0.00
180) Chrysene-d12D	12.156	240	683340	40.00	ppm	-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	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%			
Target Compounds						Qvalue
162) Benzidine	9.661	184	1287825	85.64	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129173.D
Acq On : 24 Apr 2019 4:35 pm
Operator : chriss2
Sample : ic5846-80
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 25 07:57:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129174.D
Acq On : 24 Apr 2019 5:02 pm
Operator : chriss2
Sample : icc5846-50
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Apr 25 07:55:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	199758	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	746315	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	439818	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	755112	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	652306	40.00	ppm	-0.01
91) Perylene-d12	15.094	264	690944	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	199758	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	746315	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	439818	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	755112	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	652306	40.00	ppm	-0.01
153) Perylene-d12A	15.094	264	690944	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	199758	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	755112	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	652306	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	746315	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	439818	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	746315	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	199758	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	652306	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	652306	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	746315	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	652306	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	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%			
Target Compounds						Qvalue
162) Benzidine	9.651	184	717717	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

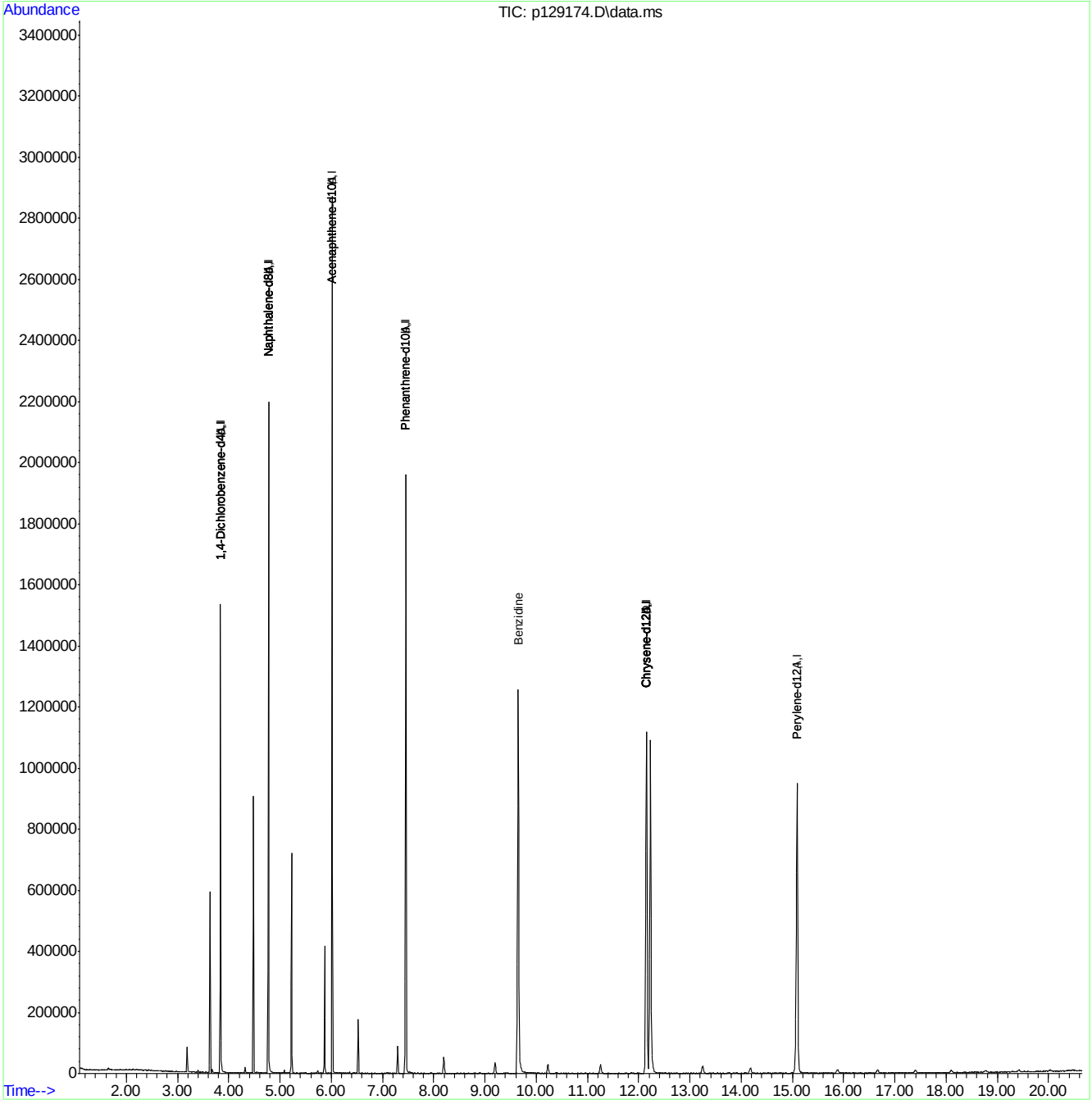
9.6.53

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129174.D
Acq On : 24 Apr 2019 5:02 pm
Operator : chriss2
Sample : icc5846-50
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Apr 25 07:55:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129175.D
Acq On : 24 Apr 2019 5:29 pm
Operator : chriss2
Sample : ic5846-25
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 25 07:58:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

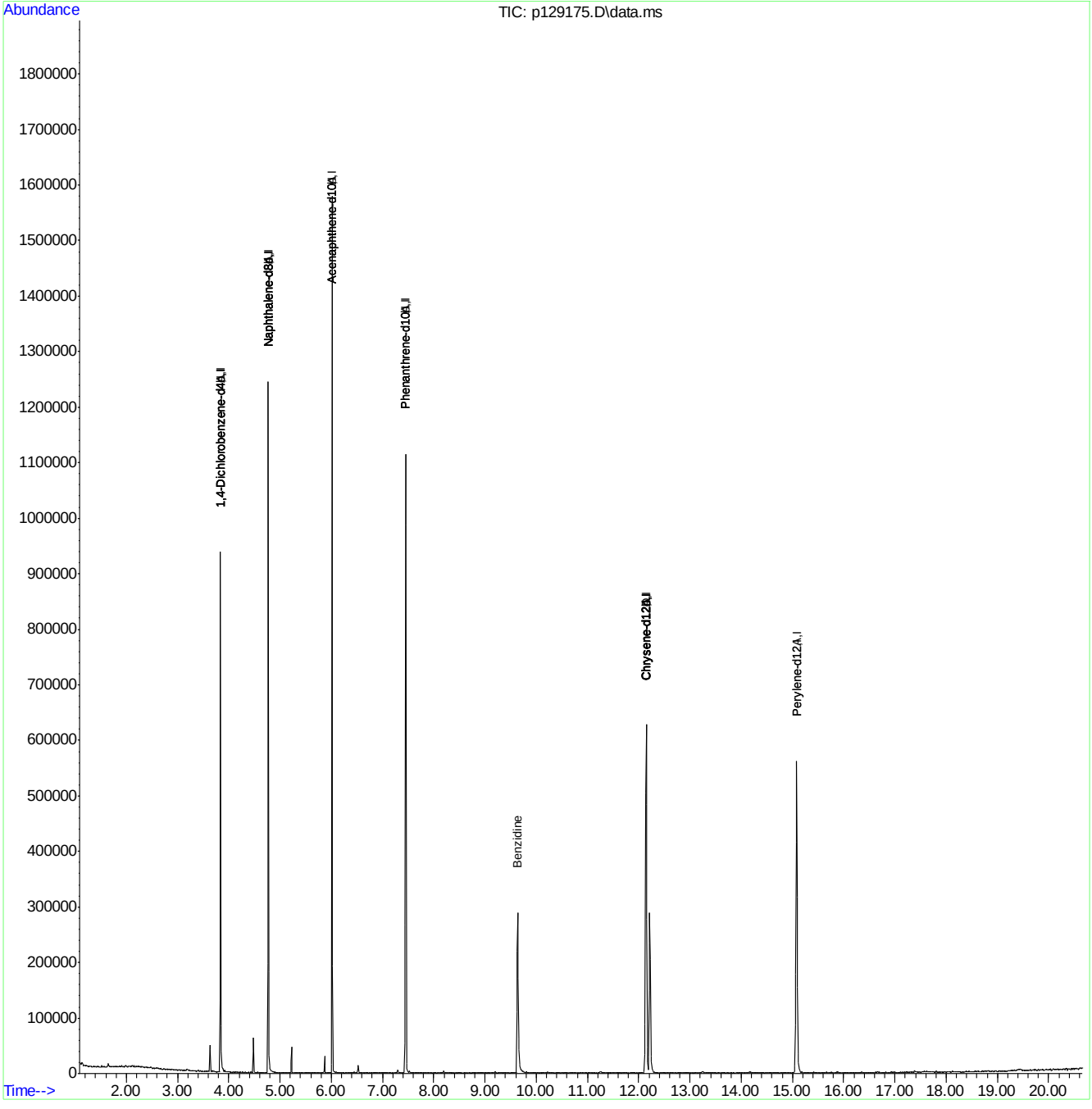
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	117597	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	435154	40.00	ppm	0.00
47) Acenaphthene-d10	6.013	164	254064	40.00	ppm	0.00
69) Phenanthrene-d10	7.450	188	430054	40.00	ppm	-0.01
83) Chrysene-d12	12.145	240	349157	40.00	ppm	-0.02
91) Perylene-d12	15.084	264	355744	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	117597	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	435154	40.00	ppm	0.00
120) Acenaphthene-d10A	6.013	164	254064	40.00	ppm	0.00
131) Phenanthrene-d10A	7.450	188	430054	40.00	ppm	-0.01
146) Chrysene-d12A	12.145	240	349157	40.00	ppm	-0.02
153) Perylene-d12A	15.084	264	355744	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	117597	40.00	ppm	0.00
159) Phenanthrene-d10b	7.450	188	430054	40.00	ppm	0.00
161) Chrysene-d12b	12.145	240	349157	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	435154	40.00	ppm	0.00
165) Acenaphthene-d10b	6.013	164	254064	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	435154	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	117597	40.00	ppm	0.00
174) Chrysene-d12c	12.145	240	349157	40.00	ppm	0.00
176) Chrysene-d12d	12.145	240	349157	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	435154	40.00	ppm	0.00
180) Chrysene-d12D	12.145	240	349157	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	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%			
Target Compounds						Qvalue
162) Benzidine	9.635	184	167053	21.74	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129175.D
Acq On : 24 Apr 2019 5:29 pm
Operator : chriss2
Sample : ic5846-25
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 25 07:58:40 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129176.D
Acq On : 24 Apr 2019 5:56 pm
Operator : chriss2
Sample : ic5846-10
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Apr 25 07:59:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

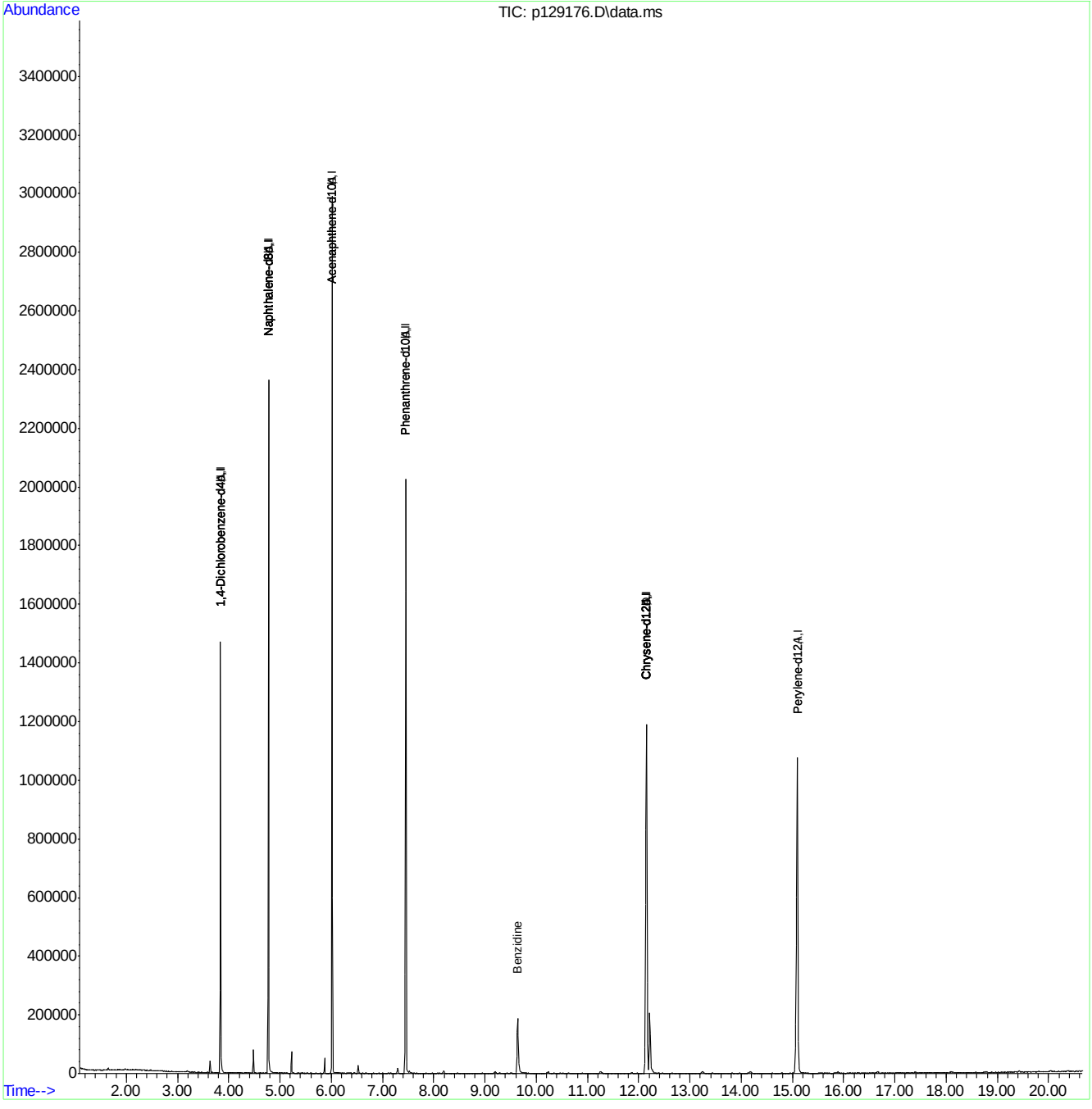
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	3.838	152	194019	40.00 ppm	0.00
24) Naphthalene-d8	4.773	136	742610	40.00 ppm	0.00
47) Acenaphthene-d10	6.018	164	456813	40.00 ppm	0.00
69) Phenanthrene-d10	7.455	188	793215	40.00 ppm	0.00
83) Chrysene-d12	12.151	240	692645	40.00 ppm	-0.01
91) Perylene-d12	15.100	264	761062	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4A	3.838	152	194019	40.00 ppm	0.00
111) Naphthalene-d8A	4.773	136	742610	40.00 ppm	0.00
120) Acenaphthene-d10A	6.018	164	456813	40.00 ppm	0.00
131) Phenanthrene-d10A	7.455	188	793215	40.00 ppm	0.00
146) Chrysene-d12A	12.151	240	692645	40.00 ppm	-0.01
153) Perylene-d12A	15.100	264	761062	40.00 ppm	0.00
157) 1,4-Dichlorobenzene-d4b	3.838	152	194019	40.00 ppm	0.00
159) Phenanthrene-d10b	7.455	188	793215	40.00 ppm	0.00
161) Chrysene-d12b	12.151	240	692645	40.00 ppm	0.00
163) Naphthalene-d8b	4.773	136	742610	40.00 ppm	0.00
165) Acenaphthene-d10b	6.018	164	456813	40.00 ppm	0.00
167) Naphthalene-d8c	4.773	136	742610	40.00 ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	194019	40.00 ppm	0.00
174) Chrysene-d12c	12.151	240	692645	40.00 ppm	0.00
176) Chrysene-d12d	12.151	240	692645	40.00 ppm	0.00
178) Naphthalene-d8d	4.773	136	742610	40.00 ppm	0.00
180) Chrysene-d12D	12.151	240	692645	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	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%		
Target Compounds					Qvalue
162) Benzidine	9.635	184	109903	7.21 ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129176.D
Acq On : 24 Apr 2019 5:56 pm
Operator : chriss2
Sample : ic5846-10
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Apr 25 07:59:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129177.D
Acq On : 24 Apr 2019 6:23 pm
Operator : chriss2
Sample : ic5846-5
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Apr 25 08:01:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

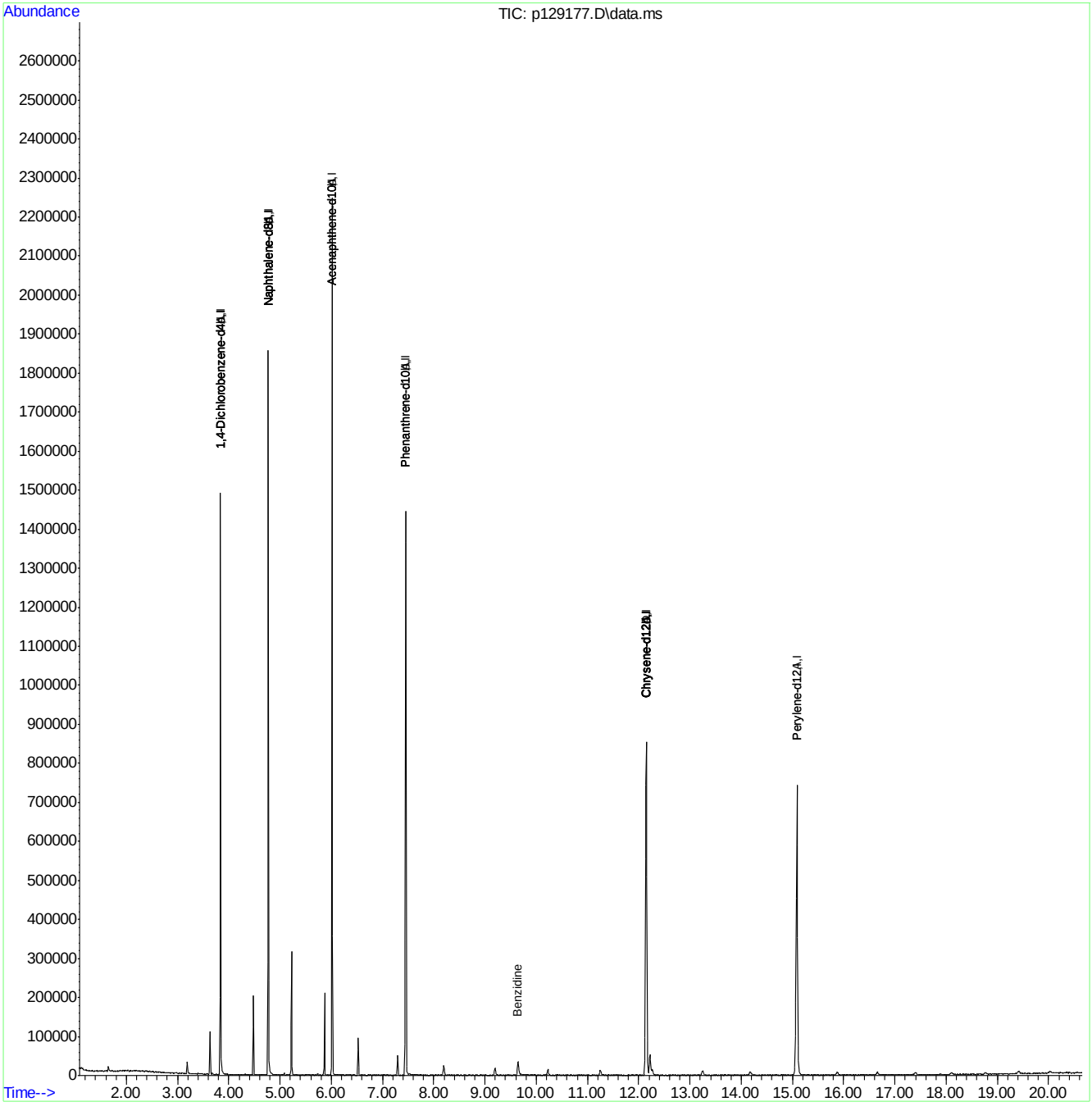
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	180802	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	655300	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	357322	40.00	ppm	0.00
69) Phenanthrene-d10	7.450	188	581257	40.00	ppm	-0.01
83) Chrysene-d12	12.145	240	463542	40.00	ppm	-0.02
91) Perylene-d12	15.089	264	500839	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	180802	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	655300	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	357322	40.00	ppm	0.00
131) Phenanthrene-d10A	7.450	188	581257	40.00	ppm	-0.01
146) Chrysene-d12A	12.145	240	463542	40.00	ppm	-0.02
153) Perylene-d12A	15.089	264	500839	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	180802	40.00	ppm	0.00
159) Phenanthrene-d10b	7.450	188	581257	40.00	ppm	0.00
161) Chrysene-d12b	12.145	240	463542	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	655300	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	357322	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	655300	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	180802	40.00	ppm	0.00
174) Chrysene-d12c	12.145	240	463542	40.00	ppm	0.00
176) Chrysene-d12d	12.145	240	463542	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	655300	40.00	ppm	0.00
180) Chrysene-d12D	12.145	240	463542	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	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%			
Target Compounds						Qvalue
162) Benzidine	9.640	184	25229	2.47	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129177.D
Acq On : 24 Apr 2019 6:23 pm
Operator : chriss2
Sample : ic5846-5
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Apr 25 08:01:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129178.D
Acq On : 24 Apr 2019 6:50 pm
Operator : chriss2
Sample : ic5846-2
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 25 08:02:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration

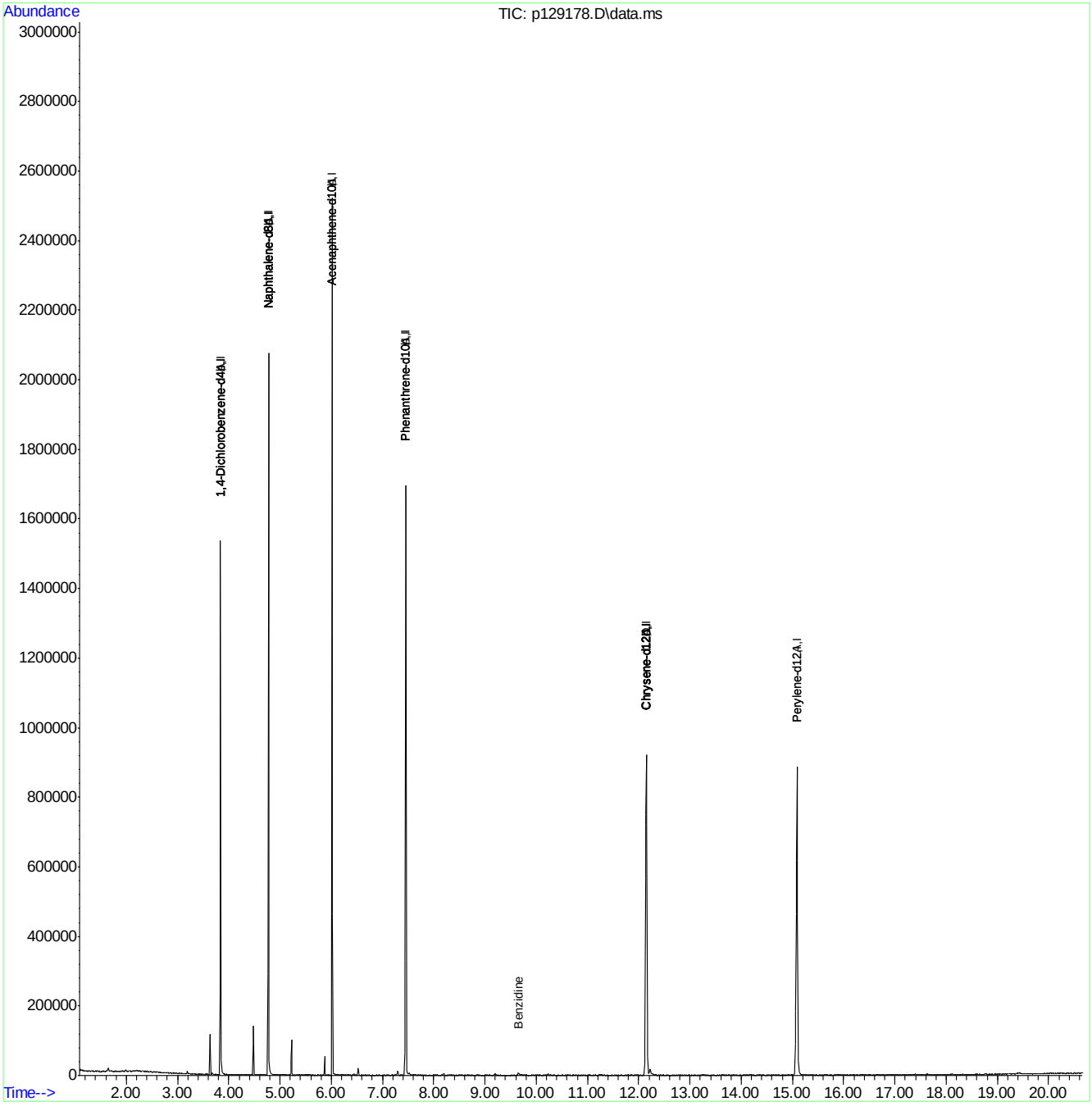
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	190990	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	689395	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	399680	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	661786	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	532931	40.00	ppm	-0.01
91) Perylene-d12	15.089	264	560074	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4A	3.838	152	190990	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	689395	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	399680	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	661786	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	532931	40.00	ppm	-0.01
153) Perylene-d12A	15.089	264	560074	40.00	ppm	-0.02
157) 1,4-Dichlorobenzene-d4b	3.838	152	190990	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	661786	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	532931	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	689395	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	399680	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	689395	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	190990	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	532931	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	532931	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	689395	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	532931	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	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%			
Target Compounds						Qvalue
162) Benzidine	9.651	184	6692	0.57	ppm #	67

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129178.D
Acq On : 24 Apr 2019 6:50 pm
Operator : chriss2
Sample : ic5846-2
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 25 08:02:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 07:54:09 2019
Response via : Initial Calibration



MP5844.M Thu Apr 25 08:02:40 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129180.D
Acq On : 24 Apr 2019 7:44 pm
Operator : chriss2
Sample : icv5846-50
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 25 08:19:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 08:18:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.838	152	226660	40.00	ppm	0.00
24) Naphthalene-d8	4.773	136	820068	40.00	ppm	0.00
47) Acenaphthene-d10	6.018	164	441879	40.00	ppm	0.00
69) Phenanthrene-d10	7.455	188	776768	40.00	ppm	0.00
83) Chrysene-d12	12.151	240	686164	40.00	ppm	-0.01
91) Perylene-d12	15.094	264	682983	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4A	3.838	152	226660	40.00	ppm	0.00
111) Naphthalene-d8A	4.773	136	820068	40.00	ppm	0.00
120) Acenaphthene-d10A	6.018	164	441879	40.00	ppm	0.00
131) Phenanthrene-d10A	7.455	188	776768	40.00	ppm	0.00
146) Chrysene-d12A	12.151	240	686164	40.00	ppm	-0.01
153) Perylene-d12A	15.094	264	682983	40.00	ppm	-0.01
157) 1,4-Dichlorobenzene-d4b	3.838	152	226660	40.00	ppm	0.00
159) Phenanthrene-d10b	7.455	188	776768	40.00	ppm	0.00
161) Chrysene-d12b	12.151	240	686164	40.00	ppm	0.00
163) Naphthalene-d8b	4.773	136	820068	40.00	ppm	0.00
165) Acenaphthene-d10b	6.018	164	441879	40.00	ppm	0.00
167) Naphthalene-d8c	4.773	136	820068	40.00	ppm	0.00
172) 1,4-Dichlorobenzene-d4c	3.838	152	226660	40.00	ppm	0.00
174) Chrysene-d12c	12.151	240	686164	40.00	ppm	0.00
176) Chrysene-d12d	12.151	240	686164	40.00	ppm	0.00
178) Naphthalene-d8d	4.773	136	820068	40.00	ppm	0.00
180) Chrysene-d12D	12.151	240	686164	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	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%			
Target Compounds						Qvalue
162) Benzidine	9.645	184	629582	44.14	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

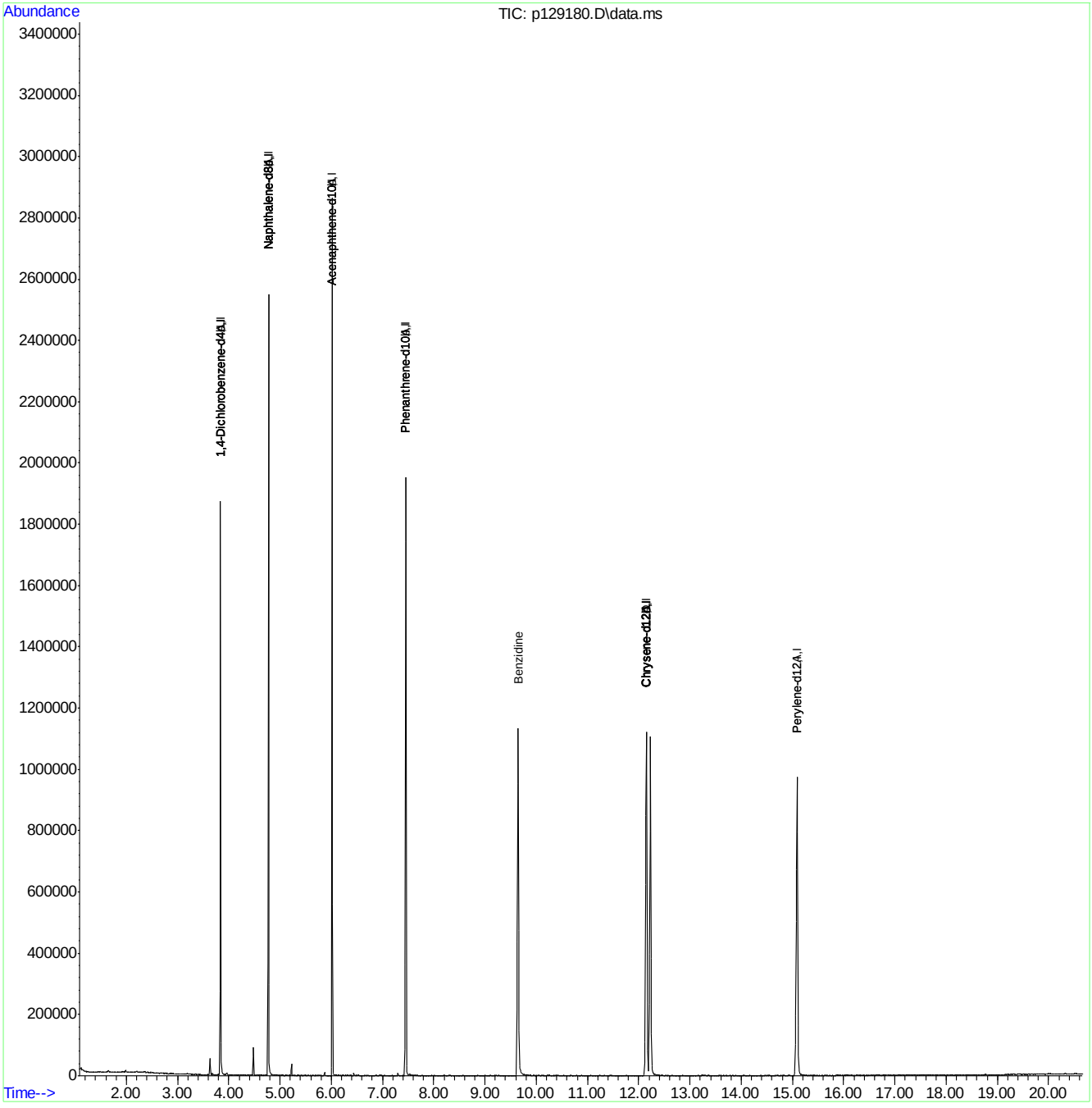
9.6.58

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5844\
Data File : p129180.D
Acq On : 24 Apr 2019 7:44 pm
Operator : chriss2
Sample : icv5846-50
Misc : op13894,ep5846,1000,,,1,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 25 08:19:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Apr 25 08:18:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129366.D
Acq On : 7 May 2019 12:44 pm
Operator : christc2
Sample : cc5844-25
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:47:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 12:50:52 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.758	152	177681	40.00	ppm	-0.08
24) Naphthalene-d8	4.698	136	616625	40.00	ppm	-0.08
47) Acenaphthene-d10	5.938	164	374206	40.00	ppm	-0.09
69) Phenanthrene-d10	7.332	188	627554	40.00	ppm	-0.13
83) Chrysene-d12	11.969	240	558176	40.00	ppm	-0.20
91) Perylene-d12	14.897	264	580998	40.00	ppm	-0.21
101) 1,4-Dichlorobenzene-d4b	3.758	152	177681	40.00	ppm	-0.08
103) Phenanthrene-d10b	7.332	188	627554	40.00	ppm	-0.12
105) Chrysene-d12b	11.969	240	558176	40.00	ppm	-0.18
107) Naphthalene-d8b	4.698	136	616625	40.00	ppm	-0.07
109) Acenaphthene-d10b	5.938	164	374206	40.00	ppm	-0.08
111) Chrysene-d12d	11.969	240	558176	40.00	ppm	-0.20
System Monitoring Compounds						
5) 2-Fluorophenol	2.802	112	174622	30.59	ppm	-0.05
Spiked Amount 50.000			Recovery	=	61.18%	
8) Phenol-d5	3.625	99	226480	31.24	ppm	-0.03
Spiked Amount 50.000			Recovery	=	62.48%	
25) Nitrobenzene-d5	4.186	82	181529	27.40	ppm	-0.08
Spiked Amount 50.000			Recovery	=	54.80%	
51) 2-Fluorobiphenyl	5.478	172	319247	26.92	ppm	-0.07
Spiked Amount 50.000			Recovery	=	53.84%	
73) 2,4,6-Tribromophenol	6.600	330	51383	24.61	ppm	-0.11
Spiked Amount 50.000			Recovery	=	49.22%	
85) Terphenyl-d14	9.944	244	327046	25.86	ppm	-0.18
Spiked Amount 50.000			Recovery	=	51.72%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.146	88	93078	32.31	ppm	99
3) Pyridine	1.365	79	219127	40.13	ppm	98
4) N-Nitrosodimethylamine	1.349	42	93771	32.28	ppm	99
6) Indene	3.950	116	247821	26.64	ppm	98
7) Cumene	3.122	105	438323	28.86	ppm	98
9) Phenol	3.635	94	218013	27.60	ppm	82
10) Aniline	3.534	93	205448	55.41	ppm	95
11) bis(2-Chloroethyl)ether	3.587	93	169553	27.09	ppm	94
12) 2-Chlorophenol	3.646	128	161441	27.11	ppm	95
13) Decane	3.673	43	126243	28.77	ppm	96
14) 1,3-Dichlorobenzene	3.715	146	178551	25.50	ppm	100
15) 1,4-Dichlorobenzene	3.774	146	174408	25.71	ppm	97
16) Benzyl alcohol	3.913	108	93524	29.27	ppm	91
17) 1,2-Dichlorobenzene	3.886	146	180700	26.66	ppm	99
18) Acetophenone	4.079	105	222665	25.57	ppm	89
19) 2-Methylphenol	4.052	108	146714	26.55	ppm	98
20) 2,2'-oxybis(1-Chloropr...	3.999	121	37098	25.48	ppm #	67
21) 3&4-Methylphenol	4.175	108	152359	28.17	ppm	99
22) n-Nitroso-di-n-propyla...	4.095	70	105555	25.52	ppm	96
23) Hexachloroethane	4.132	201	69414	25.01	ppm	88
26) Nitrobenzene	4.202	77	191402	28.55	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129366.D
Acq On : 7 May 2019 12:44 pm
Operator : christc2
Sample : cc5844-25
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:47:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 12:50:52 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
27)	Quinoline	4.960	129	283241	25.34 ppm	98
28)	Isophorone	4.383	82	320607	27.86 ppm	95
29)	2-Nitrophenol	4.437	139	87313	28.77 ppm	89
30)	2,4-Dimethylphenol	4.533	107	157799	29.29 ppm	99
31)	Benzoic acid	4.682	105	126634	28.63 ppm	92
32)	bis(2-Chloroethoxy)met...	4.554	93	184330	27.65 ppm	99
33)	2,4-Dichlorophenol	4.656	162	139911	27.59 ppm	93
34)	2,6-Dichlorophenol	4.789	162	134362	27.13 ppm	97
35)	1,3,5-Trichlorobenzene	4.437	180	161678	27.09 ppm	99
36)	1,2,4-Trichlorobenzene	4.666	180	151189	26.52 ppm	98
37)	1,2,3-Trichlorobenzene	4.821	180	143126	26.58 ppm	97
38)	Naphthalene	4.714	128	401530	27.27 ppm	99
39)	4-Chloroaniline	4.784	127	167212	29.16 ppm	95
40)	2,3-Dichloroaniline	5.425	161	163409	25.58 ppm	98
41)	Caprolactam	5.046	55	67330	30.25 ppm	96
42)	Hexachlorobutadiene	4.816	225	90852	25.77 ppm	98
43)	4-Chloro-3-methylphenol	5.190	107	148902	27.91 ppm	86
44)	2-Methylnaphthalene	5.206	141	233677	27.68 ppm	96
45)	1-Methylnaphthalene	5.275	142	281940	25.79 ppm	97
46)	Dimethylnaphthalene	5.649	156	239464	24.50 ppm	99
48)	Hexachlorocyclopentadiene	5.329	237	164482	57.51 ppm	99
49)	2,4,6-Trichlorophenol	5.441	196	99088	26.71 ppm	99
50)	2,4,5-Trichlorophenol	5.494	196	100489	27.35 ppm	99
52)	2-Chloronaphthalene	5.548	162	278365	27.44 ppm	97
53)	Biphenyl	5.542	154	345560	27.40 ppm	98
54)	2-Nitroaniline	5.649	65	94058	28.13 ppm	86
55)	Dimethylphthalate	5.777	163	327489	25.04 ppm	99
56)	Acenaphthylene	5.836	152	431534	26.95 ppm	99
57)	2,6-Dinitrotoluene	5.815	165	71282	26.02 ppm	79
58)	3-Nitroaniline	5.943	138	72717	25.35 ppm	88
59)	Acenaphthene	5.959	153	260081	26.43 ppm	98
60)	2,4-Dinitrophenol	6.018	184	70186	42.29 ppm	83
61)	4-Nitrophenol	6.173	109	55990	27.26 ppm	88
62)	Dibenzofuran	6.093	168	391994	26.27 ppm	95
63)	2,4-Dinitrotoluene	6.109	165	92482	25.37 ppm	65
64)	2,3,4,6-Tetrachlorophenol	6.221	232	84981	26.39 ppm	91
65)	Diethylphthalate	6.312	149	340786	25.60 ppm	97
66)	Fluorene	6.370	166	312691	26.14 ppm	99
67)	4-Chlorophenyl-phenyle...	6.381	204	149334	25.25 ppm	87
68)	4-Nitroaniline	6.440	138	70641	25.77 ppm	91
70)	4,6-Dinitro-2-methylph...	6.456	198	55566	23.63 ppm	83
71)	n-Nitrosodiphenylamine	6.499	169	209437	25.75 ppm	98
72)	1,2-Diphenylhydrazine	6.525	77	399744	31.44 ppm	89
74)	4-Bromophenyl-phenylether	6.846	248	94927	24.88 ppm	87
75)	Hexachlorobenzene	6.905	284	108288	24.89 ppm	97
76)	Pentachlorophenol	7.161	266	130314	47.12 ppm	98
77)	Phenanthrene	7.359	178	424858	25.98 ppm	99
78)	Anthracene	7.423	178	447368	26.19 ppm	99
79)	Carbazole	7.679	167	424062	25.70 ppm	99
80)	Di-n-butylphthalate	8.278	149	624352	26.67 ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129366.D
Acq On : 7 May 2019 12:44 pm
Operator : christc2
Sample : cc5844-25
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:47:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 12:50:52 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
81)	Fluoranthene	9.127	202	517865	25.67 ppm	95
82)	Octadecane	7.316	57	186834	29.19 ppm	95
84)	Pyrene	9.506	202	538398	27.86 ppm	95
86)	Butylbenzylphthalate	11.077	149	281264	28.29 ppm	95
87)	Benzo[a]anthracene	11.948	228	478575	26.01 ppm	99
88)	3,3'-Dichlorobenzidine	12.049	252	155650	25.72 ppm	96
89)	Chrysene	12.017	228	421988	26.04 ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.471	149	377833	28.42 ppm	98
92)	Di-n-octylphthalate	13.876	149	664445	29.58 ppm	97
93)	Benzo[b]fluoranthene	14.176	252	459185	25.93 ppm	99
94)	Benzo[k]fluoranthene	14.234	252	409024	27.45 ppm	98
95)	Benzo[a]pyrene	14.774	252	405768	27.09 ppm	97
96)	Indeno[1,2,3-cd]pyrene	16.804	276	384543	28.09 ppm	91
97)	Dibenz(a,h)acridine	16.467	279	363525	27.55 ppm	98
98)	Dibenz[a,h]anthracene	16.873	278	383471	27.48 ppm	95
99)	7,12-Dimethylbenz(a)an...	14.197	256	193055	24.87 ppm	96
100)	Benzo[g,h,i]perylene	17.210	276	387606	28.09 ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

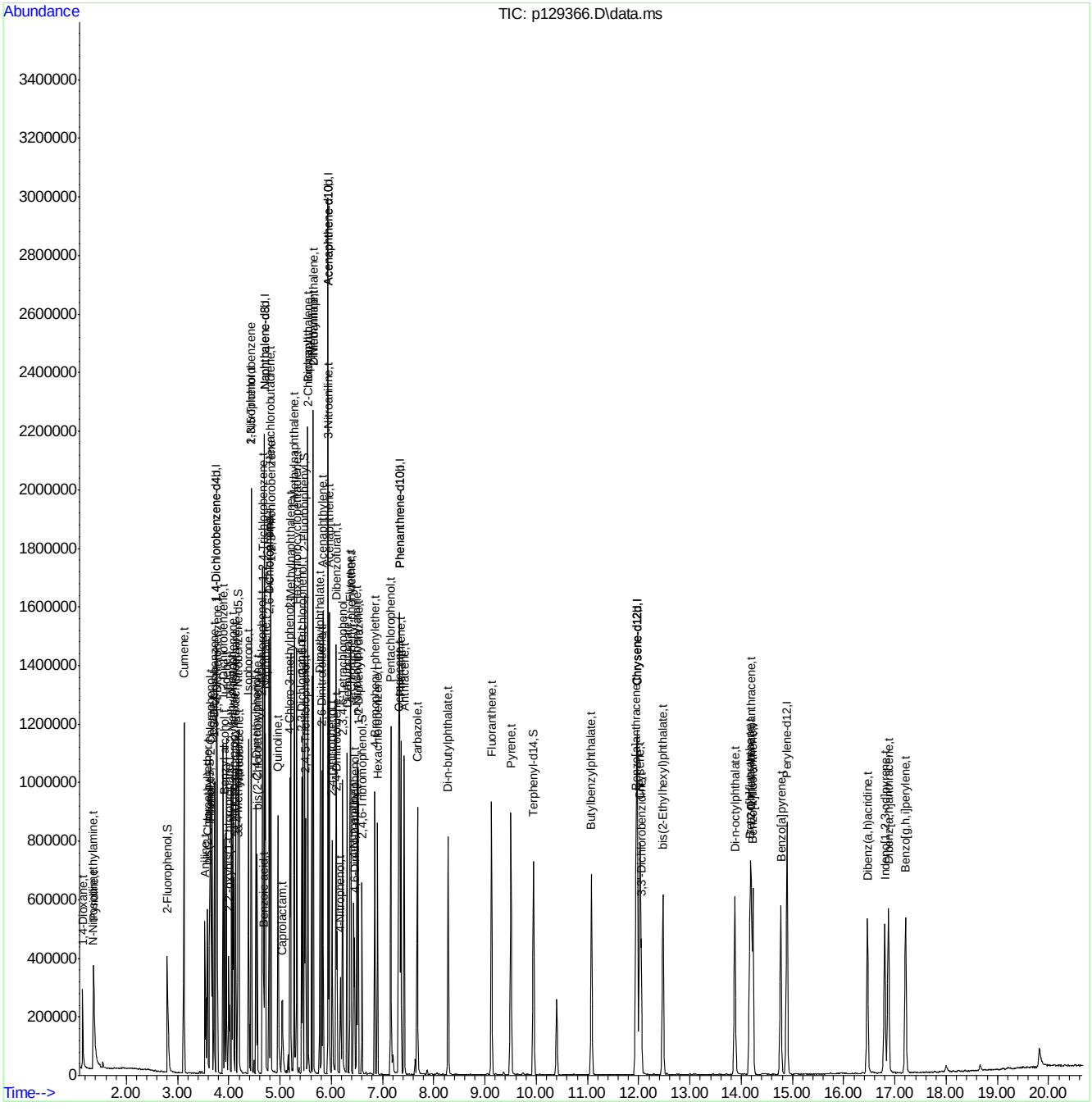
9.6.59

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129366.D
Acq On : 7 May 2019 12:44 pm
Operator : christc2
Sample : cc5844-25
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 07 14:47:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 12:50:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129367.D
Acq On : 7 May 2019 1:11 pm
Operator : christc2
Sample : cc5845-25
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 14:48:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 12:50:52 2019
Response via : Initial Calibration

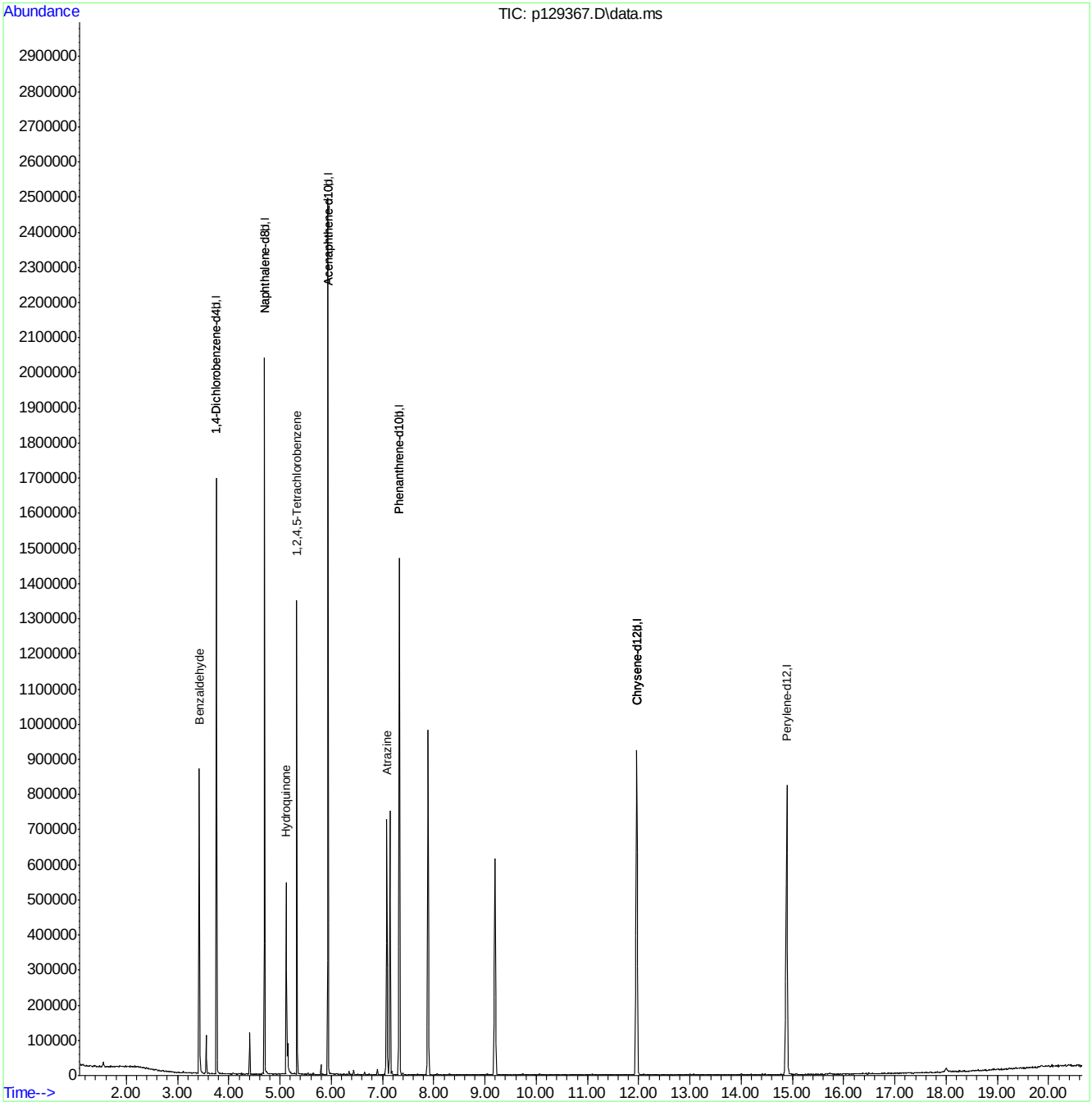
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.758	152	181695	40.00	ppm	-0.08
24) Naphthalene-d8	4.693	136	661962	40.00	ppm	-0.09
47) Acenaphthene-d10	5.938	164	370170	40.00	ppm	-0.09
69) Phenanthrene-d10	7.327	188	597593	40.00	ppm	-0.14
83) Chrysene-d12	11.958	240	519229	40.00	ppm	-0.21
91) Perylene-d12	14.891	264	557733	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4b	3.758	152	181695	40.00	ppm	-0.08
103) Phenanthrene-d10b	7.327	188	597593	40.00	ppm	-0.12
105) Chrysene-d12b	11.958	240	519229	40.00	ppm	-0.19
107) Naphthalene-d8b	4.693	136	661962	40.00	ppm	-0.08
109) Acenaphthene-d10b	5.938	164	370170	40.00	ppm	-0.08
111) Chrysene-d12d	11.958	240	519229	40.00	ppm	-0.21
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%			
Target Compounds						Qvalue
102) Benzaldehyde	3.422	105	135979	28.67	ppm	92
104) Atrazine	7.086	200	90705	28.23	ppm	97
108) Hydroquinone	5.120	110	148413	33.61	ppm	97
110) 1,2,4,5-Tetrachloroben...	5.329	216	148733	27.32	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5856\
Data File : p129367.D
Acq On : 7 May 2019 1:11 pm
Operator : christc2
Sample : cc5845-25
Misc : op13894,ep5856,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 07 14:48:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Apr 26 12:50:52 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/09/19 08:14

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129393.D
Acq On : 8 May 2019 9:12 am
Operator : angelar
Sample : cc5844-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 13:04:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:02:27 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.747	152	143485	40.00	ppm	-0.09
24) Naphthalene-d8	4.688	136	497061	40.00	ppm	-0.09
47) Acenaphthene-d10	5.927	164	310643	40.00	ppm	-0.10
69) Phenanthrene-d10	7.321	188	511788	40.00	ppm	0.00
83) Chrysene-d12	11.958	240	474180	40.00	ppm	0.00
91) Perylene-d12	14.886	264	503346	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4b	3.747	152	143485	40.00	ppm	-0.09
103) Phenanthrene-d10b	7.321	188	511788	40.00	ppm	-0.13
105) Chrysene-d12b	11.958	240	474180	40.00	ppm	-0.19
107) Naphthalene-d8b	4.688	136	497061	40.00	ppm	-0.09
109) Acenaphthene-d10b	5.927	164	310643	40.00	ppm	-0.09
111) Chrysene-d12d	11.958	240	474180	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	2.770	112	273023	59.22	ppm	-0.08
Spiked Amount 50.000			Recovery	=	118.44%	
8) Phenol-d5	3.598	99	344047	58.77	ppm	-0.05
Spiked Amount 50.000			Recovery	=	117.54%	
25) Nitrobenzene-d5	4.175	82	284906	53.35	ppm	-0.09
Spiked Amount 50.000			Recovery	=	106.70%	
51) 2-Fluorobiphenyl	5.468	172	521870	53.02	ppm	-0.09
Spiked Amount 50.000			Recovery	=	106.04%	
73) 2,4,6-Tribromophenol	6.595	330	87102	51.15	ppm	-0.11
Spiked Amount 50.000			Recovery	=	102.30%	
85) Terphenyl-d14	9.934	244	570156	53.07	ppm	-0.19
Spiked Amount 50.000			Recovery	=	106.14%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.124	88	150255	64.58	ppm	97
3) Pyridine	1.338	79	350047	79.38	ppm	96
4) N-Nitrosodimethylamine	1.322	42	135911	57.94	ppm	92
6) Indene	3.940	116	387782	51.61	ppm	98
7) Cumene	3.106	105	661387	53.92	ppm	98
9) Phenol	3.609	94	338103	53.00	ppm	81
10) Aniline	3.518	93	313665	89.26	ppm	97
11) bis(2-Chloroethyl)ether	3.571	93	259026	51.24	ppm	93
12) 2-Chlorophenol	3.625	128	244836	50.92	ppm	96
13) Decane	3.662	43	186528	52.64	ppm	97
14) 1,3-Dichlorobenzene	3.705	146	287216	50.79	ppm	99
15) 1,4-Dichlorobenzene	3.763	146	284382	51.91	ppm	99
16) Benzyl alcohol	3.902	108	148421	55.36	ppm	91
17) 1,2-Dichlorobenzene	3.876	146	285459	52.16	ppm	98
18) Acetophenone	4.068	105	346044	49.21	ppm	92
19) 2-Methylphenol	4.041	108	230328	51.62	ppm	99
20) 2,2'-oxybis(1-Chloropr...	3.988	121	57800	49.16	ppm #	85
21) 3&4-Methylphenol	4.153	108	238339	54.56	ppm	99
22) n-Nitroso-di-n-propyla...	4.089	70	165010	49.40	ppm	99
23) Hexachloroethane	4.121	201	112665	50.27	ppm	99
26) Nitrobenzene	4.191	77	281683	52.13	ppm	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129393.D
Acq On : 8 May 2019 9:12 am
Operator : angelar
Sample : cc5844-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 13:04:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:02:27 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
27)	Quinoline	4.955	129	458910	50.93	ppm		99
28)	Isophorone	4.372	82	493972	53.25	ppm		96
29)	2-Nitrophenol	4.426	139	140146	57.28	ppm		97
30)	2,4-Dimethylphenol	4.517	107	253364	58.35	ppm		97
31)	Benzoic acid	4.682	105	197036m	52.44	ppm		
32)	bis(2-Chloroethoxy)met...	4.549	93	286281	53.28	ppm		98
33)	2,4-Dichlorophenol	4.640	162	225740	55.22	ppm		97
34)	2,6-Dichlorophenol	4.779	162	213952	53.59	ppm		98
35)	1,3,5-Trichlorobenzene	4.426	180	262329	54.53	ppm		99
36)	1,2,4-Trichlorobenzene	4.656	180	236770	51.52	ppm		98
37)	1,2,3-Trichlorobenzene	4.811	180	234449	54.01	ppm		94
38)	Naphthalene	4.704	128	626457	52.78	ppm		100
39)	4-Chloroaniline	4.773	127	252706	54.67	ppm		95
40)	2,3-Dichloroaniline	5.414	161	260314	50.55	ppm		98
41)	Caprolactam	5.056	55	107464	59.90	ppm		97
42)	Hexachlorobutadiene	4.805	225	146761	51.65	ppm		98
43)	4-Chloro-3-methylphenol	5.179	107	235686	54.80	ppm		95
44)	2-Methylnaphthalene	5.201	141	370017	54.38	ppm		98
45)	1-Methylnaphthalene	5.265	142	458145	51.98	ppm		98
46)	Dimethylnaphthalene	5.644	156	387398	49.16	ppm		99
48)	Hexachlorocyclopentadiene	5.318	237	270402	113.89	ppm		97
49)	2,4,6-Trichlorophenol	5.430	196	164684	53.48	ppm		99
50)	2,4,5-Trichlorophenol	5.484	196	166455	54.58	ppm		99
52)	2-Chloronaphthalene	5.542	162	445880	52.95	ppm		98
53)	Biphenyl	5.537	154	554411	52.95	ppm		99
54)	2-Nitroaniline	5.639	65	139208	50.15	ppm	#	81
55)	Dimethylphthalate	5.772	163	544970	50.20	ppm		99
56)	Acenaphthylene	5.831	152	699154	52.60	ppm		99
57)	2,6-Dinitrotoluene	5.810	165	116474	51.22	ppm		84
58)	3-Nitroaniline	5.932	138	127902	53.71	ppm		90
59)	Acenaphthene	5.954	153	429365	52.55	ppm		94
60)	2,4-Dinitrophenol	6.013	184	134317	89.07	ppm		74
61)	4-Nitrophenol	6.151	109	94185	55.24	ppm		88
62)	Dibenzofuran	6.087	168	642522	51.86	ppm		96
63)	2,4-Dinitrotoluene	6.103	165	157104	51.91	ppm		84
64)	2,3,4,6-Tetrachlorophenol	6.210	232	142638	53.36	ppm		92
65)	Diethylphthalate	6.306	149	549684	49.75	ppm		98
66)	Fluorene	6.365	166	511581	51.52	ppm		98
67)	4-Chlorophenyl-phenyle...	6.376	204	244209	49.73	ppm		96
68)	4-Nitroaniline	6.435	138	116572	51.23	ppm		96
70)	4,6-Dinitro-2-methylph...	6.451	198	97643	50.92	ppm		74
71)	n-Nitrosodiphenylamine	6.493	169	346200	52.19	ppm		99
72)	1,2-Diphenylhydrazine	6.515	77	612696	59.10	ppm		88
74)	4-Bromophenyl-phenylether	6.841	248	162847	52.34	ppm		97
75)	Hexachlorobenzene	6.894	284	183120	51.60	ppm		95
76)	Pentachlorophenol	7.150	266	234404	97.22	ppm		97
77)	Phenanthrene	7.353	178	716604	53.73	ppm		100
78)	Anthracene	7.412	178	737119	52.90	ppm		100
79)	Carbazole	7.669	167	705537	52.44	ppm		99
80)	Di-n-butylphthalate	8.267	149	1017953	53.31	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129393.D
Acq On : 8 May 2019 9:12 am
Operator : angelar
Sample : cc5844-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 13:04:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:02:27 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
81) Fluoranthene	9.122	202	872438	53.03 ppm	98
82) Octadecane	7.305	57	292812	56.10 ppm	97
84) Pyrene	9.501	202	905293	55.14 ppm	96
86) Butylbenzylphthalate	11.066	149	473268	56.04 ppm	98
87) Benzo[a]anthracene	11.942	228	816395	52.23 ppm	99
88) 3,3'-Dichlorobenzidine	12.039	252	284877	55.42 ppm	98
89) Chrysene	12.012	228	745298	54.14 ppm	99
90) bis(2-Ethylhexyl)phtha...	12.455	149	627749	55.58 ppm	97
92) Di-n-octylphthalate	13.860	149	1119879	57.55 ppm	98
93) Benzo[b]fluoranthene	14.181	252	843003	54.94 ppm	99
94) Benzo[k]fluoranthene	14.234	252	687680	53.28 ppm	98
95) Benzo[a]pyrene	14.774	252	715823	55.17 ppm	98
96) Indeno[1,2,3-cd]pyrene	16.804	276	682417	57.54 ppm	92
97) Dibenz(a,h)acridine	16.462	279	643204	56.27 ppm	98
98) Dibenz[a,h]anthracene	16.873	278	676861	55.98 ppm	97
99) 7,12-Dimethylbenz(a)an...	14.197	256	348706	49.85 ppm	98
100) Benzo[g,h,i]perylene	17.215	276	676124	56.56 ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

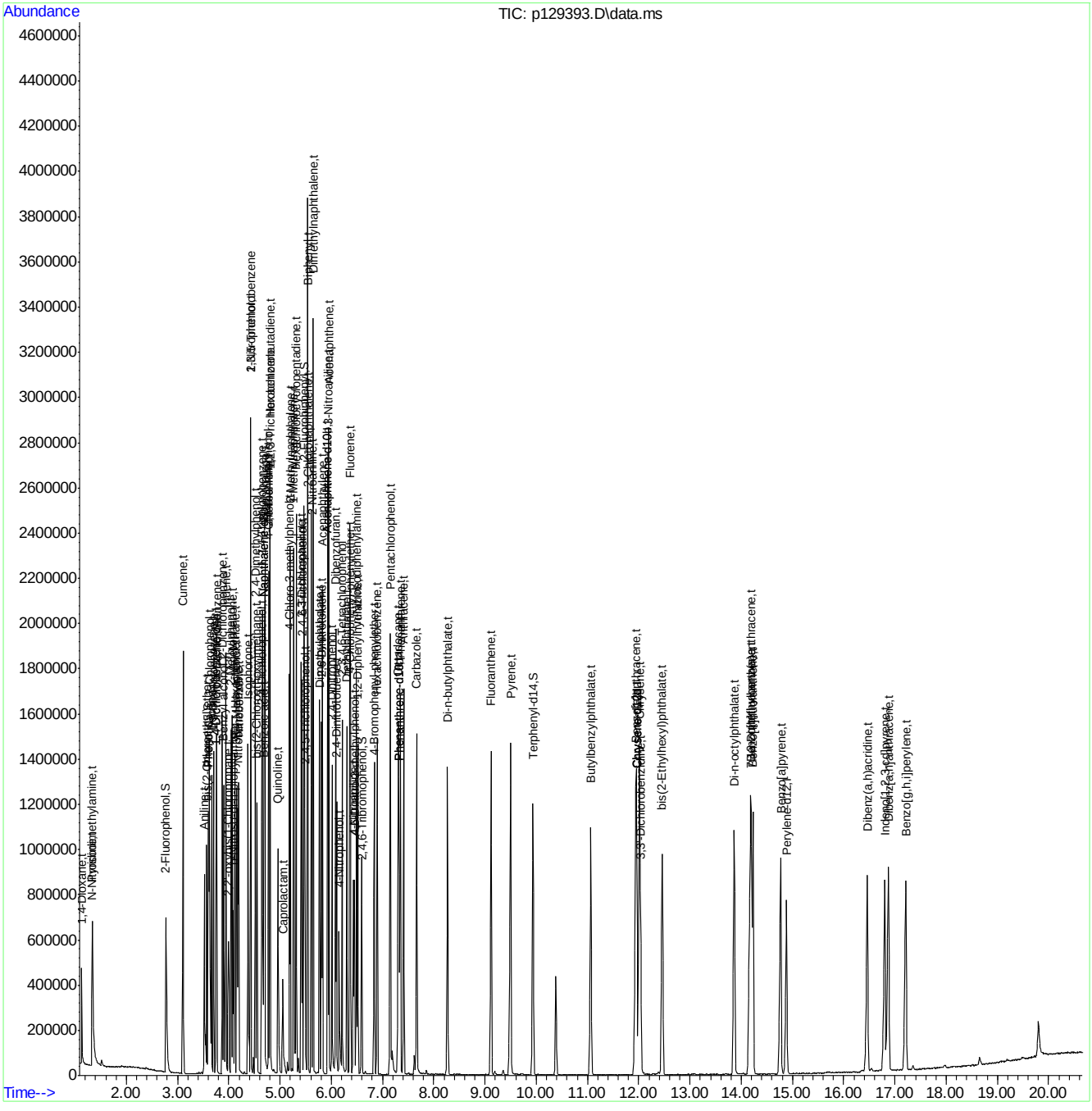
9.6.61

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129393.D
Acq On : 8 May 2019 9:12 am
Operator : angelar
Sample : cc5844-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 13:04:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:02:27 2019
Response via : Initial Calibration



Manual Integration Approval Summary

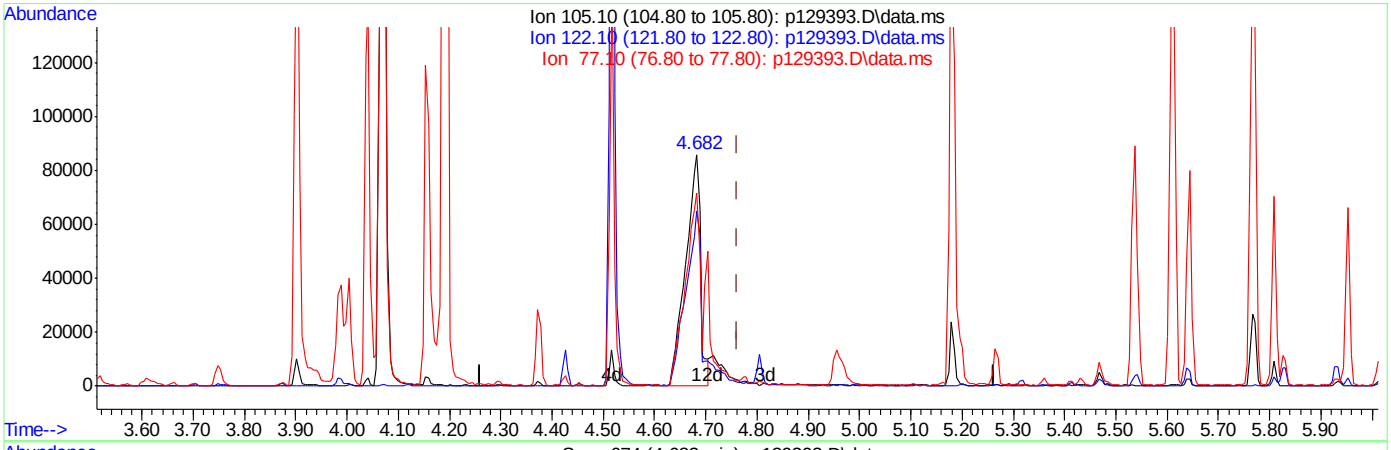
Sample Number:	EP5857-CC5844	**Method:**	SW846 8270D
Lab FileID:	P129393.D	**Analyst approved:**	05/08/19 13:19 Dipa Patel
Injection Time:	05/08/19 09:12	**Supervisor approved:**	05/09/19 08:14 Kristi Schollenberger

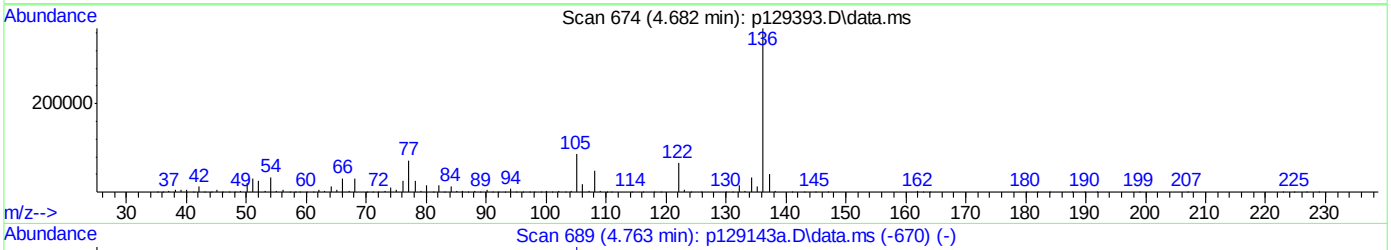
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		4.68	Poor instrument integration

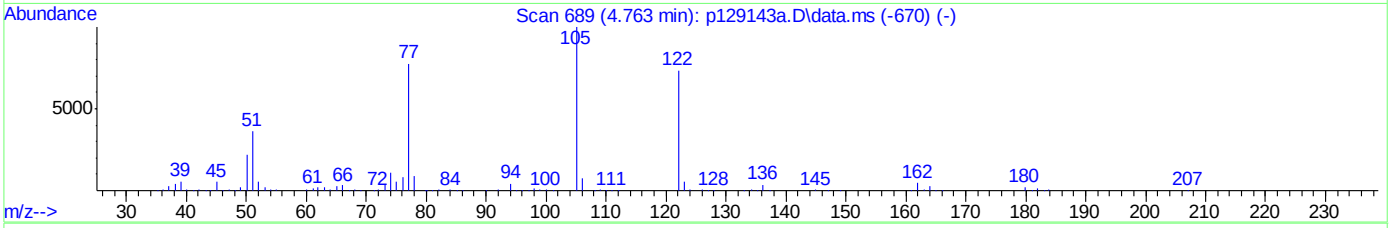
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129393.D
Acq On : 8 May 2019 9:12 am
Operator : angelar
Sample : cc5844-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 09:33:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 16:30:33 2019
Response via : Initial Calibration







TIC: p129393.D\data.ms

(31) Benzoic acid (t)

4.682min (-0.080) 45.93ppm

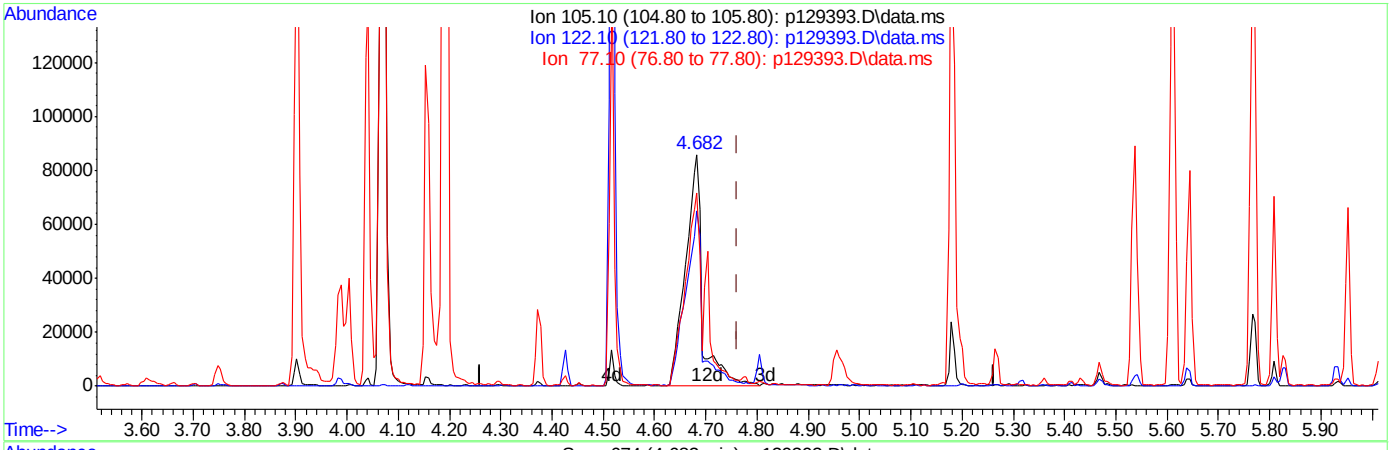
response 171479

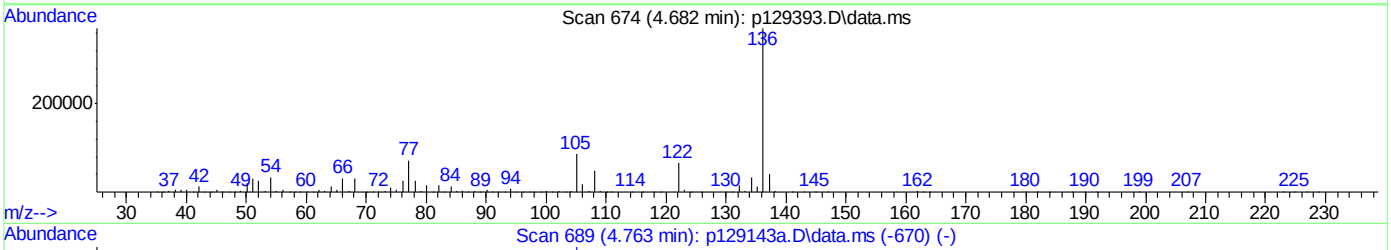
Ion	Exp%	Act%
105.10	100	100
122.10	67.60	74.34
77.10	76.90	57.76
0.00	0.00	0.00

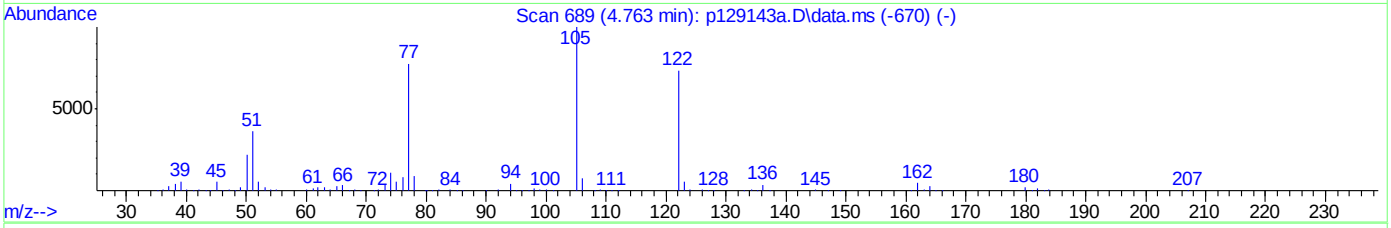
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129393.D
Acq On : 8 May 2019 9:12 am
Operator : angelar
Sample : cc5844-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 13:02:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:02:27 2019
Response via : Initial Calibration







TIC: p129393.D\data.ms

(31) Benzoic acid (t)

4.682min (-0.080) 52.44ppm m

response 197036

Ion	Exp%	Act%
105.10	100	100
122.10	67.60	75.58
77.10	76.90	83.49
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129394.D
Acq On : 8 May 2019 9:39 am
Operator : angelar
Sample : cc5845-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 13:07:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 16:30:33 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.748	152	193452	40.00	ppm	-0.09
24) Naphthalene-d8	4.683	136	728781	40.00	ppm	-0.10
47) Acenaphthene-d10	5.927	164	413085	40.00	ppm	-0.10
69) Phenanthrene-d10	7.316	188	669012	40.00	ppm	-0.01
83) Chrysene-d12	11.943	240	593817	40.00	ppm	-0.02
91) Perylene-d12	14.876	264	648267	40.00	ppm	-0.23
101) 1,4-Dichlorobenzene-d4b	3.748	152	193452	40.00	ppm	-0.09
103) Phenanthrene-d10b	7.316	188	669012	40.00	ppm	-0.13
105) Chrysene-d12b	11.943	240	593817	40.00	ppm	-0.20
107) Naphthalene-d8b	4.683	136	728781	40.00	ppm	-0.09
109) Acenaphthene-d10b	5.927	164	413085	40.00	ppm	-0.09
111) Chrysene-d12d	11.943	240	593817	40.00	ppm	-0.23
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%	
Target Compounds						Qvalue
102) Benzaldehyde	3.406	105	280514	55.54	ppm	95
104) Atrazine	7.081	200	190945	53.08	ppm	96
108) Hydroquinone	5.105	110	314067	64.60	ppm	98
110) 1,2,4,5-Tetrachloroben...	5.324	216	328959	54.14	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

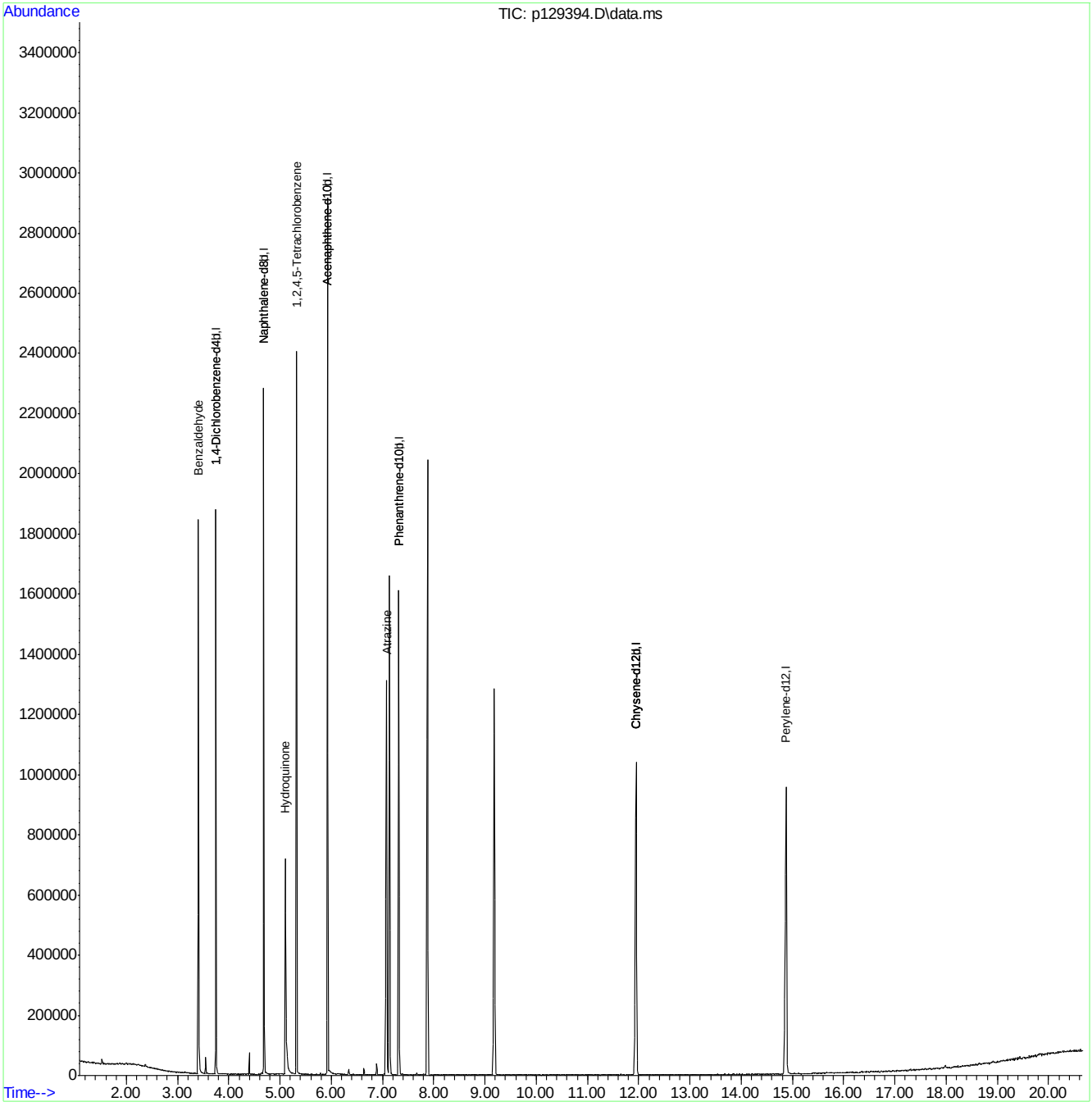
9.6.62

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129394.D
Acq On : 8 May 2019 9:39 am
Operator : angelar
Sample : cc5845-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 13:07:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 16:30:33 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129395.D
Acq On : 8 May 2019 10:06 am
Operator : angelar
Sample : cc5846-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 13:08:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:07:05 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.747	152	191451	40.00	ppm	-0.09
24) Naphthalene-d8	4.682	136	689432	40.00	ppm	-0.10
47) Acenaphthene-d10	5.927	164	390887	40.00	ppm	-0.10
69) Phenanthrene-d10	7.316	188	661054	40.00	ppm	-0.01
83) Chrysene-d12	11.942	240	563694	40.00	ppm	-0.02
91) Perylene-d12	14.875	264	617087	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	3.747	152	191451	40.00	ppm	-0.09
103) Phenanthrene-d10b	7.316	188	661054	40.00	ppm	-0.13
105) Chrysene-d12b	11.942	240	563694	40.00	ppm	-0.20
107) Naphthalene-d8b	4.682	136	689432	40.00	ppm	-0.09
109) Acenaphthene-d10b	5.927	164	390887	40.00	ppm	-0.09
111) Chrysene-d12d	11.942	240	563694	40.00	ppm	-0.23
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%	
Target Compounds						Qvalue
106) Benzidine	9.469	184	608058	51.89	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

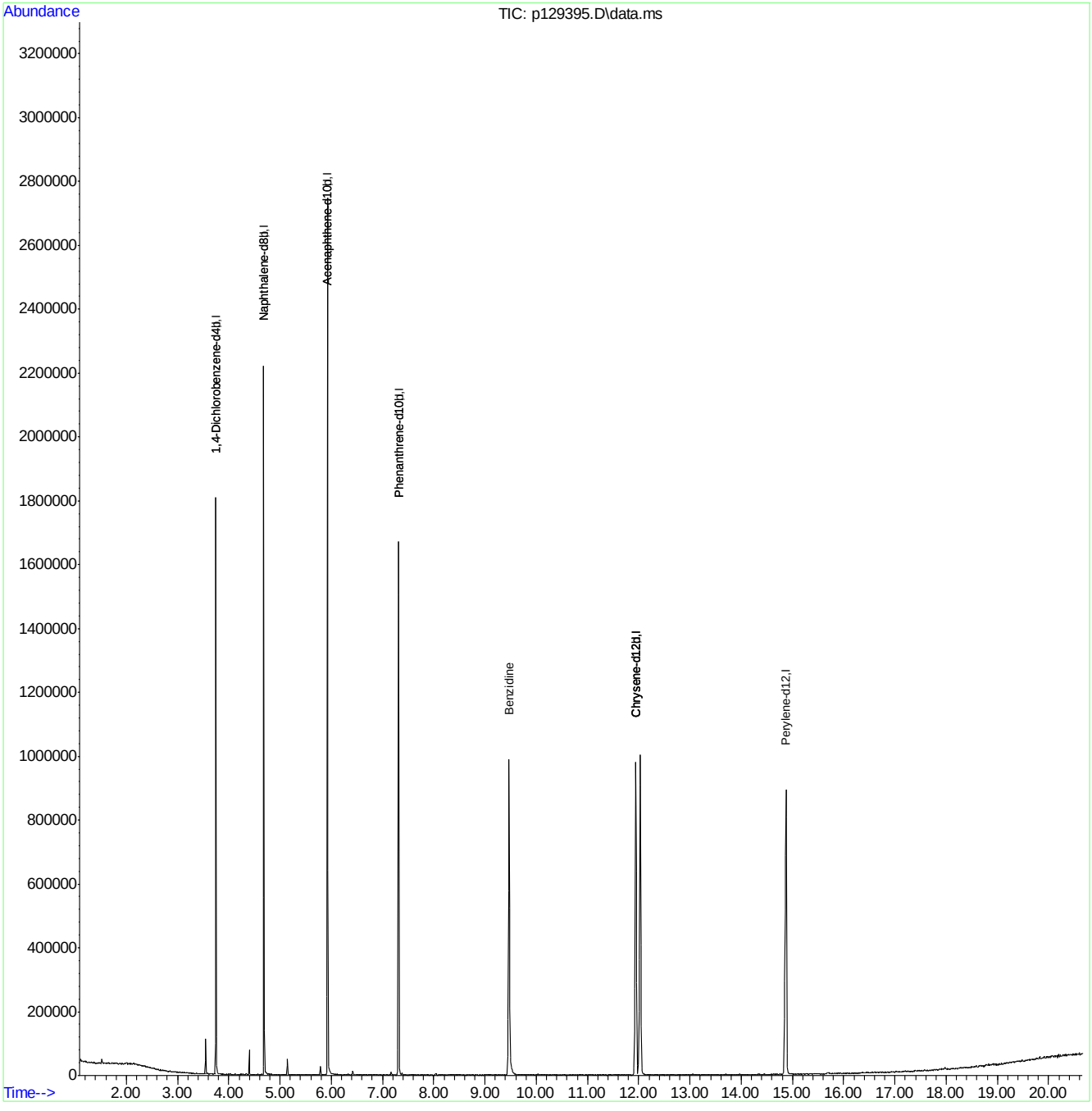
9.6.63

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5857\
Data File : p129395.D
Acq On : 8 May 2019 10:06 am
Operator : angelar
Sample : cc5846-50
Misc : op13894,ep5857,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 13:08:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed May 08 13:07:05 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129419.D
Acq On : 9 May 2019 9:23 am
Operator : angelar
Sample : cc5844-25
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 10:14:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 10:12:58 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.742	152	183114	40.00	ppm	-0.10
24) Naphthalene-d8	4.683	136	638658	40.00	ppm	-0.10
47) Acenaphthene-d10	5.922	164	392900	40.00	ppm	-0.10
69) Phenanthrene-d10	7.311	188	646551	40.00	ppm	-0.02
83) Chrysene-d12	11.943	240	570278	40.00	ppm	-0.02
91) Perylene-d12	14.870	264	595124	40.00	ppm	-0.24
101) 1,4-Dichlorobenzene-d4b	3.742	152	183114	40.00	ppm	-0.10
103) Phenanthrene-d10b	7.311	188	646551	40.00	ppm	-0.14
105) Chrysene-d12b	11.943	240	570278	40.00	ppm	-0.20
107) Naphthalene-d8b	4.683	136	638658	40.00	ppm	-0.09
109) Acenaphthene-d10b	5.922	164	392900	40.00	ppm	-0.10
111) Chrysene-d12d	11.943	240	570278	40.00	ppm	-0.23
System Monitoring Compounds						
5) 2-Fluorophenol	2.781	112	172272	29.28	ppm	-0.07
Spiked Amount 50.000			Recovery	=	58.56%	
8) Phenol-d5	3.609	99	229701	30.75	ppm	-0.04
Spiked Amount 50.000			Recovery	=	61.50%	
25) Nitrobenzene-d5	4.170	82	187629	27.35	ppm	-0.10
Spiked Amount 50.000			Recovery	=	54.70%	
51) 2-Fluorobiphenyl	5.463	172	331222	26.61	ppm	-0.09
Spiked Amount 50.000			Recovery	=	53.22%	
73) 2,4,6-Tribromophenol	6.584	330	53413	24.83	ppm	-0.12
Spiked Amount 50.000			Recovery	=	49.66%	
85) Terphenyl-d14	9.918	244	334375	25.88	ppm	-0.21
Spiked Amount 50.000			Recovery	=	51.76%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.125	88	94903	31.96	ppm	99
3) Pyridine	1.333	79	223804	39.77	ppm	97
4) N-Nitrosodimethylamine	1.322	42	90877	30.36	ppm	92
6) Indene	3.935	116	257070	26.81	ppm	99
7) Cumene	3.101	105	435309	27.81	ppm	97
9) Phenol	3.619	94	221497	27.21	ppm	84
10) Aniline	3.513	93	200595	53.03	ppm	96
11) bis(2-Chloroethyl)ether	3.566	93	167083	25.90	ppm	92
12) 2-Chlorophenol	3.625	128	165208	26.92	ppm	90
13) Decane	3.652	43	125281	27.70	ppm	95
14) 1,3-Dichlorobenzene	3.694	146	188405	26.11	ppm	99
15) 1,4-Dichlorobenzene	3.758	146	184075	26.33	ppm	97
16) Benzyl alcohol	3.903	108	100326	30.41	ppm	93
17) 1,2-Dichlorobenzene	3.871	146	183734	26.31	ppm	99
18) Acetophenone	4.063	105	231023	25.74	ppm	92
19) 2-Methylphenol	4.042	108	153364	26.93	ppm	98
20) 2,2'-oxybis(1-Chloropr...	3.983	121	37853	25.23	ppm #	74
21) 3&4-Methylphenol	4.164	108	153565	27.55	ppm	99
22) n-Nitroso-di-n-propyla...	4.079	70	107826	25.30	ppm	98
23) Hexachloroethane	4.116	201	72791	25.45	ppm	97
26) Nitrobenzene	4.186	77	245462	35.35	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129419.D
Acq On : 9 May 2019 9:23 am
Operator : angelar
Sample : cc5844-25
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 10:14:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 10:12:58 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
27) Quinoline	4.944	129	292048	25.23	ppm	98
28) Isophorone	4.373	82	324210	27.20	ppm	98
29) 2-Nitrophenol	4.421	139	89886	28.59	ppm	86
30) 2,4-Dimethylphenol	4.517	107	157007	28.14	ppm	99
31) Benzoic acid	4.677	105	130814	28.57	ppm	89
32) bis(2-Chloroethoxy)met...	4.538	93	190927	27.65	ppm	99
33) 2,4-Dichlorophenol	4.640	162	145302	27.66	ppm	96
34) 2,6-Dichlorophenol	4.773	162	133659	26.05	ppm	97
35) 1,3,5-Trichlorobenzene	4.421	180	169340	27.39	ppm	98
36) 1,2,4-Trichlorobenzene	4.651	180	160560	27.19	ppm	98
37) 1,2,3-Trichlorobenzene	4.805	180	148224	26.58	ppm	97
38) Naphthalene	4.699	128	401226	26.31	ppm	100
39) 4-Chloroaniline	4.768	127	150334	25.31	ppm	94
40) 2,3-Dichloroaniline	5.409	161	163353	24.69	ppm	97
41) Caprolactam	5.030	55	65898	28.59	ppm	96
42) Hexachlorobutadiene	4.800	225	93258	25.54	ppm	98
43) 4-Chloro-3-methylphenol	5.179	107	151979	27.50	ppm	94
44) 2-Methylnaphthalene	5.190	141	238762	27.31	ppm	94
45) 1-Methylnaphthalene	5.260	142	293611	25.93	ppm	96
46) Dimethylnaphthalene	5.639	156	249074	24.60	ppm	99
48) Hexachlorocyclopentadiene	5.308	237	163437	54.43	ppm	97
49) 2,4,6-Trichlorophenol	5.425	196	104594	26.86	ppm	98
50) 2,4,5-Trichlorophenol	5.479	196	107263	27.81	ppm	100
52) 2-Chloronaphthalene	5.532	162	288062	27.05	ppm	98
53) Biphenyl	5.527	154	350135	26.44	ppm	97
54) 2-Nitroaniline	5.633	65	90377	25.74	ppm	84
55) Dimethylphthalate	5.762	163	342450	24.94	ppm	99
56) Acenaphthylene	5.820	152	438196	26.07	ppm	99
57) 2,6-Dinitrotoluene	5.804	165	74993	26.07	ppm	97
58) 3-Nitroaniline	5.927	138	73047	24.25	ppm	87
59) Acenaphthene	5.943	153	268645	26.00	ppm	97
60) 2,4-Dinitrophenol	6.007	184	77723	44.29	ppm	88
61) 4-Nitrophenol	6.157	109	61087	28.33	ppm	94
62) Dibenzofuran	6.077	168	398921	25.46	ppm	96
63) 2,4-Dinitrotoluene	6.098	165	97216	25.39	ppm	95
64) 2,3,4,6-Tetrachlorophenol	6.205	232	90146	26.66	ppm	93
65) Diethylphthalate	6.291	149	341829	24.46	ppm	97
66) Fluorene	6.355	166	317988	25.32	ppm	96
67) 4-Chlorophenyl-phenyle...	6.365	204	152800	24.60	ppm	95
68) 4-Nitroaniline	6.419	138	61866	21.50	ppm	94
70) 4,6-Dinitro-2-methylph...	6.440	198	56793	23.44	ppm	85
71) n-Nitrosodiphenylamine	6.483	169	213803	25.51	ppm	97
72) 1,2-Diphenylhydrazine	6.504	77	406457	31.03	ppm	89
74) 4-Bromophenyl-phenylether	6.825	248	97085	24.70	ppm	90
75) Hexachlorobenzene	6.884	284	110763	24.71	ppm	94
76) Pentachlorophenol	7.140	266	133940	47.02	ppm	98
77) Phenanthrene	7.338	178	439885	26.11	ppm	99
78) Anthracene	7.402	178	459708	26.12	ppm	99
79) Carbazole	7.658	167	419541	24.68	ppm	99
80) Di-n-butylphthalate	8.251	149	623559	25.85	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129419.D
Acq On : 9 May 2019 9:23 am
Operator : angelar
Sample : cc5844-25
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 10:14:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 10:12:58 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
81)	Fluoranthene	9.101	202	524874	25.25 ppm	96
82)	Octadecane	7.295	57	187950	28.51 ppm	97
84)	Pyrene	9.480	202	548119	27.76 ppm	95
86)	Butylbenzylphthalate	11.045	149	280075	27.58 ppm	96
87)	Benzo[a]anthracene	11.921	228	481193	25.60 ppm	98
88)	3,3'-Dichlorobenzidine	12.017	252	149434	24.17 ppm	97
89)	Chrysene	11.991	228	432019	26.09 ppm	100
90)	bis(2-Ethylhexyl)phtha...	12.440	149	377118	27.77 ppm	98
92)	Di-n-octylphthalate	13.845	149	662711	28.81 ppm	97
93)	Benzo[b]fluoranthene	14.149	252	479642	26.44 ppm	97
94)	Benzo[k]fluoranthene	14.208	252	401885	26.33 ppm	97
95)	Benzo[a]pyrene	14.747	252	406468	26.50 ppm	96
96)	Indeno[1,2,3-cd]pyrene	16.777	276	372724	26.58 ppm	89
97)	Dibenz(a,h)acridine	16.441	279	352728	26.10 ppm	99
98)	Dibenz[a,h]anthracene	16.847	278	383043	26.80 ppm	94
99)	7,12-Dimethylbenz(a)an...	14.170	256	196470	24.72 ppm	95
100)	Benzo[g,h,i]perylene	17.189	276	375675	26.58 ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

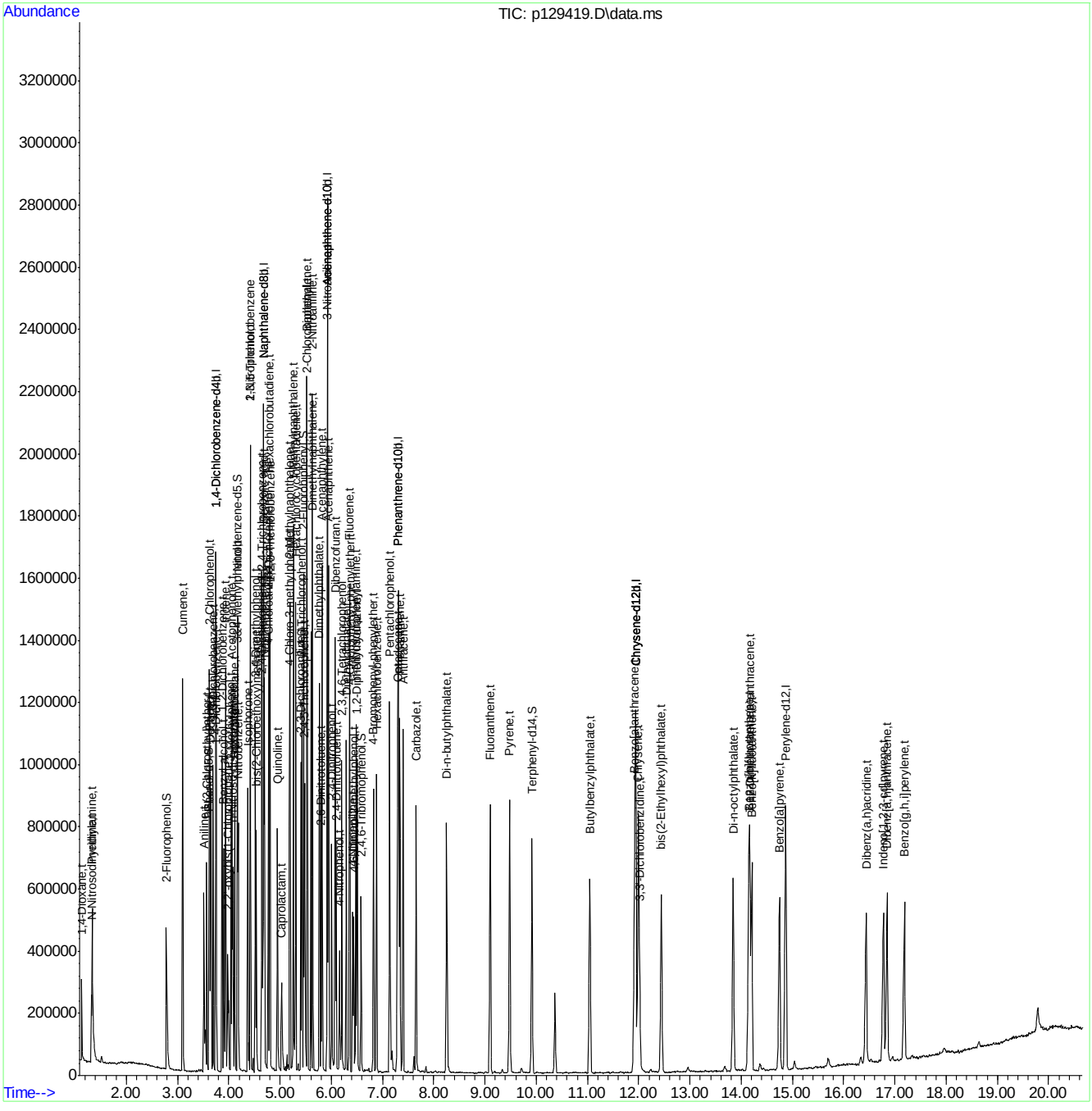
9.6.64

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129419.D
Acq On : 9 May 2019 9:23 am
Operator : angelar
Sample : cc5844-25
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 09 10:14:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 10:12:58 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129420.D
Acq On : 9 May 2019 9:50 am
Operator : angelar
Sample : cc5845-25
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 10:15:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 16:30:33 2019
Response via : Initial Calibration

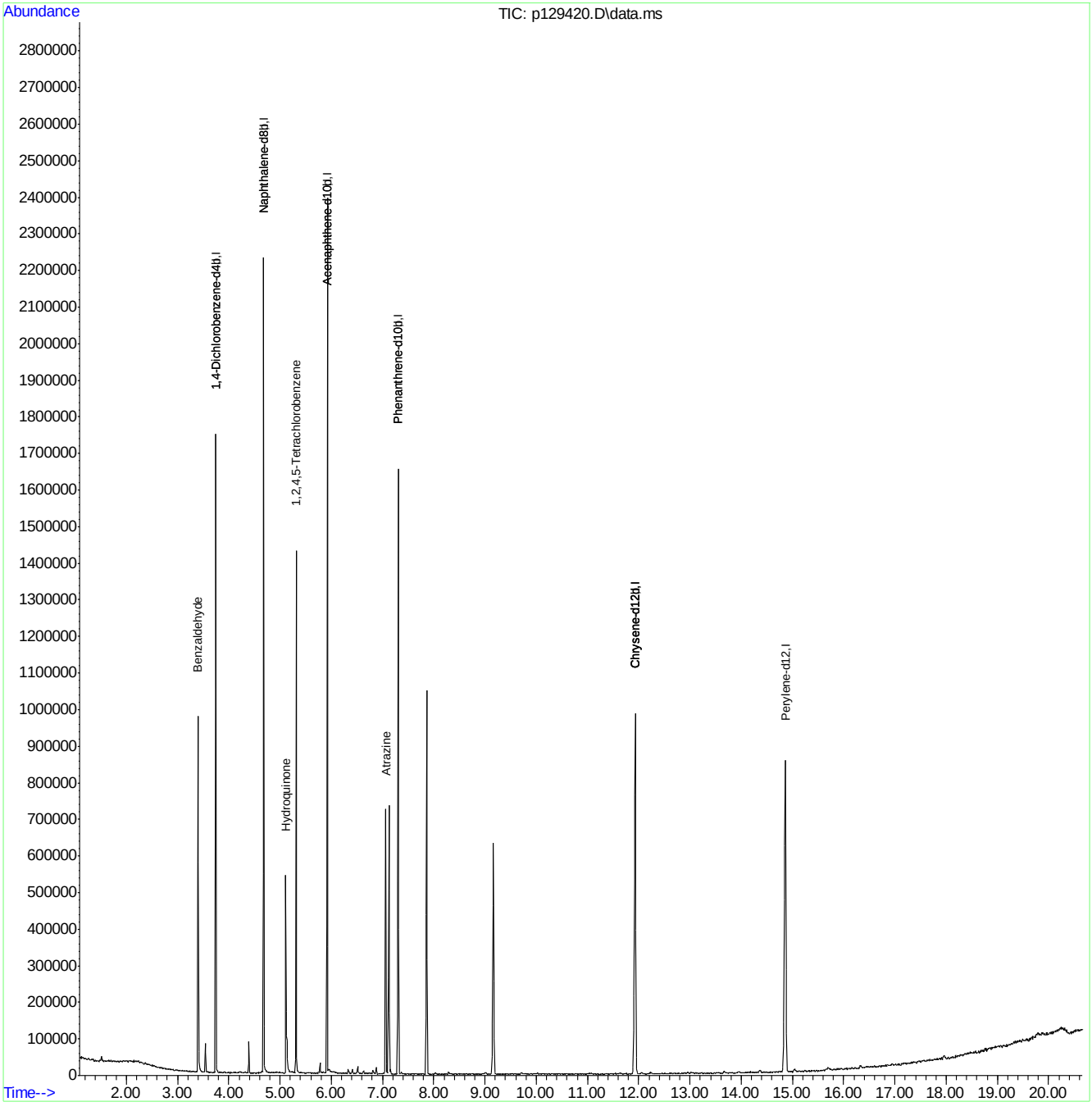
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.742	152	189113	40.00	ppm	-0.10
24) Naphthalene-d8	4.677	136	683930	40.00	ppm	-0.10
47) Acenaphthene-d10	5.922	164	384807	40.00	ppm	-0.10
69) Phenanthrene-d10	7.305	188	634744	40.00	ppm	-0.02
83) Chrysene-d12	11.932	240	552203	40.00	ppm	-0.03
91) Perylene-d12	14.865	264	597649	40.00	ppm	-0.25
101) 1,4-Dichlorobenzene-d4b	3.742	152	189113	40.00	ppm	-0.10
103) Phenanthrene-d10b	7.305	188	634744	40.00	ppm	-0.14
105) Chrysene-d12b	11.932	240	552203	40.00	ppm	-0.21
107) Naphthalene-d8b	4.677	136	683930	40.00	ppm	-0.10
109) Acenaphthene-d10b	5.922	164	384807	40.00	ppm	-0.10
111) Chrysene-d12d	11.932	240	552203	40.00	ppm	-0.24
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%	
Target Compounds						Qvalue
102) Benzaldehyde	3.400	105	139179	28.19	ppm	93
104) Atrazine	7.065	200	93797	27.48	ppm	98
108) Hydroquinone	5.110	110	162856	35.69	ppm	99
110) 1,2,4,5-Tetrachloroben...	5.313	216	155528	27.48	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EP5858\
Data File : p129420.D
Acq On : 9 May 2019 9:50 am
Operator : angelar
Sample : cc5845-25
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 09 10:15:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue May 07 16:30:33 2019
Response via : Initial Calibration



MP5844.M Thu May 09 10:16:11 2019 ACLIMS Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\ep5858\
Data File : p129421.d
Acq On : 9 May 2019 10:17 am
Operator : angelar
Sample : cc5846-25 Inst : MSVOAMSP
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 09 15:29:54 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 15:28:19 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	3.742	152	213538	40.00	ppm	0.00
24) Naphthalene-d8	4.677	136	779690	40.00	ppm	0.00
47) Acenaphthene-d10	5.922	164	440930	40.00	ppm	0.00
69) Phenanthrene-d10	7.306	188	738602	40.00	ppm	0.00
83) Chrysene-d12	11.932	240	606814	40.00	ppm	-0.01
91) Perylene-d12	14.860	264	661138	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	3.742	152	213538	40.00	ppm	0.00
103) Phenanthrene-d10b	7.306	188	738602	40.00	ppm	0.00
105) Chrysene-d12b	11.932	240	606814	40.00	ppm	-0.01
107) Naphthalene-d8b	4.677	136	779690	40.00	ppm	0.00
109) Acenaphthene-d10b	5.922	164	440930	40.00	ppm	0.00
111) Chrysene-d12d	11.932	240	606814	40.00	ppm	-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%	
Target Compounds						Qvalue
106) Benzidine	9.458	184	273841	21.71	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

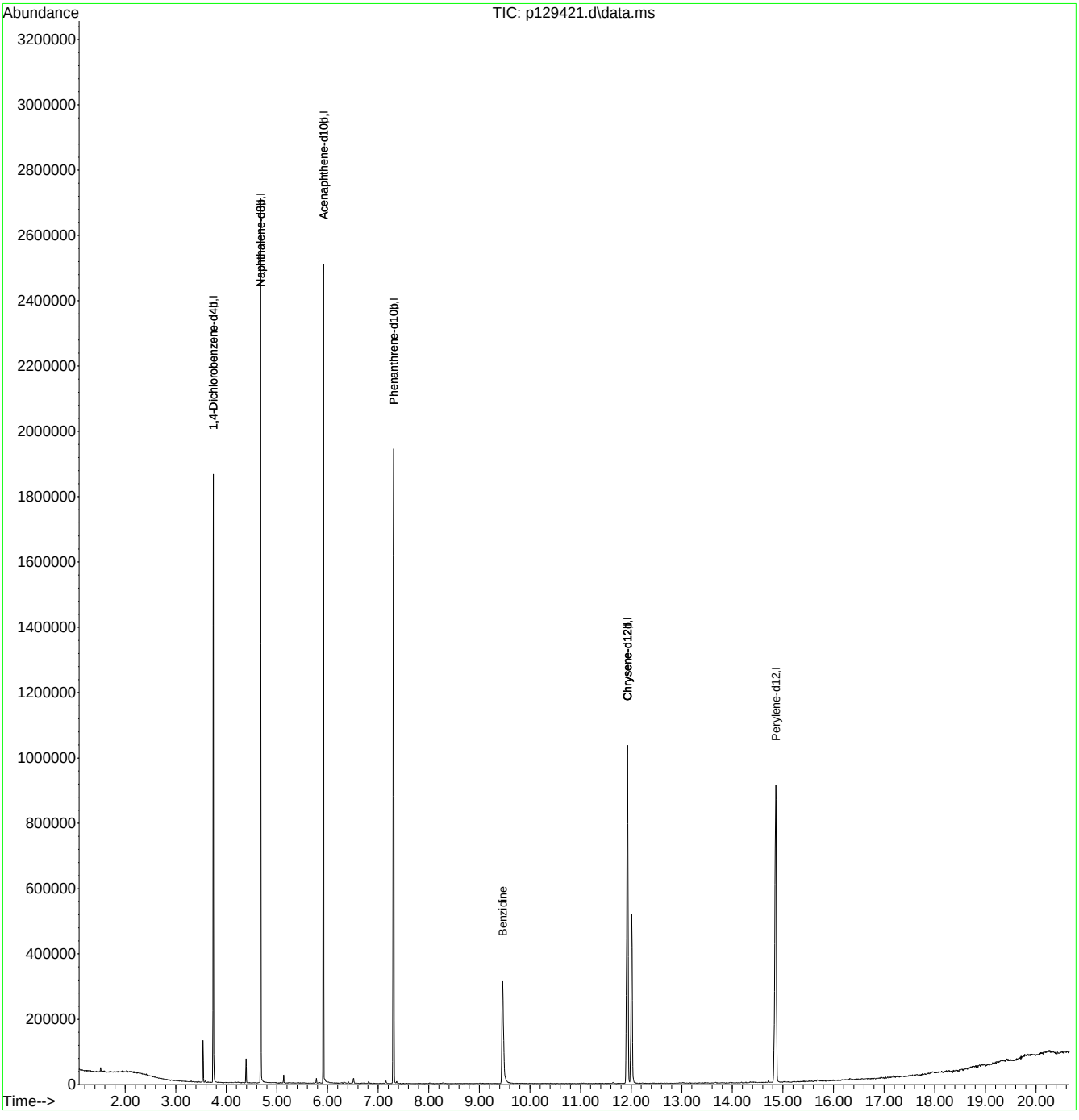
9.6.66

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\ep5858\
Data File : p129421.d
Acq On : 9 May 2019 10:17 am
Operator : angelar
Sample : cc5846-25 Inst : MSVOAMSP
Misc : op13894,ep5858,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MP5844.M
Quant Results File: MP5844.RES
Quant Time: May 09 15:29:54 2019
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu May 09 15:28:19 2019
Response via : Initial Calibration



MP5844.M Thu May 09 15:31:36 2019 Page: 2

GCMS Semi Volatile Run Log

Instrument ID: GCMS6P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dftpp	sv182535-77	50ppm			
			istd	A0144955	4000 ppm
			dcm/fisher	190729	---

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/16/19	Sequence Loaded By:	angelar	Quant Method/s	M6P2562
Batch ID	E6P2562	Analysis Date	4/16/2019	Data Processed By:	ying li	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	8/2019 10:27:05				

- [x] SW846 8270 D
- [x] EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P	481124	DFTPP				1					not using	pcp tailing high, reinstall
6P	481125	DFTPP				1					not using	pcp tailing high, cut column and replace inlet seal and washer
6P	481126	DFTPP				1					ok	9:34am
6P	481127	IC2562-100		BNA		2					ok	sv182535-96A
6P	481128	IC2562-80				3					ok	sv182535-96B
6P	481129	ICC2562-50				4					ok	sv182535-96C
6P	481130	IC2562-25				5					ok	sv182535-96D
6P	481131	IC2562-10				6					ok	sv182535-96E
6P	481132	IC2562-5				7					ok	sv182535-96G
6P	481133	IC2562-2				8					ok	sv182535-96H

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
6P	481134	IC2562-1				9					ok	sv182535-96I
6P	481135	ICV2562-50		BN1		10					ok	op192336-51
6P	481136	ICV2562-50		BN2		11					ok	op192336-72
6P	481137	ICV2562-50		ABN SURR		12					ok	op192336-76
6P	481138	ICV2562-50		ANILINE		13					ok	op192336-85
6P	481139	ICV2562-50		ACID		14					ok	op192336-47
6P	481140	ICV2562-50		BZD 3rd		15					ok	sv182490-113 3:06pm

GCMS Semi Volatile Run Log

Instrument ID: GCMS6P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dftpp	sv182535-77	50ppm			
			istd	A0144955	4000 ppm
			dcm/fisher	190729	

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/16/19	Sequence Loaded By:	angelar	Quant Method/s	M6P2562
Batch ID	E6P2563	Analysis Date	4/16/2019	Data Processed By:	ying li	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	8/2019 10:27:22				

☑ 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
6P	481141	DFTPP				1					ok	3:25pm
6P	481142	IC2563-100		TCL42		16					ok	sv192573-9A
6P	481143	IC2563-80				17					ok	sv192573-9B
6P	481144	ICC2563-50				18					ok	sv192573-9C
6P	481145	IC2563-25				19					ok	sv192573-9D
6P	481146	IC2563-10				20					ok	sv192573-9E
6P	481147	IC2563-5				21					ok	sv192573-9G
6P	481148	IC2563-2				22					ok	sv192573-9H
6P	481149	IC2563-1				23					ok	sv192573-9I
6P	481150	ICV2563-50		AP9 MIX #2		24					ok	sv192573-8

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
6P	481151	ICV2563-50		HQ 2nd		25					ok	sv182490-103B 7:16pm

GCMS Semi Volatile Run Log

Instrument ID: GCMS6P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dftpp	sv182535-77	50ppm	istd	CL13166	4000 ppm
bna	sv182535-121c	50ppm	dcm/fisher	191108	--
tcl42	sv182535-120c	50ppm			
bna ver	sv182535-46e	10ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/16/19	Sequence Loaded By:	angelar	Quant Method/s	M6P2562
Batch ID	E6P2588	Analysis Date	5/10/2019	Data Processed By:		Injection Volume	1.0ul
Approved By:		Approved Date					

☐ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P	481782	DFTPP				1					ok	8:59am
6P	481783	CC2562-50		bna		2					ok	
6P	481784	CC2563-50		tcl42		3					ok	
6P	481785	BNA 10PPM VER				4					ok	
6P	481786	OP20233-MB	OP20233	AB8270TCLP	SO	5			y	y	ok	
6P	481787	OP20233-LB21	OP20233	AB8270TCLP	SO	6			y	y	ok	
6P	481788	OP20233-BS	OP20233	AB8270TCLP	SO	7			y	y	ok	
6P	481789	OP20110-MB	OP20110	AB8270TCL20	SO	8			y	y	ok	
6P	481790	JC87093-1	OP20110	AB8270TCL20	SO	9	500		y	X	OK/RR	RR 50X
6P	481791	JC87093-6	OP20110	AB8270TCL20	SO	10	100		y	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
6P	481792	JC87093-1	OP20110	AB8270TCL20	SO	11	50		y	y	ok	
6P	481793	JC87498-2	OP20241	AB8270SCO	SO	12			x	x	ok	
6P	481794	JC87093-6	OP20110	AB8270TCL20	SO	13	10					
6P	481795	JC87488-3	OP20241	B8270PAH	SO	14	5					
6P	481796	JC87488-1	OP20241	B8270PAH	SO	15	10					
6P	481797	JC87437-3R	OP20170A	B8270EPHNAP+2MNAP	SO	16	10	X				
6P	481798	OP20233-LS13	OP20233	AB8270TCLP	SO	17						
6P	481799	OP20233-MSD	OP20233	AB8270TCLP	SO	18						
6P	481800	JC87154-1	OP20135	AB8270TCLP	SO	19						
6P	481801	JC87154-3	OP20135	AB8270TCLP	SO	20						
6P	481802	JC87422-5A	OP20233	AB8270TCLP	SO	21		X				

GCMS Semi Volatile Run Log

Instrument ID: GCMSP

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	int std	A0144955	4000ppm
			dcm-fisher	191108	---

Column	5silms30mx0.25mmx0.25	Initial Calib Date	4-23-19	Sequence Loaded By:	chriss2	Quant Method/s	MP5844
Batch ID	EP5844	Analysis Date	4/23/2019	Data Processed By:	ying li	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	1/2019 10:45:46 A				

☑ 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
P	129140	DFTPP				1					ok	10:58pm
P	129141a	IC5844-100		BNA		2					ok	sv182535-96a, solvent delay too long, adjust/rerun as "A" file
P	129142a	IC5844-80				3					ok	sv182535-96b, solvent delay too long, adjust/rerun as "A" file
P	129143a	ICC5844-50				4					ok	sv182535-96c, solvent delay too long, adjust/rerun as "A" file
P	129144a	IC5844-25				5					ok	sv182535-96d, solvent delay too long, adjust/rerun as "A" file
P	129145a	IC5844-10				6					ok	sv182535-96e, solvent delay too long, adjust/rerun as "A" file
P	129146a	IC5844-5				7					ok	sv182535-96g, solvent delay too long, adjust/rerun as "A" file
P	129147	IC5844-2				8					ok	sv182535-96h
P	129148	IC5844-1				9					ok	sv182535-96i
P	129149	ICV5844-50		BN1		10					ok	op192336-51

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
P	129150	ICV5844-50		BN2		11					ok	op192336-72
P	129151	ICV5844-50		Aniline		12					ok	op192336-85
P	129152	ICV5844-50		Acid		13					ok	op192336-47
P	129153	ICV5844-50		ABN Surrogate		14					ok	op192336-76
P	129154	ICV5844-50		Bzd 3rd		15					ok	sv182490-113 7:54am

GCMS Semi Volatile Run Log

Instrument ID: GCMSP

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	int std	A0144955	4000ppm
			dcm-fisher	191108	---

Column	5silms30mx0.25mmx0.25	Initial Calib Date	4-23-19	Sequence Loaded By:	chriss2	Quant Method/s	MP5844
Batch ID	EP5845	Analysis Date	4/24/2019	Data Processed By:	ying li	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	1/2019 10:46:02 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
P	129155	DFTPP				1					ok	8:17am
P	129156	IC5845-100		TCL42		16					ok	sv192573-9a
P	129157	IC5845-80				17					ok	sv192573-9b
P	129158	ICC5845-50				18					ok	sv192573-9c
P	129159	IC5845-25				19					ok	sv192573-9d
P	129160	IC5845-10				20					ok	sv192573-9e
P	129161	IC5845-5				21					ok	sv192573-9g
P	129162	IC5845-2				22					ok	sv192573-9h
P	129163	IC5845-1				23					ok	sv192573-9i
P	129164	ICV5845-50		AP9 Mix #2		24					ok	sv182490-78

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
P	129165	ICV5845-50		HQ 2nd		25					ok	sv182490-103a 12:34pm

GCMS Semi Volatile Run Log

Instrument ID: GCMSP

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	int std	A0144955	4000ppm
			dcm-fisher	191108	---

Column	5silms30mx0.25mmx0.25	Initial Calib Date	4-23-19	Sequence Loaded By:	chriss2	Quant Method/s	MP5844
Batch ID	EP5846	Analysis Date	4/24/2019	Data Processed By:	ying li	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	1/2019 10:46:19 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
P	129166	DFTPP				1					not using	442 low, rr
P	129167	IC5846-100		Bzd		26					not using	sv182535-70a; tune failed, rr
P	129168	IC5846-80				27					not using	sv182535-70b; tune failed, rr
P	129169	ICC5846-50				28					not using	sv182535-70c; tune failed, rr
P	129170	IC5846-25				29					not using	sv182535-70d; tune failed, rr
P	129171	DFTPP				1					ok	3:00pm
P	129172	IC5846-100				26					ok	sv182535-70a
P	129173	IC5846-80				27					ok	sv182535-70b
P	129174	ICC5846-50				28					ok	sv182535-70c
P	129175	IC5846-25				29					ok	sv182535-70d

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
P	129176	IC5846-10				30					ok	sv182535-101
P	129177	IC5846-5				31					ok	sv182535-70g
P	129178	IC5846-2				32					ok	sv182535-70h
P	129179	IC5846-1				33					ok	sv182535-70i
P	129180	ICV5846-50		Bzd 3rd		34					ok	sv182490-113 7:44pm

GCMS Semi Volatile Run Log

Instrument ID: GCMSP

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	int std	CL13166	4000ppm
bna	sv182535-121g	25ppm	dcm-fisher	191532	---
tcl42	sv182535-120g	25ppm			

Column	5silms30mx0.25mmx0.25	Initial Calib Date	4-23-19	Sequence Loaded By:	christc2	Quant Method/s	MP5844
Batch ID	EP5856	Analysis Date	5/7/2019	Data Processed By:	MICHELLC	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	0/2019 11:26:30 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
P	129365	DFTPP				1					OK	12:32pm
P	129366	CC5844-25		bna		2					OK	
P	129367	CC5845-25		tcl42		3					OK	
	129368	OP20145-MB1	OP20145	AB8270TCL20+,AB8270TCL20-PAH+	SO	4		X			OK	
P	129369	OP20110-MB	OP20110	AB8270TCL20	SO	5					OK	
P	129370	OP20110-BS	OP20110	AB8270TCL20	SO	6					OK	
P	129371	JC87467-2	OP20145	B8270PAH	SO	7	5				OK	
P	129372	JC87467-6	OP20145	B8270PAH	SO	8	5				OK	
	129373	JC87324-2	OP20145	AB8270TCL20-PAH+	SO	9	5	X			OK	
P	129374	OP20110-MS	OP20110	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
P	129375	OP20110-MSD	OP20110	AB8270TCL20	SO	11			Y	Y	OK	
P	129376	JC87093-7	OP20110	AB8270TCL20	SO	12			Y	Y	OK	
P	129377	JC86986-6	OP20110	AB8270TCL	SO	13			Y	Y	OK	
P	129378	JC87093-9	OP20110	AB8270TCL20	SO	14			Y	Y	OK	
P	129379	JC87093-10	OP20110	AB8270TCL20	SO	15			Y	Y	OK	RERUN OVERCAL
P	129380	JC87093-8	OP20110	AB8270TCL20	SO	16			NO	Y	OK	RERUN OVERCAL
P	129381	JC87093-2	OP20110	AB8270TCL20	SO	17			Y	Y	OK	
P	129382	JC87093-11	OP20110	AB8270TCL20	SO	18			Y	Y	OK	
P	129383	JC87093-12	OP20110	AB8270TCL20	SO	19			Y	Y	OK	
P	129384	JC87073-1	OP20110	AB8270TCL20	SO	20			Y	Y	OK	
P	129385	JC87073-7	OP20110	AB8270TCL20	SO	21			Y	Y	OK	
P	129386	JC87073-9	OP20110	AB8270TCL20	SO	22			Y	Y	OK	
P	129387	JC87073-11	OP20110	AB8270TCL20	SO	23			Y	Y	OK	RERUN OVERCAL
P	129388	JC87073-13	OP20110	AB8270TCL20	SO	24			Y	Y	OK	RERUN OVERCAL
P	129389	JC87073-5	OP20110	AB8270TCL20	SO	25			Y	Y	OK	
P	129390	JC87073-3	OP20110	AB8270TCL20	SO	26	2		Y	Y	OK	diluted for visc.1143 PM

GCMS Semi Volatile Run Log

Instrument ID: GCMSP

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	int std	CL13166	4000ppm
bna	sv182535-121b	50ppm	dcm-fisher	191109	---
tcl42	sv192573-9c	50ppm			
bzd	sv182535-71d	50ppm			

Column	5silms30mx0.25mmx0.25	Initial Calib Date	4-23-19	Sequence Loaded By:	angelar	Quant Method/s	MP5844
Batch ID	EP5857	Analysis Date	5/8/2019	Data Processed By:	MICHELLEC	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	4/2019 11:22:08				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
P	129391	DFTPP				1					not using	442 low, rr
P	129392	DFTPP				1					OK	8:57am
P	129393	CC5844-50		bna		2					ok	
P	129394	CC5845-50		tcl42		3					ok	
P	129395	CC5846-50		bzd		4					ok	
P	129396	OP19637-MB3	OP19637	B8270HQ	AQ	5			x	x	ok	
P	129397	JC80787-3E	OP19637	B8270HQ	AQ	6			x	x	ok	BS7
P	129398	JC80787-3E	OP19637	B8270HQ	AQ	7			x	x	ok	BS8
P	129399	JC80787-3E	OP19637	B8270HQ	AQ	8			x	x	ok	BS9
P	129400	OP20230-MB1	OP20230	AB8270TCL20	LIQ	9			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
P	129401	OP20230-BS1	OP20230	AB8270TCL20	LIQ	10			high	x	ok	high recoveries
P	129402	OP20067-MB	OP20067	AB8270SL,BMS+HQ	SO	11		X	X	X	OK	
	129403	JC86955-5B	OP20067	AB8270SL,BMS+HQ	SO	12		X	X	X	OK	
	129404	JC86955-6B	OP20067	AB8270SL,BMS+HQ	SO	13		X	X	X	OK	
	129405	JC86955-7B	OP20067	AB8270SL,BMS+HQ	SO	14		X	X	X	OK	
P	129406	JC87449-1	OP20230	AB8270TCL20	LIQ	15			N	Y	OK	
P	129407	JC87449-2	OP20230	AB8270TCL20	LIQ	16			N	Y	OK	
P	129408	JC87449-3	OP20230	AB8270TCL20	LIQ	17			Y	Y	OK	
P	129409	JC87073-11	OP20110	AB8270TCL20	SO	18	2		Y	Y	OK	
P	129410	JC87073-13	OP20110	AB8270TCL20	SO	19	2		Y	Y	OK	
P	129411	JC87093-10	OP20110	AB8270TCL20	SO	20	5		Y	Y	OK	
P	129412	JC87093-8	OP20110	AB8270TCL20	SO	21	5		Y	Y	OK	diluted due to matrix
P	129413	OP20230-MS	OP20230	AB8270TCL20	LIQ	22			Y	Y	OK	
P	129414	OP20230-MSD	OP20230	AB8270TCL20	LIQ	23			Y	Y	OK	
P	129415	JC87093-3	OP20110	AB8270TCL20	SO	24			Y	Y	OK	
P	129416	JC87093-4	OP20110	AB8270TCL20	SO	25			Y	Y	OK	end (20:35)
P	129417	JC87093-5	OP20110	AB8270TCL20	SO	26			Y	Y	rr	out of tune time (21:22)
P	129418	JC87093-6	OP20110	AB8270TCL20	SO	27	2		Y	Y	not run	diluted due to viscosity /cut from seq
P	129419	JC87093-1	OP20110	AB8270TCL20	SO	28	5		Y	Y	not run	diluted due to viscosity/cut from seq.

GCMS Semi Volatile Run Log

Instrument ID: GCMSP

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	int std	CL13166	4000ppm
bna	sv182535-121e	25ppm	dcm-fisher	191108	---
tcl42	sv182535-120e	25ppm			
bzd	sv182535-71h	25ppm			

Column	5silms30mx0.25mmx0.25	Initial Calib Date	4-23-19	Sequence Loaded By:	angelar	Quant Method/s	MP5844
Batch ID	EP5858	Analysis Date	5/9/2019	Data Processed By:	jeryllr	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	4/2019 11:12:39 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
P	129418	DFTPP				1					ok	9:12am
P	129419	CC5844-25		bna		2					ok	
P	129420	CC5845-25		tcl42		3					ok	
P	129421	CC5846-25		bzd		4					ok	
P	129422	OP20228-MB1	OP20228	AB8270TCL20+	AQ	5		X	Y	Y	ok	
P	129423	OP20228-BS1	OP20228	AB8270TCL20+	AQ	6		X	Y	Y	ok	
	129424	JC87606-1	OP20228	AB8270PPTCL42+,BMS+124TCB ,BMS+14DIOX	AQ	7		X	Y	Y	ok	
P	129425	JC87129-15	OP20056	AB8270STD	AQ	8	5		Y	Y	ok	
P	129426	JC87093-8	OP20110	AB8270TCL20	SO	9	25		Y	Y	ok	
P	129427	JC87449-3	OP20230	AB8270TCL20	LIQ	10	20		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
P	129428	JC87093-3	OP20110	AB8270TCL20	SO	11	5		Y	Y	OK	
P	129429A	JC87073-5	OP20110	AB8270TCL20	SO	12			Y	Y	OK	ran after p123450; software shutdown, rr as "A" file
P	129430	JC87073-3	OP20110	AB8270TCL20	SO	13	2		Y	Y	OK	diluted due to viscosity; ran after p123450
P	129431	JC87093-5	OP20110	AB8270TCL20	SO	14			Y	Y	OK	ran after p123450
P	129432	JC87093-6	OP20110	AB8270TCL20	SO	15	2		Y	2 LOW	OK	diluted due to viscosity; ran after p123450; CORR IS FAIL, NEEDS DILUTION
P	129433	JC87093-1	OP20110	AB8270TCL20	SO	16	5		Y	Y	OK	diluted due to viscosity; ran after p123450; CORR NEEDS DILUTION
P	129434	OP20228-MS	OP20228	AB8270TCL20+	AQ	17		X	Y	Y	OK	
P	129435	OP20228-MSD	OP20228	AB8270TCL20+	AQ	18		X	Y	Y	OK	
P	129436	JC87521-1	OP20228	AB8270TCL20+	AQ	19		X	Y	Y	OK	
P	129437	JC87521-2	OP20228	AB8270TCL20+	AQ	20		X			not ran	cut from sequence
P	129438	JC87521-3	OP20228	AB8270TCL20+	AQ	21		X			not ran	cut from sequence
P	129439	JC87521-4	OP20228	AB8270TCL20+	AQ	22		X			not ran	cut from sequence
P	129440	JC87521-5	OP20228	AB8270TCL20+	AQ	23		X			not ran	cut from sequence
P	129441	JC87521-8	OP20228	AB8270TCL20+	AQ	24		X	Y	Y	OK	
P	129442	JC87521-9	OP20228	AB8270TCL20+	AQ	25		X			not ran	cut from sequence
P	129443	JC87521-10	OP20228	AB8270TCL20+	AQ	26		X			not ran	cut from sequence
P	129444	JC87521-11	OP20228	AB8270TCL20+	AQ	27		X			not ran	cut from sequence
P	129445	JC87521-6	OP20228	AB8270TCL20+	AQ	28		X	Y	Y	OK	CORR NEEDS DILUTION
P	129446	JC87521-7	OP20228	AB8270TCL20+	AQ	29		X	Y	Y	OK	RR OUT OF CLOCK; NEEDS DILUTION;09:36PM

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
P	129447	OP20210-MB	OP20210	AB8270PPTCL20+,AB8270TCL20-PAH+,B8270PAH	SO	30		X	y	y	ok	ran after p129435
	129448	JC87419-3	OP20210	AB8270TCL20-PAH+	SO	31		X	y	y	ok	ran after p129435
	129449	JC87419-1	OP20210	AB8270TCL20-PAH+	SO	32	5	X	y	y	ok	ran after p129435 diluted for visc.
	129450	JC87419-2	OP20210	AB8270TCL20-PAH+	SO	33	5	X	y	y	ok	ran after p129435 diluted for visc.
P	129451	JC87419-2	OP20210	AB8270TCL20-PAH+	SO	1	50	X	y	y	ok	4:37pm
P	129452	JC87419-2	OP20210	AB8270TCL20-PAH+	SO	2	500	X	y	y	ok	5:04pm

9-2338

LOGBOOK ID:

ABN Extraction Log - Solids

Date started: 5/6/19 Time started: 17:35
Date finished: 5/6/19 Time finished: 23:55

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C ____
Waste Dil. SW3580A ____ Soxhlet SW3540C ____

BATCH # MS 20110 RACK# R-46

Weighed by: SH
Extracted by: SH
Concentrated by: SH
Final Vol. Top-up: SH
Vialed by: SH
Supervisor Review: aj 5/7/19

Special Client Spike Instructions

QC ID# for Spec. 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:

Other:

DD 5/10

	Sample #	Analysis Type	Sample Bottle #	Sample Description	Sample Wet Wt. (g) Oil (g) Liq (mL)	Decant Y	Decant N	Sonicator ID	Microwave ID	Final Extract Color	Final Extract Vol(mL)	GPC Cleanup	Comments
	MB1	abn		sand	30.0			12		clear	1.0		
	BS1			sand	30.0			12		yellow	1.0		
	JC87093-7MS		1	soil	30.4		—	12		gold	1.0		
	MSD		1	soil	31.2		—	12		gold	1.0		
	BS												
	MS												
	MSD												
	BS												
	MS												
	MSD												
1	JC86986-6	abn	1	soil	30.0		—	12		l.yellow	1.0		
2	JC87073-1		2	soil	30.0		—	12		brown	1.0		
3	-5		2	soil	31.8		—	12		brown	1.0		
4	-3		2	soil	30.5		2	12		brown	1.0		
5	-7		1	soil	30.6		—	12		brown	1.0		
6	-9		1	soil	31.2		—	12		brown	1.0		
7	-11		2	soil	31.2		—	12		brown	1.0		
8	-13		1	soil	30.6		—	12		brown	1.0		
9	JC87093-1		1	clay	30.4		—	12		brown	1.0		
10	-2		1	clay	30.9		—	12		brown	1.0		
11	-3		1	mulch	31.7		—	12		brown	1.0		
12	-4		1	clay	30.1		—	12		brown	1.0		
13	-5		1	clay	30.4		—	12		brown	1.0		
14	-6		1	mulch	30.3		—	12		brown	1.0		
15	-7		1	soil	30.3		—	12		green	1.0		
16	-8		1	rock+	31.6		—	12		brown	1.0		
17	-9		1	clay	30.0		—	12		yellow	1.0		
18	-10		1	sand	30.7	—		12		brown	1.0		
19	-11		1	clay	30.7		—	12		brown	1.0		
20	-12		1	wet sand	30.7		—	12		brown	1.0		

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

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	75.9	-1.0	74.9	OK
Waterbath Chiller (GPM)	V3,V4	5.5,6.0	—	—	0.8
NEVAP (32-39°C, LPM)	2	34.9	+0.1	35.0	10
Balance	B4	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	OP192386107	50	1.0
ABN DOD SIM			

WITNESS SIGN: NT SPIKE SIGN: SH

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	OP192336104	50	Acid: 1.0
Acid (for SIM)			A(SIM):
Base #1	OP192386107	50	1.0
Base #2	OP192336106	50	1.0
Aniline	OP192336109	50	1.0
BSIM			

WITNESS SIGN: NT SPIKE SIGN: SH

SOLVENT	LOT #	BRAND	AMT (mL)
1:1 METH CHLOR/ ACETONE	191109 / 174411	FISHER	30.0
METH CHLOR			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	6435092	4-29-19A	AGILENT
SODIUM SULFATE	190294	4-29-19A	FISHER
FILTER PAPER	169364 62		FISHER

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	8GA190103C1A	3-5-19	FISHER

SGS
Form: OP019A-10
Rev Date: 8/2/17

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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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46615
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:00	MA46615-STD1	1		B=1.6623E-004, C=3.2260E-002, RHO=0.9997479
09:01	MA46615-STD2	1		STDB
09:03	MA46615-STD3	1		STDC
09:04	MA46615-STD4	1		STDD
09:06	MA46615-STD5	1		STDE
09:08	MA46615-STD6	1		STDF
09:11	MA46615-ICV1	1		
09:13	MA46615-ICB1	1		
09:15	MA46615-CCV1	1		
09:16	MA46615-CCB1	1		
09:18	MA46615-CRI1	1		
09:24	MP14633-MB1	1		
09:25	MP14633-B1	1		
09:27	ZZZZZZ	1		
09:29	MP14633-S2	1		
09:31	JC87045-1	1		(sample used for QC only; not part of login JC87093)
09:33	ZZZZZZ	1		
09:34	ZZZZZZ	1		
09:35	ZZZZZZ	1		
09:37	MA46615-CCV2	1		
09:38	MA46615-CCB2	1		
09:40	ZZZZZZ	1		
09:42	ZZZZZZ	1		
09:43	ZZZZZZ	1		
09:45	ZZZZZZ	1		
09:46	ZZZZZZ	1		
09:47	ZZZZZZ	1		
09:49	ZZZZZZ	1		
09:51	ZZZZZZ	1		
09:52	ZZZZZZ	1		
09:54	MA46615-CCV3	1		
09:56	MA46615-CCB3	1		
09:58	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46615
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:59	ZZZZZZ	1		
10:01	ZZZZZZ	1		
10:03	ZZZZZZ	1		
10:04	ZZZZZZ	1		
10:06	ZZZZZZ	1		
10:08	ZZZZZZ	1		
10:10	MP14638-MB1	1		
10:12	MP14638-B1	1		
10:13	MA46615-CCV4	1		
10:15	MA46615-CCB4	1		
10:17	MP14638-S1	1		
10:18	MP14638-S2	1		
10:20	JC87093-7	1		
10:23	JC87093-1	1		
10:24	JC87093-2	1		overrange
10:27	JC87093-3	1		Possible carryover?
10:29	JC87093-4	1		
10:31	JC87093-5	1		
10:34	JC87093-6	1		
10:36	MA46615-CCV5	1		
10:38	MA46615-CCB5	1		
10:41	JC87093-8	1		
10:42	JC87093-9	1		
10:44	JC87093-10	1		
10:46	JC87093-11	1		
10:47	JC87093-12	1		
10:52	JC87093-3	1		
10:54	JC87093-1	5		
10:56	JC87093-2	5		
10:58	JC87093-4	5		
11:00	MA46615-CCV6	1		
11:02	MA46615-CCB6	1		
11:04	JC87093-5	5		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46615
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:05	JC87093-6	5		
	11:07	JC87093-11	2		
---------->	Last reportable sample/prep for job JC87093				
	11:12	MP14633-S1	1		
	11:21	ZZZZZZ	1		
	11:24	MA46615-CRI2	1		
	11:25	MA46615-CCV7	1		
	11:27	MA46615-CCB7	1		
---------->	Last reportable CCB for job JC87093				
	Refer to raw data for calibration curve and standards.				

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46615
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
09:11	MA46615-ICV1	1	X	
09:13	MA46615-ICB1	1	X	
09:15	MA46615-CCV1	1	X	
09:16	MA46615-CCB1	1	X	
09:18	MA46615-CRI1	1	X	
09:24	MP14633-MB1	1	X	
09:25	MP14633-B1	1	X	
09:27	ZZZZZZ	1		
09:29	MP14633-S2	1	X	
09:31	JC87045-1	1	X	(a)
09:33	ZZZZZZ	1		
09:34	ZZZZZZ	1		
09:35	ZZZZZZ	1		
09:37	MA46615-CCV2	1	X	
09:38	MA46615-CCB2	1	X	
09:40	ZZZZZZ	1		
09:42	ZZZZZZ	1		
09:43	ZZZZZZ	1		
09:45	ZZZZZZ	1		
09:46	ZZZZZZ	1		
09:47	ZZZZZZ	1		
09:49	ZZZZZZ	1		
09:51	ZZZZZZ	1		
09:52	ZZZZZZ	1		
09:54	MA46615-CCV3	1	X	
09:56	MA46615-CCB3	1	X	
09:58	ZZZZZZ	1		
09:59	ZZZZZZ	1		
10:01	ZZZZZZ	1		
10:03	ZZZZZZ	1		
10:04	ZZZZZZ	1		
10:06	ZZZZZZ	1		
10:08	ZZZZZZ	1		
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46615
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
10:10	MP14638-MB1	1	X
10:12	MP14638-B1	1	X
10:13	MA46615-CCV4	1	X
10:15	MA46615-CCB4	1	X
10:17	MP14638-S1	1	X
10:18	MP14638-S2	1	X
10:20	JC87093-7	1	X
10:23	JC87093-1	1	
10:24	JC87093-2	1	
10:27	JC87093-3	1	
10:29	JC87093-4	1	
10:31	JC87093-5	1	
10:34	JC87093-6	1	
10:36	MA46615-CCV5	1	X
10:38	MA46615-CCB5	1	X
10:41	JC87093-8	1	X
10:42	JC87093-9	1	X
10:44	JC87093-10	1	X
10:46	JC87093-11	1	
10:47	JC87093-12	1	X
10:52	JC87093-3	1	X
10:54	JC87093-1	5	X
10:56	JC87093-2	5	X
10:58	JC87093-4	5	X
11:00	MA46615-CCV6	1	X
11:02	MA46615-CCB6	1	X
11:04	JC87093-5	5	X
11:05	JC87093-6	5	X
11:07	JC87093-11	2	X
11:12	MP14633-S1	1	X
11:21	ZZZZZZ	1	
11:24	MA46615-CRI2	1	X
11:25	MA46615-CCV7	1	X
		Element:	Hg

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46615
Parameters: Hg

Time	Sample Description	Element: Dilution	H g
11:27	MA46615-CCB7	1	X

(a) Sample used for QC only; not part of login JC87093.

Element: H
g

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46615 Units: ug/l

Time:			09:13		09:16		09:38		09:56	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.035	-0.00280	<0.20	0.00900	<0.20	0.00200	<0.20	0.0136	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46615 Units: ug/l

Time:			10:15		10:38		11:02		11:27	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.035	-0.00830	<0.20	-0.0168	<0.20	0.00830	<0.20	0.00650	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46615 Units: ug/l

Time:		09:11			09:15			09:37	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.28	109.3	2.5	2.58	103.2	2.5	2.51	100.4

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46615 Units: ug/l

Time:		09:54			10:13			10:36	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.54	101.6	2.5	2.57	102.8	2.5	2.42	96.8

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46615 Units: ug/l

Time:		11:00			11:25	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.57	102.8	2.5	2.55	102.0

(*) Outside of QC limits
(anr) Analyte not requested

10.1.3
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H7043019S1.CSV Date Analyzed: 04/30/19 Methods: SW846 7471B
QC Limits: 70 to 130 % Recovery Run ID: MA46615 Units: ug/l

Time:			09:18		11:24	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.201	100.5	0.255	127.5

(*) Outside of QC limits
(anr) Analyte not requested

10.1.4
10

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
11:57	MA46638-STD1	1		STDA
12:02	MA46638-STD2	1		STDB
12:08	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:18	MA46638-ICV1	1		
12:23	MA46638-ICB1	1		
12:28	MA46638-CCV1	1		
12:33	MA46638-CCB1	1		
12:38	ZZZZZZ	1		
12:44	ZZZZZZ	1		
12:49	MA46638-CRI1	1		
12:55	MA46638-CRID1	1		See rerun
13:00	MA46638-ICSA1	1		
13:05	MA46638-ICSAB1	1		
13:10	MA46638-HSTD1	1		
13:16	MA46638-HSTD2	1		
13:22	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:32	MA46638-CCV2	1		
13:37	MA46638-CCB2	1		
13:43	MA46638-CRID2	1		
13:48	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:58	MP14579-PS1	1		
14:03	ZZZZZZ	3		
14:08	ZZZZZZ	2		
14:13	ZZZZZZ	2		
14:19	ZZZZZZ	2		
14:24	ZZZZZZ	5		
14:29	MA46638-CCV3	1		
14:34	MA46638-CCB3	1		
14:39	ZZZZZZ	1		
14:44	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
14:49	ZZZZZZ	2		
14:54	ZZZZZZ	3		
15:00	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:21	ZZZZZZ	2		
15:26	MA46638-CCV4	1		
15:31	MA46638-CCB4	1		
15:37	ZZZZZZ	2		
15:42	MP14600-PS1	1		
15:47	MP14600-PS1	10		
15:52	ZZZZZZ	1		
15:57	ZZZZZZ	2		
16:02	ZZZZZZ	1		
16:07	ZZZZZZ	1		
16:12	ZZZZZZ	2		
16:17	ZZZZZZ	2		
16:23	MA46638-CCV5	1		
16:28	MA46638-CCB5	1		
16:33	ZZZZZZ	3		
16:38	ZZZZZZ	5		
16:43	ZZZZZZ	1		
16:48	MA46638-ICSA2	1		
16:53	MA46638-ICSAB2	1		
16:59	MP14617-PS1	1		
17:04	ZZZZZZ	1		
17:09	MP14667-MB2	1		
17:14	MP14667-B2	1		
17:19	MA46638-CCV6	1		
17:24	MA46638-CCB6	1		
17:29	ZZZZZZ	1		
17:34	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
17:39	ZZZZZZ	1		
17:45	ZZZZZZ	1		
17:50	ZZZZZZ	1		
17:55	ZZZZZZ	1		
18:00	ZZZZZZ	1		
18:06	ZZZZZZ	2		
18:11	ZZZZZZ	2		
18:17	MA46638-CCV7	1		
18:22	MA46638-CCB7	1		
18:27	ZZZZZZ	2		
18:32	ZZZZZZ	1		
18:37	ZZZZZZ	2		
18:42	ZZZZZZ	2		
18:47	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:58	ZZZZZZ	1		
19:03	MP14636-PS1	1		
19:08	ZZZZZZ	2		
19:13	MA46638-CCV8	1		
19:18	MA46638-CCB8	1		
19:23	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:34	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:44	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:05	ZZZZZZ	1		
20:10	ZZZZZZ	1		
20:15	ZZZZZZ	1		
20:20	ZZZZZZ	1		
20:26	MA46638-CCV9	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
20:31	MA46638-CCB9	1		
20:36	ZZZZZZ	1		
20:41	ZZZZZZ	2		
20:46	ZZZZZZ	1		
20:51	ZZZZZZ	1		
20:56	ZZZZZZ	1		
21:01	ZZZZZZ	1		
21:06	MA46638-CCV10	1		
21:11	MA46638-CCB10	1		
21:16	ZZZZZZ	100		
21:22	ZZZZZZ	50		
21:27	ZZZZZZ	1		
21:32	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:42	ZZZZZZ	1		
21:47	ZZZZZZ	1		
21:52	ZZZZZZ	1		
21:58	ZZZZZZ	1		
22:03	ZZZZZZ	3		
22:08	MA46638-CCV11	1		
22:13	MA46638-CCB11	1		
22:18	MP14766-MB1	1		
22:23	MP14766-B1	1		
22:28	MP14766-S1	1		
22:33	MP14766-S2	1		
22:38	JC85779-11R	1		(sample used for QC only; not part of login JC87093)
22:43	MP14766-SD1	5		
22:49	MA46638-CCV12	1		
22:54	MA46638-CCB12	1		
22:59	MP14721-MB1	1		
23:04	MP14721-B1	1		
23:09	MP14721-S1	1		Need PS for Sb
23:14	MP14721-S2	1		Need PS for Sb

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
23:19	JC87093-7	1		
23:24	MP14721-SD1	5		
23:29	JC87093-1	1		FE=230ppm
23:34	JC87093-2	1		FE=250ppm
23:39	JC87093-3	1		Y3600 saturation
23:44	JC87093-4	1		Zn=10ppm, FE=225ppm
23:50	MA46638-CCV13	1		
23:55	MA46638-CCB13	1		
00:00	JC87093-5	1		
00:05	JC87093-6	1		
00:10	JC87093-8	1		FE=280ppm
00:15	JC87093-9	1		
00:21	JC87093-10	1		FE=220ppm
00:26	JC87093-11	1		Zn high RSD
00:31	JC87093-12	1		
---------->	Last reportable sample/prep for job JC87093			
00:36	ZZZZZZ	1		
00:41	ZZZZZZ	1		
00:46	MA46638-CCV14	1		
00:51	MA46638-CCB14	1		
---------->	Last reportable CCB for job JC87093			
00:56	ZZZZZZ	1		
01:01	ZZZZZZ	1		
01:07	ZZZZZZ	1		
01:12	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:22	ZZZZZZ	1		
01:27	MP14726-MB1	5		
01:32	MP14726-B1	5		
01:37	MP14726-S1	5		
01:42	MP14726-S2	5		
01:47	MA46638-CCV15	1		
01:52	MA46638-CCB15	1		
01:57	JC87171-1	5		(sample used for QC only; not part of login JC87093)
02:02	MP14726-SD1	25		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
02:07	MP14724-MB1	1		
02:12	MP14724-B1	1		
02:17	MP14724-S1	1		
02:22	MP14724-S2	1		
02:28	JC87131-2	1		(sample used for QC only; not part of login JC87093)
02:33	MP14724-SD1	5		
02:38	MP14724-S3	1		
02:43	MP14724-S4	1		
02:49	MA46638-CCV16	1		
02:54	MA46638-CCB16	1		
02:59	JC87131-2F	1		(sample used for QC only; not part of login JC87093)
03:04	MP14724-SD2	5		
03:09	ZZZZZZ	1		
03:15	ZZZZZZ	1		
03:20	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:31	ZZZZZZ	1		
03:36	ZZZZZZ	1		
03:41	ZZZZZZ	1		
03:46	MA46638-CCV17	1		
03:51	MA46638-CCB17	1		
03:56	ZZZZZZ	1		
04:01	ZZZZZZ	1		
04:06	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:16	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:27	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:37	ZZZZZZ	1		
04:42	ZZZZZZ	1		
04:47	MA46638-CCV18	1		
04:52	MA46638-CCB18	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
04:57	ZZZZZZ	1		
05:02	ZZZZZZ	1		
05:07	ZZZZZZ	1		
05:13	ZZZZZZ	1		
05:18	ZZZZZZ	1		
05:23	ZZZZZZ	1		
05:28	ZZZZZZ	1		
05:33	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:43	ZZZZZZ	1		
05:49	MA46638-CCV19	1		
05:54	MA46638-CCB19	1		
05:59	ZZZZZZ	1		
06:04	ZZZZZZ	1		
06:09	ZZZZZZ	1		
06:14	ZZZZZZ	1		
06:20	ZZZZZZ	1		
06:25	ZZZZZZ	1		
06:30	ZZZZZZ	1		
06:35	ZZZZZZ	1		
06:40	MA46638-CCV20	1		
06:45	MA46638-CCB20	1		
07:57	ZZZZZZ	3		
08:02	ZZZZZZ	1		
08:06	ZZZZZZ	3		
08:13	ZZZZZZ	3		
08:17	MA46638-CCV21	1		
08:24	MA46638-CCB21	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
12:08	ZZZZZZ	1																						
12:13	ZZZZZZ	1																						
12:18	MA46638-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:23	MA46638-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:28	MA46638-CCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:33	MA46638-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:38	ZZZZZZ	1																						
12:44	ZZZZZZ	1																						
12:49	MA46638-CRI1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:55	MA46638-CRID1	1	See		rerun																			
13:00	MA46638-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:05	MA46638-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:10	MA46638-HSTD1	1		X	X	X	X	X		X	X	X		X		X	X		X	X		X	X	X
13:16	MA46638-HSTD2	1	X						X				X		X			X			X			
13:22	ZZZZZZ	1																						
13:27	ZZZZZZ	1																						
13:32	MA46638-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:37	MA46638-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:43	MA46638-CRID2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:48	ZZZZZZ	1																						
13:53	ZZZZZZ	1																						
13:58	MP14579-PS1	1		X					X															
14:03	ZZZZZZ	3																						
14:08	ZZZZZZ	2																						
14:13	ZZZZZZ	2																						
14:19	ZZZZZZ	2																						
14:24	ZZZZZZ	5																						
14:29	MA46638-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14:34	MA46638-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14:39	ZZZZZZ	1																						
14:44	ZZZZZZ	1																						
14:49	ZZZZZZ	2																						
14:54	ZZZZZZ	3																						
		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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
15:00	ZZZZZZ	1																						
15:05	ZZZZZZ	1																						
15:10	ZZZZZZ	1																						
15:16	ZZZZZZ	1																						
15:21	ZZZZZZ	2																						
15:26	MA46638-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:31	MA46638-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:37	ZZZZZZ	2																						
15:42	MP14600-PS1	1							X															
15:47	MP14600-PS1	10		X																				
15:52	ZZZZZZ	1																						
15:57	ZZZZZZ	2																						
16:02	ZZZZZZ	1																						
16:07	ZZZZZZ	1																						
16:12	ZZZZZZ	2																						
16:17	ZZZZZZ	2																						
16:23	MA46638-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:28	MA46638-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:33	ZZZZZZ	3																						
16:38	ZZZZZZ	5																						
16:43	ZZZZZZ	1																						
16:48	MA46638-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:53	MA46638-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:59	MP14617-PS1	1		X																				
17:04	ZZZZZZ	1																						
17:09	MP14667-MB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:14	MP14667-B2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:19	MA46638-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:24	MA46638-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:29	ZZZZZZ	1																						
17:34	ZZZZZZ	1																						
17:39	ZZZZZZ	1																						
17:45	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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
17:50	ZZZZZZ	1																						
17:55	ZZZZZZ	1																						
18:00	ZZZZZZ	1																						
18:06	ZZZZZZ	2																						
18:11	ZZZZZZ	2																						
18:17	MA46638-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:22	MA46638-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:27	ZZZZZZ	2																						
18:32	ZZZZZZ	1																						
18:37	ZZZZZZ	2																						
18:42	ZZZZZZ	2																						
18:47	ZZZZZZ	1																						
18:52	ZZZZZZ	1																						
18:58	ZZZZZZ	1																						
19:03	MP14636-PS1	1		X											X									
19:08	ZZZZZZ	2																						
19:13	MA46638-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:18	MA46638-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:23	ZZZZZZ	1																						
19:28	ZZZZZZ	1																						
19:34	ZZZZZZ	1																						
19:39	ZZZZZZ	1																						
19:44	ZZZZZZ	1																						
19:49	ZZZZZZ	1																						
19:54	ZZZZZZ	1																						
20:00	ZZZZZZ	1																						
20:05	ZZZZZZ	1																						
20:10	ZZZZZZ	1																						
20:15	ZZZZZZ	1																						
20:20	ZZZZZZ	1																						
20:26	MA46638-CCV9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:31	MA46638-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:36	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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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	
20:41	ZZZZZZ	2																							
20:46	ZZZZZZ	1																							
20:51	ZZZZZZ	1																							
20:56	ZZZZZZ	1																							
21:01	ZZZZZZ	1																							
21:06	MA46638-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:11	MA46638-CCB10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:16	ZZZZZZ	100																							
21:22	ZZZZZZ	50																							
21:27	ZZZZZZ	1																							
21:32	ZZZZZZ	1																							
21:37	ZZZZZZ	1																							
21:42	ZZZZZZ	1																							
21:47	ZZZZZZ	1																							
21:52	ZZZZZZ	1																							
21:58	ZZZZZZ	1																							
22:03	ZZZZZZ	3																							
22:08	MA46638-CCV11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:13	MA46638-CCB11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:18	MP14766-MB1	1												X											
22:23	MP14766-B1	1												X											
22:28	MP14766-S1	1												X											
22:33	MP14766-S2	1												X											
22:38	JC85779-11R	1												X											(a)
22:43	MP14766-SD1	5												X											
22:49	MA46638-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:54	MA46638-CCB12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:59	MP14721-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:04	MP14721-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:09	MP14721-S1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:14	MP14721-S2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:19	JC87093-7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:24	MP14721-SD1	5	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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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	
23:29	JC87093-1	1	X	X		X	X	X	X	X	X				X		X	X			X		X	X	
23:34	JC87093-2	1	X	X		X	X	X	X	X	X				X		X	X			X		X	X	
23:39	JC87093-3	1	X	X	X	X	X	X	X		X		X	X	X		X	X	X		X	X		X	
23:44	JC87093-4	1	X	X		X	X	X	X	X	X				X		X	X			X		X		
23:50	MA46638-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:55	MA46638-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:00	JC87093-5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:05	JC87093-6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:10	JC87093-8	1	X	X		X	X	X	X	X	X				X		X	X			X		X	X	
00:15	JC87093-9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:21	JC87093-10	1	X	X		X	X	X	X	X	X				X		X	X			X		X	X	
00:26	JC87093-11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
00:31	JC87093-12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:36	ZZZZZZ	1																							
00:41	ZZZZZZ	1																							
00:46	MA46638-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:51	MA46638-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
00:56	ZZZZZZ	1																							
01:01	ZZZZZZ	1																							
01:07	ZZZZZZ	1																							
01:12	ZZZZZZ	1																							
01:17	ZZZZZZ	1																							
01:22	ZZZZZZ	1																							
01:27	MP14726-MB1	5			X	X		X		X				X					X	X					
01:32	MP14726-B1	5			X	X		X		X				X					X	X					
01:37	MP14726-S1	5			X	X		X		X				X					X	X					
01:42	MP14726-S2	5			X	X		X		X				X					X	X					
01:47	MA46638-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
01:52	MA46638-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
01:57	JC87171-1	5			X	X		X		X				X					X	X					(a)
02:02	MP14726-SD1	25			X	X		X		X				X					X	X					
02:07	MP14724-MB1	1		X						X			X			X	X				X	X	X		
02:12	MP14724-B1	1		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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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	
02:17	MP14724-S1	1		X						X			X			X	X					X	X		
02:22	MP14724-S2	1		X						X			X			X	X					X	X		
02:28	JC87131-2	1											X			X									(a)
02:33	MP14724-SD1	5		X						X			X			X	X					X	X		
02:38	MP14724-S3	1		X						X			X			X	X					X	X		
02:43	MP14724-S4	1		X						X			X			X	X					X	X		
02:49	MA46638-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
02:54	MA46638-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
02:59	JC87131-2F	1											X			X									(a)
03:04	MP14724-SD2	5		X						X			X			X	X					X	X		
03:09	ZZZZZZ	1																							
03:15	ZZZZZZ	1																							
03:20	ZZZZZZ	1																							
03:25	ZZZZZZ	1																							
03:31	ZZZZZZ	1																							
03:36	ZZZZZZ	1																							
03:41	ZZZZZZ	1																							
03:46	MA46638-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:51	MA46638-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
03:56	ZZZZZZ	1																							
04:01	ZZZZZZ	1																							
04:06	ZZZZZZ	1																							
04:11	ZZZZZZ	1																							
04:16	ZZZZZZ	1																							
04:21	ZZZZZZ	1																							
04:27	ZZZZZZ	1																							
04:32	ZZZZZZ	1																							
04:37	ZZZZZZ	1																							
04:42	ZZZZZZ	1																							
04:47	MA46638-CCV18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
04:52	MA46638-CCB18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
04:57	ZZZZZZ	1																							
05:02	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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
05:07	ZZZZZZ	1																						
05:13	ZZZZZZ	1																						
05:18	ZZZZZZ	1																						
05:23	ZZZZZZ	1																						
05:28	ZZZZZZ	1																						
05:33	ZZZZZZ	1																						
05:38	ZZZZZZ	1																						
05:43	ZZZZZZ	1																						
05:49	MA46638-CCV19	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
05:54	MA46638-CCB19	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
05:59	ZZZZZZ	1																						
06:04	ZZZZZZ	1																						
06:09	ZZZZZZ	1																						
06:14	ZZZZZZ	1																						
06:20	ZZZZZZ	1																						
06:25	ZZZZZZ	1																						
06:30	ZZZZZZ	1																						
06:35	ZZZZZZ	1																						
06:40	MA46638-CCV20	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
06:45	MA46638-CCB20	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07:57	ZZZZZZ	3																						
08:02	ZZZZZZ	1																						
08:06	ZZZZZZ	3																						
08:13	ZZZZZZ	3																						
08:17	MA46638-CCV21	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
08:24	MA46638-CCB21	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 JC87093.

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
11:57	MA46638-STD1	6526 R	161940 R	24771 R	10236 R
12:02	MA46638-STD2	6073	147730	24290	9091
12:08	ZZZZZZ	6224	151810	24682	9302
12:13	ZZZZZZ	6465	160470	24565	10167
12:18	MA46638-ICV1	6162	150310	24212	9241
12:23	MA46638-ICB1	6487	159280	24581	10176
12:28	MA46638-CCV1	6161	150230	24172	9219
12:33	MA46638-CCB1	6485	159800	24519	10174
12:38	ZZZZZZ	13230 !	298890 !	37823 !	19851 !
12:44	ZZZZZZ	14320 !	333350 !	41863 !	21418 !
12:49	MA46638-CRI1	6316	155290	24022	9686
12:55	MA46638-CRID1	No results reported for the elements associated with this internal standard.			
13:00	MA46638-ICSA1	5753	137280	23317	8419
13:05	MA46638-ICSAB1	5740	137570	22952	8422
13:10	MA46638-HSTD1	6333	155790	24723	9893
13:16	MA46638-HSTD2	5822	139090	23635	8386
13:22	ZZZZZZ	6412	156260	24578	10031
13:27	ZZZZZZ	6297	158560	24310	10017
13:32	MA46638-CCV2	6209	149590	23966	9156
13:37	MA46638-CCB2	6483	159390	24376	10033
13:43	MA46638-CRID2	6464	158160	24409	9962
13:48	ZZZZZZ	6570	162430	25040	10121
13:53	ZZZZZZ	6548	160020	24680	10112
13:58	MP14579-PS1	6387	155130	25041	9423
14:03	ZZZZZZ	6536	156770	25139	9712
14:08	ZZZZZZ	6468	157210	25297	9380
14:13	ZZZZZZ	6567	157970	25288	9577
14:19	ZZZZZZ	6385	156010	25075	9497
14:24	ZZZZZZ	6550	160000	24842	9953
14:29	MA46638-CCV3	6174	149100	24042	9140
14:34	MA46638-CCB3	6444	158090	24278	10011
14:39	ZZZZZZ	6570	159780	25136	9710
14:44	ZZZZZZ	6720	160200	25710	9835

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
14:49	ZZZZZZ	6199	153770	24795	9191
14:54	ZZZZZZ	6071	145130	24179	8775
15:00	ZZZZZZ	6641	162810	25059	10187
15:05	ZZZZZZ	6424	156210	25448	9409
15:10	ZZZZZZ	6585	156690	25662	9302
15:16	ZZZZZZ	6590	159410	25791	9391
15:21	ZZZZZZ	6506	157100	25012	9399
15:26	MA46638-CCV4	6187	149320	23844	9097
15:31	MA46638-CCB4	6453	158470	24346	9950
15:37	ZZZZZZ	6504	156910	25228	9486
15:42	MP14600-PS1	6207	150270	25022	10044
15:47	MP14600-PS1	6440	156730	24461	9764
15:52	ZZZZZZ	6777	165840	25743	9956
15:57	ZZZZZZ	6564	157510	24721	9694
16:02	ZZZZZZ	6721	161480	25846	9425
16:07	ZZZZZZ	6680	160120	25825	9409
16:12	ZZZZZZ	6653	158050	25213	9609
16:17	ZZZZZZ	6867	162150	25881	9610
16:23	MA46638-CCV5	6179	149890	23859	9114
16:28	MA46638-CCB5	6514	160310	24357	10072
16:33	ZZZZZZ	6797	162910	25589	9731
16:38	ZZZZZZ	6449	156530	24466	9646
16:43	ZZZZZZ	6570	162660	25068	10154
16:48	MA46638-ICSA2	5733	137390	23209	8340
16:53	MA46638-ICSAB2	5707	137490	23262	8358
16:59	MP14617-PS1	6563	159190	25936	9321
17:04	ZZZZZZ	6477	159190	24469	10036
17:09	MP14667-MB2	6461	159800	24456	10037
17:14	MP14667-B2	6218	151430	23875	9295
17:19	MA46638-CCV6	6104	148220	23707	9042
17:24	MA46638-CCB6	6296	157170	23868	9783
17:29	ZZZZZZ	6401	154280	24810	9027
17:34	ZZZZZZ	6280	152620	24745	9131

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
17:39	ZZZZZZ	6152	151590	24704	8743
17:45	ZZZZZZ	6203	150120	24358	8963
17:50	ZZZZZZ	6179	150620	24558	8884
17:55	ZZZZZZ	6282	151220	24637	8964
18:00	ZZZZZZ	6856	165340	26394	9443
18:06	ZZZZZZ	6271	152550	24223	9135
18:11	ZZZZZZ	6323	158210	24675	9228
18:17	MA46638-CCV7	6201	148810	23560	9146
18:22	MA46638-CCB7	6449	158010	24173	9966
18:27	ZZZZZZ	6384	154550	24234	9783
18:32	ZZZZZZ	6466	155520	24958	9327
18:37	ZZZZZZ	6410	155780	24533	9458
18:42	ZZZZZZ	6316	154030	24202	9351
18:47	ZZZZZZ	6503	159670	24503	10092
18:52	ZZZZZZ	6483	159930	24894	9869
18:58	ZZZZZZ	6540	160320	24857	10159
19:03	MP14636-PS1	6379	153860	25179	9306
19:08	ZZZZZZ	6499	157620	24699	9788
19:13	MA46638-CCV8	6160	150430	23915	9159
19:18	MA46638-CCB8	6403	156130	23958	9974
19:23	ZZZZZZ	6367	156520	23983	9903
19:28	ZZZZZZ	6393	157660	24215	9942
19:34	ZZZZZZ	6357	156490	24119	9939
19:39	ZZZZZZ	6530	160210	24500	10133
19:44	ZZZZZZ	6428	158280	24198	9976
19:49	ZZZZZZ	6533	159790	24217	10096
19:54	ZZZZZZ	6399	157380	24326	9966
20:00	ZZZZZZ	6410	157390	24102	10086
20:05	ZZZZZZ	6364	144230	24562	9178
20:10	ZZZZZZ	5875	143180	23350	8709
20:15	ZZZZZZ	6485	159950	24440	10137
20:20	ZZZZZZ	6389	156500	24310	10007
20:26	MA46638-CCV9	6117	148890	23635	9140

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
20:31	MA46638-CCB9	6458	158390	24187	10102
20:36	ZZZZZZ	6670	161830	26577	9603
20:41	ZZZZZZ	6393	155600	24807	9527
20:46	ZZZZZZ	6548	999999 !	25281	9605
20:51	ZZZZZZ	6536	160080	25242	9745
20:56	ZZZZZZ	6457	159730	24624	10121
21:01	ZZZZZZ	6428	159520	24757	10089
21:06	MA46638-CCV10	6076	149380	23877	9129
21:11	MA46638-CCB10	6385	157570	24143	10028
21:16	ZZZZZZ	6433	158460	24258	10055
21:22	ZZZZZZ	6394	157530	24260	9978
21:27	ZZZZZZ	6462	161140	24747	10120
21:32	ZZZZZZ	6491	161110	24217	10180
21:37	ZZZZZZ	6425	158870	24502	10085
21:42	ZZZZZZ	6337	158310	24867	9604
21:47	ZZZZZZ	6088	148530	24064	9023
21:52	ZZZZZZ	5849	143540	24147	8488
21:58	ZZZZZZ	6236	152620	24403	9308
22:03	ZZZZZZ	6272	154540	24213	9587
22:08	MA46638-CCV11	6099	148190	23712	9169
22:13	MA46638-CCB11	6348	157330	24088	9993
22:18	MP14766-MB1	6467	160060	24728	10202
22:23	MP14766-B1	6273	153000	24520	9470
22:28	MP14766-S1	6156	149310	24523	9133
22:33	MP14766-S2	6134	149560	24264	9094
22:38	JC85779-11R	6264	152740	24455	9348
22:43	MP14766-SD1	6357	156180	24367	9773
22:49	MA46638-CCV12	6116	148920	23651	9175
22:54	MA46638-CCB12	6379	157700	24193	10037
22:59	MP14721-MB1	6392	159640	24587	10071
23:04	MP14721-B1	6199	152350	24103	9387
23:09	MP14721-S1	6446	156430	25249	9327
23:14	MP14721-S2	6435	156890	25413	9277

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
23:19	JC87093-7	6604	160720	25786	9660
23:24	MP14721-SD1	6489	158120	24616	9885
23:29	JC87093-1	6545	159920	25860	9747
23:34	JC87093-2	6665	163160	26339	9638
23:39	JC87093-3	6461	999999 !a	25138	9783
23:44	JC87093-4	6720	162830	26523	9574
23:50	MA46638-CCV13	6185	151070	23968	9277
23:55	MA46638-CCB13	6433	162260	24139	10110
00:00	JC87093-5	6667	161800	26076	9615
00:05	JC87093-6	6157	156650	24931	9445
00:10	JC87093-8	6344	155440	24924	9875
00:15	JC87093-9	6770	162250	26335	9472
00:21	JC87093-10	7008	170870	27674	9494
00:26	JC87093-11	6468	162990	25357	9625
00:31	JC87093-12	6544	162190	26081	9498
00:36	ZZZZZZ	6394	154560	25027	9685
00:41	ZZZZZZ	6405	156010	25265	9488
00:46	MA46638-CCV14	6026	149030	23444	9070
00:51	MA46638-CCB14	6378	158550	24156	10031
00:56	ZZZZZZ	6463	156780	25223	9580
01:01	ZZZZZZ	6427	999999 !a	25008	9570
01:07	ZZZZZZ	6433	156620	24758	9518
01:12	ZZZZZZ	6478	156000	25095	9601
01:17	ZZZZZZ	6418	155670	24916	9512
01:22	ZZZZZZ	6551	161850	25636	9482
01:27	MP14726-MB1	6466	159870	24182	10119
01:32	MP14726-B1	6365	156130	24021	9763
01:37	MP14726-S1	6222	153390	24254	9306
01:42	MP14726-S2	6257	150710	23805	9358
01:47	MA46638-CCV15	6090	149250	23578	9135
01:52	MA46638-CCB15	6361	157090	23812	9985
01:57	JC87171-1	6209	152220	24046	9375
02:02	MP14726-SD1	6317	156190	23871	9756

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
02:07	MP14724-MB1	6425	159450	24271	10068
02:12	MP14724-B1	6258	153630	24002	9422
02:17	MP14724-S1	5894	142770	23541	8579
02:22	MP14724-S2	5868	143190	23519	8541
02:28	JC87131-2	5874	142850	23542	8576
02:33	MP14724-SD1	6244	152290	23842	9363
02:38	MP14724-S3	5893	143200	23457	8567
02:43	MP14724-S4	5888	143080	23465	8562
02:49	MA46638-CCV16	6107	148170	23168	9128
02:54	MA46638-CCB16	6365	157020	23689	9986
02:59	JC87131-2F	5948	143520	23559	8663
03:04	MP14724-SD2	6192	153810	23833	9300
03:09	ZZZZZZ	6037	145730	23554	8908
03:15	ZZZZZZ	6078	147670	23591	8993
03:20	ZZZZZZ	5979	147230	23746	8803
03:25	ZZZZZZ	5991	145650	23342	8826
03:31	ZZZZZZ	6029	148090	23650	8950
03:36	ZZZZZZ	6229	153360	23891	9356
03:41	ZZZZZZ	6170	152170	23909	9288
03:46	MA46638-CCV17	6081	148500	23350	9102
03:51	MA46638-CCB17	6415	159840	24004	10036
03:56	ZZZZZZ	6203	153020	23910	9334
04:01	ZZZZZZ	6283	154870	23840	9491
04:06	ZZZZZZ	6230	153980	23915	9375
04:11	ZZZZZZ	6262	153510	23850	9447
04:16	ZZZZZZ	6268	154130	23914	9489
04:21	ZZZZZZ	6265	153810	23746	9480
04:27	ZZZZZZ	6286	153600	23911	9512
04:32	ZZZZZZ	6238	153350	23640	9395
04:37	ZZZZZZ	6502	161500	24373	10136
04:42	ZZZZZZ	5938	144050	23568	8479
04:47	MA46638-CCV18	6073	149590	23268	9074
04:52	MA46638-CCB18	6367	157310	23583	9965

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46638
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
04:57	ZZZZZZ	6541	159790	23794	10199
05:02	ZZZZZZ	6203	152620	23450	9325
05:07	ZZZZZZ	6479	157980	24651	9479
05:13	ZZZZZZ	6433	158350	24516	9478
05:18	ZZZZZZ	6266	156080	24191	9324
05:23	ZZZZZZ	6423	157170	24149	9528
05:28	ZZZZZZ	6555	157890	24503	9559
05:33	ZZZZZZ	6552	159700	24752	9546
05:38	ZZZZZZ	6524	159970	24568	9559
05:43	ZZZZZZ	6521	157430	24126	9631
05:49	MA46638-CCV19	6065	147830	22907	9039
05:54	MA46638-CCB19	6373	157150	23422	9941
05:59	ZZZZZZ	6759	165070	23952	9841
06:04	ZZZZZZ	6826	168370	26771	9860
06:09	ZZZZZZ	6719	165160	26316	9863
06:14	ZZZZZZ	6856	999999 !a	26781	9920
06:20	ZZZZZZ	6753	167710	26607	9950
06:25	ZZZZZZ	6872	168720	26929	9936
06:30	ZZZZZZ	6779	167470	26523	9953
06:35	ZZZZZZ	6861	167750	26879	9983
06:40	MA46638-CCV20	6288	157300	25258	9292
06:45	MA46638-CCB20	6618	165530	25325	10259
07:57	ZZZZZZ	6141	151110	24198	9013
08:02	ZZZZZZ	6292	154400	24771	9795
08:06	ZZZZZZ	6477	159580	24803	9877
08:13	ZZZZZZ	6775	165800	25936	9748
08:17	MA46638-CCV21	6292	154380	24541	9313
08:24	MA46638-CCB21	6589	164090	24814	10232

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			12:23		12:33		13:37		14:34	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	3.20	<200	11.1	<200	-1.30	<200	-1.70	<200
Antimony	6.0	1.4	-1.30	<6.0	-1.40	<6.0	-0.700	<6.0	-0.100	<6.0
Arsenic	3.0	1.5	0.300	<3.0	1.20	<3.0	1.10	<3.0	-0.400	<3.0
Barium	200	.5	-0.200	<200	0.200	<200	0.00	<200	0.200	<200
Beryllium	1.0	.1	0.100	<1.0	0.600	<1.0	0.300	<1.0	0.100	<1.0
Bismuth	20	1.8								
Boron	100	.8								
Cadmium	3.0	.3	0.100	<3.0	0.300	<3.0	0.400	<3.0	0.200	<3.0
Calcium	5000	3.9	1.80	<5000	11.7	<5000	5.10	<5000	0.300	<5000
Chromium	10	.3	0.100	<10	0.600	<10	0.100	<10	0.200	<10
Cobalt	50	.3	0.200	<50	0.500	<50	0.200	<50	0.200	<50
Copper	10	.6	0.600	<10	0.800	<10	0.200	<10	0.00	<10
Iron	100	2.6	2.50	<100	10.9	<100	4.70	<100	0.400	<100
Lead	3.0	1.6	0.200	<3.0	0.200	<3.0	0.700	<3.0	0.600	<3.0
Lithium	50	2.1								
Magnesium	5000	16	3.10	<5000	27.6	<5000	6.30	<5000	-0.900	<5000
Manganese	15	.1	0.100	<15	0.700	<15	0.300	<15	0.100	<15
Molybdenum	20	.4								
Nickel	10	.5	0.200	<10	0.300	<10	0.200	<10	0.300	<10
Phosphorus	50	1.9								
Potassium	10000	79	5.10	<10000	3.40	<10000	-141	<10000	-31.8	<10000
Selenium	10	3	-1.50	<10	-1.20	<10	-2.00	<10	-1.30	<10
Silicon	200	1.2								
Silver	10	.5	0.300	<10	0.00	<10	-0.100	<10	-0.300	<10
Sodium	10000	9.9	13.2	<10000	33.6	<10000	-14.2	<10000	-2.10	<10000
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	0.900	<10	1.00	<10	1.10	<10	0.700	<10
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	0.100	<50	0.400	<50	0.200	<50	0.200	<50
Zinc	20	.2	1.00	<20	1.20	<20	0.100	<20	-0.200	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			12:23		12:33		13:37		14:34	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			15:31		16:28		17:24		18:22	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	-4.50	<200	1.30	<200	4.30	<200	-5.40	<200
Antimony	6.0	1.4	-1.80	<6.0	0.700	<6.0	-0.600	<6.0	-0.600	<6.0
Arsenic	3.0	1.5	0.600	<3.0	1.20	<3.0	1.20	<3.0	0.300	<3.0
Barium	200	.5	0.100	<200	0.100	<200	0.600	<200	-0.200	<200
Beryllium	1.0	.1	0.100	<1.0	0.200	<1.0	0.400	<1.0	0.00	<1.0
Bismuth	20	1.8								
Boron	100	.8								
Cadmium	3.0	.3	0.300	<3.0	0.700	<3.0	0.400	<3.0	0.300	<3.0
Calcium	5000	3.9	-0.300	<5000	1.20	<5000	6.10	<5000	-4.50	<5000
Chromium	10	.3	0.100	<10	0.500	<10	0.400	<10	-0.100	<10
Cobalt	50	.3	0.300	<50	0.700	<50	0.600	<50	0.300	<50
Copper	10	.6	0.200	<10	0.500	<10	0.300	<10	0.00	<10
Iron	100	2.6	1.20	<100	4.90	<100	6.90	<100	-1.50	<100
Lead	3.0	1.6	0.700	<3.0	0.700	<3.0	0.600	<3.0	0.900	<3.0
Lithium	50	2.1								
Magnesium	5000	16	8.10	<5000	4.50	<5000	1.80	<5000	2.50	<5000
Manganese	15	.1	0.100	<15	0.300	<15	0.500	<15	0.00	<15
Molybdenum	20	.4								
Nickel	10	.5	0.00	<10	0.700	<10	0.500	<10	0.00	<10
Phosphorus	50	1.9								
Potassium	10000	79	-110	<10000	-30.4	<10000	36.3	<10000	-108	<10000
Selenium	10	3	-1.70	<10	-0.500	<10	-0.900	<10	-1.20	<10
Silicon	200	1.2								
Silver	10	.5	-0.200	<10	-0.100	<10	-0.300	<10	0.00	<10
Sodium	10000	9.9	-23.9	<10000	7.80	<10000	9.10	<10000	-15.6	<10000
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	0.900	<10	1.00	<10	-0.100	<10	0.700	<10
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	0.300	<50	0.500	<50	1.00	<50	0.00	<50
Zinc	20	.2	0.100	<20	0.300	<20	0.600	<20	-0.200	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			15:31		16:28		17:24		18:22	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			19:18		20:31		21:11		22:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	-3.50	<200	-10.8	<200	-4.50	<200	-0.700	<200
Antimony	6.0	1.4	0.200	<6.0	-1.50	<6.0	0.100	<6.0	-0.300	<6.0
Arsenic	3.0	1.5	-0.100	<3.0	0.400	<3.0	0.900	<3.0	-0.400	<3.0
Barium	200	.5	0.00	<200	-0.200	<200	-0.100	<200	-0.400	<200
Beryllium	1.0	.1	0.100	<1.0	0.00	<1.0	0.100	<1.0	0.00	<1.0
Bismuth	20	1.8								
Boron	100	.8								
Cadmium	3.0	.3	0.200	<3.0	0.100	<3.0	0.100	<3.0	0.00	<3.0
Calcium	5000	3.9	-0.600	<5000	-3.00	<5000	-2.30	<5000	-2.50	<5000
Chromium	10	.3	0.100	<10	-0.100	<10	0.00	<10	0.100	<10
Cobalt	50	.3	0.400	<50	0.100	<50	0.200	<50	0.100	<50
Copper	10	.6	0.100	<10	0.00	<10	0.500	<10	0.400	<10
Iron	100	2.6	0.500	<100	-0.100	<100	-0.300	<100	-1.00	<100
Lead	3.0	1.6	-0.500	<3.0	0.200	<3.0	0.200	<3.0	-0.100	<3.0
Lithium	50	2.1								
Magnesium	5000	16	0.00	<5000	-1.40	<5000	6.90	<5000	-2.30	<5000
Manganese	15	.1	0.200	<15	0.00	<15	0.00	<15	0.00	<15
Molybdenum	20	.4								
Nickel	10	.5	0.200	<10	-0.100	<10	-0.200	<10	0.00	<10
Phosphorus	50	1.9								
Potassium	10000	79	-20.7	<10000	-42.6	<10000	2.10	<10000	42.5	<10000
Selenium	10	3	-0.300	<10	-2.40	<10	-0.800	<10	-1.10	<10
Silicon	200	1.2								
Silver	10	.5	-0.300	<10	0.300	<10	0.200	<10	0.200	<10
Sodium	10000	9.9	-2.40	<10000	-7.80	<10000	-8.00	<10000	47.0	<10000
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	0.200	<10	-0.200	<10	0.200	<10	0.800	<10
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	0.600	<50	-0.100	<50	-0.200	<50	-0.100	<50
Zinc	20	.2	-0.200	<20	-0.400	<20	-0.400	<20	-0.500	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			19:18		20:31		21:11		22:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			22:54		23:55		00:51	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	14	-2.60	<200	-10.6	<200	-8.90	<200
Antimony	6.0	1.4	-0.400	<6.0	0.00	<6.0	-0.800	<6.0
Arsenic	3.0	1.5	-0.700	<3.0	0.00	<3.0	0.100	<3.0
Barium	200	.5	-0.200	<200	-0.300	<200	-0.100	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	0.00	<1.0
Bismuth	20	1.8						
Boron	100	.8						
Cadmium	3.0	.3	0.100	<3.0	0.100	<3.0	0.100	<3.0
Calcium	5000	3.9	-1.30	<5000	-2.10	<5000	-1.70	<5000
Chromium	10	.3	-0.100	<10	0.00	<10	0.00	<10
Cobalt	50	.3	0.100	<50	0.200	<50	0.00	<50
Copper	10	.6	0.300	<10	0.00	<10	0.400	<10
Iron	100	2.6	-0.400	<100	-1.20	<100	-0.400	<100
Lead	3.0	1.6	0.300	<3.0	-0.600	<3.0	-0.100	<3.0
Lithium	50	2.1						
Magnesium	5000	16	2.50	<5000	4.50	<5000	1.20	<5000
Manganese	15	.1	0.00	<15	0.00	<15	0.00	<15
Molybdenum	20	.4						
Nickel	10	.5	0.100	<10	0.100	<10	-0.100	<10
Phosphorus	50	1.9						
Potassium	10000	79	-8.80	<10000	50.4	<10000	30.0	<10000
Selenium	10	3	-0.400	<10	-1.30	<10	-0.500	<10
Silicon	200	1.2						
Silver	10	.5	0.500	<10	0.100	<10	0.00	<10
Sodium	10000	9.9	34.1	<10000	11.7	<10000	14.3	<10000
Strontium	10	.3						
Sulfur	50	3.5						
Thallium	10	1.3	0.200	<10	1.30	<10	0.400	<10
Tin	10	.7						
Titanium	10	.5						
Tungsten	50	1.7						
Vanadium	50	.5	0.00	<50	0.00	<50	0.200	<50
Zinc	20	.2	-0.400	<20	-0.300	<20	-0.400	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46638 Units: ug/l

Time:			22:54		23:55		00:51	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.3						

(*) Outside of QC limits
(anr) Analyte not requested

10.2.3 10

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		12:18			12:28			13:32	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38700	96.8	40000	39100	97.8	40000	39600	99.0
Antimony	2000	1930	96.5	2000	1960	98.0	2000	1960	98.0
Arsenic	2000	1940	97.0	2000	1950	97.5	2000	1970	98.5
Barium	2000	1990	99.5	2000	1990	99.5	2000	2010	100.5
Beryllium	2000	2060	103.0	2000	2060	103.0	2000	2090	104.5
Bismuth									
Boron									
Cadmium	2000	2000	100.0	2000	2000	100.0	2000	1990	99.5
Calcium	40000	38800	97.0	40000	39400	98.5	40000	39500	98.8
Chromium	2000	1980	99.0	2000	2010	100.5	2000	2020	101.0
Cobalt	2000	2050	102.5	2000	2020	101.0	2000	2020	101.0
Copper	2000	1970	98.5	2000	1990	99.5	2000	2020	101.0
Iron	40000	39100	97.8	40000	39500	98.8	40000	40400	101.0
Lead	2000	2000	100.0	2000	2020	101.0	2000	2030	101.5
Lithium									
Magnesium	40000	39400	98.5	40000	40100	100.3	40000	40100	100.3
Manganese	2000	2010	100.5	2000	2050	102.5	2000	2040	102.0
Molybdenum									
Nickel	2000	2010	100.5	2000	2020	101.0	2000	2050	102.5
Phosphorus									
Potassium	40000	38800	97.0	40000	38900	97.3	40000	39400	98.5
Selenium	2000	1970	98.5	2000	1990	99.5	2000	2010	100.5
Silicon									
Silver	250	238	95.2	250	242	96.8	250	244	97.6
Sodium	40000	39000	97.5	40000	39700	99.3	40000	40200	100.5
Strontium									
Sulfur									
Thallium	2000	2060	103.0	2000	2090	104.5	2000	2100	105.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	2000	100.0	2000	1980	99.0
Zinc	2000	1990	99.5	2000	2020	101.0	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		12:18			12:28			13:32	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		14:29			15:26			16:23	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	40000	100.0	40000	40000	100.0
Antimony	2000	1970	98.5	2000	1990	99.5	2000	1990	99.5
Arsenic	2000	1980	99.0	2000	2000	100.0	2000	2010	100.5
Barium	2000	2020	101.0	2000	2040	102.0	2000	2040	102.0
Beryllium	2000	2090	104.5	2000	2100	105.0	2000	2090	104.5
Bismuth									
Boron									
Cadmium	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Calcium	40000	39600	99.0	40000	39800	99.5	40000	39600	99.0
Chromium	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5
Cobalt	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Copper	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5
Iron	40000	40700	101.8	40000	41000	102.5	40000	40800	102.0
Lead	2000	2040	102.0	2000	2050	102.5	2000	2050	102.5
Lithium									
Magnesium	40000	40400	101.0	40000	40200	100.5	40000	40100	100.3
Manganese	2000	2040	102.0	2000	2050	102.5	2000	2050	102.5
Molybdenum									
Nickel	2000	2050	102.5	2000	2070	103.5	2000	2070	103.5
Phosphorus									
Potassium	40000	39400	98.5	40000	39800	99.5	40000	40100	100.3
Selenium	2000	2010	100.5	2000	2030	101.5	2000	2030	101.5
Silicon									
Silver	250	244	97.6	250	248	99.2	250	248	99.2
Sodium	40000	40400	101.0	40000	40600	101.5	40000	40900	102.3
Strontium									
Sulfur									
Thallium	2000	2100	105.0	2000	2120	106.0	2000	2110	105.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Zinc	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		14:29			15:26			16:23	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		17:19			18:17			19:13	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40100	100.3	40000	39900	99.8	40000	39700	99.3
Antimony	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0
Arsenic	2000	2020	101.0	2000	2040	102.0	2000	2020	101.0
Barium	2000	2050	102.5	2000	2050	102.5	2000	2010	100.5
Beryllium	2000	2100	105.0	2000	2090	104.5	2000	2090	104.5
Bismuth									
Boron									
Cadmium	2000	2030	101.5	2000	2010	100.5	2000	2020	101.0
Calcium	40000	39800	99.5	40000	39600	99.0	40000	39700	99.3
Chromium	2000	2040	102.0	2000	2040	102.0	2000	2020	101.0
Cobalt	2000	2040	102.0	2000	2040	102.0	2000	2030	101.5
Copper	2000	2040	102.0	2000	2040	102.0	2000	2000	100.0
Iron	40000	40900	102.3	40000	41200	103.0	40000	40700	101.8
Lead	2000	2060	103.0	2000	2050	102.5	2000	2040	102.0
Lithium									
Magnesium	40000	40200	100.5	40000	40100	100.3	40000	39800	99.5
Manganese	2000	2040	102.0	2000	2060	103.0	2000	2030	101.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2070	103.5	2000	2040	102.0
Phosphorus									
Potassium	40000	40200	100.5	40000	40000	100.0	40000	39800	99.5
Selenium	2000	2040	102.0	2000	2040	102.0	2000	2020	101.0
Silicon									
Silver	250	249	99.6	250	252	100.8	250	247	98.8
Sodium	40000	40900	102.3	40000	40900	102.3	40000	40100	100.3
Strontium									
Sulfur									
Thallium	2000	2110	105.5	2000	2120	106.0	2000	2100	105.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2000	100.0	2000	2010	100.5	2000	1980	99.0
Zinc	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		17:19			18:17			19:13	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		20:26			21:06			22:08	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39400	98.5	40000	39600	99.0
Antimony	2000	2040	102.0	2000	2060	103.0	2000	2050	102.5
Arsenic	2000	2050	102.5	2000	2060	103.0	2000	2050	102.5
Barium	2000	2040	102.0	2000	2030	101.5	2000	2040	102.0
Beryllium	2000	2090	104.5	2000	2090	104.5	2000	2090	104.5
Bismuth									
Boron									
Cadmium	2000	2040	102.0	2000	2060	103.0	2000	2050	102.5
Calcium	40000	39900	99.8	40000	39900	99.8	40000	40000	100.0
Chromium	2000	2040	102.0	2000	2040	102.0	2000	2040	102.0
Cobalt	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Copper	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0
Iron	40000	40700	101.8	40000	40500	101.3	40000	40500	101.3
Lead	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Lithium									
Magnesium	40000	40500	101.3	40000	40400	101.0	40000	40500	101.3
Manganese	2000	2080	104.0	2000	2100	105.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2070	103.5	2000	2060	103.0
Phosphorus									
Potassium	40000	39600	99.0	40000	39300	98.3	40000	39600	99.0
Selenium	2000	2040	102.0	2000	2050	102.5	2000	2040	102.0
Silicon									
Silver	250	251	100.4	250	251	100.4	250	251	100.4
Sodium	40000	40600	101.5	40000	40300	100.8	40000	40200	100.5
Strontium									
Sulfur									
Thallium	2000	2130	106.5	2000	2130	106.5	2000	2130	106.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2040	102.0	2000	2040	102.0
Zinc	2000	2050	102.5	2000	2070	103.5	2000	2060	103.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		20:26			21:06			22:08	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		22:49			23:50			00:46	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39100	97.8	40000	39900	99.8
Antimony	2000	2040	102.0	2000	2020	101.0	2000	2080	104.0
Arsenic	2000	2040	102.0	2000	2020	101.0	2000	2070	103.5
Barium	2000	2030	101.5	2000	2010	100.5	2000	2040	102.0
Beryllium	2000	2090	104.5	2000	2060	103.0	2000	2100	105.0
Bismuth									
Boron									
Cadmium	2000	2040	102.0	2000	2020	101.0	2000	2080	104.0
Calcium	40000	40000	100.0	40000	39500	98.8	40000	40100	100.3
Chromium	2000	2040	102.0	2000	2010	100.5	2000	2040	102.0
Cobalt	2000	2060	103.0	2000	2030	101.5	2000	2080	104.0
Copper	2000	2020	101.0	2000	2000	100.0	2000	2020	101.0
Iron	40000	40400	101.0	40000	39800	99.5	40000	40400	101.0
Lead	2000	2050	102.5	2000	2030	101.5	2000	2080	104.0
Lithium									
Magnesium	40000	40500	101.3	40000	39800	99.5	40000	40400	101.0
Manganese	2000	2070	103.5	2000	2050	102.5	2000	2060	103.0
Molybdenum									
Nickel	2000	2060	103.0	2000	2030	101.5	2000	2080	104.0
Phosphorus									
Potassium	40000	39600	99.0	40000	39300	98.3	40000	40000	100.0
Selenium	2000	2030	101.5	2000	2010	100.5	2000	2060	103.0
Silicon									
Silver	250	252	100.8	250	249	99.6	250	250	100.0
Sodium	40000	40300	100.8	40000	39900	99.8	40000	40500	101.3
Strontium									
Sulfur									
Thallium	2000	2120	106.0	2000	2100	105.0	2000	2140	107.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2040	102.0	2000	2020	101.0	2000	2030	101.5
Zinc	2000	2050	102.5	2000	2030	101.5	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46638 Units: ug/l

Time:		22:49			23:50			00:46	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

10.2.4
10

HIGH STANDARD CHECK SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46638 Units: ug/l

Time:		13:10			13:16	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				300000	308000	102.7
Antimony	8000	8050	100.6			
Arsenic	8000	7970	99.6			
Barium	8000	7990	99.9			
Beryllium	8000	8140	101.8			
Bismuth						
Boron						
Cadmium	8000	7870	98.4			
Calcium				200000	197000	98.5
Chromium	8000	8150	101.9			
Cobalt	8000	7940	99.3			
Copper	8000	7950	99.4			
Iron				200000	198000	99.0
Lead	8000	8130	101.6			
Lithium						
Magnesium				300000	304000	101.3
Manganese	8000	8010	100.1			
Molybdenum						
Nickel	8000	8030	100.4			
Phosphorus						
Potassium				200000	198000	99.0
Selenium	8000	8070	100.9			
Silicon						
Silver	625	621	99.4			
Sodium				200000	198000	99.0
Strontium						
Sulfur						
Thallium	8000	8350	104.4			
Tin						
Titanium						
Tungsten						
Vanadium	8000	7860	98.3			
Zinc	8000	8130	101.6			

HIGH STANDARD CHECK SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46638 Units: ug/l

Time:		13:10			13:16	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46638 Units: ug/l

Time:				12:49		13:43	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	194	97.0	91.2	91.2
Antimony	6.0	20	3.0	5.00	83.3	-1.30U	0.0* (a)
Arsenic	8.0	20	3.0	7.30	91.3	3.30	110.0
Barium	200		4.0	204	102.0	3.90	97.5
Beryllium	2.0		1.0	2.10	105.0	1.00	100.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	3.00	100.0	1.00	100.0
Calcium	5000	2000	1000	5100	102.0	1010	101.0
Chromium	10		2.0	10.5	105.0	2.20	110.0
Cobalt	50		3.0	51.4	102.8	3.20	106.7
Copper	10		2.0	9.80	98.0	0.300U	0.0* (a)
Iron	100	500		106	106.0		
Lead	3.0	20	2.5	3.40	113.3	0.00U	0.0* (a)
Lithium	50						
Magnesium	5000	2000	100	5280	105.6	108	108.0
Manganese	15		3.0	16.1	107.3	3.20	106.7
Molybdenum	20						
Nickel	10		4.0	10.4	104.0	4.10	102.5
Phosphorus	50						
Potassium	5000		2000	5160	103.2	1860	93.0
Selenium	10	20	5.0	9.40	94.0	2.10U	0.0* (a)
Silicon	200						
Silver	5.0		2.0	4.90	98.0	-0.300U	0.0* (a)
Sodium	5000		1000	5300	106.0	1030	103.0
Strontium	10						
Sulfur	50						
Thallium	10		2.0	9.60	96.0	2.60	130.0*(a
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	50.9	101.8	2.00	100.0
Zinc	20		10	20.6	103.0	10.1	101.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46638 Units: ug/l

Time:				12:49		13:43	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46638 Units: ug/l

Time:			13:00		13:05		16:48		16:53	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	496000	99.2	504000	100.8	505000	101.0	504000	100.8
Antimony		1000	-3.00		1060	106.0	-3.50		1060	106.0
Arsenic		1000	0.900		1070	107.0	0.900		1070	107.0
Barium		500	0.500		525	105.0	0.600		523	104.6
Beryllium		500	0.100		525	105.0	0.00		518	103.6
Bismuth		500	-3.90		505	101.0	-3.50		508	101.6
Boron		500	-0.200		490	98.0	-0.100		496	99.2
Cadmium		1000	-0.200		1020	102.0	0.00		1020	102.0
Calcium	400000	400000	377000	94.3	384000	96.0	378000	94.5	377000	94.3
Chromium		500	-0.600		496	99.2	-0.600		497	99.4
Cobalt		500	1.50		495	99.0	1.60		495	99.0
Copper		500	-4.10		512	102.4	-3.90		514	102.8
Iron	200000	200000	192000	96.0	201000	100.5	192000	96.0	199000	99.5
Lead		1000	2.40		968	96.8	2.70		975	97.5
Lithium		500	9.40		555	111.0	6.60		542	108.4
Magnesium	500000	500000	492000	98.4	509000	101.8	492000	98.4	501000	100.2
Manganese		500	1.70		519	103.8	1.60		518	103.6
Molybdenum		500	-0.200		473	94.6	0.400		470	94.0
Nickel		1000	-0.500		988	98.8	-0.500		993	99.3
Phosphorus		500	24.9		581	116.2	31.2		539	107.8
Potassium			106		57.3		102		158	
Selenium		1000	0.200		1070	107.0	2.00		1070	107.0
Silicon		500	3.30		498	99.6	1.90		501	100.2
Silver		1000	1.60		1070	107.0	1.30		1080	108.0
Sodium			56.9		67.5		15.5		55.2	
Strontium		500	0.100		545	109.0	0.100		540	108.0
Sulfur		500	-0.400		515	103.0	1.70		507	101.4
Thallium		1000	-1.70		1000	100.0	-1.20		991	99.1
Tin		500	-3.70		464	92.8	-4.40		462	92.4
Titanium		500	-1.10		499	99.8	-1.00		500	100.0
Tungsten		500	1.50		471	94.2	1.70		477	95.4
Vanadium		500	-1.70		497	99.4	-1.40		497	99.4
Zinc		1000	-1.60		964	96.4	-1.60		965	96.5

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050219M1.ICP Date Analyzed: 05/02/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46638 Units: ug/l

Time:			13:00		13:05		16:48		16:53	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	0.400		486	97.2	0.400		488	97.6

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:23	MA46646-STD1	1		STDA
11:28	MA46646-STD2	1		STDB
11:34	ZZZZZZ	1		
11:39	ZZZZZZ	1		
11:44	MA46646-ICV1	1		
11:50	MA46646-ICB1	1		
11:58	MA46646-ICCV1	1		
12:05	MA46646-CCB1	1		
12:13	MA46646-CRI1	1		
12:18	MA46646-CRID1	1		See rerun
12:23	MA46646-ICSA1	1		
12:28	MA46646-ICSAB1	1		
12:34	MA46646-HSTD1	1		
12:40	MA46646-HSTD2	1		
12:45	ZZZZZZ	1		
12:51	ZZZZZZ	1		
12:56	MA46646-CRID2	1		
13:01	ZZZZZZ	1		
13:06	MA46646-CCV1	1		
13:11	MA46646-CCB2	1		
13:16	ZZZZZZ	1		
13:21	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:32	JC87093-1	2		
13:37	JC87093-2	2		
13:42	JC87093-3	1		
13:47	JC87093-4	2		
13:53	JC87093-8	2		
13:58	JC87093-10	2		
14:03	MA46646-CCV2	1		
14:08	MA46646-CCB3	1		
14:13	JC87093-11	1		
---------->	Last reportable sample/prep for job JC87093			
14:18	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	14:23	ZZZZZZ	2		
	14:28	ZZZZZZ	1		
	14:33	ZZZZZZ	2		
	14:38	ZZZZZZ	2		
	14:43	MP14646-SD1	5		
	14:48	MP14646-S1	2		
	14:54	MP14646-S2	2		
	14:59	MA46646-CCV3	1		
	15:04	MA46646-CCB4	1		
	15:09	JC87116-1	2		(sample used for QC only; not part of login JC87093)
	15:14	MP14646-SD1	10		
	15:19	ZZZZZZ	1		
	15:24	ZZZZZZ	2		
	15:30	MP14684-B1	1		
	15:34	ZZZZZZ	2		
	15:40	ZZZZZZ	2		
	15:45	ZZZZZZ	1		
	15:50	ZZZZZZ	2		
	15:55	MA46646-CCV4	1		
	16:00	MA46646-CCB5	1		
	16:05	MP14776-MB1	1		
	16:11	MP14776-B1	1		
	16:16	ZZZZZZ	1		
	16:21	MP14772-B1	1		
	16:26	MP14772-MB1	1		
	16:31	MA46646-ICSA2	1		
	16:36	MA46646-ICSAB2	1		
	16:42	ZZZZZZ	1		
	16:47	MA46646-CCV5	1		
	16:52	MA46646-CCB6	1		
---------->	Last reportable CCB for job JC87093				
	16:57	MP14772-S1	1		Need PS for Sb
	17:02	MP14772-S2	1		Need PS for Sb
	17:08	JC87361-3	1		(sample used for QC only; not part of login JC87093)

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:13	MP14772-SD1	5		
17:18	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:44	MA46646-CCV6	1		
17:49	MA46646-CCB7	1		
17:54	ZZZZZZ	1		
18:00	ZZZZZZ	1		
18:05	ZZZZZZ	1		
18:11	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:21	MP14771-B1	5		
18:26	MP14771-MB1	5		
18:31	ZZZZZZ	5		
18:37	MA46646-CCV7	1		
18:42	MA46646-CCB8	1		
18:47	ZZZZZZ	5		
18:52	ZZZZZZ	5		
18:57	ZZZZZZ	5		
19:03	ZZZZZZ	5		
19:08	ZZZZZZ	5		
19:13	ZZZZZZ	5		
19:18	MP14771-S1	5		
19:23	MP14771-S2	5		
19:28	JC87206-2	5		(sample used for QC only; not part of login JC87093)
19:34	MA46646-CCV8	1		
19:39	MA46646-CCB9	1		
19:44	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:05	ZZZZZZ	1		
20:10	ZZZZZZ	1		
20:15	ZZZZZZ	1		
20:20	ZZZZZZ	1		
20:26	ZZZZZZ	1		
20:31	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:46	MA46646-CCV9	1		
20:51	MA46646-CCB10	1		
20:57	ZZZZZZ	3		
21:02	ZZZZZZ	3		
21:07	ZZZZZZ	2		
21:12	ZZZZZZ	1		
21:17	ZZZZZZ	2		
21:22	ZZZZZZ	5		
21:28	ZZZZZZ	3		
21:33	ZZZZZZ	2		
21:38	ZZZZZZ	1		
21:43	ZZZZZZ	10		
21:48	MA46646-CCV10	1		
21:54	MA46646-CCB11	1		
21:59	ZZZZZZ	2		
22:04	MP14771-SD1	25		
22:09	ZZZZZZ	5		
22:14	ZZZZZZ	5		
22:19	ZZZZZZ	5		
22:25	ZZZZZZ	5		
22:30	ZZZZZZ	5		
22:35	ZZZZZZ	1		
22:40	MP14677-PS1	1		
22:45	ZZZZZZ	2		
22:50	MA46646-CCV11	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:55	MA46646-CCB12	1		
23:01	ZZZZZZ	2		
23:06	ZZZZZZ	2		
23:11	ZZZZZZ	2		
23:16	ZZZZZZ	1		
23:21	ZZZZZZ	1		
23:26	ZZZZZZ	1		
23:31	MP14724-S1	5		
23:36	MP14724-S2	5		
23:41	JC87131-2	5		(sample used for QC only; not part of login JC87093)
23:46	MP14724-SD1	25		
23:51	MA46646-CCV12	1		
23:56	MA46646-CCB13	1		
00:01	MP14724-S3	5		
00:06	MP14724-S4	5		
00:11	JC87131-2F	5		(sample used for QC only; not part of login JC87093)
00:16	MP14724-SD2	25		
00:21	ZZZZZZ	1		
00:27	ZZZZZZ	1		
00:32	ZZZZZZ	1		
00:38	ZZZZZZ	1		
00:43	ZZZZZZ	1		
00:49	ZZZZZZ	1		
00:54	MA46646-CCV13	1		
00:59	MA46646-CCB14	1		
01:04	ZZZZZZ	1		
01:10	ZZZZZZ	1		
01:15	ZZZZZZ	1		
01:20	MP14776-S1	1		Needs PS for Sb
01:25	MP14776-S2	1		Needs PS for Sb
01:30	JC87355-1	1		(sample used for QC only; not part of login JC87093)
01:35	MP14776-SD1	5		
01:41	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:46	ZZZZZZ	1		
01:51	ZZZZZZ	1		
01:56	MA46646-CCV14	1		
02:01	MA46646-CCB15	1		
02:06	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:17	ZZZZZZ	1		
02:22	ZZZZZZ	1		
02:27	ZZZZZZ	1		
02:33	ZZZZZZ	1		
02:38	ZZZZZZ	1		
02:43	ZZZZZZ	1		
02:48	ZZZZZZ	1		
02:53	ZZZZZZ	1		
02:59	MA46646-CCV15	1		
03:04	MA46646-CCB16	1		
03:09	ZZZZZZ	1		
03:14	ZZZZZZ	1		
03:20	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:30	ZZZZZZ	1		
03:36	MP14763-B1	1		
03:41	ZZZZZZ	1		
03:46	MP14763-MB1	1		
03:51	MP14763-S1	1		Very high Na and Ca. In out
03:56	MP14763-S2	1		Very high Na and Ca. In out
04:01	MA46646-CCV16	1		
04:06	MA46646-CCB17	1		
04:11	JC87289-1	1		(sample used for QC only; not part of login JC87093)
04:17	MP14763-SD1	5		Very high Na and Ca. In out
04:22	ZZZZZZ	1		
04:28	ZZZZZZ	1		
04:33	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:39	ZZZZZZ	1		
04:44	ZZZZZZ	1		
04:49	ZZZZZZ	1		
04:54	ZZZZZZ	1		
04:59	MA46646-CCV17	1		
05:04	MA46646-CCB18	1		
05:09	ZZZZZZ	1		
05:14	ZZZZZZ	1		
05:20	ZZZZZZ	1		
05:25	ZZZZZZ	1		
05:30	ZZZZZZ	1		
05:35	ZZZZZZ	1		
05:40	ZZZZZZ	1		
05:45	ZZZZZZ	1		
05:50	ZZZZZZ	1		
05:55	MA46646-CCV18	1		
06:00	MA46646-CCB19	1		
06:06	MP14767-MB1	1		
06:11	MP14767-B1	1		
06:16	MP14767-S1	1		FE=300ppm
06:21	MP14767-S2	1		FE=300ppm
06:26	JC87239-4	1		(sample used for QC only; not part of login JC87093)
06:32	MP14767-SD1	5		FE=300ppm
06:37	ZZZZZZ	1		
06:42	ZZZZZZ	1		
06:47	ZZZZZZ	1		
06:53	MA46646-CCV19	1		Y3600 saturation
06:58	MA46646-CCB20	1		
07:03	ZZZZZZ	1		
07:08	ZZZZZZ	1		
07:14	ZZZZZZ	1		
07:19	ZZZZZZ	1		
07:24	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:30	ZZZZZZ	1		
07:35	ZZZZZZ	1		
07:40	ZZZZZZ	1		
07:46	ZZZZZZ	1		
07:51	MA46646-CCV20	1		
07:56	MA46646-CCB21	1		
08:01	ZZZZZZ	1		
08:06	ZZZZZZ	1		
08:12	ZZZZZZ	1		
08:17	ZZZZZZ	1		
08:22	ZZZZZZ	1		
08:27	ZZZZZZ	1		
08:32	ZZZZZZ	1		
08:38	ZZZZZZ	1		
08:43	ZZZZZZ	1		
08:48	MA46646-CCV21	1		
08:53	MA46646-CCB22	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn
11:34	ZZZZZZ	1											
11:39	ZZZZZZ	1											
11:44	MA46646-ICV1	1	X	X	X	X	X	X	X	X	X	X	X
11:50	MA46646-ICB1	1	X	X	X	X	X	X	X	X	X	X	X
11:58	MA46646-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X
12:05	MA46646-CCB1	1	X	X	X	X	X	X	X	X	X	X	X
12:13	MA46646-CRI1	1	X	X	X	X	X	X	X	X	X	X	X
12:18	MA46646-CRID1	1	See		rerun								
12:23	MA46646-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X
12:28	MA46646-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X
12:34	MA46646-HSTD1	1	X	X	X		X	X	X	X	X	X	X
12:40	MA46646-HSTD2	1				X							
12:45	ZZZZZZ	1											
12:51	ZZZZZZ	1											
12:56	MA46646-CRID2	1	X	X	X	X	X	X	X	X	X	X	X
13:01	ZZZZZZ	1											
13:06	MA46646-CCV1	1	X	X	X	X	X	X	X	X	X	X	X
13:11	MA46646-CCB2	1	X	X	X	X	X	X	X	X	X	X	X
13:16	ZZZZZZ	1											
13:21	ZZZZZZ	1											
13:27	ZZZZZZ	1											
13:32	JC87093-1	2	X		X	X	X	X	X	X	X		
13:37	JC87093-2	2	X		X	X	X	X	X	X	X		
13:42	JC87093-3	1		X	X			X		X		X	
13:47	JC87093-4	2	X		X	X	X	X	X	X			X
13:53	JC87093-8	2	X		X	X	X	X	X	X	X		
13:58	JC87093-10	2	X		X	X	X	X	X	X	X		
14:03	MA46646-CCV2	1	X	X	X	X	X	X	X	X	X	X	X
14:08	MA46646-CCB3	1	X	X	X	X	X	X	X	X	X	X	X
14:13	JC87093-11	1											X
14:18	ZZZZZZ	2											
14:23	ZZZZZZ	2											
14:28	ZZZZZZ	1											
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	
14:33	ZZZZZZ	2												
14:38	ZZZZZZ	2												
14:43	MP14646-SD1	5	X										X	
14:48	MP14646-S1	2					X							
14:54	MP14646-S2	2					X							
14:59	MA46646-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	
15:04	MA46646-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	
15:09	JC87116-1	2												(a)
15:14	MP14646-SD1	10					X							
15:19	ZZZZZZ	1												
15:24	ZZZZZZ	2												
15:30	MP14684-B1	1		X	X			X		X		X		
15:34	ZZZZZZ	2												
15:40	ZZZZZZ	2												
15:45	ZZZZZZ	1												
15:50	ZZZZZZ	2												
15:55	MA46646-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	
16:00	MA46646-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	
16:05	MP14776-MB1	1	X	X	X	X	X	X	X	X	X	X	X	
16:11	MP14776-B1	1	X	X	X	X	X	X	X	X	X	X	X	
16:16	ZZZZZZ	1												
16:21	MP14772-B1	1	X	X	X	X	X	X	X	X	X	X	X	
16:26	MP14772-MB1	1	X	X	X	X	X	X	X	X	X	X	X	
16:31	MA46646-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	
16:36	MA46646-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	
16:42	ZZZZZZ	1												
16:47	MA46646-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	
16:52	MA46646-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	
16:57	MP14772-S1	1	X	X	X	X	X	X	X	X	X	X	X	
17:02	MP14772-S2	1	X	X	X	X	X	X	X	X	X	X	X	
17:08	JC87361-3	1	X	X			X		X	X				(a)
17:13	MP14772-SD1	5	X	X	X	X	X	X	X	X	X	X	X	
17:18	ZZZZZZ	1												
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	
17:23	ZZZZZZ	1												
17:28	ZZZZZZ	1												
17:34	ZZZZZZ	1												
17:39	ZZZZZZ	1												
17:44	MA46646-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	
17:49	MA46646-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	
17:54	ZZZZZZ	1												
18:00	ZZZZZZ	1												
18:05	ZZZZZZ	1												
18:11	ZZZZZZ	1												
18:16	ZZZZZZ	1												
18:21	MP14771-B1	5	X	X			X		X	X				
18:26	MP14771-MB1	5	X	X			X		X	X				
18:31	ZZZZZZ	5												
18:37	MA46646-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	
18:42	MA46646-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	
18:47	ZZZZZZ	5												
18:52	ZZZZZZ	5												
18:57	ZZZZZZ	5												
19:03	ZZZZZZ	5												
19:08	ZZZZZZ	5												
19:13	ZZZZZZ	5												
19:18	MP14771-S1	5	X	X			X		X	X				
19:23	MP14771-S2	5	X	X			X		X	X				
19:28	JC87206-2	5	X	X			X		X	X				(a)
19:34	MA46646-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	
19:39	MA46646-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	
19:44	ZZZZZZ	1												
19:49	ZZZZZZ	1												
19:54	ZZZZZZ	1												
20:00	ZZZZZZ	1												
20:05	ZZZZZZ	1												
20:10	ZZZZZZ	1												
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn
20:15	ZZZZZZ	1											
20:20	ZZZZZZ	1											
20:26	ZZZZZZ	1											
20:31	ZZZZZZ	1											
20:36	ZZZZZZ	1											
20:41	ZZZZZZ	1											
20:46	MA46646-CCV9	1	X	X	X	X	X	X	X	X	X	X	X
20:51	MA46646-CCB10	1	X	X	X	X	X	X	X	X	X	X	X
20:57	ZZZZZZ	3											
21:02	ZZZZZZ	3											
21:07	ZZZZZZ	2											
21:12	ZZZZZZ	1											
21:17	ZZZZZZ	2											
21:22	ZZZZZZ	5											
21:28	ZZZZZZ	3											
21:33	ZZZZZZ	2											
21:38	ZZZZZZ	1											
21:43	ZZZZZZ	10											
21:48	MA46646-CCV10	1	X	X	X	X	X	X	X	X	X	X	X
21:54	MA46646-CCB11	1	X	X	X	X	X	X	X	X	X	X	X
21:59	ZZZZZZ	2											
22:04	MP14771-SD1	25	X	X			X		X	X			
22:09	ZZZZZZ	5											
22:14	ZZZZZZ	5											
22:19	ZZZZZZ	5											
22:25	ZZZZZZ	5											
22:30	ZZZZZZ	5											
22:35	ZZZZZZ	1											
22:40	MP14677-PS1	1											
22:45	ZZZZZZ	2											
22:50	MA46646-CCV11	1	X	X	X	X	X	X	X	X	X	X	X
22:55	MA46646-CCB12	1	X	X	X	X	X	X	X	X	X	X	X
23:01	ZZZZZZ	2											
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	
23:06	ZZZZZZ	2												
23:11	ZZZZZZ	2												
23:16	ZZZZZZ	1												
23:21	ZZZZZZ	1												
23:26	ZZZZZZ	1												
23:31	MP14724-S1	5												
23:36	MP14724-S2	5												
23:41	JC87131-2	5												(a)
23:46	MP14724-SD1	25												
23:51	MA46646-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	
23:56	MA46646-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	
00:01	MP14724-S3	5												
00:06	MP14724-S4	5												
00:11	JC87131-2F	5												(a)
00:16	MP14724-SD2	25												
00:21	ZZZZZZ	1												
00:27	ZZZZZZ	1												
00:32	ZZZZZZ	1												
00:38	ZZZZZZ	1												
00:43	ZZZZZZ	1												
00:49	ZZZZZZ	1												
00:54	MA46646-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	
00:59	MA46646-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	
01:04	ZZZZZZ	1												
01:10	ZZZZZZ	1												
01:15	ZZZZZZ	1												
01:20	MP14776-S1	1	X	X			X					X	X	
01:25	MP14776-S2	1	X	X			X					X	X	
01:30	JC87355-1	1	X	X			X					X	X	(a)
01:35	MP14776-SD1	5	X	X			X					X	X	
01:41	ZZZZZZ	1												
01:46	ZZZZZZ	1												
01:51	ZZZZZZ	1												
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	
01:56	MA46646-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	
02:01	MA46646-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	
02:06	ZZZZZZ	1												
02:11	ZZZZZZ	1												
02:17	ZZZZZZ	1												
02:22	ZZZZZZ	1												
02:27	ZZZZZZ	1												
02:33	ZZZZZZ	1												
02:38	ZZZZZZ	1												
02:43	ZZZZZZ	1												
02:48	ZZZZZZ	1												
02:53	ZZZZZZ	1												
02:59	MA46646-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	
03:04	MA46646-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	
03:09	ZZZZZZ	1												
03:14	ZZZZZZ	1												
03:20	ZZZZZZ	1												
03:25	ZZZZZZ	1												
03:30	ZZZZZZ	1												
03:36	MP14763-B1	1	X	X	X	X	X	X	X	X	X	X	X	
03:41	ZZZZZZ	1												
03:46	MP14763-MB1	1	X	X	X	X	X	X	X	X	X	X	X	
03:51	MP14763-S1	1		X	X	X		X		X		X	X	
03:56	MP14763-S2	1		X	X	X		X		X		X	X	
04:01	MA46646-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	
04:06	MA46646-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	
04:11	JC87289-1	1		X	X	X		X		X		X	X	(a)
04:17	MP14763-SD1	5		X	X	X		X		X		X	X	
04:22	ZZZZZZ	1												
04:28	ZZZZZZ	1												
04:33	ZZZZZZ	1												
04:39	ZZZZZZ	1												
04:44	ZZZZZZ	1												
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn
04:49	ZZZZZZ	1											
04:54	ZZZZZZ	1											
04:59	MA46646-CCV17	1	X	X	X	X	X	X	X	X	X	X	X
05:04	MA46646-CCB18	1	X	X	X	X	X	X	X	X	X	X	X
05:09	ZZZZZZ	1											
05:14	ZZZZZZ	1											
05:20	ZZZZZZ	1											
05:25	ZZZZZZ	1											
05:30	ZZZZZZ	1											
05:35	ZZZZZZ	1											
05:40	ZZZZZZ	1											
05:45	ZZZZZZ	1											
05:50	ZZZZZZ	1											
05:55	MA46646-CCV18	1	X	X	X	X	X	X	X	X	X	X	X
06:00	MA46646-CCB19	1	X	X	X	X	X	X	X	X	X	X	X
06:06	MP14767-MB1	1	X										
06:11	MP14767-B1	1	X										
06:16	MP14767-S1	1	FE=300ppm										
06:21	MP14767-S2	1	FE=300ppm										
06:26	JC87239-4	1	FE=300ppm										
06:32	MP14767-SD1	5	FE=300ppm										
06:37	ZZZZZZ	1											
06:42	ZZZZZZ	1											
06:47	ZZZZZZ	1											
06:53	MA46646-CCV19	1	X	X	X	X	X	X	X	X	X	X	X
06:58	MA46646-CCB20	1	X	X	X	X	X	X	X	X	X	X	X
07:03	ZZZZZZ	1											
07:08	ZZZZZZ	1											
07:14	ZZZZZZ	1											
07:19	ZZZZZZ	1											
07:24	ZZZZZZ	1											
07:30	ZZZZZZ	1											
07:35	ZZZZZZ	1											
		Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Element: Dilution	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn
07:40	ZZZZZZ	1											
07:46	ZZZZZZ	1											
07:51	MA46646-CCV20	1	X	X	X	X	X	X	X	X	X	X	X
07:56	MA46646-CCB21	1	X	X	X	X	X	X	X	X	X	X	X
08:01	ZZZZZZ	1											
08:06	ZZZZZZ	1											
08:12	ZZZZZZ	1											
08:17	ZZZZZZ	1											
08:22	ZZZZZZ	1											
08:27	ZZZZZZ	1											
08:32	ZZZZZZ	1											
08:38	ZZZZZZ	1											
08:43	ZZZZZZ	1											
08:48	MA46646-CCV21	1	X	X	X	X	X	X	X	X	X	X	X
08:53	MA46646-CCB22	1	X	X	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login JC87093.

Element:	As	Cr	Cu	Fe	Pb	Mn	Se	Ag	Tl	V	Zn

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:23	MA46646-STD1	6461 R	151250 R	27805 R	10109 R
11:28	MA46646-STD2	6115	140810	27371	9005
11:34	ZZZZZZ	6258	144990	27492	9219
11:39	ZZZZZZ	6520	152870	27774	10168
11:44	MA46646-ICV1	6239	143770	27470	9192
11:50	MA46646-ICB1	6489	151100	27561	10119
11:58	MA46646-ICCV1	6229	143600	27442	9159
12:05	MA46646-CCB1	6491	151860	27825	10093
12:13	MA46646-CRI1	6304	146820	27365	9638
12:18	MA46646-CRID1	No results reported for the elements associated with this internal standard.			
12:23	MA46646-ICSA1	5834	131160	26451	8360
12:28	MA46646-ICSAB1	5825	131390	26569	8381
12:34	MA46646-HSTD1	6230	147530	27632	9743
12:40	MA46646-HSTD2	5862	133410	26571	8356
12:45	ZZZZZZ	6394	149040	27494	10032
12:51	ZZZZZZ	6278	152070	27773	10022
12:56	MA46646-CRID2	6474	151650	27903	10019
13:01	ZZZZZZ	6516	152380	27904	10118
13:06	MA46646-CCV1	6211	143970	27218	9112
13:11	MA46646-CCB2	6474	151490	27605	10058
13:16	ZZZZZZ	6623	152550	28138	10247
13:21	ZZZZZZ	6669	153120	29459	9582
13:27	ZZZZZZ	6508	152300	27999	10109
13:32	JC87093-1	6564	150910	28778	9686
13:37	JC87093-2	6614	152560	29040	9603
13:42	JC87093-3	6543	152060	28918	9665
13:47	JC87093-4	6700	152920	29046	9612
13:53	JC87093-8	6445	148350	28025	9784
13:58	JC87093-10	6815	154940	30028	9454
14:03	MA46646-CCV2	6220	142340	27141	9087
14:08	MA46646-CCB3	6442	150500	27383	9989
14:13	JC87093-11	6650	153980	29080	9635
14:18	ZZZZZZ	6479	147680	28271	9582

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:23	ZZZZZZ	6542	149230	28479	9563
14:28	ZZZZZZ	6535	149490	28591	9453
14:33	ZZZZZZ	6469	148290	28299	9469
14:38	ZZZZZZ	6502	147110	28255	9503
14:43	MP14646-SD1	6342	147440	27997	9337
14:48	MP14646-S1	6162	141130	27509	8836
14:54	MP14646-S2	6170	141780	27638	8816
14:59	MA46646-CCV3	6179	143330	27318	9015
15:04	MA46646-CCB4	6438	152130	27852	9950
15:09	JC87116-1	6136	142010	27678	8868
15:14	MP14646-SD1	6485	148300	28073	9693
15:19	ZZZZZZ	6545	152980	28194	10235
15:24	ZZZZZZ	6584	151920	28154	9819
15:30	MP14684-B1	6332	147090	27980	9279
15:34	ZZZZZZ	6238	144310	28241	9137
15:40	ZZZZZZ	6278	145070	27731	9183
15:45	ZZZZZZ	6551	153220	28353	10089
15:50	ZZZZZZ	6473	148890	28178	9451
15:55	MA46646-CCV4	6153	143960	27393	8970
16:00	MA46646-CCB5	6472	151670	27748	9976
16:05	MP14776-MB1	6517	151920	28016	10032
16:11	MP14776-B1	6352	146840	27894	9303
16:16	ZZZZZZ	No results reported for the elements associated with this internal standard.			
16:21	MP14772-B1	6324	145670	27578	9269
16:26	MP14772-MB1	6505	153180	28199	10027
16:31	MA46646-ICSA2	5825	131170	26501	8277
16:36	MA46646-ICSAB2	5781	132580	26671	8268
16:42	ZZZZZZ	6724	154720	29501	9351
16:47	MA46646-CCV5	6201	143770	27568	9037
16:52	MA46646-CCB6	6496	150760	27667	10028
16:57	MP14772-S1	6418	146510	28634	9108
17:02	MP14772-S2	6410	146020	28634	9085
17:08	JC87361-3	6519	148750	28976	9339

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:13	MP14772-SD1	6443	149510	27989	9635
17:18	ZZZZZZ	6174	142120	28673	8546
17:23	ZZZZZZ	6323	149170	29064	9250
17:28	ZZZZZZ	5936	137670	27595	8275
17:34	ZZZZZZ	6218	143660	28873	8515
17:39	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:44	MA46646-CCV6	6189	142120	27450	9014
17:49	MA46646-CCB7	6366	149690	27460	9827
17:54	ZZZZZZ	6075	139480	28066	8276
18:00	ZZZZZZ	6197	144230	28382	9224
18:05	ZZZZZZ	6237	145720	28402	8653
18:11	ZZZZZZ	No results reported for the elements associated with this internal standard.			
18:16	ZZZZZZ	6078	140970	27758	8471
18:21	MP14771-B1	6153	141600	27690	8728
18:26	MP14771-MB1	6087	139410	27472	8728
18:31	ZZZZZZ	6132	141320	27819	8749
18:37	MA46646-CCV7	6212	142150	27462	9003
18:42	MA46646-CCB8	6476	151230	27769	9946
18:47	ZZZZZZ	6111	139980	27349	8721
18:52	ZZZZZZ	5897	136340	27002	8427
18:57	ZZZZZZ	6142	140920	27681	8775
19:03	ZZZZZZ	6070	140260	27707	8632
19:08	ZZZZZZ	6125	139630	27555	8696
19:13	ZZZZZZ	6118	140530	27557	8744
19:18	MP14771-S1	6104	140280	27682	8770
19:23	MP14771-S2	6111	139840	27624	8779
19:28	JC87206-2	6099	135890	27484	8776
19:34	MA46646-CCV8	6187	142480	27311	8978
19:39	MA46646-CCB9	6435	150910	27921	9900
19:44	ZZZZZZ	6442	150560	27881	9870
19:49	ZZZZZZ	6412	150330	27680	9838
19:54	ZZZZZZ	6393	150610	27826	9854
20:00	ZZZZZZ	6438	152890	27943	9877

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:05	ZZZZZZ	6494	151040	27889	9926
20:10	ZZZZZZ	6427	150790	27605	9848
20:15	ZZZZZZ	6428	150230	27655	9876
20:20	ZZZZZZ	6428	150660	27769	9971
20:26	ZZZZZZ	6512	136540	28331	8956
20:31	ZZZZZZ	5905	136950	27080	8549
20:36	ZZZZZZ	6488	151210	27850	9958
20:41	ZZZZZZ	6440	148960	27677	9897
20:46	MA46646-CCV9	6188	142390	27121	8975
20:51	MA46646-CCB10	6381	151110	27253	9825
20:57	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:02	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:07	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:12	ZZZZZZ	6173	143020	28858	8556
21:17	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:22	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:28	ZZZZZZ	6291	145660	27871	9332
21:33	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:38	ZZZZZZ	6184	142170	28920	8547
21:43	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:48	MA46646-CCV10	6172	141390	27203	8941
21:54	MA46646-CCB11	6410	151140	27631	9853
21:59	ZZZZZZ	No results reported for the elements associated with this internal standard.			
22:04	MP14771-SD1	6324	144830	27280	9375
22:09	ZZZZZZ	6068	138930	27297	8670
22:14	ZZZZZZ	6118	140950	27679	8774
22:19	ZZZZZZ	6104	138870	27506	8663
22:25	ZZZZZZ	6049	138730	27394	8588
22:30	ZZZZZZ	6141	141210	27787	8773
22:35	ZZZZZZ	6501	152460	28108	9953
22:40	MP14677-PS1	6407	146630	28468	9164
22:45	ZZZZZZ	6528	151130	28372	9601
22:50	MA46646-CCV11	6204	141960	27371	8987

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:55	MA46646-CCB12	6438	150990	27672	9885
23:01	ZZZZZZ	6480	999999 !a	28029	9498
23:06	ZZZZZZ	6478	148680	28120	9499
23:11	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:16	ZZZZZZ	6510	152890	28055	9975
23:21	ZZZZZZ	6527	152870	28152	9989
23:26	ZZZZZZ	6319	146520	27975	9225
23:31	MP14724-S1	6193	143900	27461	8999
23:36	MP14724-S2	6217	144240	27571	9034
23:41	JC87131-2	6220	144670	27484	9084
23:46	MP14724-SD1	6350	146150	27256	9537
23:51	MA46646-CCV12	6190	142230	27076	8950
23:56	MA46646-CCB13	6425	150060	27487	9851
00:01	MP14724-S3	6183	143270	27331	8993
00:06	MP14724-S4	6199	143290	27376	9014
00:11	JC87131-2F	6208	144180	27340	9073
00:16	MP14724-SD2	6327	147870	27387	9518
00:21	ZZZZZZ	6134	138390	28030	8213
00:27	ZZZZZZ	6037	139400	28318	8131
00:32	ZZZZZZ	6513	149870	30260	8712
00:38	ZZZZZZ	6678	148640	29937	9206
00:43	ZZZZZZ	7129	158670	31633	9047
00:49	ZZZZZZ	6526	150890	29634	8961
00:54	MA46646-CCV13	6159	141080	27076	8922
00:59	MA46646-CCB14	6431	152170	27548	9876
01:04	ZZZZZZ	6775	153130	29156	9509
01:10	ZZZZZZ	6528	153680	28199	9965
01:15	ZZZZZZ	6318	146260	27949	9184
01:20	MP14776-S1	6371	147050	28428	9084
01:25	MP14776-S2	6374	147830	28650	9117
01:30	JC87355-1	6418	149010	29089	8933
01:35	MP14776-SD1	6425	148130	27676	9428
01:41	ZZZZZZ	6571	151970	29017	9213

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	
01:46	ZZZZZZ	6417	148310	28069	9299	
01:51	ZZZZZZ	6582	149970	28811	9248	
01:56	MA46646-CCV14	6173	143160	27101	8902	
02:01	MA46646-CCB15	6401	150020	27362	9784	
02:06	ZZZZZZ	6595	150350	28406	9364	
02:11	ZZZZZZ	6599	150600	28926	9192	
02:17	ZZZZZZ	6505	150220	28433	9282	
02:22	ZZZZZZ	6584	152760	29115	9269	
02:27	ZZZZZZ	6529	149750	28811	9120	
02:33	ZZZZZZ	6612	151090	28789	9252	
02:38	ZZZZZZ	6545	150520	28559	9290	
02:43	ZZZZZZ	6619	152070	29211	9127	
02:48	ZZZZZZ	6635	151330	29221	9200	
02:53	ZZZZZZ	6561	151490	28763	9212	
02:59	MA46646-CCV15	6150	141920	27014	8851	
03:04	MA46646-CCB16	6402	150100	27549	9769	
03:09	ZZZZZZ	6495	150600	28970	9363	
03:14	ZZZZZZ	6575	150320	28888	9401	
03:20	ZZZZZZ	6449	149060	28495	9295	
03:25	ZZZZZZ	6303	148290	28607	9089	
03:30	ZZZZZZ	6379	146790	28780	8584	
03:36	MP14763-B1	6301	146030	27806	9133	
03:41	ZZZZZZ	6352	150310	27613	9704	
03:46	MP14763-MB1	6484	151850	27929	9869	
03:51	MP14763-S1	4928	116340	25037	6942	!a
03:56	MP14763-S2	4930	117090	25350	6935	!a
04:01	MA46646-CCV16	6141	138110	27002	8818	
04:06	MA46646-CCB17	6484	151590	27697	9853	
04:11	JC87289-1	4949	116590	25416	6922	!a
04:17	MP14763-SD1	5695	131980	26599	7967	
04:22	ZZZZZZ	5321	125430	26266	7325	
04:28	ZZZZZZ	5330	124160	26300	7339	
04:33	ZZZZZZ	5455	126360	26530	7514	

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:39	ZZZZZZ	6338	147470	27936	9220
04:44	ZZZZZZ	6201	143200	28011	8996
04:49	ZZZZZZ	6312	148630	27675	9150
04:54	ZZZZZZ	6345	148200	27584	9401
04:59	MA46646-CCV17	6158	141000	27194	8825
05:04	MA46646-CCB18	6404	150220	27576	9746
05:09	ZZZZZZ	6160	144470	27656	8872
05:14	ZZZZZZ	6151	144960	27664	8879
05:20	ZZZZZZ	6276	146450	27771	9107
05:25	ZZZZZZ	6244	145920	27622	9007
05:30	ZZZZZZ	6340	148850	27927	9251
05:35	ZZZZZZ	6120	142520	27417	8712
05:40	ZZZZZZ	6327	147270	28015	9183
05:45	ZZZZZZ	6208	145080	27481	8983
05:50	ZZZZZZ	6522	153330	28081	9893
05:55	MA46646-CCV18	6138	141170	26975	8821
06:00	MA46646-CCB19	6405	150410	27364	9745
06:06	MP14767-MB1	6482	152210	27927	9871
06:11	MP14767-B1	6260	146470	27535	9085
06:16	MP14767-S1	No results reported for the elements associated with this internal standard.			
06:21	MP14767-S2	No results reported for the elements associated with this internal standard.			
06:26	JC87239-4	No results reported for the elements associated with this internal standard.			
06:32	MP14767-SD1	No results reported for the elements associated with this internal standard.			
06:37	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:42	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:47	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:53	MA46646-CCV19	6216	143300	27491	8925
06:58	MA46646-CCB20	6403	999999 !a	27427	9760
07:03	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:08	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:14	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:19	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:24	ZZZZZZ	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
Analyst: MET Run ID: MA46646
Parameters: As,Cr,Cu,Fe,Pb,Mn,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:30	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:35	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:40	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:46	ZZZZZZ	No results reported for the elements associated with this internal standard.			
07:51	MA46646-CCV20	6098	141180	26903	8769
07:56	MA46646-CCB21	6412	150640	27568	9752
08:01	ZZZZZZ	No results reported for the elements associated with this internal standard.			
08:06	ZZZZZZ	No results reported for the elements associated with this internal standard.			
08:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
08:17	ZZZZZZ	No results reported for the elements associated with this internal standard.			
08:22	ZZZZZZ	6822	153830	29729	9239
08:27	ZZZZZZ	7544	168140	32826	9284
08:32	ZZZZZZ	No results reported for the elements associated with this internal standard.			
08:38	ZZZZZZ	6815	154680	29834	9186
08:43	ZZZZZZ	6667	154010	29453	9141
08:48	MA46646-CCV21	6123	141500	27019	8801
08:53	MA46646-CCB22	6361	149240	27656	9691

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46646 Units: ug/l

Time:			11:50		12:05		13:11		14:08	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1.4	anr							
Arsenic	3.0	1.5	0.800	<3.0	0.300	<3.0	1.00	<3.0	0.100	<3.0
Barium	200	.5	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.8								
Boron	100	.8	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	3.9	anr							
Chromium	10	.3	0.100	<10	0.700	<10	0.500	<10	0.200	<10
Cobalt	50	.3	anr							
Copper	10	.6	0.500	<10	0.900	<10	0.800	<10	0.500	<10
Iron	100	2.6	1.70	<100	10.5	<100	9.90	<100	2.20	<100
Lead	3.0	1.6	0.600	<3.0	0.100	<3.0	-0.400	<3.0	0.00	<3.0
Lithium	50	2.1								
Magnesium	5000	16	anr							
Manganese	15	.1	0.200	<15	0.600	<15	0.400	<15	0.200	<15
Molybdenum	20	.4								
Nickel	10	.5	anr							
Phosphorus	50	1.9								
Potassium	10000	79	anr							
Selenium	10	3	0.500	<10	1.10	<10	1.30	<10	1.20	<10
Silicon	200	1.2								
Silver	10	.5	-0.100	<10	0.00	<10	-0.300	<10	-0.100	<10
Sodium	10000	9.9	anr							
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	0.400	<10	1.40	<10	1.30	<10	0.800	<10
Tin	10	.7	anr							
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	0.200	<50	0.200	<50	0.200	<50	0.00	<50
Zinc	20	.2	-0.200	<20	0.200	<20	0.00	<20	-0.100	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46646 Units: ug/l

Time:			11:50		12:05		13:11		14:08	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46646 Units: ug/l

Time:			15:04		16:00		16:52	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	14	anr					
Antimony	6.0	1.4	anr					
Arsenic	3.0	1.5	0.500	<3.0	-0.700	<3.0	0.100	<3.0
Barium	200	.5	anr					
Beryllium	1.0	.1	anr					
Bismuth	20	1.8						
Boron	100	.8	anr					
Cadmium	3.0	.3	anr					
Calcium	5000	3.9	anr					
Chromium	10	.3	0.300	<10	0.400	<10	0.200	<10
Cobalt	50	.3	anr					
Copper	10	.6	0.700	<10	1.10	<10	0.500	<10
Iron	100	2.6	4.00	<100	7.20	<100	1.40	<100
Lead	3.0	1.6	0.300	<3.0	0.500	<3.0	-0.900	<3.0
Lithium	50	2.1						
Magnesium	5000	16	anr					
Manganese	15	.1	0.300	<15	0.500	<15	0.100	<15
Molybdenum	20	.4						
Nickel	10	.5	anr					
Phosphorus	50	1.9						
Potassium	10000	79	anr					
Selenium	10	3	1.60	<10	1.00	<10	0.00	<10
Silicon	200	1.2						
Silver	10	.5	0.00	<10	0.00	<10	-0.100	<10
Sodium	10000	9.9	anr					
Strontium	10	.3						
Sulfur	50	3.5						
Thallium	10	1.3	0.700	<10	0.800	<10	0.200	<10
Tin	10	.7	anr					
Titanium	10	.5						
Tungsten	50	1.7						
Vanadium	50	.5	-0.100	<50	-0.200	<50	-0.100	<50
Zinc	20	.2	-0.100	<20	0.300	<20	-0.300	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46646 Units: ug/l

Time:			15:04		16:00		16:52	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.3						

(*) Outside of QC limits
(anr) Analyte not requested

10.3.3 10

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46646 Units: ug/l

Time:		11:58	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	2000	1980	99.0
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	2000	2000	100.0
Cobalt	anr		
Copper	2000	1990	99.5
Iron	40000	40300	100.8
Lead	2000	2020	101.0
Lithium			
Magnesium	anr		
Manganese	2000	2050	102.5
Molybdenum			
Nickel	anr		
Phosphorus			
Potassium	anr		
Selenium	2000	2000	100.0
Silicon			
Silver	250	247	98.8
Sodium	anr		
Strontium			
Sulfur			
Thallium	2000	2070	103.5
Tin	anr		
Titanium			
Tungsten			
Vanadium	2000	1990	99.5
Zinc	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46646 Units: ug/l

Time:		11:58	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46646 Units: ug/l

Time:		11:44			13:06			14:03	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1950	97.5	2000	1980	99.0	2000	2000	100.0
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	2000	1970	98.5	2000	1990	99.5	2000	2020	101.0
Cobalt	anr								
Copper	2000	1980	99.0	2000	1990	99.5	2000	2020	101.0
Iron	40000	39800	99.5	40000	40600	101.5	40000	41100	102.8
Lead	2000	1990	99.5	2000	2020	101.0	2000	2040	102.0
Lithium									
Magnesium	anr								
Manganese	2000	2060	103.0	2000	2040	102.0	2000	2070	103.5
Molybdenum									
Nickel	anr								
Phosphorus									
Potassium	anr								
Selenium	2000	1970	98.5	2000	1990	99.5	2000	2020	101.0
Silicon									
Silver	250	240	96.0	250	246	98.4	250	250	100.0
Sodium	anr								
Strontium									
Sulfur									
Thallium	2000	2050	102.5	2000	2060	103.0	2000	2100	105.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	1990	99.5	2000	1990	99.5	2000	2000	100.0
Zinc	2000	1990	99.5	2000	2000	100.0	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46646 Units: ug/l

Time:		11:44			13:06			14:03	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46646 Units: ug/l

Time:		14:59			15:55			16:47	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2020	101.0	2000	2020	101.0	2000	1980	99.0
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	2000	2020	101.0	2000	2000	100.0	2000	1990	99.5
Cobalt	anr								
Copper	2000	2030	101.5	2000	2010	100.5	2000	1990	99.5
Iron	40000	41400	103.5	40000	40900	102.3	40000	40600	101.5
Lead	2000	2050	102.5	2000	2050	102.5	2000	2030	101.5
Lithium									
Magnesium	anr								
Manganese	2000	2070	103.5	2000	2050	102.5	2000	2020	101.0
Molybdenum									
Nickel	anr								
Phosphorus									
Potassium	anr								
Selenium	2000	2040	102.0	2000	2040	102.0	2000	2010	100.5
Silicon									
Silver	250	251	100.4	250	248	99.2	250	246	98.4
Sodium	anr								
Strontium									
Sulfur									
Thallium	2000	2120	106.0	2000	2110	105.5	2000	2080	104.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	1980	99.0	2000	1970	98.5
Zinc	2000	2020	101.0	2000	2020	101.0	2000	1990	99.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46646 Units: ug/l

Time:		14:59			15:55			16:47	
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

HIGH STANDARD CHECK SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46646 Units: ug/l

Time:		12:34			12:40	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	anr					
Arsenic	8000	8020	100.3			
Barium	anr					
Beryllium	anr					
Bismuth						
Boron	anr					
Cadmium	anr					
Calcium						
Chromium	8000	8130	101.6			
Cobalt	anr					
Copper	8000	7900	98.8			
Iron				200000	199000	99.5
Lead	8000	8100	101.3			
Lithium						
Magnesium						
Manganese	8000	8120	101.5			
Molybdenum						
Nickel	anr					
Phosphorus						
Potassium						
Selenium	8000	8070	100.9			
Silicon						
Silver	625	626	100.2			
Sodium						
Strontium						
Sulfur						
Thallium	8000	8230	102.9			
Tin	anr					
Titanium						
Tungsten						
Vanadium	8000	8000	100.0			
Zinc	8000	8220	102.8			

HIGH STANDARD CHECK SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46646 Units: ug/l

Time:		12:34			12:40	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46646 Units: ug/l

Time:				12:13		12:56	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0	anr			
Arsenic	8.0	20	3.0	7.90	98.8	3.00	100.0
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	10.7	107.0	2.50	125.0*(a
Cobalt	50		3.0	anr			
Copper	10		2.0	9.90	99.0	0.600	30.0*(a)
Iron	100	500		110	110.0		
Lead	3.0	20	2.5	2.50	83.3	0.00U	0.0* (a)
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	16.5	110.0	3.20	106.7
Molybdenum	20						
Nickel	10		4.0	anr			
Phosphorus	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	9.00	90.0	3.60	72.0*(a)
Silicon	200						
Silver	5.0		2.0	4.90	98.0	-0.100U	0.0* (a)
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	10.4	104.0	3.80	190.0*(a
Tin	10			anr			
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	51.8	103.6	1.50	75.0*(a)
Zinc	20		10	20.9	104.5	10.2	102.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46646 Units: ug/l

Time:				12:13		12:56	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46646 Units: ug/l

Time:			12:23		12:28		16:31		16:36	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	509000	101.8	503000	100.6	509000	101.8	499000	99.8
Antimony		1000	1.00		1050	105.0	0.400		1060	106.0
Arsenic		1000	-2.60		1050	105.0	-0.400		1060	106.0
Barium		500	0.800		507	101.4	0.700		511	102.2
Beryllium		500	0.100		498	99.6	0.00		498	99.6
Bismuth		500	-1.70		505	101.0	-2.90		514	102.8
Boron		500	0.100		484	96.8	0.400		492	98.4
Cadmium		1000	0.00		1010	101.0	-0.100		1010	101.0
Calcium	400000	400000	381000	95.3	380000	95.0	386000	96.5	382000	95.5
Chromium		500	-0.300		490	98.0	-0.100		489	97.8
Cobalt		500	1.50		493	98.6	1.40		493	98.6
Copper		500	-4.50		504	100.8	-3.60		505	101.0
Iron	200000	200000	192000	96.0	199000	99.5	192000	96.0	197000	98.5
Lead		1000	1.90		959	95.9	2.30		963	96.3
Lithium		500	-7.60		522	104.4	-5.90		510	102.0
Magnesium	500000	500000	501000	100.2	503000	100.6	496000	99.2	502000	100.4
Manganese		500	1.90		520	104.0	1.60		518	103.6
Molybdenum		500	0.900		473	94.6	0.700		479	95.8
Nickel		1000	-0.300		977	97.7	-0.200		985	98.5
Phosphorus		500	24.8		543	108.6	30.7		543	108.6
Potassium			323		285		428		369	
Selenium		1000	-0.800		1050	105.0	-4.00		1050	105.0
Silicon		500	0.400		505	101.0	2.10		506	101.2
Silver		1000	2.20		1070	107.0	0.500		1070	107.0
Sodium			116		130		191		184	
Strontium		500	-0.300		524	104.8	-0.200		533	106.6
Sulfur		500	-1.30		501	100.2	0.100		503	100.6
Thallium		1000	-0.400		981	98.1	-2.00		981	98.1
Tin		500	-4.60		459	91.8	-4.40		454	90.8
Titanium		500	-1.10		492	98.4	-1.10		496	99.2
Tungsten		500	-1.20		460	92.0	3.50		471	94.2
Vanadium		500	-2.00		494	98.8	-2.10		493	98.6
Zinc		1000	-1.90		951	95.1	-2.00		945	94.5

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050319M1.ICP Date Analyzed: 05/03/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46646 Units: ug/l

Time:			12:23		12:28		16:31		16:36	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	0.600		479	95.8	0.700		481	96.2

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:41	MA46661-STD1	1		STDA
16:47	MA46661-STD2	1		STDB
16:52	ZZZZZZ	1		
16:57	ZZZZZZ	1		
17:03	MA46661-ICV1	1		
17:08	MA46661-ICB1	1		
17:13	MA46661-CCV1	1		
17:18	MA46661-CCB1	1		
17:24	MA46661-CRI1	1		
17:29	MA46661-CRID1	1		
17:35	MA46661-ICSA1	1		
17:40	MA46661-ICSAB1	1		
17:45	MA46661-HSTD1	1		
17:51	MA46661-HSTD2	1		
17:56	ZZZZZZ	1		
18:01	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:13	MA46661-CCV2	1		
18:18	MA46661-CCB2	1		
18:23	ZZZZZZ	1		
18:29	MP14721-PS1	1		
---------->	Last reportable sample/prep for job JC87093			
18:34	MP14810-MB1	5		
18:39	MP14810-B1	5		
18:44	MP14810-S1	1		
18:49	MP14810-S2	1		
18:54	JC87377-1A	1		(sample used for QC only; not part of login JC87093)
19:00	MP14810-SD1	5		
19:05	ZZZZZZ	1		
19:11	MP14736-PS1	1		
19:16	MA46661-CCV3	1		
19:21	MA46661-CCB3	1		
---------->	Last reportable CCB for job JC87093			
19:26	MP14791-MB1	1		
19:32	MP14791-MB2	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:37	MP14791-B1	1		
19:42	MP14791-B2	1		
19:47	MP14791-S1	1		
19:52	MP14791-S2	1		
19:58	JC87412-3	1		(sample used for QC only; not part of login JC87093)
20:03	MP14791-SD1	5		
20:08	ZZZZZZ	1		
20:14	ZZZZZZ	1		
20:19	MA46661-CCV4	1		
20:24	MA46661-CCB4	1		
20:30	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:47	ZZZZZZ	1		
20:52	ZZZZZZ	1		
20:58	ZZZZZZ	1		
21:03	ZZZZZZ	1		
21:09	ZZZZZZ	1		
21:14	ZZZZZZ	1		
21:20	ZZZZZZ	1		
21:25	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:36	MA46661-CCV5	1		
21:41	MA46661-CCB5	1		
21:47	ZZZZZZ	1		
21:52	ZZZZZZ	1		
21:58	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:08	ZZZZZZ	1		
22:14	ZZZZZZ	1		
22:19	ZZZZZZ	1		
22:25	ZZZZZZ	1		
22:30	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:36	ZZZZZZ	1		
22:41	MA46661-CCV6	1		
22:46	MA46661-CCB6	1		
22:52	ZZZZZZ	1		
22:57	ZZZZZZ	1		
23:02	ZZZZZZ	1		
23:08	ZZZZZZ	1		
23:13	ZZZZZZ	1		
23:19	ZZZZZZ	1		
23:24	ZZZZZZ	1		
23:29	ZZZZZZ	1		
23:35	MP14723-SD2	5		No ICCV
23:40	MA46661-CCV7	1		
23:45	MA46661-CCB7	1		
23:51	ZZZZZZ	5		
23:56	ZZZZZZ	20		
00:02	MP14812-MB1	1		
00:07	MP14812-B1	1		
00:12	MP14812-S1	1		
00:18	MP14812-S2	1		
00:23	JC87397-1	1		(sample used for QC only; not part of login JC87093)
00:28	MP14812-SD1	5		
00:33	ZZZZZZ	1		
00:39	MA46661-CCV8	1		
00:44	MA46661-CCB8	1		
00:49	ZZZZZZ	1		
00:54	ZZZZZZ	1		
01:00	ZZZZZZ	1		
01:05	ZZZZZZ	1		
01:10	ZZZZZZ	1		
01:15	MP14789-MB1	1		
01:21	ZZZZZZ	1		
01:26	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:31	ZZZZZZ	1		
01:37	ZZZZZZ	1		
01:42	MA46661-CCV9	1		
01:47	MA46661-CCB9	1		
01:52	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:03	ZZZZZZ	1		
02:08	ZZZZZZ	1		
02:14	ZZZZZZ	1		
02:19	ZZZZZZ	1		
02:24	ZZZZZZ	1		
02:30	ZZZZZZ	1		
02:35	ZZZZZZ	1		
02:40	ZZZZZZ	1		
02:46	MA46661-CCV10	1		
02:51	MA46661-CCB10	1		
02:56	ZZZZZZ	1		
03:02	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:12	ZZZZZZ	1		
03:18	ZZZZZZ	1		
03:23	ZZZZZZ	1		
03:29	ZZZZZZ	1		
03:34	ZZZZZZ	1		
03:40	ZZZZZZ	1		
03:45	ZZZZZZ	1		
03:51	MA46661-CCV11	1		
03:56	MA46661-CCB11	1		
04:01	ZZZZZZ	1		
04:07	ZZZZZZ	1		
04:12	ZZZZZZ	1		
04:18	ZZZZZZ	1		
04:23	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:29	ZZZZZZ	1		
04:34	ZZZZZZ	1		
04:40	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:50	ZZZZZZ	1		
04:56	MA46661-CCV12	1		
05:01	MA46661-CCB12	1		
05:06	ZZZZZZ	1		
05:12	ZZZZZZ	1		
05:17	ZZZZZZ	1		
05:22	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:33	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:43	ZZZZZZ	1		
05:49	ZZZZZZ	1		
05:54	MA46661-CCV13	1		
05:59	MA46661-CCB13	1		
06:04	ZZZZZZ	1		
06:10	ZZZZZZ	1		
06:15	ZZZZZZ	1		
06:20	MA46661-CCV14	1		
06:25	MA46661-CCB14	1		
06:31	ZZZZZZ	1		
06:36	MP14685-S1	10		
06:41	MP14685-S2	10		
06:47	JC87221-3	10		(sample used for QC only; not part of login JC87093)
06:52	MP14685-SD1	50		
06:58	ZZZZZZ	1		
07:03	ZZZZZZ	2		
07:09	ZZZZZZ	1		
07:14	ZZZZZZ	2		
07:19	MA46661-CCV15	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:24	MA46661-CCB15	1		
07:30	ZZZZZZ	1		
07:35	ZZZZZZ	1		
07:41	ZZZZZZ	3		
07:46	ZZZZZZ	1		
07:52	ZZZZZZ	2		
07:57	ZZZZZZ	3		
08:03	ZZZZZZ	1		
08:08	ZZZZZZ	2		
08:13	ZZZZZZ	1		
08:19	MA46661-CCV16	1		
08:24	MA46661-CCB16	1		
08:30	ZZZZZZ	5		
08:35	ZZZZZZ	10		
08:40	ZZZZZZ	2		
08:46	ZZZZZZ	2		
08:51	ZZZZZZ	2		
08:56	ZZZZZZ	5		
09:02	ZZZZZZ	2		
09:07	ZZZZZZ	5		
09:13	MP14788-S1	5		
09:18	MA46661-CCV17	1		
09:23	MA46661-CCB17	1		
09:29	ZZZZZZ	2		
09:34	MP14788-S2	5		
09:39	MP14788-SD1	25		
09:44	ZZZZZZ	5		
09:49	MA46661-CCV18	1		
09:54	MA46661-CCB18	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Element: Dilution	Sb
16:52	ZZZZZZ	1	
16:57	ZZZZZZ	1	
17:03	MA46661-ICV1	1	X
17:08	MA46661-ICB1	1	X
17:13	MA46661-CCV1	1	X
17:18	MA46661-CCB1	1	X
17:24	MA46661-CRI1	1	X
17:29	MA46661-CRID1	1	X
17:35	MA46661-ICSA1	1	X
17:40	MA46661-ICSAB1	1	X
17:45	MA46661-HSTD1	1	X
17:51	MA46661-HSTD2	1	
17:56	ZZZZZZ	1	
18:01	ZZZZZZ	1	
18:07	ZZZZZZ	1	
18:13	MA46661-CCV2	1	X
18:18	MA46661-CCB2	1	X
18:23	ZZZZZZ	1	
18:29	MP14721-PS1	1	X
18:34	MP14810-MB1	5	
18:39	MP14810-B1	5	
18:44	MP14810-S1	1	
18:49	MP14810-S2	1	
18:54	JC87377-1A	1	(a)
19:00	MP14810-SD1	5	
19:05	ZZZZZZ	1	
19:11	MP14736-PS1	1	X
19:16	MA46661-CCV3	1	X
19:21	MA46661-CCB3	1	X
19:26	MP14791-MB1	1	X
19:32	MP14791-MB2	1	X
19:37	MP14791-B1	1	X
19:42	MP14791-B2	1	X
		Element:	Sb

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Element: Dilution	Sb	
19:47	MP14791-S1	1	X	
19:52	MP14791-S2	1	X	
19:58	JC87412-3	1		(a)
20:03	MP14791-SD1	5	X	
20:08	ZZZZZZ	1		
20:14	ZZZZZZ	1		
20:19	MA46661-CCV4	1	X	
20:24	MA46661-CCB4	1	X	
20:30	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:47	ZZZZZZ	1		
20:52	ZZZZZZ	1		
20:58	ZZZZZZ	1		
21:03	ZZZZZZ	1		
21:09	ZZZZZZ	1		
21:14	ZZZZZZ	1		
21:20	ZZZZZZ	1		
21:25	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:36	MA46661-CCV5	1	X	
21:41	MA46661-CCB5	1	X	
21:47	ZZZZZZ	1		
21:52	ZZZZZZ	1		
21:58	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:08	ZZZZZZ	1		
22:14	ZZZZZZ	1		
22:19	ZZZZZZ	1		
22:25	ZZZZZZ	1		
22:30	ZZZZZZ	1		
22:36	ZZZZZZ	1		
22:41	MA46661-CCV6	1	X	
		Element:	Sb	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Element: Dilution	S b
22:46	MA46661-CCB6	1	X
22:52	ZZZZZZ	1	
22:57	ZZZZZZ	1	
23:02	ZZZZZZ	1	
23:08	ZZZZZZ	1	
23:13	ZZZZZZ	1	
23:19	ZZZZZZ	1	
23:24	ZZZZZZ	1	
23:29	ZZZZZZ	1	
23:35	MP14723-SD2	5	No ICCV
23:40	MA46661-CCV7	1	X
23:45	MA46661-CCB7	1	X
23:51	ZZZZZZ	5	
23:56	ZZZZZZ	20	
00:02	MP14812-MB1	1	
00:07	MP14812-B1	1	
00:12	MP14812-S1	1	
00:18	MP14812-S2	1	
00:23	JC87397-1	1	(a)
00:28	MP14812-SD1	5	
00:33	ZZZZZZ	1	
00:39	MA46661-CCV8	1	X
00:44	MA46661-CCB8	1	X
00:49	ZZZZZZ	1	
00:54	ZZZZZZ	1	
01:00	ZZZZZZ	1	
01:05	ZZZZZZ	1	
01:10	ZZZZZZ	1	
01:15	MP14789-MB1	1	
01:21	ZZZZZZ	1	
01:26	ZZZZZZ	1	
01:31	ZZZZZZ	1	
01:37	ZZZZZZ	1	
		Element:	S b

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Element: Dilution	Sb
01:42	MA46661-CCV9	1	X
01:47	MA46661-CCB9	1	X
01:52	ZZZZZZ	1	
01:58	ZZZZZZ	1	
02:03	ZZZZZZ	1	
02:08	ZZZZZZ	1	
02:14	ZZZZZZ	1	
02:19	ZZZZZZ	1	
02:24	ZZZZZZ	1	
02:30	ZZZZZZ	1	
02:35	ZZZZZZ	1	
02:40	ZZZZZZ	1	
02:46	MA46661-CCV10	1	X
02:51	MA46661-CCB10	1	X
02:56	ZZZZZZ	1	
03:02	ZZZZZZ	1	
03:07	ZZZZZZ	1	
03:12	ZZZZZZ	1	
03:18	ZZZZZZ	1	
03:23	ZZZZZZ	1	
03:29	ZZZZZZ	1	
03:34	ZZZZZZ	1	
03:40	ZZZZZZ	1	
03:45	ZZZZZZ	1	
03:51	MA46661-CCV11	1	X
03:56	MA46661-CCB11	1	X
04:01	ZZZZZZ	1	
04:07	ZZZZZZ	1	
04:12	ZZZZZZ	1	
04:18	ZZZZZZ	1	
04:23	ZZZZZZ	1	
04:29	ZZZZZZ	1	
04:34	ZZZZZZ	1	
		Element:	Sb

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Element: Dilution	Sb	
04:40	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:50	ZZZZZZ	1		
04:56	MA46661-CCV12	1	X	
05:01	MA46661-CCB12	1	X	
05:06	ZZZZZZ	1		
05:12	ZZZZZZ	1		
05:17	ZZZZZZ	1		
05:22	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:33	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:43	ZZZZZZ	1		
05:49	ZZZZZZ	1		
05:54	MA46661-CCV13	1	X	
05:59	MA46661-CCB13	1	X	
06:04	ZZZZZZ	1		
06:10	ZZZZZZ	1		
06:15	ZZZZZZ	1		
06:20	MA46661-CCV14	1	X	
06:25	MA46661-CCB14	1	X	
06:31	ZZZZZZ	1		
06:36	MP14685-S1	10		
06:41	MP14685-S2	10		
06:47	JC87221-3	10		(a)
06:52	MP14685-SD1	50		
06:58	ZZZZZZ	1		
07:03	ZZZZZZ	2		
07:09	ZZZZZZ	1		
07:14	ZZZZZZ	2		
07:19	MA46661-CCV15	1	X	
07:24	MA46661-CCB15	1	X	
07:30	ZZZZZZ	1		
		Element:	Sb	

REPORTED ELEMENTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Element: Dilution	S b
07:35	ZZZZZZ	1	
07:41	ZZZZZZ	3	
07:46	ZZZZZZ	1	
07:52	ZZZZZZ	2	
07:57	ZZZZZZ	3	
08:03	ZZZZZZ	1	
08:08	ZZZZZZ	2	
08:13	ZZZZZZ	1	
08:19	MA46661-CCV16	1	X
08:24	MA46661-CCB16	1	X
08:30	ZZZZZZ	5	
08:35	ZZZZZZ	10	
08:40	ZZZZZZ	2	
08:46	ZZZZZZ	2	
08:51	ZZZZZZ	2	
08:56	ZZZZZZ	5	
09:02	ZZZZZZ	2	
09:07	ZZZZZZ	5	
09:13	MP14788-S1	5	
09:18	MA46661-CCV17	1	X
09:23	MA46661-CCB17	1	X
09:29	ZZZZZZ	2	
09:34	MP14788-S2	5	
09:39	MP14788-SD1	25	
09:44	ZZZZZZ	5	
09:49	MA46661-CCV18	1	X
09:54	MA46661-CCB18	1	X

(a) Sample used for QC only; not part of login JC87093.

Element: S
b

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:41	MA46661-STD1	4797 R	137250 R	4958 R	11578 R
16:47	MA46661-STD2	4515	128440	4894	9917
16:52	ZZZZZZ	4630	131670	4890	10338
16:57	ZZZZZZ	4798	137430	4925	11565
17:03	MA46661-ICV1	4650	132440	4919	10379
17:08	MA46661-ICB1	4794	137290	4943	11564
17:13	MA46661-CCV1	4641	131960	4901	10357
17:18	MA46661-CCB1	4792	138100	4916	11541
17:24	MA46661-CRI1	4698	134800	4902	11150
17:29	MA46661-CRID1	4812	137860	4961	11548
17:35	MA46661-ICSA1	4291	122010	4762	9053
17:40	MA46661-ICSAB1	4289	122530	4787	9054
17:45	MA46661-HSTD1	4720	133870	4950	11128
17:51	MA46661-HSTD2	4294	122480	4738	9071
17:56	ZZZZZZ	4732	135200	4907	11349
18:01	ZZZZZZ	4733	137050	4885	11543
18:07	ZZZZZZ	4820	138400	4916	11617
18:13	MA46661-CCV2	4642	131320	4870	10387
18:18	MA46661-CCB2	4797	136950	4899	11584
18:23	ZZZZZZ	4816	138370	5025	11686
18:29	MP14721-PS1	4742	135060	5107	10362
18:34	MP14810-MB1	4802	137370	4923	11590
18:39	MP14810-B1	4764	136160	4935	11276
18:44	MP14810-S1	4551	129130	4774	10091
18:49	MP14810-S2	4572	129000	4759	10160
18:54	JC87377-1A	4591	129290	4806	10485
19:00	MP14810-SD1	4759	136150	4947	11347
19:05	ZZZZZZ	4827	134990	5045	11730
19:11	MP14736-PS1	4647	133290	4979	10415
19:16	MA46661-CCV3	4636	131750	4852	10383
19:21	MA46661-CCB3	4793	137490	4898	11580
19:26	MP14791-MB1	4817	137380	4919	11667
19:32	MP14791-MB2	4790	137660	4949	11619

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:37	MP14791-B1	4692	133250	4904	10707
19:42	MP14791-B2	4669	133080	4927	10677
19:47	MP14791-S1	4641	131660	4914	10439
19:52	MP14791-S2	4608	131380	4912	10374
19:58	JC87412-3	4673	133300	4883	10963
20:03	MP14791-SD1	4777	135820	4931	11497
20:08	ZZZZZZ	4362	124980	4749	9830
20:14	ZZZZZZ	4431	126290	4779	9974
20:19	MA46661-CCV4	4618	130560	4809	10385
20:24	MA46661-CCB4	4803	136680	4852	11653
20:30	ZZZZZZ	4801	135910	4867	11614
20:36	ZZZZZZ	4801	136590	4891	11618
20:41	ZZZZZZ	4797	136940	4899	11625
20:47	ZZZZZZ	4800	136270	4860	11692
20:52	ZZZZZZ	4802	136420	4849	11635
20:58	ZZZZZZ	4816	136820	4860	11635
21:03	ZZZZZZ	4771	135640	4882	11581
21:09	ZZZZZZ	4796	136360	4893	11669
21:14	ZZZZZZ	4924	132380	5061	10386
21:20	ZZZZZZ	4377	124900	4709	9922
21:25	ZZZZZZ	4827	137170	4862	11731
21:31	ZZZZZZ	4807	134210	4856	11655
21:36	MA46661-CCV5	4607	130260	4810	10379
21:41	MA46661-CCB5	4789	136000	4827	11631
21:47	ZZZZZZ	4460	126780	4801	9964
21:52	ZZZZZZ	4520	128030	4826	10233
21:58	ZZZZZZ	4416	125410	4807	9869
22:03	ZZZZZZ	4376	124680	4733	9870
22:08	ZZZZZZ	4428	125500	4772	9978
22:14	ZZZZZZ	4468	127380	4805	10005
22:19	ZZZZZZ	4523	128570	4811	10240
22:25	ZZZZZZ	4401	125120	4801	9865
22:30	ZZZZZZ	4815	136690	4890	11736

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:36	ZZZZZZ	4508	128400	4788	10433
22:41	MA46661-CCV6	4636	130390	4799	10458
22:46	MA46661-CCB6	4794	136050	4820	11662
22:52	ZZZZZZ	4362	124820	4738	9860
22:57	ZZZZZZ	4297	122660	4711	9632
23:02	ZZZZZZ	4350	126520	4721	9801
23:08	ZZZZZZ	4520	128970	4798	10489
23:13	ZZZZZZ	4109	116550	4610	8988
23:19	ZZZZZZ	4526	129460	4756	10397
23:24	ZZZZZZ	4528	127890	4759	10197
23:29	ZZZZZZ	4861	138560	4912	11930
23:35	MP14723-SD2	No results reported for the elements associated with this internal standard.			
23:40	MA46661-CCV7	4629	130090	4792	10432
23:45	MA46661-CCB7	4793	136030	4794	11638
23:51	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:56	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:02	MP14812-MB1	4818	137180	4885	11755
00:07	MP14812-B1	4670	132450	4823	10741
00:12	MP14812-S1	4751	134400	4950	10430
00:18	MP14812-S2	4784	135810	5042	10408
00:23	JC87397-1	4855	137860	5005	10963
00:28	MP14812-SD1	4781	137410	4876	11235
00:33	ZZZZZZ	4773	135460	4895	10981
00:39	MA46661-CCV8	4645	131270	4790	10464
00:44	MA46661-CCB8	4814	136870	4796	11692
00:49	ZZZZZZ	4507	128920	4868	9675
00:54	ZZZZZZ	4606	132490	4876	10326
01:00	ZZZZZZ	4592	131440	4824	10127
01:05	ZZZZZZ	4600	131300	4880	10025
01:10	ZZZZZZ	4502	128870	4771	9854
01:15	MP14789-MB1	4848	137790	4719	11814
01:21	ZZZZZZ	4758	132790	4807	10928
01:26	ZZZZZZ	4945	138350	5063	10916

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:31	ZZZZZZ	4815	135790	4782	10883
01:37	ZZZZZZ	4786	134570	4930	10966
01:42	MA46661-CCV9	4654	131050	4753	10458
01:47	MA46661-CCB9	4819	136960	4759	11673
01:52	ZZZZZZ	4871	137820	4978	11072
01:58	ZZZZZZ	4766	135240	4902	10813
02:03	ZZZZZZ	4805	136430	4923	11032
02:08	ZZZZZZ	4781	135630	4909	10953
02:14	ZZZZZZ	4760	135620	5061	11071
02:19	ZZZZZZ	4782	136460	4957	10905
02:24	ZZZZZZ	4680	134560	4929	10649
02:30	ZZZZZZ	4910	139830	5018	11182
02:35	ZZZZZZ	4798	137900	4818	11668
02:40	ZZZZZZ	4706	133520	4806	10769
02:46	MA46661-CCV10	4661	131670	4762	10476
02:51	MA46661-CCB10	4837	137710	4795	11711
02:56	ZZZZZZ	4758	135040	4815	11097
03:02	ZZZZZZ	4485	125040	4676	9929
03:07	ZZZZZZ	4544	128890	4745	10223
03:12	ZZZZZZ	4308	121760	4662	9462
03:18	ZZZZZZ	3923	111330	4484	8364
03:23	ZZZZZZ	4286	119980	4666	9176
03:29	ZZZZZZ	4174	117880	4618	8955
03:34	ZZZZZZ	4845	138890	4802	11751
03:40	ZZZZZZ	4294	122120	4626	9440
03:45	ZZZZZZ	3918	111050	4476	8366
03:51	MA46661-CCV11	4677	132030	4741	10503
03:56	MA46661-CCB11	4856	138570	4718	11765
04:01	ZZZZZZ	4284	119110	4629	9194
04:07	ZZZZZZ	4193	118060	4598	9034
04:12	ZZZZZZ	4842	138570	4784	11761
04:18	ZZZZZZ	4665	132920	4780	10733
04:23	ZZZZZZ	4676	133270	4746	10923

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:29	ZZZZZZ	4366	125250	4666	9854
04:34	ZZZZZZ	4433	126550	4697	9940
04:40	ZZZZZZ	4517	129020	4673	10343
04:45	ZZZZZZ	4686	133540	4775	10863
04:50	ZZZZZZ	4854	138240	4877	11110
04:56	MA46661-CCV12	4651	131180	4688	10466
05:01	MA46661-CCB12	4837	138100	4737	11740
05:06	ZZZZZZ	4934	137600	4888	11326
05:12	ZZZZZZ	4859	137650	4832	11151
05:17	ZZZZZZ	4889	138660	4904	11139
05:22	ZZZZZZ	4865	137830	4882	11129
05:27	ZZZZZZ	4468	127780	4745	9203
05:33	ZZZZZZ	4549	129220	4718	9540
05:38	ZZZZZZ	4528	129070	4801	9372
05:43	ZZZZZZ	4561	128700	4709	9481
05:49	ZZZZZZ	4590	130990	4811	9293
05:54	MA46661-CCV13	4671	131640	4666	10519
05:59	MA46661-CCB13	4819	137430	4707	11704
06:04	ZZZZZZ	4457	127700	4642	9562
06:10	ZZZZZZ	4410	126830	4720	8978
06:15	ZZZZZZ	4516	128650	4707	9401
06:20	MA46661-CCV14	4656	131320	4642	10470
06:25	MA46661-CCB14	4822	137640	4716	11692
06:31	ZZZZZZ	4824	137780	4751	11717
06:36	MP14685-S1	4549	129970	4615	10383
06:41	MP14685-S2	4570	130130	4609	10429
06:47	JC87221-3	4519	129730	4586	10322
06:52	MP14685-SD1	4754	135160	4652	11279
06:58	ZZZZZZ	4246	120770	4527	9402
07:03	ZZZZZZ	4444	126020	4576	10008
07:09	ZZZZZZ	4396	125320	4594	9850
07:14	ZZZZZZ	4570	131190	4606	10428
07:19	MA46661-CCV15	4670	131890	4638	10514

INTERNAL STANDARD SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46661
Parameters: Sb

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:24	MA46661-CCB15	4849	138410	4717	11773
07:30	ZZZZZZ	4670	133720	4680	10958
07:35	ZZZZZZ	4240	120990	4536	9347
07:41	ZZZZZZ	4517	128470	4585	10228
07:46	ZZZZZZ	4503	128710	4640	10286
07:52	ZZZZZZ	4237	120380	4499	9249
07:57	ZZZZZZ	4274	120490	4483	9301
08:03	ZZZZZZ	4390	124630	4562	9791
08:08	ZZZZZZ	4532	128950	4611	10300
08:13	ZZZZZZ	3965	113090	4407	8591
08:19	MA46661-CCV16	4666	131950	4634	10508
08:24	MA46661-CCB16	4862	138160	4650	11797
08:30	ZZZZZZ	4462	126950	4560	10046
08:35	ZZZZZZ	4595	130680	4605	10537
08:40	ZZZZZZ	4715	135220	4735	10760
08:46	ZZZZZZ	4832	137180	4725	11305
08:51	ZZZZZZ	4773	137770	4781	11094
08:56	ZZZZZZ	4584	128580	4593	10303
09:02	ZZZZZZ	4763	131340	4731	11030
09:07	ZZZZZZ	4492	126910	4578	10007
09:13	MP14788-S1	4591	128430	4575	10234
09:18	MA46661-CCV17	4674	131640	4644	10516
09:23	MA46661-CCB17	4871	138470	4637	11807
09:29	ZZZZZZ	4918	139620	4942	11422
09:34	MP14788-S2	4597	128760	4615	10232
09:39	MP14788-SD1	4729	134310	4633	11104
09:44	ZZZZZZ	4575	128120	4583	10252
09:49	MA46661-CCV18	4691	132510	4596	10545
09:54	MA46661-CCB18	4875	138710	4629	11824

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46661 Units: ug/l

Time:			17:08		17:18		18:18		19:21	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	13	anr							
Antimony	6.0	1.1	1.10	<6.0	1.40	<6.0	0.200	<6.0	-0.400	<6.0
Arsenic	3.0	1.2	anr							
Barium	200	.2	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.8								
Boron	100	1.2								
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	anr							
Lead	3.0	1.5	anr							
Lithium	50	1.5								
Magnesium	5000	17	anr							
Manganese	15	.1	anr							
Molybdenum	20	.3								
Nickel	10	.3	anr							
Phosphorus	50	2								
Potassium	10000	40	anr							
Selenium	10	1.8	anr							
Silicon	200	.9								
Silver	10	.5	anr							
Sodium	10000	13	anr							
Strontium	10	.2								
Sulfur	50	3.5								
Thallium	10	1.6	anr							
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46661 Units: ug/l

Time:			17:08		17:18		18:18		19:21	
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46661 Units: ug/l

Time:		17:03			17:13			18:13	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1970	98.5	2000	2020	101.0	2000	2010	100.5
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Phosphorus									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46661 Units: ug/l

Time:		17:03			17:13			18:13	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46661 Units: ug/l

Time:		19:16	
Sample ID:	CCV	CCV3	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	2000	2000	100.0
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron			
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Phosphorus			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Strontium			
Sulfur			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46661 Units: ug/l

Time:		19:16	
Sample ID:	CCV	CCV3	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

10.4.4 10

HIGH STANDARD CHECK SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46661 Units: ug/l

Time:		17:45			17:51	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	8000	8290	103.6			
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Bismuth						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron						
Lead	anr					
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

HIGH STANDARD CHECK SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46661 Units: ug/l

Time:		17:45			17:51	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46661 Units: ug/l

Time:				17:24		17:29	
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	7.20	120.0	0.00U	0.0* (a)
Arsenic	8.0	20	3.0	anr			
Barium	200		4.0	anr			
Beryllium	2.0		1.0	anr			
Bismuth	20						
Boron	100		10				
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		anr			
Lead	3.0	20	2.5	anr			
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	anr			
Molybdenum	20						
Nickel	10		4.0	anr			
Phosphorus	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	anr			
Silicon	200						
Silver	5.0		2.0	anr			
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	anr			
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46661 Units: ug/l

Time:				17:24		17:29	
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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46661 Units: ug/l

Time:			17:35		17:40	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	510000	102.0	514000	102.8
Antimony		1000	0.800		1080	108.0
Arsenic		1000	0.300		1060	106.0
Barium		500	-0.100		512	102.4
Beryllium		500	0.400		502	100.4
Bismuth		500	5.50		511	102.2
Boron		500	-3.20		477	95.4
Cadmium		1000	0.200		1030	103.0
Calcium	400000	400000	392000	98.0	386000	96.5
Chromium		500	0.200		484	96.8
Cobalt		500	-1.00		492	98.4
Copper		500	0.600		505	101.0
Iron	200000	200000	193000	96.5	196000	98.0
Lead		1000	2.00		982	98.2
Lithium		500	-10.1		534	106.8
Magnesium	500000	500000	511000	102.2	512000	102.4
Manganese		500	2.30		499	99.8
Molybdenum		500	-1.80		485	97.0
Nickel		1000	0.00		991	99.1
Phosphorus		500	3.10		526	105.2
Potassium			-380		-350	
Selenium		1000	-2.90		1050	105.0
Silicon		500	-8.90		521	104.2
Silver		1000	0.900		1040	104.0
Sodium			28.1		55.1	
Strontium		500	-3.10		512	102.4
Sulfur		500	-34.4		474	94.8
Thallium		1000	-0.100		967	96.7
Tin		500	-1.50		473	94.6
Titanium		500	-0.700		500	100.0
Tungsten		500	5.60		486	97.2
Vanadium		500	1.30		492	98.4
Zinc		1000	0.00		952	95.2

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SE050619M2.ICP Date Analyzed: 05/06/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46661 Units: ug/l

Time:			17:35		17:40	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	-1.50		489	97.8

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14638 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/30/19

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0058	.015	0.0040	<0.033

Associated samples MP14638: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14638
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 04/30/19

Metal	JC87093-7 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.060	0.55	0.494	99.3	80-120

Associated samples MP14638: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14638
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 04/30/19

Metal	JC87093-7 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.060	0.65	0.535	110.2	16.7	20

Associated samples MP14638: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14638
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 04/30/19

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.30	0.333	90.0	80-120

Associated samples MP14638: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 05/01/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	48	1.4	7.7	0.86	<48
Antimony	1.9	.13	.39	-0.086	<1.9
Arsenic	1.9	.14	.27	0.019	<1.9
Barium	19	.048	1.8	0.0	<19
Beryllium	0.19	.0095	.076	0.019	<0.19
Bismuth	1.9	.17	.5		
Boron	9.5	.076	1.4		
Cadmium	0.48	.029	.067	0.029	<0.48
Calcium	480	.37	42	15.1	<480
Chromium	0.95	.029	.35	0.086	<0.95
Cobalt	4.8	.029	.27	0.019	<4.8
Copper	2.4	.057	.8	0.15	<2.4
Iron	48	.25	18	3.0	<48
Lead	1.9	.15	.39	0.11	<1.9
Lithium	4.8	.2	.88		
Magnesium	480	1.6	13	1.8	<480
Manganese	1.4	.0095	.39	0.048	<1.4
Molybdenum	1.9	.038	.3		
Nickel	3.8	.048	.33	0.076	<3.8
Phosphorus	19	.18	3.1		
Potassium	950	7.5	30	-4.9	<950
Selenium	1.9	.29	.62	-0.067	<1.9
Silicon	19	.11	10		
Silver	0.48	.048	.16	0.0	<0.48
Sodium	950	.94	74	5.3	<950
Strontium	4.8	.029	.17		
Sulfur	9.5	.33	8.9		
Thallium	0.95	.12	.55	0.048	<0.95
Tin	19	.067	3.6		
Titanium	0.95	.048	.32		
Tungsten	4.8	.16	1.7		
Vanadium	4.8	.048	.18	-0.0095	<4.8
Zinc	4.8	.019	2.2	1.5	<4.8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 05/01/19

Metal	RL	IDL	MDL	MB raw	final
Zirconium	1.9	.029	.22		

Associated samples MP14721: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 05/01/19

Metal	JC87093-7 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	12500	17900	4290	126.0N(a	75-125
Antimony	0.0	218	343	63.6N(a)	75-125
Arsenic	4.1	315	343	90.6	75-125
Barium	116	442	343	95.0	75-125
Beryllium	0.69	333	343	96.9	75-125
Bismuth					
Boron					
Cadmium	0.099	324	343	94.4	75-125
Calcium	3380	7660	4290	99.8	75-125
Chromium	27.1	344	343	92.4	75-125
Cobalt	5.6	338	343	96.9	75-125
Copper	11.9	334	343	93.9	75-125
Iron	14400	17200	4290	65.3N(a)	75-125
Lead	21.4	372	343	102.2	75-125
Lithium					
Magnesium	3120	6870	4290	87.5	75-125
Manganese	333	650	343	92.4	75-125
Molybdenum					
Nickel	16.0	347	343	96.5	75-125
Phosphorus					
Potassium	1280	5830	4290	106.1	75-125
Selenium	0.0	318	343	92.7	75-125
Silicon					
Silver	0.25	40.7	42.9	94.3	75-125
Sodium	240	4260	4290	93.8	75-125
Strontium					
Sulfur					
Thallium	0.0	346	343	100.9	75-125
Tin					
Titanium					
Tungsten					
Vanadium	25.9	347	343	93.6	75-125
Zinc	56.1	369	343	91.2	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 05/01/19

Metal	JC87093-7 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP14721: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 05/01/19

Metal	JC87093-7 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	12500	22200	4200	230.8N(a	21.4 (b)	20
Antimony	0.0	189	336	56.2N(a)	14.3	20
Arsenic	4.1	312	336	91.6	1.0	20
Barium	116	450	336	99.3	1.8	20
Beryllium	0.69	329	336	97.7	1.2	20
Bismuth						
Boron						
Cadmium	0.099	321	336	95.5	0.9	20
Calcium	3380	7450	4200	96.8	2.8	20
Chromium	27.1	348	336	95.5	1.2	20
Cobalt	5.6	337	336	98.6	0.3	20
Copper	11.9	330	336	94.6	1.2	20
Iron	14400	20200	4200	138.0N(a	16.0	20
Lead	21.4	405	336	114.1	8.5	20
Lithium						
Magnesium	3120	7810	4200	111.6	12.8	20
Manganese	333	652	336	94.9	0.3	20
Molybdenum						
Nickel	16.0	348	336	98.8	0.3	20
Phosphorus						
Potassium	1280	6250	4200	118.3	7.0	20
Selenium	0.0	313	336	93.1	1.6	20
Silicon						
Silver	0.25	40.4	42	95.5	0.7	20
Sodium	240	4240	4200	95.2	0.5	20
Strontium						
Sulfur						
Thallium	0.0	343	336	102.0	0.9	20
Tin						
Titanium						
Tungsten						
Vanadium	25.9	347	336	95.5	0.0	20
Zinc	56.1	373	336	94.3	1.1	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 05/01/19

Metal	JC87093-7 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP14721: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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.
(b) High rpd due to possible sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 05/01/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2360	2450	96.3	80-120
Antimony	191	196	97.4	80-120
Arsenic	191	196	97.4	80-120
Barium	195	196	99.5	80-120
Beryllium	201	196	102.5	80-120
Bismuth				
Boron				
Cadmium	197	196	100.5	80-120
Calcium	2400	2450	97.9	80-120
Chromium	195	196	99.5	80-120
Cobalt	198	196	101.0	80-120
Copper	195	196	99.5	80-120
Iron	2410	2450	98.3	80-120
Lead	198	196	101.0	80-120
Lithium				
Magnesium	2420	2450	98.7	80-120
Manganese	201	196	102.5	80-120
Molybdenum				
Nickel	197	196	100.5	80-120
Phosphorus				
Potassium	2350	2450	95.9	80-120
Selenium	193	196	98.4	80-120
Silicon				
Silver	24.3	24.5	99.1	80-120
Sodium	2430	2450	99.1	80-120
Strontium				
Sulfur				
Thallium	210	196	107.1	80-120
Tin				
Titanium				
Tungsten				
Vanadium	193	196	98.4	80-120
Zinc	200	196	102.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 05/01/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP14721: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/19

Metal	JC87093-7 Original	SDL 1:5	%DIF	QC Limits
Aluminum	75900	77500	2.1	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	24.9	27.9	12.0 (a)	0-10
Barium	702	712	1.5	0-10
Beryllium	4.20	4.30	2.4	0-10
Bismuth				
Boron				
Cadmium	0.600	0.00	100.0(a)	0-10
Calcium	20500	21200	3.5	0-10
Chromium	165	171	3.8	0-10
Cobalt	34.1	35.4	3.8	0-10
Copper	72.1	74.9	3.9	0-10
Iron	87400	90600	3.7	0-10
Lead	130	132	1.6	0-10
Lithium				
Magnesium	19000	19700	3.9	0-10
Manganese	2020	2120	5.0	0-10
Molybdenum				
Nickel	97.1	98.4	1.3	0-10
Phosphorus				
Potassium	7750	7800	0.6	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	1.50	0.00	100.0(a)	0-10
Sodium	1450	1430	1.4	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	157	163	3.9	0-10
Zinc	340	362	6.5	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721 | Methods: SW846 6010D
Matrix Type: SOLID | Units: ug/l

Prep Date: 05/01/19

Metal	JC87093-7 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP14721: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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).

POST DIGESTATE SPIKE SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/19

Metal	Sample ml	Final ml	JC87093-7 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20			2096	0.2	200	2000	104.8	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14721
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/19

Metal	Sample ml	Final ml	JC87093-7 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP14721: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12

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: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: LEEMANHG7 **Effective Date:** 02/18/19

Analyte	IDL ug/l
Mercury	.0349

The above applies to the following instrument runs:
MA46615

Instrument Detection Limits

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE3 **Effective Date:** 02/18/19

Analyte	IDL ug/l
Aluminum	14.3
Antimony	1.4
Arsenic	1.5
Barium	.5
Beryllium	.1
Bismuth	1.8
Boron	.8
Cadmium	.3
Calcium	3.9
Chromium	.3
Cobalt	.3
Copper	.6
Iron	2.6
Lead	1.6
Lithium	2.1
Magnesium	16.3
Manganese	.1
Molybdenum	.4
Nickel	.5
Phosphorus	1.9
Potassium	79
Selenium	3
Silicon	1.2
Silver	.5
Sodium	9.9
Sulfur	3.5
Strontium	.3
Thallium	1.3
Tin	.7
Titanium	.5
Tungsten	1.7
Vanadium	.5
Yttrium	5
Zinc	.2
Zirconium	.3

The above applies to the following instrument runs:
MA46638,MA46646

Instrument Detection Limits

Job Number: JC87093
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:
MA46661

Instrument Linear Ranges

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: LEEMANHG7 **Effective Date:** 03/10/17

Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA46615

Instrument Linear Ranges

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE3 **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:
MA46638,MA46646

Instrument Linear Ranges

Job Number: JC87093
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:
MA46661

Metals Analysis

Raw Data

MA46615

Method: ACCUTEST Operator: Admin Date of Analysis: 30 Apr 2019 08:16:40

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
STDA - 1	30 Apr 2019 09:00:37	Std	ug/l	-	205	1.000	1.000
STDB - 1	30 Apr 2019 09:01:55	Std	ug/l	-	993	1.000	1.000
STDC - 1	30 Apr 2019 09:03:13	Std	ug/l	-	2799	1.000	1.000
STDD - 1	30 Apr 2019 09:04:53	Std	ug/l	-	5426	1.000	1.000
STDE - 1	30 Apr 2019 09:06:43	Std	ug/l	-	14761	1.000	1.000
STDF - 1	30 Apr 2019 09:08:39	Std	ug/l	-	29998	1.000	1.000
ICV - 1	30 Apr 2019 09:11:15	CK STND	ug/l	109.3% 3.2793	19534	1.000	1.000
ICB - 1	30 Apr 2019 09:13:03	CK STND	ug/l	-0.0028	-211	1.000	1.000
CCV - 1	30 Apr 2019 09:15:10	CK STND	ug/l	103.2% 2.5808	15332	1.000	1.000
CCB - 1	30 Apr 2019 09:16:28	CK STND	ug/l	0.0090	-140	1.000	1.000
CRI - 1	30 Apr 2019 09:18:34	CK STND	ug/l	100.6% 0.2011	1016	1.000	1.000
MP14633-MB1 - 1	30 Apr 2019 09:24:32	SMPL	ug/l	0.0899	347	1.000	1.000
MP14633-B1 - 1	30 Apr 2019 09:25:48	SMPL	ug/l	1.7751	10485	1.000	1.000
SAMPLECONF - 1	30 Apr 2019 09:27:05	SMPL	ug/l	1.6639	9816	1.000	1.000
MP14633-S2 - 1	30 Apr 2019 09:29:09	SMPL	ug/l	1.9640	11621	1.000	1.000
JC87045-1 - 1	30 Apr 2019 09:31:11	SMPL	ug/l	0.0392	42	1.000	1.000
JC87045-2 - 1	30 Apr 2019 09:33:13	SMPL	ug/l	0.0153	-102	1.000	1.000
JC87045-3 - 1	30 Apr 2019 09:34:33	SMPL	ug/l	0.0349	16	1.000	1.000
JC87045-4 - 1	30 Apr 2019 09:35:53	SMPL	ug/l	0.0362	24	1.000	1.000
CCV - 1	30 Apr 2019 09:37:22	CK STND	ug/l	100.3% 2.5072	14889	1.000	1.000
CCB - 1	30 Apr 2019 09:38:42	CK STND	ug/l	0.0020	-182	1.000	1.000
JC87045-5 - 1	30 Apr 2019 09:40:45	SMPL	ug/l	0.0361	23	1.000	1.000
JC87045-6 - 1	30 Apr 2019 09:42:03	SMPL	ug/l	0.1325	603	1.000	1.000
JC87045-7 - 1	30 Apr 2019 09:43:24	SMPL	ug/l	0.0495	104	1.000	1.000
JC87045-8 - 1	30 Apr 2019 09:45:01	SMPL	ug/l	0.0226	-58	1.000	1.000
JC87045-9 - 1	30 Apr 2019 09:46:22	SMPL	ug/l	0.8318	4810	1.000	1.000
JC87045-10 - 1	30 Apr 2019 09:47:42	SMPL	ug/l	0.1265	567	1.000	1.000
JC87045-11 - 1	30 Apr 2019 09:49:36	SMPL	ug/l	0.1647	797	1.000	1.000
JC87071-3 - 1	30 Apr 2019 09:51:09	SMPL	ug/l	0.0913	355	1.000	1.000
JC87071-4 - 1	30 Apr 2019 09:52:47	SMPL	ug/l	1.6834	9933	1.000	1.000
CCV - 1	30 Apr 2019 09:54:17	CK STND	ug/l	101.8% 2.5448	15115	1.000	1.000
CCB - 1	30 Apr 2019 09:56:19	CK STND	ug/l	0.0136	-112	1.000	1.000
JC87071-5 - 1	30 Apr 2019 09:58:24	SMPL	ug/l	0.2537	1332	1.000	1.000
JC87071-6 - 1	30 Apr 2019 09:59:41	SMPL	ug/l	0.2489	1303	1.000	1.000
JC87074-1 - 1	30 Apr 2019 10:01:26	SMPL	ug/l	0.3511	1918	1.000	1.000
JC87074-9 - 1	30 Apr 2019 10:03:08	SMPL	ug/l	0.7723	4452	1.000	1.000
JC87096-1 - 1	30 Apr 2019 10:04:53	SMPL	ug/l	1.2406	7269	1.000	1.000
JC87096-2 - 1	30 Apr 2019 10:06:47	SMPL	ug/l	0.3092	1666	1.000	1.000
JC87096-3 - 1	30 Apr 2019 10:08:47	SMPL	ug/l	0.1890	943	1.000	1.000
MP14638-MB1 - 1	30 Apr 2019 10:10:32	SMPL	ug/l	0.0238	-51	1.000	1.000
MP14638-B1 - 1	30 Apr 2019 10:12:11	SMPL	ug/l	1.7914	10583	1.000	1.000
CCV - 1	30 Apr 2019 10:13:27	CK STND	ug/l	102.6% 2.5657	15241	1.000	1.000
CCB - 1	30 Apr 2019 10:15:31	CK STND	ug/l	-0.0083	-244	1.000	1.000
MP14638-S1 - 1	30 Apr 2019 10:17:33	SMPL	ug/l	2.2401	13282	1.000	1.000
MP14638-S2 - 1	30 Apr 2019 10:18:49	SMPL	ug/l	2.4430	14503	1.000	1.000
JC87093-7 - 1	30 Apr 2019 10:20:54	SMPL	ug/l	0.2336	1211	1.000	1.000
JC87093-1 - 1	30 Apr 2019 10:23:00	SMPL	ug/l	8.3785	50210	1.000	1.000
JC87093-2 - 1	30 Apr 2019 10:24:43	SMPL	ug/l	10.0243	60111	1.000	1.000
JC87093-3 - 1	30 Apr 2019 10:27:08	SMPL	ug/l	1.5070	8872	1.000	1.000
JC87093-4 - 1	30 Apr 2019 10:29:28	SMPL	ug/l	9.7766	58621	1.000	1.000
JC87093-5 - 1	30 Apr 2019 10:31:31	SMPL	ug/l	10.1220	60699	1.000	1.000
JC87093-6 - 1	30 Apr 2019 10:34:00	SMPL	ug/l	17.7674	106693	1.000	1.000
CCV - 1	30 Apr 2019 10:36:31	CK STND	ug/l	96.7% 2.4183	14354	1.000	1.000
CCB - 1	30 Apr 2019 10:38:59	CK STND	ug/l	-0.0168	-295	1.000	1.000
JC87093-8 - 1	30 Apr 2019 10:41:04	SMPL	ug/l	0.3468	1892	1.000	1.000
JC87093-9 - 1	30 Apr 2019 10:42:25	SMPL	ug/l	0.4887	2746	1.000	1.000
JC87093-10 - 1	30 Apr 2019 10:44:11	SMPL	ug/l	0.9457	5495	1.000	1.000
JC87093-11 - 1	30 Apr 2019 10:46:02	SMPL	ug/l	5.1159	30583	1.000	1.000
JC87093-12 - 1	30 Apr 2019 10:47:58	SMPL	ug/l	2.4670	14647	1.000	1.000
JC87093-3 - 1	30 Apr 2019 10:52:43	SMPL	ug/l	1.7943	10600	1.000	1.000
JC87093-1 - 1	30 Apr 2019 10:54:00	SMPL	ug/l	7.8002	9191	1.000	5.000
JC87093-2 - 1	30 Apr 2019 10:56:01	SMPL	ug/l	9.2090	10886	1.000	5.000
JC87093-4 - 1	30 Apr 2019 10:58:02	SMPL	ug/l	9.0776	10728	1.000	5.000
CCV - 1	30 Apr 2019 11:00:03	CK STND	ug/l	102.8% 2.5699	15266	1.000	1.000
CCB - 1	30 Apr 2019 11:02:07	CK STND	ug/l	0.0083	-144	1.000	1.000
JC87093-5 - 1	30 Apr 2019 11:04:12	SMPL	ug/l	9.4425	11167	1.000	5.000
JC87093-6 - 1	30 Apr 2019 11:05:32	SMPL	ug/l	16.8204	20044	1.000	5.000
JC87093-11 - 1	30 Apr 2019 11:07:36	SMPL	ug/l	4.9107	14577	1.000	2.000
MP14633-S1 - 1	30 Apr 2019 11:12:01	SMPL	ug/l	2.0263	11996	1.000	1.000

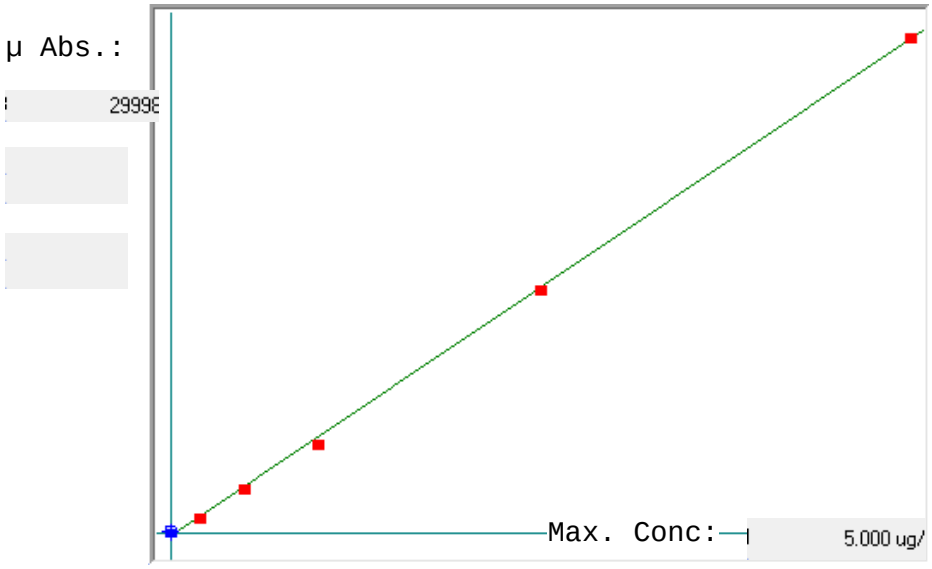
MA46615

Method: ACCUTEST Operator: Admin Date of Analysis: 30 Apr 2019 08:16:40

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
SAMPLECONF - 1	30 Apr 2019 11:21:12	CK STND	ug/l	(H)131.5% 0.2630	1388	1.000	1.000
CRI - 1	30 Apr 2019 11:24:19	CK STND	ug/l	127.3% 0.2545	1337	1.000	1.000
CCV - 1	30 Apr 2019 11:25:35	CK STND	ug/l	101.9% 2.5469	15128	1.000	1.000
CCB - 1	30 Apr 2019 11:27:14	CK STND	ug/l	0.0065	-155	1.000	1.000

ACCUTEST

Linear



A= 0.0000e+000

B= 1.6623e-004

C= 3.2260e-002

Rho= 0.9997479

Accept= Accepted

Accepted Date=

04/30/19 09:10

11.1.1

11

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	0.066	0.066	205	0.000	205				
STDB	0.200	0.197	-0.003	993	0.0 %	993				
STDC	0.500	0.498	-0.002	2799	0.0 %	2799				
STDD	1.000	0.934	-0.066	5426	0.0 %	5426				
STDE	2.500	2.486	-0.014	14761	0.0 %	14761				
STDF	5.000	5.019	0.019	29998	0.0 %	29998				

Zoom In
Zoom Out

Sample Name: STDA Acquired: 5/2/2019 11:57:48 Type: Cal
Method: SGS 3 NO Valve(v332) 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	**.0144**	**-.0007**	**.0005**	**-.0001**	**-.0001**	**.0026**	**.0001**	**-.0001**	**-.0003**
Stddev	.0001	.0001	.0001	.0001	.0000	.0001	.0000	.0000	.0001
%RSD	.4413	10.43	13.11	91.11	32.65	2.702	30.61	65.62	32.04
#1	.0145	-.0007	.0004	-.0000	-.0000	.0026	.0001	-.0001	-.0003
#2	.0144	-.0007	.0005	-.0002	-.0001	.0027	.0001	-.0000	-.0002
#3	.0144	-.0008	.0004	-.0001	-.0001	.0026	.0001	-.0001	-.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	**.0002**	**.0002**	**-.0002**	**-.0002**	**.0008**	**.0001**	**.0009**	**.0006**	**.0049**
Stddev	.0000	.0001	.0000	.0001	.0001	.0002	.0001	.0002	.0002
%RSD	10.89	43.14	7.544	36.72	18.40	159.7	16.87	38.58	4.493
#1	.0002	.0003	-.0002	-.0001	.0008	.0002	.0007	.0003	.0050
#2	.0003	.0002	-.0002	-.0003	.0007	-.0001	.0009	.0007	.0051
#3	.0002	.0001	-.0002	-.0003	.0010	.0002	.0010	.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	**.0002**	**.0000**	**.0043**	**-.0038**	**.0005**	**-.0010**	**.0024**	**.0004**	**-.0018**
Stddev	.0000	.0000	.0003	.0004	.0002	.0001	.0003	.0001	.0003
%RSD	4.571	68.61	7.534	11.45	31.96	6.287	11.56	28.55	16.83
#1	.0002	.0001	.0041	-.0035	.0006	-.0010	.0023	.0005	-.0015
#2	.0002	.0001	.0047	-.0035	.0006	-.0010	.0027	.0006	-.0021
#3	.0002	.0000	.0042	-.0042	.0003	-.0009	.0021	.0003	-.0017

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**	**.0006**	**-.0004**	**-.0001**	**.0000**	**-.0055**	**-.0016**
Stddev	.0000	.0002	.0001	.0000	.0002	.0010	.0001
%RSD	47.86	28.06	19.67	13.00	641.1	18.51	4.437
#1	.0001	.0004	-.0005	-.0002	.0003	-.0066	-.0015
#2	.0001	.0007	-.0003	-.0001	-.0001	-.0046	-.0017
#3	.0000	.0005	-.0005	-.0001	-.0001	-.0053	-.0017

Zoom In
Zoom Out

Sample Name: STDA Acquired: 5/2/2019 11:57:48 Type: Cal
Method: SGS 3 NO Valve(v332) 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	**161940.**	**24771.**	**6526.3**	**10236.**
Stddev	396.	65.	5.7	5.
%RSD	.24431	.26401	.08670	.04579
#1	161730.	24707.	6520.3	10236.
#2	161690.	24838.	6531.5	10240.
#3	162390.	24769.	6527.3	10231.

Zoom In
Zoom Out

Sample Name: STDb Acquired: 5/2/2019 12:02:51 Type: Cal
Method: SGS 3 NO Valve(v332) 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	**7.850**	**11.39**	**4.671**	**2.908**	**.6264**	**1.027**	**3.456**	**2.358**	**.0776**
Stddev	.023	.14	.008	.004	.0009	.001	.006	.003	.0001
%RSD	.2960	1.233	.1688	.1408	.1449	.1274	.1822	.1450	.0953
#1	7.841	11.24	4.679	2.909	.6261	1.026	3.454	2.358	.0777
#2	7.833	11.42	4.669	2.912	.6257	1.027	3.452	2.362	.0776
#3	7.877	11.51	4.664	2.904	.6275	1.029	3.463	2.355	.0777

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	**.8885**	**6.806**	**.5053**	**.2975**	**1.033**	**.3807**	**.6606**	**3.644**	**8.176**
Stddev	.0005	.018	.0014	.0008	.001	.0004	.0013	.014	.034
%RSD	.0592	.2636	.2692	.2585	.1122	.1059	.1905	.3752	.4106
#1	.8885	6.826	.5069	.2976	1.034	.3811	.6609	3.637	8.155
#2	.8880	6.802	.5046	.2967	1.034	.3803	.6617	3.636	8.158
#3	.8890	6.791	.5045	.2982	1.032	.3805	.6592	3.660	8.215

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	**4.491**	**.8645**	**1.913**	**7.192**	**1.026**	**3.162**	**2.283**	**.9469**	**13.36**
Stddev	.016	.0032	.007	.021	.002	.005	.004	.0023	.28
%RSD	.3627	.3654	.3576	.2912	.1716	.1573	.1641	.2416	2.063
#1	4.483	.8620	1.909	7.186	1.028	3.167	2.285	.9495	13.21
#2	4.480	.8636	1.909	7.175	1.026	3.159	2.285	.9452	13.20
#3	4.510	.8681	1.921	7.215	1.025	3.158	2.278	.9460	13.68

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	**.7191**	**1.608**	**2.047**	**.2036**	**.6981**	**2.109**	**.1195**
Stddev	.0005	.003	.028	.0009	.0016	.011	.0010
%RSD	.0645	.1584	1.356	.4644	.2320	.5014	.8490
#1	.7189	1.609	2.079	.2043	.6982	2.105	.1203
#2	.7187	1.610	2.036	.2026	.6996	2.101	.1184
#3	.7196	1.606	2.027	.2040	.6964	2.121	.1199

Zoom In
Zoom Out

Sample Name: STDb Acquired: 5/2/2019 12:02:51 Type: Cal
Method: SGS 3 NO Valve(v332) 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	**147730.**	**24290.**	**6072.5**	**9091.4**
Stddev	697.	201.	23.6	19.5
%RSD	.47174	.82550	.38930	.21458
#1	147060.	24485.	6045.4	9069.8
#2	148450.	24300.	6083.3	9096.7
#3	147690.	24084.	6088.8	9107.7

Zoom In Zoom Out

Sample Name: CCVCONF Acquired: 5/2/2019 12:08:17 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.984**	**2.042**	**2.002**	**2.031**	**2.007**	**1.986**	**2.033**	**2.032**	**.2415**
Stddev	.005	.007	.014	.015	.009	.007	.018	.014	.0005
%RSD	.2769	.3225	.7155	.7373	.4344	.3618	.8771	.6925	.2244
#1	1.981	2.037	2.010	2.040	2.014	1.992	2.029	2.040	.2416
#2	1.990	2.049	2.012	2.039	1.998	1.978	2.018	2.040	.2409
#3	1.981	2.039	1.986	2.014	2.010	1.988	2.052	2.016	.2420
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	**1.998**	**2.025**	**1.954**	**2.068**	**2.026**	**1.991**	**1.964**	**38.81**	**39.16**
Stddev	.008	.016	.016	.020	.015	.019	.013	.11	.12
%RSD	.3849	.7715	.8334	.9435	.7440	.9352	.6772	.2878	.3169
#1	2.004	2.035	1.964	2.080	2.034	2.008	1.971	38.76	39.08
#2	1.989	2.034	1.962	2.078	2.036	1.993	1.973	38.94	39.30
#3	2.000	2.007	1.935	2.046	2.009	1.971	1.949	38.74	39.10
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	**38.92**	**39.62**	**38.97**	**39.37**	**2.026**	**1.985**	**5.013**	**2.006**	**2.042**
Stddev	.12	.15	.17	.11	.017	.016	.037	.018	.006
%RSD	.3169	.3787	.4490	.2827	.8324	.7868	.7369	.9040	.3058
#1	38.84	39.57	38.84	39.32	2.038	1.994	5.037	2.018	2.038
#2	39.06	39.79	39.17	39.50	2.034	1.994	5.033	2.014	2.049
#3	38.86	39.51	38.90	39.29	2.007	1.967	4.971	1.985	2.039
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: 5/2/2019 12:08:17 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.970**	**1.934**	**1.987**	**1.954**	**1.991**	**1.981**	**2.038**
Stddev	.009	.015	.009	.017	.012	.005	.017
%RSD	.4843	.7802	.4791	.8596	.5916	.2519	.8491
#1	1.976	1.943	1.995	1.968	1.998	1.979	2.056
#2	1.959	1.942	1.977	1.958	1.996	1.986	2.037
#3	1.974	1.917	1.991	1.935	1.977	1.977	2.021
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	**151810.**	**24682.**	**6223.8**	**9302.3**
Stddev	582.	145.	36.8	45.4
%RSD	.38340	.58774	.59047	.48826
#1	151250.	24766.	6202.5	9279.2
#2	152410.	24514.	6202.7	9273.1
#3	151760.	24765.	6266.3	9354.7

Zoom In Zoom Out

Sample Name: CCBCONF Acquired: 5/2/2019 12:13:21 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0004**	**.0000**	**.0002**	**.0002**
Stddev	.0002	.0000	.0002	.0001	.0001	.0003	.0000	.0002	.0002
%RSD	478.7	39.13	157.8	95.67	1081.	75.44	213.9	84.25	139.4
#1	-.0003	.0001	.0002	.0000	-.0001	.0002	.0000	.0000	.0001
#2	.0002	.0001	-.0001	.0001	-.0000	.0008	.0000	.0002	.0004
#3	-.0000	.0001	.0003	.0002	.0002	.0003	-.0000	.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0007**	**.0005**	**.0009**	**.0006**	**-.0015**	**-.0010**	**-.0080**	**.0041**
Stddev	.0003	.0001	.0003	.0007	.0007	.0006	.0005	.0015	.0004
%RSD	356.7	14.44	67.75	70.88	102.8	37.69	51.47	18.88	9.723
#1	-.0002	.0006	.0008	.0002	.0007	-.0021	-.0008	-.0094	.0045
#2	.0001	.0008	.0001	.0015	.0013	-.0009	-.0005	-.0081	.0040
#3	.0004	.0008	.0006	.0011	-.0000	-.0016	-.0015	-.0064	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**-.0029**	**.1020**	**.0384**	**.0037**	**.0004**	**.0003**	**.0000**	**.0002**
Stddev	.0002	.0075	.0273	.0044	.0005	.0000	.0010	.0002	.0001
%RSD	8.836	256.6	26.78	11.47	14.13	12.59	304.7	387.7	66.10
#1	.0024	.0051	.0727	.0356	.0043	.0004	.0001	-.0001	.0003
#2	.0028	-.0098	.1268	.0435	.0034	.0004	-.0005	.0003	.0001
#3	.0026	-.0041	.1065	.0362	.0034	.0003	.0014	-.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: CCBCONF Acquired: 5/2/2019 12:13:21 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0001**	**.0006**	**.0005**	**.0023**	**.0015**
Stddev	.0003	.0004	.0001	.0022	.0020	.0008	.0002
%RSD	55.76	188.7	86.65	396.3	407.9	34.52	11.31
#1	.0009	.0001	.0001	-.0020	.0013	.0027	.0016
#2	.0004	-.0001	.0001	.0014	-.0018	.0014	.0015
#3	.0003	.0006	.0000	.0022	.0020	.0029	.0013
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	**160470.**	**24565.**	**6464.5**	**10167.**
Stddev	458.	72.	15.6	14.
%RSD	.28561	.29451	.24141	.14203
#1	159960.	24523.	6453.7	10155.
#2	160590.	24522.	6457.4	10163.
#3	160850.	24648.	6482.4	10183.

Zoom In Zoom Out

Sample Name: icv 7 Acquired: 5/2/2019 12:18:30 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**2.062**	**2.000**	**2.048**	**1.978**	**1.971**	**2.014**	**2.009**	**.2376**
Stddev	.002	.004	.018	.013	.003	.002	.009	.011	.0006
%RSD	.1210	.2001	.8942	.6485	.1674	.0985	.4558	.5620	.2543
#1	1.985	2.065	2.020	2.063	1.977	1.971	2.023	2.022	.2375
#2	1.989	2.057	1.995	2.042	1.982	1.973	2.013	2.003	.2382
#3	1.989	2.063	1.985	2.038	1.976	1.969	2.005	2.002	.2370
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	**1.984**	**1.991**	**1.942**	**2.062**	**1.995**	**1.966**	**1.925**	**38.73**	**38.83**
Stddev	.001	.016	.013	.014	.014	.020	.020	.06	.07
%RSD	.0670	.8013	.6755	.6705	.6798	.9915	1.050	.1614	.1700
#1	1.983	2.009	1.957	2.078	2.010	1.987	1.947	38.80	38.87
#2	1.985	1.987	1.938	2.056	1.990	1.960	1.919	38.67	38.75
#3	1.985	1.977	1.932	2.053	1.985	1.949	1.908	38.72	38.86
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	**39.13**	**39.39**	**38.79**	**39.04**	**2.018**	**1.947**	**5.002**	**1.966**	**2.049**
Stddev	.05	.08	.10	.02	.016	.017	.036	.016	.001
%RSD	.1361	.2134	.2464	.0452	.7886	.8744	.7293	.8227	.0601
#1	39.16	39.49	38.84	39.06	2.036	1.966	5.044	1.984	2.048
#2	39.07	39.32	38.68	39.03	2.013	1.942	4.989	1.960	2.048
#3	39.17	39.37	38.84	39.03	2.006	1.933	4.975	1.954	2.050
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 7 Acquired: 5/2/2019 12:18:30 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.942**	F **1.897**	**1.950**	**1.943**	**1.975**	**2.023**	**2.016**
Stddev	.001	.014	.002	.014	.015	.003	.024
%RSD	.0331	.7094	.1052	.7217	.7640	.1605	1.188
#1	1.941	1.912	1.948	1.959	1.993	2.025	1.991
#2	1.941	1.893	1.952	1.936	1.970	2.019	2.020
#3	1.942	1.886	1.951	1.934	1.964	2.024	2.038
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		2.000					
Range		-5.000%					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**150310.**	**24212.**	**6162.4**	**9240.9**
Stddev	268.	96.	38.2	45.0
%RSD	.17829	.39851	.61970	.48673
#1	150200.	24104.	6123.0	9192.3
#2	150110.	24244.	6165.1	9249.3
#3	150610.	24289.	6199.2	9281.1

Zoom In Zoom Out

Sample Name: icb Acquired: 5/2/2019 12:23:32 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0001**	**.0006**	**.0001**	**.0002**	**.0003**
Stddev	.0003	.0001	.0002	.0001	.0003	.0002	.0000	.0004	.0002
%RSD	128.3	73.31	214.1	44.29	384.9	27.53	9.425	216.2	73.64
#1	-.0002	.0002	.0002	.0003	-.0003	.0005	.0001	-.0000	.0005
#2	.0001	.0002	.0002	.0001	.0002	.0005	.0001	-.0001	.0001
#3	-.0004	.0000	-.0001	.0001	.0003	.0008	.0001	.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0010**	**.0003**	**.0009**	**.0002**	**-.0015**	**-.0013**	**.0032**	**.0018**
Stddev	.0002	.0001	.0009	.0007	.0003	.0013	.0020	.0047	.0010
%RSD	285.9	13.91	334.6	80.09	116.9	83.14	158.8	146.9	56.27
#1	-.0002	.0011	-.0006	.0009	.0001	-.0013	.0002	-.0009	.0026
#2	.0003	.0008	.0011	.0017	.0000	-.0004	-.0005	.0022	.0007
#3	.0001	.0010	.0002	.0002	.0006	-.0030	-.0035	.0083	.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	**.0025**	**.0031**	**.0051**	**.0132**	**.0031**	**.0003**	**.0006**	**.0002**	**.0002**
Stddev	.0014	.0091	.0231	.0048	.0009	.0000	.0009	.0005	.0000
%RSD	57.86	296.5	451.4	36.74	29.75	14.94	159.9	261.7	19.59
#1	.0039	-.0063	-.0134	.0083	.0040	.0002	.0016	.0005	.0002
#2	.0026	.0036	.0310	.0179	.0022	.0003	.0001	-.0004	.0002
#3	.0010	.0119	-.0023	.0133	.0031	.0003	-.0000	.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 Acquired: 5/2/2019 12:23:32 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0019**	**.0003**	**.0002**	**-.0016**	**.0020**	**-.0015**
Stddev	.0002	.0007	.0001	.0009	.0006	.0016	.0017
%RSD	50.25	38.65	26.16	453.6	36.17	80.65	115.7
#1	.0002	.0022	.0002	-.0006	-.0023	.0014	-.0015
#2	.0006	.0023	.0003	.0001	-.0015	.0007	.0002
#3	.0005	.0010	.0004	.0011	-.0011	.0038	-.0031
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	**159280.**	**24581.**	**6487.1**	**10176.**
Stddev	11.	156.	5.7	14.
%RSD	.00710	.63369	.08794	.13696
#1	159290.	24688.	6481.3	10160.
#2	159270.	24653.	6487.5	10180.
#3	159290.	24403.	6492.7	10187.

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/2/2019 12:28:41 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.992**	**2.063**	**1.999**	**2.019**	**2.009**	**1.991**	**2.050**	**2.023**	**.2423**
Stddev	.001	.002	.001	.003	.001	.001	.012	.001	.0009
%RSD	.0517	.1105	.0347	.1217	.0671	.0679	.5620	.0553	.3548
#1	1.993	2.061	1.998	2.016	2.009	1.990	2.063	2.022	.2421
#2	1.991	2.066	2.000	2.020	2.008	1.991	2.048	2.024	.2416
#3	1.993	2.063	1.999	2.020	2.010	1.992	2.041	2.023	.2433
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**	**2.019**	**1.953**	**2.088**	**2.020**	**1.985**	**1.958**	**39.12**	**39.40**
Stddev	.001	.003	.000	.001	.002	.001	.002	.04	.03
%RSD	.0570	.1441	.0205	.0435	.1093	.0380	.0755	.0956	.0870
#1	1.998	2.019	1.954	2.089	2.019	1.984	1.957	39.08	39.36
#2	1.996	2.022	1.953	2.089	2.018	1.985	1.958	39.15	39.42
#3	1.998	2.016	1.953	2.087	2.022	1.986	1.960	39.12	39.42
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	**39.46**	**40.11**	**38.91**	**39.68**	**2.023**	**1.977**	**4.995**	**2.003**	**2.055**
Stddev	.03	.10	.06	.05	.002	.001	.003	.001	.001
%RSD	.0681	.2525	.1429	.1372	.1144	.0687	.0566	.0505	.0394
#1	39.43	39.99	38.85	39.63	2.025	1.978	4.994	2.002	2.054
#2	39.48	40.16	38.94	39.74	2.020	1.977	4.998	2.004	2.056
#3	39.48	40.18	38.95	39.69	2.023	1.975	4.992	2.002	2.055
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: 5/2/2019 12:28:41 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.977**	**1.933**	**1.992**	**1.977**	**1.992**	**1.990**	**2.193**
Stddev	.001	.002	.001	.005	.005	.004	.014
%RSD	.0260	.1261	.0427	.2414	.2377	.2139	.6472
#1	1.977	1.935	1.992	1.983	1.998	1.985	2.198
#2	1.977	1.931	1.993	1.973	1.988	1.994	2.203
#3	1.976	1.931	1.992	1.976	1.991	1.992	2.177
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	**150230.**	**24172.**	**6160.7**	**9218.7**
Stddev	482.	152.	19.8	28.0
%RSD	.32085	.62770	.32102	.30422
#1	149810.	24347.	6160.3	9227.8
#2	150760.	24079.	6141.1	9187.2
#3	150110.	24089.	6180.7	9241.1

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/2/2019 12:33:42 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0003**	**.0005**	**.0006**	**.0008**	**.0007**	**.0003**	**-.0000**
Stddev	.0003	.0001	.0001	.0002	.0002	.0002	.0000	.0002	.0002
%RSD	167.4	10.97	27.09	40.76	33.68	28.56	7.308	55.81	1306.
#1	.0002	.0005	.0004	.0008	.0007	.0010	.0007	.0004	-.0002
#2	.0004	.0006	.0003	.0006	.0007	.0005	.0007	.0001	.0001
#3	-.0001	.0006	.0002	.0003	.0003	.0009	.0006	.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0012**	**.0012**	**.0010**	**.0002**	**-.0012**	**-.0014**	**.0111**	**.0117**
Stddev	.0003	.0002	.0008	.0006	.0008	.0013	.0021	.0066	.0024
%RSD	61.36	19.75	66.12	58.91	390.4	112.7	144.5	58.94	20.32
#1	.0003	.0014	.0018	.0011	.0007	-.0005	.0007	.0126	.0102
#2	.0007	.0012	.0003	.0016	-.0007	-.0003	-.0034	.0040	.0105
#3	.0002	.0010	.0015	.0004	.0005	-.0027	-.0016	.0168	.0145
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	**.0109**	**.0276**	**.0034**	**.0336**	**.0035**	**.0007**	**.0014**	**.0005**	**.0007**
Stddev	.0025	.0052	.0438	.0091	.0006	.0003	.0008	.0003	.0000
%RSD	22.96	18.91	1284.	27.13	18.01	36.26	54.67	64.72	6.364
#1	.0095	.0331	.0521	.0257	.0031	.0009	.0018	.0002	.0007
#2	.0095	.0228	-.0090	.0436	.0043	.0009	.0005	.0004	.0007
#3	.0138	.0268	-.0329	.0316	.0032	.0004	.0019	.0008	.0008
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: 5/2/2019 12:33:42 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0010**	**.0006**	**.0006**	**-.0003**	**.0011**	**.0016**	**-.0009**
Stddev	.0002	.0002	.0001	.0013	.0006	.0016	.0023
%RSD	22.15	26.55	17.20	527.2	60.91	98.34	240.0
#1	.0011	.0006	.0006	-.0012	.0017	.0035	.0012
#2	.0008	.0004	.0005	.0013	.0004	.0011	-.0033
#3	.0012	.0007	.0007	-.0008	.0010	.0003	-.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	**159800.**	**24519.**	**6485.2**	**10174.**
Stddev	502.	129.	9.8	16.
%RSD	.31440	.52567	.15166	.15799
#1	159380.	24384.	6477.8	10158.
#2	160360.	24533.	6481.5	10175.
#3	159660.	24641.	6496.3	10190.

Zoom In Zoom Out

Sample Name: emptyconf Acquired: 5/2/2019 12:38:51 Type: QC
Method: SGS 3 NO Valve(v332) 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	F .0302	F .0001	F -.0001	F .0030	F .0013	F -.0012	F .0021	F .0006
Stddev	.0029	.0001	.0001	.0005	.0004	.0006	.0004	.0001
%RSD	9.679	46.68	170.5	17.89	28.51	47.46	20.61	22.67
#1	.0334	.0002	-.0001	.0036	.0018	-.0010	.0025	.0008
#2	.0277	.0001	.0001	.0028	.0012	-.0007	.0020	.0006
#3	.0294	.0001	-.0001	.0026	.0011	-.0018	.0017	.0005
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.2000	.0020	.0030	.0500	.0100	.0100	.0150	.0100
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0007	F .0062	F .0121	F .0015	F .0019	F -.0005	F -.0016	F -.0028
Stddev	.0001	.0012	.0012	.0000	.0006	.0001	.0001	.0009
%RSD	18.46	19.58	9.741	2.838	30.78	16.26	4.961	33.05
#1	.0008	.0074	.0113	.0015	.0025	-.0005	-.0015	-.0021
#2	.0005	.0063	.0115	.0015	.0017	-.0005	-.0015	-.0024
#3	.0007	.0050	.0135	.0014	.0014	-.0006	-.0017	-.0039
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0050	.0500	.0200	.0080	.0100	.0030	.0100	.0060
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0306	F .8451	F .0151	F .9130	F .7183	F .8689	F .0068	F .0017
Stddev	.0046	.0755	.0009	.0734	.0638	.0749	.0008	.0002
%RSD	14.91	8.932	5.951	8.039	8.884	8.616	11.46	12.78
#1	.0356	.9310	.0160	.9970	.7911	.9548	.0077	.0019
#2	.0295	.7895	.0142	.8612	.6918	.8178	.0063	.0016
#3	.0266	.8147	.0152	.8808	.6720	.8340	.0065	.0015
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.2000	5.000	.1000	5.000	5.000	5.000	.1000	.0200
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Zoom In Zoom Out

Sample Name: emptyconf Acquired: 5/2/2019 12:38:51 Type: QC
Method: SGS 3 NO Valve(v332) 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	F .0059	F -.0009	F .0018	F .0015	F .0025	F .0020	F .0039	F .0005
Stddev	.0021	.0004	.0002	.0002	.0008	.0004	.0010	.0007
%RSD	34.74	45.33	9.270	16.34	30.98	19.71	24.98	127.2
#1	.0083	-.0004	.0020	.0017	.0032	.0024	.0032	.0001
#2	.0050	-.0009	.0017	.0014	.0017	.0019	.0050	.0002
#3	.0045	-.0012	.0018	.0013	.0027	.0017	.0034	.0013
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.2000	.0100	.0100	.0100	.0500	.0100	.0500	.0200
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F .0185	F .0030
Stddev	.0013	.0007
%RSD	6.744	24.16
#1	.0197	.0031
#2	.0172	.0038
#3	.0187	.0023
Check ?	Chk Fail	Chk Fail
Value	.0500	.0500
Range	-20.00%	-20.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	298890.	37823.	13230.	19851.
Stddev	10231.	1146.	20.	41.
%RSD	3.4232	3.0310	.15278	.20831
#1	291970.	36733.	13212.	19809.
#2	294050.	37717.	13252.	19892.
#3	310640.	39018.	13227.	19854.

Zoom In Zoom Out

Sample Name: emptyconf Acquired: 5/2/2019 12:44:02 Type: QC
Method: SGS 3 NO Valve(v332) 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	F -.0022	F -.0003	F -.0002	F .0000	F -.0002	F -.0029	F -.0001	F .0001
Stddev	.0001	.0000	.0000	.0000	.0001	.0002	.0000	.0001
%RSD	4.499	1.694	13.29	107.9	59.09	6.294	21.06	59.10
#1	-.0022	-.0003	-.0002	.0000	-.0001	-.0030	-.0001	.0000
#2	-.0023	-.0003	-.0003	.0000	-.0002	-.0030	-.0001	.0002
#3	-.0021	-.0003	-.0003	.0001	-.0003	-.0027	-.0001	.0002
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0040	.0010	.0010	.0030	.0020	.0020	.0030	.0040
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0000	F -.0005	F -.0003	F .0012	.0020	F -.0011	F -.0023	F -.0025
Stddev	.0002	.0002	.0000	.0004	.0001	.0002	.0002	.0003
%RSD	1414.	39.74	14.99	38.62	4.981	15.16	7.833	13.58
#1	-.0003	-.0005	-.0003	.0014	.0021	-.0009	-.0021	-.0021
#2	.0002	-.0006	-.0003	.0006	.0019	-.0012	-.0024	-.0028
#3	.0000	-.0003	-.0004	.0014	.0020	-.0011	-.0025	-.0024
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value	.0020	.0020	.0100	.0030		.0025	.0050	.0030
Range	-20.00%	-20.00%	-20.00%	-20.00%		-20.00%	-20.00%	-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0086	F -.0090	-.0025	F -.0028	F -.2461	F -.0490	.0010	.0005
Stddev	.0054	.0014	.0009	.0059	.0241	.0038	.0002	.0001
%RSD	63.56	15.56	38.15	208.9	9.789	7.830	20.55	11.87
#1	-.0133	-.0089	-.0021	-.0051	-.2625	-.0507	.0010	.0005
#2	-.0098	-.0105	-.0018	-.0072	-.2575	-.0517	.0012	.0005
#3	-.0026	-.0077	-.0036	.0038	-.2185	-.0446	.0008	.0006
Check ?	Chk Fail	Chk Fail	None	Chk Fail	Chk Fail	Chk Fail	None	None
Value	.1000	1.000		.1000	2.000	1.000		
Range	-20.00%	-20.00%		-20.00%	-20.00%	-20.00%		

Zoom In Zoom Out

Sample Name: emptyconf Acquired: 5/2/2019 12:44:02 Type: QC
Method: SGS 3 NO Valve(v332) 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	-.0063	-.0018	.0001	.0003	-.0007	.0002	.0010	-.0007
Stddev	.0003	.0003	.0001	.0001	.0000	.0001	.0009	.0012
%RSD	4.040	14.61	81.97	24.67	6.692	32.85	86.86	181.5
#1	-.0060	-.0016	.0001	.0002	-.0007	.0001	.0002	.0005
#2	-.0063	-.0018	.0000	.0003	-.0006	.0002	.0008	-.0020
#3	-.0065	-.0021	.0002	.0004	-.0007	.0001	.0020	-.0006
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	.0120	.0018
Stddev	.0012	.0018
%RSD	10.32	102.3
#1	.0134	.0024
#2	.0118	.0031
#3	.0109	-.0003
Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	333350.	41863.	14320.	21418.
Stddev	2610.	310.	180.	247.
%RSD	.78292	.74000	1.2581	1.1538
#1	336110.	41526.	14390.	21517.
#2	333040.	41928.	14455.	21600.
#3	330910.	42136.	14115.	21137.

Zoom In Zoom Out

Sample Name: cri Acquired: 5/2/2019 12:49:55 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.2035**	**.0021**	**.0030**	**.0514**	**.0105**	**.0098**	**.0161**	**.0104**	**.0049**
Stddev	.0004	.0000	.0001	.0003	.0000	.0003	.0000	.0003	.0002
%RSD	.2038	1.723	2.661	.5588	.4291	2.872	.1189	3.225	3.363
#1	.2034	.0021	.0031	.0512	.0105	.0095	.0161	.0106	.0051
#2	.2032	.0021	.0030	.0517	.0104	.0099	.0161	.0106	.0048
#3	.2040	.0021	.0031	.0512	.0105	.0101	.0161	.0100	.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	**.0509**	**.0206**	**.0073**	**.0096**	**.0034**	**.0094**	**.0050**	**.1939**	**5.097**
Stddev	.0002	.0001	.0007	.0001	.0003	.0010	.0010	.0076	.034
%RSD	.4677	.3030	9.453	.6571	8.995	10.16	19.13	3.907	.6678
#1	.0508	.0207	.0077	.0097	.0031	.0092	.0039	.2017	5.133
#2	.0508	.0206	.0078	.0096	.0037	.0085	.0055	.1936	5.095
#3	.0512	.0206	.0065	.0097	.0033	.0104	.0057	.1865	5.065
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	**.1055**	**5.279**	**5.158**	**5.300**	**.1035**	**.0206**	**.2112**	**.0098**	**.0105**
Stddev	.0013	.025	.039	.002	.0004	.0002	.0005	.0001	.0001
%RSD	1.245	.4818	.7508	.0441	.3901	.8860	.2266	1.301	.5570
#1	.1043	5.283	5.201	5.301	.1040	.0208	.2117	.0097	.0106
#2	.1052	5.302	5.147	5.301	.1032	.0205	.2111	.0098	.0105
#3	.1069	5.252	5.126	5.297	.1034	.0204	.2107	.0099	.0105
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: 5/2/2019 12:49:55 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0511**	**.0104**	**.0516**	**.0210**	F **.0637**	**.0538**
Stddev	.0003	.0010	.0001	.0020	.0017	.0003	.0023
%RSD	3.349	1.927	.9877	3.822	8.093	.5080	4.277
#1	.0105	.0517	.0104	.0529	.0215	.0637	.0538
#2	.0106	.0516	.0104	.0493	.0224	.0633	.0515
#3	.0100	.0500	.0105	.0525	.0191	.0640	.0561
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						.0500	
Range						20.00%	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**155290.**	**24022.**	**6315.7**	**9685.8**
Stddev	257.	56.	28.9	35.4
%RSD	.16539	.23330	.45777	.36534
#1	155510.	23963.	6291.6	9647.7
#2	155360.	24074.	6347.7	9717.6
#3	155010.	24028.	6307.7	9692.0

Zoom In Zoom Out

Sample Name: crid Acquired: 5/2/2019 12:55:00 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0041**	**.0010**	**.0009**	**.0032**	**.0023**	F **.0002**	**.0032**	**.0042**
Stddev	.0001	.0001	.0001	.0001	.0003	.0004	.0000	.0003
%RSD	2.421	4.998	8.768	4.617	11.90	161.8	.6431	7.666
#1	.0040	.0010	.0010	.0030	.0023	-.0000	.0032	.0038
#2	.0042	.0010	.0008	.0033	.0026	.0007	.0032	.0044
#3	.0041	.0011	.0009	.0033	.0021	.0001	.0032	.0044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-20.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0005**	**.0020**	**.0102**	F **.0038**	F **.0025**	F **-.0004**	F **.0029**	F **-.0018**
Stddev	.0002	.0004	.0000	.0002	.0003	.0002	.0007	.0012
%RSD	33.95	21.95	.3714	4.038	13.34	46.59	25.03	67.72
#1	-.0007	.0023	.0102	.0038	.0021	-.0002	.0037	-.0018
#2	-.0005	.0015	.0102	.0036	.0028	-.0004	.0026	-.0030
#3	-.0003	.0021	.0103	.0039	.0027	-.0005	.0024	-.0006
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0020			.0030	.0020	.0025	.0050	.0030
Range	-20.00%			20.00%	20.00%	-20.00%	-20.00%	-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0945**	**1.015**	**.0010**	**.1134**	**1.911**	**1.032**	**.0012**	**.0000**
Stddev	.0059	.004	.0004	.0125	.025	.006	.0006	.0001
%RSD	6.221	.4398	42.53	11.06	1.332	.6324	50.88	219.5
#1	.0918	1.010	.0014	.1278	1.882	1.037	.0018	.0001
#2	.0905	1.018	.0009	.1077	1.921	1.035	.0008	-.0000
#3	.1013	1.018	.0006	.1047	1.929	1.025	.0009	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Zoom In Zoom Out

Sample Name: crid Acquired: 5/2/2019 12:55:00 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0002**	**-.0012**	**-.0000**	**.0000**	**.0007**	**-.0000**	**.0050**	**-.0017**
Stddev	.0001	.0004	.0001	.0004	.0012	.0000	.0008	.0015
%RSD	42.03	29.27	303.2	5453.	165.0	90.89	16.50	91.16
#1	.0001	-.0014	.0001	.0003	.0020	-.0001	.0041	-.0002
#2	.0002	-.0014	-.0001	.0002	.0005	-.0000	.0054	-.0032
#3	.0003	-.0008	-.0002	-.0004	-.0004	-.0000	.0056	-.0017
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0024**	**.0047**
Stddev	.0009	.0004
%RSD	39.97	9.374
#1	.0034	.0051
#2	.0023	.0048
#3	.0015	.0042
Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**158790.**	**24387.**	**6447.6**	**10020.**
Stddev	431.	1.	5.8	10.
%RSD	.27115	.00373	.08948	.09694
#1	158480.	24388.	6450.4	10026.
#2	158610.	24387.	6451.5	10024.
#3	159280.	24387.	6441.0	10008.

Zoom In
Zoom Out

Sample Name: ICSA Acquired: 5/2/2019 13:00:07 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0001**	**-.0002**	**.0015**	**-.0006**	**-.0041**	**.0017**	**-.0005**	**.0016**
Stddev	.0004	.0001	.0000	.0001	.0002	.0003	.0001	.0006	.0007
%RSD	64.68	50.29	18.43	7.420	35.80	8.343	8.478	108.6	43.44
#1	.0006	.0001	-.0002	.0016	-.0008	-.0037	.0018	-.0007	.0021
#2	.0008	.0001	-.0002	.0016	-.0004	-.0043	.0016	.0001	.0008
#3	.0002	.0002	-.0002	.0014	-.0005	-.0043	.0019	-.0010	.0020
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	**-.0017**	**-.0016**	**.0009**	**-.0017**	**.0024**	**.0002**	**-.0030**	**496.2**	**377.4**
Stddev	.0002	.0002	.0005	.0004	.0022	.0021	.0024	5.7	4.2
%RSD	10.59	10.91	54.29	24.27	88.42	1231.	78.82	1.142	1.123
#1	-.0015	-.0018	.0004	-.0022	-.0001	.0006	-.0035	502.7	381.3
#2	-.0019	-.0014	.0013	-.0013	.0037	.0020	-.0004	492.9	378.1
#3	-.0017	-.0015	.0010	-.0017	.0037	-.0021	-.0050	493.0	372.9
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	**191.6**	**492.0**	**.1059**	**.0569**	**-.0002**	**-.0002**	**.0033**	**-.0037**	**.0001**
Stddev	1.8	.5	.0378	.0017	.0007	.0003	.0011	.0003	.0001
%RSD	.9520	.1108	35.72	2.932	289.2	146.7	32.01	8.476	175.1
#1	192.8	492.5	.1110	.0564	.0004	-.0004	.0023	-.0040	-.0000
#2	189.5	491.4	.0658	.0588	-.0010	-.0002	.0044	-.0034	.0002
#3	192.6	492.0	.1409	.0555	-.0001	.0001	.0033	-.0038	.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: ICSA Acquired: 5/2/2019 13:00:07 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0015**	**.0004**	**-.0004**	**-.0039**	**.0094**	**.0249**
Stddev	.0003	.0004	.0002	.0026	.0010	.0014	.0037
%RSD	24.42	27.63	43.17	630.5	25.33	15.24	14.90
#1	-.0014	.0020	.0004	-.0030	-.0030	.0078	.0207
#2	-.0008	.0014	.0002	-.0005	-.0038	.0106	.0275
#3	-.0011	.0012	.0005	.0023	-.0050	.0097	.0266
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	**137280.**	**23317.**	**5753.4**	**8418.6**
Stddev	110.	119.	3.5	3.0
%RSD	.08028	.51005	.06017	.03554
#1	137400.	23245.	5750.7	8415.5
#2	137230.	23454.	5757.3	8418.9
#3	137200.	23252.	5752.1	8421.4

Zoom In
Zoom Out

Sample Name: ICSAB Acquired: 5/2/2019 13:05:29 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.5253**	**.5252**	**1.021**	**.4946**	**.4962**	**.5122**	**.5190**	**.9882**	**1.073**
Stddev	.0159	.0146	.002	.0002	.0002	.0008	.0007	.0007	.002
%RSD	3.034	2.782	.2167	.0490	.0358	.1634	.1339	.0703	.1484
#1	.5170	.5174	1.024	.4943	.4960	.5132	.5196	.9876	1.075
#2	.5152	.5161	1.021	.4946	.4963	.5117	.5182	.9879	1.072
#3	.5437	.5420	1.019	.4948	.4963	.5117	.5191	.9889	1.073
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	**.4974**	**.9644**	**1.068**	**1.001**	**.9683**	**1.073**	**1.059**	**503.5**	**383.5**
Stddev	.0009	.0011	.002	.000	.0011	.007	.002	17.1	12.6
%RSD	.1751	.1165	.2068	.0088	.1106	.6234	.2139	3.399	3.295
#1	.4983	.9656	1.065	1.001	.9672	1.079	1.062	494.7	379.9
#2	.4965	.9640	1.068	1.001	.9682	1.072	1.059	492.6	373.0
#3	.4974	.9635	1.070	1.001	.9694	1.066	1.057	523.2	397.5
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	**200.9**	**508.7**	**.0573**	**.0675**	**.4902**	**.4726**	**.4980**	**.4639**	**.5446**
Stddev	4.7	14.4	.0271	.0155	.0011	.0009	.0009	.0014	.0161
%RSD	2.336	2.822	47.37	23.04	.2260	.1929	.1899	.2995	2.953
#1	197.6	501.3	.0876	.0852	.4897	.4735	.4975	.4650	.5359
#2	198.9	499.5	.0489	.0610	.4895	.4727	.4991	.4624	.5346
#3	206.3	525.3	.0353	.0562	.4915	.4717	.4975	.4645	.5631
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: 5/2/2019 13:05:29 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.4986**	**.4711**	**.4860**	**.5147**	**.5050**	**.5551**	**.5805**
Stddev	.0013	.0014	.0009	.0081	.0016	.0161	.0096
%RSD	.2654	.2916	.1945	1.569	.3095	2.898	1.661
#1	.5001	.4704	.4871	.5238	.5063	.5458	.5739
#2	.4976	.4702	.4852	.5082	.5053	.5458	.5760
#3	.4980	.4727	.4859	.5122	.5032	.5737	.5915
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	**137570.**	**22952.**	**5740.3**	**8422.1**
Stddev	350.	633.	.9	5.0
%RSD	.25424	2.7577	.01618	.05929
#1	137950.	23282.	5740.7	8427.5
#2	137490.	23352.	5739.3	8417.7
#3	137270.	22222.	5741.0	8421.1

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/2/2019 13:10:47 Type: QC
Method: SGS 3 NO Valve(v332) 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	**7.986**	**8.141**	**7.870**	**7.941**	**8.150**	**7.947**	**8.013**	**8.030**	**.6209**
Stddev	.198	.157	.007	.003	.029	.075	.109	.006	.0021
%RSD	2.474	1.932	.0941	.0409	.3582	.9381	1.366	.0692	.3353
#1	7.797	7.964	7.878	7.940	8.155	7.862	8.090	8.024	.6221
#2	7.970	8.265	7.864	7.944	8.176	8.002	8.060	8.035	.6221
#3	8.191	8.194	7.869	7.938	8.119	7.977	7.887	8.031	.6185
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	**7.855**	**8.130**	**7.974**	**8.350**	**8.131**	**8.074**	**8.045**	**.0457**	**-.0482**
Stddev	.066	.011	.002	.011	.006	.004	.007	.0056	.0017
%RSD	.8420	.1346	.0194	.1362	.0775	.0540	.0863	12.29	3.564
#1	7.922	8.127	7.976	8.352	8.127	8.069	8.053	.0410	-.0464
#2	7.853	8.142	7.974	8.338	8.139	8.077	8.043	.0443	-.0499
#3	7.790	8.121	7.973	8.361	8.128	8.075	8.039	.0519	-.0482
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	**-.0297**	**-.0509**	**.2404**	**.0478**	**8.101**	**8.005**	**25.75**	**8.230**	**8.250**
Stddev	.0002	.0070	.0167	.0033	.010	.010	.01	.005	.022
%RSD	.7413	13.82	6.967	6.952	.1216	.1254	.0255	.0590	.2709
#1	-.0298	-.0586	.2592	.0477	8.109	8.016	25.76	8.236	8.251
#2	-.0299	-.0492	.2348	.0511	8.104	8.003	25.76	8.228	8.272
#3	-.0294	-.0449	.2272	.0445	8.090	7.996	25.75	8.227	8.227
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: 5/2/2019 13:10:47 Type: QC
Method: SGS 3 NO Valve(v332) 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	**8.131**	**8.323**	**7.908**	**95.66**	**8.303**	**8.017**	**8.679**
Stddev	.061	.008	.056	.18	.002	.027	.097
%RSD	.7522	.0957	.7015	.1870	.0224	.3377	1.114
#1	8.077	8.322	7.844	95.54	8.303	7.989	8.571
#2	8.198	8.331	7.931	95.58	8.305	8.017	8.712
#3	8.119	8.315	7.947	95.86	8.302	8.043	8.756
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	**155790.**	**24723.**	**6332.6**	**9893.0**
Stddev	514.	248.	4.3	8.5
%RSD	.33022	1.0018	.06846	.08632
#1	155600.	25002.	6333.7	9902.8
#2	155400.	24639.	6327.8	9887.9
#3	156370.	24528.	6336.2	9888.2

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/2/2019 13:16:49 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0007**	**.0007**	**.0002**	**.0019**	**-.0004**	**-.0034**	**.0017**	**.0002**	**-.0002**
Stddev	.0001	.0001	.0001	.0003	.0005	.0003	.0001	.0003	.0003
%RSD	17.75	8.583	71.99	14.50	117.7	7.851	4.092	126.8	132.9
#1	.0005	.0007	.0000	.0016	.0001	-.0032	.0017	.0005	-.0004
#2	.0007	.0007	.0003	.0019	-.0006	-.0033	.0018	-.0001	.0001
#3	.0007	.0006	.0002	.0022	-.0008	-.0037	.0018	.0002	-.0004
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	**-.0016**	**-.0006**	**-.0002**	**-.0040**	**.0026**	**-.0000**	**-.0025**	**308.1**	**196.6**
Stddev	.0001	.0002	.0007	.0020	.0012	.0005	.0014	1.1	1.9
%RSD	8.034	37.92	436.3	50.78	46.56	2037.	57.07	.3495	.9553
#1	-.0015	-.0005	-.0009	-.0018	.0012	-.0002	-.0041	307.0	198.7
#2	-.0016	-.0009	.0000	-.0044	.0031	.0005	-.0012	308.3	195.0
#3	-.0017	-.0005	.0004	-.0057	.0034	-.0004	-.0023	309.1	196.3
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	**197.9**	**304.0**	**198.0**	**198.1**	**.0056**	**.0008**	**.0128**	**-.0028**	**.0002**
Stddev	1.0	1.4	.7	.4	.0006	.0003	.0015	.0007	.0001
%RSD	.5235	.4467	.3759	.2098	10.36	34.40	11.79	23.75	34.70
#1	198.4	303.4	197.9	197.6	.0054	.0005	.0142	-.0024	.0002
#2	198.6	305.6	198.8	198.5	.0062	.0010	.0112	-.0024	.0002
#3	196.7	303.1	197.3	198.1	.0051	.0009	.0130	-.0035	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/2/2019 13:16:49 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0011**	**.0007**	**.0046**	**-.0038**	**.0218**	**.0152**
Stddev	.0002	.0004	.0003	.0016	.0015	.0007	.0026
%RSD	57.57	40.29	43.55	34.19	39.52	3.316	17.14
#1	-.0003	.0009	.0008	.0060	-.0054	.0224	.0170
#2	-.0003	.0016	.0009	.0029	-.0024	.0220	.0122
#3	-.0007	.0008	.0003	.0049	-.0035	.0210	.0165
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	**139090.**	**23635.**	**5821.6**	**8386.3**
Stddev	559.	134.	8.7	13.5
%RSD	.40213	.56547	.15023	.16152
#1	138480.	23713.	5831.7	8401.8
#2	139580.	23481.	5816.5	8376.8
#3	139200.	23712.	5816.7	8380.3

Zoom In Zoom Out

Sample Name: FECONF Acquired: 5/2/2019 13:22:24 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0013**	**-.0006**	**-.0036**	**.0023**	**-.0002**	**.0003**
Stddev	.0004	.0001	.0001	.0001	.0002	.0005	.0000	.0001	.0000
%RSD	336.2	221.1	98.69	6.849	38.50	13.05	2.050	81.78	6.783
#1	-.0002	-.0001	-.0001	.0012	-.0005	-.0039	.0023	-.0003	.0003
#2	.0006	.0000	-.0000	.0013	-.0009	-.0030	.0024	-.0001	.0003
#3	-.0000	-.0000	-.0003	.0014	-.0004	-.0038	.0023	-.0001	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**-.0019**	**-.0012**	**-.0016**	**.0002**	**.0012**	**-.0006**	**-.0090**	**-.0070**
Stddev	.0002	.0001	.0008	.0003	.0004	.0026	.0019	.0040	.0024
%RSD	10.22	3.115	65.04	21.28	188.7	210.0	304.7	44.29	33.71
#1	-.0015	-.0018	-.0004	-.0013	.0006	-.0015	-.0018	-.0126	-.0080
#2	-.0016	-.0019	-.0014	-.0020	-.0002	.0036	.0016	-.0095	-.0087
#3	-.0018	-.0019	-.0019	-.0015	.0002	.0016	-.0017	-.0048	-.0043

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**193.0**	**-.0265**	**.0623**	**.0667**	**.0023**	**.0012**	**.0044**	**-.0005**	**.0001**
Stddev	.5	.0080	.0103	.0116	.0005	.0000	.0014	.0004	.0001
%RSD	.2707	30.13	16.59	17.47	21.52	1.266	31.82	75.32	75.68
#1	192.4	-.0353	.0577	.0770	.0023	.0012	.0031	-.0003	.0002
#2	193.3	-.0197	.0551	.0690	.0028	.0012	.0043	-.0010	.0000
#3	193.2	-.0245	.0742	.0540	.0018	.0013	.0059	-.0003	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0045**	**.0004**	**-.0007**	**-.0001**	**-.0009**	**.0041**
Stddev	.0003	.0012	.0001	.0011	.0011	.0007	.0037
%RSD	69.59	27.12	30.68	149.8	978.7	79.39	90.96
#1	.0005	.0031	.0006	-.0002	.0011	-.0017	.0075
#2	.0008	.0052	.0003	-.0020	-.0006	-.0004	.0002
#3	.0001	.0051	.0004	-.0000	-.0009	-.0006	.0044

Zoom In Zoom Out

Sample Name: FECONF Acquired: 5/2/2019 13:22:24 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156260.**	**24578.**	**6412.0**	**10031.**
Stddev	503.	110.	17.2	18.
%RSD	.32210	.44695	.26838	.18383
#1	155730.	24701.	6392.1	10010.
#2	156730.	24545.	6422.0	10037.
#3	156320.	24490.	6421.8	10046.

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 5/2/2019 13:27:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**-.0007**	F **10.03**	**.0001**	**-.0014**	**-.0001**	**-.0004**
Stddev	.0002	.0001	.0000	.0001	.10	.0004	.0000	.0002	.0003
%RSD	74.64	128.4	84.30	15.77	.9517	434.4	1.710	319.4	78.72
#1	.0001	-.0001	.0000	-.0008	9.971	.0003	-.0014	.0002	-.0006
#2	.0004	.0000	.0001	-.0006	9.983	-.0003	-.0014	-.0002	-.0000
#3	.0001	-.0001	.0001	-.0007	10.14	.0003	-.0014	-.0002	-.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093**	**.0017**	**-.0000**	**-.0009**	**-.0003**	**-.0026**	**-.0010**	**-.0059**	**-.0044**
Stddev	.0010	.0001	.0008	.0008	.0006	.0021	.0019	.0047	.0019
%RSD	10.88	6.624	1873.	89.76	171.9	81.10	193.1	79.94	44.07
#1	.0086	.0018	-.0008	-.0000	-.0004	-.0009	-.0015	-.0022	-.0040
#2	.0088	.0016	.0008	-.0011	-.0009	-.0019	.0011	-.0113	-.0027
#3	.0104	.0018	-.0002	-.0016	.0003	-.0050	-.0025	-.0044	-.0065

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0016**	**-.0035**	**-.1375**	**-.0051**	**.0031**	**.0009**	**.0048**	**-.0013**	**.0001**
Stddev	.0005	.0063	.0175	.0172	.0001	.0002	.0010	.0004	.0001
%RSD	28.37	181.7	12.71	336.6	3.843	20.99	21.32	27.65	111.4
#1	-.0012	-.0088	-.1359	.0137	.0032	.0007	.0036	-.0010	.0002
#2	-.0015	.0035	-.1557	-.0091	.0032	.0010	.0056	-.0013	.0002
#3	-.0021	-.0050	-.1209	-.0200	.0030	.0011	.0050	-.0017	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0022**	**.0057**	**.0024**	**.0019**	**.0000**	**.0094**	**.0003**
Stddev	.0003	.0000	.0002	.0015	.0009	.0014	.0021
%RSD	13.50	.8359	6.881	78.86	4717.	14.74	722.7
#1	-.0019	.0057	.0023	.0037	.0003	.0079	.0007
#2	-.0023	.0058	.0024	.0008	.0007	.0105	-.0020
#3	-.0025	.0057	.0026	.0013	-.0010	.0100	.0021

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 5/2/2019 13:27:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158560.**	**24310.**	**6297.2**	**10017.**
Stddev	488.	232.	2.9	3.
%RSD	.30805	.95379	.04558	.03107
#1	158730.	24469.	6295.3	10020.
#2	158940.	24044.	6295.7	10014.
#3	158010.	24417.	6300.5	10018.

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 13:32:56 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**2.086**	**1.986**	**2.022**	**2.023**	**2.016**	**2.040**	**2.047**	**.2442**
Stddev	.001	.004	.001	.002	.001	.002	.023	.003	.0008
%RSD	.0703	.2001	.0572	.0927	.0418	.1051	1.111	.1340	.3161
#1	2.011	2.091	1.985	2.024	2.022	2.016	2.015	2.049	.2440
#2	2.010	2.083	1.985	2.020	2.024	2.018	2.046	2.044	.2451
#3	2.013	2.083	1.987	2.022	2.024	2.014	2.059	2.047	.2436
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	**1.980**	**2.007**	**1.966**	**2.102**	**2.032**	**2.009**	**1.956**	**39.64**	**39.50**
Stddev	.002	.001	.004	.006	.002	.002	.004	.08	.11
%RSD	.0783	.0586	.1873	.2908	.1084	.0973	.2324	.1931	.2835
#1	1.979	2.006	1.966	2.106	2.030	2.011	1.960	39.73	39.63
#2	1.981	2.008	1.963	2.095	2.032	2.008	1.951	39.59	39.44
#3	1.982	2.008	1.970	2.104	2.035	2.007	1.957	39.62	39.44
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	**40.36**	**40.13**	**39.37**	**40.16**	**2.032**	**1.944**	**4.999**	**1.973**	**2.091**
Stddev	.06	.07	.09	.03	.003	.003	.009	.003	.003
%RSD	.1561	.1691	.2233	.0867	.1281	.1304	.1744	.1339	.1464
#1	40.43	40.17	39.46	40.18	2.030	1.944	5.007	1.972	2.095
#2	40.31	40.17	39.30	40.12	2.031	1.941	4.989	1.971	2.088
#3	40.34	40.05	39.34	40.17	2.035	1.946	5.001	1.976	2.091
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: 5/2/2019 13:32:56 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.992**	**1.947**	**1.982**	**1.983**	**2.012**	**2.002**	F **2.243**
Stddev	.002	.002	.001	.007	.003	.007	.018
%RSD	.1153	.1019	.0347	.3645	.1525	.3513	.7843
#1	1.990	1.949	1.982	1.990	2.013	2.010	2.259
#2	1.994	1.945	1.982	1.975	2.008	1.998	2.225
#3	1.992	1.947	1.983	1.984	2.014	1.999	2.246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**149590.**	**23966.**	**6209.0**	**9155.8**
Stddev	623.	219.	27.6	31.6
%RSD	.41628	.91300	.44472	.34503
#1	150290.	23727.	6240.9	9192.2
#2	149090.	24016.	6191.6	9139.2
#3	149380.	24156.	6194.6	9135.9

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 13:37:58 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0003**	**.0004**	**.0002**	**.0001**	**.0002**	**.0003**	**.0002**	**-.0001**
Stddev	.0002	.0000	.0001	.0002	.0003	.0004	.0000	.0003	.0004
%RSD	3854.	10.40	20.29	65.13	485.2	229.9	10.15	117.1	502.8
#1	-.0002	.0002	.0005	.0001	.0004	-.0003	.0003	-.0001	-.0002
#2	.0001	.0003	.0004	.0004	.0000	.0003	.0003	.0005	-.0004
#3	.0001	.0003	.0003	.0003	-.0002	.0005	.0003	.0003	.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	**.0002**	**.0001**	**.0011**	**.0011**	**.0007**	**-.0020**	**-.0007**	**-.0013**	**.0051**
Stddev	.0003	.0000	.0009	.0004	.0006	.0003	.0003	.0046	.0013
%RSD	119.7	28.01	84.11	34.77	87.48	13.04	45.66	359.9	24.37
#1	.0000	.0001	.0013	.0016	-.0000	-.0017	-.0006	-.0056	.0037
#2	.0005	.0001	.0020	.0010	.0010	-.0019	-.0010	-.0017	.0056
#3	.0002	.0001	.0001	.0008	.0010	-.0023	-.0004	.0035	.0061
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	**.0047**	**.0063**	**-.1412**	**-.0142**	**.0037**	**.0004**	**.0007**	**.0004**	**.0004**
Stddev	.0014	.0070	.0187	.0035	.0001	.0003	.0008	.0008	.0000
%RSD	29.04	112.2	13.26	24.49	2.755	62.98	117.1	208.7	9.461
#1	.0032	.0012	-.1315	-.0107	.0036	.0004	.0010	.0003	.0005
#2	.0060	.0143	-.1628	-.0177	.0037	.0007	-.0002	.0012	.0005
#3	.0049	.0033	-.1294	-.0142	.0038	.0001	.0014	-.0004	.0004
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: 5/2/2019 13:37:58 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0015**	**.0005**	**.0029**	**.0003**	F **.0094**	**.0046**
Stddev	.0000	.0004	.0001	.0011	.0018	.0029	.0033
%RSD	1.581	23.85	15.15	37.84	648.1	30.83	71.18
#1	.0008	.0011	.0004	.0041	.0015	.0122	.0011
#2	.0008	.0018	.0004	.0027	-.0017	.0064	.0076
#3	.0007	.0016	.0005	.0019	.0010	.0097	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.0040	
Low Limit						-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**159390.**	**24376.**	**6483.2**	**10033.**
Stddev	716.	75.	22.4	27.
%RSD	.44913	.30767	.34599	.27080
#1	160090.	24328.	6494.5	10044.
#2	158660.	24338.	6497.7	10053.
#3	159420.	24462.	6457.3	10002.

Zoom In Zoom Out

Sample Name: crid Acquired: 5/2/2019 13:43:07 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0039**	**.0010**	**.0010**	**.0032**	**.0022**	F **.0003**	**.0032**	**.0041**
Stddev	.0001	.0001	.0001	.0003	.0003	.0003	.0000	.0002
%RSD	3.359	6.721	13.54	8.058	14.55	99.98	.7472	5.762
#1	.0040	.0009	.0010	.0034	.0022	.0005	.0032	.0042
#2	.0038	.0011	.0009	.0032	.0026	.0004	.0032	.0038
#3	.0038	.0010	.0012	.0029	.0020	-.0000	.0032	.0043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-20.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0003**	**.0020**	**.0101**	**.0033**	F **.0026**	F **.0000**	F **.0021**	F **-.0013**
Stddev	.0003	.0003	.0000	.0006	.0004	.0012	.0010	.0003
%RSD	108.9	13.06	.1801	18.71	13.75	2965.	48.41	24.33
#1	-.0007	.0018	.0101	.0035	.0022	-.0013	.0031	-.0011
#2	-.0000	.0020	.0101	.0038	.0028	.0008	.0011	-.0012
#3	-.0002	.0023	.0101	.0026	.0027	.0006	.0021	-.0017
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0020				.0020	.0025	.0050	.0030
Range	-20.00%				20.00%	-20.00%	-20.00%	-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0912**	**1.012**	**.0009**	**.1082**	**1.860**	**1.030**	**.0031**	**.0001**
Stddev	.0019	.003	.0014	.0080	.017	.008	.0002	.0001
%RSD	2.041	.3231	147.1	7.352	.8998	.7745	5.535	136.9
#1	.0896	1.014	.0022	.1027	1.879	1.029	.0033	.0001
#2	.0933	1.014	.0012	.1173	1.854	1.022	.0029	.0001
#3	.0907	1.008	-.0006	.1045	1.847	1.038	.0031	-.0000
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Zoom In Zoom Out

Sample Name: crid Acquired: 5/2/2019 13:43:07 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0011**	**-.0011**	**.0001**	**.0004**	**.0007**	**.0000**	**.0016**	**-.0014**
Stddev	.0008	.0005	.0001	.0001	.0012	.0001	.0013	.0019
%RSD	67.56	43.93	132.8	31.44	161.2	3447.	85.52	131.8
#1	.0019	-.0016	.0002	.0003	.0005	.0001	.0026	-.0026
#2	.0004	-.0009	-.0000	.0005	-.0003	-.0000	.0021	.0007
#3	.0011	-.0007	.0001	.0004	.0021	-.0001	.0000	-.0023
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0066**	**.0046**
Stddev	.0031	.0028
%RSD	47.55	61.52
#1	.0044	.0032
#2	.0052	.0027
#3	.0102	.0078
Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**158160.**	**24409.**	**6463.5**	**9962.0**
Stddev	932.	213.	17.6	22.6
%RSD	.58922	.87222	.27176	.22682
#1	157700.	24164.	6444.0	9936.2
#2	157540.	24514.	6468.5	9971.5
#3	159230.	24549.	6478.0	9978.3

Zoom In Zoom Out

Sample Name: mp14678-mb1conf Acquired: 5/2/2019 13:48:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0089**	**.0011**	**.0010**	**.0038**	**-.0006**
Stddev	.0001	.0000	.0001	.0002	.0004	.0001	.0000	.0001	.0003
%RSD	40.78	61.03	125.1	81.78	4.168	9.604	4.666	1.902	44.97
#1	-.0004	.0000	.0001	.0003	.0087	.0011	.0010	.0037	-.0006
#2	-.0003	.0001	.0002	.0003	.0086	.0011	.0010	.0039	-.0003
#3	-.0002	.0000	-.0000	.0000	.0093	.0010	.0009	.0038	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0109**	**-.0007**	**.0004**	**.0006**	**-.0025**	**-.0011**	**-.0043**	**.0640**
Stddev	.0003	.0002	.0003	.0006	.0004	.0013	.0007	.0043	.0005
%RSD	387.0	2.216	48.68	162.7	74.64	54.14	61.52	100.4	.8427
#1	-.0002	.0112	-.0004	.0008	.0001	-.0029	-.0004	-.0072	.0644
#2	.0000	.0107	-.0005	-.0003	.0009	-.0035	-.0017	-.0064	.0634
#3	.0004	.0109	-.0010	.0007	.0008	-.0010	-.0013	.0007	.0641

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0459**	**.0076**	**-.1909**	**.0045**	**.0031**	**.0007**	**.0072**	**.0152**	**.0004**
Stddev	.0021	.0056	.0227	.0121	.0006	.0001	.0019	.0000	.0001
%RSD	4.556	73.21	11.87	266.5	19.26	21.08	26.12	.1196	16.66
#1	.0475	.0138	-.2144	-.0091	.0034	.0009	.0055	.0152	.0004
#2	.0435	.0031	-.1892	.0087	.0034	.0006	.0068	.0152	.0005
#3	.0467	.0059	-.1692	.0140	.0024	.0006	.0092	.0152	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0007**	**.0003**	**.0078**	**-.0007**	**.0058**	**.0230**
Stddev	.0001	.0008	.0001	.0010	.0022	.0025	.0016
%RSD	21.18	111.7	33.49	12.17	331.6	43.00	7.030
#1	.0008	.0002	.0002	.0080	-.0027	.0063	.0230
#2	.0006	.0003	.0004	.0068	-.0009	.0079	.0247
#3	.0006	.0015	.0003	.0087	.0016	.0030	.0214

Zoom In Zoom Out

Sample Name: mp14678-mb1conf Acquired: 5/2/2019 13:48:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**162430.**	**25040.**	**6570.3**	**10121.**
Stddev	1085.	78.	13.4	22.
%RSD	.66791	.31036	.20401	.22075
#1	161250.	25017.	6575.6	10132.
#2	163390.	25126.	6580.3	10135.
#3	162640.	24976.	6555.1	10095.

Zoom In Zoom Out

Sample Name: mp14579-mb1conf Acquired: 5/2/2019 13:53:21 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0002**	**.0003**	**.0010**	**.0010**	**.0006**	**.0007**	**-.0002**
Stddev	.0004	.0001	.0001	.0000	.0004	.0001	.0000	.0000	.0001
%RSD	219.0	40.08	66.38	7.082	39.12	14.70	6.009	5.099	67.81
#1	.0005	.0002	.0003	.0003	.0014	.0012	.0006	.0007	-.0003
#2	-.0002	.0001	.0003	.0003	.0007	.0009	.0006	.0006	-.0001
#3	.0002	.0003	.0001	.0003	.0008	.0010	.0006	.0007	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0101**	**.0006**	**.0001**	**.0009**	**-.0005**	**-.0010**	**.0136**	**.0830**
Stddev	.0004	.0001	.0005	.0004	.0010	.0010	.0017	.0074	.0014
%RSD	145.2	1.294	82.63	322.9	102.5	192.1	168.4	54.65	1.628
#1	.0004	.0100	.0003	.0000	.0019	.0006	-.0030	.0142	.0820
#2	-.0002	.0102	.0013	-.0002	-.0000	-.0013	-.0003	.0059	.0846
#3	.0005	.0100	.0003	.0006	.0009	-.0009	.0002	.0206	.0826

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0424**	**.0301**	**-.1267**	**.1074**	**.0027**	**.0006**	**.0125**	**.0196**	**.0006**
Stddev	.0008	.0128	.0315	.0127	.0008	.0001	.0007	.0002	.0000
%RSD	1.930	42.43	24.85	11.83	29.60	16.99	5.897	1.263	7.111
#1	.0426	.0434	-.1388	.0958	.0018	.0007	.0127	.0194	.0006
#2	.0415	.0180	-.1503	.1054	.0031	.0005	.0117	.0198	.0006
#3	.0431	.0288	-.0909	.1210	.0032	.0006	.0131	.0198	.0006

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0004**	**.0004**	**.0216**	**-.0008**	**.0047**	**.0271**
Stddev	.0003	.0002	.0002	.0015	.0004	.0026	.0021
%RSD	22.95	46.48	36.77	7.014	52.88	54.18	7.755
#1	.0013	.0006	.0005	.0200	-.0004	.0054	.0289
#2	.0011	.0002	.0005	.0217	-.0012	.0069	.0275
#3	.0017	.0004	.0002	.0230	-.0009	.0019	.0248

Zoom In Zoom Out

Sample Name: mp14579-mb1conf Acquired: 5/2/2019 13:53:21 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160020.**	**24680.**	**6548.1**	**10112.**
Stddev	610.	383.	32.5	47.
%RSD	.38120	1.5525	.49571	.46184
#1	160670.	24698.	6585.5	10165.
#2	159470.	25053.	6532.0	10090.
#3	159900.	24288.	6526.8	10080.

Zoom In Zoom Out

Sample Name: mp14579-ps1 Acquired: 5/2/2019 13:58:27 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**3.947**	**2.085**	**2.043**	**2.068**	**2.138**	**3.102**	**3.782**	**2.196**	**.2503**
Stddev	.059	.009	.004	.004	.003	.004	.032	.004	.0012
%RSD	1.492	.4107	.1775	.1840	.1231	.1445	.8483	.1742	.4952
#1	3.926	2.089	2.046	2.070	2.136	3.103	3.747	2.198	.2493
#2	3.901	2.075	2.044	2.071	2.141	3.097	3.789	2.198	.2499
#3	4.013	2.091	2.039	2.064	2.137	3.106	3.810	2.191	.2516

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.124**	F **8.015**	**2.870**	**2.131**	**4.604**	**2.050**	**2.030**	**69.70**	**45.26**
Stddev	.002	.008	.007	.012	.007	.005	.003	.36	.20
%RSD	.0741	.0943	.2494	.5492	.1426	.2591	.1439	.5126	.4504
#1	2.123	8.020	2.878	2.140	4.605	2.055	2.033	69.83	45.27
#2	2.126	8.018	2.870	2.137	4.610	2.051	2.029	69.29	45.05
#3	2.124	8.006	2.863	2.118	4.597	2.045	2.028	69.97	45.46

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**160.7**	**33.64**	**29.16**	**25.77**	**2.066**	**1.946**	**1.190**	**2.111**	**2.267**
Stddev	4.0	.09	.18	.07	.005	.003	.004	.005	.010
%RSD	2.495	.2776	.6136	.2823	.2537	.1372	.3644	.2540	.4248
#1	157.7	33.58	29.26	25.81	2.069	1.946	1.193	2.116	2.270
#2	159.0	33.59	28.95	25.69	2.069	1.949	1.192	2.111	2.256
#3	165.2	33.75	29.27	25.82	2.060	1.943	1.185	2.105	2.275

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.182**	**1.848**	**2.026**	**3.271**	**.1617**	**.0638**	**7.604**
Stddev	.003	.005	.001	.002	.0008	.0012	.041
%RSD	.0923	.2530	.0530	.0612	.5159	1.839	.5425
#1	3.180	1.842	2.025	3.271	.1621	.0624	7.571
#2	3.185	1.849	2.026	3.272	.1607	.0644	7.590
#3	3.181	1.852	2.027	3.268	.1621	.0645	7.650

Zoom In Zoom Out

Sample Name: mp14579-ps1 Acquired: 5/2/2019 13:58:27 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**155130.**	**25041.**	**6387.3**	**9422.9**
Stddev	840.	209.	4.2	5.4
%RSD	.54180	.83425	.06625	.05698
#1	155840.	25245.	6386.9	9419.4
#2	154200.	25052.	6391.7	9429.0
#3	155340.	24828.	6383.2	9420.1

Zoom In Zoom Out

Sample Name: jc86901-3 Acquired: 5/2/2019 14:03:41 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.5796**	**.0074**	**.0004**	**.0917**	**.2769**	**.2630**	**3.919**	**.1705**	**.0041**
Stddev	.0078	.0001	.0002	.0007	.0078	.0047	.099	.0023	.0010
%RSD	1.343	1.311	46.27	.7643	2.799	1.788	2.523	1.368	24.32
#1	.5865	.0073	.0006	.0925	.2838	.2670	4.009	.1731	.0030
#2	.5811	.0074	.0004	.0912	.2784	.2641	3.936	.1693	.0045
#3	.5712	.0075	.0002	.0914	.2685	.2578	3.813	.1689	.0049

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4329**	**.4544**	**.0794**	**.0032**	**.1513**	**.0119**	**-.0076**	**246.8**	**7.576**
Stddev	.0125	.0060	.0029	.0076	.0031	.0067	.0015	3.8	.103
%RSD	2.883	1.328	3.699	235.6	2.072	56.27	19.70	1.520	1.357
#1	.4444	.4609	.0823	-.0049	.1534	.0042	-.0075	250.2	7.666
#2	.4347	.4534	.0764	.0102	.1529	.0149	-.0091	247.4	7.598
#3	.4196	.4489	.0796	.0044	.1477	.0165	-.0061	242.7	7.464

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**317.9**	**35.18**	**13.79**	**.5687**	**.0712**	**.0216**	**1.599**	**.0228**	**.0953**
Stddev	4.4	.50	.26	.0550	.0018	.0004	.027	.0006	.0014
%RSD	1.392	1.432	1.898	9.676	2.575	1.691	1.670	2.751	1.496
#1	321.9	35.65	14.06	.6279	.0702	.0220	1.627	.0221	.0964
#2	318.5	35.26	13.78	.5192	.0733	.0215	1.593	.0228	.0957
#3	313.1	34.65	13.54	.5589	.0701	.0213	1.575	.0233	.0937

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.210**	**.0741**	**.1143**	**.5421**	**.1610**	**.2646**	**3.566**
Stddev	.109	.0066	.0026	.0089	.0093	.0034	.034
%RSD	2.593	8.911	2.265	1.645	5.773	1.290	.9660
#1	4.311	.0804	.1165	.5521	.1715	.2646	3.593
#2	4.225	.0747	.1150	.5389	.1575	.2680	3.577
#3	4.094	.0673	.1114	.5351	.1540	.2611	3.527

Zoom In Zoom Out

Sample Name: jc86901-3 Acquired: 5/2/2019 14:03:41 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156770.**	**25139.**	**6536.3**	**9711.8**
Stddev	315.	85.	5.1	7.2
%RSD	.20082	.33665	.07872	.07451
#1	156680.	25057.	6540.2	9715.4
#2	157120.	25134.	6538.1	9716.6
#3	156520.	25226.	6530.4	9703.5

Zoom In Zoom Out

Sample Name: jc86901-9conf Acquired: 5/2/2019 14:08:44 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.7291**	**.0136**	**.0010**	**.1497**	**.2744**	**.0655**	**4.489**	**.2957**	**-.0048**
Stddev	.0137	.0004	.0002	.0061	.0083	.0007	.166	.0115	.0016
%RSD	1.877	2.579	18.38	4.093	3.034	1.113	3.696	3.900	33.93
#1	.7153	.0132	.0011	.1431	.2661	.0646	4.329	.2839	-.0034
#2	.7293	.0136	.0008	.1508	.2743	.0659	4.479	.2964	-.0043
#3	.7427	.0139	.0011	.1552	.2828	.0659	4.660	.3069	-.0065

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3242**	**1.009**	**.0457**	**.0005**	**.1421**	**-.0090**	**-.0020**	**205.5**	**7.221**
Stddev	.0110	.038	.0025	.0009	.0080	.0035	.0026	3.5	.122
%RSD	3.399	3.799	5.443	186.0	5.604	38.96	126.1	1.695	1.690
#1	.3134	.9682	.0432	.0001	.1345	-.0129	.0005	201.9	7.095
#2	.3237	1.015	.0482	.0015	.1415	-.0060	-.0047	205.9	7.230
#3	.3354	1.044	.0456	-.0002	.1504	-.0083	-.0019	208.8	7.339

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**290.3**	**79.98**	**65.58**	**1.297**	**.4362**	**.0065**	**1.702**	**.0196**	**.0945**
Stddev	4.9	1.43	1.18	.008	.0147	.0008	.060	.0003	.0018
%RSD	1.672	1.790	1.804	.6322	3.368	12.69	3.555	1.750	1.931
#1	285.4	78.54	64.45	1.300	.4201	.0067	1.638	.0193	.0927
#2	290.5	80.01	65.46	1.288	.4398	.0073	1.711	.0196	.0944
#3	295.1	81.40	66.81	1.304	.4488	.0056	1.758	.0200	.0963

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.192**	**.0189**	**.0974**	**.3693**	**.1509**	**.6047**	**2.315**
Stddev	.136	.0008	.0032	.0145	.0070	.0133	.099
%RSD	3.244	4.375	3.319	3.931	4.638	2.193	4.286
#1	4.050	.0179	.0940	.3528	.1455	.5910	2.206
#2	4.203	.0194	.0979	.3751	.1485	.6056	2.342
#3	4.322	.0193	.1004	.3800	.1588	.6175	2.399

Zoom In Zoom Out

Sample Name: jc86901-9conf Acquired: 5/2/2019 14:08:44 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**157210.**	**25297.**	**6468.2**	**9379.8**
Stddev	1419.	154.	17.0	37.0
%RSD	.90275	.60937	.26218	.39486
#1	158830.	25165.	6486.8	9422.4
#2	156580.	25259.	6453.7	9355.8
#3	156210.	25466.	6464.1	9361.1

Zoom In Zoom Out

Sample Name: jc86901-13conf Acquired: 5/2/2019 14:13:55 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.7551**	**.0116**	**-.0002**	**.1632**	**.3470**	**.0441**	**6.675**	**.3706**	**-.0034**
Stddev	.0079	.0003	.0005	.0031	.0039	.0018	.091	.0053	.0019
%RSD	1.048	2.690	214.0	1.896	1.136	4.099	1.364	1.420	55.52
#1	.7463	.0112	-.0008	.1599	.3428	.0427	6.707	.3650	-.0053
#2	.7574	.0118	.0002	.1637	.3474	.0461	6.573	.3714	-.0016
#3	.7616	.0117	-.0001	.1661	.3506	.0434	6.746	.3755	-.0031

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3559**	**.8335**	**.0626**	**.0004**	**.2270**	**-.0014**	**-.0033**	**178.1**	**5.476**
Stddev	.0030	.0107	.0015	.0040	.0047	.0048	.0031	2.2	.063
%RSD	.8504	1.278	2.389	1026.	2.072	349.9	95.04	1.232	1.144
#1	.3530	.8223	.0629	-.0019	.2219	-.0069	-.0059	175.9	5.412
#2	.3557	.8348	.0640	.0051	.2279	.0009	-.0041	178.2	5.479
#3	.3590	.8435	.0610	-.0020	.2312	.0018	.0002	180.2	5.538

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**368.3**	**65.11**	**26.33**	**1.450**	**.1875**	**.0087**	**1.512**	**.0187**	**.1299**
Stddev	8.3	.56	.42	.019	.0028	.0005	.019	.0016	.0013
%RSD	2.242	.8665	1.580	1.292	1.509	5.559	1.278	8.694	1.004
#1	360.2	64.50	25.94	1.430	.1844	.0090	1.493	.0170	.1285
#2	376.7	65.20	26.29	1.453	.1884	.0090	1.511	.0202	.1300
#3	368.1	65.62	26.77	1.467	.1898	.0082	1.531	.0190	.1311

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.551**	**.0155**	**.0848**	**.3219**	**.2456**	**.4216**	**2.437**
Stddev	.064	.0010	.0010	.0036	.0022	.0028	.049
%RSD	.9736	6.145	1.232	1.107	.9010	.6720	1.992
#1	6.486	.0144	.0836	.3200	.2471	.4187	2.386
#2	6.555	.0162	.0855	.3260	.2430	.4217	2.445
#3	6.613	.0159	.0853	.3197	.2465	.4244	2.482

Zoom In Zoom Out

Sample Name: jc86901-13conf Acquired: 5/2/2019 14:13:55 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**157970.**	**25288.**	**6566.5**	**9577.0**
Stddev	460.	52.	18.6	15.5
%RSD	.29095	.20673	.28348	.16217
#1	157620.	25244.	6546.0	9559.4
#2	157790.	25346.	6571.2	9582.8
#3	158490.	25273.	6582.3	9588.8

Zoom In Zoom Out

Sample Name: jc86837-1 Acquired: 5/2/2019 14:19:12 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.422**	**.0078**	**.0109**	**.0638**	**.2124**	**1.595**	**4.554**	**.3127**	**.0033**
Stddev	.002	.0002	.0002	.0017	.0012	.004	.030	.0073	.0008
%RSD	.1591	2.634	2.061	2.739	.5727	.2549	.6696	2.343	24.61
#1	1.420	.0079	.0108	.0627	.2111	1.596	4.519	.3080	.0038
#2	1.425	.0078	.0107	.0629	.2134	1.598	4.569	.3089	.0024
#3	1.422	.0075	.0111	.0658	.2129	1.590	4.574	.3211	.0038

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2615**	**4.395**	**.1608**	**.0021**	**8.134**	**.0057**	**.1627**	**61.90**	**94.81**
Stddev	.0011	.112	.0048	.0021	.178	.0042	.0054	.11	.18
%RSD	.4285	2.539	2.957	95.65	2.192	73.44	3.299	.1850	.1849
#1	.2606	4.333	.1565	.0032	8.041	.0070	.1604	61.91	94.86
#2	.2628	4.327	.1599	.0034	8.021	.0010	.1589	62.01	94.95
#3	.2611	4.523	.1659	-.0002	8.340	.0092	.1689	61.78	94.61

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**233.5**	**38.17**	**8.584**	**1.648**	**.0638**	**.0184**	**3.952**	**.3150**	**.5260**
Stddev	.3	.05	.041	.004	.0028	.0006	.098	.0079	.0007
%RSD	.1422	.1246	.4814	.2644	4.438	3.073	2.491	2.504	.1304
#1	233.4	38.16	8.543	1.643	.0616	.0179	3.905	.3113	.5263
#2	233.8	38.23	8.584	1.648	.0628	.0182	3.885	.3097	.5265
#3	233.1	38.13	8.626	1.652	.0670	.0190	4.065	.3241	.5252

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.722**	**.0136**	**.0709**	**8.663**	**.1058**	**.0792**	**5.148**
Stddev	.006	.0015	.0003	.188	.0038	.0015	.096
%RSD	.2150	10.95	.4226	2.169	3.562	1.903	1.862
#1	2.719	.0122	.0709	8.577	.1087	.0810	5.141
#2	2.729	.0135	.0712	8.533	.1072	.0785	5.056
#3	2.718	.0151	.0706	8.878	.1015	.0782	5.248

Zoom In Zoom Out

Sample Name: jc86837-1 Acquired: 5/2/2019 14:19:12 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156010.**	**25075.**	**6385.1**	**9496.8**
Stddev	711.	56.	138.8	177.3
%RSD	.45570	.22375	2.1730	1.8668
#1	156820.	25030.	6461.1	9595.0
#2	155500.	25057.	6469.2	9603.3
#3	155700.	25137.	6224.9	9292.2

Zoom In Zoom Out

Sample Name: jc86837-4 Acquired: 5/2/2019 14:24:17 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.847**	**.0014**	**.0006**	**.0241**	**.1016**	**.1219**	**.6766**	**.0584**	**.0003**
Stddev	.040	.0002	.0006	.0017	.0021	.0023	.0040	.0020	.0027
%RSD	1.397	10.85	93.86	7.167	2.097	1.894	.5880	3.504	1030.
#1	2.815	.0013	.0003	.0222	.0998	.1195	.6722	.0560	.0009
#2	2.835	.0016	.0013	.0245	.1010	.1223	.6775	.0595	-.0027
#3	2.891	.0014	.0003	.0256	.1040	.1241	.6800	.0596	.0027

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0601**	**.5941**	**.0523**	**.0067**	**21.37**	**-.0185**	**.0062**	**33.08**	**4.479**
Stddev	.0013	.0156	.0034	.0026	.55	.0111	.0020	.44	.071
%RSD	2.151	2.622	6.418	38.42	2.581	59.95	31.94	1.341	1.591
#1	.0605	.5785	.0526	.0094	20.81	-.0057	.0066	32.72	4.414
#2	.0612	.5941	.0555	.0064	21.38	-.0242	.0080	32.95	4.469
#3	.0587	.6096	.0488	.0043	21.91	-.0256	.0041	33.57	4.555

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**68.79**	**12.84**	**7.667**	**.2260**	**.0175**	**.0046**	**.9742**	**.1075**	**.0679**
Stddev	1.00	.22	.169	.0254	.0012	.0000	.0274	.0023	.0012
%RSD	1.453	1.688	2.202	11.25	7.049	.5148	2.813	2.174	1.839
#1	67.98	12.63	7.823	.1975	.0181	.0046	.9450	.1049	.0670
#2	68.50	12.81	7.488	.2343	.0161	.0046	.9780	.1093	.0674
#3	69.91	13.07	7.692	.2463	.0183	.0046	.9994	.1084	.0693

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.704**	**.0234**	**.0225**	**7.801**	**.0623**	**.0696**	**1.363**
Stddev	.009	.0057	.0016	.215	.0121	.0050	.024
%RSD	.5556	24.18	7.183	2.752	19.49	7.124	1.780
#1	1.693	.0261	.0209	7.588	.0581	.0708	1.341
#2	1.711	.0271	.0242	7.798	.0760	.0641	1.359
#3	1.707	.0169	.0223	8.017	.0528	.0738	1.389

Zoom In Zoom Out

Sample Name: jc86837-4 Acquired: 5/2/2019 14:24:17 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160000.**	**24842.**	**6550.3**	**9953.4**
Stddev	467.	72.	24.7	30.5
%RSD	.29212	.29136	.37694	.30638
#1	160510.	24856.	6557.0	9964.4
#2	159900.	24907.	6570.9	9976.9
#3	159590.	24764.	6522.9	9919.0

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/2/2019 14:29:19 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.021**	**2.092**	**2.001**	**2.026**	**2.024**	**2.015**	**2.043**	**2.051**	**.2442**
Stddev	.001	.005	.002	.001	.005	.004	.027	.001	.0006
%RSD	.0362	.2285	.1122	.0424	.2387	.2151	1.330	.0355	.2616
#1	2.021	2.096	2.002	2.026	2.023	2.012	2.065	2.051	.2438
#2	2.020	2.087	1.998	2.025	2.020	2.014	2.051	2.051	.2438
#3	2.020	2.093	2.002	2.026	2.030	2.020	2.013	2.052	.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	**1.987**	**2.015**	**1.975**	**2.099**	**2.038**	**2.012**	**1.968**	**39.72**	**39.62**
Stddev	.003	.001	.001	.008	.004	.005	.005	.09	.09
%RSD	.1658	.0564	.0350	.3683	.2196	.2731	.2416	.2330	.2237
#1	1.987	2.015	1.975	2.108	2.035	2.015	1.969	39.78	39.67
#2	1.983	2.014	1.975	2.095	2.036	2.005	1.963	39.61	39.52
#3	1.990	2.016	1.976	2.095	2.043	2.015	1.972	39.76	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	**40.68**	**40.41**	**39.41**	**40.37**	**2.041**	**1.953**	**5.016**	**1.980**	**2.096**
Stddev	.05	.04	.11	.03	.001	.002	.004	.003	.003
%RSD	.1215	.1056	.2749	.0728	.0585	.1125	.0843	.1400	.1249
#1	40.72	40.37	39.44	40.38	2.039	1.956	5.019	1.982	2.099
#2	40.62	40.41	39.30	40.33	2.041	1.953	5.011	1.981	2.094
#3	40.69	40.46	39.51	40.39	2.042	1.951	5.018	1.977	2.096
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: 5/2/2019 14:29:19 Type: QC
Method: SGS 3 NO Valve(v332) 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	**1.992**	**1.959**	**1.990**	**1.954**	**2.021**	**1.986**	**1.996**
Stddev	.002	.003	.002	.003	.000	.006	.011
%RSD	.0757	.1298	.1051	.1594	.0179	.3109	.5590
#1	1.994	1.959	1.989	1.958	2.022	1.992	1.994
#2	1.992	1.957	1.988	1.952	2.021	1.979	1.987
#3	1.992	1.962	1.992	1.952	2.021	1.987	2.009
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	**149100.**	**24042.**	**6173.8**	**9140.3**
Stddev	356.	57.	7.3	10.1
%RSD	.23874	.23603	.11809	.11023
#1	148960.	24107.	6181.9	9150.8
#2	149500.	24015.	6167.8	9130.7
#3	148840.	24004.	6171.5	9139.6

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/2/2019 14:34:22 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0002**	**-.0000**	**.0001**	**.0003**	**-.0003**
Stddev	.0002	.0000	.0001	.0001	.0001	.0003	.0000	.0001	.0001
%RSD	107.5	22.07	50.12	63.27	39.79	17110.	10.17	43.50	45.66
#1	.0004	.0001	.0001	.0001	.0002	.0003	.0001	.0004	-.0002
#2	.0001	.0002	.0001	.0003	.0003	-.0003	.0001	.0004	-.0003
#3	.0000	.0001	.0003	.0001	.0001	.0000	.0001	.0002	-.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	**.0002**	**-.0002**	**-.0004**	**.0007**	**.0006**	**-.0013**	**-.0001**	**-.0017**	**.0003**
Stddev	.0002	.0001	.0010	.0013	.0007	.0008	.0005	.0149	.0004
%RSD	140.8	61.03	255.1	199.8	117.0	61.35	361.3	859.7	154.7
#1	.0004	-.0003	.0007	-.0008	.0006	-.0004	.0004	.0122	.0005
#2	.0001	-.0001	-.0007	.0009	-.0001	-.0019	-.0004	-.0175	-.0002
#3	-.0000	-.0002	-.0012	.0019	.0013	-.0016	-.0004	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0009**	**-.0318**	**-.0021**	**.0021**	**.0007**	**.0017**	**-.0002**	**.0003**
Stddev	.0018	.0059	.0336	.0072	.0011	.0001	.0018	.0004	.0001
%RSD	469.3	620.8	105.8	334.6	50.55	15.39	104.5	178.0	48.57
#1	-.0014	-.0019	-.0121	-.0104	.0009	.0006	.0038	.0002	.0002
#2	.0004	.0054	-.0706	.0013	.0030	.0007	.0006	-.0005	.0004
#3	.0021	-.0063	-.0126	.0027	.0024	.0007	.0007	-.0005	.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: 5/2/2019 14:34:22 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0031**	**.0002**	**.0048**	**-.0010**	**.0017**	**-.0027**
Stddev	.0001	.0010	.0001	.0011	.0004	.0014	.0005
%RSD	52.53	33.33	77.21	21.82	34.81	82.64	17.69
#1	.0003	.0042	.0001	.0041	-.0010	.0023	-.0027
#2	.0001	.0021	.0001	.0060	-.0007	.0001	-.0031
#3	.0002	.0030	.0003	.0043	-.0014	.0027	-.0022
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	**158090.**	**24278.**	**6444.4**	**10011.**
Stddev	1114.	158.	16.9	18.
%RSD	.70456	.65039	.26153	.18113
#1	159310.	24096.	6426.7	9990.8
#2	157140.	24359.	6446.2	10018.
#3	157810.	24379.	6460.3	10025.

Zoom In Zoom Out

Sample Name: jc86837-9 Acquired: 5/2/2019 14:39:30 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.2251**	**.0019**	**.0005**	**.0455**	**.0982**	**.0533**	**2.403**	**.0753**	**-.0001**
Stddev	.0029	.0001	.0002	.0005	.0004	.0003	.019	.0005	.0005
%RSD	1.275	2.707	36.09	1.059	.3933	.4719	.7746	.6419	655.0
#1	.2224	.0019	.0003	.0450	.0983	.0530	2.423	.0749	-.0001
#2	.2247	.0020	.0006	.0460	.0985	.0535	2.400	.0758	-.0006
#3	.2281	.0020	.0006	.0455	.0978	.0534	2.387	.0750	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0639**	**.6547**	**.0440**	**.0012**	**.0679**	**-.0002**	**-.0016**	**37.26**	**7.556**
Stddev	.0006	.0055	.0017	.0007	.0010	.0016	.0008	.63	.119
%RSD	.9611	.8343	3.776	59.31	1.510	660.0	48.31	1.695	1.575
#1	.0642	.6505	.0449	.0005	.0667	-.0021	-.0008	36.68	7.447
#2	.0644	.6609	.0451	.0011	.0684	.0007	-.0024	37.18	7.537
#3	.0632	.6526	.0421	.0019	.0685	.0006	-.0016	37.93	7.683

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**80.03**	**14.02**	**5.430**	**.4020**	**.0232**	**.0016**	**1.039**	**.0246**	**.0484**
Stddev	1.24	.21	.105	.0052	.0003	.0003	.010	.0003	.0007
%RSD	1.544	1.468	1.939	1.289	1.391	18.00	.9896	1.129	1.410
#1	78.89	13.85	5.319	.3973	.0228	.0013	1.034	.0243	.0479
#2	79.86	13.97	5.442	.4011	.0234	.0018	1.051	.0248	.0481
#3	81.34	14.25	5.529	.4075	.0234	.0018	1.032	.0247	.0492

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.138**	**.0017**	**.0333**	**6.153**	**.0389**	**.0805**	**2.004**
Stddev	.003	.0009	.0000	.045	.0007	.0011	.015
%RSD	.2621	57.01	.1185	.7361	1.778	1.427	.7662
#1	1.141	.0025	.0334	6.104	.0396	.0815	2.022
#2	1.138	.0019	.0333	6.194	.0382	.0808	1.994
#3	1.135	.0006	.0333	6.159	.0388	.0792	1.996

Zoom In Zoom Out

Sample Name: jc86837-9 Acquired: 5/2/2019 14:39:30 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159780.**	**25136.**	**6570.4**	**9710.3**
Stddev	151.	323.	46.0	55.2
%RSD	.09469	1.2870	.70078	.56853
#1	159610.	25462.	6607.9	9757.6
#2	159890.	25131.	6519.0	9649.6
#3	159830.	24815.	6584.2	9723.6

Zoom In Zoom Out

Sample Name: jc86837-12 Acquired: 5/2/2019 14:44:40 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.7472**	**.0055**	**.0023**	**.0394**	**.1295**	**.4568**	**1.125**	**.1098**	**.0000**
Stddev	.0003	.0000	.0000	.0003	.0002	.0007	.002	.0007	.0013
%RSD	.0339	.2406	1.652	.7518	.1440	.1492	.1504	.6269	11030.
#1	.7470	.0055	.0023	.0397	.1293	.4560	1.127	.1105	.0015
#2	.7471	.0055	.0022	.0391	.1296	.4573	1.125	.1091	-.0004
#3	.7475	.0055	.0023	.0394	.1295	.4569	1.124	.1097	-.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1422**	**1.200**	**.4835**	**-.0002**	**5.693**	**.0058**	**.0166**	**77.33**	**6.648**
Stddev	.0002	.007	.0040	.0008	.043	.0008	.0015	.02	.006
%RSD	.1651	.5722	.8257	340.5	.7576	12.98	8.869	.0207	.0985
#1	.1421	1.207	.4870	-.0011	5.737	.0052	.0168	77.31	6.641
#2	.1421	1.193	.4791	-.0000	5.651	.0067	.0180	77.34	6.649
#3	.1425	1.201	.4842	.0004	5.692	.0056	.0150	77.33	6.654

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**162.3**	**13.12**	**5.798**	**.4896**	**.0271**	**.0079**	**1.422**	**.0621**	**.1125**
Stddev	3.5	.02	.039	.0053	.0004	.0001	.008	.0004	.0000
%RSD	2.130	.1681	.6719	1.074	1.385	1.590	.5895	.6742	.0374
#1	165.9	13.14	5.841	.4906	.0275	.0078	1.430	.0625	.1125
#2	161.9	13.11	5.766	.4943	.0270	.0081	1.413	.0617	.1124
#3	159.0	13.10	5.788	.4840	.0268	.0080	1.424	.0621	.1125

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.140**	**.0017**	**.0239**	**1.539**	**.0430**	**.1015**	**4.161**
Stddev	.002	.0005	.0003	.020	.0011	.0023	.076
%RSD	.1446	29.83	1.291	1.302	2.586	2.270	1.837
#1	1.141	.0013	.0243	1.552	.0427	.0991	4.229
#2	1.140	.0022	.0237	1.516	.0421	.1016	4.078
#3	1.138	.0015	.0237	1.550	.0443	.1037	4.177

Zoom In Zoom Out

Sample Name: jc86837-12 Acquired: 5/2/2019 14:44:40 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160200.**	**25710.**	**6720.4**	**9835.4**
Stddev	474.	136.	22.5	41.4
%RSD	.29613	.52794	.33523	.42140
#1	159990.	25553.	6700.8	9796.9
#2	159860.	25782.	6745.0	9879.3
#3	160740.	25793.	6715.3	9830.0

Zoom In Zoom Out

Sample Name: jc86981-4 Acquired: 5/2/2019 14:49:43 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: mp14628

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0466**	**-.0000**	**.0002**	**-.0001**	**.0059**	**.0009**	**.8490**	**.0000**	**-.0010**
Stddev	.0007	.0001	.0003	.0005	.0002	.0002	.0045	.0005	.0004
%RSD	1.531	994.3	142.8	615.2	3.284	23.64	.5297	6546.	35.50
#1	.0467	-.0001	-.0001	.0001	.0057	.0010	.8536	.0005	-.0006
#2	.0473	-.0000	.0004	-.0006	.0061	.0006	.8486	-.0005	-.0013
#3	.0458	.0001	.0003	.0002	.0059	.0010	.8447	.0001	-.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.0046**	**-.0034**	**-.0018**	**.0030**	**-.0060**	**.0033**	**.0957**	**273.3**
Stddev	.0006	.0001	.0014	.0016	.0021	.0036	.0004	.0157	1.7
%RSD	21.56	2.416	40.13	89.63	72.16	59.06	12.14	16.40	.6271
#1	.0022	.0045	-.0045	-.0023	.0009	-.0022	.0028	.1039	273.5
#2	.0024	.0046	-.0019	-.0031	.0028	-.0093	.0034	.0776	274.9
#3	.0032	.0047	-.0038	.0000	.0052	-.0066	.0036	.1055	271.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2521**	**33.06**	**11.17**	**42.70**	**.0702**	**.0018**	**35.07**	**-.0061**	**.6559**
Stddev	.0048	.38	.20	.50	.0007	.0009	.10	.0012	.0090
%RSD	1.922	1.163	1.785	1.177	1.060	47.91	.2841	19.52	1.378
#1	.2519	32.98	11.10	42.54	.0707	.0009	35.19	-.0061	.6536
#2	.2570	33.48	11.39	43.27	.0693	.0020	35.03	-.0049	.6659
#3	.2473	32.73	11.01	42.30	.0704	.0026	35.00	-.0072	.6483

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040**	**.0022**	**-.0014**	**189.0**	**-.0021**	**.2691**	**1.790**
Stddev	.0003	.0015	.0002	.4	.0008	.0022	.019
%RSD	6.903	67.19	12.52	.2043	39.64	.8192	1.053
#1	.0037	.0022	-.0015	189.3	-.0015	.2696	1.793
#2	.0042	.0007	-.0016	189.1	-.0030	.2710	1.770
#3	.0041	.0037	-.0013	188.6	-.0018	.2667	1.807

Zoom In Zoom Out

Sample Name: jc86981-4 Acquired: 5/2/2019 14:49:43 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: mp14628

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**153770.**	**24795.**	**6198.9**	**9191.2**
Stddev	352.	200.	4.5	3.8
%RSD	.22858	.80554	.07210	.04144
#1	153390.	24843.	6203.3	9195.2
#2	153860.	24576.	6194.4	9187.7
#3	154070.	24966.	6199.0	9190.7

Zoom In Zoom Out

Sample Name: jc87088-1 Acquired: 5/2/2019 14:54:53 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.1438**	**-.0001**	**.0001**	**.0010**	**.0079**	**.0110**	**1.170**	**.0117**	**-.0009**
Stddev	.0012	.0002	.0005	.0007	.0001	.0006	.005	.0012	.0006
%RSD	.8178	144.7	626.7	71.41	1.105	5.802	.3924	10.49	63.01
#1	.1449	.0001	-.0001	.0002	.0078	.0105	1.167	.0104	-.0015
#2	.1439	-.0003	.0007	.0013	.0080	.0117	1.169	.0129	-.0003
#3	.1426	-.0002	-.0003	.0016	.0078	.0108	1.176	.0118	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050**	**.0174**	**-.0014**	**.0011**	**-.0002**	**-.0061**	**.0011**	**1.180**	**395.9**
Stddev	.0006	.0003	.0020	.0013	.0032	.0022	.0056	.023	5.6
%RSD	12.83	1.609	139.1	115.0	1292.	35.32	522.9	1.965	1.420
#1	.0054	.0176	-.0004	.0026	-.0034	-.0085	-.0052	1.196	396.3
#2	.0053	.0176	-.0002	.0004	.0029	-.0045	.0027	1.190	390.2
#3	.0042	.0171	-.0037	.0004	-.0002	-.0053	.0057	1.153	401.4

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.670**	**93.77**	**44.81**	F **657.0**	**.1381**	**.0082**	**6.999**	**-.0057**	**14.99**
Stddev	.007	.27	.21	8.6	.0018	.0003	.152	.0016	.16
%RSD	.4431	.2929	.4760	1.308	1.330	4.142	2.172	28.11	1.099
#1	1.678	94.08	44.60	650.1	.1397	.0086	7.012	-.0065	15.09
#2	1.666	93.61	44.82	666.6	.1384	.0080	7.144	-.0067	15.07
#3	1.665	93.61	45.02	654.2	.1361	.0080	6.841	-.0038	14.80

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0136**	**.0196**	**.0004**	**235.4**	**-.0007**	**.1191**	**.1420**
Stddev	.0011	.0020	.0004	4.7	.0032	.0044	.0066
%RSD	7.855	10.11	89.67	1.999	432.5	3.715	4.680
#1	.0143	.0173	.0004	235.6	-.0025	.1155	.1496
#2	.0142	.0208	.0008	240.0	.0029	.1177	.1393
#3	.0124	.0206	.0001	230.6	-.0027	.1240	.1372

Zoom In Zoom Out

Sample Name: jc87088-1 Acquired: 5/2/2019 14:54:53 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**145130.**	**24179.**	**6071.1**	**8775.4**
Stddev	651.	47.	114.5	145.0
%RSD	.44840	.19430	1.8857	1.6528
#1	145850.	24198.	6041.4	8746.4
#2	144960.	24214.	5974.5	8647.1
#3	144580.	24126.	6197.5	8932.8

Zoom In Zoom Out

Sample Name: mp14600-mb1conf Acquired: 5/2/2019 15:00:21 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0000**	**.0008**	**.0006**	**.0003**	**.0004**	**-.0004**
Stddev	.0003	.0000	.0001	.0002	.0001	.0004	.0000	.0002	.0003
%RSD	22360.	182.7	62.31	411.6	17.64	61.55	5.901	52.96	65.10
#1	.0004	.0000	.0001	.0002	.0007	.0008	.0004	.0001	-.0002
#2	-.0001	-.0000	.0002	-.0001	.0009	.0002	.0003	.0004	-.0007
#3	-.0002	-.0000	.0003	.0001	.0009	.0009	.0003	.0005	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0073**	**-.0006**	**.0006**	**.0001**	**-.0020**	**-.0004**	**.0025**	**.0575**
Stddev	.0002	.0001	.0009	.0015	.0006	.0013	.0003	.0039	.0024
%RSD	59.54	1.096	159.7	267.9	745.5	64.49	75.14	154.3	4.088
#1	.0003	.0074	.0005	.0018	.0006	-.0015	-.0006	.0042	.0594
#2	.0001	.0072	-.0012	-.0011	-.0005	-.0035	-.0001	.0052	.0583
#3	.0004	.0073	-.0009	.0011	.0001	-.0011	-.0006	-.0019	.0549

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0254**	**.0062**	**-.0871**	**.1104**	**.0019**	**.0010**	**.0082**	**.0171**	**.0005**
Stddev	.0012	.0079	.0117	.0097	.0007	.0001	.0014	.0006	.0000
%RSD	4.601	128.4	13.39	8.741	35.39	10.29	17.31	3.321	6.901
#1	.0253	.0045	-.0737	.1188	.0022	.0011	.0092	.0176	.0005
#2	.0266	.0148	-.0947	.0999	.0023	.0009	.0089	.0170	.0005
#3	.0243	-.0008	-.0929	.1126	.0011	.0010	.0066	.0165	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0035**	**.0003**	**.0149**	**-.0005**	**.0067**	**.0260**
Stddev	.0004	.0006	.0001	.0010	.0010	.0008	.0011
%RSD	55.69	17.48	41.22	6.805	198.0	11.93	4.418
#1	.0006	.0042	.0002	.0143	-.0008	.0074	.0248
#2	.0004	.0030	.0005	.0143	.0006	.0058	.0271
#3	.0012	.0033	.0002	.0161	-.0014	.0068	.0262

Zoom In Zoom Out

Sample Name: mp14600-mb1conf Acquired: 5/2/2019 15:00:21 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**162810.**	**25059.**	**6640.9**	**10187.**
Stddev	343.	225.	86.8	103.
%RSD	.21055	.89843	1.3064	1.0111
#1	162440.	24882.	6574.9	10115.
#2	162890.	24983.	6608.7	10142.
#3	163110.	25312.	6739.2	10305.

Zoom In Zoom Out

Sample Name: jc86901-3 Acquired: 5/2/2019 15:05:26 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.5236**	**.0069**	**.0001**	**.0950**	**.2594**	**.2447**	**3.561**	**.1769**
Stddev	.0005	.0001	.0002	.0023	.0011	.0002	.038	.0033
%RSD	.0872	.8017	251.5	2.382	.4357	.0930	1.074	1.891
#1	.5232	.0069	-.0000	.0976	.2607	.2449	3.594	.1808
#2	.5241	.0068	-.0000	.0935	.2588	.2447	3.571	.1750
#3	.5234	.0069	.0002	.0940	.2587	.2445	3.519	.1749

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0023**	**.4041**	**.4611**	**.0764**	**-.0002**	**.1518**	**.0034**	F **-.0046**
Stddev	.0006	.0014	.0101	.0016	.0013	.0023	.0026	.0028
%RSD	25.71	.3536	2.192	2.120	827.9	1.523	75.08	59.98
#1	-.0029	.4051	.4727	.0781	-.0014	.1537	.0007	-.0017
#2	-.0021	.4047	.4555	.0762	-.0002	.1492	.0038	-.0051
#3	-.0018	.4025	.4550	.0749	.0011	.1526	.0057	-.0072

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**219.4**	**6.693**	F **272.5**	**30.97**	**12.83**	**.6249**	**.0650**	**.0089**
Stddev	5.6	.021	1.1	.11	.05	.0063	.0003	.0003
%RSD	2.556	.3062	.3922	.3395	.3593	1.002	.5384	3.258
#1	217.9	6.709	271.4	31.08	12.88	.6225	.0650	.0091
#2	214.6	6.670	273.5	30.88	12.83	.6320	.0653	.0090
#3	225.6	6.700	272.5	30.94	12.78	.6202	.0646	.0086

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.670**	**.0207**	**.0848**	**3.995**	**.0023**	**.1062**	**.5563**	**.1550**
Stddev	.047	.0007	.0000	.008	.0006	.0001	.0148	.0013
%RSD	2.794	3.620	.0334	.2003	27.81	.0687	2.669	.8202
#1	1.723	.0212	.0849	4.000	.0027	.1061	.5733	.1540
#2	1.649	.0198	.0848	3.998	.0016	.1063	.5460	.1546
#3	1.638	.0211	.0848	3.985	.0027	.1062	.5496	.1565

Zoom In Zoom Out

Sample Name: jc86901-3 Acquired: 5/2/2019 15:05:26 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.2247**	**3.586**
Stddev	.0017	.049
%RSD	.7419	1.372
#1	.2256	3.643
#2	.2228	3.556
#3	.2258	3.560

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**156210.**	**25448.**	**6424.3**	**9409.0**
Stddev	676.	180.	119.0	147.2
%RSD	.43256	.70539	1.8530	1.5639
#1	155760.	25268.	6286.8	9239.1
#2	155890.	25627.	6492.0	9496.1
#3	156990.	25450.	6494.0	9491.7

Zoom In Zoom Out

Sample Name: jc86901-9 Acquired: 5/2/2019 15:10:45 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8322**	**.0154**	**.0009**	**.1400**	**.2865**	**.0730**	**4.648**	**.2797**
Stddev	.0013	.0001	.0001	.0004	.0005	.0007	.039	.0003
%RSD	.1538	.9567	10.41	.2900	.1792	.9712	.8348	.1152
#1	.8335	.0154	.0008	.1396	.2864	.0722	4.605	.2799
#2	.8321	.0155	.0010	.1404	.2860	.0736	4.661	.2793
#3	.8310	.0152	.0010	.1399	.2870	.0733	4.679	.2798

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0027**	**.3353**	**.9302**	**.0438**	**.0001**	**.1371**	**.0023**	F **-.0048**
Stddev	.0009	.0002	.0008	.0006	.0007	.0005	.0015	.0018
%RSD	34.27	.0627	.0837	1.299	675.4	.3585	62.18	37.28
#1	-.0037	.3352	.9311	.0443	.0008	.1368	.0014	-.0031
#2	-.0020	.3356	.9299	.0439	-.0000	.1377	.0040	-.0046
#3	-.0023	.3353	.9296	.0432	-.0005	.1368	.0016	-.0067

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**233.0**	**7.971**	F **315.6**	**89.19**	**74.76**	**1.565**	**.4055**	**.0044**
Stddev	2.3	.019	3.0	.28	.20	.008	.0009	.0004
%RSD	.9779	.2415	.9652	.3146	.2682	.5212	.2124	8.044
#1	231.1	7.977	312.4	89.39	74.63	1.557	.4065	.0047
#2	235.5	7.985	318.5	89.32	74.99	1.573	.4049	.0046
#3	232.4	7.949	316.0	88.87	74.66	1.566	.4052	.0040

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.605**	**.0186**	**.1069**	**4.389**	**.0034**	**.1031**	**.3486**	**.1755**
Stddev	.002	.0005	.0002	.006	.0001	.0003	.0034	.0019
%RSD	.1485	2.812	.1948	.1400	3.824	.2631	.9630	1.093
#1	1.604	.0189	.1071	4.386	.0034	.1029	.3521	.1733
#2	1.604	.0180	.1070	4.396	.0034	.1034	.3484	.1763
#3	1.608	.0189	.1067	4.385	.0032	.1031	.3454	.1769

Zoom In Zoom Out

Sample Name: jc86901-9 Acquired: 5/2/2019 15:10:45 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.6767**	**2.122**
Stddev	.0018	.020
%RSD	.2639	.9514
#1	.6788	2.145
#2	.6758	2.109
#3	.6756	2.112

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**156690.**	**25662.**	**6584.7**	**9302.2**
Stddev	229.	132.	4.2	6.0
%RSD	.14603	.51549	.06312	.06450
#1	156770.	25631.	6581.6	9299.3
#2	156430.	25548.	6583.2	9298.3
#3	156860.	25807.	6589.4	9309.1

Zoom In Zoom Out

Sample Name: jc86901-13 Acquired: 5/2/2019 15:16:05 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.7891**	**.0103**	**-.0004**	**.1757**	**.3448**	*****	**6.521**	**.3625**
Stddev	.0124	.0002	.0001	.0030	.0027	-----	.045	.0063
%RSD	1.574	2.153	28.18	1.696	.7859	-----	.6979	1.725
#1	.7845	.0102	-.0003	.1744	.3467	-----	6.573	.3591
#2	.7796	.0102	-.0004	.1791	.3460	-----	6.499	.3697
#3	.8031	.0106	-.0005	.1737	.3417	-----	6.490	.3587

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0986**	**.3436**	**.7937**	**.0464**	F **-.0285**	**.2304**	F **-.0572**	**.0080**
Stddev	.0012	.0022	.0161	.0011	.0018	.0045	.0022	.0022
%RSD	1.207	.6504	2.031	2.470	6.177	1.963	3.803	28.01
#1	-.0991	.3446	.7850	.0462	-.0292	.2276	-.0554	.0055
#2	-.0995	.3451	.8123	.0477	-.0298	.2357	-.0596	.0089
#3	-.0972	.3410	.7838	.0454	-.0265	.2280	-.0566	.0097

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**185.6**	**5.552**	F **370.9**	**66.17**	**27.57**	**1.562**	**.1781**	**.0036**
Stddev	2.9	.108	5.3	1.19	.54	.025	.0032	.0002
%RSD	1.586	1.940	1.438	1.794	1.953	1.604	1.781	6.684
#1	183.9	5.502	369.6	65.64	27.35	1.574	.1762	.0033
#2	183.9	5.478	366.4	65.34	27.17	1.533	.1817	.0036
#3	188.9	5.676	376.8	67.53	28.18	1.579	.1763	.0038

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.597**	**.0068**	**.1355**	**6.399**	**.0130**	**.0607**	**.3432**	F **-.1415**
Stddev	.031	.0004	.0022	.084	.0009	.0002	.0080	.0022
%RSD	1.944	6.212	1.657	1.318	6.583	.3886	2.334	1.532
#1	1.580	.0073	.1345	6.490	.0129	.0607	.3396	-.1402
#2	1.632	.0066	.1339	6.384	.0122	.0609	.3524	-.1440
#3	1.577	.0065	.1381	6.323	.0139	.0604	.3377	-.1403

Zoom In Zoom Out

Sample Name: jc86901-13 Acquired: 5/2/2019 15:16:05 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.4672**	**2.233**
Stddev	.0078	.051
%RSD	1.670	2.262
#1	.4618	2.204
#2	.4636	2.291
#3	.4762	2.203

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**159410.**	**25791.**	**6590.0**	**9391.1**
Stddev	1396.	542.	119.3	145.3
%RSD	.87540	2.1007	1.8102	1.5474
#1	158540.	26082.	6660.9	9475.3
#2	158680.	26125.	6452.3	9223.3
#3	161020.	25165.	6656.8	9474.6

Zoom In Zoom Out

Sample Name: jc86901-9 Acquired: 5/2/2019 15:21:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8453**	**.0156**	**.0010**	**.1428**	**.2918**	**.0753**	**4.820**	**.2849**
Stddev	.0017	.0002	.0002	.0012	.0015	.0013	.053	.0020
%RSD	.2000	1.277	22.27	.8420	.5097	1.741	1.095	.7146
#1	.8452	.0154	.0008	.1430	.2911	.0739	4.771	.2833
#2	.8436	.0157	.0012	.1439	.2935	.0754	4.876	.2872
#3	.8470	.0158	.0009	.1415	.2909	.0765	4.812	.2843

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.3415**	**.9693**	**.0461**	**.0023**	**.1416**	**.0009**	F **-.0077**
Stddev	.0006	.0037	.0058	.0004	.0015	.0013	.0018	.0042
%RSD	145.6	1.081	.5957	.8864	67.66	.9271	204.4	54.27
#1	.0005	.3375	.9666	.0457	.0010	.1408	.0012	-.0031
#2	-.0002	.3446	.9760	.0465	.0018	.1410	-.0011	-.0086
#3	.0011	.3426	.9654	.0462	.0039	.1432	.0026	-.0114

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**237.8**	**8.203**	**331.8**	**91.63**	**76.42**	**1.568**	**.4205**	**.0046**
Stddev	.7	.020	4.2	.30	.34	.009	.0012	.0008
%RSD	.2946	.2390	1.275	.3236	.4436	.5572	.2861	17.84
#1	238.3	8.219	327.5	91.80	76.56	1.561	.4199	.0037
#2	237.0	8.181	331.8	91.28	76.03	1.578	.4219	.0051
#3	238.0	8.208	336.0	91.79	76.66	1.565	.4198	.0051

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.596**	**.0172**	**.1093**	**4.475**	**.0019**	**.1060**	**.3615**	**.1720**
Stddev	.119	.0011	.0001	.054	.0023	.0007	.0026	.0062
%RSD	4.600	6.583	.1267	1.212	117.5	.6708	.7068	3.579
#1	2.727	.0173	.1094	4.414	-.0006	.1052	.3635	.1661
#2	2.568	.0182	.1092	4.495	.0038	.1066	.3623	.1717
#3	2.493	.0160	.1094	4.517	.0026	.1061	.3586	.1784

Zoom In Zoom Out

Sample Name: jc86901-9 Acquired: 5/2/2019 15:21:37 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.7021**	**2.216**
Stddev	.0024	.009
%RSD	.3385	.4170
#1	.7031	2.209
#2	.7039	2.226
#3	.6994	2.213

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**157100.**	**25012.**	**6506.4**	**9399.2**
Stddev	1804.	203.	24.7	35.4
%RSD	1.1480	.81176	.38006	.37653
#1	158700.	24980.	6510.4	9409.0
#2	155150.	25229.	6479.9	9360.0
#3	157470.	24826.	6528.9	9428.7

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/2/2019 15:26:54 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.038**	**2.101**	**1.999**	**2.034**	**2.039**	**2.037**	**2.051**	**2.066**	**.2479**
Stddev	.003	.002	.002	.002	.001	.002	.018	.001	.0002
%RSD	.1676	.0802	.0843	.1076	.0580	.1040	.8710	.0504	.0740
#1	2.039	2.102	2.000	2.036	2.037	2.037	2.031	2.067	.2477
#2	2.041	2.102	1.997	2.033	2.039	2.039	2.061	2.065	.2479
#3	2.034	2.099	1.999	2.032	2.040	2.035	2.062	2.065	.2481
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	**1.987**	**2.017**	**2.001**	**2.124**	**2.046**	**2.029**	**1.986**	**40.01**	**39.77**
Stddev	.002	.003	.003	.003	.001	.006	.001	.03	.05
%RSD	.0895	.1459	.1486	.1571	.0618	.2776	.0488	.0827	.1159
#1	1.986	2.020	2.004	2.128	2.047	2.036	1.986	39.99	39.80
#2	1.989	2.015	1.998	2.122	2.045	2.025	1.988	40.04	39.79
#3	1.986	2.016	2.000	2.123	2.047	2.027	1.986	39.98	39.72
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	**40.99**	**40.23**	**39.77**	**40.61**	**2.060**	**1.964**	**5.171**	**1.992**	**2.121**
Stddev	.08	.10	.12	.09	.003	.002	.005	.004	.003
%RSD	.1897	.2484	.2895	.2287	.1267	.1097	.1069	.2075	.1560
#1	41.05	40.22	39.84	40.65	2.063	1.964	5.176	1.996	2.120
#2	41.02	40.34	39.84	40.67	2.059	1.961	5.165	1.988	2.124
#3	40.90	40.14	39.64	40.50	2.058	1.966	5.172	1.993	2.118
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: 5/2/2019 15:26:54 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**1.981**	**2.012**	**2.007**	**2.027**	**2.029**	F **2.261**
Stddev	.001	.003	.001	.005	.000	.002	.008
%RSD	.0650	.1454	.0290	.2510	.0056	.1123	.3523
#1	2.026	1.982	2.012	2.010	2.027	2.031	2.260
#2	2.029	1.978	2.011	2.009	2.027	2.030	2.253
#3	2.027	1.984	2.011	2.001	2.027	2.026	2.269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**149320.**	**23844.**	**6187.1**	**9096.9**
Stddev	459.	114.	12.2	13.4
%RSD	.30719	.47636	.19736	.14680
#1	149570.	23753.	6177.8	9083.4
#2	148790.	23808.	6200.9	9110.1
#3	149600.	23971.	6182.6	9097.2

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/2/2019 15:31:56 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0003**	**.0001**	**.0002**	**.0001**	**.0000**	**-.0002**
Stddev	.0003	.0001	.0002	.0003	.0003	.0004	.0000	.0004	.0002
%RSD	382.9	112.3	79.81	111.4	554.9	140.7	20.13	2686.	129.4
#1	-.0003	.0000	.0000	-.0000	-.0002	.0003	.0001	-.0004	-.0002
#2	.0002	.0002	.0004	.0003	-.0001	.0006	.0001	.0002	.0001
#3	.0003	.0000	.0004	.0007	.0005	-.0001	.0001	.0003	-.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	**.0003**	**.0001**	**.0006**	**.0009**	**.0007**	**-.0017**	**-.0018**	**-.0045**	**-.0003**
Stddev	.0002	.0001	.0008	.0007	.0003	.0004	.0007	.0078	.0005
%RSD	64.46	232.2	133.5	84.24	43.60	26.13	38.34	172.2	196.3
#1	.0001	-.0000	.0014	.0007	.0009	-.0019	-.0025	-.0130	.0003
#2	.0006	.0000	.0006	.0002	.0010	-.0012	-.0011	.0024	-.0006
#3	.0003	.0002	-.0002	.0017	.0004	-.0019	-.0020	-.0030	-.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	**.0012**	**.0081**	**-.1101**	**-.0239**	**.0023**	**.0004**	**.0015**	**-.0006**	**.0003**
Stddev	.0030	.0065	.0283	.0019	.0002	.0002	.0011	.0005	.0000
%RSD	255.0	79.94	25.72	8.164	8.510	57.16	71.13	79.39	2.343
#1	-.0022	.0144	-.1399	-.0261	.0022	.0002	.0003	-.0011	.0003
#2	.0021	.0014	-.1068	-.0229	.0022	.0005	.0019	-.0001	.0003
#3	.0036	.0086	-.0835	-.0226	.0026	.0006	.0024	-.0006	.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: 5/2/2019 15:31:56 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0018**	**.0003**	**.0020**	**.0000**	F **.0068**	**.0052**
Stddev	.0004	.0009	.0001	.0004	.0021	.0029	.0021
%RSD	124.9	49.05	33.10	21.85	64350.	42.39	40.95
#1	-.0001	.0024	.0004	.0021	-.0020	.0092	.0043
#2	.0006	.0022	.0002	.0025	.0022	.0076	.0076
#3	.0004	.0008	.0003	.0016	-.0002	.0036	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.0040	
Low Limit						-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**158470.**	**24346.**	**6453.2**	**9949.7**
Stddev	676.	93.	39.3	51.0
%RSD	.42666	.38345	.60902	.51255
#1	159200.	24449.	6467.9	9981.4
#2	157870.	24322.	6483.1	9976.8
#3	158320.	24268.	6408.7	9890.9

Zoom In Zoom Out

Sample Name: jc86901-13 Acquired: 5/2/2019 15:37:04 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8040**	**.0122**	**.0003**	**.1601**	**.3577**	**.0476**	**6.925**	**.3659**	**-.0041**
Stddev	.0010	.0001	.0005	.0004	.0012	.0010	.033	.0007	.0008
%RSD	.1227	.4649	174.2	.2297	.3462	2.001	.4810	.1944	20.45
#1	.8031	.0123	.0008	.1605	.3591	.0475	6.902	.3660	-.0036
#2	.8038	.0122	-.0002	.1598	.3568	.0468	6.963	.3651	-.0050
#3	.8051	.0122	.0002	.1600	.3572	.0486	6.909	.3664	-.0036

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3649**	**.8206**	**.0644**	**.0024**	**.2247**	**.0005**	**-.0039**	**189.1**	**5.923**
Stddev	.0004	.0008	.0027	.0020	.0034	.0032	.0026	.2	.007
%RSD	.1163	.0938	4.255	81.85	1.501	594.7	65.57	.1235	.1157
#1	.3654	.8197	.0654	.0047	.2215	.0025	-.0032	188.9	5.920
#2	.3649	.8209	.0613	.0017	.2282	-.0032	-.0067	189.1	5.919
#3	.3645	.8211	.0665	.0009	.2245	.0023	-.0018	189.4	5.931

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**384.3**	**68.34**	**28.23**	**1.630**	**.1849**	**.0075**	**1.757**	**.0179**	**.1385**
Stddev	3.5	.15	.16	.011	.0007	.0003	.040	.0014	.0002
%RSD	.9140	.2217	.5574	.6444	.3771	3.381	2.263	7.587	.1430
#1	385.3	68.22	28.06	1.638	.1857	.0072	1.731	.0163	.1383
#2	380.4	68.29	28.37	1.635	.1843	.0075	1.738	.0184	.1386
#3	387.3	68.51	28.27	1.618	.1848	.0077	1.803	.0189	.1387

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.755**	**.0051**	**.0877**	**.3242**	**.2654**	**.4426**	**2.558**
Stddev	.001	.0008	.0003	.0037	.0026	.0043	.038
%RSD	.0078	16.23	.3863	1.129	.9896	.9661	1.485
#1	6.755	.0041	.0877	.3205	.2630	.4377	2.515
#2	6.755	.0054	.0873	.3278	.2682	.4440	2.571
#3	6.754	.0057	.0879	.3243	.2650	.4459	2.588

Zoom In Zoom Out

Sample Name: jc86901-13 Acquired: 5/2/2019 15:37:04 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156910.**	**25228.**	**6503.7**	**9485.8**
Stddev	381.	219.	8.0	13.5
%RSD	.24273	.86769	.12375	.14190
#1	157350.	25477.	6513.0	9501.3
#2	156660.	25064.	6498.6	9477.6
#3	156730.	25144.	6499.6	9478.4

Zoom In Zoom Out

Sample Name: mp14600-ps1 7 Acquired: 5/2/2019 15:42:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.456**	**2.014**	**1.958**	**1.789**	**2.971**	**2.011**	**3.685**	**1.941**	*****
Stddev	.002	.004	.004	.002	.003	.006	.019	.003	-----
%RSD	.0735	.1788	.2135	.1341	.1130	.2878	.5208	.1274	-----
#1	2.455	2.018	1.962	1.791	2.973	2.014	3.693	1.943	-----
#2	2.456	2.011	1.954	1.790	2.968	2.005	3.663	1.942	-----
#3	2.458	2.012	1.958	1.787	2.974	2.015	3.698	1.939	-----

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.631**	**2.932**	**2.241**	**1.737**	**1.834**	**1.910**	**1.918**	**173.3**	**36.95**
Stddev	.002	.005	.004	.002	.002	.004	.004	.3	.08
%RSD	.0609	.1769	.1683	.1153	.0981	.2221	.2096	.1510	.2282
#1	3.633	2.938	2.245	1.738	1.835	1.915	1.922	173.6	37.05
#2	3.630	2.928	2.238	1.738	1.832	1.907	1.915	173.1	36.89
#3	3.629	2.930	2.241	1.735	1.835	1.908	1.916	173.3	36.93

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1057.**	**51.65**	**72.64**	**26.06**	**2.215**	**1.829**	**2.564**	**1.835**	**2.191**
Stddev	12.	.07	.07	.03	.005	.003	.014	.006	.001
%RSD	1.127	.1305	.0926	.1023	.2086	.1412	.5362	.3231	.0430
#1	1071.	51.67	72.66	26.04	2.221	1.832	2.568	1.842	2.192
#2	1049.	51.57	72.56	26.04	2.212	1.827	2.575	1.831	2.190
#3	1052.	51.70	72.69	26.09	2.213	1.828	2.549	1.833	2.191

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.257**	**1.718**	**2.015**	**2.150**	**.2867**	**.0071**	F **23.65**
Stddev	.005	.007	.001	.012	.0011	.0008	.69
%RSD	.1014	.4375	.0504	.5785	.3778	11.58	2.920
#1	5.262	1.711	2.016	2.164	.2870	.0067	24.40
#2	5.257	1.717	2.014	2.144	.2876	.0066	23.51
#3	5.251	1.726	2.014	2.142	.2855	.0081	23.04

Zoom In Zoom Out

Sample Name: mp14600-ps1 7 Acquired: 5/2/2019 15:42:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**150270.**	**25022.**	**6206.8**	**10044.**
Stddev	303.	134.	8.3	3.
%RSD	.20145	.53635	.13358	.02689
#1	149980.	24933.	6200.3	10047.
#2	150250.	25176.	6216.2	10044.
#3	150580.	24956.	6204.1	10041.

Zoom In Zoom Out

Sample Name: mp14600-ps1 Acquired: 5/2/2019 15:47:24 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.496**	**2.068**	**1.987**	**2.064**	**3.103**	**1.969**	**3.992**	**2.255**	**.2436**
Stddev	.004	.004	.002	.006	.003	.005	.004	.007	.0060
%RSD	.1500	.1716	.0761	.3088	.0926	.2589	.1079	.3301	2.470
#1	2.492	2.064	1.985	2.058	3.100	1.966	3.994	2.248	.2377
#2	2.500	2.070	1.987	2.071	3.103	1.966	3.995	2.256	.2497
#3	2.496	2.070	1.988	2.065	3.106	1.975	3.987	2.262	.2435

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.711**	**3.178**	**2.263**	**2.104**	**2.165**	**1.967**	**1.951**	**177.2**	**39.52**
Stddev	.002	.005	.015	.011	.015	.017	.008	.3	.05
%RSD	.0563	.1538	.6562	.5395	.6895	.8867	.4224	.1650	.1306
#1	3.709	3.175	2.280	2.117	2.157	1.953	1.959	176.9	39.47
#2	3.713	3.175	2.252	2.100	2.182	1.962	1.943	177.5	39.52
#3	3.711	3.184	2.258	2.095	2.157	1.987	1.951	177.2	39.57

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1306.**	**56.20**	**73.88**	**26.77**	**2.373**	**1.907**	**2.662**	**2.003**	**2.241**
Stddev	2.	.13	.57	.02	.005	.002	.016	.004	.001
%RSD	.1386	.2308	.7744	.0817	.1937	.1024	.6091	.1919	.0344
#1	1304.	56.10	73.47	26.80	2.375	1.905	2.658	2.007	2.240
#2	1308.	56.35	74.53	26.77	2.367	1.906	2.680	2.000	2.242
#3	1307.	56.15	73.63	26.75	2.375	1.909	2.649	2.004	2.241

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.364**	**1.786**	**2.060**	**2.192**	**.2301**	**.0154**	**22.56**
Stddev	.013	.007	.005	.015	.0126	.0077	.30
%RSD	.2473	.4140	.2416	.7029	5.474	49.94	1.326
#1	5.373	1.794	2.058	2.209	.2430	.0238	22.91
#2	5.369	1.780	2.066	2.180	.2294	.0138	22.40
#3	5.349	1.784	2.057	2.186	.2178	.0086	22.38

Zoom In Zoom Out

Sample Name: mp14600-ps1 Acquired: 5/2/2019 15:47:24 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156730.**	**24461.**	**6439.6**	**9763.6**
Stddev	59.	131.	19.9	25.1
%RSD	.03766	.53447	.30871	.25670
#1	156770.	24505.	6442.1	9773.4
#2	156670.	24314.	6458.1	9782.2
#3	156760.	24565.	6418.5	9735.1

Zoom In Zoom Out

Sample Name: jc86838-1 Acquired: 5/2/2019 15:52:16 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0903**	**.0011**	**-.0001**	**.0186**	**.1962**	**.0324**	**.2783**	**.0165**	**-.0002**
Stddev	.0009	.0001	.0001	.0002	.0023	.0004	.0024	.0001	.0004
%RSD	1.042	6.368	47.19	.8563	1.176	1.160	.8490	.6729	157.8
#1	.0893	.0012	-.0001	.0185	.1953	.0324	.2778	.0166	-.0000
#2	.0907	.0011	-.0001	.0186	.1988	.0327	.2809	.0164	-.0007
#3	.0910	.0011	-.0002	.0188	.1944	.0320	.2763	.0166	-.0000

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2361**	**.0624**	**.0078**	**-.0008**	**.1208**	**.0003**	**-.0026**	**11.45**	**.5179**
Stddev	.0025	.0006	.0008	.0009	.0009	.0007	.0014	.07	.0007
%RSD	1.072	.8829	9.908	121.1	.7525	203.5	55.15	.6023	.1435
#1	.2360	.0622	.0071	-.0006	.1211	.0011	-.0015	11.37	.5179
#2	.2387	.0630	.0075	-.0017	.1216	.0000	-.0041	11.47	.5171
#3	.2337	.0619	.0086	.0001	.1198	-.0001	-.0020	11.51	.5186

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**61.45**	**.4426**	**.0452**	**.1931**	**.0042**	**.0030**	**1.800**	**.0203**	**.0063**
Stddev	.40	.0098	.0366	.0091	.0003	.0002	.011	.0004	.0000
%RSD	.6578	2.224	81.11	4.700	6.874	7.054	.6277	2.160	.3120
#1	61.01	.4518	.0087	.1840	.0043	.0029	1.799	.0208	.0063
#2	61.52	.4437	.0449	.1931	.0038	.0033	1.812	.0201	.0063
#3	61.81	.4322	.0819	.2022	.0044	.0029	1.790	.0199	.0063

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.229**	**.0131**	**.0135**	**.0802**	**.0453**	**.0005**	**.3725**
Stddev	.012	.0005	.0001	.0022	.0014	.0021	.0040
%RSD	.9322	3.827	.9070	2.745	3.043	405.4	1.078
#1	1.227	.0127	.0136	.0779	.0463	.0029	.3763
#2	1.242	.0128	.0136	.0823	.0458	-.0013	.3683
#3	1.219	.0136	.0134	.0804	.0437	-.0001	.3730

Zoom In Zoom Out

Sample Name: jc86838-1 Acquired: 5/2/2019 15:52:16 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**165840.**	**25743.**	**6777.3**	**9956.0**
Stddev	1216.	249.	57.9	65.7
%RSD	.73340	.96595	.85472	.65955
#1	166250.	26020.	6804.3	9991.0
#2	164470.	25539.	6710.8	9880.2
#3	166800.	25671.	6816.8	9996.7

Zoom In Zoom Out

Sample Name: jc86838-5 Acquired: 5/2/2019 15:57:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	.2962	.0052	.0000	.1056	.2024	.0758	1.600	.0935	-.0003
Stddev	.0018	.0000	.0004	.0001	.0013	.0003	.004	.0007	.0002
%RSD	.6041	.3995	9440.	.1298	.6639	.3600	.2183	.7628	80.68
#1	.2944	.0052	.0001	.1058	.2040	.0758	1.601	.0929	-.0003
#2	.2979	.0052	.0003	.1055	.2015	.0760	1.596	.0943	-.0006
#3	.2962	.0051	-.0004	.1057	.2018	.0755	1.603	.0934	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3084	.2208	.0582	-.0004	.0915	.0035	-.0050	133.2	4.446
Stddev	.0001	.0006	.0019	.0019	.0026	.0010	.0017	.5	.019
%RSD	.0246	.2790	3.180	479.9	2.791	28.06	34.77	.4088	.4298
#1	.3083	.2203	.0561	.0011	.0931	.0041	-.0030	132.8	4.432
#2	.3085	.2205	.0593	-.0025	.0929	.0040	-.0061	133.8	4.467
#3	.3084	.2215	.0592	.0002	.0886	.0024	-.0059	132.9	4.437

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	242.0	11.79	7.671	3.741	.0325	.0090	1.842	.0151	.0575
Stddev	1.2	.14	.060	.037	.0011	.0002	.004	.0015	.0003
%RSD	.4853	1.151	.7881	.9831	3.434	1.758	.1929	9.703	.5352
#1	241.3	11.76	7.629	3.702	.0314	.0091	1.840	.0162	.0572
#2	243.3	11.93	7.643	3.775	.0325	.0088	1.840	.0135	.0578
#3	241.3	11.66	7.740	3.747	.0336	.0091	1.846	.0157	.0574

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.776	.0135	.0848	.4788	.1453	.0654	3.223
Stddev	.007	.0019	.0002	.0022	.0020	.0028	.023
%RSD	.1858	14.32	.1827	.4686	1.374	4.274	.7248
#1	3.776	.0157	.0846	.4814	.1440	.0674	3.244
#2	3.769	.0121	.0849	.4777	.1476	.0666	3.225
#3	3.783	.0127	.0849	.4774	.1443	.0622	3.198

Zoom In Zoom Out

Sample Name: jc86838-5 Acquired: 5/2/2019 15:57:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	157510.	24721.	6563.6	9694.3
Stddev	953.	249.	17.5	17.3
%RSD	.60492	1.0057	.26685	.17896
#1	158100.	24938.	6570.9	9707.9
#2	158020.	24450.	6576.2	9700.2
#3	156410.	24777.	6543.6	9674.8

Zoom In Zoom Out

Sample Name: jc86838-11 Acquired: 5/2/2019 16:02:20 Type: Unk
Method: SGS 3 NO Valve(v332) 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	.7064	.0053	.0013	.0769	.1938	.5791	3.062	.1234	-.0004
Stddev	.0046	.0000	.0002	.0004	.0009	.0049	.034	.0004	.0005
%RSD	.6556	.4825	13.79	.5671	.4616	.8385	1.093	.2841	137.7
#1	.7089	.0053	.0014	.0764	.1937	.5779	3.075	.1233	.0001
#2	.7092	.0053	.0011	.0772	.1947	.5845	3.087	.1232	-.0009
#3	.7010	.0053	.0014	.0771	.1929	.5750	3.024	.1238	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2361	.6094	.1985	.0022	.6763	.0030	.0002	104.7	29.13
Stddev	.0015	.0029	.0025	.0014	.0013	.0017	.0015	.8	.23
%RSD	.6394	.4737	1.266	61.85	.1879	56.24	750.8	.7899	.7858
#1	.2364	.6085	.1962	.0029	.6752	.0047	.0019	105.3	29.30
#2	.2375	.6071	.1981	.0032	.6759	.0013	-.0004	105.0	29.22
#3	.2345	.6127	.2011	.0006	.6777	.0030	-.0009	103.8	28.87

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.5	19.20	7.226	7.974	.0253	.0153	2.236	.0371	.1553
Stddev	1.4	.13	.052	.045	.0000	.0004	.007	.0005	.0009
%RSD	.9282	.6788	.7271	.5710	.1368	2.367	.3311	1.219	.5965
#1	155.6	19.26	7.259	7.986	.0253	.0157	2.234	.0376	.1559
#2	155.1	19.29	7.254	8.012	.0253	.0150	2.229	.0371	.1557
#3	152.9	19.05	7.166	7.924	.0254	.0151	2.244	.0367	.1542

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.749	.0049	.0308	1.212	.1052	.1081	3.440
Stddev	.016	.0017	.0003	.006	.0017	.0016	.004
%RSD	.5662	35.68	1.086	.4720	1.644	1.442	.1240
#1	2.749	.0030	.0310	1.209	.1040	.1064	3.437
#2	2.765	.0065	.0310	1.209	.1071	.1094	3.445
#3	2.734	.0051	.0304	1.219	.1043	.1084	3.439

Zoom In Zoom Out

Sample Name: jc86838-11 Acquired: 5/2/2019 16:02:20 Type: Unk
Method: SGS 3 NO Valve(v332) 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	161480.	25846.	6721.0	9425.2
Stddev	1075.	382.	34.8	36.6
%RSD	.66592	1.4787	.51711	.38856
#1	161380.	25734.	6724.3	9432.6
#2	160450.	25533.	6754.0	9457.6
#3	162600.	26272.	6684.8	9385.5

Zoom In Zoom Out

Sample Name: jc86838-13 Acquired: 5/2/2019 16:07:28 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.366**	**.0088**	**.0092**	**.0571**	**.1884**	**.9275**	**2.052**	**.1428**	**.0019**
Stddev	.002	.0000	.0002	.0001	.0004	.0005	.009	.0005	.0007
%RSD	.1614	.3205	2.285	.2035	.1958	.0581	.4558	.3350	34.87
#1	1.369	.0088	.0091	.0572	.1887	.9279	2.051	.1433	.0026
#2	1.366	.0088	.0092	.0570	.1880	.9269	2.042	.1424	.0017
#3	1.364	.0088	.0095	.0572	.1884	.9278	2.061	.1427	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2835**	**2.337**	**.4289**	**.0348**	**1.890**	**.0059**	**.0082**	**111.4**	**61.70**
Stddev	.0002	.001	.0007	.0016	.002	.0025	.0004	.2	.15
%RSD	.0761	.0202	.1730	4.647	.1271	41.53	5.507	.1515	.2469
#1	.2833	2.337	.4282	.0333	1.887	.0042	.0086	111.5	61.77
#2	.2835	2.337	.4289	.0346	1.889	.0088	.0077	111.5	61.81
#3	.2837	2.338	.4297	.0365	1.892	.0049	.0082	111.2	61.53

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**158.4**	**35.68**	**7.294**	**6.691**	**.0540**	**.0142**	**2.244**	**.5272**	**.2874**
Stddev	1.6	.14	.020	.006	.0003	.0001	.001	.0003	.0003
%RSD	1.001	.3815	.2766	.0922	.5546	.8811	.0398	.0530	.1209
#1	159.9	35.84	7.271	6.692	.0536	.0143	2.245	.5270	.2877
#2	158.7	35.63	7.305	6.697	.0542	.0142	2.243	.5271	.2875
#3	156.8	35.58	7.306	6.685	.0541	.0141	2.244	.5275	.2870

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.321**	**.0046**	**.0519**	**7.164**	**.1387**	**.1234**	**6.079**
Stddev	.003	.0008	.0002	.018	.0014	.0007	.026
%RSD	.0787	18.32	.4679	.2520	1.037	.5301	.4263
#1	3.322	.0056	.0521	7.158	.1374	.1229	6.097
#2	3.318	.0041	.0520	7.151	.1386	.1241	6.091
#3	3.324	.0041	.0516	7.185	.1402	.1232	6.050

Zoom In Zoom Out

Sample Name: jc86838-13 Acquired: 5/2/2019 16:07:28 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160120.**	**25825.**	**6679.6**	**9409.4**
Stddev	435.	66.	5.9	4.8
%RSD	.27147	.25415	.08774	.05148
#1	160500.	25762.	6684.1	9413.7
#2	160220.	25893.	6681.8	9410.4
#3	159650.	25822.	6673.0	9404.1

Zoom In Zoom Out

Sample Name: jc87020-1 Acquired: 5/2/2019 16:12:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.2865**	**.0090**	**.0001**	**.0852**	**.1327**	**.2533**	**1.904**	**.2123**	**-.0047**
Stddev	.0033	.0000	.0003	.0009	.0008	.0028	.016	.0012	.0007
%RSD	1.168	.2057	349.2	1.078	.6348	1.088	.8271	.5471	14.59
#1	.2836	.0089	.0003	.0842	.1321	.2506	1.888	.2111	-.0045
#2	.2858	.0090	.0001	.0854	.1323	.2531	1.904	.2124	-.0054
#3	.2902	.0089	-.0002	.0860	.1336	.2561	1.920	.2134	-.0041

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3215**	**.3922**	**1.052**	**-.0023**	**.1455**	**-.0000**	**-.0045**	**277.3**	**9.515**
Stddev	.0018	.0045	.0018	.0006	.0053	.0010	.0019	1.9	.089
%RSD	.5618	1.145	1.726	24.68	3.628	5053.	41.59	.6931	.9342
#1	.3203	.3875	.1034	-.0020	.1395	.0011	-.0062	275.4	9.429
#2	.3207	.3928	.1052	-.0030	.1493	-.0009	-.0025	277.2	9.509
#3	.3236	.3964	.1070	-.0020	.1477	-.0002	-.0050	279.3	9.607

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **400.4**	**8.554**	**12.29**	**.1382**	**.0091**	**.0154**	**2.543**	**.0171**	**.0866**
Stddev	6.0	.023	.26	.0145	.0003	.0005	.022	.0006	.0008
%RSD	1.507	.2656	2.099	10.48	3.161	3.137	.8746	3.561	.8773
#1	394.5	8.528	12.09	.1355	.0094	.0150	2.519	.0175	.0858
#2	400.0	8.561	12.21	.1252	.0088	.0160	2.549	.0164	.0868
#3	406.6	8.572	12.58	.1538	.0091	.0153	2.562	.0174	.0873

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.519**	**.0089**	**.1497**	**.5698**	**.0488**	**.1398**	**6.380**
Stddev	.010	.0019	.0013	.0074	.0022	.0007	.087
%RSD	.6855	21.11	.8895	1.302	4.533	.4785	1.357
#1	1.509	.0075	.1485	.5612	.0495	.1395	6.293
#2	1.519	.0081	.1494	.5742	.0464	.1405	6.381
#3	1.530	.0110	.1511	.5740	.0507	.1393	6.466

Zoom In Zoom Out

Sample Name: jc87020-1 Acquired: 5/2/2019 16:12:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158050.**	**25213.**	**6653.3**	**9608.5**
Stddev	86.	103.	31.3	35.1
%RSD	.05427	.40952	.47024	.36528
#1	158080.	25193.	6685.5	9647.2
#2	157950.	25325.	6651.4	9599.6
#3	158110.	25122.	6623.0	9578.7

Zoom In Zoom Out

Sample Name: jc87020-2 Acquired: 5/2/2019 16:17:46 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.3331**	**.0163**	**.0005**	**.2738**	**.0815**	**.2722**	**3.682**	**.3014**	**-.0056**
Stddev	.0032	.0002	.0001	.0040	.0014	.0023	.070	.0033	.0013
%RSD	.9672	1.116	29.07	1.460	1.717	.8313	1.903	1.100	22.75
#1	.3304	.0161	.0006	.2696	.0809	.2697	3.646	.2980	-.0055
#2	.3323	.0163	.0006	.2740	.0805	.2730	3.638	.3014	-.0044
#3	.3367	.0164	.0003	.2776	.0831	.2740	3.763	.3047	-.0069

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2172**	**.3727**	**.1048**	**.0011**	**.1377**	**-.0031**	**-.0056**	**232.3**	**6.156**
Stddev	.0032	.0044	.0001	.0013	.0008	.0014	.0014	1.3	.048
%RSD	1.467	1.193	.1419	121.7	.5551	44.87	24.78	.5615	.7867
#1	.2146	.3679	.1048	.0026	.1372	-.0018	-.0041	231.1	6.111
#2	.2163	.3734	.1050	.0002	.1372	-.0031	-.0069	232.1	6.152
#3	.2208	.3767	.1047	.0005	.1385	-.0046	-.0060	233.7	6.207

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**325.8**	**10.40**	**14.22**	**.1141**	**.0098**	**.0179**	**2.242**	**.0149**	**.0976**
Stddev	4.0	.13	.17	.0131	.0001	.0003	.029	.0011	.0006
%RSD	1.213	1.208	1.228	11.52	1.362	1.768	1.278	7.512	.5957
#1	322.6	10.27	14.05	.1211	.0097	.0176	2.211	.0136	.0971
#2	330.3	10.39	14.22	.0990	.0099	.0179	2.249	.0156	.0973
#3	324.7	10.53	14.40	.1223	.0097	.0182	2.267	.0156	.0982

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.754**	**.0057**	**.1734**	**.2766**	**.0578**	**.1875**	**7.953**
Stddev	.017	.0013	.0018	.0065	.0014	.0023	.092
%RSD	.9590	23.76	1.024	2.352	2.497	1.253	1.155
#1	1.738	.0070	.1716	.2714	.0563	.1858	7.959
#2	1.752	.0044	.1735	.2744	.0579	.1864	7.858
#3	1.771	.0056	.1751	.2839	.0592	.1902	8.042

Zoom In Zoom Out

Sample Name: jc87020-2 Acquired: 5/2/2019 16:17:46 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**162150.**	**25881.**	**6866.8**	**9610.3**
Stddev	631.	37.	5.2	5.0
%RSD	.38895	.14348	.07630	.05153
#1	161810.	25899.	6871.7	9614.4
#2	162880.	25838.	6861.3	9611.7
#3	161770.	25905.	6867.6	9604.8

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/2/2019 16:23:04 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.044**	**2.091**	**2.005**	**2.034**	**2.030**	**2.030**	**2.046**	**2.066**	**.2478**
Stddev	.002	.004	.000	.002	.005	.003	.021	.003	.0004
%RSD	.1043	.1858	.0100	.1188	.2616	.1686	1.011	.1189	.1597
#1	2.042	2.087	2.005	2.034	2.034	2.033	2.025	2.066	.2483
#2	2.046	2.095	2.005	2.036	2.024	2.027	2.066	2.068	.2475
#3	2.043	2.090	2.005	2.031	2.033	2.031	2.047	2.063	.2477
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	**1.987**	**2.018**	**2.008**	**2.106**	**2.049**	**2.031**	**1.994**	**39.96**	**39.60**
Stddev	.004	.002	.001	.005	.002	.005	.002	.04	.07
%RSD	.2137	.1084	.0707	.2226	.0716	.2257	.0928	.0923	.1856
#1	1.990	2.016	2.007	2.111	2.049	2.035	1.993	39.92	39.52
#2	1.982	2.019	2.010	2.103	2.048	2.031	1.996	39.99	39.67
#3	1.989	2.020	2.008	2.103	2.051	2.026	1.994	39.95	39.60
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	**40.83**	**40.10**	**40.07**	**40.87**	**2.070**	**1.964**	**5.193**	**1.995**	**2.117**
Stddev	.03	.03	.09	.05	.001	.002	.005	.002	.002
%RSD	.0744	.0623	.2315	.1184	.0553	.1148	.0992	.0953	.0942
#1	40.80	40.08	39.99	40.82	2.069	1.963	5.192	1.993	2.116
#2	40.86	40.08	40.17	40.92	2.071	1.966	5.198	1.996	2.120
#3	40.84	40.13	40.04	40.86	2.070	1.961	5.188	1.997	2.117
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: 5/2/2019 16:23:04 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.024**	**1.992**	**2.014**	**1.968**	**2.034**	**2.013**	**2.038**
Stddev	.004	.003	.006	.009	.002	.004	.022
%RSD	.1970	.1373	.3039	.4717	.1040	.2247	1.077
#1	2.029	1.989	2.020	1.977	2.032	2.009	2.064
#2	2.021	1.994	2.008	1.968	2.034	2.018	2.024
#3	2.024	1.992	2.016	1.959	2.036	2.012	2.027
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	**149890.**	**23859.**	**6178.7**	**9113.8**
Stddev	395.	124.	21.1	22.3
%RSD	.26386	.52100	.34102	.24489
#1	150060.	23980.	6191.9	9123.7
#2	150170.	23867.	6189.7	9129.5
#3	149440.	23731.	6154.4	9088.3

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/2/2019 16:28:06 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0002**	F **.0007**	**.0007**	**.0005**	**.0005**	**.0003**	**.0007**	**-.0001**
Stddev	.0003	.0000	.0000	.0002	.0006	.0003	.0001	.0003	.0002
%RSD	479.9	12.99	4.933	28.24	124.0	70.97	25.77	48.63	189.8
#1	.0001	.0002	.0007	.0007	.0009	.0004	.0004	.0010	.0000
#2	.0003	.0002	.0008	.0005	-.0002	.0002	.0002	.0004	-.0004
#3	-.0002	.0003	.0007	.0008	.0007	.0008	.0003	.0007	-.0000
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0007						
Low Limit			-.0007						

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0003**	**.0012**	**.0010**	**.0007**	**-.0005**	**.0007**	**.0013**	**.0012**
Stddev	.0002	.0001	.0004	.0010	.0004	.0014	.0021	.0079	.0009
%RSD	35.87	18.56	34.71	102.8	56.78	278.4	319.3	618.3	77.96
#1	.0007	.0003	.0008	.0021	.0008	-.0006	-.0013	.0007	.0001
#2	.0003	.0003	.0016	.0001	.0010	-.0018	.0004	.0095	.0018
#3	.0005	.0004	.0011	.0008	.0002	.0009	.0030	-.0063	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049**	**.0045**	**-.0304**	**.0078**	**.0029**	**.0011**	**.0024**	**.0003**	**.0005**
Stddev	.0035	.0055	.0254	.0134	.0005	.0001	.0003	.0005	.0000
%RSD	70.84	121.3	83.51	172.2	17.52	9.341	10.49	156.5	5.432
#1	.0010	.0037	-.0509	.0009	.0030	.0012	.0026	-.0002	.0005
#2	.0063	.0104	-.0020	-.0007	.0024	.0011	.0022	.0008	.0006
#3	.0075	-.0005	-.0383	.0232	.0034	.0010	.0026	.0004	.0005
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: 5/2/2019 16:28:06 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0005**	**.0075**	**.0014**	**.0010**	**.0061**
Stddev	.0001	.0011	.0001	.0014	.0007	.0005	.0021
%RSD	20.00	37.69	26.43	18.53	47.44	54.50	34.12
#1	.0006	.0021	.0006	.0059	.0020	.0013	.0046
#2	.0007	.0042	.0003	.0085	.0007	.0004	.0085
#3	.0005	.0026	.0005	.0082	.0014	.0014	.0052
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	**160310.**	**24357.**	**6514.1**	**10072.**
Stddev	760.	216.	12.1	15.
%RSD	.47395	.88725	.18574	.14813
#1	159590.	24238.	6517.8	10075.
#2	161100.	24607.	6500.6	10055.
#3	160230.	24227.	6523.9	10084.

Zoom In Zoom Out

Sample Name: jc87020-3conf Acquired: 5/2/2019 16:33:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.4460**	**.0123**	**-.0002**	**.1987**	**.0953**	**.2529**	**2.052**	**.2848**	**-.0060**
Stddev	.0156	.0006	.0008	.0065	.0012	.0067	.042	.0091	.0011
%RSD	3.495	4.488	333.3	3.266	1.274	2.669	2.045	3.183	18.04
#1	.4304	.0118	-.0008	.1925	.0939	.2466	2.010	.2754	-.0048
#2	.4460	.0122	-.0005	.1982	.0956	.2520	2.052	.2854	-.0068
#3	.4616	.0129	.0006	.2054	.0963	.2600	2.093	.2935	-.0064

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2432**	**.4164**	**.1241**	**-.0008**	**.1509**	**-.0061**	**-.0027**	**216.0**	**5.378**
Stddev	.0045	.0140	.0036	.0027	.0046	.0019	.0005	4.1	.173
%RSD	1.854	3.353	2.912	357.4	3.050	30.86	18.31	1.906	3.214
#1	.2390	.4019	.1200	-.0031	.1457	-.0081	-.0033	211.9	5.209
#2	.2425	.4175	.1259	.0022	.1525	-.0058	-.0023	215.8	5.372
#3	.2480	.4298	.1266	-.0013	.1545	-.0044	-.0026	220.2	5.554

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**341.6**	**8.785**	**11.06**	**.1846**	**.0120**	**.0194**	**2.140**	**.0166**	**.1162**
Stddev	7.0	.291	.60	.0372	.0016	.0012	.076	.0022	.0036
%RSD	2.036	3.311	5.388	20.18	13.54	6.123	3.564	13.45	3.122
#1	334.8	8.518	10.47	.2028	.0103	.0180	2.064	.0164	.1126
#2	341.4	8.742	11.05	.1417	.0135	.0199	2.139	.0145	.1162
#3	348.7	9.095	11.66	.2092	.0122	.0203	2.216	.0190	.1198

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.326**	**.0036**	**.1736**	**.1412**	**.0365**	**.1649**	**7.699**
Stddev	.022	.0010	.0034	.0100	.0034	.0087	.399
%RSD	1.679	28.30	1.984	7.080	9.279	5.252	5.188
#1	1.303	.0026	.1700	.1325	.0336	.1563	7.300
#2	1.327	.0047	.1739	.1521	.0356	.1649	7.699
#3	1.348	.0035	.1769	.1389	.0402	.1736	8.099

Zoom In Zoom Out

Sample Name: jc87020-3conf Acquired: 5/2/2019 16:33:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**162910.**	**25589.**	**6796.8**	**9730.8**
Stddev	592.	158.	14.1	5.9
%RSD	.36351	.61586	.20686	.06111
#1	162340.	25407.	6785.4	9723.9
#2	162880.	25677.	6792.5	9733.8
#3	163520.	25682.	6812.5	9734.6

Zoom In Zoom Out

Sample Name: jc86838-13 Acquired: 5/2/2019 16:38:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.429**	**.0091**	**.0099**	**.0585**	**.2028**	**.9328**	**2.217**	**.1470**	**.0018**
Stddev	.002	.0002	.0006	.0012	.0015	.0079	.003	.0004	.0011
%RSD	.1085	1.718	6.023	2.033	.7454	.8498	.1225	.2958	62.46
#1	1.428	.0092	.0103	.0592	.2037	.9308	2.219	.1474	.0025
#2	1.430	.0090	.0102	.0591	.2038	.9261	2.214	.1465	.0024
#3	1.431	.0089	.0092	.0571	.2011	.9415	2.218	.1470	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3010**	**2.533**	**.4469**	**.0357**	**1.964**	**-.0032**	**.0101**	**116.9**	**65.53**
Stddev	.0011	.005	.0028	.0072	.004	.0068	.0057	.5	.30
%RSD	.3609	.2190	.6271	20.18	.1910	209.3	56.76	.4595	.4643
#1	.3022	2.537	.4497	.0394	1.965	.0012	.0163	116.3	65.18
#2	.3000	2.527	.4469	.0274	1.961	.0001	.0091	117.2	65.65
#3	.3009	2.536	.4441	.0403	1.968	-.0110	.0049	117.3	65.75

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**171.3**	**38.52**	**7.599**	**7.022**	**.0622**	**.0164**	**2.399**	**.5672**	**.3037**
Stddev	.6	.19	.150	.081	.0007	.0002	.006	.0019	.0010
%RSD	.3640	.4832	1.970	1.156	1.100	1.433	.2525	.3343	.3435
#1	170.6	38.36	7.481	6.954	.0622	.0162	2.392	.5693	.3025
#2	171.5	38.49	7.549	6.999	.0615	.0164	2.405	.5661	.3043
#3	171.8	38.72	7.767	7.112	.0629	.0167	2.399	.5660	.3044

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.469**	**.0097**	**.0588**	**7.315**	**.1318**	**.1292**	**6.062**
Stddev	.001	.0065	.0012	.032	.0024	.0083	.055
%RSD	.0268	67.20	2.062	.4309	1.823	6.393	.9023
#1	3.470	.0025	.0602	7.346	.1298	.1314	6.121
#2	3.470	.0151	.0581	7.314	.1312	.1362	6.052
#3	3.468	.0115	.0580	7.283	.1345	.1201	6.013

Zoom In Zoom Out

Sample Name: jc86838-13 Acquired: 5/2/2019 16:38:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156530.**	**24466.**	**6448.6**	**9646.4**
Stddev	366.	200.	28.9	31.9
%RSD	.23376	.81541	.44760	.33095
#1	156450.	24677.	6436.6	9626.2
#2	156920.	24439.	6481.6	9683.2
#3	156200.	24281.	6427.7	9629.8

Zoom In Zoom Out

Sample Name: mp14617-mb1conf Acquired: 5/2/2019 16:43:17 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0009**	**.0030**	**.0004**	**.0005**	**-.0003**
Stddev	.0002	.0001	.0001	.0002	.0002	.0002	.0000	.0001	.0003
%RSD	219.0	128.4	75.84	198.1	18.37	6.525	1.633	27.41	93.87
#1	-.0002	.0000	.0000	.0002	.0010	.0032	.0004	.0003	-.0004
#2	-.0000	-.0000	.0002	-.0001	.0007	.0030	.0004	.0004	-.0006
#3	.0001	.0001	.0001	.0001	.0009	.0028	.0004	.0006	-.0000

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0076**	**-.0001**	**.0009**	**.0002**	**-.0024**	**-.0017**	**.0047**	**.0588**
Stddev	.0002	.0001	.0010	.0012	.0001	.0009	.0009	.0036	.0016
%RSD	59.31	1.953	931.2	137.6	53.76	36.82	51.95	77.22	2.786
#1	.0001	.0076	-.0008	-.0003	.0003	-.0026	-.0025	.0053	.0603
#2	.0003	.0077	.0011	.0022	.0003	-.0014	-.0017	.0081	.0570
#3	.0005	.0074	-.0006	.0009	.0001	-.0031	-.0008	.0008	.0590

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0246**	**.0128**	**-.0558**	**.0340**	**.0017**	**.0008**	**.0091**	**.0205**	**.0005**
Stddev	.0019	.0142	.0453	.0092	.0010	.0002	.0011	.0005	.0001
%RSD	7.918	110.9	81.19	27.08	57.45	23.92	11.90	2.382	10.80
#1	.0225	.0086	-.0087	.0432	.0006	.0010	.0096	.0208	.0004
#2	.0249	.0287	-.0596	.0340	.0019	.0006	.0098	.0207	.0005
#3	.0264	.0012	-.0990	.0248	.0025	.0007	.0078	.0199	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0027**	**.0007**	**.0128**	**-.0001**	**.0009**	**.0293**
Stddev	.0003	.0005	.0001	.0014	.0013	.0008	.0011
%RSD	29.65	16.94	9.808	11.01	2240.	82.07	3.756
#1	.0012	.0031	.0007	.0138	.0015	.0010	.0289
#2	.0011	.0027	.0007	.0134	-.0007	.0001	.0284
#3	.0007	.0022	.0006	.0112	-.0010	.0016	.0305

Zoom In Zoom Out

Sample Name: mp14617-mb1conf Acquired: 5/2/2019 16:43:17 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**162660.**	**25068.**	**6570.0**	**10154.**
Stddev	720.	197.	55.5	69.
%RSD	.44256	.78462	.84400	.68014
#1	163290.	25286.	6576.4	10169.
#2	162830.	25014.	6511.6	10079.
#3	161880.	24904.	6622.0	10214.

Zoom In
Zoom Out

Sample Name: icsa Acquired: 5/2/2019 16:48:25 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0006**	**.0000**	**.0000**	**.0016**	**-.0006**	**-.0039**	**.0016**	**-.0005**	**.0013**
Stddev	.0002	.0000	.0001	.0002	.0001	.0010	.0005	.0003	.0012
%RSD	30.17	63.59	297.1	10.36	23.73	26.14	28.27	50.90	91.03
#1	.0009	.0001	.0001	.0018	-.0005	-.0035	.0019	-.0003	.0020
#2	.0005	.0000	-.0001	.0015	-.0008	-.0051	.0011	-.0009	-.0001
#3	.0005	.0000	.0001	.0015	-.0006	-.0032	.0019	-.0005	.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	**-.0014**	**-.0016**	**.0009**	**-.0012**	**.0027**	**.0020**	**-.0035**	**505.1**	**377.9**
Stddev	.0003	.0002	.0025	.0011	.0016	.0034	.0017	2.6	1.1
%RSD	24.92	15.19	296.2	95.66	60.41	170.2	46.93	.5101	.3014
#1	-.0010	-.0019	-.0021	-.0019	.0014	.0055	-.0022	507.2	379.1
#2	-.0015	-.0014	.0022	.0001	.0045	.0015	-.0030	505.9	377.7
#3	-.0016	-.0016	.0024	-.0018	.0021	-.0011	-.0054	502.2	376.9
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	**192.1**	**491.8**	**.1020**	**.0155**	**-.0001**	**.0004**	**.0019**	**-.0044**	**.0001**
Stddev	4.3	1.1	.0587	.0027	.0011	.0001	.0016	.0002	.0001
%RSD	2.259	.2174	57.55	17.32	1011.	30.81	83.24	4.642	111.2
#1	193.9	492.6	.0750	.0126	-.0012	.0005	.0023	-.0043	-.0000
#2	187.2	490.6	.0616	.0159	-.0002	.0003	.0001	-.0046	.0002
#3	195.3	492.2	.1693	.0179	.0011	.0003	.0032	-.0043	.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: icsa Acquired: 5/2/2019 16:48:25 Type: QC
Method: SGS 3 NO Valve(v332) 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	**-.0010**	**.0017**	**.0004**	**.0017**	**-.0035**	**.0066**	**.0312**
Stddev	.0003	.0009	.0003	.0009	.0025	.0020	.0035
%RSD	33.02	56.18	64.08	54.51	72.98	30.04	11.10
#1	-.0007	.0014	.0005	.0026	-.0008	.0085	.0329
#2	-.0013	.0009	.0001	.0008	-.0038	.0069	.0272
#3	-.0011	.0027	.0007	.0016	-.0059	.0045	.0336
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	**137390.**	**23209.**	**5733.1**	**8339.7**
Stddev	626.	217.	10.5	6.7
%RSD	.45530	.93689	.18325	.08025
#1	137850.	22960.	5736.0	8333.7
#2	137650.	23361.	5741.9	8346.9
#3	136680.	23307.	5721.5	8338.6

Zoom In
Zoom Out

Sample Name: ICSAB Acquired: 5/2/2019 16:53:48 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.5225**	**.5181**	**1.024**	**.4949**	**.4967**	**.5135**	**.5183**	**.9927**	**1.075**
Stddev	.0006	.0012	.002	.0017	.0011	.0005	.0003	.0025	.001
%RSD	.1182	.2325	.1694	.3510	.2269	.1010	.0618	.2484	.0439
#1	.5224	.5190	1.025	.4965	.4966	.5130	.5179	.9952	1.075
#2	.5220	.5185	1.025	.4951	.4979	.5135	.5185	.9927	1.075
#3	.5232	.5167	1.022	.4930	.4957	.5141	.5185	.9902	1.075
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	**.4974**	**.9645**	**1.070**	**.9907**	**.9746**	**1.072**	**1.062**	**504.0**	**377.4**
Stddev	.0007	.0010	.005	.0082	.0053	.003	.004	10.0	5.2
%RSD	.1319	.1037	.4791	.8316	.5404	.2948	.4247	1.991	1.366
#1	.4970	.9646	1.069	.9936	.9799	1.069	1.065	513.2	383.3
#2	.4981	.9654	1.075	.9971	.9745	1.075	1.064	505.4	373.6
#3	.4971	.9634	1.065	.9814	.9694	1.071	1.057	493.3	375.4
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	**198.9**	**500.7**	**.1581**	**.0552**	**.4955**	**.4704**	**.5013**	**.4619**	**.5403**
Stddev	.9	1.2	.0413	.0020	.0017	.0024	.0015	.0011	.0001
%RSD	.4694	.2373	26.15	3.624	.3414	.5203	.3054	.2333	.0274
#1	198.3	502.0	.1383	.0539	.4954	.4718	.5028	.4627	.5403
#2	198.4	500.4	.1304	.0542	.4973	.4718	.4997	.4606	.5404
#3	200.0	499.6	.2056	.0575	.4939	.4676	.5014	.4622	.5401
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: 5/2/2019 16:53:48 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.4999**	**.4769**	**.4876**	**.5073**	**.5079**	**.5423**	**.5386**
Stddev	.0009	.0012	.0003	.0073	.0004	.0034	.0084
%RSD	.1766	.2486	.0714	1.436	.0701	.6271	1.552
#1	.4989	.4772	.4872	.5090	.5082	.5451	.5427
#2	.5004	.4779	.4878	.5136	.5075	.5433	.5440
#3	.5004	.4756	.4877	.4993	.5078	.5385	.5289
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	**137490.**	**23262.**	**5706.9**	**8358.3**
Stddev	587.	108.	15.7	14.0
%RSD	.42687	.46398	.27567	.16700
#1	137380.	23138.	5722.0	8368.7
#2	136960.	23316.	5690.6	8342.4
#3	138120.	23333.	5708.0	8363.7

Zoom In Zoom Out

Sample Name: mp14617-ps1 Acquired: 5/2/2019 16:59:07 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**3.013**	**2.027**	**1.981**	**2.139**	**2.841**	**2.790**	**6.614**	**2.254**	**.2468**
Stddev	.005	.005	.007	.005	.008	.008	.005	.006	.0016
%RSD	.1585	.2510	.3805	.2137	.2724	.2779	.0775	.2566	.6615
#1	3.011	2.026	1.982	2.140	2.845	2.793	6.620	2.255	.2477
#2	3.010	2.023	1.973	2.134	2.846	2.796	6.613	2.247	.2478
#3	3.018	2.033	1.988	2.143	2.832	2.781	6.610	2.258	.2449

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.118**	**5.566**	**2.224**	**2.105**	**3.460**	**1.986**	**1.955**	**127.8**	**45.82**
Stddev	.003	.020	.007	.007	.008	.007	.006	.3	.09
%RSD	.1558	.3611	.3041	.3384	.2295	.3759	.3290	.2408	.1950
#1	2.120	5.564	2.225	2.106	3.463	1.992	1.957	127.7	45.77
#2	2.120	5.546	2.217	2.097	3.452	1.978	1.947	127.6	45.76
#3	2.114	5.586	2.231	2.111	3.467	1.989	1.959	128.1	45.92

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**197.8**	**48.94**	**35.38**	**26.17**	**2.018**	**1.862**	**2.111**	**2.068**	**2.202**
Stddev	4.2	.09	.13	.03	.005	.008	.007	.012	.005
%RSD	2.130	.1898	.3629	.1024	.2708	.4472	.3470	.5619	.2463
#1	200.0	48.84	35.27	26.16	2.018	1.861	2.112	2.067	2.199
#2	200.4	48.99	35.34	26.16	2.012	1.854	2.103	2.057	2.198
#3	192.9	49.01	35.52	26.20	2.023	1.870	2.118	2.080	2.208

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.172**	**1.765**	**2.006**	**17.77**	**.2059**	**.1394**	**7.788**
Stddev	.010	.013	.004	.13	.0013	.0023	.102
%RSD	.2410	.7389	.2116	.7368	.6129	1.665	1.313
#1	4.180	1.757	2.009	17.79	.2072	.1402	7.762
#2	4.175	1.758	2.008	17.63	.2047	.1368	7.701
#3	4.160	1.780	2.002	17.89	.2059	.1413	7.900

Zoom In Zoom Out

Sample Name: mp14617-ps1 Acquired: 5/2/2019 16:59:07 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159190.**	**25936.**	**6563.1**	**9321.4**
Stddev	62.	199.	30.7	28.6
%RSD	.03917	.76608	.46828	.30665
#1	159190.	26092.	6578.7	9332.5
#2	159130.	25712.	6582.9	9342.8
#3	159260.	26003.	6527.7	9288.9

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 5/2/2019 17:04:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0000**	**.0001**	**.0002**	**.0000**	**.0000**	**-.0004**
Stddev	.0003	.0000	.0002	.0002	.0001	.0004	.0000	.0003	.0003
%RSD	198.1	38.29	91.61	615.8	244.8	189.6	62.49	708.6	74.23
#1	-.0002	-.0000	-.0002	-.0002	-.0001	.0003	.0000	.0002	-.0008
#2	-.0005	-.0001	-.0004	.0001	.0000	-.0002	.0001	-.0003	-.0004
#3	.0002	-.0001	-.0000	.0001	.0002	.0006	.0000	.0002	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**-.0001**	**5.175**	**-.0008**	**-.0000**	**-.0015**	**-.0005**	**-.0032**	**-.0459**
Stddev	.0003	.0001	.008	.0007	.0002	.0009	.0007	.0081	.0015
%RSD	28.79	96.27	.1543	85.00	453.2	60.35	149.4	254.3	3.217
#1	.0013	-.0001	5.183	-.0012	.0001	-.0023	.0003	.0002	-.0476
#2	.0008	-.0002	5.176	-.0011	-.0000	-.0005	-.0012	.0026	-.0449
#3	.0014	-.0000	5.167	-.0000	-.0003	-.0016	-.0005	-.0124	-.0452

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**-.0041**	**-.0692**	**-.0168**	**.0022**	**.0042**	**.0028**	**-.0003**	**.0001**
Stddev	.0017	.0043	.0510	.0052	.0005	.0005	.0009	.0003	.0000
%RSD	116.8	105.0	73.72	31.02	24.95	12.77	31.51	83.20	24.18
#1	.0004	-.0035	-.0668	-.0144	.0028	.0046	.0018	-.0003	.0001
#2	.0033	-.0088	-.0194	-.0132	.0018	.0045	.0032	-.0005	.0002
#3	.0005	-.0002	-.1213	-.0228	.0019	.0036	.0034	-.0000	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0251**	**.0008**	**.0088**	**-.0010**	**.0013**	**.0087**
Stddev	.0001	.0015	.0001	.0012	.0006	.0008	.0015
%RSD	19.25	6.058	10.38	13.78	58.88	57.22	17.28
#1	.0009	.0269	.0008	.0085	-.0016	.0007	.0104
#2	.0007	.0242	.0009	.0101	-.0010	.0012	.0080
#3	.0006	.0243	.0007	.0077	-.0004	.0021	.0077

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 5/2/2019 17:04:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159190.**	**24469.**	**6476.7**	**10036.**
Stddev	740.	133.	2.6	10.
%RSD	.46493	.54483	.04059	.10320
#1	159360.	24565.	6476.0	10031.
#2	158380.	24526.	6479.7	10047.
#3	159830.	24317.	6474.6	10029.

Zoom In Zoom Out

Sample Name: MP14667-MB2 Acquired: 5/2/2019 17:09:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0001**	**.0001**	**.0006**	**.0006**	**.0002**	**.0005**	**-.0003**
Stddev	.0004	.0000	.0000	.0000	.0002	.0004	.0000	.0004	.0002
%RSD	136.9	253.6	29.99	32.76	34.14	55.58	11.77	68.04	45.70
#1	-.0007	-.0000	.0001	.0001	.0004	.0003	.0002	.0008	-.0003
#2	.0000	-.0000	.0001	.0001	.0008	.0010	.0002	.0006	-.0005
#3	-.0002	.0000	.0001	.0001	.0006	.0006	.0002	.0001	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0071**	**.0009**	**.0013**	**-.0011**	**-.0015**	**-.0005**	**.0051**	**.1001**
Stddev	.0001	.0001	.0007	.0011	.0011	.0006	.0007	.0023	.0018
%RSD	36.29	.8281	76.96	85.64	104.3	40.36	138.6	45.15	1.788
#1	.0004	.0072	.0008	.0000	-.0003	-.0019	-.0012	.0034	.0984
#2	.0002	.0071	.0017	.0020	-.0024	-.0008	.0002	.0042	.1000
#3	.0003	.0071	.0003	.0018	-.0006	-.0019	-.0005	.0077	.1019

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0188**	**.0239**	**-.0892**	**.0363**	**.0022**	**.0013**	**.0079**	**.0186**	**.0004**
Stddev	.0005	.0148	.0167	.0022	.0001	.0002	.0015	.0005	.0001
%RSD	2.665	61.97	18.71	5.968	2.687	13.15	18.85	2.450	33.96
#1	.0194	.0239	-.1074	.0342	.0023	.0012	.0076	.0191	.0002
#2	.0184	.0386	-.0858	.0363	.0022	.0015	.0096	.0184	.0004
#3	.0188	.0091	-.0745	.0385	.0022	.0012	.0067	.0184	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0059**	**.0003**	**.0115**	**-.0006**	**.0001**	**.0214**
Stddev	.0003	.0005	.0001	.0012	.0013	.0016	.0023
%RSD	83.22	8.392	41.26	10.63	204.0	1564.	10.80
#1	.0000	.0064	.0004	.0127	-.0014	.0019	.0207
#2	.0007	.0056	.0003	.0116	-.0014	-.0005	.0240
#3	.0004	.0055	.0001	.0103	.0009	-.0011	.0195

Zoom In Zoom Out

Sample Name: MP14667-MB2 Acquired: 5/2/2019 17:09:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159800.**	**24456.**	**6460.9**	**10037.**
Stddev	615.	77.	12.0	12.
%RSD	.38463	.31409	.18632	.12103
#1	160460.	24530.	6472.8	10049.
#2	159240.	24377.	6448.7	10024.
#3	159700.	24460.	6461.3	10039.

Zoom In Zoom Out

Sample Name: MP14667-B2 Acquired: 5/2/2019 17:14:25 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.046**	**2.124**	**2.016**	**2.026**	**2.032**	**2.043**	**2.030**	**2.052**	**.2523**
Stddev	.003	.003	.001	.002	.003	.005	.009	.002	.0004
%RSD	.1378	.1515	.0466	.1085	.1322	.2355	.4475	.1136	.1759
#1	2.044	2.120	2.017	2.028	2.035	2.048	2.027	2.055	.2518
#2	2.044	2.124	2.016	2.024	2.030	2.043	2.040	2.051	.2527
#3	2.049	2.127	2.015	2.025	2.033	2.039	2.022	2.050	.2523

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.977**	**2.019**	**1.967**	**2.140**	**2.051**	**1.994**	**1.972**	**24.71**	**24.77**
Stddev	.001	.002	.004	.007	.002	.005	.002	.07	.06
%RSD	.0606	.1127	.1937	.3409	.0863	.2423	.0810	.2946	.2357
#1	1.978	2.022	1.971	2.149	2.053	2.000	1.974	24.64	24.71
#2	1.977	2.018	1.965	2.138	2.050	1.991	1.971	24.72	24.78
#3	1.976	2.018	1.965	2.134	2.049	1.992	1.972	24.78	24.82

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.41**	**24.89**	**24.81**	**25.33**	**1.991**	**1.935**	**-.0570**	**1.994**	**2.122**
Stddev	.04	.05	.09	.04	.001	.003	.0005	.003	.004
%RSD	.1607	.1935	.3637	.1435	.0543	.1286	.9247	.1471	.2012
#1	25.37	24.83	24.71	25.30	1.990	1.937	-.0571	1.994	2.119
#2	25.41	24.91	24.83	25.32	1.990	1.935	-.0565	1.996	2.119
#3	25.45	24.92	24.89	25.37	1.992	1.932	-.0575	1.990	2.127

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.988**	**1.398**	**1.985**	**.0277**	**.1037**	**.0003**	**2.076**
Stddev	.003	.010	.002	.0010	.0005	.0018	.023
%RSD	.1475	.7427	.0810	3.727	.4577	688.2	1.119
#1	1.990	1.389	1.986	.0282	.1037	.0023	2.103
#2	1.990	1.395	1.985	.0283	.1042	-.0011	2.062
#3	1.985	1.409	1.983	.0265	.1032	-.0005	2.064

Zoom In Zoom Out

Sample Name: MP14667-B2 Acquired: 5/2/2019 17:14:25 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**151430.**	**23875.**	**6218.0**	**9294.8**
Stddev	426.	217.	2.8	3.5
%RSD	.28132	.90911	.04426	.03713
#1	151910.	24086.	6219.0	9292.8
#2	151120.	23652.	6220.2	9298.8
#3	151250.	23887.	6214.9	9292.8

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 17:19:27 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.045**	**2.102**	**2.026**	**2.040**	**2.043**	**2.042**	**2.042**	**2.069**	**.2490**
Stddev	.005	.008	.002	.001	.003	.004	.027	.002	.0005
%RSD	.2658	.3801	.0917	.0470	.1308	.1923	1.313	.1010	.1995
#1	2.045	2.111	2.025	2.040	2.043	2.038	2.038	2.069	.2488
#2	2.050	2.100	2.026	2.038	2.046	2.042	2.071	2.067	.2486
#3	2.040	2.096	2.028	2.040	2.041	2.045	2.018	2.071	.2495
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**	**2.027**	**2.017**	**2.105**	**2.055**	**2.035**	**2.017**	**40.05**	**39.80**
Stddev	.003	.003	.003	.003	.002	.005	.003	.14	.16
%RSD	.1498	.1423	.1628	.1368	.0908	.2438	.1231	.3589	.3947
#1	2.003	2.024	2.014	2.106	2.055	2.033	2.016	40.21	39.97
#2	2.008	2.030	2.018	2.102	2.054	2.032	2.016	40.01	39.76
#3	2.002	2.028	2.020	2.108	2.057	2.041	2.020	39.93	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	**40.85**	**40.22**	**40.18**	**40.92**	**2.089**	**1.986**	**5.232**	**2.004**	**2.119**
Stddev	.16	.11	.23	.08	.004	.001	.005	.001	.006
%RSD	.3893	.2804	.5649	.1953	.1932	.0718	.0958	.0476	.2751
#1	41.02	40.31	40.44	40.96	2.084	1.985	5.228	2.003	2.123
#2	40.84	40.25	40.09	40.98	2.089	1.987	5.230	2.004	2.121
#3	40.70	40.09	40.01	40.83	2.092	1.987	5.237	2.005	2.112
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: 5/2/2019 17:19:27 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.027**	**2.017**	**2.029**	**1.953**	**2.042**	**2.032**	**1.870**
Stddev	.002	.003	.002	.002	.005	.008	.017
%RSD	.0891	.1220	.0958	.1203	.2606	.3944	.9107
#1	2.027	2.014	2.027	1.952	2.038	2.040	1.889
#2	2.029	2.017	2.031	1.952	2.041	2.029	1.861
#3	2.025	2.019	2.028	1.956	2.048	2.025	1.859
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	**148220.**	**23707.**	**6104.3**	**9042.4**
Stddev	545.	149.	9.9	6.5
%RSD	.36778	.62656	.16151	.07162
#1	148120.	23535.	6109.6	9043.6
#2	147730.	23792.	6092.9	9035.4
#3	148810.	23793.	6110.4	9048.2

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 17:24:30 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0006**	**.0004**	**.0004**	**.0006**	**.0004**	**.0003**	**.0005**	**.0005**	**-.0003**
Stddev	.0002	.0001	.0002	.0003	.0003	.0001	.0000	.0002	.0006
%RSD	26.60	33.35	38.51	53.26	69.53	31.33	5.779	36.44	215.2
#1	.0008	.0003	.0003	.0002	.0005	.0003	.0005	.0004	.0003
#2	.0007	.0003	.0006	.0008	.0007	.0004	.0005	.0008	-.0003
#3	.0004	.0005	.0004	.0006	.0001	.0002	.0005	.0005	-.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	**.0010**	**.0006**	**.0012**	**-.0001**	**.0006**	**-.0009**	**-.0006**	**.0043**	**.0061**
Stddev	.0002	.0008	.0013	.0009	.0000	.0017	.0007	.0058	.0013
%RSD	16.23	131.4	110.8	949.5	2.677	185.4	123.4	134.2	20.75
#1	.0010	.0015	.0025	.0007	.0006	.0009	-.0002	.0062	.0060
#2	.0008	.0002	.0012	.0000	.0006	-.0011	-.0001	-.0022	.0049
#3	.0012	.0001	-.0001	-.0011	.0007	-.0025	-.0013	.0089	.0074
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	**.0069**	**.0018**	**.0363**	**.0091**	**.0033**	**.0017**	F **.2426**	**.0000**	**.0005**
Stddev	.0020	.0018	.0244	.0108	.0003	.0002	.4169	.0004	.0001
%RSD	29.42	103.5	67.03	119.3	10.71	10.79	171.8	2327.	26.73
#1	.0046	.0033	.0469	.0134	.0037	.0017	.7240	.0002	.0004
#2	.0078	-.0003	.0536	.0170	.0030	.0019	.0013	-.0004	.0004
#3	.0083	.0023	.0085	-.0033	.0031	.0015	.0026	.0002	.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit							.0591		
Low Limit							-.0591		

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 17:24:30 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0007**	F **.0123**	**.0005**	**.0096**	**-.0002**	**.0011**	**.0096**
Stddev	.0001	.0004	.0000	.0055	.0009	.0023	.0008
%RSD	22.01	3.633	8.911	57.08	503.2	204.7	8.491
#1	.0006	.0125	.0005	.0158	-.0010	.0028	.0091
#2	.0006	.0118	.0005	.0077	-.0003	-.0014	.0106
#3	.0008	.0126	.0006	.0053	.0008	.0019	.0092
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0050					
Low Limit		-.0050					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**157170.**	**23868.**	**6295.6**	**9783.3**
Stddev	185.	84.	108.5	146.3
%RSD	.11750	.35391	1.7231	1.4951
#1	157220.	23771.	6170.4	9614.6
#2	156970.	23906.	6360.6	9874.9
#3	157330.	23927.	6355.8	9860.4

Zoom In Zoom Out

Sample Name: JC87312-2 Acquired: 5/2/2019 17:29:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8416**	**.0046**	**.0012**	**.0512**	**.1872**	**.2237**	**2.366**	**.1871**	**.0008**
Stddev	.0006	.0000	.0002	.0001	.0007	.0008	.006	.0001	.0002
%RSD	.0747	.4344	13.47	.2323	.3491	.3465	.2421	.0396	30.65
#1	.8414	.0046	.0013	.0512	.1865	.2228	2.362	.1872	.0007
#2	.8410	.0046	.0010	.0514	.1874	.2240	2.372	.1871	.0010
#3	.8422	.0046	.0012	.0511	.1878	.2243	2.364	.1870	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2509**	**.5899**	**.0714**	**.0023**	**.7042**	**.0025**	**.0000**	**97.97**	**186.7**
Stddev	.0013	.0007	.0008	.0007	.0012	.0017	.0012	.15	3.1
%RSD	.5177	.1170	1.168	29.87	.1764	67.38	2741.	.1509	1.683
#1	.2501	.5902	.0706	.0029	.7037	.0018	-.0007	98.07	187.4
#2	.2503	.5904	.0715	.0026	.7033	.0045	-.0006	98.03	189.4
#3	.2524	.5891	.0722	.0015	.7056	.0013	.0014	97.80	183.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**125.2**	**39.89**	**17.47**	**1.828**	**.0358**	**.0075**	**2.959**	**.0365**	**.4068**
Stddev	.2	.12	.01	.008	.0002	.0001	.015	.0006	.0002
%RSD	.1452	.3103	.0373	.4222	.6910	1.005	.5185	1.771	.0449
#1	125.3	39.95	17.48	1.820	.0359	.0075	2.976	.0369	.4070
#2	125.3	39.98	17.47	1.827	.0359	.0074	2.946	.0358	.4067
#3	125.0	39.75	17.47	1.835	.0355	.0076	2.956	.0368	.4067

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.939**	**.0078**	**.0168**	**3.787**	**.2018**	**.0993**	**4.666**
Stddev	.014	.0007	.0001	.017	.0029	.0003	.056
%RSD	.2772	8.826	.6042	.4459	1.439	.3515	1.199
#1	4.927	.0079	.0169	3.804	.2009	.0989	4.729
#2	4.936	.0071	.0168	3.787	.1994	.0995	4.648
#3	4.954	.0085	.0167	3.771	.2050	.0995	4.622

Zoom In Zoom Out

Sample Name: JC87312-2 Acquired: 5/2/2019 17:29:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**154280.**	**24810.**	**6400.8**	**9027.3**
Stddev	912.	171.	5.4	2.4
%RSD	.59147	.68750	.08432	.02646
#1	155330.	24863.	6395.2	9027.7
#2	153690.	24620.	6406.0	9029.6
#3	153810.	24949.	6401.4	9024.8

Zoom In Zoom Out

Sample Name: JC87313-1 Acquired: 5/2/2019 17:34:53 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8388**	**.0061**	**.0017**	**.0335**	**.1622**	**.1504**	**1.293**	**.1227**	**-.0000**
Stddev	.0014	.0001	.0002	.0003	.0003	.0007	.002	.0009	.0003
%RSD	.1624	1.095	9.496	.7680	.2134	.4326	.1207	.7520	735.1
#1	.8403	.0061	.0017	.0337	.1619	.1502	1.292	.1235	-.0004
#2	.8381	.0060	.0019	.0335	.1626	.1499	1.294	.1217	.0000
#3	.8379	.0062	.0016	.0332	.1621	.1512	1.291	.1228	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2399**	**.6861**	**.2170**	**.0049**	**.1259**	**.0144**	**.0024**	**46.01**	**137.2**
Stddev	.0006	.0026	.0013	.0016	.0012	.0019	.0001	.10	1.4
%RSD	.2470	.3731	.5815	32.31	.9233	13.14	2.950	.2120	1.007
#1	.2394	.6884	.2160	.0066	.1270	.0147	.0024	46.11	138.7
#2	.2405	.6833	.2164	.0045	.1247	.0161	.0025	46.02	136.0
#3	.2397	.6866	.2184	.0035	.1261	.0123	.0024	45.91	136.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**149.7**	**72.03**	**10.44**	**2.837**	**.1887**	**.0234**	**6.018**	**.0264**	**.7336**
Stddev	.2	.13	.02	.016	.0008	.0001	.065	.0004	.0010
%RSD	.1357	.1762	.2243	.5458	.4300	.2199	1.079	1.511	.1428
#1	149.9	72.17	10.44	2.848	.1891	.0234	6.044	.0260	.7347
#2	149.6	71.99	10.46	2.843	.1878	.0234	6.066	.0265	.7334
#3	149.5	71.93	10.41	2.819	.1893	.0235	5.944	.0268	.7326

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.238**	**.0069**	**.0735**	**40.83**	**.0922**	**.1210**	**1.788**
Stddev	.005	.0012	.0000	.21	.0015	.0013	.016
%RSD	.2362	16.99	.0572	.5236	1.610	1.089	.9070
#1	2.234	.0069	.0735	40.79	.0908	.1215	1.773
#2	2.244	.0080	.0735	40.63	.0937	.1195	1.786
#3	2.236	.0057	.0736	41.05	.0921	.1220	1.805

Zoom In Zoom Out

Sample Name: JC87313-1 Acquired: 5/2/2019 17:34:53 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**152620.**	**24745.**	**6280.1**	**9130.9**
Stddev	539.	136.	20.6	25.7
%RSD	.35318	.54854	.32855	.28108
#1	152940.	24590.	6262.0	9109.2
#2	152000.	24802.	6302.5	9159.2
#3	152930.	24842.	6275.7	9124.3

Zoom In Zoom Out

Sample Name: JC87313-2 Acquired: 5/2/2019 17:39:57 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.307**	**.0079**	**.0007**	**.0284**	**.1000**	**.1013**	**5.683**	**.0974**	**-.0003**
Stddev	.002	.0001	.0001	.0006	.0011	.0008	.059	.0008	.0004
%RSD	.1782	.9741	12.12	2.176	1.055	.8188	1.035	.8378	124.9
#1	1.308	.0080	.0007	.0279	.1003	.1017	5.732	.0971	-.0006
#2	1.309	.0079	.0007	.0281	.1009	.1018	5.701	.0968	-.0004
#3	1.304	.0079	.0008	.0291	.0988	.1004	5.618	.0983	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1817**	**.4025**	**.1339**	**.0038**	**.1107**	**.0099**	**.0013**	**55.82**	F **243.5**
Stddev	.0018	.0064	.0025	.0013	.0005	.0008	.0005	.15	1.7
%RSD	1.008	1.581	1.882	34.93	.4603	8.418	39.30	.2682	.6910
#1	.1832	.3996	.1329	.0050	.1104	.0100	.0018	55.85	245.4
#2	.1822	.3980	.1320	.0040	.1105	.0090	.0014	55.96	242.4
#3	.1797	.4097	.1368	.0024	.1113	.0106	.0008	55.66	242.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**119.1**	**110.2**	**7.286**	**2.898**	**.2384**	**.0191**	**5.731**	**.0229**	**.8088**
Stddev	.2	.2	.013	.005	.0030	.0003	.080	.0007	.0014
%RSD	.1720	.1388	.1822	.1876	1.239	1.772	1.396	3.042	.1701
#1	119.1	110.2	7.289	2.903	.2364	.0192	5.699	.0237	.8090
#2	119.2	110.3	7.297	2.897	.2369	.0187	5.672	.0227	.8101
#3	118.8	110.0	7.271	2.893	.2418	.0193	5.822	.0224	.8073

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.900**	**.0052**	**.0820**	**39.07**	**.1184**	**.0760**	**1.406**
Stddev	.031	.0017	.0008	.59	.0036	.0018	.017
%RSD	1.065	32.57	1.019	1.521	3.026	2.389	1.208
#1	2.917	.0033	.0825	38.75	.1204	.0759	1.404
#2	2.918	.0058	.0825	38.70	.1206	.0779	1.389
#3	2.864	.0066	.0811	39.76	.1143	.0743	1.423

Zoom In Zoom Out

Sample Name: JC87313-2 Acquired: 5/2/2019 17:39:57 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**151590.**	**24704.**	**6151.5**	**8742.9**
Stddev	1653.	77.	94.3	113.3
%RSD	1.0905	.31083	1.5327	1.2956
#1	150790.	24627.	6198.7	8799.6
#2	150490.	24704.	6212.8	8816.6
#3	153490.	24780.	6042.9	8612.4

Zoom In Zoom Out

Sample Name: JC87313-3 Acquired: 5/2/2019 17:45:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8888**	**.0058**	**.0026**	**.0365**	**.1066**	**.1294**	**1.974**	**.0997**	**-.0002**
Stddev	.0009	.0001	.0001	.0003	.0003	.0006	.009	.0004	.0004
%RSD	.1035	1.121	2.039	.9408	.3181	.4846	.4380	.3737	162.1
#1	.8886	.0059	.0027	.0362	.1069	.1298	1.966	.1000	-.0004
#2	.8880	.0058	.0026	.0363	.1066	.1287	1.973	.0993	.0002
#3	.8898	.0058	.0025	.0369	.1062	.1296	1.983	.0998	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1841**	**.6466**	**.1854**	**.0073**	**.1737**	**.0112**	**.0027**	**43.50**	**181.1**
Stddev	.0004	.0006	.0014	.0007	.0006	.0004	.0007	.03	1.5
%RSD	.2202	.0994	.7303	10.08	.3396	3.775	23.84	.0703	.8361
#1	.1836	.6460	.1839	.0080	.1743	.0112	.0021	43.53	179.4
#2	.1842	.6473	.1864	.0065	.1731	.0108	.0028	43.50	181.6
#3	.1844	.6465	.1860	.0074	.1737	.0117	.0034	43.47	182.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**150.8**	**82.29**	**6.864**	**2.099**	**.1760**	**.0236**	**5.703**	**.0294**	**.7707**
Stddev	.3	.10	.011	.007	.0010	.0002	.029	.0008	.0015
%RSD	.1971	.1181	.1630	.3448	.5649	.6773	.5159	2.795	.1998
#1	151.2	82.40	6.852	2.094	.1757	.0237	5.728	.0297	.7725
#2	150.7	82.22	6.866	2.096	.1752	.0235	5.710	.0300	.7697
#3	150.7	82.25	6.874	2.107	.1771	.0238	5.671	.0284	.7699

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.429**	**.0038**	**.0733**	**42.10**	**.1014**	**.0566**	**2.001**
Stddev	.013	.0004	.0003	.06	.0007	.0014	.013
%RSD	.5283	9.788	.3474	.1414	.6501	2.512	.6329
#1	2.417	.0040	.0733	42.12	.1014	.0572	1.988
#2	2.443	.0034	.0730	42.14	.1020	.0550	2.014
#3	2.428	.0042	.0736	42.03	.1007	.0577	2.001

Zoom In Zoom Out

Sample Name: JC87313-3 Acquired: 5/2/2019 17:45:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**150120.**	**24358.**	**6203.2**	**8963.2**
Stddev	379.	18.	11.7	12.4
%RSD	.25276	.07364	.18854	.13782
#1	150270.	24366.	6215.0	8976.5
#2	149690.	24338.	6202.9	8961.2
#3	150400.	24371.	6191.6	8952.0

Zoom In Zoom Out

Sample Name: JC87313-4 Acquired: 5/2/2019 17:50:26 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.190**	**.0068**	**.0010**	**.0275**	**.1021**	**.1089**	**1.435**	**.0940**	**-.0005**
Stddev	.002	.0001	.0002	.0002	.0005	.0004	.008	.0008	.0004
%RSD	.1692	.9160	18.21	.8274	.4905	.3407	.5825	.8551	93.82
#1	1.191	.0067	.0012	.0273	.1021	.1088	1.436	.0944	-.0008
#2	1.192	.0067	.0010	.0276	.1015	.1085	1.426	.0931	-.0006
#3	1.188	.0068	.0008	.0277	.1025	.1093	1.442	.0945	.0000

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2510**	**.2284**	**.2800**	**.0027**	**.1307**	**.0090**	**.0011**	**56.77**	**173.8**
Stddev	.0012	.0006	.0014	.0013	.0010	.0016	.0024	.15	2.6
%RSD	.4646	.2581	.5029	49.43	.7890	17.98	229.4	.2610	1.511
#1	.2511	.2278	.2798	.0018	.1300	.0095	.0014	56.66	175.5
#2	.2498	.2289	.2786	.0042	.1302	.0072	-.0015	56.70	175.2
#3	.2521	.2286	.2814	.0020	.1319	.0104	.0033	56.94	170.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**139.0**	**95.02**	**9.060**	**2.258**	**.1561**	**.0199**	**5.181**	**.0247**	**.6988**
Stddev	.3	.04	.048	.009	.0007	.0002	.245	.0003	.0009
%RSD	.1946	.0424	.5337	.3824	.4236	.8663	4.727	1.198	.1310
#1	138.7	94.98	9.038	2.251	.1555	.0200	5.042	.0247	.6978
#2	139.1	95.03	9.027	2.268	.1558	.0200	5.464	.0250	.6991
#3	139.3	95.06	9.115	2.256	.1568	.0197	5.037	.0244	.6996

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.668**	**.0038**	**.0772**	**35.01**	**.1109**	**.0621**	**2.040**
Stddev	.017	.0007	.0004	.12	.0003	.0007	.028
%RSD	.6267	18.33	.4634	.3318	.2859	1.138	1.394
#1	2.666	.0046	.0773	35.02	.1109	.0613	2.012
#2	2.652	.0032	.0768	34.88	.1106	.0623	2.039
#3	2.685	.0036	.0776	35.11	.1112	.0627	2.069

Zoom In Zoom Out

Sample Name: JC87313-4 Acquired: 5/2/2019 17:50:26 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**150620.**	**24558.**	**6178.6**	**8884.3**
Stddev	593.	74.	82.0	99.6
%RSD	.39377	.30081	1.3275	1.1210
#1	150090.	24473.	6239.7	8959.7
#2	151260.	24605.	6085.3	8771.4
#3	150510.	24595.	6210.6	8921.7

Zoom In Zoom Out

Sample Name: JC87313-5 Acquired: 5/2/2019 17:55:29 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.382**	**.0091**	**.0010**	**.0351**	**.1535**	**.1262**	**4.042**	**.1097**	**-.0015**
Stddev	.002	.0001	.0001	.0003	.0007	.0005	.019	.0000	.0004
%RSD	.1549	.6557	8.733	.9765	.4268	.4020	.4797	.0402	29.04
#1	1.384	.0090	.0011	.0351	.1533	.1265	4.049	.1098	-.0020
#2	1.382	.0091	.0009	.0354	.1542	.1256	4.056	.1097	-.0011
#3	1.379	.0091	.0011	.0347	.1529	.1265	4.020	.1097	-.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2544**	**.3112**	**.1436**	**.0028**	**.1059**	**.0107**	**.0005**	**85.28**	F **213.7**
Stddev	.0004	.0004	.0005	.0005	.0013	.0009	.0014	.07	4.0
%RSD	.1743	.1351	.3526	18.73	1.259	8.410	275.0	.0787	1.882
#1	.2539	.3113	.1435	.0029	.1049	.0097	-.0011	85.31	209.1
#2	.2548	.3115	.1441	.0033	.1053	.0111	.0016	85.33	215.3
#3	.2545	.3107	.1431	.0023	.1074	.0114	.0011	85.20	216.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**173.3**	**92.92**	**11.54**	**3.644**	**.1840**	**.0233**	**4.661**	**.0234**	**.9264**
Stddev	1.7	.04	.03	.006	.0008	.0004	.029	.0006	.0013
%RSD	.9736	.0405	.2780	.1649	.4172	1.909	.6111	2.448	.1432
#1	172.0	92.89	11.50	3.649	.1839	.0238	4.693	.0228	.9276
#2	172.6	92.96	11.57	3.645	.1833	.0231	4.642	.0238	.9267
#3	175.2	92.90	11.54	3.637	.1848	.0230	4.646	.0237	.9250

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.969**	**.0046**	**.1166**	**28.93**	**.2096**	**.0959**	**2.317**
Stddev	.006	.0015	.0000	.07	.0006	.0020	.021
%RSD	.1199	32.48	.0198	.2291	.2707	2.125	.9165
#1	4.964	.0056	.1166	28.90	.2102	.0983	2.296
#2	4.976	.0029	.1166	29.00	.2091	.0945	2.338
#3	4.968	.0055	.1166	28.88	.2095	.0950	2.319

Zoom In Zoom Out

Sample Name: JC87313-5 Acquired: 5/2/2019 17:55:29 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**151220.**	**24637.**	**6282.3**	**8963.8**
Stddev	278.	45.	9.2	7.0
%RSD	.18406	.18437	.14648	.07820
#1	150990.	24690.	6272.7	8957.1
#2	151140.	24615.	6291.0	8971.1
#3	151530.	24608.	6283.4	8963.1

Zoom In Zoom Out

Sample Name: jc86986-8 Acquired: 5/2/2019 18:00:52 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.187**	**.0076**	**.0009**	**.0657**	**.3068**	**.0788**	**2.409**	**.1868**
Stddev	.002	.0000	.0001	.0005	.0006	.0008	.007	.0014
%RSD	.1446	.3598	15.67	.7864	.2087	1.037	.2968	.7239
#1	1.185	.0076	.0010	.0651	.3075	.0783	2.417	.1854
#2	1.187	.0076	.0008	.0658	.3066	.0784	2.405	.1869
#3	1.188	.0077	.0010	.0662	.3063	.0798	2.405	.1881

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.2825**	**.4548**	**.0354**	**.0011**	**.1201**	**.0046**	F **-.0049**
Stddev	.0015	.0007	.0027	.0009	.0011	.0011	.0010	.0009
%RSD	153.1	.2541	.5992	2.471	102.2	.8784	21.17	19.34
#1	-.0022	.2828	.4518	.0347	-.0001	.1204	.0042	-.0038
#2	-.0014	.2830	.4554	.0364	.0013	.1189	.0038	-.0053
#3	.0007	.2817	.4571	.0351	.0020	.1210	.0057	-.0056

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**155.6**	**22.13**	**161.0**	**37.27**	**13.69**	**2.066**	**.0500**	**.0035**
Stddev	.2	.04	3.8	.14	.01	.006	.0005	.0002
%RSD	.1522	.1587	2.362	.3812	.1006	.2743	.9155	5.345
#1	155.4	22.09	158.0	37.11	13.70	2.069	.0495	.0037
#2	155.9	22.16	159.7	37.37	13.68	2.071	.0502	.0036
#3	155.5	22.14	165.3	37.33	13.71	2.060	.0504	.0033

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.067**	**.0199**	**.1677**	**4.644**	**.0031**	**.1119**	**6.307**	**.1907**
Stddev	.011	.0005	.0001	.017	.0012	.0001	.046	.0029
%RSD	.5432	2.320	.0309	.3570	39.14	.1221	.7264	1.518
#1	2.055	.0201	.1676	4.661	.0031	.1117	6.258	.1936
#2	2.071	.0193	.1676	4.641	.0043	.1119	6.312	.1906
#3	2.076	.0202	.1677	4.629	.0019	.1120	6.350	.1878

Zoom In Zoom Out

Sample Name: jc86986-8 Acquired: 5/2/2019 18:00:52 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.2188**	**3.208**
Stddev	.0007	.064
%RSD	.3175	1.993
#1	.2193	3.147
#2	.2180	3.203
#3	.2190	3.275

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**165340.**	**26394.**	**6856.3**	**9442.9**
Stddev	617.	410.	45.8	57.9
%RSD	.37307	1.5518	.66857	.61340
#1	164740.	26835.	6898.8	9493.5
#2	165320.	26320.	6862.3	9455.5
#3	165970.	26026.	6807.7	9379.7

Zoom In Zoom Out

Sample Name: JC87313-2 Acquired: 5/2/2019 18:06:38 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.319**	**.0079**	**.0008**	**.0277**	**.1012**	**.1031**	**5.927**	**.0969**	**-.0003**
Stddev	.013	.0002	.0002	.0006	.0004	.0006	.025	.0008	.0008
%RSD	.9470	2.566	20.48	2.123	.3479	.5728	.4230	.8242	270.1
#1	1.317	.0077	.0009	.0271	.1008	.1027	5.901	.0962	.0001
#2	1.333	.0081	.0006	.0282	.1013	.1028	5.951	.0978	.0002
#3	1.308	.0078	.0009	.0280	.1015	.1037	5.928	.0968	-.0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1854**	**.4088**	**.1321**	**.0046**	**.1110**	**.0064**	**-.0005**	**55.82**	**247.0**
Stddev	.0006	.0000	.0005	.0013	.0012	.0018	.0029	.53	6.5
%RSD	.3342	.0044	.3513	29.12	1.042	27.63	550.4	.9546	2.632
#1	.1851	.4088	.1316	.0058	.1114	.0073	.0021	55.73	246.6
#2	.1850	.4088	.1326	.0031	.1097	.0076	-.0036	56.39	253.7
#3	.1862	.4088	.1322	.0049	.1118	.0044	-.0001	55.33	240.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**122.0**	**112.8**	**7.127**	**2.896**	**.2350**	**.0188**	**5.740**	**.0212**	**.8135**
Stddev	1.3	1.2	.073	.019	.0002	.0003	.037	.0008	.0082
%RSD	1.057	1.034	1.018	.6473	.0975	1.716	.6488	3.596	1.003
#1	121.9	112.6	7.098	2.917	.2350	.0186	5.702	.0203	.8131
#2	123.4	114.1	7.209	2.889	.2348	.0186	5.777	.0217	.8219
#3	120.8	111.8	7.073	2.882	.2353	.0192	5.741	.0216	.8056

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.920**	**.0079**	**.0821**	**39.73**	**.1180**	**.0786**	**1.712**
Stddev	.008	.0012	.0002	.19	.0023	.0039	.020
%RSD	.2857	15.78	.2522	.4786	1.917	4.911	1.155
#1	2.911	.0088	.0822	39.95	.1205	.0780	1.735
#2	2.921	.0084	.0823	39.66	.1171	.0827	1.698
#3	2.928	.0065	.0819	39.59	.1163	.0750	1.705

Zoom In Zoom Out

Sample Name: JC87313-2 Acquired: 5/2/2019 18:06:38 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**152550.**	**24223.**	**6270.7**	**9135.2**
Stddev	843.	364.	12.5	16.9
%RSD	.55238	1.5015	.19857	.18500
#1	153500.	24353.	6259.1	9124.8
#2	151910.	23812.	6283.8	9154.7
#3	152240.	24504.	6269.2	9126.1

Zoom In Zoom Out

Sample Name: JC87313-5 Acquired: 5/2/2019 18:11:54 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.388**	**.0088**	**.0007**	**.0359**	**.1504**	**.1233**	**4.036**	**.1111**	**.0009**
Stddev	.005	.0001	.0001	.0003	.0056	.0043	.082	.0004	.0012
%RSD	.3936	1.438	14.29	.8761	3.729	3.462	2.018	.3447	124.0
#1	1.395	.0089	.0007	.0356	.1534	.1247	4.083	.1113	.0007
#2	1.385	.0089	.0008	.0359	.1539	.1267	4.083	.1107	-.0001
#3	1.385	.0087	.0006	.0363	.1440	.1185	3.942	.1114	.0022

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2519**	**.3250**	**.1447**	**.0029**	**.1059**	**.0116**	**-.0011**	**84.57**	**211.3**
Stddev	.0092	.0005	.0011	.0016	.0025	.0048	.0026	.27	1.6
%RSD	3.662	.1665	.7489	54.59	2.350	41.45	236.8	.3176	.7413
#1	.2548	.3250	.1436	.0015	.1067	.0063	.0018	84.75	210.8
#2	.2593	.3256	.1458	.0047	.1079	.0156	-.0018	84.69	213.0
#3	.2416	.3245	.1448	.0027	.1031	.0129	-.0033	84.26	210.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**178.6**	**94.72**	**11.47**	**3.673**	**.1880**	**.0240**	**4.864**	**.0212**	**.9218**
Stddev	.5	.09	.05	.019	.0023	.0004	.014	.0010	.0021
%RSD	.2962	.0910	.4099	.5055	1.232	1.567	.2825	4.530	.2233
#1	179.0	94.78	11.42	3.693	.1868	.0244	4.878	.0221	.9241
#2	178.8	94.76	11.52	3.656	.1906	.0240	4.851	.0214	.9214
#3	178.0	94.62	11.47	3.671	.1865	.0236	4.865	.0202	.9200

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.878**	**.0069**	**.1168**	**29.35**	**.1973**	**.0882**	**2.348**
Stddev	.188	.0020	.0072	.18	.0128	.0012	.042
%RSD	3.857	28.85	6.201	.5997	6.492	1.362	1.784
#1	4.943	.0066	.1157	29.20	.2021	.0896	2.301
#2	5.025	.0090	.1246	29.32	.2071	.0877	2.380
#3	4.666	.0051	.1102	29.54	.1828	.0874	2.364

Zoom In Zoom Out

Sample Name: JC87313-5 Acquired: 5/2/2019 18:11:54 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158210.**	**24675.**	**6323.4**	**9228.3**
Stddev	5429.	53.	19.5	27.8
%RSD	3.4318	.21661	.30784	.30141
#1	155980.	24693.	6337.3	9255.0
#2	154250.	24615.	6301.1	9199.5
#3	164400.	24717.	6331.7	9230.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 18:17:11 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.050**	**2.091**	**2.005**	**2.037**	**2.044**	**2.041**	**2.064**	**2.066**	**.2515**
Stddev	.011	.009	.019	.014	.014	.011	.019	.014	.0015
%RSD	.5373	.4187	.9398	.6859	.6943	.5361	.9330	.6850	.6069
#1	2.058	2.098	2.013	2.043	2.047	2.042	2.081	2.072	.2517
#2	2.055	2.095	2.019	2.048	2.056	2.051	2.067	2.077	.2528
#3	2.038	2.081	1.984	2.022	2.028	2.029	2.043	2.050	.2498
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**	**2.019**	**2.039**	**2.123**	**2.049**	**2.042**	**2.022**	**39.92**	**39.63**
Stddev	.010	.019	.018	.005	.016	.017	.018	.20	.19
%RSD	.4853	.9520	.9085	.2613	.7912	.8301	.8697	.4982	.4723
#1	2.008	2.026	2.047	2.128	2.053	2.049	2.028	40.06	39.80
#2	2.020	2.033	2.053	2.122	2.062	2.054	2.037	40.00	39.67
#3	2.001	1.997	2.018	2.117	2.031	2.022	2.003	39.69	39.43
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	**41.15**	**40.10**	**39.96**	**40.94**	**2.087**	**1.994**	**5.359**	**2.032**	**2.122**
Stddev	.18	.23	.23	.25	.019	.019	.048	.018	.009
%RSD	.4349	.5643	.5748	.6057	.9076	.9351	.8977	.9022	.4480
#1	41.28	40.31	40.12	41.15	2.095	2.004	5.379	2.040	2.127
#2	41.23	40.14	40.07	41.01	2.100	2.007	5.393	2.046	2.127
#3	40.95	39.86	39.70	40.67	2.065	1.973	5.304	2.011	2.111
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: 5/2/2019 18:17:11 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.069**	**2.008**	**2.052**	**2.049**	**2.033**	**2.029**	F **2.382**
Stddev	.012	.016	.009	.021	.013	.010	.012
%RSD	.5696	.8012	.4549	1.021	.6587	.5060	.4972
#1	2.067	2.012	2.051	2.059	2.037	2.035	2.375
#2	2.081	2.022	2.062	2.063	2.044	2.035	2.396
#3	2.058	1.991	2.043	2.025	2.018	2.017	2.376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**148810.**	**23560.**	**6201.0**	**9145.8**
Stddev	1438.	253.	54.6	55.7
%RSD	.96629	1.0754	.88107	.60898
#1	148300.	23310.	6180.4	9123.7
#2	147700.	23553.	6159.6	9104.6
#3	150430.	23817.	6262.9	9209.2

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 18:22:12 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0003**	**.0003**	**-.0001**	**.0000**	**.0000**	**-.0000**	**-.0000**
Stddev	.0003	.0001	.0002	.0003	.0001	.0003	.0000	.0001	.0002
%RSD	127.1	1010.	64.25	107.0	83.03	806.5	90.57	200.7	877.9
#1	-.0004	.0001	.0001	-.0001	-.0001	-.0002	.0000	.0000	-.0002
#2	.0001	-.0000	.0003	.0004	-.0001	.0001	.0001	-.0000	.0002
#3	-.0004	-.0001	.0004	.0005	-.0000	.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	**.0000**	**-.0002**	**.0003**	**.0007**	**.0009**	**-.0012**	**-.0006**	**-.0054**	**-.0045**
Stddev	.0002	.0001	.0005	.0006	.0004	.0029	.0023	.0077	.0006
%RSD	963.8	46.06	202.6	81.22	47.75	229.6	374.4	141.8	13.93
#1	-.0000	-.0003	.0005	.0011	.0007	.0001	-.0015	-.0061	-.0039
#2	.0002	-.0002	-.0004	.0010	.0015	.0007	-.0024	-.0127	-.0044
#3	-.0001	-.0001	.0006	.0000	.0007	-.0045	.0020	.0026	-.0051
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	**-.0015**	**.0025**	**-.1083**	**-.0156**	**.0026**	**.0006**	**.0014**	**-.0004**	**.0001**
Stddev	.0017	.0106	.0451	.0099	.0002	.0003	.0010	.0005	.0000
%RSD	111.2	423.4	41.60	63.35	6.914	46.73	72.93	119.6	27.15
#1	-.0033	.0071	-.0998	-.0153	.0027	.0003	.0025	-.0005	.0001
#2	.0001	-.0096	-.0682	-.0256	.0024	.0006	.0004	-.0009	.0002
#3	-.0014	.0100	-.1571	-.0059	.0027	.0009	.0013	.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: CCB Acquired: 5/2/2019 18:22:12 Type: QC
Method: SGS 3 NO Valve(v332) 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	**.0007**	**.0040**	**.0003**	**.0032**	**-.0013**	**.0038**	**-.0047**
Stddev	.0004	.0008	.0001	.0015	.0008	.0011	.0016
%RSD	52.75	20.23	48.26	48.10	61.27	28.68	33.62
#1	.0003	.0042	.0003	.0049	-.0004	.0042	-.0028
#2	.0010	.0047	.0003	.0022	-.0016	.0026	-.0055
#3	.0008	.0031	.0001	.0023	-.0020	.0047	-.0056
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	**158010.**	**24173.**	**6449.2**	**9965.9**
Stddev	553.	46.	13.4	13.9
%RSD	.34974	.19207	.20760	.13959
#1	157970.	24227.	6454.8	9970.8
#2	158580.	24145.	6433.9	9950.2
#3	157480.	24149.	6458.8	9976.7

Zoom In Zoom Out

Sample Name: jc86986-9 Acquired: 5/2/2019 18:27:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8257**	**.0030**	**.0054**	**.0391**	**.9549**	**.8501**	**1.565**	**.2955**	**.0006**
Stddev	.0010	.0001	.0003	.0002	.0014	.0022	.001	.0006	.0004
%RSD	.1202	4.689	6.055	.6214	.1438	.2646	.0369	.2123	62.34
#1	.8257	.0030	.0055	.0389	.9558	.8526	1.566	.2954	.0004
#2	.8267	.0029	.0056	.0391	.9555	.8493	1.565	.2961	.0010
#3	.8247	.0032	.0050	.0394	.9533	.8483	1.565	.2949	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1058**	**.8346**	**.1118**	**-.0039**	**.7047**	**.0229**	**.0078**	**25.71**	**40.78**
Stddev	.0006	.0002	.0018	.0010	.0008	.0014	.0016	.07	.06
%RSD	.6055	.0232	1.639	26.77	.1098	6.167	20.90	.2698	.1363
#1	.1059	.8347	.1104	-.0041	.7055	.0213	.0059	25.75	40.84
#2	.1064	.8348	.1139	-.0028	.7046	.0235	.0086	25.63	40.77
#3	.1052	.8344	.1112	-.0048	.7039	.0239	.0089	25.75	40.72

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**306.2**	**7.301**	**2.507**	**.5908**	**.0320**	**.1200**	**6.155**	**.1203**	**.2237**
Stddev	.3	.028	.030	.0163	.0008	.0005	.011	.0003	.0001
%RSD	.0875	.3773	1.205	2.752	2.511	.4502	.1704	.2471	.0659
#1	306.4	7.327	2.496	.5840	.0321	.1195	6.148	.1205	.2239
#2	306.3	7.303	2.484	.6093	.0328	.1205	6.167	.1204	.2236
#3	305.9	7.272	2.542	.5790	.0312	.1200	6.151	.1199	.2237

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.127**	**.0124**	**.0392**	F **398.8**	**.0453**	**.0273**	**1.328**
Stddev	.001	.0011	.0002	1.5	.0026	.0009	.016
%RSD	.0951	8.788	.5126	.3813	5.672	3.247	1.234
#1	1.127	.0136	.0393	400.5	.0481	.0282	1.347
#2	1.127	.0118	.0393	398.1	.0447	.0265	1.315
#3	1.125	.0116	.0390	397.7	.0431	.0273	1.323

Zoom In Zoom Out

Sample Name: jc86986-9 Acquired: 5/2/2019 18:27:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**154550.**	**24234.**	**6383.9**	**9783.1**
Stddev	69.	74.	4.2	4.4
%RSD	.04466	.30596	.06594	.04484
#1	154470.	24196.	6388.6	9778.4
#2	154590.	24186.	6382.6	9783.9
#3	154590.	24319.	6380.5	9787.1

Zoom In Zoom Out

Sample Name: jc86986-12 Acquired: 5/2/2019 18:32:16 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.140**	**.0064**	**.0007**	**.0899**	**.2455**	**.3495**	**2.882**	**.1858**	**-.0001**
Stddev	.001	.0000	.0001	.0039	.0011	.0018	.037	.0061	.0006
%RSD	.0680	.5220	11.27	4.328	.4629	.5029	1.269	3.283	412.8
#1	1.139	.0064	.0008	.0916	.2443	.3475	2.864	.1888	.0004
#2	1.140	.0064	.0007	.0854	.2466	.3501	2.857	.1788	-.0007
#3	1.140	.0063	.0006	.0926	.2455	.3509	2.924	.1898	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2713**	**.7944**	**.0217**	**.0059**	**.7704**	**-.0002**	**.0019**	**119.7**	**54.19**
Stddev	.0014	.0306	.0015	.0026	.0234	.0042	.0015	.2	.07
%RSD	.5285	3.846	6.792	44.61	3.038	2573.	78.35	.2077	.1241
#1	.2697	.8069	.0222	.0073	.7815	-.0030	.0016	119.7	54.16
#2	.2723	.7595	.0200	.0075	.7436	.0046	.0006	119.9	54.27
#3	.2721	.8166	.0228	.0029	.7863	-.0021	.0035	119.4	54.14

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**198.5**	**62.50**	**57.15**	**1.286**	**.0209**	**.0033**	**1.792**	**.0667**	**.2845**
Stddev	2.7	.15	.09	.004	.0011	.0001	.071	.0018	.0002
%RSD	1.366	.2471	.1520	.3078	5.029	2.212	3.948	2.625	.0837
#1	200.5	62.42	57.19	1.283	.0211	.0033	1.823	.0679	.2844
#2	195.4	62.68	57.20	1.291	.0198	.0032	1.711	.0647	.2848
#3	199.6	62.41	57.05	1.285	.0219	.0033	1.841	.0676	.2844

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **9.655**	**-.0007**	**.0369**	**1.163**	**.3789**	**.1599**	**3.143**
Stddev	.088	.0008	.0003	.042	.0159	.0021	.093
%RSD	.9155	115.4	.7240	3.577	4.201	1.300	2.969
#1	9.599	-.0005	.0370	1.185	.3704	.1596	3.169
#2	9.757	-.0017	.0366	1.116	.3973	.1621	3.040
#3	9.610	-.0000	.0371	1.190	.3691	.1580	3.221

Zoom In Zoom Out

Sample Name: jc86986-12 Acquired: 5/2/2019 18:32:16 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**155520.**	**24958.**	**6465.8**	**9327.4**
Stddev	808.	146.	231.6	273.1
%RSD	.51958	.58335	3.5826	2.9284
#1	156300.	25126.	6375.6	9214.7
#2	155570.	24873.	6729.0	9638.9
#3	154690.	24874.	6292.8	9128.6

Zoom In Zoom Out

Sample Name: jc86986-12 Acquired: 5/2/2019 18:37:38 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.146**	**.0063**	**.0006**	**.0915**	**.2495**	**.3480**	**2.961**	**.1888**	**.0005**
Stddev	.002	.0001	.0002	.0005	.0009	.0011	.006	.0007	.0009
%RSD	.1418	1.041	25.31	.5534	.3640	.3054	.1967	.3530	194.0
#1	1.145	.0063	.0008	.0911	.2501	.3492	2.968	.1895	.0004
#2	1.145	.0063	.0005	.0920	.2498	.3478	2.958	.1882	-.0004
#3	1.148	.0062	.0006	.0913	.2484	.3471	2.958	.1888	.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2758**	**.8197**	**.0207**	**.0068**	**.7823**	**-.0015**	**.0025**	**120.2**	**55.07**
Stddev	.0010	.0007	.0013	.0014	.0020	.0022	.0016	.2	.10
%RSD	.3474	.0795	6.311	20.39	.2511	151.2	61.72	.1395	.1786
#1	.2766	.8201	.0198	.0077	.7836	-.0032	.0038	120.4	55.18
#2	.2748	.8189	.0201	.0076	.7800	.0011	.0008	120.3	55.04
#3	.2761	.8200	.0222	.0052	.7831	-.0023	.0031	120.0	54.99

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**203.2**	**63.84**	**57.60**	**1.311**	**.0228**	**.0035**	**1.845**	**.0697**	**.2868**
Stddev	.3	.11	.20	.004	.0008	.0002	.006	.0002	.0003
%RSD	.1564	.1652	.3545	.2926	3.597	4.678	.3343	.3477	.0873
#1	203.6	63.89	57.83	1.307	.0234	.0037	1.852	.0696	.2871
#2	203.2	63.72	57.44	1.314	.0219	.0035	1.842	.0700	.2868
#3	202.9	63.92	57.52	1.313	.0231	.0033	1.841	.0696	.2866

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.846**	**.0030**	**.0375**	**1.148**	**.3852**	**.1610**	**2.861**
Stddev	.016	.0019	.0001	.009	.0027	.0018	.016
%RSD	.1588	62.11	.3662	.7591	.7124	1.099	.5701
#1	9.864	.0010	.0374	1.140	.3851	.1627	2.871
#2	9.837	.0033	.0376	1.157	.3826	.1610	2.869
#3	9.837	.0047	.0376	1.145	.3881	.1592	2.842

Zoom In Zoom Out

Sample Name: jc86986-12 Acquired: 5/2/2019 18:37:38 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**155780.**	**24533.**	**6409.6**	**9458.4**
Stddev	323.	123.	11.7	9.3
%RSD	.20712	.50303	.18241	.09839
#1	155460.	24414.	6397.8	9450.9
#2	155770.	24660.	6409.8	9455.4
#3	156110.	24526.	6421.2	9468.8

Zoom In Zoom Out

Sample Name: jc86986-13 Acquired: 5/2/2019 18:42:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.317**	**.0078**	**.0006**	**.1131**	**.2899**	**.4630**	**4.008**	**.2758**	**.0010**
Stddev	.002	.0000	.0001	.0006	.0006	.0017	.068	.0005	.0010
%RSD	.1143	.3540	15.26	.5464	.2148	.3677	1.693	.1854	100.5
#1	1.317	.0078	.0005	.1124	.2892	.4618	4.073	.2764	.0017
#2	1.317	.0078	.0006	.1134	.2904	.4649	4.014	.2756	.0013
#3	1.319	.0077	.0006	.1134	.2901	.4622	3.938	.2754	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3682**	**1.074**	**.0208**	**.0086**	**.3145**	**.0002**	**-.0006**	**158.0**	**14.43**
Stddev	.0010	.001	.0017	.0030	.0017	.0034	.0026	.5	.04
%RSD	.2784	.0857	8.333	34.66	.5495	1867.	424.4	.3223	.2898
#1	.3672	1.075	.0223	.0056	.3126	-.0025	.0003	157.8	14.43
#2	.3692	1.075	.0212	.0085	.3154	-.0009	.0014	157.6	14.39
#3	.3682	1.073	.0189	.0116	.3157	.0040	-.0035	158.6	14.47

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**260.0**	**84.00**	**87.97**	**1.590**	**.0117**	**.0059**	**2.049**	**.0243**	**.1084**
Stddev	.7	.20	.22	.022	.0004	.0008	.004	.0006	.0001
%RSD	.2533	.2368	.2461	1.389	3.584	13.22	.1859	2.678	.1203
#1	259.5	83.83	88.02	1.585	.0116	.0066	2.053	.0242	.1085
#2	259.6	83.94	87.73	1.571	.0114	.0060	2.046	.0249	.1085
#3	260.7	84.22	88.15	1.614	.0122	.0051	2.048	.0236	.1083

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.25**	**.0030**	**.0271**	**.7895**	**.5500**	**.1948**	**3.788**
Stddev	.02	.0012	.0001	.0027	.0026	.0005	.036
%RSD	.1151	40.53	.5480	.3436	.4787	.2674	.9503
#1	14.27	.0043	.0272	.7890	.5504	.1954	3.779
#2	14.24	.0020	.0269	.7871	.5472	.1944	3.758
#3	14.26	.0027	.0271	.7924	.5524	.1946	3.828

Zoom In Zoom Out

Sample Name: jc86986-13 Acquired: 5/2/2019 18:42:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**154030.**	**24202.**	**6315.6**	**9350.7**
Stddev	428.	127.	2.9	8.5
%RSD	.27783	.52374	.04614	.09130
#1	153640.	24343.	6314.0	9354.8
#2	153960.	24166.	6313.8	9356.4
#3	154490.	24098.	6319.0	9340.9

Zoom In Zoom Out

Sample Name: mp14596-mb2conf Acquired: 5/2/2019 18:47:53 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0001**	**-.0000**	**.0007**	**.0008**	**.0004**	**.0006**	**-.0002**
Stddev	.0001	.0000	.0003	.0003	.0002	.0002	.0000	.0000	.0002
%RSD	340.4	38.72	434.5	1118.	29.42	21.95	1.739	7.897	111.0
#1	-.0000	-.0001	.0001	.0003	.0007	.0007	.0005	.0007	-.0004
#2	.0001	-.0000	.0004	-.0002	.0005	.0010	.0004	.0006	.0000
#3	-.0001	-.0001	-.0002	-.0001	.0009	.0007	.0004	.0006	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0071**	**.0005**	**-.0002**	**-.0001**	**-.0017**	**-.0008**	**.0005**	**.0675**
Stddev	.0001	.0001	.0007	.0006	.0001	.0005	.0007	.0129	.0018
%RSD	379.6	1.391	156.8	234.4	68.35	27.54	94.16	2657.	2.702
#1	-.0000	.0073	.0012	-.0008	-.0001	-.0015	.0000	-.0114	.0660
#2	.0001	.0071	-.0002	.0004	-.0001	-.0022	-.0009	-.0012	.0669
#3	-.0000	.0071	.0004	-.0003	-.0002	-.0013	-.0015	.0141	.0695

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0202**	**.0082**	**.0514**	**.0496**	**.0011**	**.0004**	**.0090**	**.0221**	**.0004**
Stddev	.0027	.0071	.0227	.0096	.0003	.0001	.0007	.0005	.0000
%RSD	13.28	86.03	44.05	19.30	24.26	17.21	7.380	2.312	12.50
#1	.0203	.0057	.0728	.0386	.0012	.0004	.0097	.0223	.0003
#2	.0175	.0027	.0538	.0546	.0014	.0005	.0088	.0215	.0004
#3	.0228	.0162	.0277	.0557	.0008	.0004	.0084	.0224	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0015**	**.0003**	**.0111**	**.0010**	**.0014**	**.0277**
Stddev	.0002	.0010	.0001	.0014	.0026	.0010	.0017
%RSD	25.05	65.96	32.29	12.64	252.9	74.22	6.236
#1	.0006	.0019	.0002	.0097	.0036	.0010	.0272
#2	.0008	.0023	.0005	.0125	.0012	.0025	.0296
#3	.0005	.0004	.0003	.0113	-.0017	.0005	.0263

Zoom In Zoom Out

Sample Name: mp14596-mb2conf Acquired: 5/2/2019 18:47:53 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159670.**	**24503.**	**6503.2**	**10092.**
Stddev	505.	108.	5.3	10.
%RSD	.31646	.44048	.08170	.09932
#1	159780.	24395.	6498.1	10081.
#2	159110.	24610.	6503.0	10100.
#3	160100.	24503.	6508.7	10095.

Zoom In Zoom Out

Sample Name: jc86953-5r Acquired: 5/2/2019 18:52:59 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0431**	**.0008**	**.0002**	**.0025**	**.0637**	**.0215**	**.0674**	**.0086**	**.0004**
Stddev	.0001	.0000	.0002	.0001	.0007	.0002	.0006	.0002	.0001
%RSD	.1244	4.848	113.6	5.577	1.065	.8005	.9613	2.469	38.41
#1	.0430	.0008	.0004	.0024	.0644	.0214	.0681	.0086	.0004
#2	.0431	.0009	.0000	.0024	.0636	.0215	.0672	.0084	.0002
#3	.0431	.0008	.0001	.0027	.0631	.0217	.0669	.0088	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0701**	**.1106**	**.0072**	**.0012**	**.0500**	**-.0007**	**.0000**	**20.50**	**1.977**
Stddev	.0003	.0007	.0010	.0010	.0016	.0014	.0004	.01	.002
%RSD	.4530	.6327	13.84	85.76	3.102	192.7	1400.	.0610	.0849
#1	.0704	.1115	.0082	.0013	.0513	-.0011	-.0004	20.51	1.979
#2	.0699	.1102	.0062	.0001	.0483	.0008	.0001	20.50	1.976
#3	.0698	.1103	.0072	.0021	.0503	-.0020	.0004	20.48	1.975

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**62.61**	**.8630**	**.8192**	**.2773**	**.0079**	**.0040**	**1.847**	**.0188**	**.0206**
Stddev	.05	.0091	.0124	.0064	.0003	.0003	.010	.0004	.0000
%RSD	.0802	1.051	1.508	2.299	3.838	6.688	.5226	2.197	.1409
#1	62.63	.8682	.8233	.2834	.0082	.0039	1.858	.0187	.0206
#2	62.55	.8526	.8290	.2779	.0076	.0039	1.839	.0193	.0206
#3	62.64	.8683	.8053	.2707	.0078	.0043	1.843	.0185	.0206

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.662**	**.0009**	**.1833**	**.8906**	**.0599**	**.0037**	**.7471**
Stddev	.018	.0008	.0019	.0066	.0027	.0012	.0127
%RSD	1.052	87.10	1.052	.7421	4.585	31.55	1.704
#1	1.681	.0000	.1853	.8981	.0630	.0029	.7615
#2	1.657	.0013	.1832	.8883	.0581	.0032	.7373
#3	1.647	.0015	.1814	.8855	.0585	.0051	.7425

Zoom In Zoom Out

Sample Name: jc86953-5r Acquired: 5/2/2019 18:52:59 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159930.**	**24894.**	**6483.4**	**9868.6**
Stddev	1966.	168.	40.4	52.7
%RSD	1.2289	.67447	.62248	.53370
#1	157680.	24863.	6436.8	9807.9
#2	160860.	24744.	6507.0	9902.2
#3	161260.	25076.	6506.4	9895.7

Zoom In Zoom Out

Sample Name: mp14636-mb1conf Acquired: 5/2/2019 18:58:01 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0019**	**.0009**	**.0005**	**.0009**	**-.0002**
Stddev	.0001	.0000	.0002	.0002	.0002	.0004	.0000	.0001	.0001
%RSD	39.29	51.91	230.8	104.9	12.66	43.33	4.218	14.21	49.74
#1	-.0003	-.0001	-.0000	.0002	.0021	.0014	.0005	.0009	-.0002
#2	-.0003	-.0001	.0003	.0003	.0016	.0007	.0005	.0009	-.0002
#3	-.0001	-.0000	-.0000	-.0000	.0019	.0007	.0005	.0011	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0068**	**.0000**	**.0010**	**-.0007**	**-.0014**	**-.0017**	**-.0012**	**.0537**
Stddev	.0003	.0012	.0003	.0015	.0007	.0013	.0003	.0075	.0014
%RSD	168.3	17.90	3921.	153.7	102.0	92.76	20.41	625.8	2.656
#1	-.0003	.0060	.0002	-.0007	-.0009	-.0007	-.0013	.0070	.0552
#2	-.0003	.0082	.0001	.0020	.0001	-.0006	-.0018	-.0076	.0535
#3	.0002	.0062	-.0003	.0016	-.0012	-.0029	-.0019	-.0029	.0524

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0406**	**.0127**	**-.0409**	**.0438**	**.0018**	**.0005**	**.0079**	**.0172**	**.0005**
Stddev	.0024	.0081	.0229	.0067	.0005	.0001	.0008	.0002	.0000
%RSD	5.797	63.75	56.05	15.22	27.89	20.93	10.59	1.393	9.261
#1	.0383	.0178	-.0376	.0447	.0012	.0004	.0069	.0169	.0005
#2	.0405	.0034	-.0653	.0500	.0020	.0005	.0085	.0173	.0005
#3	.0430	.0169	-.0198	.0368	.0022	.0006	.0082	.0173	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0020**	**.0008**	**.0162**	**.0007**	**.0005**	**.0233**
Stddev	.0001	.0002	.0001	.0014	.0017	.0010	.0017
%RSD	7.650	12.15	6.926	8.849	235.3	186.9	7.317
#1	.0011	.0018	.0008	.0170	.0023	.0006	.0217
#2	.0010	.0023	.0007	.0146	.0010	.0015	.0231
#3	.0011	.0019	.0007	.0171	-.0011	-.0005	.0250

Zoom In Zoom Out

Sample Name: mp14636-mb1conf Acquired: 5/2/2019 18:58:01 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160320.**	**24857.**	**6539.5**	**10159.**
Stddev	1820.	150.	8.0	10.
%RSD	1.1351	.60387	.12238	.09859
#1	158280.	24737.	6531.6	10150.
#2	160890.	24810.	6539.3	10158.
#3	161790.	25025.	6547.6	10170.

Zoom In Zoom Out

Sample Name: mp14636-ps1 Acquired: 5/2/2019 19:03:10 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**4.030**	**2.095**	**2.034**	**2.079**	**2.317**	**3.428**	**3.125**	**2.202**	**.2485**
Stddev	.017	.008	.087	.076	.005	.010	.041	.080	.0010
%RSD	.4104	.3823	4.297	3.680	.2355	.2803	1.305	3.651	.3979
#1	4.017	2.097	1.944	2.001	2.323	3.439	3.132	2.120	.2477
#2	4.048	2.102	2.119	2.153	2.317	3.423	3.161	2.281	.2496
#3	4.024	2.086	2.039	2.082	2.312	3.422	3.081	2.205	.2484

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.235**	**3.251**	**2.114**	**2.130**	**5.299**	**2.047**	**2.019**	**88.02**	**73.63**
Stddev	.006	.143	.095	.071	.193	.086	.089	.39	.33
%RSD	.2590	4.402	4.489	3.356	3.638	4.204	4.405	.4411	.4420
#1	2.242	3.104	2.018	2.058	5.102	1.960	1.930	88.19	73.75
#2	2.231	3.390	2.208	2.201	5.487	2.132	2.108	88.30	73.89
#3	2.232	3.261	2.117	2.130	5.308	2.048	2.020	87.58	73.27

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**183.1**	**39.91**	**31.22**	**26.24**	**2.069**	**1.935**	**1.670**	**2.066**	**2.392**
Stddev	5.3	.25	.14	.08	.086	.084	.075	.093	.006
%RSD	2.868	.6213	.4571	.2986	4.164	4.323	4.494	4.500	.2565
#1	178.0	39.94	31.29	26.28	1.980	1.849	1.596	1.971	2.393
#2	188.5	40.14	31.32	26.28	2.152	2.016	1.746	2.157	2.397
#3	182.9	39.64	31.06	26.14	2.076	1.940	1.669	2.070	2.385

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.048**	**1.791**	**2.083**	**9.103**	**.1892**	**.0609**	**4.739**
Stddev	.011	.084	.005	.391	.0058	.0004	.201
%RSD	.2707	4.675	.2579	4.290	3.042	.7354	4.240
#1	4.060	1.703	2.089	8.706	.1953	.0613	4.540
#2	4.038	1.869	2.078	9.487	.1839	.0610	4.942
#3	4.046	1.800	2.082	9.116	.1885	.0604	4.736

Zoom In Zoom Out

Sample Name: mp14636-ps1 Acquired: 5/2/2019 19:03:10 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**153860.**	**25179.**	**6379.2**	**9306.3**
Stddev	1041.	241.	254.7	303.6
%RSD	.67662	.95832	3.9929	3.2617
#1	153820.	25119.	6649.0	9627.2
#2	152840.	24973.	6142.8	9023.8
#3	154920.	25444.	6345.7	9267.9

Zoom In Zoom Out

Sample Name: jc86916-2 Acquired: 5/2/2019 19:08:25 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.3833**	**.0056**	**.0010**	**.0654**	**.1705**	**.1545**	**1.885**	**.1052**	**.0011**
Stddev	.0005	.0001	.0002	.0005	.0003	.0012	.002	.0005	.0006
%RSD	.1353	2.345	19.51	.8148	.1693	.7991	.1178	.4850	58.35
#1	.3836	.0055	.0008	.0648	.1708	.1555	1.886	.1055	.0005
#2	.3827	.0058	.0011	.0657	.1702	.1550	1.886	.1055	.0017
#3	.3835	.0056	.0012	.0658	.1706	.1531	1.882	.1046	.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2065**	**.5565**	**.0605**	**-.0009**	**.2374**	**-.0007**	**-.0023**	**75.12**	**4.732**
Stddev	.0003	.0016	.0013	.0022	.0015	.0032	.0020	.06	.002
%RSD	.1441	.2811	2.176	241.0	.6129	477.2	88.80	.0863	.0481
#1	.2066	.5547	.0593	-.0026	.2368	-.0042	-.0027	75.05	4.729
#2	.2062	.5576	.0619	-.0018	.2363	.0020	-.0040	75.17	4.732
#3	.2068	.5573	.0602	.0016	.2390	.0001	-.0001	75.15	4.734

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**219.9**	**12.95**	**12.64**	**.2407**	**.0725**	**.0132**	**1.561**	**.0322**	**.0658**
Stddev	.1	.01	.07	.0180	.0004	.0002	.005	.0006	.0003
%RSD	.0413	.1039	.5545	7.466	.4922	1.167	.3498	2.001	.4550
#1	219.8	12.95	12.61	.2359	.0721	.0134	1.557	.0330	.0658
#2	219.9	12.96	12.72	.2606	.0724	.0131	1.567	.0319	.0654
#3	220.0	12.93	12.58	.2257	.0728	.0131	1.558	.0318	.0660

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.696**	**.0400**	**.1067**	**.4356**	**.0550**	**.0856**	**1.969**
Stddev	.002	.0041	.0001	.0011	.0021	.0025	.015
%RSD	.1020	10.23	.0919	.2456	3.827	2.899	.7644
#1	1.697	.0440	.1068	.4365	.0529	.0832	1.955
#2	1.697	.0400	.1066	.4358	.0571	.0882	1.967
#3	1.694	.0359	.1067	.4344	.0549	.0856	1.985

Zoom In Zoom Out

Sample Name: jc86916-2 Acquired: 5/2/2019 19:08:25 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**157620.**	**24699.**	**6498.9**	**9787.7**
Stddev	908.	58.	18.3	22.0
%RSD	.57586	.23373	.28155	.22442
#1	158230.	24642.	6519.9	9812.6
#2	156580.	24757.	6486.0	9771.4
#3	158050.	24698.	6490.9	9778.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 19:13:29 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.008**	**2.090**	**2.015**	**2.027**	**2.016**	**2.004**	**2.026**	**2.044**	**.2474**
Stddev	.004	.009	.003	.003	.022	.019	.033	.002	.0018
%RSD	.1918	.4370	.1374	.1408	1.076	.9598	1.628	.0918	.7245
#1	2.007	2.083	2.017	2.030	2.031	2.018	2.024	2.046	.2489
#2	2.004	2.087	2.016	2.029	2.026	2.013	2.061	2.044	.2480
#3	2.012	2.100	2.012	2.024	1.991	1.982	1.995	2.043	.2454
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	**1.977**	**2.020**	**2.019**	**2.102**	**2.037**	**2.023**	**2.022**	**39.69**	**39.71**
Stddev	.021	.002	.004	.005	.004	.006	.003	.14	.18
%RSD	1.084	.0987	.1999	.2571	.1847	.2806	.1290	.3639	.4508
#1	1.994	2.022	2.021	2.101	2.041	2.026	2.025	39.58	39.55
#2	1.985	2.021	2.023	2.107	2.036	2.026	2.023	39.63	39.68
#3	1.953	2.018	2.015	2.097	2.033	2.016	2.020	39.85	39.91
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	**40.66**	**39.82**	**39.78**	**40.09**	**2.074**	**2.011**	**5.348**	**2.033**	**2.085**
Stddev	.12	.22	.22	.08	.003	.004	.011	.003	.005
%RSD	.2943	.5438	.5531	.1972	.1276	.1938	.2087	.1675	.2650
#1	40.57	39.59	39.58	40.03	2.076	2.014	5.358	2.034	2.083
#2	40.60	39.83	39.73	40.07	2.076	2.013	5.348	2.036	2.081
#3	40.79	40.02	40.02	40.18	2.071	2.007	5.336	2.029	2.091
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: 5/2/2019 19:13:29 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.003**	**1.999**	**2.015**	**1.986**	**2.013**	**2.036**	**2.001**
Stddev	.019	.004	.020	.004	.005	.012	.014
%RSD	.9512	.2176	1.007	.1905	.2428	.5882	.6793
#1	2.018	2.003	2.030	1.988	2.018	2.027	1.988
#2	2.010	1.999	2.024	1.989	2.009	2.032	2.000
#3	1.982	1.995	1.992	1.982	2.012	2.050	2.015
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	**150430.**	**23915.**	**6160.0**	**9158.8**
Stddev	2015.	230.	13.0	17.7
%RSD	1.3396	.95990	.21067	.19334
#1	149040.	24178.	6171.2	9174.8
#2	149500.	23816.	6145.8	9139.8
#3	152740.	23752.	6163.1	9161.8

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 19:18:32 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0004**	**.0001**	**.0001**	**.0002**	**.0002**	**-.0003**
Stddev	.0004	.0000	.0001	.0002	.0002	.0001	.0001	.0001	.0001
%RSD	1796.	38.57	47.71	59.63	253.5	118.3	29.85	48.08	30.35
#1	-.0005	.0000	.0002	.0002	.0002	.0001	.0002	.0002	-.0003
#2	.0002	.0001	.0001	.0004	.0002	.0003	.0002	.0001	-.0002
#3	.0003	.0001	.0003	.0006	-.0001	.0000	.0001	.0002	-.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	**.0006**	**-.0002**	**-.0001**	**.0002**	**-.0005**	**-.0003**	**.0002**	**-.0035**	**-.0006**
Stddev	.0001	.0000	.0012	.0011	.0001	.0008	.0008	.0055	.0011
%RSD	14.16	19.03	1382.	608.1	15.18	260.0	505.3	156.6	184.4
#1	.0005	-.0002	.0011	.0001	-.0004	.0006	-.0005	-.0017	-.0018
#2	.0006	-.0002	-.0013	-.0009	-.0005	-.0008	-.0001	-.0097	-.0002
#3	.0007	-.0002	.0000	.0013	-.0006	-.0008	.0011	.0008	.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	**.0005**	**-.0000**	**-.0207**	**-.0024**	**.0028**	**.0013**	**.0028**	**-.0008**	**.0002**
Stddev	.0026	.0082	.0487	.0087	.0001	.0003	.0017	.0005	.0001
%RSD	567.5	1345000.	235.9	368.9	2.398	22.07	60.08	60.94	22.44
#1	-.0020	-.0067	.0330	.0071	.0028	.0014	.0030	-.0013	.0002
#2	.0031	-.0024	-.0329	-.0100	.0027	.0015	.0011	-.0006	.0003
#3	.0003	.0091	-.0621	-.0042	.0028	.0010	.0045	-.0004	.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: 5/2/2019 19:18:32 Type: QC
Method: SGS 3 NO Valve(v332) 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**	F **.0063**	**.0002**	**.0031**	**-.0010**	**.0027**	**-.0000**
Stddev	.0001	.0014	.0001	.0038	.0016	.0017	.0023
%RSD	31.56	21.38	47.41	122.5	157.9	62.97	4663.
#1	.0005	.0072	.0004	.0061	-.0008	.0046	.0024
#2	.0003	.0070	.0001	.0044	.0005	.0015	-.0020
#3	.0003	.0048	.0002	-.0012	-.0027	.0020	-.0006
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0050					
Low Limit		-.0050					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**156130.**	**23958.**	**6403.1**	**9973.7**
Stddev	1506.	105.	26.0	42.0
%RSD	.96479	.43638	.40631	.42135
#1	154970.	24006.	6394.2	9957.1
#2	155600.	23838.	6382.7	9942.4
#3	157830.	24031.	6432.4	10021.

Zoom In Zoom Out

Sample Name: TICONF Acquired: 5/2/2019 19:23:41 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0007**	**.0001**	**-.0021**	**-.0001**	**.0000**	**.0001**	**.0001**	**-.0005**
Stddev	.0001	.0001	.0001	.0003	.0001	.0002	.0000	.0001	.0002
%RSD	100.4	11.46	93.30	15.29	110.6	506.5	36.46	101.1	38.12
#1	-.0001	.0006	.0001	-.0019	-.0002	-.0002	.0001	-.0000	-.0003
#2	.0000	.0007	.0000	-.0025	-.0002	.0001	.0001	.0001	-.0007
#3	-.0002	.0007	.0002	-.0019	.0000	.0001	.0000	.0003	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0000**	**-.0001**	**.0051**	**-.0002**	**-.0014**	**.0010**	**.0088**	**.0172**
Stddev	.0002	.0001	.0003	.0008	.0004	.0018	.0011	.0043	.0005
%RSD	23.90	481.4	408.6	16.25	217.5	130.9	108.9	48.78	2.905
#1	.0011	.0001	.0002	.0057	-.0001	-.0019	.0015	.0099	.0174
#2	.0007	.0000	-.0003	.0055	.0002	.0006	-.0002	.0041	.0175
#3	.0009	-.0001	-.0002	.0042	-.0006	-.0028	.0017	.0124	.0166

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0169**	**-.0355**	**-.0362**	**-.0230**	**.0028**	**.0009**	**-.0043**	**-.0087**	**.0001**
Stddev	.0008	.0067	.0198	.0094	.0005	.0003	.0004	.0001	.0001
%RSD	4.698	18.94	54.71	40.86	17.86	26.78	9.847	1.494	73.08
#1	.0174	-.0416	-.0495	-.0265	.0027	.0007	-.0042	-.0088	.0000
#2	.0172	-.0365	-.0134	-.0124	.0034	.0012	-.0048	-.0086	.0001
#3	.0160	-.0283	-.0456	-.0302	.0024	.0009	-.0039	-.0085	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **10.32**	**.0043**	**-.0014**	**.0073**	**.3610**	**.0018**	**.1242**
Stddev	.04	.0007	.0001	.0029	.0072	.0010	.0034
%RSD	.3507	15.69	5.963	40.59	2.007	54.56	2.744
#1	10.30	.0045	-.0014	.0039	.3573	.0007	.1213
#2	10.37	.0049	-.0013	.0095	.3693	.0025	.1280
#3	10.31	.0036	-.0014	.0084	.3563	.0023	.1233

Zoom In Zoom Out

Sample Name: TICONF Acquired: 5/2/2019 19:23:41 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156520.**	**23983.**	**6367.2**	**9902.7**
Stddev	571.	201.	42.2	48.7
%RSD	.36457	.83933	.66287	.49146
#1	156220.	23831.	6323.2	9852.6
#2	156170.	23907.	6371.1	9905.7
#3	157180.	24211.	6407.4	9949.8

Zoom In Zoom Out

Sample Name: VCONF Acquired: 5/2/2019 19:28:57 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0005**	**.0005**	**.0001**	**.0003**	**.0001**	**-.0007**	**-.0000**	**.0001**
Stddev	.0002	.0001	.0001	.0001	.0003	.0003	.0000	.0003
%RSD	42.87	11.79	139.3	35.11	259.3	45.03	79.93	426.2
#1	.0007	.0005	.0000	.0003	.0002	-.0006	-.0000	-.0001
#2	.0003	.0005	.0000	.0002	-.0002	-.0005	-.0000	-.0001
#3	.0006	.0006	.0002	.0004	.0003	-.0011	-.0000	.0003

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	F **10.55**	**.0002**	**.0011**	F **-.0073**	**-.0015**	**-.0009**	**.0015**
Stddev	.0005	.02	.0001	.0007	.0038	.0012	.0014	.0021
%RSD	104.1	.1436	55.53	69.36	52.64	79.58	155.8	144.3
#1	.0000	10.56	.0002	.0005	-.0047	-.0025	.0002	-.0008
#2	-.0005	10.53	.0001	.0008	-.0116	-.0002	-.0004	.0035
#3	-.0009	10.55	.0002	.0019	-.0054	-.0018	-.0024	.0017

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0051**	**.0089**	**-.0000**	**-.0023**	**.0013**	**.0273**	**.0015**	**-.0008**
Stddev	.0055	.0015	.0023	.0185	.0470	.0104	.0005	.0001
%RSD	107.8	17.12	16790.	815.9	3593.	38.05	32.10	8.471
#1	-.0027	.0078	.0012	.0187	.0487	.0285	.0021	-.0008
#2	-.0113	.0106	.0014	-.0096	.0004	.0163	.0011	-.0008
#3	-.0012	.0081	-.0026	-.0160	-.0452	.0370	.0013	-.0007

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0811**	**-.0007**	**.0002**	**.0009**	**.0068**	**.0013**	**.0040**	**-.0000**
Stddev	.0016	.0004	.0001	.0003	.0007	.0002	.0018	.0007
%RSD	1.920	53.91	28.58	31.94	10.11	16.65	45.33	8310.
#1	-.0828	-.0007	.0003	.0005	.0071	.0013	.0060	-.0003
#2	-.0809	-.0010	.0002	.0010	.0073	.0015	.0033	.0008
#3	-.0797	-.0003	.0001	.0010	.0060	.0010	.0026	-.0005

Zoom In Zoom Out

Sample Name: VCONF Acquired: 5/2/2019 19:28:57 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0019**	**.0164**
Stddev	.0014	.0011
%RSD	71.10	6.949
#1	.0010	.0172
#2	.0035	.0169
#3	.0013	.0151

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**157660.**	**24215.**	**6393.2**	**9941.6**
Stddev	558.	194.	15.8	15.9
%RSD	.35365	.80265	.24761	.15992
#1	157720.	24314.	6395.5	9948.2
#2	158190.	23991.	6407.7	9953.1
#3	157080.	24340.	6376.3	9923.5

Zoom In Zoom Out

Sample Name: MOCONF Acquired: 5/2/2019 19:34:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**-.0005**	**.0001**	**.0002**	**-.0006**	**-.0008**	**.0016**	**-.0003**	**-.0003**
Stddev	.0004	.0000	.0001	.0001	.0003	.0005	.0000	.0002
%RSD	84.46	4.762	29.27	20.31	31.59	29.66	4.418	87.83
#1	-.0005	.0001	.0002	-.0006	-.0005	.0015	-.0003	-.0004
#2	-.0001	.0001	.0002	-.0008	-.0010	.0011	-.0003	-.0005
#3	-.0009	.0001	.0003	-.0006	-.0009	.0021	-.0003	-.0000

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0004**	**-.0022**	**-.0024**	F **-.0083**	**-.0004**	**-.0020**	**-.0008**
Stddev	.0002	.0003	.0001	.0010	.0007	.0004	.0008	.0017
%RSD	189.6	59.17	3.949	41.85	8.911	84.56	39.33	218.1
#1	.0001	-.0007	-.0022	-.0035	-.0078	-.0006	-.0019	-.0008
#2	-.0003	-.0004	-.0023	-.0017	-.0079	-.0007	-.0029	.0009
#3	-.0002	-.0002	-.0022	-.0019	-.0091	-.0000	-.0013	-.0025

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0407**	**.0101**	**.0007**	**-.0371**	**-.0265**	**.0027**	**.0322**	F **10.25**
Stddev	.0094	.0017	.0008	.0033	.0415	.0166	.0017	.03
%RSD	23.17	16.54	114.5	8.930	156.4	617.1	5.317	.3270
#1	.0430	.0121	.0012	-.0340	.0146	.0060	.0303	10.29
#2	.0303	.0092	-.0002	-.0406	-.0258	-.0153	.0328	10.24
#3	.0487	.0092	.0009	-.0367	-.0683	.0174	.0335	10.23

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0180**	**.0003**	**.0000**	**-.0018**	**.0070**	**-.0005**	**.0604**	**-.0016**
Stddev	.0018	.0005	.0000	.0003	.0008	.0001	.0013	.0010
%RSD	9.933	192.4	140.9	16.33	11.12	16.36	2.133	64.12
#1	-.0191	.0001	-.0000	-.0017	.0065	-.0006	.0595	-.0017
#2	-.0189	-.0001	.0001	-.0016	.0079	-.0006	.0598	-.0005
#3	-.0159	.0008	.0000	-.0022	.0066	-.0004	.0619	-.0026

Zoom In Zoom Out

Sample Name: MOCONF Acquired: 5/2/2019 19:34:13 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0005**	**.0167**
Stddev	.0012	.0012
%RSD	238.8	6.999
#1	.0001	.0177
#2	-.0005	.0170
#3	.0019	.0154

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**156490.**	**24119.**	**6357.4**	**9939.1**
Stddev	1429.	99.	12.1	19.1
%RSD	.91300	.41226	.19056	.19237
#1	157450.	24184.	6346.2	9920.7
#2	157170.	24005.	6355.6	9937.8
#3	154850.	24169.	6370.3	9958.8

Zoom In Zoom Out

Sample Name: snconf Acquired: 5/2/2019 19:39:18 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0001**	**.0001**	**.0000**
Stddev	.0002	.0001	.0001	.0002	.0002	.0002	.0001	.0002	.0004
%RSD	417.8	73.54	70.16	261.0	47.53	67.31	78.74	164.2	1294.
#1	.0003	-.0000	.0002	.0001	.0005	.0003	.0000	.0002	.0005
#2	-.0002	-.0000	.0001	.0003	.0002	.0004	.0001	.0003	-.0003
#3	.0001	-.0001	.0003	-.0001	.0003	.0001	.0001	-.0001	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0006**	**.0019**	**.0001**	**-.0000**	**-.0013**	**.0025**	**.0049**	**.0311**
Stddev	.0003	.0001	.0006	.0006	.0012	.0021	.0015	.0043	.0023
%RSD	1579.	8.868	33.73	680.5	4785.	159.5	61.69	87.90	7.322
#1	.0001	.0006	.0024	.0008	.0005	-.0001	.0035	.0026	.0337
#2	.0003	.0006	.0012	-.0001	-.0014	-.0001	.0007	.0023	.0299
#3	-.0003	.0007	.0021	-.0004	.0008	-.0038	.0033	.0099	.0297

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0008**	**.0405**	**-.0222**	**.0057**	**.0013**	**-.0222**	F **10.25**	**.0001**
Stddev	.0003	.0105	.0188	.0068	.0003	.0002	.0004	.01	.0001
%RSD	55.16	1309.	46.48	30.45	5.713	18.17	1.998	.1373	61.80
#1	-.0002	.0108	.0525	-.0299	.0060	.0012	-.0228	10.26	.0002
#2	-.0006	-.0096	.0188	-.0192	.0054	.0015	-.0220	10.24	.0002
#3	-.0008	-.0037	.0502	-.0175	.0057	.0011	-.0220	10.26	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0108**	**.0002**	**.0024**	**-.0016**	**.0006**	**-.0033**
Stddev	.0003	.0006	.0001	.0028	.0016	.0007	.0023
%RSD	410.4	5.603	36.95	116.3	97.20	122.4	71.46
#1	-.0004	-.0105	.0002	.0053	.0002	.0011	-.0006
#2	.0001	-.0115	.0003	-.0002	-.0028	-.0002	-.0051
#3	.0001	-.0104	.0001	.0020	-.0021	.0009	-.0041

Zoom In Zoom Out

Sample Name: snconf Acquired: 5/2/2019 19:39:18 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160210.**	**24500.**	**6530.2**	**10133.**
Stddev	1036.	357.	19.3	30.
%RSD	.64643	1.4579	.29564	.29517
#1	161100.	24099.	6521.9	10122.
#2	159070.	24783.	6552.2	10166.
#3	160450.	24618.	6516.4	10109.

Zoom In Zoom Out

Sample Name: mnconf Acquired: 5/2/2019 19:44:25 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0001**	**.0014**	**.0003**	F **10.10**	**.0001**	**-.0006**
Stddev	.0004	.0000	.0001	.0001	.0003	.0005	.19	.0002	.0003
%RSD	159.8	37.32	29.80	107.5	17.90	147.4	1.898	246.9	57.66
#1	-.0001	-.0001	-.0003	-.0001	.0013	.0002	9.920	.0001	-.0006
#2	.0000	-.0001	-.0002	.0000	.0017	-.0001	10.30	-.0001	-.0002
#3	-.0007	-.0002	-.0004	-.0001	.0013	.0008	10.07	.0003	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0010**	**-.0016**	**-.0002**	**.0002**	**-.0018**	**-.0012**	**-.0047**	**.0307**
Stddev	.0005	.0001	.0004	.0014	.0003	.0006	.0004	.0128	.0005
%RSD	78.41	4.987	25.72	587.1	190.8	32.63	30.66	272.4	1.486
#1	.0001	.0010	-.0014	.0009	.0003	-.0017	-.0015	.0015	.0311
#2	.0011	.0010	-.0013	.0002	-.0002	-.0025	-.0013	-.0194	.0307
#3	.0007	.0011	-.0020	-.0018	.0003	-.0013	-.0008	.0038	.0302

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0050**	**-.0015**	**.0196**	**-.0259**	**.0011**	**.0004**	**.0084**	**-.0010**	**.0002**
Stddev	.0010	.0042	.0517	.0069	.0004	.0002	.0007	.0002	.0001
%RSD	19.25	290.5	263.8	26.72	42.54	52.92	8.783	20.54	33.09
#1	-.0061	.0034	.0604	-.0334	.0006	.0004	.0083	-.0010	.0001
#2	-.0045	-.0041	-.0385	-.0244	.0011	.0002	.0092	-.0008	.0002
#3	-.0044	-.0037	.0369	-.0198	.0015	.0006	.0077	-.0012	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0020**	**-.0000**	**.0084**	**.0001**	**-.0001**	**.0410**
Stddev	.0001	.0003	.0002	.0015	.0006	.0021	.0005
%RSD	45.50	12.51	686.0	17.38	528.5	2587.	1.167
#1	.0002	.0023	.0002	.0068	-.0004	.0019	.0409
#2	.0002	.0018	-.0001	.0090	.0007	.0002	.0405
#3	.0005	.0020	-.0001	.0095	.0001	-.0023	.0414

Zoom In Zoom Out

Sample Name: mnconf Acquired: 5/2/2019 19:44:25 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158280.**	**24198.**	**6428.3**	**9976.3**
Stddev	750.	53.	22.0	16.4
%RSD	.47369	.22042	.34227	.16408
#1	158810.	24213.	6452.2	9994.1
#2	157420.	24139.	6423.5	9972.8
#3	158610.	24243.	6409.0	9961.9

Zoom In Zoom Out

Sample Name: siconf Acquired: 5/2/2019 19:49:42 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0003**	**.0003**	**-.0001**	**-.0001**	**-.0002**
Stddev	.0001	.0000	.0001	.0001	.0000	.0006	.0001	.0001	.0001
%RSD	39.28	43.19	192.3	40.93	11.15	220.5	73.01	98.95	69.78
#1	-.0001	-.0001	-.0001	-.0002	.0002	.0010	-.0000	-.0001	-.0002
#2	-.0003	-.0000	.0002	-.0004	.0003	.0001	-.0001	-.0000	-.0001
#3	-.0003	-.0001	.0001	-.0004	.0003	-.0002	-.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	**.0002**	**-.0000**	**-.0001**	**.0004**	**.0017**	**-.0021**	**.0014**	**-.0080**	**.0228**
Stddev	.0003	.0001	.0007	.0005	.0002	.0008	.0012	.0059	.0012
%RSD	126.8	997.6	485.3	128.2	12.62	38.99	85.57	73.37	5.062
#1	.0003	-.0001	-.0006	-.0001	.0018	-.0028	.0016	-.0047	.0219
#2	-.0001	.0001	.0006	.0003	.0018	-.0022	.0024	-.0147	.0241
#3	.0005	-.0000	-.0005	.0009	.0014	-.0012	.0001	-.0045	.0225

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0083**	**-.0087**	**-.0576**	**-.0333**	**.0008**	**.0009**	**9.545**	**-.0002**	**-.0002**
Stddev	.0012	.0062	.0367	.0080	.0005	.0001	.100	.0002	.0000
%RSD	14.26	71.40	63.72	24.07	66.62	12.99	1.047	92.63	6.101
#1	-.0072	-.0037	-.0266	-.0356	.0002	.0010	9.634	-.0001	-.0003
#2	-.0082	-.0156	-.0982	-.0399	.0009	.0008	9.564	-.0001	-.0002
#3	-.0096	-.0068	-.0482	-.0244	.0013	.0011	9.437	-.0004	-.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0096**	**.0005**	**.0028**	**-.0020**	**.0005**	**.0152**
Stddev	.0002	.0006	.0001	.0006	.0009	.0025	.0026
%RSD	48.15	5.860	17.91	20.87	47.13	532.6	17.36
#1	.0002	.0090	.0005	.0025	-.0019	.0024	.0175
#2	.0004	.0101	.0004	.0035	-.0011	-.0024	.0123
#3	.0006	.0096	.0006	.0024	-.0030	.0014	.0159

Zoom In Zoom Out

Sample Name: siconf Acquired: 5/2/2019 19:49:42 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159790.**	**24217.**	**6533.2**	**10096.**
Stddev	1780.	86.	65.0	82.
%RSD	1.1137	.35407	.99426	.81366
#1	158600.	24122.	6465.3	10012.
#2	161840.	24288.	6539.5	10101.
#3	158930.	24241.	6594.8	10176.

Zoom In Zoom Out

Sample Name: srconf Acquired: 5/2/2019 19:54:49 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**.0012**	**.0006**	**.0002**	**-.0000**	**.0003**
Stddev	.0001	.0001	.0001	.0001	.0002	.0001	.0000	.0003	.0005
%RSD	81.17	662.0	41.18	1919.	16.89	19.87	13.71	979.3	156.4
#1	-.0002	.0001	.0003	-.0001	.0011	.0006	.0002	.0003	-.0003
#2	-.0002	-.0001	.0002	.0001	.0014	.0007	.0001	-.0001	.0005
#3	-.0000	.0000	.0001	-.0001	.0011	.0005	.0002	-.0003	.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0009**	**.0013**	**.0007**	**-.0002**	**.0003**	**-.0018**	**-.0091**	**.0050**
Stddev	.0001	.0001	.0006	.0006	.0004	.0013	.0010	.0093	.0005
%RSD	9.656	11.96	44.77	87.00	250.8	442.2	55.82	102.4	9.574
#1	.0011	.0009	.0015	.0002	-.0005	-.0010	-.0030	-.0106	.0045
#2	.0013	.0008	.0007	.0005	-.0002	.0015	-.0010	.0009	.0049
#3	.0014	.0010	.0018	.0014	.0003	.0004	-.0015	-.0175	.0055

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**-.0090**	**-.0555**	**-.0292**	**.0006**	**.0005**	**-.0007**	**.0000**	F **11.85**
Stddev	.0009	.0031	.0263	.0160	.0004	.0002	.0008	.0005	.03
%RSD	57.65	33.96	47.39	54.58	69.50	37.24	111.5	1456.	.2673
#1	.0007	-.0079	-.0737	-.0374	.0002	.0006	-.0015	-.0006	11.86
#2	.0014	-.0066	-.0254	-.0394	.0006	.0007	-.0004	.0003	11.88
#3	.0025	-.0124	-.0675	-.0108	.0010	.0003	-.0001	.0004	11.82

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0139**	**.0019**	**.0026**	**-.0005**	**.0003**	**-.0028**
Stddev	.0003	.0004	.0000	.0011	.0011	.0012	.0027
%RSD	131.8	2.523	1.789	40.79	229.6	373.1	95.21
#1	.0001	.0141	.0019	.0015	-.0018	-.0001	-.0031
#2	.0005	.0135	.0019	.0036	.0002	-.0006	-.0053
#3	.0000	.0141	.0019	.0027	.0001	.0017	-.0000

Zoom In Zoom Out

Sample Name: srconf Acquired: 5/2/2019 19:54:49 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**157380.**	**24326.**	**6399.3**	**9965.8**
Stddev	405.	110.	16.9	19.3
%RSD	.25733	.45362	.26390	.19324
#1	157350.	24441.	6410.3	9978.5
#2	157800.	24220.	6407.7	9975.1
#3	156990.	24317.	6379.8	9943.6

Zoom In Zoom Out

Sample Name: coconf Acquired: 5/2/2019 20:00:06 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	F **10.96**	**.0003**	**.0002**	**-.0000**	**-.0016**	**-.0001**
Stddev	.0002	.0000	.0002	.01	.0002	.0002	.0000	.0003	.0001
%RSD	341.9	37.58	60.65	.0564	56.50	86.95	70.05	18.76	119.1
#1	.0000	.0000	-.0003	10.96	.0005	.0003	-.0000	-.0018	.0000
#2	.0001	.0001	-.0002	10.95	.0003	.0000	-.0000	-.0018	-.0001
#3	-.0002	.0001	-.0006	10.96	.0002	.0004	-.0000	-.0013	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0008**	**.0042**	**-.0012**	**.0003**	**.0019**	**-.0167**	**.0356**
Stddev	.0001	.0000	.0008	.0015	.0005	.0022	.0003	.0072	.0016
%RSD	93.37	51.64	99.42	35.12	42.08	862.2	15.55	43.35	4.550
#1	.0000	.0000	.0006	.0026	-.0011	-.0023	.0016	-.0109	.0339
#2	.0001	.0001	.0001	.0044	-.0008	.0012	.0019	-.0144	.0357
#3	.0002	.0001	.0016	.0055	-.0018	.0018	.0021	-.0248	.0372

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.0003**	**-.1819**	**-.0451**	**-.0002**	**.0004**	**.0010**	**-.0008**	**.0000**
Stddev	.0019	.0036	.0244	.0076	.0004	.0004	.0005	.0002	.0001
%RSD	303.8	1415.	13.39	16.85	222.1	110.7	49.83	28.59	408.8
#1	.0006	-.0042	-.2087	-.0523	-.0006	.0001	.0006	-.0005	-.0000
#2	-.0029	.0028	-.1610	-.0372	.0001	.0008	.0015	-.0008	.0002
#3	.0004	.0006	-.1762	-.0459	-.0000	.0002	.0008	-.0010	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0121**	**.0001**	**.0038**	**.0024**	**.0016**	**.0224**
Stddev	.0001	.0005	.0001	.0019	.0005	.0015	.0008
%RSD	54.57	3.958	130.2	49.40	22.49	91.68	3.668
#1	-.0001	.0123	-.0000	.0059	.0027	.0026	.0220
#2	-.0003	.0115	.0002	.0024	.0018	-.0001	.0233
#3	-.0003	.0124	.0001	.0030	.0027	.0023	.0218

Zoom In Zoom Out

Sample Name: coconf Acquired: 5/2/2019 20:00:06 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**157390.**	**24102.**	**6410.3**	**10086.**
Stddev	436.	166.	11.2	18.
%RSD	.27731	.68754	.17513	.18263
#1	157110.	23925.	6397.5	10066.
#2	157170.	24125.	6415.0	10101.
#3	157890.	24254.	6418.4	10092.

Zoom In Zoom Out

Sample Name: alconf Acquired: 5/2/2019 20:05:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0000**	**-.0000**	**-.0011**	**-.0013**	**-.0003**	**.0027**
Stddev	.0002	.0000	.0002	.0002	.0001	.0000	.0000	.0002	.0003
%RSD	108.8	151.5	366.2	530.7	301.5	3.043	.5179	52.27	9.842
#1	-.0003	.0000	.0001	-.0003	.0001	-.0012	-.0013	-.0003	.0026
#2	.0001	-.0001	-.0002	-.0000	-.0001	-.0012	-.0013	-.0005	.0024
#3	-.0004	-.0000	-.0000	.0002	-.0001	-.0011	-.0013	-.0001	.0029

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0010**	**.0007**	**.0019**	**.0030**	**-.0039**	**-.0026**	F **508.1**	**.0004**
Stddev	.0003	.0001	.0007	.0010	.0007	.0034	.0033	6.2	.0004
%RSD	61.63	13.17	103.8	53.36	24.91	86.45	129.8	1.227	99.77
#1	-.0009	-.0011	-.0001	.0029	.0037	-.0006	-.0036	514.4	-.0000
#2	-.0004	-.0009	.0009	.0008	.0022	-.0037	-.0052	507.8	.0008
#3	-.0003	-.0009	.0012	.0021	.0029	-.0074	.0012	501.9	.0005

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**-.0822**	**-.0048**	**.0005**	**.0001**	**.0050**	**-.0030**	**.0001**
Stddev	.0018	.0178	.0237	.0080	.0005	.0005	.0017	.0008	.0001
%RSD	920.5	84380.	28.83	165.2	103.5	426.1	33.36	26.15	63.78
#1	.0022	.0123	-.1094	-.0124	.0009	.0007	.0037	-.0033	.0001
#2	-.0010	-.0204	-.0665	-.0057	-.0000	.0001	.0068	-.0036	.0002
#3	-.0006	.0082	-.0706	.0035	.0005	-.0004	.0043	-.0021	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0029**	**.0001**	**.0052**	**-.0045**	**.0006**	**.0078**
Stddev	.0001	.0024	.0000	.0032	.0007	.0013	.0025
%RSD	17.53	81.01	48.12	61.42	15.28	203.8	32.26
#1	.0006	.0052	.0001	.0059	-.0053	-.0007	.0050
#2	.0007	.0031	.0001	.0081	-.0039	.0007	.0088
#3	.0005	.0005	.0001	.0017	-.0045	.0019	.0097

Zoom In Zoom Out

Sample Name: alconf Acquired: 5/2/2019 20:05:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**144230.**	**24562.**	**6364.4**	**9177.9**
Stddev	238.	76.	4.5	2.4
%RSD	.16501	.30849	.07026	.02661
#1	143970.	24483.	6367.0	9176.4
#2	144430.	24572.	6359.3	9176.5
#3	144280.	24633.	6367.0	9180.7

Zoom In Zoom Out

Sample Name: caconf Acquired: 5/2/2019 20:10:23 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0000**	**.0003**	**.0012**	**.0005**	**.0001**	**.0002**
Stddev	.0001	.0001	.0002	.0003	.0001	.0001	.0000	.0001	.0003
%RSD	91.52	90.89	327.2	607.8	42.42	12.76	8.235	228.4	144.7
#1	-.0002	.0002	.0000	.0003	.0003	.0012	.0004	.0002	-.0000
#2	-.0000	.0001	.0002	-.0002	.0002	.0010	.0005	.0001	.0001
#3	-.0000	-.0000	-.0001	-.0002	.0004	.0013	.0004	-.0001	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0016**	**-.0012**	**.0008**	**-.0018**	**-.0012**	**-.0003**	**.0183**	F **424.6**
Stddev	.0001	.0001	.0007	.0007	.0017	.0025	.0003	.0055	10.6
%RSD	71.19	4.437	64.99	97.09	89.60	209.0	108.9	30.07	2.504
#1	-.0003	.0016	-.0018	.0016	-.0011	-.0021	-.0007	.0151	413.7
#2	-.0002	.0015	-.0013	.0002	-.0007	.0016	.0000	.0152	425.1
#3	-.0000	.0016	-.0003	.0005	-.0037	-.0030	-.0003	.0247	435.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0062**	**.0073**	**-.0942**	**-.0968**	**.0008**	**.0003**	**.0048**	**-.0022**	**-.0002**
Stddev	.0008	.0056	.0480	.0095	.0003	.0002	.0003	.0001	.0002
%RSD	12.55	76.89	50.96	9.782	40.68	84.72	5.989	6.599	72.96
#1	-.0066	.0025	-.1002	-.1047	.0006	.0006	.0044	-.0024	-.0000
#2	-.0068	.0135	-.1388	-.0994	.0006	.0001	.0050	-.0021	-.0003
#3	-.0053	.0059	-.0435	-.0863	.0012	.0002	.0049	-.0022	-.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.0027**	**-.0000**	**-.0046**	**.0014**	**.0136**	**.0008**
Stddev	.0004	.0005	.0001	.0033	.0010	.0025	.0013
%RSD	43.09	17.82	249.0	70.60	72.44	18.17	177.3
#1	-.0006	.0032	.0001	-.0025	.0007	.0115	-.0007
#2	-.0009	.0023	-.0001	-.0030	.0027	.0163	.0020
#3	-.0014	.0026	-.0001	-.0084	.0010	.0129	.0009

Zoom In Zoom Out

Sample Name: caconf Acquired: 5/2/2019 20:10:23 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**143180.**	**23350.**	**5875.2**	**8708.7**
Stddev	317.	103.	3.1	5.5
%RSD	.22167	.44307	.05276	.06282
#1	142810.	23437.	5875.4	8702.6
#2	143410.	23379.	5878.3	8710.3
#3	143310.	23236.	5872.1	8713.2

Zoom In Zoom Out

Sample Name: sconf Acquired: 5/2/2019 20:15:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0000**	**-.0000**	**.0000**	**-.0001**	**.0004**	**.0000**	**-.0002**	**.0002**
Stddev	.0001	.0000	.0001	.0001	.0003	.0003	.0000	.0002	.0005
%RSD	18.61	193.8	117.2	21040.	644.0	64.13	224.6	99.16	229.0
#1	-.0003	.0000	-.0001	-.0001	-.0000	.0002	.0000	-.0004	.0007
#2	-.0005	-.0000	.0000	.0002	-.0004	.0007	.0000	-.0001	.0003
#3	-.0004	-.0000	-.0000	-.0001	.0003	.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	**-.0003**	**-.0001**	**-.0010**	**.0003**	**-.0012**	**-.0017**	**-.0007**	**-.0064**	**.0381**
Stddev	.0004	.0001	.0004	.0008	.0011	.0020	.0007	.0019	.0010
%RSD	116.4	37.83	42.74	313.7	90.06	117.5	89.17	29.95	2.682
#1	-.0008	-.0002	-.0005	-.0002	.0000	-.0017	-.0003	-.0042	.0388
#2	.0000	-.0001	-.0012	.0012	-.0018	.0003	-.0004	-.0076	.0369
#3	-.0003	-.0002	-.0013	-.0002	-.0019	-.0038	-.0015	-.0074	.0385

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0052**	**-.0792**	**-.0220**	**.0003**	**.0003**	**.0024**	**-.0012**	**.0001**
Stddev	.0023	.0075	.0344	.0018	.0002	.0004	.0017	.0004	.0001
%RSD	426.1	143.7	43.47	8.158	63.58	139.0	71.80	34.36	64.37
#1	.0003	.0024	-.0882	-.0210	.0004	-.0000	.0040	-.0007	.0002
#2	-.0031	-.0054	-.0412	-.0209	.0003	.0002	.0006	-.0015	.0000
#3	.0012	-.0126	-.1082	-.0241	.0001	.0008	.0025	-.0013	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0023**	**.0002**	**93.19**	**-.0005**	**-.0001**	**.0121**
Stddev	.0001	.0011	.0002	.06	.0013	.0008	.0015
%RSD	21.92	49.42	99.67	.0627	267.6	561.3	12.48
#1	.0003	.0035	-.0000	93.26	-.0018	-.0010	.0138
#2	.0003	.0013	.0003	93.16	.0007	.0000	.0117
#3	.0002	.0020	.0002	93.15	-.0003	.0005	.0109

Zoom In Zoom Out

Sample Name: sconf Acquired: 5/2/2019 20:15:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159950.**	**24440.**	**6485.3**	**10137.**
Stddev	536.	133.	18.5	27.
%RSD	.33534	.54307	.28546	.26316
#1	159610.	24425.	6499.5	10163.
#2	159680.	24316.	6464.3	10109.
#3	160570.	24580.	6492.1	10139.

Zoom In Zoom Out

Sample Name: zrconf Acquired: 5/2/2019 20:20:45 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**.0001**	**-.0011**	**.0022**	**.0009**	**-.0003**	**-.0015**
Stddev	.0006	.0000	.0002	.0002	.0002	.0006	.0001	.0002	.0015
%RSD	182.3	75.02	344.0	230.5	22.35	26.16	6.545	58.61	96.86
#1	.0003	-.0001	.0002	-.0002	-.0008	.0018	.0009	-.0002	-.0001
#2	-.0009	-.0000	.0001	.0002	-.0011	.0020	.0008	-.0005	-.0030
#3	-.0003	-.0001	-.0001	.0002	-.0013	.0029	.0009	-.0002	-.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0026**	**.0005**	**-.0011**	**.0002**	**-.0002**	**.0006**	**.0153**	**.0284**
Stddev	.0003	.0000	.0003	.0005	.0003	.0011	.0005	.0121	.0012
%RSD	21.40	1.626	49.45	44.42	193.0	509.4	89.25	78.87	4.139
#1	.0015	.0026	.0004	-.0013	.0005	.0010	.0005	.0179	.0271
#2	.0010	.0025	.0008	-.0005	-.0001	-.0004	.0001	.0022	.0293
#3	.0010	.0026	.0003	-.0015	.0000	-.0012	.0011	.0260	.0288

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**-.0001**	**-.0138**	**-.0205**	**.0006**	**-.0001**	**.0002**	**-.0002**	**.0003**
Stddev	.0009	.0094	.0289	.0050	.0005	.0002	.0009	.0003	.0001
%RSD	35.92	13720.	209.5	24.49	85.44	267.2	383.9	198.0	33.28
#1	.0016	.0052	-.0346	-.0154	.0003	.0000	.0012	-.0005	.0002
#2	.0023	-.0109	-.0261	-.0205	.0003	.0001	-.0000	.0002	.0004
#3	.0033	.0055	.0192	-.0254	.0012	-.0003	-.0005	-.0002	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0015**	F **11.01**	**.0136**	**-.0012**	**.0014**	**-.0077**
Stddev	.0001	.0008	.19	.0002	.0001	.0014	.0006
%RSD	18.31	55.20	1.729	1.404	7.072	102.1	7.925
#1	.0006	.0022	10.80	.0136	-.0012	-.0000	-.0076
#2	.0007	.0019	11.18	.0137	-.0012	.0029	-.0072
#3	.0008	.0006	11.05	.0133	-.0013	.0014	-.0084

Zoom In Zoom Out

Sample Name: zrconf Acquired: 5/2/2019 20:20:45 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156500.**	**24310.**	**6388.6**	**10007.**
Stddev	368.	151.	21.2	34.
%RSD	.23545	.61917	.33180	.33595
#1	156870.	24137.	6409.9	10037.
#2	156130.	24377.	6388.4	10013.
#3	156490.	24414.	6367.6	9970.3

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 20:26:04 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.040**	**2.086**	**2.036**	**2.057**	**2.043**	**2.025**	**2.076**	**2.065**	**.2512**
Stddev	.001	.004	.003	.004	.001	.003	.025	.003	.0004
%RSD	.0631	.2070	.1601	.1874	.0244	.1376	1.212	.1604	.1589
#1	2.041	2.090	2.033	2.055	2.043	2.023	2.104	2.062	.2513
#2	2.040	2.087	2.039	2.061	2.043	2.028	2.056	2.068	.2515
#3	2.038	2.081	2.035	2.054	2.044	2.024	2.068	2.063	.2507
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	**2.034**	**2.051**	**2.046**	**2.129**	**2.058**	**2.040**	**2.043**	**39.59**	**39.90**
Stddev	.002	.004	.005	.009	.003	.002	.005	.09	.06
%RSD	.1118	.1752	.2647	.4120	.1430	.0754	.2381	.2181	.1548
#1	2.032	2.048	2.041	2.123	2.055	2.041	2.042	39.67	39.96
#2	2.036	2.055	2.051	2.139	2.061	2.040	2.049	39.61	39.89
#3	2.034	2.050	2.045	2.124	2.058	2.038	2.039	39.50	39.84
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	**40.67**	**40.46**	**39.64**	**40.57**	**2.095**	**2.050**	**5.415**	**2.080**	**2.095**
Stddev	.08	.05	.10	.03	.004	.004	.008	.003	.003
%RSD	.1973	.1203	.2587	.0714	.1873	.1869	.1426	.1483	.1596
#1	40.75	40.42	39.73	40.60	2.091	2.048	5.411	2.078	2.099
#2	40.67	40.52	39.66	40.55	2.099	2.055	5.424	2.084	2.094
#3	40.59	40.44	39.53	40.55	2.096	2.048	5.410	2.078	2.093
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: 5/2/2019 20:26:04 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**2.009**	**2.067**	**2.076**	**2.028**	**2.025**	F **2.445**
Stddev	.003	.004	.003	.010	.003	.002	.023
%RSD	.1543	.1985	.1192	.4697	.1261	.1207	.9585
#1	2.055	2.004	2.065	2.066	2.025	2.028	2.423
#2	2.061	2.012	2.070	2.085	2.030	2.025	2.442
#3	2.058	2.011	2.067	2.078	2.027	2.023	2.469
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**148890.**	**23635.**	**6116.5**	**9140.2**
Stddev	130.	42.	12.8	22.7
%RSD	.08704	.17585	.20910	.24869
#1	149030.	23673.	6125.8	9157.9
#2	148820.	23642.	6102.0	9114.6
#3	148800.	23591.	6121.9	9148.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 20:31:05 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**-.0001**	**.0000**	**.0000**	**-.0001**	**.0003**
Stddev	.0002	.0000	.0001	.0001	.0002	.0001	.0000	.0002	.0005
%RSD	138.8	64.46	217.2	158.7	247.5	415.1	90.41	112.0	148.8
#1	.0001	.0001	-.0001	-.0000	-.0001	.0002	.0000	-.0003	.0003
#2	-.0001	.0000	.0002	.0000	.0001	.0000	.0001	-.0001	-.0002
#3	-.0004	.0000	.0001	.0002	-.0003	-.0001	.0000	-.0000	.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**	**-.0004**	**.0004**	**-.0002**	**.0002**	**-.0024**	**-.0015**	**-.0108**	**-.0030**
Stddev	.0001	.0001	.0005	.0010	.0003	.0006	.0014	.0012	.0014
%RSD	159.5	16.06	119.8	680.0	131.2	26.49	93.30	10.86	47.15
#1	-.0001	-.0004	.0009	-.0006	.0006	-.0027	-.0008	-.0118	-.0046
#2	.0000	-.0005	.0001	.0010	.0002	-.0029	-.0030	-.0112	-.0020
#3	-.0001	-.0003	.0001	-.0009	-.0000	-.0017	-.0006	-.0095	-.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	**-.0001**	**-.0014**	**-.0426**	**-.0078**	**.0023**	**.0006**	**.0021**	**-.0006**	**.0001**
Stddev	.0024	.0109	.0190	.0058	.0006	.0001	.0012	.0007	.0001
%RSD	1804.	797.1	44.60	74.74	25.75	20.79	56.97	132.7	77.22
#1	.0016	-.0086	-.0488	-.0128	.0029	.0007	.0032	-.0005	.0000
#2	-.0028	.0111	-.0578	-.0014	.0021	.0006	.0008	-.0013	.0001
#3	.0008	-.0066	-.0213	-.0091	.0018	.0005	.0024	.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: 5/2/2019 20:31:05 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0028**	**.0001**	**.0018**	**.0003**	**.0022**	**-.0091**
Stddev	.0002	.0007	.0001	.0013	.0013	.0012	.0005
%RSD	85.37	24.05	96.04	70.09	473.2	55.20	5.408
#1	.0000	.0035	.0001	.0024	.0015	.0022	-.0096
#2	.0003	.0021	.0003	.0027	-.0010	.0010	-.0092
#3	.0004	.0028	.0000	.0004	.0004	.0035	-.0086
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	**158390.**	**24187.**	**6458.4**	**10102.**
Stddev	712.	53.	93.5	120.
%RSD	.44979	.21906	1.4485	1.1922
#1	157590.	24181.	6389.5	10015.
#2	158940.	24242.	6564.9	10239.
#3	158660.	24136.	6420.8	10051.

Zoom In Zoom Out

Sample Name: jc86916-8 Acquired: 5/2/2019 20:36:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.265**	**.0070**	**.0091**	**.1110**	**.4601**	**.5047**	**4.067**	**.2017**	**.0055**
Stddev	.068	.0004	.0000	.0001	.0015	.0011	.017	.0005	.0013
%RSD	5.333	5.503	.3143	.0717	.3257	.2216	.4241	.2562	24.10
#1	1.296	.0072	.0090	.1109	.4587	.5042	4.070	.2011	.0059
#2	1.188	.0066	.0091	.1110	.4617	.5039	4.082	.2018	.0040
#3	1.312	.0073	.0090	.1111	.4600	.5060	4.048	.2021	.0066

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1816**	**2.660**	**.1388**	**.0029**	**1.135**	**.0099**	**.0028**	**89.25**	**21.74**
Stddev	.0007	.002	.0004	.0031	.002	.0031	.0010	4.82	1.14
%RSD	.3682	.0677	.2632	106.2	.1283	31.85	36.16	5.403	5.235
#1	.1812	2.659	.1392	.0015	1.134	.0069	.0019	91.60	22.31
#2	.1824	2.662	.1388	.0008	1.135	.0096	.0026	83.71	20.43
#3	.1812	2.661	.1385	.0065	1.136	.0132	.0039	92.45	22.47

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**152.1**	**24.87**	**10.03**	**2.590**	**.0326**	**.0053**	**1.513**	**.1077**	**.1429**
Stddev	4.6	1.29	.51	.121	.0008	.0001	.002	.0003	.0077
%RSD	3.020	5.206	5.079	4.688	2.370	2.118	.1438	.3077	5.375
#1	153.2	25.59	10.26	2.652	.0331	.0053	1.515	.1076	.1464
#2	147.0	23.38	9.448	2.451	.0330	.0052	1.511	.1074	.1340
#3	156.0	25.65	10.39	2.669	.0317	.0054	1.514	.1081	.1481

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.378**	**.0003**	**.0569**	**11.57**	**.0852**	**.1212**	**5.703**
Stddev	.002	.0003	.0003	.08	.0017	.0077	.037
%RSD	.0918	93.11	.6088	.6892	1.980	6.342	.6412
#1	2.376	.0005	.0569	11.52	.0852	.1267	5.701
#2	2.380	-.0000	.0565	11.52	.0868	.1124	5.668
#3	2.377	.0005	.0572	11.66	.0834	.1246	5.741

Zoom In Zoom Out

Sample Name: jc86916-8 Acquired: 5/2/2019 20:36:15 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**161830.**	**26577.**	**6669.5**	**9603.3**
Stddev	508.	1135.	8.5	7.7
%RSD	.31385	4.2700	.12791	.08015
#1	162280.	25880.	6661.7	9597.1
#2	161280.	27887.	6668.2	9601.0
#3	161950.	25965.	6678.6	9611.9

Zoom In Zoom Out

Sample Name: jc86916-10 Acquired: 5/2/2019 20:41:30 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.398**	**.0077**	**.0084**	**.0873**	**.2362**	**4.510**	**8.668**	**.2850**	**.0060**
Stddev	.024	.0001	.0005	.0009	.0007	.010	.110	.0007	.0006
%RSD	1.007	1.616	6.528	1.048	.2974	.2118	1.263	.2367	10.45
#1	2.371	.0077	.0090	.0868	.2362	4.500	8.773	.2852	.0053
#2	2.406	.0078	.0083	.0884	.2355	4.512	8.554	.2855	.0065
#3	2.417	.0075	.0079	.0868	.2369	4.519	8.676	.2843	.0062

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3319**	**3.743**	**.1113**	**.0029**	**9.247**	**.0079**	**.0181**	**102.5**	**132.1**
Stddev	.0004	.013	.0003	.0020	.032	.0036	.0014	1.2	1.5
%RSD	.1248	.3364	.2259	70.07	.3496	45.79	7.774	1.133	1.171
#1	.3322	3.752	.1116	.0006	9.276	.0063	.0182	101.2	130.4
#2	.3320	3.747	.1112	.0045	9.253	.0054	.0195	102.9	132.6
#3	.3314	3.728	.1112	.0035	9.212	.0121	.0167	103.4	133.4

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**286.8**	**56.39**	**20.68**	**1.864**	**.0589**	**.0156**	**1.714**	**.4179**	**.5289**
Stddev	3.1	.65	.24	.022	.0021	.0006	.011	.0002	.0060
%RSD	1.089	1.144	1.172	1.157	3.594	3.659	.6106	.0502	1.128
#1	283.3	55.65	20.41	1.848	.0610	.0149	1.723	.4181	.5222
#2	287.9	56.64	20.78	1.854	.0591	.0160	1.716	.4179	.5307
#3	289.2	56.87	20.86	1.888	.0567	.0158	1.702	.4177	.5337

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.293**	**.0179**	**.0771**	**10.19**	**.1900**	**.1727**	**5.012**
Stddev	.009	.0020	.0003	.03	.0061	.0019	.053
%RSD	.1737	10.97	.3532	.2774	3.196	1.077	1.064
#1	5.283	.0197	.0769	10.22	.1969	.1721	5.072
#2	5.295	.0182	.0771	10.19	.1878	.1748	4.994
#3	5.301	.0158	.0774	10.16	.1854	.1713	4.970

Zoom In Zoom Out

Sample Name: jc86916-10 Acquired: 5/2/2019 20:41:30 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**155600.**	**24807.**	**6393.1**	**9526.6**
Stddev	479.	196.	22.4	27.2
%RSD	.30767	.79081	.35075	.28602
#1	155600.	25020.	6382.7	9514.9
#2	156080.	24765.	6377.9	9507.2
#3	155130.	24635.	6418.9	9557.8

Zoom In Zoom Out

Sample Name: jc87182-1conf Acquired: 5/2/2019 20:46:35 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.6763**	**.0020**	**.0010**	**.0348**	**.0857**	**.0406**	**1.310**	**.0557**
Stddev	.0019	.0005	.0001	.0042	.0075	.0045	.112	.0002
%RSD	.2806	26.51	7.988	12.09	8.744	11.09	8.577	.3579
#1	.6770	.0023	.0010	.0327	.0785	.0416	1.197	.0559
#2	.6778	.0014	.0011	.0397	.0934	.0357	1.422	.0555
#3	.6742	.0024	.0010	.0321	.0851	.0446	1.310	.0556

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0061**	**.1206**	**.2676**	**.0175**	**-.0009**	**.0842**	**-.0035**	**.0008**
Stddev	.0103	.0107	.0015	.0018	.0061	.0028	.0054	.0013
%RSD	169.4	8.905	.5755	10.21	678.8	3.343	156.6	160.0
#1	.0005	.1097	.2670	.0170	.0017	.0858	-.0001	-.0003
#2	-.0179	.1312	.2665	.0160	-.0079	.0810	-.0098	.0023
#3	-.0008	.1209	.2694	.0195	.0035	.0859	-.0006	.0005

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.48**	**16.26**	**58.14**	**14.40**	**4.067**	**.6056**	**.0262**	**.0069**
Stddev	.23	.07	.23	.03	.028	.0035	.0003	.0005
%RSD	.4308	.4479	.3973	.2383	.6987	.5741	.9965	7.389
#1	54.69	16.33	58.33	14.43	4.041	.6096	.0265	.0071
#2	54.53	16.28	58.20	14.41	4.064	.6038	.0260	.0063
#3	54.23	16.19	57.88	14.37	4.097	.6034	.0261	.0073

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.872**	**.0216**	**.0891**	**3.277**	**.0017**	**.0102**	**3.168**	**.0369**
Stddev	.003	.0033	.0004	.291	.0016	.0017	.022	.1219
%RSD	.1821	15.18	.4261	8.875	94.46	16.18	.7111	330.1
#1	1.868	.0235	.0892	2.986	.0011	.0109	3.155	.0973
#2	1.871	.0178	.0895	3.568	.0034	.0083	3.154	-.1033
#3	1.875	.0235	.0888	3.279	.0005	.0114	3.194	.1168

Zoom In Zoom Out

Sample Name: jc87182-1conf Acquired: 5/2/2019 20:46:35 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1131**	**2.405**
Stddev	.0036	.033
%RSD	3.182	1.365
#1	.1104	2.396
#2	.1172	2.377
#3	.1116	2.441

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	*****	**25281.**	**6547.7**	**9605.0**
Stddev	-----	60.	57.3	63.9
%RSD	-----	.23611	.87493	.66556
#1	158710.	25273.	6580.7	9644.5
#2	-----	25345.	6580.9	9639.2
#3	147710.	25226.	6481.6	9531.2

Zoom In Zoom Out

Sample Name: jc87182-2conf Acquired: 5/2/2019 20:51:32 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.3351**	**.0015**	**.0003**	**.0219**	**.0578**	**.0283**	**.8134**	**.0384**	**.0005**
Stddev	.0026	.0000	.0001	.0002	.0004	.0000	.0019	.0002	.0003
%RSD	.7629	1.948	39.60	.8825	.6691	.0828	.2381	.5244	49.29
#1	.3358	.0015	.0004	.0219	.0579	.0283	.8145	.0382	.0007
#2	.3323	.0015	.0003	.0218	.0581	.0283	.8145	.0386	.0002
#3	.3372	.0015	.0002	.0222	.0574	.0283	.8112	.0384	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0895**	**.1388**	**.0201**	**.0021**	**.0562**	**-.0019**	**-.0006**	**35.12**	**12.92**
Stddev	.0004	.0002	.0002	.0006	.0009	.0014	.0010	.21	.08
%RSD	.4616	.1665	.7590	29.77	1.605	72.48	157.0	.5891	.5948
#1	.0898	.1391	.0200	.0028	.0570	-.0023	-.0013	35.10	12.92
#2	.0896	.1387	.0203	.0019	.0565	-.0032	-.0011	34.92	12.84
#3	.0890	.1388	.0202	.0016	.0552	-.0004	.0005	35.33	13.00

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**44.06**	**10.64**	**3.073**	**.5453**	**.0183**	**.0077**	**1.529**	**.0180**	**.0620**
Stddev	.31	.06	.039	.0128	.0004	.0001	.007	.0001	.0003
%RSD	.6956	.5969	1.283	2.342	2.444	1.894	.4655	.7478	.4266
#1	44.05	10.63	3.072	.5307	.0186	.0078	1.538	.0181	.0620
#2	43.77	10.59	3.033	.5546	.0178	.0077	1.526	.0179	.0617
#3	44.38	10.71	3.112	.5505	.0185	.0075	1.525	.0179	.0622

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.522**	**.0016**	**.0163**	**8.165**	**.0791**	**.0718**	**1.964**
Stddev	.008	.0014	.0001	.048	.0017	.0012	.009
%RSD	.3303	88.36	.7982	.5873	2.193	1.631	.4728
#1	2.525	.0015	.0165	8.205	.0797	.0730	1.967
#2	2.528	.0002	.0162	8.112	.0772	.0718	1.954
#3	2.512	.0031	.0163	8.178	.0805	.0706	1.972

Zoom In Zoom Out

Sample Name: jc87182-2conf Acquired: 5/2/2019 20:51:32 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160080.**	**25242.**	**6536.4**	**9745.3**
Stddev	222.	271.	15.6	17.0
%RSD	.13847	1.0739	.23811	.17479
#1	160270.	25207.	6518.7	9725.8
#2	160150.	25529.	6547.9	9752.8
#3	159840.	24990.	6542.5	9757.2

Zoom In Zoom Out

Sample Name: mp14628-mb1conf Acquired: 5/2/2019 20:56:31 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**-.0001**	**-.0001**	**.0001**	**.0006**	**.0000**	**-.0002**	**-.0000**
Stddev	.0001	.0001	.0001	.0000	.0001	.0004	.0000	.0002	.0003
%RSD	20.59	982.6	63.46	34.57	114.5	63.40	39.77	93.80	1813.
#1	-.0005	.0001	-.0001	-.0001	.0001	.0003	.0000	-.0001	.0002
#2	-.0004	-.0000	-.0002	-.0001	.0001	.0010	.0000	-.0003	.0001
#3	-.0004	-.0000	-.0000	-.0001	-.0000	.0005	.0000	-.0001	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0048**	**.0002**	**.0006**	**.0009**	**-.0014**	**-.0005**	**-.0002**	**.0064**
Stddev	.0003	.0001	.0003	.0009	.0006	.0008	.0008	.0069	.0012
%RSD	898.3	2.107	133.2	149.7	69.75	58.17	173.8	2767.	18.63
#1	-.0002	.0047	.0003	.0013	.0009	-.0005	-.0013	.0025	.0077
#2	.0003	.0047	-.0001	.0011	.0014	-.0017	-.0005	-.0081	.0061
#3	-.0002	.0049	.0005	-.0005	.0002	-.0020	.0004	.0049	.0054

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**.0010**	**-.1337**	**-.0282**	**.0006**	**.0006**	**.0084**	**-.0010**	**.0001**
Stddev	.0010	.0071	.0283	.0067	.0006	.0004	.0007	.0002	.0000
%RSD	32.63	691.4	21.20	23.64	105.5	62.24	8.792	22.44	21.27
#1	.0023	-.0071	-.1566	-.0270	.0006	.0009	.0080	-.0009	.0001
#2	.0044	.0057	-.1020	-.0354	-.0000	.0007	.0080	-.0013	.0001
#3	.0029	.0045	-.1424	-.0223	.0011	.0002	.0093	-.0009	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0016**	**.0001**	**.0023**	**-.0004**	**.0011**	**-.0087**
Stddev	.0001	.0012	.0002	.0007	.0005	.0025	.0008
%RSD	57.20	72.49	182.6	31.06	121.1	228.8	9.595
#1	.0002	.0024	-.0000	.0025	.0001	.0011	-.0085
#2	.0003	.0003	-.0000	.0015	-.0010	.0035	-.0097
#3	.0001	.0022	.0004	.0029	-.0004	-.0014	-.0080

Zoom In Zoom Out

Sample Name: mp14628-mb1conf Acquired: 5/2/2019 20:56:31 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159730.**	**24624.**	**6457.0**	**10121.**
Stddev	682.	201.	4.5	10.
%RSD	.42672	.81817	.07046	.09645
#1	160310.	24470.	6455.2	10112.
#2	159910.	24551.	6453.6	10121.
#3	158980.	24852.	6462.2	10131.

Zoom In Zoom Out

Sample Name: mp14558-mb1conf Acquired: 5/2/2019 21:01:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0001**	**.0008**	**.0018**	**.0003**	**.0001**	**.0002**
Stddev	.0002	.0000	.0001	.0002	.0002	.0002	.0000	.0001	.0001
%RSD	159.1	239.0	51.49	110.5	20.50	9.517	9.138	82.09	51.35
#1	-.0003	.0000	.0002	.0000	.0008	.0019	.0003	.0001	.0004
#2	.0001	-.0000	.0001	-.0003	.0006	.0019	.0004	.0000	.0002
#3	-.0001	-.0000	.0001	-.0002	.0009	.0016	.0003	.0002	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0028**	**-.0002**	**.0003**	**-.0008**	**-.0018**	**.0001**	**.0006**	**.0674**
Stddev	.0002	.0000	.0012	.0005	.0003	.0014	.0004	.0146	.0016
%RSD	147.3	1.498	726.5	189.6	32.66	75.67	325.8	2251.	2.408
#1	-.0004	.0028	.0004	.0001	-.0006	-.0028	.0002	-.0056	.0692
#2	.0000	.0028	-.0015	.0008	-.0011	-.0002	.0005	-.0098	.0660
#3	-.0001	.0028	.0006	-.0001	-.0007	-.0025	-.0003	.0173	.0671

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0240**	**.0147**	**-.0633**	**.0454**	**.0009**	**.0005**	**.0106**	**.0242**	**.0004**
Stddev	.0002	.0084	.0150	.0060	.0009	.0001	.0009	.0005	.0001
%RSD	1.016	57.23	23.73	13.13	98.09	23.02	8.090	2.260	22.38
#1	.0243	.0237	-.0555	.0521	.0018	.0005	.0096	.0236	.0004
#2	.0238	.0071	-.0538	.0405	-.0000	.0007	.0112	.0247	.0003
#3	.0240	.0132	-.0807	.0437	.0010	.0005	.0109	.0242	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0012**	**.0001**	**.0117**	**-.0002**	**.0008**	**.0190**
Stddev	.0000	.0004	.0001	.0025	.0004	.0013	.0029
%RSD	3.911	31.88	64.53	21.19	205.6	162.7	15.22
#1	.0007	.0008	.0001	.0131	-.0004	-.0006	.0157
#2	.0008	.0016	.0000	.0088	.0003	.0010	.0201
#3	.0007	.0011	.0001	.0131	-.0005	.0021	.0212

Zoom In Zoom Out

Sample Name: mp14558-mb1conf Acquired: 5/2/2019 21:01:39 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159520.**	**24757.**	**6428.3**	**10089.**
Stddev	769.	109.	59.6	79.
%RSD	.48180	.43985	.92709	.78073
#1	160190.	24693.	6434.4	10094.
#2	159680.	24883.	6484.6	10164.
#3	158680.	24695.	6365.9	10007.

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 21:06:49 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.029**	**2.085**	**2.057**	**2.074**	**2.039**	**2.020**	**2.099**	**2.073**	**.2513**
Stddev	.004	.003	.030	.024	.006	.004	.017	.023	.0005
%RSD	.1942	.1203	1.472	1.142	.3180	.2115	.7871	1.128	.1806
#1	2.031	2.088	2.040	2.060	2.046	2.022	2.118	2.057	.2518
#2	2.030	2.083	2.092	2.101	2.040	2.022	2.092	2.100	.2511
#3	2.024	2.084	2.039	2.060	2.033	2.015	2.088	2.062	.2509
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**	**2.071**	**2.062**	**2.132**	**2.067**	**2.054**	**2.062**	**39.43**	**39.89**
Stddev	.001	.030	.029	.023	.022	.031	.029	.05	.05
%RSD	.0584	1.450	1.408	1.084	1.064	1.488	1.427	.1304	.1290
#1	2.043	2.051	2.043	2.119	2.051	2.031	2.044	39.48	39.94
#2	2.043	2.106	2.095	2.159	2.092	2.088	2.096	39.38	39.85
#3	2.041	2.057	2.047	2.118	2.057	2.041	2.045	39.43	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	**40.49**	**40.39**	**39.31**	**40.26**	**2.113**	**2.077**	**5.467**	**2.109**	**2.084**
Stddev	.04	.06	.06	.08	.029	.031	.080	.032	.002
%RSD	.1010	.1524	.1452	.1899	1.374	1.484	1.454	1.495	.0819
#1	40.54	40.46	39.35	40.34	2.094	2.060	5.422	2.090	2.085
#2	40.47	40.39	39.24	40.25	2.147	2.113	5.558	2.145	2.083
#3	40.47	40.34	39.33	40.19	2.099	2.059	5.419	2.092	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: 5/2/2019 21:06:49 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**2.022**	**2.072**	**2.106**	**2.037**	**2.031**	F **2.609**
Stddev	.001	.028	.000	.029	.028	.002	.050
%RSD	.0295	1.380	.0195	1.365	1.374	.0779	1.918
#1	2.055	2.003	2.071	2.087	2.022	2.032	2.563
#2	2.055	2.054	2.072	2.139	2.069	2.029	2.662
#3	2.056	2.008	2.071	2.092	2.019	2.031	2.600
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**149380.**	**23877.**	**6075.7**	**9129.1**
Stddev	926.	89.	82.4	98.1
%RSD	.61992	.37171	1.3559	1.0748
#1	148370.	23895.	6136.0	9203.4
#2	149580.	23956.	5981.9	9017.9
#3	150180.	23781.	6109.4	9166.0

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 21:11:50 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**-.0000**	**.0005**	**.0000**	**-.0002**	**.0002**
Stddev	.0001	.0001	.0001	.0000	.0001	.0002	.0000	.0004	.0002
%RSD	65.78	102.6	56.55	13.41	547.8	39.05	29.52	249.1	119.9
#1	-.0002	-.0000	.0002	.0002	-.0002	.0006	.0000	-.0005	-.0001
#2	-.0000	.0001	.0001	.0002	.0001	.0003	.0000	-.0003	.0004
#3	-.0001	.0001	.0002	.0002	.0000	.0006	.0000	.0003	.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**	**-.0004**	**.0009**	**.0002**	**.0002**	**-.0008**	**.0001**	**-.0045**	**-.0023**
Stddev	.0002	.0001	.0005	.0004	.0006	.0022	.0005	.0031	.0018
%RSD	110.8	29.50	52.62	182.9	270.2	263.3	803.1	68.32	77.97
#1	-.0003	-.0004	.0014	-.0001	-.0000	.0014	.0003	-.0023	-.0010
#2	-.0003	-.0003	.0008	.0001	.0009	-.0029	-.0005	-.0080	-.0016
#3	.0001	-.0005	.0005	.0007	-.0002	-.0010	.0004	-.0032	-.0044
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	**-.0003**	**.0069**	**.0021**	**-.0080**	**.0020**	**.0006**	**.0010**	**-.0011**	**.0001**
Stddev	.0006	.0049	.0415	.0064	.0000	.0001	.0008	.0000	.0002
%RSD	191.0	71.19	1953.	79.87	1.863	15.59	86.60	3.703	102.6
#1	-.0003	.0033	-.0384	-.0128	.0019	.0005	.0000	-.0011	-.0000
#2	.0003	.0125	.0001	-.0106	.0020	.0006	.0016	-.0011	.0003
#3	-.0009	.0049	.0446	-.0007	.0020	.0007	.0013	-.0011	.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: 5/2/2019 21:11:50 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0017**	**.0001**	**-.0022**	**-.0008**	**.0023**	**-.0114**
Stddev	.0003	.0010	.0001	.0026	.0004	.0025	.0014
%RSD	104.8	59.23	64.96	120.3	46.73	104.8	11.92
#1	.0005	.0016	.0002	-.0003	-.0007	-.0003	-.0120
#2	-.0000	.0007	.0001	-.0052	-.0012	.0028	-.0099
#3	.0003	.0028	.0000	-.0010	-.0005	.0046	-.0124
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	**157570.**	**24143.**	**6384.7**	**10028.**
Stddev	981.	98.	12.1	6.
%RSD	.62263	.40726	.18916	.06106
#1	158700.	24030.	6398.5	10035.
#2	157080.	24190.	6376.0	10027.
#3	156930.	24209.	6379.5	10023.

Zoom In Zoom Out

Sample Name: jc86821-9 Acquired: 5/2/2019 21:16:58 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 100.000000
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	**66.63**	**.0053**	**.0531**	**.2255**	**1.151**	**273.0**	**13.26**	**1.964**	**.0598**
Stddev	.17	.0021	.0187	.0167	.042	.4	.05	.017	.0172
%RSD	.2573	39.30	35.24	7.404	3.681	.1599	.3942	.8717	28.76
#1	66.56	.0062	.0625	.2415	1.144	273.5	13.24	1.982	.0688
#2	66.51	.0029	.0315	.2268	1.112	272.6	13.22	1.961	.0400
#3	66.83	.0068	.0652	.2082	1.196	272.8	13.32	1.949	.0706

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2576**	**265.6**	**.3057**	**.0482**	**449.7**	**-.1169**	**.1400**	**73.30**	**101.2**
Stddev	.0234	.5	.1132	.0729	1.1	.0366	.2496	.19	.2
%RSD	9.074	.1869	37.03	151.2	.2518	31.35	178.2	.2599	.1635
#1	.2819	265.0	.2105	.0137	448.5	-.0805	.3446	73.23	101.0
#2	.2558	265.9	.2756	.1319	449.8	-.1164	.2135	73.51	101.4
#3	.2352	265.9	.4309	-.0010	450.7	-.1538	-.1380	73.15	101.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**319.5**	**190.6**	**.1864**	**.8817**	**1.043**	**.0442**	**2.589**	**8.422**	**2.826**
Stddev	.1	1.4	1.787	.6936	.019	.0188	.072	.050	.009
%RSD	.0320	.7328	958.6	78.67	1.785	42.57	2.782	.5922	.3164
#1	319.6	191.0	1.412	.5777	1.061	.0272	2.622	8.368	2.832
#2	319.4	191.7	1.011	1.675	1.042	.0410	2.506	8.433	2.816
#3	319.4	189.0	-1.864	.3920	1.024	.0644	2.638	8.466	2.831

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.00**	**-.0717**	**.0671**	**20.09**	**.6190**	**.0333**	**19.61**
Stddev	.07	.1693	.0086	.18	.1292	.1645	.28
%RSD	.3887	236.0	12.81	.8983	20.87	494.7	1.426
#1	17.05	-.2155	.0623	20.03	.7680	.0855	19.55
#2	16.93	.1149	.0620	19.94	.5495	-.1510	19.92
#3	17.02	-.1147	.0770	20.29	.5394	.1653	19.37

Zoom In Zoom Out

Sample Name: jc86821-9 Acquired: 5/2/2019 21:16:58 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 100.000000
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	**158460.**	**24258.**	**6433.3**	**10055.**
Stddev	387.	69.	20.2	25.
%RSD	.24424	.28604	.31398	.25270
#1	158880.	24183.	6428.9	10055.
#2	158390.	24268.	6415.6	10029.
#3	158120.	24321.	6455.3	10080.

Zoom In Zoom Out

Sample Name: jc86821-11 Acquired: 5/2/2019 21:22:02 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 50.000000
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	**42.86**	**.0011**	**.0679**	**.2091**	**1.804**	**264.9**	**7.584**	**2.361**	**.0528**
Stddev	.03	.0017	.0046	.0086	.006	.4	.008	.018	.0250
%RSD	.0730	145.7	6.746	4.135	.3429	.1598	.1021	.7505	47.47
#1	42.83	.0029	.0654	.2074	1.800	264.6	7.586	2.378	.0364
#2	42.87	.0008	.0651	.2014	1.802	265.4	7.591	2.363	.0816
#3	42.89	-.0003	.0731	.2184	1.811	264.8	7.576	2.343	.0403

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1158**	**213.9**	**.3542**	**-.0335**	**125.1**	**.1078**	**.0587**	**42.80**	**89.98**
Stddev	.0090	1.6	.0587	.0458	.8	.0560	.0627	.49	.17
%RSD	7.752	.7423	16.57	137.0	.6270	51.98	106.8	1.155	.1933
#1	.1186	215.1	.3073	-.0782	125.7	.0514	.0788	42.46	89.90
#2	.1058	214.5	.3354	-.0356	125.3	.1086	-.0116	42.58	90.18
#3	.1231	212.1	.4200	.0134	124.2	.1634	.1090	43.37	89.87

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**275.2**	**242.8**	**3.234**	**.9004**	**.3831**	**.0194**	**2.101**	**7.818**	**1.194**
Stddev	.3	1.0	1.092	.2711	.0337	.0114	.048	.087	.001
%RSD	.1147	.4068	33.75	30.11	8.803	59.01	2.286	1.109	.0810
#1	274.8	243.8	2.900	1.090	.3653	.0284	2.046	7.890	1.196
#2	275.4	241.8	2.349	.5898	.3620	.0065	2.122	7.841	1.194
#3	275.3	242.8	4.454	1.022	.4220	.0232	2.135	7.722	1.194

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.82**	**-.2426**	**.0408**	**30.37**	**.4254**	**.0454**	**12.18**
Stddev	.02	.0138	.0041	.51	.1623	.0603	.02
%RSD	.2277	5.670	10.13	1.678	38.15	132.7	.1473
#1	10.81	-.2440	.0455	30.52	.6085	.1137	12.16
#2	10.85	-.2282	.0389	30.79	.2990	.0230	12.18
#3	10.81	-.2556	.0379	29.80	.3688	-.0004	12.20

Zoom In Zoom Out

Sample Name: jc86821-11 Acquired: 5/2/2019 21:22:02 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 50.000000
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	**157530.**	**24260.**	**6394.1**	**9978.2**
Stddev	531.	207.	41.9	57.3
%RSD	.33711	.85461	.65592	.57450
#1	158060.	24190.	6371.7	9946.2
#2	156990.	24096.	6368.0	9943.9
#3	157550.	24493.	6442.5	10044.

Zoom In Zoom Out

Sample Name: mp14554-mb1conf Acquired: 5/2/2019 21:27:05 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**-.0007**	**-.0000**	**.0001**	**.0000**	**.0002**	**.0004**	**.0000**	**.0001**	**.0001**
Stddev	.0001	.0000	.0001	.0002	.0000	.0001	.0000	.0003	.0004
%RSD	11.07	2693.	135.8	533.0	21.25	33.09	160.2	196.0	270.8
#1	-.0008	-.0000	-.0000	.0002	.0002	.0003	-.0000	.0003	.0001
#2	-.0007	-.0000	.0001	-.0002	.0001	.0005	.0000	-.0002	-.0002
#3	-.0007	.0000	.0002	.0002	.0002	.0005	.0000	.0003	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0007**	**-.0006**	**-.0000**	**.0003**	**.0002**	**-.0003**	**-.0027**	**.0056**
Stddev	.0002	.0000	.0002	.0005	.0004	.0010	.0006	.0070	.0013
%RSD	67.23	1.506	35.67	4578.	150.3	516.9	210.8	254.1	22.78
#1	-.0003	.0007	-.0005	.0006	-.0002	.0012	-.0009	.0018	.0066
#2	-.0001	.0007	-.0005	-.0003	.0006	.0001	-.0001	-.0108	.0042
#3	-.0003	.0007	-.0009	-.0004	.0005	-.0007	.0002	.0007	.0059

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**-.0036**	**-.1176**	**-.0260**	**.0011**	**.0004**	**.0092**	**-.0008**	**.0000**
Stddev	.0008	.0100	.0171	.0084	.0004	.0001	.0002	.0003	.0001
%RSD	38.43	279.7	14.57	32.25	40.52	21.64	1.732	36.48	438.2
#1	.0029	-.0122	-.1155	-.0292	.0006	.0005	.0091	-.0009	.0000
#2	.0013	-.0059	-.1357	-.0322	.0012	.0004	.0090	-.0005	.0001
#3	.0020	.0074	-.1016	-.0165	.0015	.0003	.0093	-.0011	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0016**	**.0001**	**.0015**	**-.0004**	**.0021**	**-.0099**
Stddev	.0001	.0004	.0001	.0026	.0001	.0016	.0024
%RSD	78.97	27.44	87.66	166.6	27.61	73.96	23.74
#1	.0002	.0011	.0002	-.0007	-.0004	.0036	-.0087
#2	.0000	.0018	.0000	.0043	-.0003	.0005	-.0084
#3	.0001	.0020	.0001	.0010	-.0005	.0023	-.0126

Zoom In Zoom Out

Sample Name: mp14554-mb1conf Acquired: 5/2/2019 21:27:05 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**161140.**	**24747.**	**6461.5**	**10120.**
Stddev	256.	34.	16.0	16.
%RSD	.15911	.13883	.24703	.15480
#1	161090.	24772.	6469.1	10123.
#2	160910.	24761.	6472.3	10134.
#3	161420.	24708.	6443.2	10103.

Zoom In Zoom Out

Sample Name: jc86821-16 Acquired: 5/2/2019 21:32:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**-.0000**	**.0004**	**.0003**	**.0005**	**.0008**	**.0015**	**.0000**
Stddev	.0001	.0000	.0001	.0001	.0001	.0004	.0000	.0002	.0003
%RSD	26.44	32.84	373.5	17.13	41.34	74.67	3.672	15.24	1043.
#1	.0003	.0000	.0001	.0004	.0004	.0009	.0008	.0017	.0001
#2	.0002	.0000	-.0001	.0004	.0004	.0003	.0009	.0017	.0003
#3	.0003	.0000	-.0001	.0003	.0002	.0003	.0008	.0013	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0213**	**.0006**	**-.0003**	**-.0001**	**-.0020**	**-.0002**	**-.0068**	**.1830**
Stddev	.0001	.0001	.0004	.0014	.0008	.0016	.0008	.0070	.0049
%RSD	272.2	.4409	66.59	434.4	932.1	77.43	498.2	102.5	2.670
#1	.0001	.0212	.0004	-.0005	-.0010	-.0003	-.0002	-.0025	.1826
#2	.0002	.0212	.0004	-.0017	.0004	-.0023	-.0009	-.0149	.1881
#3	-.0001	.0214	.0011	.0012	.0003	-.0034	.0007	-.0030	.1784

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105**	**.0137**	**-.0844**	**.0148**	**.0009**	**.0003**	**.0689**	**-.0010**	**.0035**
Stddev	.0003	.0093	.0188	.0019	.0005	.0003	.0004	.0003	.0002
%RSD	2.543	68.13	22.29	12.59	54.03	106.7	.5890	30.06	4.972
#1	.0106	.0031	-.0631	.0127	.0006	.0002	.0692	-.0009	.0034
#2	.0108	.0173	-.0988	.0158	.0008	.0001	.0684	-.0008	.0037
#3	.0102	.0206	-.0913	.0160	.0015	.0007	.0690	-.0014	.0033

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0020**	**.0001**	**.0027**	**-.0004**	**.0006**	**-.0110**
Stddev	.0004	.0006	.0001	.0014	.0002	.0010	.0012
%RSD	79.44	30.05	106.3	51.03	65.08	171.4	10.97
#1	.0003	.0016	.0001	.0039	-.0005	.0015	-.0100
#2	.0002	.0026	.0000	.0029	-.0001	.0007	-.0106
#3	.0009	.0016	.0000	.0012	-.0005	-.0004	-.0123

Zoom In Zoom Out

Sample Name: jc86821-16 Acquired: 5/2/2019 21:32:13 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**161110.**	**24217.**	**6490.7**	**10180.**
Stddev	744.	394.	24.7	35.
%RSD	.46192	1.6284	.38021	.34564
#1	161600.	24326.	6489.7	10174.
#2	161470.	23780.	6515.8	10218.
#3	160250.	24545.	6466.5	10148.

Zoom In Zoom Out

Sample Name: jc86843-2 Acquired: 5/2/2019 21:37:18 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**.0005**	**.0005**	**.0003**	**.0002**
Stddev	.0003	.0000	.0001	.0002	.0002	.0002	.0000	.0002	.0003
%RSD	188.0	119.1	278.7	303.9	655.3	42.46	7.009	60.28	168.4
#1	.0004	-.0000	.0001	.0001	-.0000	.0002	.0006	.0004	.0004
#2	.0004	.0000	-.0001	.0002	-.0002	.0006	.0006	.0001	.0004
#3	-.0002	-.0000	.0001	-.0001	.0003	.0005	.0005	.0004	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0135**	**.0001**	**.0006**	**-.0001**	**-.0020**	**.0001**	**-.0125**	**.0928**
Stddev	.0001	.0001	.0007	.0012	.0011	.0014	.0007	.0076	.0010
%RSD	138.7	.7928	796.5	203.6	2154.	68.85	1240.	61.03	1.080
#1	.0001	.0136	.0004	-.0000	.0009	-.0023	-.0003	-.0110	.0929
#2	-.0000	.0136	.0007	.0019	-.0013	-.0031	.0009	-.0057	.0918
#3	.0001	.0134	-.0007	-.0002	.0003	-.0005	-.0005	-.0208	.0938

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0148**	**-.1322**	**-.0296**	**.0014**	**.0002**	**.0592**	**-.0011**	**.0004**
Stddev	.0018	.0166	.0245	.0046	.0006	.0003	.0001	.0004	.0000
%RSD	398.8	112.5	18.51	15.39	41.71	126.4	.2462	33.73	5.947
#1	.0024	.0029	-.1064	-.0248	.0015	.0005	.0591	-.0015	.0004
#2	-.0013	.0076	-.1551	-.0299	.0019	-.0001	.0592	-.0011	.0004
#3	.0002	.0338	-.1350	-.0339	.0007	.0004	.0594	-.0008	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0016**	**.0001**	**.0020**	**.0006**	**.0012**	**-.0114**
Stddev	.0001	.0011	.0001	.0011	.0012	.0014	.0024
%RSD	17.44	68.74	98.53	53.39	182.5	111.0	20.56
#1	.0005	.0004	.0000	.0031	-.0007	.0010	-.0129
#2	.0004	.0025	.0003	.0011	.0011	.0027	-.0087
#3	.0004	.0018	.0001	.0017	.0015	-.0000	-.0127

Zoom In Zoom Out

Sample Name: jc86843-2 Acquired: 5/2/2019 21:37:18 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158870.**	**24502.**	**6425.2**	**10085.**
Stddev	1348.	91.	13.3	10.
%RSD	.84829	.37000	.20663	.09594
#1	160010.	24451.	6425.6	10082.
#2	159220.	24607.	6411.8	10077.
#3	157390.	24449.	6438.3	10096.

Zoom In Zoom Out

Sample Name: jc86843-3 Acquired: 5/2/2019 21:42:22 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.1312**	**.0004**	**.0001**	**.0046**	**.0321**	**.0231**	**1.933**	**.0105**	**.0004**
Stddev	.0001	.0001	.0002	.0001	.0000	.0005	.006	.0004	.0002
%RSD	.0439	21.83	187.6	1.418	.0758	2.290	.2903	3.589	48.73
#1	.1313	.0004	.0003	.0046	.0321	.0233	1.927	.0101	.0002
#2	.1313	.0003	.0001	.0046	.0321	.0236	1.938	.0106	.0003
#3	.1312	.0004	-.0001	.0045	.0321	.0226	1.932	.0108	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0191**	**.0480**	**.0028**	**.0000**	**.0259**	**-.0020**	**.0040**	**11.93**	**17.03**
Stddev	.0002	.0009	.0009	.0002	.0013	.0009	.0007	.01	.02
%RSD	.7885	1.871	32.59	611.9	5.196	44.58	16.54	.0597	.1432
#1	.0190	.0491	.0018	.0002	.0272	-.0028	.0033	11.93	17.00
#2	.0193	.0475	.0032	-.0002	.0245	-.0010	.0044	11.93	17.05
#3	.0191	.0476	.0035	.0001	.0260	-.0022	.0044	11.92	17.03

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.76**	**5.172**	**9.642**	**9.449**	**.0220**	**.0040**	**23.94**	**.0004**	**.0807**
Stddev	.02	.008	.017	.014	.0005	.0001	.06	.0005	.0002
%RSD	.1371	.1593	.1717	.1462	2.078	2.497	.2649	101.1	.2416
#1	14.74	5.175	9.628	9.458	.0218	.0038	24.02	.0000	.0809
#2	14.75	5.178	9.660	9.457	.0225	.0040	23.91	.0004	.0808
#3	14.78	5.163	9.639	9.433	.0216	.0040	23.91	.0009	.0805

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3594**	**-.0005**	**.0035**	**2.360**	**.0097**	**.0068**	**.4653**
Stddev	.0003	.0006	.0001	.008	.0017	.0027	.0020
%RSD	.0719	121.5	2.895	.3437	17.42	38.75	.4402
#1	.3595	-.0003	.0034	2.367	.0078	.0097	.4630
#2	.3591	-.0000	.0036	2.362	.0103	.0063	.4666
#3	.3596	-.0012	.0036	2.351	.0111	.0045	.4664

Zoom In Zoom Out

Sample Name: jc86843-3 Acquired: 5/2/2019 21:42:22 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158310.**	**24867.**	**6337.0**	**9603.6**
Stddev	231.	148.	126.8	161.9
%RSD	.14573	.59500	2.0016	1.6863
#1	158070.	24878.	6190.6	9416.7
#2	158330.	25009.	6412.4	9693.2
#3	158530.	24714.	6408.0	9700.9

Zoom In Zoom Out

Sample Name: jc86843-5 Acquired: 5/2/2019 21:47:31 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0268**	**.0000**	**.0001**	**.0002**	**.0021**	**.0038**	**.0521**	**.0037**	**.0003**
Stddev	.0005	.0001	.0002	.0001	.0001	.0001	.0000	.0005	.0001
%RSD	1.777	185.3	184.2	52.77	2.663	3.913	.0358	12.63	23.74
#1	.0263	.0000	.0001	.0001	.0021	.0036	.0520	.0037	.0004
#2	.0268	.0001	-.0001	.0002	.0022	.0038	.0521	.0042	.0002
#3	.0273	-.0000	.0003	.0002	.0020	.0039	.0521	.0033	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0104**	**-.0005**	**-.0007**	**.0002**	**.0023**	**.0005**	**.6095**	**57.11**
Stddev	.0002	.0001	.0007	.0008	.0006	.0007	.0011	.0082	.55
%RSD	12.78	1.019	136.7	127.0	372.9	30.93	194.8	1.351	.9641
#1	.0016	.0103	-.0007	-.0003	-.0000	.0030	.0017	.6176	57.08
#2	.0013	.0105	-.0012	-.0016	-.0003	.0023	.0002	.6012	56.57
#3	.0013	.0103	.0003	-.0001	.0008	.0016	-.0003	.6097	57.67

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5934**	**19.26**	**1.942**	**170.8**	**.2491**	**.0005**	**7.754**	**-.0027**	**.1639**
Stddev	.0082	.17	.050	2.8	.0006	.0001	.017	.0004	.0015
%RSD	1.387	.9085	2.593	1.663	.2426	11.89	.2234	15.70	.8888
#1	.5934	19.27	1.968	171.2	.2495	.0006	7.752	-.0029	.1637
#2	.5851	19.08	1.884	167.8	.2494	.0006	7.772	-.0030	.1626
#3	.6015	19.43	1.974	173.5	.2484	.0005	7.738	-.0022	.1655

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0149**	**.0008**	**.0001**	F **134.5**	**-.0007**	**.0078**	**.1574**
Stddev	.0004	.0007	.0002	.4	.0003	.0005	.0011
%RSD	2.441	87.36	147.3	.3122	40.64	6.928	.6694
#1	.0147	.0006	-.0000	134.5	-.0007	.0072	.1563
#2	.0147	.0015	.0003	134.8	-.0004	.0081	.1577
#3	.0153	.0002	.0000	134.0	-.0010	.0081	.1583

Zoom In Zoom Out

Sample Name: jc86843-5 Acquired: 5/2/2019 21:47:31 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**148530.**	**24064.**	**6087.8**	**9023.3**
Stddev	365.	267.	2.8	3.3
%RSD	.24541	1.1085	.04630	.03643
#1	148260.	24029.	6088.9	9019.5
#2	148390.	24347.	6084.6	9025.1
#3	148940.	23817.	6089.9	9025.3

Zoom In Zoom Out

Sample Name: jc86843-6 Acquired: 5/2/2019 21:52:41 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.5683**	**.0001**	**.0011**	**.0015**	**.0076**	**.0045**	**.6977**	**.0213**	**.0005**
Stddev	.0032	.0001	.0002	.0002	.0005	.0004	.0110	.0004	.0002
%RSD	.5551	72.26	16.83	13.54	6.412	8.111	1.578	2.063	31.56
#1	.5671	.0001	.0009	.0013	.0077	.0048	.6970	.0211	.0005
#2	.5718	.0000	.0011	.0014	.0080	.0046	.7090	.0211	.0003
#3	.5659	.0001	.0012	.0017	.0071	.0041	.6870	.0218	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043**	**.0113**	**.0003**	**.0005**	**.0031**	**.0012**	**.0023**	**1.554**	F **222.0**
Stddev	.0005	.0003	.0008	.0011	.0008	.0017	.0024	.018	2.9
%RSD	10.78	2.990	325.6	235.9	25.87	138.4	105.5	1.159	1.312
#1	.0048	.0112	.0012	.0015	.0022	.0014	.0042	1.564	224.0
#2	.0039	.0110	-.0003	-.0007	.0037	.0028	.0032	1.565	223.4
#3	.0043	.0116	-.0001	.0005	.0034	-.0006	-.0004	1.533	218.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.538**	**44.31**	**7.222**	F **365.3**	**.0797**	**.0013**	**15.57**	**-.0019**	**.6589**
Stddev	.006	.24	.066	6.0	.0023	.0001	.28	.0004	.0041
%RSD	.4255	.5416	.9095	1.638	2.868	7.050	1.813	22.64	.6265
#1	1.535	44.23	7.163	369.5	.0781	.0013	15.51	-.0014	.6571
#2	1.546	44.58	7.293	367.8	.0787	.0013	15.33	-.0020	.6636
#3	1.534	44.12	7.209	358.4	.0823	.0014	15.88	-.0022	.6560

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0320**	**.0090**	**.0001**	**3.427**	**.0002**	**.0286**	**.0923**
Stddev	.0007	.0005	.0002	.060	.0013	.0013	.0053
%RSD	2.198	5.231	244.4	1.745	803.1	4.581	5.793
#1	.0322	.0087	.0000	3.414	-.0013	.0276	.0904
#2	.0326	.0088	.0003	3.375	.0008	.0280	.0882
#3	.0312	.0095	-.0001	3.492	.0010	.0301	.0984

Zoom In Zoom Out

Sample Name: jc86843-6 Acquired: 5/2/2019 21:52:41 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**143540.**	**24147.**	**5849.1**	**8487.5**
Stddev	2012.	54.	95.7	115.8
%RSD	1.4015	.22413	1.6366	1.3640
#1	144110.	24119.	5877.2	8521.1
#2	141300.	24112.	5927.6	8582.7
#3	145200.	24210.	5742.4	8358.6

Zoom In Zoom Out

Sample Name: jc86843-7 Acquired: 5/2/2019 21:58:01 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0363**	**.0002**	**.0001**	**.0013**	**.0045**	**.0061**	**.0469**	**.0027**	**.0000**
Stddev	.0004	.0001	.0001	.0002	.0001	.0003	.0004	.0002	.0004
%RSD	1.140	44.00	75.70	12.22	3.292	4.314	.8760	9.283	1647.
#1	.0365	.0001	.0000	.0014	.0045	.0063	.0473	.0028	.0004
#2	.0367	.0002	.0000	.0011	.0044	.0063	.0468	.0028	.0001
#3	.0359	.0001	.0001	.0014	.0046	.0058	.0465	.0024	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036**	**.0127**	**.0003**	**-.0005**	**.0022**	**-.0008**	**.0003**	**2.074**	**13.96**
Stddev	.0001	.0001	.0007	.0009	.0010	.0005	.0003	.008	.04
%RSD	4.144	.4658	198.4	172.2	44.55	62.22	85.53	.3802	.2816
#1	.0035	.0126	.0005	-.0008	.0016	-.0002	.0005	2.068	13.92
#2	.0034	.0127	.0009	.0005	.0017	-.0012	.0000	2.083	14.00
#3	.0037	.0127	-.0004	-.0012	.0033	-.0009	.0005	2.072	13.96

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.055**	**2.732**	**1.981**	**110.8**	**.1240**	**.0009**	**7.147**	**-.0020**	**.0436**
Stddev	.004	.003	.006	2.8	.0007	.0002	.029	.0006	.0001
%RSD	.2129	.0901	.3050	2.494	.6020	22.27	.4115	30.58	.1230
#1	2.050	2.731	1.974	110.2	.1236	.0007	7.134	-.0015	.0436
#2	2.058	2.735	1.986	113.7	.1236	.0011	7.127	-.0018	.0437
#3	2.058	2.730	1.981	108.3	.1249	.0008	7.181	-.0026	.0437

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0434**	**.0004**	**.0008**	**61.84**	**-.0001**	**.0101**	**.2721**
Stddev	.0002	.0008	.0001	.16	.0017	.0004	.0030
%RSD	.4770	188.8	12.75	.2590	2222.	3.563	1.104
#1	.0432	.0009	.0007	61.77	-.0019	.0105	.2687
#2	.0436	-.0005	.0008	61.73	.0014	.0102	.2744
#3	.0433	.0008	.0010	62.03	.0003	.0097	.2732

Zoom In Zoom Out

Sample Name: jc86843-7 Acquired: 5/2/2019 21:58:01 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**152620.**	**24403.**	**6236.4**	**9308.1**
Stddev	1612.	197.	30.2	38.3
%RSD	1.0563	.80617	.48404	.41113
#1	151290.	24413.	6239.1	9304.0
#2	152150.	24202.	6265.1	9348.2
#3	154410.	24595.	6204.9	9272.0

Zoom In Zoom Out

Sample Name: jc86843-7conf Acquired: 5/2/2019 22:03:12 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0368**	**.0001**	**.0000**	**.0011**	**.0049**	**.0067**	**.0476**	**.0019**	**.0000**
Stddev	.0008	.0000	.0001	.0006	.0004	.0003	.0001	.0009	.0016
%RSD	2.145	41.90	128.6	54.23	7.231	3.783	.1564	44.73	3858.
#1	.0369	.0001	-.0000	.0008	.0045	.0068	.0475	.0029	-.0015
#2	.0376	.0001	.0001	.0006	.0051	.0064	.0476	.0014	.0017
#3	.0360	.0001	.0000	.0017	.0051	.0068	.0477	.0015	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**.0190**	**.0016**	**.0017**	**.0015**	**-.0063**	**-.0039**	**2.057**	**13.96**
Stddev	.0005	.0000	.0019	.0021	.0006	.0042	.0009	.012	.02
%RSD	15.68	.1066	119.8	123.7	44.44	65.60	24.10	.5648	.1556
#1	.0038	.0190	.0037	.0026	.0011	-.0102	-.0038	2.047	13.95
#2	.0031	.0190	.0011	.0032	.0022	-.0070	-.0030	2.070	13.98
#3	.0028	.0190	-.0000	-.0007	.0011	-.0019	-.0049	2.055	13.95

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.049**	**2.777**	**2.108**	**112.8**	**.1246**	**.0012**	**7.106**	**-.0030**	**.0440**
Stddev	.005	.032	.035	.1	.0025	.0003	.015	.0015	.0003
%RSD	.2398	1.138	1.642	.0646	1.982	22.57	.2120	50.98	.6327
#1	2.045	2.752	2.113	112.9	.1234	.0014	7.096	-.0016	.0438
#2	2.054	2.767	2.140	112.8	.1274	.0013	7.098	-.0047	.0439
#3	2.049	2.812	2.071	112.8	.1230	.0009	7.123	-.0028	.0444

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0436**	**.0048**	**.0013**	**60.73**	**.0008**	**.0149**	**.2354**
Stddev	.0003	.0027	.0004	.12	.0042	.0058	.0045
%RSD	.7581	55.90	34.12	.1961	498.8	38.98	1.921
#1	.0432	.0078	.0011	60.77	.0050	.0085	.2344
#2	.0437	.0027	.0010	60.59	.0008	.0165	.2403
#3	.0439	.0039	.0018	60.82	-.0033	.0197	.2315

Zoom In Zoom Out

Sample Name: jc86843-7conf Acquired: 5/2/2019 22:03:12 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**154540.**	**24213.**	**6272.1**	**9586.8**
Stddev	906.	114.	24.8	31.0
%RSD	.58605	.47011	.39521	.32289
#1	154210.	24113.	6251.0	9559.1
#2	155560.	24337.	6265.9	9581.0
#3	153840.	24189.	6299.4	9620.2

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 22:08:18 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.035**	**2.088**	**2.046**	**2.059**	**2.043**	**2.022**	**2.075**	**2.058**	**.2513**
Stddev	.002	.001	.001	.002	.005	.002	.011	.002	.0010
%RSD	.1082	.0316	.0672	.1129	.2311	.1149	.5085	.1048	.4105
#1	2.037	2.088	2.046	2.059	2.038	2.020	2.064	2.058	.2502
#2	2.034	2.087	2.044	2.057	2.047	2.024	2.085	2.056	.2523
#3	2.033	2.088	2.046	2.061	2.044	2.023	2.077	2.060	.2514
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	**2.043**	**2.058**	**2.050**	**2.134**	**2.055**	**2.038**	**2.049**	**39.61**	**39.99**
Stddev	.003	.002	.002	.004	.000	.001	.003	.02	.02
%RSD	.1609	.1076	.0791	.1690	.0202	.0358	.1646	.0444	.0600
#1	2.039	2.060	2.051	2.133	2.054	2.039	2.051	39.63	40.01
#2	2.045	2.060	2.050	2.138	2.055	2.038	2.045	39.61	39.97
#3	2.044	2.056	2.048	2.131	2.054	2.039	2.051	39.59	39.99
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	**40.50**	**40.51**	**39.63**	**40.22**	**2.097**	**2.068**	**5.426**	**2.102**	**2.088**
Stddev	.01	.04	.03	.02	.004	.002	.010	.002	.002
%RSD	.0369	.0988	.0864	.0443	.1826	.0747	.1767	.0828	.0855
#1	40.52	40.56	39.66	40.23	2.100	2.069	5.435	2.101	2.090
#2	40.49	40.50	39.63	40.20	2.093	2.066	5.416	2.104	2.088
#3	40.50	40.48	39.59	40.23	2.099	2.069	5.428	2.100	2.087
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: 5/2/2019 22:08:18 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**2.007**	**2.072**	**2.099**	**2.025**	**2.043**	F **2.567**
Stddev	.005	.001	.003	.002	.003	.003	.013
%RSD	.2434	.0650	.1645	.1123	.1672	.1291	.5117
#1	2.050	2.005	2.068	2.101	2.028	2.040	2.568
#2	2.060	2.007	2.075	2.099	2.022	2.044	2.580
#3	2.055	2.008	2.072	2.096	2.027	2.045	2.553
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**148190.**	**23712.**	**6098.9**	**9168.7**
Stddev	722.	95.	16.1	16.9
%RSD	.48699	.40093	.26391	.18450
#1	149000.	23753.	6096.7	9165.0
#2	147970.	23779.	6084.1	9154.0
#3	147600.	23603.	6116.0	9187.2

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 22:13:19 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**-.0000**	**.0001**	**.0001**	**.0004**	**.0000**	**.0000**	**.0002**
Stddev	.0003	.0001	.0002	.0002	.0004	.0003	.0000	.0003	.0004
%RSD	93.15	974.6	412.2	252.5	258.2	73.13	380.7	1483.	262.3
#1	-.0002	.0001	-.0002	-.0001	.0000	.0002	.0000	.0003	.0006
#2	-.0001	-.0001	.0001	.0000	-.0002	.0007	-.0000	.0000	.0000
#3	-.0007	.0000	-.0000	.0004	.0005	.0002	.0000	-.0003	-.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**	**-.0005**	**-.0004**	**.0008**	**-.0001**	**-.0011**	**-.0003**	**-.0007**	**-.0025**
Stddev	.0001	.0000	.0005	.0009	.0007	.0005	.0020	.0131	.0007
%RSD	172.4	7.640	127.4	104.8	702.4	48.87	612.2	1887.	27.98
#1	-.0003	-.0005	-.0005	.0018	.0000	-.0011	-.0016	.0145	-.0021
#2	.0000	-.0005	-.0008	.0005	.0005	-.0005	-.0014	-.0081	-.0033
#3	-.0000	-.0004	.0002	.0002	-.0008	-.0016	.0020	-.0085	-.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	**-.0010**	**-.0023**	**.0425**	**.0470**	**.0023**	**.0003**	**.0017**	**-.0007**	**.0000**
Stddev	.0021	.0102	.0314	.0136	.0004	.0002	.0007	.0005	.0001
%RSD	222.3	448.5	74.04	29.03	16.40	80.75	41.29	70.89	202.1
#1	.0011	.0072	.0784	.0626	.0022	.0002	.0011	-.0012	.0000
#2	-.0032	-.0010	.0290	.0405	.0020	.0001	.0015	-.0002	-.0000
#3	-.0008	-.0131	.0200	.0378	.0027	.0006	.0025	-.0007	.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: 5/2/2019 22:13:19 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0015**	**.0001**	**.0008**	**-.0005**	F **.0045**	**-.0161**
Stddev	.0003	.0006	.0001	.0015	.0003	.0009	.0004
%RSD	48.08	39.10	131.7	189.2	53.98	19.25	2.195
#1	.0008	.0022	.0001	.0022	-.0008	.0036	-.0158
#2	.0005	.0011	.0001	.0010	-.0003	.0048	-.0160
#3	.0003	.0013	-.0000	-.0008	-.0004	.0052	-.0165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.0040	
Low Limit						-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**157330.**	**24088.**	**6347.7**	**9993.4**
Stddev	247.	134.	48.4	65.1
%RSD	.15682	.55795	.76198	.65137
#1	157130.	23939.	6371.3	10032.
#2	157250.	24126.	6379.7	10030.
#3	157610.	24200.	6292.0	9918.3

Zoom In Zoom Out

Sample Name: MP14766-MB1 3 Acquired: 5/2/2019 22:18:27 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: SPLP

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0001**	**-.0001**	**.0002**	**-.0001**	**.0074**	**.0002**	**.0008**	**.0001**
Stddev	.0003	.0000	.0002	.0002	.0003	.0002	.0001	.0001	.0002
%RSD	12.53	49.91	348.7	98.83	433.4	3.387	32.89	15.94	170.4
#1	.0017	.0001	-.0000	.0001	.0003	.0072	.0001	.0007	.0001
#2	.0021	.0001	-.0003	.0003	-.0004	.0073	.0001	.0007	.0003
#3	.0022	.0000	.0001	.0000	-.0002	.0077	.0002	.0009	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0110**	**.0005**	**.0002**	**-.0003**	**-.0016**	**-.0008**	**.0198**	**.0271**
Stddev	.0003	.0001	.0007	.0006	.0009	.0014	.0007	.0036	.0020
%RSD	169.0	1.217	131.8	338.7	320.1	82.56	82.66	18.38	7.549
#1	-.0005	.0111	.0007	.0009	.0007	-.0031	-.0016	.0157	.0261
#2	-.0001	.0110	.0012	-.0000	-.0011	-.0015	-.0005	.0214	.0294
#3	.0001	.0109	-.0002	-.0003	-.0004	-.0004	-.0004	.0224	.0257

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.0065**	**-.0284**	**.0953**	**.0055**	**.0001**	**.3283**	**-.0017**	**.0021**
Stddev	.0024	.0236	.0299	.0142	.0001	.0001	.0015	.0003	.0001
%RSD	226.1	362.9	105.3	14.87	1.709	109.4	.4456	19.71	2.569
#1	.0005	-.0172	-.0630	.0897	.0056	.0003	.3293	-.0015	.0022
#2	.0001	.0067	-.0112	.1114	.0055	.0001	.3290	-.0021	.0021
#3	-.0038	.0300	-.0111	.0848	.0054	-.0000	.3266	-.0016	.0021

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0006**	**-.0000**	**.3632**	**-.0001**	**.0012**	**-.0136**
Stddev	.0002	.0011	.0001	.0038	.0009	.0010	.0007
%RSD	58.86	197.1	643.1	1.040	1448.	87.70	4.984
#1	.0001	.0017	-.0000	.3670	-.0011	.0022	-.0134
#2	.0005	.0006	.0001	.3633	.0004	.0002	-.0131
#3	.0002	-.0006	-.0001	.3594	.0005	.0010	-.0144

Zoom In Zoom Out

Sample Name: MP14766-MB1 3 Acquired: 5/2/2019 22:18:27 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: SPLP

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**160060.**	**24728.**	**6467.1**	**10202.**
Stddev	529.	265.	25.3	26.
%RSD	.33060	1.0710	.39069	.25340
#1	160360.	25034.	6443.4	10178.
#2	160360.	24591.	6464.1	10199.
#3	159450.	24560.	6493.7	10230.

Zoom In Zoom Out

Sample Name: MP14766-B1 Acquired: 5/2/2019 22:23:34 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.991**	**2.061**	**2.003**	**2.028**	**2.002**	**2.001**	**2.029**	**2.024**	**.2523**
Stddev	.005	.009	.022	.024	.003	.002	.003	.024	.0003
%RSD	.2310	.4249	1.123	1.160	.1531	.0990	.1485	1.188	.1348
#1	1.987	2.053	2.026	2.052	2.005	2.003	2.026	2.048	.2526
#2	1.996	2.059	1.982	2.005	1.999	1.999	2.032	2.000	.2520
#3	1.990	2.070	2.002	2.027	2.003	2.000	2.030	2.023	.2523

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.004**	**2.018**	**1.957**	**2.119**	**2.022**	**1.979**	**1.973**	**24.33**	**24.73**
Stddev	.004	.023	.023	.028	.023	.024	.023	.08	.08
%RSD	.2191	1.126	1.187	1.306	1.122	1.193	1.175	.3384	.3066
#1	2.009	2.042	1.982	2.146	2.047	2.003	1.997	24.26	24.65
#2	2.001	1.996	1.935	2.091	2.002	1.956	1.951	24.32	24.72
#3	2.003	2.016	1.955	2.119	2.019	1.976	1.972	24.42	24.80

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.84**	**24.92**	**24.39**	**24.89**	**2.008**	**2.008**	**.3471**	**2.035**	**2.045**
Stddev	.06	.08	.06	.06	.023	.023	.0051	.024	.005
%RSD	.2581	.3142	.2392	.2283	1.143	1.152	1.472	1.155	.2229
#1	24.77	24.84	24.35	24.83	2.031	2.032	.3517	2.060	2.040
#2	24.86	24.92	24.36	24.94	1.985	1.986	.3416	2.013	2.047
#3	24.90	25.00	24.45	24.88	2.007	2.005	.3479	2.032	2.048

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.982**	**1.893**	**2.000**	**.3701**	**.1003**	**.0032**	**2.452**
Stddev	.004	.020	.003	.0060	.0012	.0004	.041
%RSD	.1784	1.052	.1507	1.628	1.240	11.01	1.683
#1	1.984	1.913	2.004	.3755	.1017	.0030	2.498
#2	1.978	1.873	1.998	.3636	.0993	.0036	2.418
#3	1.983	1.894	1.999	.3711	.0999	.0030	2.440

Zoom In Zoom Out

Sample Name: MP14766-B1 Acquired: 5/2/2019 22:23:34 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**153000.**	**24520.**	**6273.2**	**9469.8**
Stddev	524.	88.	57.6	86.8
%RSD	.34277	.36088	.91834	.91661
#1	152540.	24471.	6208.9	9375.5
#2	153570.	24466.	6320.2	9546.4
#3	152890.	24622.	6290.4	9487.4

Zoom In Zoom Out

Sample Name: MP14766-S1 Acquired: 5/2/2019 22:28:35 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.985**	**2.018**	**2.000**	**2.015**	**1.983**	**1.964**	**2.023**	**2.019**	**.2489**
Stddev	.003	.000	.014	.015	.027	.025	.042	.014	.0031
%RSD	.1556	.0094	.6886	.7260	1.373	1.264	2.082	.7119	1.251
#1	1.988	2.018	2.009	2.022	2.013	1.991	2.068	2.027	.2522
#2	1.984	2.018	1.984	1.998	1.959	1.942	1.985	2.003	.2460
#3	1.982	2.018	2.007	2.025	1.978	1.959	2.015	2.028	.2484

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.981**	**2.077**	**1.952**	**2.064**	**2.002**	**1.975**	**1.942**	**25.36**	**28.33**
Stddev	.027	.018	.015	.010	.011	.013	.015	.03	.01
%RSD	1.343	.8431	.7436	.4826	.5669	.6544	.7751	.1104	.0210
#1	2.010	2.088	1.963	2.073	2.008	1.982	1.952	25.39	28.33
#2	1.958	2.057	1.935	2.053	1.989	1.960	1.925	25.33	28.33
#3	1.975	2.087	1.957	2.067	2.009	1.982	1.950	25.37	28.32

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.03**	**29.06**	**25.67**	**127.7**	**2.606**	**1.957**	**7.302**	**1.983**	**2.014**
Stddev	.02	.03	.08	1.3	.021	.015	.056	.014	.002
%RSD	.0751	.0912	.3080	1.042	.7880	.7480	.7604	.7227	.0902
#1	25.05	29.04	25.73	128.4	2.620	1.967	7.335	1.995	2.015
#2	25.02	29.09	25.58	126.2	2.582	1.941	7.238	1.967	2.014
#3	25.02	29.07	25.72	128.6	2.615	1.964	7.333	1.986	2.012

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.977**	**1.862**	**1.973**	**5.399**	**.1016**	**.0083**	**2.595**
Stddev	.025	.017	.025	.028	.0032	.0009	.024
%RSD	1.263	.8949	1.288	.5148	3.198	10.78	.9084
#1	2.005	1.874	2.001	5.418	.1052	.0076	2.587
#2	1.957	1.843	1.951	5.367	.0990	.0093	2.577
#3	1.970	1.870	1.967	5.413	.1006	.0081	2.622

Zoom In Zoom Out

Sample Name: MP14766-S1 Acquired: 5/2/2019 22:28:35 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**149310.**	**24523.**	**6156.0**	**9132.5**
Stddev	2042.	49.	45.7	53.7
%RSD	1.3675	.19899	.74230	.58852
#1	147050.	24474.	6121.6	9102.8
#2	151030.	24522.	6207.9	9194.5
#3	149840.	24572.	6138.6	9100.1

Zoom In Zoom Out

Sample Name: MP14766-S2 Acquired: 5/2/2019 22:33:43 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.041**	**2.070**	**2.027**	**2.048**	**2.016**	**2.004**	**2.042**	**2.054**	**.2545**
Stddev	.002	.001	.002	.002	.002	.002	.012	.002	.0005
%RSD	.0927	.0403	.1055	.0872	.0877	.1071	.5852	.0737	.1906
#1	2.041	2.071	2.027	2.050	2.018	2.005	2.056	2.055	.2547
#2	2.040	2.069	2.025	2.047	2.014	2.002	2.033	2.052	.2548
#3	2.043	2.069	2.029	2.047	2.017	2.006	2.038	2.054	.2539

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.016**	**2.114**	**1.982**	**2.087**	**2.033**	**2.002**	**1.976**	**26.24**	**29.21**
Stddev	.002	.002	.001	.004	.003	.003	.003	.01	.04
%RSD	.1012	.0945	.0475	.1815	.1642	.1630	.1589	.0194	.1277
#1	2.019	2.114	1.982	2.082	2.034	2.000	1.976	26.24	29.26
#2	2.016	2.112	1.981	2.089	2.029	2.006	1.974	26.24	29.19
#3	2.015	2.116	1.982	2.089	2.035	2.000	1.980	26.25	29.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.90**	**30.00**	**26.58**	**127.6**	**2.642**	**1.988**	**7.240**	**2.010**	**2.068**
Stddev	.01	.02	.02	1.0	.001	.002	.006	.002	.001
%RSD	.0447	.0589	.0574	.7731	.0522	.1031	.0887	.1175	.0379
#1	25.90	30.02	26.59	126.7	2.643	1.987	7.237	2.013	2.068
#2	25.91	29.99	26.59	127.6	2.640	1.988	7.236	2.008	2.067
#3	25.89	29.99	26.56	128.6	2.641	1.991	7.248	2.008	2.069

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.014**	**1.890**	**2.010**	**5.450**	**.1004**	**.0094**	**2.703**
Stddev	.003	.002	.001	.016	.0010	.0016	.013
%RSD	.1405	.1138	.0286	.2899	1.036	16.58	.4961
#1	2.017	1.890	2.011	5.437	.1005	.0086	2.718
#2	2.012	1.887	2.011	5.444	.0993	.0084	2.699
#3	2.013	1.892	2.010	5.467	.1013	.0112	2.692

Zoom In Zoom Out

Sample Name: MP14766-S2 Acquired: 5/2/2019 22:33:43 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**149560.**	**24264.**	**6133.8**	**9093.5**
Stddev	261.	154.	4.9	6.5
%RSD	.17476	.63623	.07973	.07159
#1	149280.	24135.	6134.8	9092.1
#2	149790.	24222.	6138.2	9100.6
#3	149620.	24435.	6128.5	9087.8

Zoom In Zoom Out

Sample Name: JC85779-11R Acquired: 5/2/2019 22:38:50 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0393**	**.0002**	**.0190**	**.0012**	**.0195**	**.0137**	**.0130**	**.0097**	**.0005**
Stddev	.0001	.0001	.0001	.0001	.0004	.0003	.0000	.0002	.0004
%RSD	.2884	63.29	.4217	5.388	1.830	2.463	.1397	1.969	75.07
#1	.0393	.0001	.0190	.0012	.0192	.0140	.0130	.0094	.0003
#2	.0393	.0001	.0189	.0012	.0193	.0139	.0130	.0098	.0003
#3	.0395	.0003	.0190	.0013	.0199	.0134	.0130	.0097	.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039**	**.0852**	**.0027**	**.0009**	**.0032**	**-.0015**	**.0011**	**1.433**	**4.319**
Stddev	.0004	.0001	.0010	.0011	.0007	.0006	.0017	.001	.015
%RSD	9.894	.0860	37.16	134.2	22.62	37.77	153.6	.0769	.3470
#1	.0034	.0852	.0015	-.0002	.0034	-.0011	-.0007	1.432	4.312
#2	.0041	.0851	.0033	.0008	.0024	-.0013	.0026	1.435	4.309
#3	.0041	.0852	.0032	.0020	.0038	-.0021	.0014	1.433	4.336

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8941**	**4.996**	**1.961**	**105.9**	**.6188**	**.0035**	**4.862**	**-.0014**	**.0193**
Stddev	.0076	.005	.018	2.1	.0004	.0002	.013	.0007	.0002
%RSD	.8456	.1029	.9119	1.966	.0574	5.193	.2661	52.98	.8017
#1	.8881	4.990	1.945	103.9	.6189	.0038	4.871	-.0015	.0192
#2	.8915	4.999	1.959	105.8	.6191	.0034	4.867	-.0006	.0193
#3	.9026	4.999	1.981	108.1	.6184	.0034	4.847	-.0021	.0195

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0291**	**.0030**	**.0048**	**5.433**	**-.0010**	**.0074**	**.0841**
Stddev	.0002	.0008	.0000	.006	.0014	.0022	.0014
%RSD	.5685	26.21	.9516	.1098	142.1	29.82	1.608
#1	.0291	.0039	.0048	5.428	-.0005	.0056	.0837
#2	.0290	.0027	.0049	5.431	.0001	.0098	.0830
#3	.0293	.0025	.0048	5.440	-.0026	.0067	.0856

Zoom In Zoom Out

Sample Name: JC85779-11R Acquired: 5/2/2019 22:38:50 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**152740.**	**24455.**	**6264.3**	**9347.9**
Stddev	865.	111.	6.1	1.5
%RSD	.56612	.45308	.09728	.01594
#1	153140.	24531.	6266.9	9346.5
#2	151750.	24507.	6268.6	9347.7
#3	153330.	24328.	6257.3	9349.5

Zoom In Zoom Out

Sample Name: MP14766-SD1 Acquired: 5/2/2019 22:43:59 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.0370**	**.0001**	**.0191**	**.0019**	**.0185**	**.0164**	**.0133**	**.0098**	**-.0005**
Stddev	.0015	.0001	.0013	.0007	.0012	.0017	.0002	.0004	.0001
%RSD	4.145	63.38	6.669	37.63	6.429	10.41	1.471	4.357	11.10
#1	.0375	.0002	.0205	.0023	.0172	.0175	.0135	.0101	-.0005
#2	.0383	.0001	.0186	.0024	.0196	.0144	.0134	.0093	-.0005
#3	.0353	.0001	.0181	.0011	.0186	.0173	.0131	.0099	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039**	**.0964**	**.0016**	**.0047**	**.0019**	**.0022**	**.0045**	**1.441**	**4.425**
Stddev	.0009	.0028	.0035	.0023	.0013	.0088	.0048	.021	.041
%RSD	22.01	2.908	215.0	48.17	65.73	405.4	105.0	1.423	.9346
#1	.0046	.0996	.0056	.0022	.0023	-.0034	.0004	1.460	4.461
#2	.0029	.0949	-.0011	.0065	.0030	-.0024	.0097	1.419	4.433
#3	.0040	.0947	.0003	.0054	.0005	.0123	.0035	1.445	4.380

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9087**	**5.024**	**1.919**	**108.4**	**.6273**	**.0052**	**4.885**	**-.0048**	**.0195**
Stddev	.0091	.015	.059	1.1	.0045	.0007	.044	.0013	.0005
%RSD	.9985	.2898	3.077	1.050	.7187	13.13	.8937	26.45	2.656
#1	.9182	5.028	1.863	109.1	.6316	.0050	4.911	-.0061	.0196
#2	.9079	5.036	1.980	109.1	.6226	.0059	4.835	-.0035	.0199
#3	.9001	5.008	1.913	107.1	.6278	.0046	4.910	-.0049	.0189

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0303**	**.0092**	**.0051**	**5.271**	**.0011**	**.0241**	**.0121**
Stddev	.0023	.0024	.0004	.030	.0027	.0039	.0060
%RSD	7.739	25.74	7.133	.5765	233.1	16.11	49.99
#1	.0327	.0075	.0054	5.299	-.0019	.0225	.0052
#2	.0281	.0119	.0047	5.239	.0031	.0212	.0145
#3	.0300	.0082	.0052	5.277	.0021	.0285	.0165

Zoom In Zoom Out

Sample Name: MP14766-SD1 Acquired: 5/2/2019 22:43:59 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156180.**	**24367.**	**6356.7**	**9772.7**
Stddev	1144.	295.	57.4	73.6
%RSD	.73234	1.2093	.90360	.75321
#1	154870.	24127.	6300.6	9699.0
#2	157010.	24278.	6415.4	9846.2
#3	156660.	24696.	6354.2	9772.8

Zoom In Zoom Out

Sample Name: CCV 7 Acquired: 5/2/2019 22:49:03 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.033**	**2.088**	**2.039**	**2.056**	**2.041**	**2.022**	**2.067**	**2.058**	**.2515**
Stddev	.001	.005	.002	.001	.003	.004	.007	.002	.0003
%RSD	.0454	.2190	.0718	.0585	.1353	.1977	.3338	.1012	.1066
#1	2.033	2.089	2.040	2.058	2.044	2.026	2.059	2.059	.2515
#2	2.034	2.092	2.040	2.056	2.039	2.022	2.072	2.058	.2512
#3	2.032	2.083	2.037	2.055	2.040	2.018	2.071	2.055	.2517
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	**2.041**	**2.054**	**2.041**	**2.121**	**2.051**	**2.034**	**2.042**	**39.57**	**39.96**
Stddev	.003	.004	.003	.008	.002	.002	.002	.07	.09
%RSD	.1402	.1747	.1259	.3879	.1126	.0976	.1094	.1878	.2250
#1	2.043	2.053	2.041	2.129	2.053	2.036	2.044	39.59	39.94
#2	2.038	2.058	2.039	2.112	2.051	2.032	2.043	39.63	40.05
#3	2.043	2.051	2.044	2.121	2.049	2.034	2.040	39.48	39.88
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	**40.44**	**40.45**	**39.55**	**40.28**	**2.095**	**2.057**	**5.411**	**2.091**	**2.086**
Stddev	.07	.06	.10	.02	.002	.002	.003	.003	.004
%RSD	.1762	.1438	.2435	.0559	.0715	.1042	.0595	.1389	.1987
#1	40.41	40.38	39.59	40.28	2.093	2.059	5.407	2.093	2.085
#2	40.52	40.48	39.62	40.30	2.096	2.058	5.413	2.088	2.090
#3	40.38	40.48	39.44	40.25	2.095	2.055	5.413	2.093	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 7 Acquired: 5/2/2019 22:49:03 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.053**	**1.999**	**2.070**	**2.084**	**2.021**	**2.046**	F **2.604**
Stddev	.004	.005	.003	.007	.001	.006	.010
%RSD	.1858	.2348	.1382	.3453	.0335	.2830	.3726
#1	2.055	1.995	2.073	2.091	2.021	2.043	2.597
#2	2.048	2.004	2.067	2.077	2.020	2.052	2.601
#3	2.055	2.000	2.070	2.085	2.022	2.041	2.615
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**148920.**	**23651.**	**6115.8**	**9174.5**
Stddev	763.	67.	12.8	8.6
%RSD	.51201	.28388	.20874	.09320
#1	148630.	23717.	6127.8	9181.8
#2	149790.	23583.	6102.4	9165.1
#3	148340.	23651.	6117.1	9176.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 22:54:04 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**-.0001**	**.0003**	**.0000**	**.0001**	**.0005**
Stddev	.0000	.0001	.0000	.0002	.0003	.0005	.0000	.0001	.0002
%RSD	4.434	71.49	54.27	174.0	268.7	185.2	202.2	164.6	31.86
#1	-.0002	.0001	.0000	.0003	.0001	.0008	.0000	.0002	.0005
#2	-.0002	.0001	.0000	.0002	-.0000	.0001	-.0000	.0000	.0007
#3	-.0002	.0000	.0001	-.0001	-.0005	-.0001	.0000	-.0000	.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	**.0000**	**-.0004**	**-.0007**	**.0002**	**.0003**	**-.0004**	**-.0004**	**-.0026**	**-.0013**
Stddev	.0004	.0001	.0005	.0008	.0001	.0022	.0012	.0009	.0034
%RSD	9750.	17.67	66.72	431.7	23.48	613.6	297.8	32.72	249.1
#1	.0004	-.0003	-.0011	-.0007	.0002	-.0021	-.0001	-.0027	.0014
#2	.0000	-.0005	-.0009	.0007	.0003	-.0011	.0006	-.0018	-.0003
#3	-.0004	-.0003	-.0002	.0006	.0004	.0021	-.0017	-.0035	-.0051
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**	**.0025**	**-.0088**	**.0341**	**.0039**	**.0003**	**.0011**	**-.0008**	**.0001**
Stddev	.0018	.0060	.0479	.0121	.0005	.0002	.0008	.0003	.0001
%RSD	490.3	242.9	547.2	35.55	11.78	52.32	74.87	34.25	96.59
#1	-.0023	-.0035	.0222	.0480	.0039	.0005	.0003	-.0009	-.0000
#2	-.0000	.0023	.0155	.0259	.0043	.0003	.0010	-.0009	.0001
#3	.0012	.0086	-.0639	.0283	.0034	.0001	.0019	-.0005	.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: 5/2/2019 22:54:04 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0017**	**.0002**	**.0011**	**.0002**	F **.0044**	**-.0153**
Stddev	.0004	.0012	.0002	.0005	.0014	.0016	.0018
%RSD	166.8	68.55	142.5	43.12	578.8	37.57	11.60
#1	.0002	.0024	.0003	.0006	.0004	.0028	-.0135
#2	.0006	.0004	.0003	.0015	.0016	.0042	-.0154
#3	-.0001	.0025	-.0001	.0012	-.0012	.0061	-.0171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.0040	
Low Limit						-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**157700.**	**24193.**	**6379.2**	**10037.**
Stddev	520.	81.	5.4	14.
%RSD	.32994	.33657	.08409	.13573
#1	158300.	24196.	6381.2	10029.
#2	157390.	24110.	6383.3	10053.
#3	157410.	24273.	6373.2	10030.

Zoom In Zoom Out

Sample Name: mp14721-mb1 7 Acquired: 5/2/2019 22:59:14 Type: Unk
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0003**	**.0002**	**.0009**	**.0016**	**.0005**	**.0008**	**.0000**
Stddev	.0002	.0001	.0001	.0002	.0002	.0003	.0000	.0002	.0003
%RSD	2241.	31.98	41.72	134.6	24.80	17.40	3.121	26.44	584.1
#1	-.0002	.0003	.0003	.0000	.0007	.0013	.0006	.0010	.0001
#2	.0002	.0001	.0001	.0005	.0011	.0019	.0005	.0006	-.0002
#3	-.0000	.0002	.0003	.0001	.0009	.0016	.0005	.0008	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0156**	**.0002**	**.0005**	**.0012**	**-.0007**	**-.0009**	**.0090**	**.1590**
Stddev	.0002	.0004	.0004	.0007	.0006	.0007	.0003	.0080	.0023
%RSD	311.7	2.580	172.1	121.8	49.13	101.7	34.21	88.74	1.468
#1	.0002	.0154	-.0002	-.0002	.0008	-.0014	-.0013	.0157	.1602
#2	-.0003	.0154	.0006	.0008	.0009	.0000	-.0007	.0113	.1563
#3	-.0001	.0161	.0003	.0011	.0018	-.0007	-.0008	.0001	.1604

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0310**	**.0185**	**-.0519**	**.0558**	**.0050**	**.0005**	**.0098**	**.0210**	**.0005**
Stddev	.0004	.0151	.0816	.0076	.0004	.0001	.0009	.0007	.0000
%RSD	1.375	81.86	157.1	13.55	7.377	23.28	9.086	3.454	7.294
#1	.0305	.0282	.0339	.0601	.0046	.0006	.0100	.0203	.0005
#2	.0312	.0011	-.0613	.0603	.0054	.0005	.0088	.0209	.0005
#3	.0312	.0262	-.1285	.0471	.0050	.0004	.0106	.0218	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**-.0007**	**.0005**	**.0140**	**.0005**	**.0034**	**.0119**
Stddev	.0001	.0003	.0001	.0005	.0009	.0012	.0025
%RSD	6.684	44.98	26.67	3.596	183.5	36.36	21.37
#1	.0010	-.0009	.0003	.0145	.0009	.0033	.0111
#2	.0011	-.0008	.0006	.0135	.0011	.0048	.0099
#3	.0009	-.0003	.0005	.0140	-.0005	.0023	.0147

Zoom In Zoom Out

Sample Name: mp14721-mb1 7 Acquired: 5/2/2019 22:59:14 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159640.**	**24587.**	**6392.0**	**10071.**
Stddev	596.	218.	106.8	158.
%RSD	.37339	.88806	1.6704	1.5659
#1	158990.	24409.	6420.8	10123.
#2	159760.	24831.	6481.5	10196.
#3	160170.	24521.	6273.8	9894.0

Zoom In Zoom Out

Sample Name: mp14721-b1 Acquired: 5/2/2019 23:04:20 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.988**	**2.055**	**2.007**	**2.015**	**1.988**	**1.986**	**2.050**	**2.013**	**.2478**
Stddev	.001	.004	.004	.004	.004	.004	.007	.004	.0003
%RSD	.0405	.2012	.1922	.1936	.2241	.2251	.3228	.2151	.1397
#1	1.988	2.051	2.011	2.019	1.993	1.991	2.045	2.017	.2482
#2	1.989	2.054	2.006	2.013	1.987	1.983	2.058	2.013	.2475
#3	1.987	2.059	2.003	2.012	1.984	1.984	2.049	2.008	.2476

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.972**	**2.038**	**1.944**	**2.137**	**2.020**	**1.971**	**1.950**	**24.03**	**24.49**
Stddev	.002	.004	.003	.008	.004	.001	.005	.07	.06
%RSD	.0887	.2058	.1767	.3934	.1830	.0689	.2503	.2794	.2488
#1	1.972	2.042	1.948	2.141	2.025	1.973	1.955	23.99	24.43
#2	1.973	2.039	1.942	2.128	2.019	1.970	1.949	24.00	24.48
#3	1.970	2.034	1.942	2.143	2.018	1.971	1.946	24.11	24.55

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.63**	**24.65**	**24.01**	**24.75**	**1.960**	**1.949**	**-.0241**	**2.034**	**2.041**
Stddev	.03	.03	.06	.02	.008	.003	.0024	.002	.001
%RSD	.1186	.1390	.2323	.0690	.4006	.1513	9.829	.0756	.0695
#1	24.60	24.63	23.97	24.74	1.969	1.952	-.0266	2.036	2.040
#2	24.65	24.69	23.99	24.77	1.957	1.948	-.0240	2.033	2.041
#3	24.66	24.63	24.07	24.74	1.954	1.946	-.0218	2.033	2.042

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.949**	**1.170**	**1.961**	**.0257**	**.0846**	**.0030**	**2.505**
Stddev	.003	.008	.002	.0020	.0017	.0015	.005
%RSD	.1308	.6937	.0859	7.921	1.980	51.68	.1854
#1	1.950	1.161	1.963	.0243	.0855	.0039	2.503
#2	1.950	1.172	1.961	.0247	.0857	.0038	2.501
#3	1.946	1.177	1.959	.0280	.0827	.0012	2.510

Zoom In Zoom Out

Sample Name: mp14721-b1 Acquired: 5/2/2019 23:04:20 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**152350.**	**24103.**	**6199.4**	**9387.2**
Stddev	760.	32.	15.4	23.7
%RSD	.49898	.13476	.24864	.25243
#1	152470.	24083.	6191.3	9371.3
#2	151540.	24086.	6189.7	9375.9
#3	153050.	24141.	6217.2	9414.5

Zoom In Zoom Out

Sample Name: mp14721-s1 Acquired: 5/2/2019 23:09:20 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.577**	**1.944**	**1.891**	**1.973**	**2.008**	**1.948**	**3.789**	**2.026**	**.2375**
Stddev	.022	.015	.020	.021	.018	.018	.019	.021	.0022
%RSD	.8746	.7891	1.042	1.062	.8833	.9371	.5075	1.049	.9412
#1	2.577	1.945	1.870	1.950	2.028	1.968	3.806	2.002	.2400
#2	2.554	1.928	1.908	1.992	2.002	1.941	3.768	2.044	.2369
#3	2.600	1.959	1.895	1.978	1.995	1.934	3.793	2.030	.2357

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.025**	**2.154**	**1.837**	**2.020**	**2.167**	**1.854**	**1.274**	**104.6**	**44.64**
Stddev	.018	.022	.020	.022	.023	.014	.015	.8	.37
%RSD	.8664	1.013	1.084	1.082	1.081	.7528	1.168	.8118	.8238
#1	2.045	2.130	1.817	1.996	2.143	1.838	1.258	104.6	44.64
#2	2.020	2.172	1.856	2.039	2.189	1.864	1.288	103.7	44.27
#3	2.011	2.160	1.839	2.025	2.170	1.860	1.276	105.4	45.01

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**100.3**	**40.06**	**33.99**	**24.84**	**1.834**	**1.800**	**2.216**	**1.838**	**2.066**
Stddev	.8	.32	.26	.22	.020	.019	.022	.019	.017
%RSD	.8474	.8097	.7766	.8889	1.104	1.060	.9958	1.034	.8269
#1	100.3	40.02	34.05	24.84	1.811	1.778	2.193	1.818	2.065
#2	99.45	39.75	33.71	24.62	1.850	1.815	2.237	1.855	2.049
#3	101.1	40.39	34.23	25.06	1.841	1.806	2.218	1.842	2.084

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.166**	**1.080**	**1.836**	**11.01**	**.1586**	**.0894**	**4.507**
Stddev	.040	.012	.017	.11	.0033	.0013	.047
%RSD	.9500	1.139	.9301	1.036	2.101	1.446	1.047
#1	4.210	1.067	1.855	10.89	.1624	.0880	4.460
#2	4.156	1.090	1.833	11.12	.1570	.0906	4.554
#3	4.133	1.085	1.821	11.01	.1563	.0895	4.506

Zoom In Zoom Out

Sample Name: mp14721-s1 Acquired: 5/2/2019 23:09:20 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156430.**	**25249.**	**6445.5**	**9327.2**
Stddev	1224.	220.	58.4	81.1
%RSD	.78239	.87151	.90626	.86912
#1	155160.	25184.	6510.5	9416.0
#2	157600.	25494.	6397.4	9257.2
#3	156530.	25069.	6428.7	9308.4

Zoom In Zoom Out

Sample Name: mp14721-s2 Acquired: 5/2/2019 23:14:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**2.679**	**1.958**	**1.909**	**2.007**	**2.069**	**1.966**	**3.878**	**2.069**	**.2404**
Stddev	.005	.005	.009	.007	.016	.013	.037	.007	.0017
%RSD	.1786	.2593	.4891	.3478	.7620	.6410	.9655	.3312	.6868
#1	2.682	1.961	1.919	2.015	2.065	1.965	3.836	2.077	.2401
#2	2.680	1.961	1.903	2.002	2.087	1.979	3.894	2.065	.2422
#3	2.673	1.952	1.904	2.004	2.056	1.953	3.906	2.065	.2390

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.065**	**2.220**	**1.856**	**2.041**	**2.407**	**1.864**	**1.122**	**132.3**	**44.30**
Stddev	.014	.011	.012	.012	.008	.009	.005	.3	.09
%RSD	.6621	.4861	.6200	.5894	.3479	.4884	.4322	.2382	.2061
#1	2.060	2.232	1.869	2.055	2.417	1.874	1.128	132.5	44.36
#2	2.080	2.216	1.849	2.033	2.400	1.856	1.120	132.5	44.35
#3	2.054	2.212	1.850	2.036	2.405	1.862	1.119	132.0	44.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**120.4**	**46.48**	**37.21**	**25.21**	**1.844**	**1.817**	**2.295**	**1.836**	**2.079**
Stddev	.3	.08	.08	.05	.010	.010	.012	.011	.004
%RSD	.2131	.1768	.2019	.2124	.5492	.5559	.5101	.6144	.2038
#1	120.5	46.54	37.21	25.23	1.855	1.828	2.308	1.849	2.081
#2	120.6	46.52	37.29	25.25	1.836	1.810	2.290	1.829	2.081
#3	120.1	46.39	37.14	25.15	1.840	1.812	2.286	1.831	2.074

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.842**	**1.167**	**1.840**	**8.931**	**.1836**	**.1300**	**5.041**
Stddev	.034	.005	.013	.064	.0037	.0001	.046
%RSD	.6995	.4573	.6771	.7105	2.030	.0768	.9211
#1	4.828	1.172	1.836	9.004	.1808	.1301	5.094
#2	4.881	1.165	1.854	8.887	.1878	.1299	5.009
#3	4.818	1.162	1.830	8.902	.1820	.1301	5.019

Zoom In Zoom Out

Sample Name: mp14721-s2 Acquired: 5/2/2019 23:14:19 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156890.**	**25413.**	**6435.3**	**9277.4**
Stddev	868.	62.	31.7	27.8
%RSD	.55305	.24248	.49327	.29978
#1	157160.	25473.	6401.2	9247.2
#2	155910.	25350.	6440.6	9283.1
#3	157580.	25415.	6464.0	9302.0

Zoom In Zoom Out

Sample Name: jc87093-7 Acquired: 5/2/2019 23:19:18 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.7016**	**.0042**	**.0006**	**.0341**	**.1645**	**.0721**	**2.020**	**.0971**	**.0015**
Stddev	.0060	.0001	.0001	.0003	.0015	.0004	.012	.0011	.0005
%RSD	.8619	1.374	20.03	.8634	.9122	.6001	.6094	1.145	35.50
#1	.7013	.0042	.0007	.0339	.1635	.0716	2.013	.0960	.0012
#2	.7079	.0042	.0006	.0345	.1637	.0723	2.014	.0982	.0021
#3	.6958	.0041	.0005	.0340	.1662	.0724	2.034	.0972	.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1570**	**.3403**	**.0249**	**.0012**	**.1299**	**.0005**	**-.0002**	**75.87**	**20.52**
Stddev	.0013	.0025	.0005	.0009	.0008	.0009	.0006	.43	.12
%RSD	.8472	.7207	1.903	76.15	.6513	166.6	327.5	.5611	.5902
#1	.1561	.3385	.0254	.0015	.1295	.0011	-.0005	75.84	20.51
#2	.1564	.3431	.0245	.0002	.1309	.0011	-.0006	76.31	20.65
#3	.1585	.3393	.0249	.0019	.1294	-.0005	.0005	75.46	20.41

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**87.37**	**18.95**	**7.751**	**1.453**	**.0316**	**.0046**	**1.798**	**.0224**	**.1213**
Stddev	.50	.11	.079	.013	.0006	.0000	.015	.0004	.0009
%RSD	.5677	.5721	1.014	.9173	2.013	1.076	.8257	1.664	.7668
#1	87.28	18.96	7.739	1.453	.0320	.0045	1.784	.0222	.1212
#2	87.90	19.05	7.836	1.467	.0309	.0046	1.814	.0223	.1223
#3	86.92	18.83	7.680	1.440	.0320	.0046	1.798	.0228	.1205

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.347**	**.0044**	**.0524**	**10.63**	**.0747**	**.1031**	**2.674**
Stddev	.015	.0008	.0001	.11	.0022	.0017	.018
%RSD	.6334	17.84	.2100	1.047	2.891	1.670	.6698
#1	2.336	.0039	.0526	10.53	.0739	.1050	2.655
#2	2.343	.0053	.0524	10.75	.0731	.1027	2.691
#3	2.364	.0040	.0524	10.62	.0772	.1017	2.676

Zoom In Zoom Out

Sample Name: jc87093-7 Acquired: 5/2/2019 23:19:18 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**160720.**	**25786.**	**6603.8**	**9660.2**
Stddev	1582.	97.	27.7	34.7
%RSD	.98399	.37569	.41967	.35918
#1	161730.	25674.	6627.4	9692.0
#2	161540.	25846.	6573.3	9623.2
#3	158900.	25837.	6610.9	9665.3

Zoom In Zoom Out

Sample Name: mp14721-sd1 Acquired: 5/2/2019 23:24:23 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.7118**	**.0043**	**.0001**	**.0354**	**.1708**	**.0749**	**2.120**	**.0984**	**.0021**
Stddev	.0011	.0002	.0008	.0003	.0019	.0011	.004	.0008	.0013
%RSD	.1509	4.790	639.9	.8524	1.111	1.479	.1629	.8489	62.91
#1	.7127	.0041	-.0004	.0351	.1702	.0755	2.123	.0980	.0006
#2	.7106	.0045	-.0003	.0354	.1693	.0756	2.121	.0979	.0031
#3	.7121	.0042	.0011	.0357	.1730	.0737	2.116	.0994	.0027

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1631**	**.3623**	**.0279**	**.0057**	**.1320**	**-.0006**	**-.0046**	**77.48**	**21.23**
Stddev	.0011	.0015	.0019	.0073	.0014	.0063	.0035	.07	.04
%RSD	.6570	.4146	6.983	129.4	1.088	1076.	76.62	.0940	.1889
#1	.1630	.3613	.0290	-.0023	.1311	-.0078	-.0054	77.57	21.27
#2	.1621	.3615	.0291	.0073	.1337	.0027	-.0077	77.44	21.20
#3	.1643	.3640	.0257	.0121	.1313	.0034	-.0007	77.44	21.22

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**90.64**	**19.68**	**7.797**	**1.432**	**.0442**	**.0055**	**1.827**	**.0199**	**.1258**
Stddev	.16	.06	.218	.018	.0005	.0001	.005	.0010	.0007
%RSD	.1761	.2911	2.796	1.242	1.121	2.564	.2962	4.817	.5850
#1	90.82	19.74	7.622	1.414	.0444	.0054	1.834	.0207	.1255
#2	90.58	19.65	8.041	1.449	.0446	.0054	1.825	.0203	.1252
#3	90.52	19.63	7.728	1.433	.0437	.0057	1.824	.0188	.1266

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.391**	**.0244**	**.0536**	**10.64**	**.0722**	**.1182**	**2.641**
Stddev	.003	.0039	.0008	.02	.0064	.0108	.007
%RSD	.1109	16.05	1.519	.2306	8.898	9.105	.2856
#1	2.394	.0268	.0540	10.65	.0650	.1229	2.643
#2	2.390	.0266	.0542	10.66	.0773	.1059	2.648
#3	2.389	.0199	.0527	10.61	.0744	.1258	2.633

Zoom In Zoom Out

Sample Name: mp14721-sd1 Acquired: 5/2/2019 23:24:23 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**158120.**	**24616.**	**6489.2**	**9885.0**
Stddev	817.	91.	14.9	14.5
%RSD	.51683	.36959	.22984	.14700
#1	157250.	24514.	6486.0	9882.5
#2	158230.	24643.	6505.4	9900.6
#3	158870.	24690.	6476.1	9871.8

Zoom In Zoom Out

Sample Name: jc87093-1 Acquired: 5/2/2019 23:29:24 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8185**	**.0052**	**.0114**	**.0733**	**.9094**	**.5237**	**4.255**	**.1562**	**.0053**
Stddev	.0014	.0001	.0002	.0004	.0087	.0050	.032	.0007	.0004
%RSD	.1740	1.652	2.025	.5475	.9537	.9501	.7562	.4707	8.220
#1	.8196	.0053	.0112	.0728	.9193	.5294	4.278	.1556	.0050
#2	.8189	.0052	.0116	.0734	.9056	.5209	4.269	.1570	.0050
#3	.8169	.0051	.0113	.0735	.9032	.5206	4.218	.1559	.0058

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1504**	**3.372**	**.2212**	**.0007**	**1.099**	**.0073**	**.0032**	**74.27**	**25.95**
Stddev	.0010	.011	.0007	.0004	.003	.0008	.0008	.37	.14
%RSD	.6624	.3326	.3021	55.15	.2965	11.49	23.45	.5015	.5407
#1	.1515	3.363	.2206	.0011	1.096	.0068	.0029	74.59	26.07
#2	.1499	3.385	.2212	.0004	1.102	.0068	.0041	74.36	25.99
#3	.1497	3.368	.2219	.0005	1.100	.0082	.0027	73.86	25.79

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **226.8**	**22.88**	**9.174**	**.9789**	**.0390**	**.0085**	**1.891**	**.1729**	**.1571**
Stddev	1.8	.07	.113	.0098	.0004	.0002	.009	.0010	.0006
%RSD	.8048	.3180	1.227	.9963	.9821	2.538	.4926	.5684	.4111
#1	228.3	22.93	9.195	.9900	.0393	.0086	1.890	.1719	.1577
#2	224.8	22.92	9.274	.9717	.0391	.0083	1.901	.1730	.1572
#3	227.4	22.80	9.052	.9750	.0386	.0087	1.882	.1739	.1564

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.107**	**-.0002**	**.0577**	F **109.1**	**.0761**	**.1016**	**5.615**
Stddev	.014	.0002	.0005	.6	.0022	.0010	.017
%RSD	.6621	147.1	.8061	.5315	2.835	.9435	.2938
#1	2.122	.0001	.0582	108.5	.0783	.1025	5.597
#2	2.103	-.0003	.0574	109.6	.0758	.1017	5.619
#3	2.096	-.0003	.0575	109.4	.0740	.1006	5.629

Zoom In Zoom Out

Sample Name: jc87093-1 Acquired: 5/2/2019 23:29:24 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**159920.**	**25860.**	**6544.8**	**9747.2**
Stddev	929.	134.	22.0	35.0
%RSD	.58098	.51937	.33544	.35860
#1	158970.	25816.	6566.6	9782.0
#2	159960.	25753.	6522.7	9712.1
#3	160820.	26011.	6545.2	9747.4

Zoom In Zoom Out

Sample Name: jc87093-2 Acquired: 5/2/2019 23:34:35 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.403**	**.0087**	**.0157**	**.1535**	**1.393**	**1.013**	**5.803**	**.2484**	**.0116**
Stddev	.001	.0001	.0002	.0003	.002	.001	.059	.0008	.0006
%RSD	.0896	1.308	1.535	.2167	.1293	.0858	1.019	.3420	4.868
#1	1.402	.0087	.0159	.1534	1.391	1.012	5.747	.2482	.0113
#2	1.404	.0087	.0157	.1538	1.394	1.014	5.865	.2493	.0122
#3	1.402	.0085	.0154	.1531	1.394	1.012	5.797	.2476	.0112

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2250**	**5.350**	**.4096**	**.0006**	**1.968**	**.0081**	**.0075**	**117.8**	**24.10**
Stddev	.0001	.018	.0013	.0008	.003	.0007	.0006	.2	.05
%RSD	.0651	.3289	.3265	132.1	.1673	8.729	7.982	.1770	.2094
#1	.2249	5.356	.4094	.0010	1.969	.0088	.0078	118.0	24.15
#2	.2252	5.363	.4111	.0011	1.971	.0083	.0068	117.9	24.10
#3	.2249	5.330	.4084	-.0003	1.965	.0074	.0079	117.6	24.05

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **247.6**	**26.45**	**12.10**	**1.881**	**.0397**	**.0078**	**1.852**	**.2471**	**.1630**
Stddev	1.3	.04	.04	.007	.0003	.0002	.012	.0008	.0004
%RSD	.5090	.1442	.3509	.3520	.7360	2.687	.6577	.3399	.2229
#1	246.2	26.46	12.13	1.874	.0394	.0077	1.865	.2475	.1632
#2	248.6	26.48	12.05	1.881	.0399	.0081	1.852	.2478	.1632
#3	247.9	26.41	12.12	1.888	.0399	.0077	1.840	.2462	.1626

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.308**	**-.0017**	**.0587**	**9.240**	**.0843**	**.1553**	F **10.34**
Stddev	.004	.0008	.0003	.038	.0006	.0017	.03
%RSD	.1642	45.84	.5474	.4068	.7692	1.094	.3043
#1	2.308	-.0009	.0584	9.258	.0847	.1569	10.34
#2	2.311	-.0025	.0590	9.265	.0846	.1535	10.31
#3	2.304	-.0017	.0586	9.197	.0835	.1554	10.37

Zoom In Zoom Out

Sample Name: jc87093-2 Acquired: 5/2/2019 23:34:35 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**163160.**	**26339.**	**6664.5**	**9638.0**
Stddev	467.	187.	24.1	32.9
%RSD	.28607	.71098	.36139	.34178
#1	163690.	26507.	6648.3	9611.6
#2	162950.	26137.	6653.1	9627.5
#3	162830.	26374.	6692.2	9674.9

Zoom In Zoom Out

Sample Name: jc87093-3 Acquired: 5/2/2019 23:39:44 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.4344**	**.0032**	**.0014**	**.0405**	**.2258**	**.2753**	**3.245**	**.1466**
Stddev	.0043	.0002	.0000	.0026	.0238	.0105	.312	.0003
%RSD	.9823	7.678	3.376	6.498	10.52	3.828	9.615	.2218
#1	.4294	.0029	.0014	.0435	.2532	.2874	3.604	.1467
#2	.4367	.0033	.0013	.0391	.2116	.2688	3.051	.1468
#3	.4370	.0033	.0014	.0389	.2125	.2695	3.078	.1462

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0103**	**.1163**	**.7491**	**.0389**	**-.0012**	**.4165**	**-.0053**	**.0024**
Stddev	.0216	.0085	.0022	.0029	.0037	.0011	.0128	.0035
%RSD	209.7	7.332	.2920	7.544	305.8	.2706	240.6	145.3
#1	-.0352	.1261	.7482	.0356	-.0054	.4167	-.0200	.0063
#2	.0023	.1106	.7515	.0400	.0010	.4175	.0017	-.0004
#3	.0020	.1122	.7474	.0412	.0009	.4153	.0024	.0012

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.70**	**23.63**	**126.7**	**10.06**	**3.740**	**.9170**	**.0210**	**.0116**
Stddev	.32	.20	1.2	.11	.067	.0080	.0002	.0007
%RSD	.9384	.8535	.9750	1.073	1.781	.8753	.8828	5.917
#1	33.34	23.39	125.3	9.934	3.664	.9129	.0211	.0108
#2	33.88	23.73	127.3	10.10	3.788	.9262	.0208	.0120
#3	33.89	23.75	127.6	10.13	3.769	.9118	.0210	.0119

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.648**	**.0417**	**.2028**	**1.758**	**.0058**	**.0337**	**48.91**	**.0235**
Stddev	.007	.0017	.0018	.176	.0052	.0023	.28	.0554
%RSD	.4101	4.054	.8718	10.01	89.65	6.944	.5719	235.9
#1	1.655	.0398	.2007	1.961	.0118	.0310	48.66	-.0405
#2	1.649	.0426	.2035	1.651	.0030	.0351	49.21	.0546
#3	1.642	.0428	.2040	1.662	.0026	.0351	48.87	.0564

Zoom In Zoom Out

Sample Name: jc87093-3 Acquired: 5/2/2019 23:39:44 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0483**	**1.807**
Stddev	.0057	.028
%RSD	11.70	1.540
#1	.0548	1.782
#2	.0455	1.837
#3	.0446	1.802

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	*****	**25138.**	**6461.1**	**9782.6**
Stddev	-----	186.	15.4	16.2
%RSD	-----	.73958	.23791	.16577
#1	-----	25340.	6475.9	9801.2
#2	158850.	25102.	6445.2	9771.4
#3	157100.	24973.	6462.3	9775.2

Zoom In Zoom Out

Sample Name: jc87093-4 Acquired: 5/2/2019 23:44:51 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.596**	**.0099**	**.0228**	**.1548**	**2.595**	**1.241**	**6.566**	**.2727**	**.0141**
Stddev	.002	.0001	.0001	.0008	.023	.010	.057	.0006	.0005
%RSD	.1180	1.260	.4013	.4948	.8799	.7746	.8653	.2307	3.544
#1	1.595	.0098	.0229	.1549	2.582	1.237	6.501	.2728	.0141
#2	1.595	.0100	.0227	.1540	2.622	1.252	6.586	.2720	.0136
#3	1.598	.0098	.0227	.1555	2.582	1.235	6.610	.2732	.0146

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2550**	F **9.226**	**.7850**	**.0031**	**3.163**	**.0157**	**.0072**	**131.5**	**28.88**
Stddev	.0020	.049	.0041	.0007	.013	.0013	.0012	.2	.05
%RSD	.7901	.5294	.5169	22.34	.4030	8.064	16.94	.1532	.1652
#1	.2537	9.262	.7857	.0027	3.165	.0157	.0066	131.3	28.83
#2	.2573	9.171	.7806	.0027	3.149	.0144	.0064	131.7	28.92
#3	.2540	9.246	.7886	.0039	3.174	.0169	.0086	131.6	28.89

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **224.6**	**29.11**	**13.05**	**1.934**	**.0457**	**.0082**	**1.992**	**.4130**	**.1772**
Stddev	.7	.10	.01	.010	.0006	.0001	.008	.0024	.0001
%RSD	.2934	.3381	.1069	.4979	1.234	1.660	.4145	.5886	.0706
#1	225.2	29.00	13.05	1.925	.0459	.0081	1.993	.4149	.1770
#2	223.9	29.16	13.07	1.934	.0451	.0082	1.983	.4103	.1772
#3	224.7	29.18	13.04	1.944	.0462	.0084	2.000	.4140	.1773

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.416**	**-.0056**	**.0419**	**23.63**	**.0982**	**.1674**	F **11.83**
Stddev	.021	.0005	.0001	.19	.0028	.0014	.11
%RSD	.8509	8.584	.1882	.8177	2.847	.8445	.9554
#1	2.405	-.0056	.0419	23.83	.0956	.1664	11.96
#2	2.440	-.0061	.0420	23.44	.1011	.1669	11.74
#3	2.404	-.0051	.0419	23.63	.0978	.1690	11.79

Zoom In Zoom Out

Sample Name: jc87093-4 Acquired: 5/2/2019 23:44:51 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**162830.**	**26523.**	**6720.1**	**9574.4**
Stddev	1447.	155.	37.6	44.1
%RSD	.88860	.58288	.55887	.46056
#1	164230.	26690.	6693.8	9545.6
#2	161340.	26385.	6763.1	9625.2
#3	162920.	26495.	6703.4	9552.5

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/2/2019 23:50:01 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.009**	**2.063**	**2.017**	**2.033**	**2.014**	**2.000**	**2.054**	**2.032**	**.2485**
Stddev	.009	.006	.009	.008	.006	.005	.027	.008	.0010
%RSD	.4367	.2918	.4678	.4000	.3003	.2669	1.314	.3793	.3944
#1	2.015	2.070	2.017	2.034	2.007	1.995	2.030	2.034	.2476
#2	1.999	2.059	2.026	2.041	2.016	1.998	2.048	2.039	.2484
#3	2.013	2.060	2.007	2.024	2.019	2.006	2.083	2.024	.2495
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	**2.016**	**2.027**	**2.018**	**2.099**	**2.028**	**2.007**	**2.020**	**39.14**	**39.50**
Stddev	.002	.009	.009	.008	.009	.010	.011	.12	.14
%RSD	.1201	.4186	.4414	.3819	.4452	.5178	.5395	.3096	.3459
#1	2.014	2.026	2.021	2.100	2.030	2.009	2.023	39.28	39.66
#2	2.016	2.035	2.025	2.107	2.036	2.017	2.028	39.04	39.40
#3	2.018	2.018	2.008	2.091	2.018	1.996	2.007	39.11	39.44
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	**39.81**	**39.81**	**39.27**	**39.90**	**2.066**	**2.036**	**5.347**	**2.067**	**2.063**
Stddev	.13	.09	.12	.14	.009	.011	.029	.010	.006
%RSD	.3169	.2291	.3009	.3400	.4260	.5383	.5370	.4651	.2947
#1	39.95	39.89	39.40	40.02	2.067	2.035	5.347	2.068	2.068
#2	39.70	39.71	39.21	39.75	2.075	2.047	5.375	2.076	2.056
#3	39.78	39.83	39.19	39.94	2.057	2.025	5.318	2.057	2.064
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: 5/2/2019 23:50:01 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.027**	**1.978**	**2.047**	**2.072**	**1.996**	**2.025**	F **2.578**
Stddev	.001	.008	.002	.013	.011	.008	.019
%RSD	.0708	.4240	.0983	.6188	.5391	.3966	.7520
#1	2.026	1.975	2.045	2.071	2.001	2.034	2.587
#2	2.027	1.988	2.047	2.086	2.004	2.020	2.591
#3	2.029	1.972	2.049	2.060	1.984	2.020	2.556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**151070.**	**23968.**	**6184.6**	**9277.4**
Stddev	769.	70.	25.6	33.6
%RSD	.50896	.29343	.41467	.36166
#1	151860.	23887.	6187.0	9273.3
#2	151030.	24006.	6157.9	9246.1
#3	150320.	24011.	6209.0	9312.8

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/2/2019 23:55:03 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0002**	**.0000**	**.0000**	**.0000**	**.0001**	**.0001**
Stddev	.0003	.0001	.0001	.0001	.0002	.0003	.0001	.0002	.0001
%RSD	96.23	193.6	130.5	26.82	396.5	1270.	160.4	200.2	125.9
#1	-.0005	.0002	-.0001	.0003	-.0001	-.0000	-.0000	.0002	.0002
#2	.0000	-.0001	.0002	.0002	.0003	-.0003	.0000	.0003	-.0000
#3	-.0004	.0001	.0002	.0001	-.0000	.0004	.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	**-.0000**	**-.0003**	**-.0000**	**.0013**	**-.0006**	**-.0013**	**-.0000**	**-.0106**	**-.0021**
Stddev	.0001	.0000	.0009	.0010	.0004	.0008	.0005	.0137	.0012
%RSD	1625.	2.886	5198.	80.85	80.27	59.21	5738.	128.4	58.34
#1	-.0000	-.0003	-.0003	.0003	-.0006	-.0005	.0006	.0025	-.0031
#2	-.0001	-.0003	.0010	.0012	-.0001	-.0014	-.0004	-.0097	-.0025
#3	.0001	-.0003	-.0007	.0024	-.0010	-.0021	-.0002	-.0247	-.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**.0045**	**.0504**	**.0117**	**.0029**	**.0005**	**.0020**	**-.0009**	**.0001**
Stddev	.0002	.0127	.0389	.0076	.0005	.0001	.0007	.0005	.0001
%RSD	14.33	282.3	77.21	65.29	15.62	30.47	34.96	53.13	114.4
#1	-.0012	-.0100	.0932	.0205	.0025	.0006	.0014	-.0004	-.0000
#2	-.0014	.0101	.0410	.0070	.0028	.0004	.0018	-.0012	.0001
#3	-.0010	.0134	.0170	.0076	.0034	.0004	.0028	-.0013	.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: 5/2/2019 23:55:03 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0021**	**.0002**	**.0020**	**.0004**	**.0011**	**-.0160**
Stddev	.0003	.0005	.0002	.0018	.0015	.0021	.0016
%RSD	47.37	25.50	79.81	92.11	332.3	194.4	10.24
#1	.0009	.0026	.0002	.0000	.0010	-.0010	-.0179
#2	.0004	.0023	.0004	.0036	-.0012	.0033	-.0153
#3	.0005	.0015	.0000	.0022	.0016	.0010	-.0148
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	**162260.**	**24139.**	**6432.7**	**10110.**
Stddev	2571.	170.	78.8	104.
%RSD	1.5846	.70226	1.2248	1.0273
#1	160630.	24316.	6516.0	10223.
#2	165220.	24123.	6423.0	10088.
#3	160920.	23978.	6359.3	10018.

Zoom In Zoom Out

Sample Name: jc87093-5 Acquired: 5/3/2019 0:00:10 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8559**	**.0071**	**.0077**	**.0960**	**.8353**	**.5294**	**5.499**	**.1808**
Stddev	.0023	.0001	.0001	.0008	.0004	.0007	.054	.0011
%RSD	.2653	.7391	1.769	.8400	.0435	.1401	.9831	.6271
#1	.8571	.0071	.0075	.0952	.8350	.5285	5.504	.1801
#2	.8533	.0072	.0078	.0968	.8351	.5298	5.550	.1821
#3	.8573	.0071	.0077	.0959	.8357	.5298	5.443	.1803

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.2042**	**2.900**	**.1823**	F **-.0029**	**1.004**	**.0066**	F **-.0061**
Stddev	.0008	.0002	.021	.0010	.0015	.008	.0019	.0011
%RSD	54.19	.1165	.7149	.5522	52.27	.7521	29.72	18.74
#1	.0006	.2045	2.886	.1820	-.0022	.9972	.0048	-.0056
#2	.0018	.2041	2.924	.1834	-.0046	1.012	.0086	-.0052
#3	.0022	.2041	2.890	.1815	-.0018	1.003	.0063	-.0074

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**99.09**	**20.96**	**176.8**	**27.32**	**11.40**	**1.435**	**.0423**	**.0042**
Stddev	.10	.01	2.4	.03	.03	.005	.0007	.0001
%RSD	.0977	.0383	1.356	.1193	.2798	.3506	1.720	2.788
#1	98.99	20.95	174.1	27.29	11.37	1.437	.0414	.0041
#2	99.18	20.97	178.2	27.35	11.41	1.429	.0426	.0043
#3	99.09	20.96	178.2	27.30	11.43	1.439	.0428	.0042

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.867**	**.1403**	**.1160**	**2.591**	**-.0008**	**.0738**	**14.49**	**.0887**
Stddev	.011	.0014	.0002	.001	.0005	.0003	.09	.0015
%RSD	.5947	1.006	.1515	.0299	68.33	.4026	.6071	1.733
#1	1.859	.1388	.1159	2.591	-.0013	.0735	14.39	.0903
#2	1.880	.1416	.1159	2.590	-.0003	.0741	14.56	.0873
#3	1.863	.1404	.1162	2.591	-.0007	.0740	14.51	.0884

Zoom In Zoom Out

Sample Name: jc87093-5 Acquired: 5/3/2019 0:00:10 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1432**	**7.359**
Stddev	.0018	.044
%RSD	1.239	.5925
#1	.1451	7.309
#2	.1430	7.388
#3	.1415	7.380

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**161800.**	**26076.**	**6667.2**	**9615.3**
Stddev	374.	31.	45.5	55.4
%RSD	.23136	.11788	.68178	.57582
#1	161380.	26079.	6696.2	9652.8
#2	162090.	26045.	6614.8	9551.7
#3	161930.	26106.	6690.5	9641.4

Zoom In Zoom Out

Sample Name: jc87093-6 Acquired: 5/3/2019 0:05:21 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.8176**	**.0023**	**.0022**	**.0309**	**.5721**	**.9964**	**2.062**	**.1355**
Stddev	.0030	.0000	.0001	.0013	.0024	.0055	.011	.0056
%RSD	.3653	.4153	6.843	4.331	.4253	.5515	.5194	4.157
#1	.8141	.0023	.0023	.0300	.5746	1.002	2.050	.1316
#2	.8193	.0023	.0020	.0303	.5718	.9968	2.069	.1328
#3	.8192	.0023	.0022	.0324	.5698	.9907	2.068	.1419

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0016**	**.0974**	**1.006**	**.1432**	F **-.0032**	**.7983**	**.0064**	**-.0027**
Stddev	.0006	.0006	.047	.0063	.0020	.0339	.0015	.0024
%RSD	35.04	.5746	4.707	4.424	61.39	4.246	22.76	86.58
#1	-.0010	.0981	.9739	.1383	-.0012	.7738	.0066	-.0036
#2	-.0015	.0970	.9839	.1409	-.0033	.7841	.0077	-.0045
#3	-.0021	.0972	1.060	.1503	-.0051	.8370	.0048	-.0000

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.40**	**85.58**	**169.8**	**11.16**	**5.106**	**1.217**	**.0248**	**.0423**
Stddev	.04	.17	2.1	.02	.053	.002	.0022	.0017
%RSD	.1607	.1955	1.231	.1798	1.036	.1934	8.834	3.922
#1	25.38	85.52	171.8	11.16	5.052	1.215	.0236	.0409
#2	25.45	85.77	169.8	11.18	5.157	1.217	.0235	.0419
#3	25.38	85.45	167.6	11.14	5.110	1.220	.0273	.0442

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.385**	**.0947**	**.3713**	**1.410**	**.0048**	**.0307**	F **235.6**	**.0482**
Stddev	.112	.0044	.0012	.007	.0002	.0002	11.0	.0034
%RSD	4.703	4.638	.3117	.5160	3.377	.6027	4.667	7.107
#1	2.305	.0922	.3700	1.418	.0047	.0309	227.8	.0509
#2	2.337	.0921	.3723	1.409	.0047	.0306	230.8	.0494
#3	2.513	.0997	.3716	1.403	.0050	.0306	248.1	.0444

Zoom In Zoom Out

Sample Name: jc87093-6 Acquired: 5/3/2019 0:05:21 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0436**	**1.475**
Stddev	.0004	.068
%RSD	.9802	4.639
#1	.0440	1.431
#2	.0438	1.440
#3	.0431	1.554

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**156650.**	**24931.**	**6157.1**	**9444.8**
Stddev	695.	139.	250.2	323.6
%RSD	.44336	.55843	4.0643	3.4268
#1	156140.	24844.	6316.8	9655.6
#2	156370.	24857.	6285.8	9606.6
#3	157440.	25092.	5868.7	9072.1

Zoom In Zoom Out

Sample Name: jc87093-8 Acquired: 5/3/2019 0:10:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.2143**	**.0141**	**.0075**	**.0688**	**.1616**	**2.325**	**3.107**	**.1474**	**.0037**
Stddev	.0012	.0001	.0001	.0004	.0005	.010	.016	.0006	.0009
%RSD	.5369	.8027	1.609	.5444	.3212	.4454	.5175	.3904	23.53
#1	.2142	.0140	.0074	.0687	.1612	2.315	3.108	.1470	.0043
#2	.2132	.0141	.0076	.0692	.1613	2.324	3.091	.1481	.0041
#3	.2155	.0142	.0075	.0685	.1622	2.336	3.123	.1472	.0027

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1045**	**.9276**	**.0974**	**-.0016**	**.6171**	**.0405**	**.0043**	**66.76**	**20.58**
Stddev	.0009	.0049	.0016	.0007	.0032	.0033	.0004	.54	.16
%RSD	.9082	.5328	1.602	43.35	.5174	8.028	8.768	.8060	.7581
#1	.1034	.9266	.0985	-.0023	.6185	.0430	.0046	67.06	20.65
#2	.1047	.9330	.0982	-.0015	.6194	.0417	.0044	66.14	20.40
#3	.1053	.9233	.0956	-.0010	.6135	.0368	.0039	67.08	20.69

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **281.0**	**3.549**	**4.433**	**.5549**	**.0353**	**.0144**	**2.267**	**.0607**	**.1519**
Stddev	3.0	.024	.019	.0038	.0003	.0003	.021	.0005	.0008
%RSD	1.078	.6608	.4278	.6854	.8471	2.229	.9194	.8754	.5500
#1	283.9	3.557	4.416	.5537	.0349	.0146	2.263	.0610	.1524
#2	281.3	3.523	4.429	.5519	.0355	.0146	2.290	.0610	.1509
#3	277.9	3.568	4.453	.5592	.0355	.0141	2.249	.0601	.1524

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7560**	**.0071**	**.0331**	F **147.5**	**.0238**	**.0640**	**3.789**
Stddev	.0050	.0012	.0003	.9	.0019	.0012	.009
%RSD	.6588	16.27	.7955	.6261	8.022	1.891	.2434
#1	.7513	.0062	.0334	147.9	.0217	.0653	3.778
#2	.7554	.0084	.0330	148.2	.0245	.0630	3.793
#3	.7612	.0067	.0329	146.5	.0253	.0636	3.795

Zoom In Zoom Out

Sample Name: jc87093-8 Acquired: 5/3/2019 0:10:37 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**155440.**	**24924.**	**6343.5**	**9875.0**
Stddev	283.	219.	25.5	33.1
%RSD	.18215	.87958	.40156	.33517
#1	155770.	24836.	6354.9	9881.4
#2	155280.	25173.	6314.4	9839.2
#3	155270.	24762.	6361.4	9904.5

Zoom In Zoom Out

Sample Name: jc87093-9 Acquired: 5/3/2019 0:15:51 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.245**	**.0079**	**.0008**	**.0689**	**.3232**	**.0538**	**2.241**	**.1839**
Stddev	.010	.0001	.0001	.0001	.0025	.0006	.024	.0003
%RSD	.8244	1.458	16.29	.1072	.7789	1.128	1.077	.1875
#1	1.257	.0081	.0007	.0688	.3206	.0542	2.222	.1838
#2	1.237	.0079	.0009	.0689	.3234	.0542	2.233	.1843
#3	1.242	.0079	.0009	.0690	.3257	.0531	2.268	.1837

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0027**	**.3136**	**.4436**	**.0312**	**.0016**	**.1126**	**.0013**	F **-.0077**
Stddev	.0003	.0022	.0002	.0007	.0013	.0003	.0030	.0018
%RSD	11.67	.7065	.0409	2.120	77.30	.3066	225.5	23.21
#1	-.0025	.3112	.4436	.0307	.0003	.1130	.0037	-.0070
#2	-.0027	.3141	.4437	.0309	.0019	.1123	.0023	-.0064
#3	-.0031	.3156	.4434	.0320	.0028	.1126	-.0020	-.0097

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**162.7**	**20.10**	**164.5**	**37.41**	**13.32**	**1.848**	**.0472**	**.0034**
Stddev	1.0	.12	1.6	.21	.10	.021	.0005	.0002
%RSD	.6389	.6154	.9708	.5541	.7154	1.142	1.043	6.504
#1	163.9	20.23	165.1	37.63	13.41	1.871	.0477	.0036
#2	161.9	20.00	165.8	37.21	13.22	1.829	.0471	.0035
#3	162.4	20.06	162.7	37.40	13.32	1.845	.0467	.0032

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.567**	**.0203**	**.1516**	**4.333**	**.0036**	**.1151**	**6.563**	**.1445**
Stddev	.001	.0003	.0011	.033	.0005	.0008	.021	.0038
%RSD	.0537	1.400	.7028	.7610	13.72	.7370	.3168	2.601
#1	1.567	.0207	.1528	4.298	.0037	.1142	6.548	.1430
#2	1.566	.0202	.1508	4.338	.0030	.1153	6.555	.1416
#3	1.567	.0202	.1511	4.364	.0040	.1158	6.587	.1487

Zoom In Zoom Out

Sample Name: jc87093-9 Acquired: 5/3/2019 0:15:51 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.2244**	**3.236**
Stddev	.0018	.011
%RSD	.8122	.3415
#1	.2265	3.233
#2	.2235	3.227
#3	.2232	3.248

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**162250.**	**26335.**	**6769.8**	**9472.1**
Stddev	1163.	175.	8.4	9.8
%RSD	.71652	.66611	.12449	.10381
#1	163590.	26222.	6760.0	9464.2
#2	161450.	26537.	6774.4	9483.1
#3	161730.	26245.	6774.9	9469.1

Zoom In Zoom Out

Sample Name: jc87093-10 Acquired: 5/3/2019 0:21:04 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.364**	**.0252**	**.0004**	**.2277**	**.4353**	**.1450**	**2.689**	**1.186**
Stddev	.002	.0001	.0001	.0009	.0112	.0022	.052	.003
%RSD	.1642	.4486	31.62	.3945	2.567	1.540	1.945	.2263
#1	1.362	.0254	.0006	.2287	.4416	.1457	2.719	1.189
#2	1.367	.0252	.0004	.2269	.4418	.1467	2.718	1.185
#3	1.363	.0251	.0003	.2276	.4224	.1424	2.628	1.183

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0036**	**.1269**	**1.867**	**.0448**	F **-.0040**	**.1021**	**.0046**	F **-.0082**
Stddev	.0020	.0036	.006	.0008	.0020	.0010	.0022	.0011
%RSD	56.87	2.870	.3002	1.713	51.19	.9559	48.69	13.61
#1	-.0047	.1290	1.873	.0440	-.0037	.1010	.0056	-.0095
#2	-.0048	.1290	1.865	.0456	-.0021	.1025	.0060	-.0075
#3	-.0012	.1227	1.863	.0448	-.0062	.1028	.0020	-.0077

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**160.3**	**88.77**	F **213.6**	**44.04**	**10.25**	**.7167**	**.0220**	**.0138**
Stddev	.2	.95	3.4	.05	.02	.0013	.0004	.0001
%RSD	.1015	1.072	1.596	.1230	.2126	.1832	1.821	.5374
#1	160.4	89.29	210.4	43.99	10.23	.7166	.0216	.0138
#2	160.4	87.67	213.3	44.09	10.25	.7154	.0224	.0139
#3	160.1	89.35	217.2	44.05	10.28	.7181	.0220	.0138

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.598**	**.0214**	**.8139**	**5.226**	**.0017**	**.2170**	F **115.1**	**.1794**
Stddev	.005	.0004	.0008	.147	.0009	.0053	.9	.0120
%RSD	.3367	1.885	.1033	2.811	50.55	2.465	.7566	6.717
#1	1.603	.0217	.8136	5.310	.0009	.2200	116.1	.1846
#2	1.592	.0216	.8148	5.311	.0017	.2202	114.6	.1879
#3	1.600	.0209	.8132	5.056	.0026	.2108	114.6	.1656

Zoom In Zoom Out

Sample Name: jc87093-10 Acquired: 5/3/2019 0:21:04 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0211**	**2.469**
Stddev	.0012	.021
%RSD	5.601	.8300
#1	.0224	2.492
#2	.0206	2.457
#3	.0201	2.456

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**170870.**	**27674.**	**7007.6**	**9493.6**
Stddev	3937.	111.	17.4	25.9
%RSD	2.3043	.40170	.24883	.27282
#1	168190.	27764.	6993.5	9469.1
#2	169030.	27708.	7002.2	9491.0
#3	175390.	27550.	7027.1	9520.7

Zoom In Zoom Out

Sample Name: jc87093-11 Acquired: 5/3/2019 0:26:23 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.5704**	**.0034**	**.0031**	**.0530**	**.4096**	**.2607**	**2.265**	**.1019**
Stddev	.0031	.0000	.0003	.0023	.0057	.0035	.035	.0049
%RSD	.5459	.7703	9.166	4.411	1.384	1.336	1.544	4.785
#1	.5713	.0034	.0031	.0521	.4154	.2640	2.299	.1003
#2	.5730	.0034	.0028	.0512	.4040	.2571	2.229	.0980
#3	.5669	.0034	.0034	.0556	.4095	.2610	2.266	.1073

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0969**	**1.415**	**.0835**	**.0010**	**.6869**	**.0018**	F **-.0038**
Stddev	.0007	.0014	.073	.0033	.0012	.0324	.0010	.0021
%RSD	140.6	1.472	5.147	3.913	124.9	4.712	56.51	54.91
#1	-.0003	.0985	1.388	.0809	.0008	.6753	.0023	-.0058
#2	.0012	.0959	1.359	.0824	.0022	.6620	.0023	-.0016
#3	.0007	.0962	1.497	.0871	-.0002	.7235	.0006	-.0042

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.13**	**14.61**	**101.2**	**16.58**	**6.631**	**.8655**	**.0264**	**.0035**
Stddev	.30	.07	.6	.11	.017	.0176	.0017	.0004
%RSD	.5757	.4875	.5876	.6756	.2525	2.039	6.537	10.76
#1	52.15	14.62	101.3	16.60	6.639	.8484	.0267	.0035
#2	52.42	14.68	101.7	16.68	6.643	.8836	.0245	.0031
#3	51.82	14.54	100.5	16.46	6.612	.8645	.0279	.0038

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.737**	**.1011**	**.0814**	**1.654**	**.0011**	**.0378**	**9.463**	**.0525**
Stddev	.093	.0050	.0005	.024	.0006	.0004	.483	.0030
%RSD	5.352	4.915	.5633	1.475	58.46	1.093	5.110	5.672
#1	1.710	.0992	.0816	1.679	.0004	.0382	9.290	.0558
#2	1.661	.0974	.0817	1.631	.0015	.0374	9.089	.0518
#3	1.841	.1068	.0808	1.652	.0014	.0378	10.01	.0499

Zoom In Zoom Out

Sample Name: jc87093-11 Acquired: 5/3/2019 0:26:23 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0859**	**4.384**
Stddev	.0012	.231
%RSD	1.414	5.270
#1	.0863	4.313
#2	.0846	4.197
#3	.0869	4.642

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**162990.**	**25357.**	**6467.8**	**9625.0**
Stddev	2661.	243.	293.7	381.0
%RSD	1.6329	.96021	4.5410	3.9584
#1	160090.	25186.	6564.7	9750.0
#2	165320.	25248.	6700.8	9927.8
#3	163550.	25636.	6137.9	9197.2

Zoom In Zoom Out

Sample Name: jc87093-12 Acquired: 5/3/2019 0:31:31 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**1.010**	**.0069**	**.0111**	**.0887**	**.9194**	**.5951**	**3.155**	**.1756**
Stddev	.004	.0001	.0002	.0028	.0027	.0019	.033	.0048
%RSD	.3992	.7964	1.364	3.140	.2990	.3144	1.036	2.716
#1	1.007	.0069	.0109	.0868	.9212	.5965	3.134	.1725
#2	1.015	.0069	.0112	.0919	.9208	.5959	3.192	.1811
#3	1.009	.0070	.0111	.0873	.9162	.5930	3.137	.1732

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.1943**	**3.357**	**.1885**	**.0002**	**1.288**	**.0084**	F **-.0033**
Stddev	.0004	.0009	.107	.0069	.0017	.034	.0021	.0014
%RSD	14.30	.4629	3.180	3.653	907.1	2.618	24.91	41.04
#1	.0028	.1941	3.288	.1848	-.0009	1.270	.0102	-.0046
#2	.0027	.1953	3.480	.1964	-.0007	1.327	.0088	-.0034
#3	.0035	.1935	3.304	.1842	.0021	1.267	.0061	-.0019

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.36**	**17.96**	**150.6**	**23.90**	**10.48**	**1.360**	**.0401**	**.0054**
Stddev	.26	.05	.9	.08	.03	.008	.0023	.0002
%RSD	.2760	.2583	.6198	.3498	.2479	.6187	5.630	4.183
#1	94.21	17.93	151.2	23.90	10.49	1.351	.0397	.0055
#2	94.66	18.02	149.5	23.99	10.51	1.365	.0425	.0055
#3	94.22	17.93	151.1	23.82	10.45	1.365	.0380	.0051

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.755**	**.1777**	**.1193**	**2.428**	**.0023**	**.0595**	**14.97**	**.0847**
Stddev	.065	.0059	.0004	.008	.0017	.0001	.55	.0010
%RSD	3.681	3.304	.2940	.3443	71.85	.1230	3.660	1.161
#1	1.714	.1739	.1190	2.428	.0005	.0596	14.63	.0858
#2	1.829	.1845	.1197	2.436	.0027	.0595	15.60	.0839
#3	1.721	.1747	.1192	2.419	.0037	.0595	14.68	.0844

Zoom In Zoom Out

Sample Name: jc87093-12 Acquired: 5/3/2019 0:31:31 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1329**	**7.117**
Stddev	.0009	.237
%RSD	.6611	3.333
#1	.1326	6.964
#2	.1323	7.390
#3	.1339	6.996

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**162190.**	**26081.**	**6543.7**	**9498.0**
Stddev	47.	211.	167.4	211.5
%RSD	.02895	.80780	2.5588	2.2273
#1	162220.	26076.	6654.0	9634.2
#2	162140.	25872.	6351.0	9254.3
#3	162220.	26294.	6626.1	9605.5

Zoom In Zoom Out

Sample Name: jc87232-1 Acquired: 5/3/2019 0:36:36 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.3569**	**.0094**	**.0014**	**.0751**	**.2549**	*****	**.7588**	**.1627**
Stddev	.0006	.0001	.0002	.0004	.0012	-----	.0046	.0006
%RSD	.1712	.9134	18.19	.5429	.4534	-----	.6038	.3452
#1	.3569	.0094	.0012	.0755	.2550	-----	.7601	.1633
#2	.3563	.0094	.0013	.0752	.2538	-----	.7538	.1625
#3	.3576	.0095	.0016	.0747	.2561	-----	.7627	.1622

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0890**	**.2752**	**.4745**	**.1175**	F **-.0235**	**.0789**	F **-.0533**	**.0080**
Stddev	.0002	.0016	.0023	.0011	.0021	.0004	.0021	.0029
%RSD	.1840	.5834	.4947	.9426	8.985	.4548	3.849	36.08
#1	-.0891	.2757	.4762	.1181	-.0253	.0792	-.0509	.0048
#2	-.0888	.2734	.4753	.1162	-.0240	.0785	-.0544	.0105
#3	-.0891	.2764	.4718	.1182	-.0212	.0790	-.0545	.0087

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**120.5**	**19.59**	F **347.2**	**33.08**	**50.21**	**1.990**	**.3040**	**.0425**
Stddev	.1	.02	1.8	.10	.13	.003	.0016	.0001
%RSD	.1000	.1225	.5082	.3143	.2537	.1485	.5116	.1683
#1	120.5	19.58	345.2	33.06	50.14	1.988	.3058	.0425
#2	120.4	19.57	348.1	32.98	50.12	1.993	.3033	.0426
#3	120.6	19.61	348.3	33.19	50.35	1.989	.3029	.0425

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.986**	**.0207**	**.1452**	**1.298**	**.0074**	**.0420**	**79.92**	**.0155**
Stddev	.004	.0003	.0003	.008	.0012	.0003	.47	.0009
%RSD	.2062	1.404	.2382	.6153	15.66	.6855	.5907	5.648
#1	1.990	.0204	.1451	1.299	.0071	.0419	80.46	.0149
#2	1.981	.0208	.1449	1.289	.0065	.0418	79.62	.0151
#3	1.986	.0209	.1456	1.305	.0087	.0423	79.67	.0165

Zoom In Zoom Out

Sample Name: jc87232-1 Acquired: 5/3/2019 0:36:36 Type: Unk
Method: SGS 3 NO Valve(v332) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.3063**	**5.079**
Stddev	.0014	.042
%RSD	.4665	.8347
#1	.3074	5.127
#2	.3047	5.056
#3	.3067	5.052

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**154560.**	**25027.**	**6394.4**	**9685.0**
Stddev	864.	177.	27.1	37.7
%RSD	.55926	.70871	.42341	.38970
#1	153810.	24963.	6373.7	9661.9
#2	155500.	25228.	6384.6	9664.5
#3	154350.	24891.	6425.1	9728.5

Zoom In Zoom Out

Sample Name: jc87232-2 Acquired: 5/3/2019 0:41:38 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**.3403**	**.0108**	**.0014**	**.0926**	**.2679**	**.0456**	**.8068**	**.2059**	**.0011**
Stddev	.0012	.0000	.0001	.0015	.0004	.0004	.0009	.0025	.0002
%RSD	.3606	.1981	7.060	1.592	.1365	.9159	.1123	1.205	19.31
#1	.3412	.0109	.0015	.0943	.2684	.0451	.8079	.2088	.0011
#2	.3407	.0109	.0013	.0920	.2677	.0460	.8064	.2048	.0014
#3	.3389	.0108	.0013	.0916	.2677	.0457	.8063	.2043	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2665**	**.5687**	**.1074**	**-.0016**	**.0681**	**.0055**	**.0008**	**109.9**	**18.07**
Stddev	.0003	.0071	.0023	.0008	.0016	.0009	.0028	.1	.01
%RSD	.1198	1.252	2.114	48.15	2.320	15.52	340.4	.0952	.0754
#1	.2667	.5767	.1093	-.0025	.0694	.0048	.0039	109.9	18.08
#2	.2661	.5663	.1080	-.0010	.0664	.0053	-.0014	109.9	18.06
#3	.2667	.5630	.1049	-.0013	.0686	.0065	-.0000	109.8	18.07

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **258.8**	**35.43**	**57.00**	**2.244**	**.3530**	**.0270**	**1.972**	**.0214**	**.1292**
Stddev	2.7	.02	.12	.012	.0040	.0001	.029	.0001	.0005
%RSD	1.050	.0620	.2091	.5468	1.141	.4322	1.481	.2898	.3676
#1	256.3	35.44	57.13	2.246	.3576	.0271	2.005	.0215	.1296
#2	261.7	35.40	56.97	2.254	.3510	.0271	1.961	.0215	.1293
#3	258.5	35.44	56.89	2.230	.3503	.0269	1.950	.0214	.1287

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.275**	**-.0006**	**.0809**	**69.41**	**.0384**	**.2744**	**4.849**
Stddev	.001	.0008	.0004	.95	.0012	.0012	.046
%RSD	.0884	133.7	.4488	1.373	3.224	.4365	.9555
#1	1.275	.0002	.0806	70.50	.0377	.2755	4.902
#2	1.276	-.0007	.0813	68.99	.0399	.2746	4.829
#3	1.274	-.0013	.0809	68.74	.0377	.2731	4.816

Zoom In Zoom Out

Sample Name: jc87232-2 Acquired: 5/3/2019 0:41:38 Type: Unk
Method: SGS 3 NO Valve(v332) 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	**156010.**	**25265.**	**6405.3**	**9488.3**
Stddev	595.	145.	75.7	90.8
%RSD	.38127	.57579	1.1819	.95674
#1	155320.	25416.	6329.4	9392.2
#2	156300.	25253.	6405.7	9500.0
#3	156400.	25126.	6480.8	9572.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/3/2019 0:46:43 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.037**	**2.098**	**2.075**	**2.080**	**2.038**	**2.017**	**2.061**	**2.081**	**.2500**
Stddev	.000	.004	.028	.024	.031	.029	.039	.024	.0035
%RSD	.0210	.1692	1.324	1.159	1.518	1.453	1.913	1.142	1.404
#1	2.038	2.096	2.106	2.107	2.053	2.033	2.091	2.108	.2522
#2	2.037	2.102	2.058	2.066	2.059	2.035	2.075	2.066	.2520
#3	2.037	2.096	2.059	2.066	2.003	1.984	2.017	2.068	.2460
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**	**2.082**	**2.072**	**2.144**	**2.076**	**2.064**	**2.080**	**39.86**	**40.12**
Stddev	.032	.028	.028	.025	.023	.027	.025	.04	.08
%RSD	1.588	1.339	1.341	1.150	1.094	1.300	1.185	.1072	.1903
#1	2.045	2.114	2.104	2.169	2.103	2.095	2.108	39.81	40.04
#2	2.048	2.067	2.053	2.120	2.062	2.045	2.067	39.90	40.18
#3	1.990	2.063	2.060	2.142	2.064	2.054	2.065	39.87	40.15
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	**40.39**	**40.39**	**39.95**	**40.48**	**2.124**	**2.090**	**5.493**	**2.117**	**2.096**
Stddev	.04	.01	.06	.03	.028	.029	.070	.028	.001
%RSD	.0977	.0310	.1614	.0816	1.332	1.395	1.277	1.300	.0552
#1	40.39	40.38	39.89	40.52	2.157	2.124	5.574	2.148	2.096
#2	40.44	40.40	39.95	40.45	2.107	2.073	5.457	2.098	2.097
#3	40.36	40.39	40.02	40.47	2.109	2.073	5.447	2.104	2.095
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: 5/3/2019 0:46:43 Type: QC
Method: SGS 3 NO Valve(v332) 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	**2.036**	**2.032**	**2.059**	**2.125**	**2.048**	**2.057**	F **2.611**
Stddev	.034	.028	.033	.031	.024	.006	.036
%RSD	1.658	1.352	1.579	1.438	1.177	.3028	1.382
#1	2.051	2.064	2.076	2.160	2.075	2.056	2.650
#2	2.059	2.018	2.078	2.102	2.036	2.064	2.578
#3	1.997	2.015	2.021	2.113	2.032	2.052	2.604
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							2.000
Range							10.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**149030.**	**23444.**	**6026.0**	**9069.6**
Stddev	2069.	89.	64.6	80.4
%RSD	1.3884	.38093	1.0715	.88646
#1	147920.	23402.	5953.1	8977.9
#2	147750.	23547.	6049.2	9102.9
#3	151410.	23384.	6075.8	9128.1

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/3/2019 0:51:44 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0000**	**-.0000**	**.0004**	**.0000**	**-.0001**	**-.0000**
Stddev	.0001	.0000	.0001	.0002	.0001	.0005	.0000	.0000	.0003
%RSD	64.29	62.47	90.09	375.6	251.2	139.4	442.5	20.39	2682.
#1	-.0001	.0000	.0000	.0002	-.0001	.0009	.0001	-.0001	.0001
#2	-.0002	.0000	.0001	-.0000	-.0000	-.0001	-.0000	-.0001	.0002
#3	-.0001	.0001	.0003	-.0001	.0001	.0003	.0000	-.0001	-.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	**.0002**	**-.0004**	**.0001**	**.0004**	**-.0001**	**-.0005**	**-.0008**	**-.0089**	**-.0017**
Stddev	.0004	.0001	.0002	.0009	.0006	.0016	.0020	.0089	.0022
%RSD	194.5	21.78	179.8	207.7	698.8	319.4	237.9	99.75	135.2
#1	.0001	-.0004	.0002	.0004	.0001	.0013	.0013	-.0104	-.0038
#2	.0007	-.0003	.0002	.0013	-.0007	-.0013	-.0013	-.0170	-.0018
#3	-.0002	-.0005	-.0001	-.0004	.0003	-.0015	-.0026	.0006	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0012**	**.0300**	**.0143**	**.0028**	**.0003**	**.0019**	**-.0010**	**.0001**
Stddev	.0003	.0098	.0213	.0093	.0007	.0003	.0010	.0004	.0001
%RSD	61.56	825.9	70.98	64.99	24.58	114.5	51.36	40.27	50.30
#1	-.0004	.0089	.0055	.0233	.0023	.0006	.0010	-.0006	.0001
#2	-.0002	-.0098	.0436	.0148	.0025	-.0000	.0016	-.0014	.0002
#3	-.0007	.0045	.0411	.0048	.0035	.0003	.0029	-.0011	.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: 5/3/2019 0:51:44 Type: QC
Method: SGS 3 NO Valve(v332) 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**	**.0019**	**.0002**	**.0034**	**-.0002**	**.0034**	**-.0169**
Stddev	.0001	.0008	.0001	.0021	.0009	.0020	.0021
%RSD	30.55	39.77	23.67	61.31	414.1	59.80	12.43
#1	.0004	.0026	.0002	.0036	.0005	.0039	-.0190
#2	.0004	.0011	.0003	.0054	-.0012	.0052	-.0169
#3	.0006	.0022	.0002	.0013	.0001	.0012	-.0148
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	**158550.**	**24156.**	**6377.7**	**10031.**
Stddev	964.	230.	68.1	93.
%RSD	.60774	.95349	1.0679	.92560
#1	159600.	24187.	6404.5	10065.
#2	157700.	24369.	6428.3	10103.
#3	158340.	23911.	6300.3	9926.4

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}	☒	1	Zr	0.001245	0.000000	No
Be 313.042 {108}	☒	6	V	0.001106	0.000000	No
			Mo	-0.000047	0.000000	No
			Ti	-0.000331	0.000000	No
			Mn	0.000010	0.000000	No
			Cu	0.000014	0.000000	No
			Bi	0.000060	0.000000	No
Cd 228.802 {448}	☒	11	As	0.010200	0.000000	No
			Ni	-0.000628	0.000000	No
			Fe	-0.000003	0.000000	No
			V	0.000091	0.000000	No
			Ba	0.000064	0.000000	No
			Co	-0.001130	0.000000	No
			Sr	-0.000020	0.000000	No
			Mn	0.000050	0.000000	No
			Cu	-0.000026	0.000000	No
			Zn	-0.000018	0.000000	No
			W	-0.000482	0.000000	No
Co 228.616 {448}	☒	7	Fe	0.000009	0.000000	No
			Mo	-0.000790	0.000000	No
			Ni	0.000091	0.000000	No
			Ti	0.002192	0.000000	No
			Ba	0.000140	0.000000	No
			W	0.000327	0.000000	No
			Cd	-0.000510	0.000000	No
Cr 267.716 {126}	☒	9	Mn	0.000348	0.000000	No
			V	0.000090	0.000000	No
			Mo	-0.000082	0.000000	No
			Fe	-0.000005	0.000000	No
			Ti	0.000060	0.000000	No
			Ba	0.000045	0.000000	No
			Cu	0.000100	0.000000	No
			Sr	-0.000100	0.000000	No
			W	0.000404	0.000000	No
Cu 324.754 {104}2	☒	13	Cr	-0.000004	0.000000	No
			V	-0.000397	0.000000	No
			Mo	0.000544	0.000000	No
			Ti	-0.000208	0.000000	No
			Fe	-0.000226	0.000000	No
			Zn	-0.000041	0.000000	No
			Co	-0.001373	0.000000	No
			Si	0.000016	0.000000	No
			Mn	0.000003	0.000000	No
			Se	0.000050	0.000000	No
			Sb	0.000069	0.000000	No
			W	0.000000	0.000000	No
			Al	0.000004	0.000000	No
Mn 257.610 {131}	☒	4	Fe	-0.000107	0.000000	No
			Si	0.000010	0.000000	No
			Ba	0.000004	0.000000	No
			Ni	0.000028	0.000000	No
Ni 231.604 {446}	☒	8	Fe	0.000008	0.000000	No
			Zn	-0.000013	0.000000	No
			Be	0.000213	0.000000	No
			Co	-0.000220	0.000000	No
			Tl	0.000209	0.000000	No
			Mo	0.000026	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cu	0.000050	0.000000	No
			Se	0.000100	0.000000	No
Ag 328.068 {103}	☒	14	Mn	0.000252	0.000000	No
			Mo	0.000012	-0.000003	No
			Ti	-0.000090	0.000000	No
			Fe	-0.000255	0.000000	No
			Zn	-0.000120	0.000000	No
			Ca	-0.000001	0.000000	No
			Zr	0.007615	0.000000	No
			Sr	-0.000020	0.000000	No
			Mg	0.000000	0.000000	No
			Ba	0.000071	0.000000	No
			Cr	0.000022	0.000000	No
			V	-0.003500	0.000000	No
			Al	-0.000006	0.000000	No
			W	0.000000	0.000000	No
V 292.402 {115}	☒	6	Ti	0.000689	0.000000	No
			Mo	-0.000304	0.000000	No
			Fe	0.000029	0.000000	No
			Sr	-0.000100	0.000000	No
			Cr	-0.007536	0.000000	No
			Mn	-0.002777	0.000000	No
Zn 206.200 {464}	☒	9	Cr	-0.000850	0.000000	No
			Fe	0.000011	0.000000	No
			Si	0.000015	0.000000	No
			Mn	-0.000045	0.000000	No
			Ba	-0.000060	0.000000	No
			Sn	-0.000023	0.000000	No
			Cu	0.000148	0.000000	No
			As	0.000055	0.000000	No
			Be	0.000058	0.000000	No
As 189.042 {478}	☒	18	Al	0.000008	0.000000	No
			Fe	-0.000045	0.000000	No
			Ca	0.000004	0.000000	No
			Mo	0.002750	0.000000	No
			Cr	0.000100	0.000000	No
			Ba	-0.000114	0.000000	No
			Sn	-0.000130	0.000000	No
			Cd	-0.000328	0.000000	No
			Si	0.000024	0.000000	No
			Zn	-0.000082	0.000000	No
			Sr	-0.000045	0.000000	No
			W	0.010000	0.000000	No
			Cu	-0.000058	0.000000	No
			Co	-0.000045	0.000000	No
			Zr	0.000036	0.000000	No
			Mn	0.000022	0.000000	No
			S	0.000010	0.000000	No
			Ti	0.000100	0.000000	No
Tl 190.856 {477}	☒	24	Cr	0.000315	0.000000	No
			Mo	-0.008200	0.000000	No
			Al	-0.000003	0.000000	No
			Fe	-0.000032	0.000000	No
			V	-0.028288	0.000000	No
			Mn	0.001890	0.000000	No
			Si	-0.000018	0.000000	No
			Ca	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ti	-0.002790	0.000000	No
			Mg	0.000000	0.000000	No
			Co	0.004280	0.000000	No
			Sr	0.000010	0.000000	No
			B	-0.000003	0.000000	No
			Ba	0.000034	0.000000	No
			Zn	-0.000053	0.000000	No
			As	0.000068	0.000000	No
			W	-0.007000	0.000000	No
			Cu	0.000142	0.000000	No
			Pb	-0.000020	0.000000	No
			S	0.000010	0.000000	No
			Sn	-0.000086	0.000000	No
			Li	0.000000	0.000000	No
			K	0.000000	0.000000	No
			Zr	0.000000	0.000000	No
Pb 220.353 {453}	☒	20	Al	-0.000093	0.000000	No
			Fe	0.000039	0.000000	No
			Ca	0.000005	0.000000	No
			Mn	0.000154	0.000000	No
			Mo	-0.001500	0.000000	No
			Cu	0.000154	0.000000	No
			Co	0.000264	0.000000	No
			Ti	-0.000900	0.000000	No
			Si	-0.000067	0.000000	No
			Ba	-0.000022	0.000000	No
			Sb	-0.000084	0.000000	No
			Sr	-0.000033	0.000000	No
			W	0.005000	0.000000	No
			Mg	0.000004	0.000000	No
			Cd	0.000012	0.000000	No
			Cr	-0.000031	0.000000	No
			Zr	-0.000281	0.000000	No
			Ni	0.000371	0.000000	No
			S	0.000010	0.000000	No
			Zn	-0.000106	0.000000	No
Se 196.090 {472}	☒	23	Al	-0.000002	0.000000	No
			Ca	-0.000007	0.000000	No
			Mn	0.000594	0.000000	No
			Mo	0.000400	0.000000	No
			Fe	-0.000172	0.000000	No
			Co	-0.000182	0.000000	No
			Sr	-0.000011	0.000000	No
			Cu	-0.000087	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000054	0.000000	No
			Be	-0.000347	0.000000	No
			Zn	0.000050	0.000000	No
			B	0.000028	0.000000	No
			Ti	-0.000020	0.000000	No
			Cd	0.000090	0.000000	No
			Zr	-0.000297	0.000000	No
			Ba	-0.000046	0.000000	No
			Mg	-0.000000	0.000000	No
			Pb	-0.000078	0.000000	No
			Ni	-0.000100	0.000000	No
			Cr	-0.000024	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			S	-0.000014	0.000000	No
			V	0.000188	0.000000	No
Sb 206.833 {463}	☒	17	Fe	0.000005	0.000000	No
			Al	0.000015	0.000000	No
			Ca	0.000001	0.000000	No
			Ni	-0.000716	0.000000	No
			Cr	0.020800	0.000000	No
			V	-0.003422	0.000000	No
			Zn	-0.000115	0.000000	No
			Mo	0.000589	0.000000	No
			Ti	0.000630	0.000000	No
			Sn	-0.010725	0.000000	No
			Mg	-0.000003	0.000000	No
			Zr	-0.000463	0.000000	No
			Sr	0.000031	0.000000	No
			B	-0.000100	0.000000	No
			Co	-0.000251	0.000000	No
			W	0.000000	0.000000	No
			Si	-0.000170	0.000000	No
Al 396.152 { 85}	☒	5	Si	0.000652	0.000000	No
			Ca	0.000018	0.000000	No
			Mo	0.043916	0.000000	No
			Zr	0.005268	0.000000	No
			Ti	-0.000583	0.000000	No
Ca 317.933 {106}	☒	14	Fe	0.000012	0.000000	No
			W	0.003960	0.000000	No
			Tl	-0.000152	0.000000	No
			Be	0.001840	0.000000	No
			Ba	-0.001224	0.000000	No
			Cu	-0.000822	0.000000	No
			Cd	-0.007593	0.000000	No
			Ni	0.000667	0.000000	No
			B	-0.000210	0.000000	No
			Se	0.000923	0.000000	No
			Co	-0.000408	0.000000	No
			Cr	0.000640	0.000000	No
			Al	-0.000000	0.000000	No
			As	0.010000	0.000000	No
Fe 259.940 {130}	☒	10	Si	0.000819	0.000000	No
			Tl	-0.000051	0.000000	No
			Cr	0.000310	0.000000	No
			Mn	-0.000196	0.000000	No
			V	-0.000064	0.000000	No
			Cu	-0.000015	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}	☒	3	Mo	-0.013702	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.007074	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Sn	-0.004700	0.000000	No
			Ba	-0.010574	0.000000	No
			Mo	-0.000850	0.000000	No
			Cu	-0.011483	0.000000	No
			Ni	-0.010000	0.000000	No
Na 589.592 { 57}	☒	4	K	-0.000560	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000180	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	☒	1	Mo	0.038137	0.000000	No
Mo 202.030 {467}	☒	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	☒	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.034932	0.000000	No
			V	0.036950	0.000000	No
			Ti	0.004593	0.000000	No
			Al	-0.000010	0.000000	No
			Cd	0.001043	0.000000	No
			Ba	0.001987	0.000000	No
			Sn	0.007500	0.000000	No
			Zn	0.000385	0.000000	No
			Be	-0.000048	0.000000	No
			W	0.000000	0.000000	No
Sn 189.989 {478}	☒	4	Ti	-0.001964	0.000000	No
			Fe	0.000004	0.000000	No
			Si	0.000131	0.000000	No
			Zr	0.000908	0.000000	No
Sr 407.771 { 83}	☒	2	Ca	0.000018	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	☒	3	Cr	0.000189	0.000000	No
			Mo	0.001351	0.000000	No
			Si	0.000035	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}	☒	20	Si	0.000105	0.000000	No
			As	0.000100	0.000000	No
			Mn	0.000066	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	0.013026	0.000000	No
			Sn	0.001300	0.000000	No
			Zr	0.000061	0.000000	No
			B	0.000009	0.000000	No
			Sb	-0.000300	0.000000	No
			Co	-0.001000	0.000000	No
			Ni	-0.003000	0.000000	No
			Be	-0.000185	0.000000	No
			Se	-0.000105	0.000000	No
			Cu	-0.000138	0.000000	No
			Tl	-0.000220	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Zr 339.198 { 99}	☒	6	Mo	0.001069	0.000000	No
			Ti	0.000203	0.000000	No
			Fe	-0.000070	0.000000	No
			Si	0.000074	0.000000	No
			S	-0.000002	0.000000	No
			Cr	-0.000700	0.000000	No
S 182.034 {485}	☒	7	Mo	-0.004201	0.000000	No
			Al	-0.000034	0.000000	No
			Fe	0.000002	0.000000	No
			Mn	0.004620	0.000000	No
			W	-0.032564	0.000000	No
			Ca	0.000032	0.000000	No
			Mg	0.000005	0.000000	No
Bi 223.061 {451}	☒	9	Ti	-0.072020	0.000000	No
			V	-0.000704	0.000000	No
			Co	-0.002380	0.000000	No
			Ca	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Fe	0.000187	0.000000	No
			Cr	0.001595	0.000000	No
			Cu	-0.001148	0.000000	No
			W	-0.020000	0.000000	No
Li 670.784 { 50}	☒	2	Ca	0.000023	0.000000	No
			Fe	0.000081	0.000000	No
P 177.495 {490}	☒	9	Mn	-0.006184	0.000000	No
			Al	-0.000060	0.000000	No
			V	-0.001953	0.000000	No
			Si	-0.001622	0.000000	No
			Ti	0.000000	-0.001185	No
			Mo	-0.001880	0.000000	No
			S	-0.000189	0.000000	No
			Co	-0.002198	0.000000	No
			Cu	-0.023500	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}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.014402	1.956498	0.000000	1.000000
Be 313.042 {108}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000738	2.845392	0.000000	1.000000
Cd 228.802 {448}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000452	1.158256	0.000000	1.000000
Co 228.616 {448}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000107	0.725950	0.000000	1.000000
Cr 267.716 {126}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000070	0.156510	0.000000	1.000000
Cu 324.754 {104}2	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.002634	0.257696	0.000000	1.000000
Mn 257.610 {131}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000093	0.865849	0.000000	1.000000
Ni 231.604 {446}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000055	0.589198	0.000000	1.000000
Ag 328.068 {103}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000252	0.157062	0.000000	1.000000
V 292.402 {115}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000236	0.224187	0.000000	1.000000
Zn 206.200 {464}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000190	1.702336	0.000000	1.000000
As 189.042 {478}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000177	0.124920	0.000000	1.000000
Tl 190.856 {477}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000237	0.077566	0.000000	1.000000
Pb 220.353 {453}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000814	0.257621	0.000000	1.000000
Se 196.090 {472}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000109	0.095454	0.000000	1.000000
Sb 206.833 {463}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000852	0.163927	0.000000	1.000000
Al 396.152 { 85}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000608	0.045432	0.000000	1.000000
Ca 317.933 {106}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.004920	0.102097	0.000000	1.000000
Fe 259.940 {130}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000202	0.056127	0.000000	1.000000
Mg 279.079 {121}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000050	0.010818	0.000000	1.000000
K 766.490 { 44}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.004340	0.023930	0.000000	1.000000
Na 589.592 { 57}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.003751	0.090001	0.000000	1.000000
B 208.959 {462}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000476	0.247032	0.000000	1.000000
Mo 202.030 {467}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000960	0.790863	0.000000	1.000000
Si 212.412 {459}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.002394	0.220142	0.000000	1.000000
Sn 189.989 {478}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000441	0.236768	0.000000	1.000000
Sr 407.771 { 83}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.001753	3.340113	0.000000	1.000000
Ti 334.904 {101}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000070	0.179464	0.000000	1.000000
Y 360.073 { 94}*	5/3/2019 8:47:21	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	5/3/2019 8:47:21	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	5/3/2019 8:47:21	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	5/3/2019 8:47:21	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000554	0.398925	0.000000	1.000000
Zr 339.198 { 99}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000429	0.512228	0.000000	1.000000
S 182.034 {485}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.000140	0.052632	0.000000	1.000000
Bi 223.061 {451}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	0.000036	0.191973	0.000000	1.000000
Li 670.784 { 50}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	None	-0.005527	0.527600	0.000000	1.000000
P 177.495 {490}	5/3/2019 8:47:21	5/2/2019 12:08:11	Linear	1/Conc	-0.001631	0.031743	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	0.000272	0.000906	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000067	0.000222	OK.	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000191	0.000635	OK.	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000232	0.000774	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000288	0.000960	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000399	0.001329	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000047	0.000155	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000328	0.001092	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000429	0.001430	OK.	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000340	0.001134	OK.	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000108	0.000359	OK.	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001094	0.003648	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001333	0.004444	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.001053	0.003511	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.001963	0.006545	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001480	0.004934	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.009505	0.031683	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.002319	0.007729	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.002055	0.006850	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.013758	0.045861	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.033271	0.110903	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.009262	0.030872	OK.	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000681	0.002269	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000265	0.000884	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.001099	0.003664	OK.	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000573	0.001912	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000107	0.000357	OK.	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000335	0.001116	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	0.001049	0.003496	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000166	0.000554	OK.	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.002384	0.007948	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001699	0.005662	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.001627	0.005424	OK.	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.002959	0.009864	OK.	1.000000	0.000000	1	0

Zoom In ▶
Zoom Out

Sample Name: STDA Acquired: 5/3/2019 11:23:52 Type: Cal
Method: SGS 3 NO Valve(v337) 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	**.0125**	**-.0007**	**.0004**	**-.0000**	**-.0001**	**.0025**	**.0001**	**-.0001**	**-.0003**
Stddev	.0002	.0000	.0001	.0001	.0000	.0001	.0000	.0001	.0001
%RSD	1.383	6.219	30.35	598.1	26.62	2.657	67.40	94.42	25.92
#1	.0127	-.0007	.0004	-.0000	-.0001	.0025	.0000	-.0002	-.0003
#2	.0124	-.0008	.0006	-.0001	-.0001	.0025	.0001	-.0000	-.0002
#3	.0125	-.0007	.0003	.0001	-.0001	.0026	.0001	-.0001	-.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	**.0004**	**.0000**	**-.0001**	**-.0002**	**.0005**	**-.0000**	**.0006**	**.0005**	**.0085**
Stddev	.0000	.0001	.0001	.0001	.0002	.0001	.0000	.0004	.0002
%RSD	11.73	269.3	106.5	31.58	37.55	135.0	4.552	75.74	2.666
#1	.0003	.0000	-.0001	-.0002	.0003	-.0001	.0005	.0001	.0087
#2	.0004	-.0001	-.0001	-.0001	.0006	.0000	.0006	.0005	.0082
#3	.0004	.0002	.0000	-.0003	.0006	-.0001	.0006	.0009	.0086

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**	**.0014**	**-.0142**	**.0007**	**-.0005**	**.0031**	**.0005**	**-.0016**
Stddev	.0000	.0001	.0011	.0007	.0001	.0002	.0003	.0002	.0003
%RSD	25.61	1396.	75.12	5.237	16.59	36.90	10.19	36.23	20.60
#1	.0001	.0000	.0002	-.0151	.0007	-.0007	.0031	.0004	-.0018
#2	.0001	.0001	.0017	-.0138	.0006	-.0004	.0034	.0007	-.0012
#3	.0001	-.0001	.0023	-.0137	.0008	-.0004	.0028	.0004	-.0016

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**	**.0005**	**-.0005**	**.0000**	**-.0001**	**-.0030**	**-.0054**
Stddev	.0001	.0005	.0001	.0001	.0003	.0006	.0001
%RSD	152.4	91.35	11.38	235.9	547.6	20.03	1.114
#1	-.0000	.0008	-.0005	.0001	.0000	-.0034	-.0054
#2	.0001	-.0000	-.0006	.0000	-.0004	-.0034	-.0054
#3	.0001	.0008	-.0004	-.0001	.0002	-.0023	-.0055

◀ Zoom In ▶
Zoom Out

Sample Name: STDA Acquired: 5/3/2019 11:23:52 Type: Cal
Method: SGS 3 NO Valve(v337) 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	**151250.**	**27805.**	**6461.1**	**10109.**
Stddev	1254.	234.	41.5	55.
%RSD	.82887	.83997	.64192	.54224
#1	150320.	27664.	6450.4	10100.
#2	152680.	28075.	6426.0	10059.
#3	150750.	27676.	6506.9	10168.

◀ Zoom In ▶
Zoom Out

Sample Name: STDb Acquired: 5/3/2019 11:28:56 Type: Cal
Method: SGS 3 NO Valve(v337) 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	**7.676**	**11.62**	**4.629**	**2.953**	**.6500**	**1.050**	**3.504**	**2.394**	**.0787**
Stddev	.029	.34	.009	.002	.0004	.006	.026	.002	.0004
%RSD	.3720	2.956	.2001	.0699	.0605	.6181	.7440	.0796	.5060
#1	7.652	11.31	4.628	2.954	.6502	1.049	3.475	2.395	.0787
#2	7.670	11.55	4.620	2.955	.6501	1.056	3.510	2.395	.0791
#3	7.708	11.99	4.638	2.951	.6495	1.043	3.526	2.392	.0783

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	**.9071**	**6.837**	**.4955**	**.3079**	**1.070**	**.3697**	**.6513**	**3.518**	**8.248**
Stddev	.0011	.035	.0007	.0009	.003	.0013	.0016	.003	.014
%RSD	.1208	.5074	.1398	.3069	.2399	.3601	.2398	.0897	.1703
#1	.9070	6.875	.4962	.3089	1.072	.3710	.6502	3.521	8.248
#2	.9083	6.829	.4948	.3072	1.070	.3683	.6506	3.517	8.262
#3	.9061	6.807	.4955	.3074	1.067	.3698	.6531	3.515	8.234

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	**5.042**	**.9115**	**1.762**	**6.485**	**.9858**	**3.072**	**2.198**	**.9533**	**13.49**
Stddev	.010	.0025	.006	.003	.0031	.009	.003	.0039	.35
%RSD	.1992	.2774	.3639	.0488	.3133	.3054	.1442	.4041	2.564
#1	5.042	.9105	1.759	6.485	.9843	3.082	2.197	.9576	13.10
#2	5.051	.9144	1.770	6.488	.9838	3.069	2.195	.9521	13.75
#3	5.031	.9097	1.758	6.481	.9894	3.064	2.201	.9501	13.62

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	**.7307**	**1.587**	**2.100**	**.2016**	**.6766**	**1.936**	**.1434**
Stddev	.0013	.004	.038	.0005	.0021	.005	.0008
%RSD	.1787	.2816	1.804	.2679	.3065	.2842	.5271
#1	.7299	1.591	2.082	.2022	.6749	1.937	.1439
#2	.7322	1.588	2.144	.2011	.6758	1.941	.1425
#3	.7300	1.583	2.075	.2015	.6789	1.930	.1438

◀ Zoom In ▶
Zoom Out

Sample Name: STDb Acquired: 5/3/2019 11:28:56 Type: Cal
Method: SGS 3 NO Valve(v337) 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	**140810.**	**27371.**	**6114.6**	**9005.2**
Stddev	436.	190.	17.8	12.0
%RSD	.30966	.69494	.29144	.13363
#1	141210.	27588.	6094.8	8994.2
#2	140340.	27233.	6129.4	9018.0
#3	140870.	27293.	6119.8	9003.3

Zoom In Zoom Out

Sample Name: CCVCONF Acquired: 5/3/2019 11:34:47 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**2.005**	**1.989**	**2.013**	**1.991**	**1.964**	**2.014**	**2.015**	**.2438**
Stddev	.006	.006	.002	.002	.003	.008	.021	.002	.0013
%RSD	.2832	.2825	.1070	.0939	.1452	.3891	1.020	.0882	.5472
#1	1.970	2.010	1.987	2.014	1.991	1.972	2.005	2.016	.2450
#2	1.972	2.005	1.988	2.011	1.994	1.963	1.999	2.013	.2442
#3	1.961	1.999	1.991	2.015	1.989	1.957	2.037	2.017	.2424
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**	**2.007**	**1.967**	**2.067**	**2.007**	**1.990**	**1.972**	**39.66**	**40.11**
Stddev	.002	.006	.002	.007	.004	.001	.002	.10	.09
%RSD	.0856	.3066	.1194	.3190	.2199	.0552	.0862	.2420	.2359
#1	1.982	2.011	1.969	2.070	2.011	1.991	1.974	39.75	40.18
#2	1.982	2.011	1.967	2.060	2.002	1.989	1.972	39.68	40.14
#3	1.979	2.000	1.964	2.072	2.006	1.990	1.970	39.56	40.00
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	**39.96**	**40.36**	**39.77**	**40.24**	**2.039**	**1.985**	**5.227**	**2.011**	**2.034**
Stddev	.07	.06	.11	.04	.003	.003	.010	.008	.004
%RSD	.1725	.1391	.2875	.0930	.1507	.1543	.1985	.3984	.2203
#1	40.02	40.41	39.79	40.25	2.037	1.987	5.228	2.018	2.037
#2	39.99	40.36	39.87	40.28	2.038	1.987	5.217	2.012	2.036
#3	39.88	40.30	39.64	40.20	2.043	1.982	5.237	2.002	2.029
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: 5/3/2019 11:34:47 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.973**	**1.939**	**1.978**	**1.967**	**2.009**	**1.979**	**1.968**
Stddev	.002	.005	.001	.004	.003	.003	.006
%RSD	.0804	.2507	.0692	.1867	.1412	.1405	.2844
#1	1.973	1.943	1.976	1.966	2.011	1.981	1.974
#2	1.974	1.939	1.979	1.963	2.006	1.979	1.963
#3	1.971	1.934	1.978	1.971	2.011	1.976	1.966
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	**144990.**	**27492.**	**6258.1**	**9219.2**
Stddev	828.	19.	9.8	7.1
%RSD	.57079	.07047	.15594	.07670
#1	144470.	27512.	6253.5	9222.0
#2	144550.	27473.	6251.4	9224.4
#3	145940.	27492.	6269.3	9211.1

Zoom In Zoom Out

Sample Name: CCBCONF Acquired: 5/3/2019 11:39:49 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0002**	**.0001**	**.0002**	**.0002**	**.0003**	**.0001**
Stddev	.0003	.0001	.0004	.0000	.0004	.0003	.0001	.0000	.0002
%RSD	80.63	181.9	203.2	26.60	322.8	169.5	47.25	1.274	296.7
#1	.0003	-.0001	-.0000	.0001	.0005	.0004	.0002	.0003	.0002
#2	.0001	.0001	-.0000	.0002	.0000	-.0002	.0002	.0003	-.0002
#3	.0006	.0002	.0007	.0001	-.0002	.0004	.0001	.0003	.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**	**-.0002**	**.0001**	**.0008**	**-.0008**	**.0010**	**.0006**	**-.0028**	**-.0015**
Stddev	.0002	.0001	.0003	.0006	.0007	.0014	.0016	.0061	.0044
%RSD	161.7	56.82	311.1	71.51	93.86	140.1	249.9	222.2	303.5
#1	-.0000	-.0002	.0003	.0004	-.0010	.0005	.0010	-.0098	-.0065
#2	-.0004	-.0003	-.0002	.0015	-.0013	-.0001	-.0011	.0011	.0018
#3	.0000	-.0001	.0002	.0006	.0000	.0025	.0020	.0004	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**-.0013**	**.0837**	**.0339**	**.0060**	**.0004**	**.0008**	**-.0001**	**.0002**
Stddev	.0030	.0097	.0625	.0107	.0009	.0003	.0009	.0002	.0001
%RSD	167.9	723.9	74.61	31.62	14.82	79.73	106.3	194.7	75.85
#1	.0003	.0028	.0751	.0222	.0052	.0005	.0000	.0000	.0003
#2	-.0002	.0056	.0260	.0433	.0070	.0006	.0006	-.0004	.0000
#3	.0053	-.0124	.1500	.0363	.0057	.0000	.0017	-.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: CCBCONF Acquired: 5/3/2019 11:39:49 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**-.0003**	**.0002**	**-.0015**	**-.0005**	**-.0008**	**.0054**
Stddev	.0003	.0004	.0001	.0006	.0009	.0009	.0021
%RSD	93.49	146.2	68.86	37.97	195.0	105.7	39.35
#1	.0006	.0002	.0000	-.0015	-.0013	-.0017	.0030
#2	.0002	-.0005	.0003	-.0021	.0005	-.0007	.0063
#3	.0001	-.0004	.0002	-.0009	-.0006	-.0000	.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	**152870.**	**27774.**	**6520.3**	**10168.**
Stddev	322.	237.	13.7	10.
%RSD	.21054	.85496	.20972	.09664
#1	152930.	27800.	6505.1	10157.
#2	153160.	27998.	6524.3	10171.
#3	152530.	27525.	6531.5	10176.

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 5/3/2019 11:44:58 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.977**	**2.010**	**1.994**	**2.050**	**1.974**	**1.977**	**2.055**	**2.012**	**.2395**
Stddev	.002	.005	.004	.002	.004	.008	.049	.003	.0009
%RSD	.0850	.2281	.2231	.1073	.2237	.3903	2.375	.1308	.3713
#1	1.979	2.015	1.990	2.047	1.979	1.979	2.107	2.009	.2399
#2	1.975	2.006	1.998	2.051	1.973	1.983	2.010	2.012	.2402
#3	1.977	2.009	1.995	2.051	1.971	1.968	2.048	2.014	.2385
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	**1.985**	**1.986**	**1.947**	**2.049**	**1.992**	**1.974**	**1.926**	**39.29**	**39.47**
Stddev	.005	.003	.004	.009	.002	.004	.005	.08	.05
%RSD	.2360	.1684	.1788	.4541	.0789	.2041	.2367	.2045	.1178
#1	1.991	1.983	1.943	2.039	1.990	1.970	1.921	39.39	39.52
#2	1.982	1.984	1.948	2.051	1.991	1.978	1.930	39.24	39.43
#3	1.984	1.989	1.949	2.057	1.993	1.976	1.927	39.25	39.46
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	**39.82**	**40.00**	**39.49**	**39.99**	**2.028**	**1.943**	**5.111**	**1.962**	**2.043**
Stddev	.04	.03	.01	.02	.008	.003	.011	.003	.000
%RSD	.0899	.0797	.0159	.0504	.3739	.1315	.2163	.1716	.0168
#1	39.86	39.96	39.50	40.01	2.023	1.941	5.100	1.958	2.043
#2	39.79	40.02	39.49	40.00	2.037	1.942	5.122	1.962	2.042
#3	39.83	40.02	39.49	39.97	2.025	1.946	5.111	1.965	2.043
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: 5/3/2019 11:44:58 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.950**	F **1.898**	**1.937**	**1.961**	**2.007**	**1.987**	**2.000**
Stddev	.003	.002	.003	.010	.004	.003	.007
%RSD	.1757	.0848	.1473	.4916	.1841	.1673	.3747
#1	1.954	1.898	1.940	1.951	2.004	1.990	2.007
#2	1.948	1.899	1.937	1.961	2.011	1.984	2.001
#3	1.948	1.896	1.934	1.971	2.007	1.986	1.992
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		2.000					
Range		-5.000%					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**143770.**	**27470.**	**6238.6**	**9191.5**
Stddev	983.	41.	20.6	29.5
%RSD	.68392	.14924	.32946	.32074
#1	142830.	27516.	6258.1	9217.6
#2	144790.	27438.	6217.1	9159.5
#3	143690.	27456.	6240.6	9197.5

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 5/3/2019 11:50:22 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0002**	**.0001**	**.0002**	**.0001**	**.0005**	**.0002**	**.0003**	**-.0001**
Stddev	.0002	.0000	.0001	.0001	.0002	.0002	.0001	.0003	.0001
%RSD	315.5	9.709	105.7	41.47	349.5	34.70	32.78	120.2	72.31
#1	.0002	.0002	.0001	.0002	.0003	.0003	.0002	.0001	-.0000
#2	.0002	.0001	.0000	.0001	-.0001	.0007	.0003	.0000	-.0001
#3	-.0002	.0002	.0002	.0003	-.0001	.0005	.0001	.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0002**	**.0008**	**.0004**	**.0006**	**.0005**	**.0005**	**-.0056**	**-.0024**
Stddev	.0002	.0001	.0005	.0001	.0009	.0003	.0019	.0065	.0026
%RSD	116.5	31.32	57.70	22.96	142.8	61.70	406.0	116.3	105.3
#1	.0002	-.0001	.0011	.0005	-.0002	.0009	.0021	-.0115	.0005
#2	.0004	-.0002	.0010	.0003	.0015	.0003	.0010	-.0067	-.0040
#3	-.0000	-.0003	.0003	.0004	.0005	.0003	-.0016	.0014	-.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	**.0017**	**.0053**	**.0926**	**.0212**	**.0046**	**.0003**	**.0014**	**-.0004**	**.0001**
Stddev	.0006	.0154	.0348	.0082	.0002	.0001	.0001	.0004	.0000
%RSD	38.37	292.4	37.60	38.51	5.306	35.14	6.679	108.2	32.77
#1	.0015	.0208	.0615	.0128	.0045	.0004	.0015	-.0006	.0001
#2	.0024	-.0100	.1302	.0217	.0048	.0004	.0014	-.0005	.0001
#3	.0011	.0049	.0860	.0291	.0044	.0002	.0013	.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: icb 7 Acquired: 5/3/2019 11:50:22 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0013**	**.0003**	**-.0020**	**.0014**	**-.0000**	**.0053**
Stddev	.0003	.0007	.0000	.0011	.0012	.0010	.0015
%RSD	77.62	57.19	11.10	57.63	81.40	27080.	29.07
#1	.0002	.0004	.0003	-.0028	.0012	.0012	.0044
#2	.0002	.0016	.0003	-.0024	.0027	-.0007	.0070
#3	.0007	.0018	.0003	-.0007	.0004	-.0005	.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	**151100.**	**27561.**	**6489.0**	**10119.**
Stddev	567.	228.	13.4	27.
%RSD	.37547	.82722	.20684	.26471
#1	150850.	27521.	6473.5	10090.
#2	150700.	27355.	6496.8	10144.
#3	151750.	27806.	6496.7	10122.

Zoom In Zoom Out

Sample Name: iccv 1 Acquired: 5/3/2019 11:58:01 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.980**	**2.022**	**1.997**	**2.024**	**2.002**	**1.991**	**2.046**	**2.029**	**.2465**
Stddev	.005	.005	.004	.004	.002	.004	.018	.004	.0006
%RSD	.2469	.2611	.2252	.1768	.1054	.1981	.8901	.1870	.2620
#1	1.977	2.020	1.991	2.020	2.005	1.993	2.034	2.024	.2460
#2	1.988	2.030	2.002	2.028	2.001	1.987	2.037	2.033	.2464
#3	1.978	2.021	1.999	2.025	2.000	1.996	2.041	2.030	.2475
#4	1.979	2.018	1.998	2.024	2.003	1.990	2.073	2.030	.2463
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	**1.991**	**2.014**	**1.977**	**2.072**	**2.021**	**1.995**	**1.979**	**39.93**	**40.42**
Stddev	.001	.004	.003	.003	.003	.006	.007	.07	.08
%RSD	.0520	.1866	.1745	.1507	.1683	.3263	.3331	.1861	.1978
#1	1.993	2.012	1.973	2.067	2.018	1.985	1.970	39.86	40.41
#2	1.991	2.015	1.980	2.074	2.025	1.998	1.986	40.03	40.54
#3	1.991	2.012	1.975	2.073	2.023	1.996	1.979	39.94	40.35
#4	1.991	2.020	1.979	2.073	2.019	2.000	1.979	39.89	40.39
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: 5/3/2019 11:58:01 Type: QC
Method: SGS 3 NO Valve(v337) 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	**40.30**	**40.50**	**39.90**	**40.36**	**2.050**	**1.998**	**5.250**	**2.014**	**2.045**
Stddev	.08	.11	.08	.08	.005	.004	.015	.003	.002
%RSD	.2092	.2808	.2098	.1897	.2464	.1781	.2882	.1522	.1171
#1	40.31	40.54	39.95	40.40	2.043	1.993	5.228	2.012	2.045
#2	40.42	40.64	39.97	40.46	2.055	1.999	5.263	2.012	2.049
#3	40.25	40.41	39.78	40.30	2.053	2.000	5.256	2.014	2.044
#4	40.24	40.41	39.91	40.30	2.050	2.001	5.251	2.019	2.043
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	**1.986**	**1.950**	**1.988**	**1.971**	**2.021**	**1.984**	**2.011**
Stddev	.001	.005	.001	.005	.006	.004	.011
%RSD	.0519	.2502	.0361	.2422	.2834	.1775	.5231
#1	1.987	1.944	1.988	1.964	2.014	1.983	2.006
#2	1.985	1.950	1.987	1.971	2.026	1.989	2.016
#3	1.986	1.952	1.987	1.975	2.026	1.984	2.022
#4	1.985	1.956	1.988	1.973	2.018	1.980	1.998
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: 5/3/2019 11:58:01 Type: QC
Method: SGS 3 NO Valve(v337) 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	**143600.**	**27442.**	**6229.0**	**9159.2**
Stddev	458.	139.	9.5	11.2
%RSD	.31877	.50684	.15283	.12201
#1	142920.	27318.	6235.3	9172.7
#2	143900.	27332.	6227.3	9145.5
#3	143810.	27599.	6237.2	9160.7
#4	143780.	27518.	6216.3	9157.9

Zoom In Zoom Out

Sample Name: ccb 7 Acquired: 5/3/2019 12:05:33 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.0007**	**.0005**	**.0006**	**.0005**	**.0007**	**.0009**	**.0006**	**.0009**	**-.0000**
Stddev	.0001	.0000	.0001	.0001	.0003	.0001	.0000	.0001	.0003
%RSD	22.78	9.034	23.84	25.95	49.31	13.04	7.598	9.411	942.4
#1	.0006	.0005	.0005	.0006	.0008	.0008	.0007	.0008	-.0001
#2	.0005	.0005	.0005	.0006	.0003	.0010	.0007	.0009	.0003
#3	.0008	.0006	.0007	.0004	.0010	.0009	.0006	.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	**.0002**	**.0002**	**.0003**	**.0014**	**.0001**	**.0011**	**.0007**	**.0056**	**.0037**
Stddev	.0003	.0001	.0005	.0008	.0003	.0005	.0007	.0065	.0005
%RSD	164.8	32.12	151.2	58.97	232.5	46.26	92.22	116.3	13.57
#1	.0003	.0002	.0005	.0017	-.0000	.0007	.0002	.0071	.0041
#2	.0003	.0002	.0006	.0019	.0004	.0016	.0005	-.0015	.0031
#3	-.0001	.0003	-.0002	.0004	-.0001	.0008	.0014	.0112	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105**	**.0187**	**.0927**	**.0413**	**.0046**	**.0008**	**.0021**	**-.0002**	**.0005**
Stddev	.0020	.0138	.0396	.0057	.0002	.0000	.0011	.0005	.0001
%RSD	19.15	73.89	42.76	13.84	3.902	5.664	53.48	228.5	19.12
#1	.0088	.0161	.0534	.0361	.0048	.0008	.0030	-.0004	.0004
#2	.0099	.0064	.1327	.0474	.0045	.0008	.0008	-.0007	.0004
#3	.0127	.0336	.0919	.0404	.0045	.0009	.0026	.0004	.0006
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: 5/3/2019 12:05:33 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0005**	**.0005**	**-.0002**	**.0017**	**-.0012**	**.0051**
Stddev	.0002	.0009	.0001	.0023	.0007	.0008	.0026
%RSD	29.59	184.3	16.40	1226.	40.85	68.50	49.69
#1	.0007	-.0002	.0006	-.0022	.0010	-.0004	.0058
#2	.0007	.0014	.0006	-.0007	.0019	-.0020	.0073
#3	.0004	.0002	.0004	.0024	.0023	-.0013	.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	**151860.**	**27825.**	**6490.7**	**10093.**
Stddev	523.	44.	17.4	13.
%RSD	.34462	.15835	.26870	.13238
#1	151390.	27823.	6506.6	10107.
#2	151780.	27870.	6493.5	10092.
#3	152420.	27782.	6472.0	10080.

Zoom In
Zoom Out

Sample Name: CRI Acquired: 5/3/2019 12:13:21 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.2032**	**.0021**	**.0031**	**.0517**	**.0107**	**.0099**	**.0165**	**.0103**	**.0049**
Stddev	.0015	.0000	.0001	.0003	.0002	.0003	.0000	.0003	.0005
%RSD	.7503	1.280	2.804	.5822	2.327	2.683	.1661	3.170	10.95
#1	.2038	.0020	.0030	.0519	.0108	.0099	.0165	.0104	.0052
#2	.2044	.0021	.0032	.0519	.0109	.0101	.0166	.0105	.0052
#3	.2015	.0021	.0032	.0514	.0104	.0096	.0165	.0099	.0043
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	**.0518**	**.0209**	**.0079**	**.0104**	**.0025**	**.0090**	**.0070**	**.2043**	**5.290**
Stddev	.0003	.0003	.0003	.0015	.0008	.0016	.0015	.0070	.033
%RSD	.6661	1.402	3.284	13.99	31.38	17.59	22.15	3.409	.6275
#1	.0519	.0210	.0077	.0120	.0026	.0072	.0081	.2003	5.310
#2	.0521	.0212	.0082	.0093	.0032	.0095	.0076	.2002	5.308
#3	.0515	.0206	.0078	.0098	.0017	.0103	.0052	.2123	5.252
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	**.1096**	**5.409**	**5.248**	**5.402**	**.1061**	**.0211**	**.2176**	**.0112**	**.0105**
Stddev	.0007	.033	.035	.033	.0009	.0003	.0034	.0003	.0001
%RSD	.6542	.6106	.6676	.6186	.8565	1.224	1.577	2.588	1.400
#1	.1088	5.413	5.270	5.423	.1067	.0212	.2207	.0115	.0106
#2	.1101	5.439	5.267	5.419	.1066	.0214	.2182	.0109	.0104
#3	.1098	5.373	5.208	5.363	.1051	.0209	.2139	.0113	.0106
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: 5/3/2019 12:13:21 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0518**	**.0108**	**.0522**	**.0227**	**.0559**	**.0527**
Stddev	.0002	.0015	.0002	.0010	.0008	.0017	.0018
%RSD	1.789	2.970	2.154	1.967	3.632	2.994	3.439
#1	.0102	.0529	.0110	.0516	.0221	.0550	.0548
#2	.0104	.0524	.0106	.0518	.0224	.0578	.0520
#3	.0106	.0500	.0106	.0534	.0236	.0549	.0514
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	**146820.**	**27365.**	**6304.1**	**9637.7**
Stddev	456.	163.	79.2	103.5
%RSD	.31066	.59629	1.2557	1.0743
#1	146300.	27202.	6269.4	9583.6
#2	147160.	27365.	6248.2	9572.3
#3	146990.	27528.	6394.6	9757.0

Zoom In
Zoom Out

Sample Name: CRID Acquired: 5/3/2019 12:18:25 Type: QC
Method: SGS 3 NO Valve(v337) 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**	F **.0024**	F **.0003**	**.0033**	**.0043**
Stddev	.0001	.0001	.0002	.0002	.0002	.0006	.0000	.0002
%RSD	2.465	5.422	15.46	6.390	9.852	188.9	1.247	3.629
#1	.0043	.0011	.0010	.0032	.0023	.0008	.0033	.0044
#2	.0041	.0010	.0009	.0032	.0027	.0003	.0032	.0044
#3	.0043	.0009	.0012	.0029	.0023	-.0003	.0033	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value					.0020	.0020		
Range					20.00%	-20.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0001**	**.0018**	**.0103**	F **.0019**	F **.0032**	F **-.0008**	**.0047**	F **-.0005**
Stddev	.0005	.0001	.0001	.0002	.0012	.0002	.0010	.0008
%RSD	713.4	5.040	.9244	12.23	38.01	30.12	21.39	140.5
#1	.0006	.0018	.0102	.0018	.0026	-.0010	.0040	.0003
#2	-.0000	.0019	.0103	.0022	.0047	-.0009	.0058	-.0012
#3	-.0003	.0017	.0104	.0019	.0025	-.0005	.0043	-.0007
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Fail
Value	.0020			.0030	.0020	.0025		.0030
Range	-20.00%			-20.00%	20.00%	-20.00%		-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0990**	**1.050**	**.0023**	**.1185**	**2.083**	**1.099**	**.0019**	**-.0000**
Stddev	.0053	.001	.0003	.0096	.018	.001	.0003	.0002
%RSD	5.404	.1360	13.98	8.127	.8533	.1181	13.35	777.9
#1	.1039	1.051	.0020	.1146	2.069	1.099	.0017	.0001
#2	.0933	1.049	.0026	.1295	2.103	1.101	.0019	-.0003
#3	.0998	1.049	.0023	.1115	2.077	1.098	.0022	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Zoom In Zoom Out

Sample Name: CRID Acquired: 5/3/2019 12:18:25 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.0009**	**-.0011**	**.0001**	**.0006**	**-.0000**	**-.0000**	**-.0006**	**.0000**
Stddev	.0007	.0003	.0001	.0003	.0004	.0001	.0022	.0008
%RSD	73.69	25.42	77.37	57.02	2920.	401.9	357.5	2368.
#1	.0009	-.0011	.0000	.0002	.0004	-.0002	-.0032	.0002
#2	.0002	-.0015	.0002	.0008	-.0004	-.0000	.0010	-.0008
#3	.0016	-.0009	.0001	.0007	.0000	.0001	.0003	.0007
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0032**	**.0045**
Stddev	.0011	.0019
%RSD	33.97	41.91
#1	-.0028	.0031
#2	-.0045	.0066
#3	-.0024	.0037
Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**152360.**	**27716.**	**6504.4**	**10067.**
Stddev	226.	339.	25.3	32.
%RSD	.14839	1.2247	.38962	.31462
#1	152620.	27460.	6523.9	10085.
#2	152190.	27588.	6513.7	10086.
#3	152280.	28101.	6475.8	10031.

Zoom In Zoom Out

Sample Name: ICSA Acquired: 5/3/2019 12:23:33 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0001**	**.0000**	**.0015**	**-.0003**	**-.0045**	**.0019**	**-.0003**	**.0022**
Stddev	.0001	.0000	.0002	.0003	.0002	.0005	.0003	.0005	.0006
%RSD	12.33	47.56	5578.	20.40	64.68	11.42	13.61	144.7	24.74
#1	.0008	.0001	.0002	.0013	-.0003	-.0045	.0018	-.0007	.0022
#2	.0008	.0000	-.0002	.0018	-.0002	-.0050	.0016	-.0005	.0017
#3	.0010	.0001	.0000	.0013	-.0006	-.0039	.0022	.0002	.0028
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	**-.0020**	**-.0019**	**-.0026**	**-.0004**	**.0019**	**-.0008**	**.0010**	**508.9**	**381.2**
Stddev	.0004	.0003	.0011	.0004	.0029	.0018	.0017	3.2	1.5
%RSD	17.61	15.32	40.25	110.8	155.8	221.8	164.2	.6204	.3828
#1	-.0019	-.0018	-.0035	-.0006	.0025	-.0022	-.0009	510.2	382.8
#2	-.0018	-.0016	-.0015	.0001	-.0013	-.0013	.0022	505.3	380.3
#3	-.0024	-.0022	-.0029	-.0006	.0045	.0012	.0018	511.2	380.4
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	**191.6**	**500.5**	**.3234**	**.1160**	**.0001**	**.0009**	**.0004**	**-.0046**	**-.0003**
Stddev	1.8	.9	.0081	.0107	.0004	.0005	.0007	.0011	.0001
%RSD	.9280	.1829	2.492	9.239	335.2	56.65	198.8	24.79	28.52
#1	191.4	500.8	.3192	.1102	-.0003	.0012	-.0003	-.0056	-.0002
#2	190.0	499.5	.3182	.1094	.0003	.0013	.0012	-.0049	-.0002
#3	193.5	501.3	.3327	.1284	.0004	.0003	.0003	-.0034	-.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: ICSA Acquired: 5/3/2019 12:23:33 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**-.0012**	**.0006**	**-.0013**	**-.0017**	**-.0076**	**.0248**
Stddev	.0001	.0020	.0002	.0015	.0013	.0019	.0018
%RSD	13.37	166.4	27.28	115.0	77.36	24.45	7.391
#1	-.0012	.0000	.0007	-.0031	-.0005	-.0096	.0236
#2	-.0009	-.0001	.0004	-.0003	-.0016	-.0071	.0269
#3	-.0012	-.0035	.0008	-.0006	-.0031	-.0060	.0239
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	**131160.**	**26451.**	**5833.8**	**8359.6**
Stddev	285.	178.	13.1	21.8
%RSD	.21751	.67396	.22477	.26120
#1	130850.	26391.	5831.8	8357.9
#2	131410.	26652.	5821.9	8338.6
#3	131210.	26311.	5847.9	8382.1

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 5/3/2019 12:28:53 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.5068**	**.4976**	**1.007**	**.4925**	**.4901**	**.5039**	**.5197**	**.9769**	**1.069**
Stddev	.0003	.0007	.000	.0011	.0017	.0014	.0009	.0014	.002
%RSD	.0544	.1336	.0212	.2135	.3439	.2764	.1764	.1481	.1555
#1	.5064	.4971	1.007	.4920	.4918	.5023	.5205	.9754	1.068
#2	.5069	.4983	1.007	.4919	.4899	.5047	.5199	.9770	1.071
#3	.5070	.4974	1.007	.4938	.4885	.5046	.5187	.9783	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	**.4943**	**.9510**	**1.045**	**.9814**	**.9592**	**1.046**	**1.045**	**503.1**	**380.4**
Stddev	.0011	.0032	.002	.0004	.0031	.001	.001	2.7	7.2
%RSD	.2307	.3344	.2069	.0396	.3228	.0706	.0907	.5420	1.887
#1	.4947	.9524	1.047	.9817	.9558	1.047	1.045	505.4	377.0
#2	.4951	.9531	1.042	.9810	.9601	1.046	1.043	503.9	375.5
#3	.4930	.9473	1.045	.9816	.9617	1.046	1.045	500.1	388.6
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	**199.4**	**503.1**	**.2846**	**.1301**	**.4838**	**.4733**	**.5053**	**.4589**	**.5242**
Stddev	2.4	.8	.0064	.0048	.0006	.0009	.0039	.0016	.0002
%RSD	1.217	.1497	2.231	3.691	.1223	.1975	.7676	.3394	.0322
#1	201.6	502.2	.2773	.1335	.4834	.4731	.5010	.4590	.5242
#2	196.8	503.7	.2877	.1323	.4835	.4743	.5063	.4605	.5243
#3	199.9	503.3	.2888	.1246	.4845	.4724	.5085	.4574	.5240
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: 5/3/2019 12:28:53 Type: QC
Method: SGS 3 NO Valve(v337) 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	.4598	.4790	.5012	.5052	.5220	.5432
Stddev	.0010	.0022	.0004	.0032	.0019	.0016	.0028
%RSD	.2091	.4785	.0810	.6307	.3857	.2982	.5089
#1	.4917	.4623	.4791	.5038	.5036	.5216	.5409
#2	.4935	.4581	.4792	.5021	.5046	.5206	.5463
#3	.4918	.4590	.4785	.4977	.5074	.5237	.5424
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	131390.	26569.	5824.6	8381.0
Stddev	642.	229.	33.4	26.7
%RSD	.48895	.86048	.57387	.31848
#1	130800.	26830.	5808.2	8365.3
#2	131300.	26467.	5802.5	8365.8
#3	132080.	26408.	5863.0	8411.8

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/3/2019 12:34:12 Type: QC
Method: SGS 3 NO Valve(v337) 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	7.927	8.045	7.976	7.960	8.132	7.897	8.116	8.000	.6255
Stddev	.196	.043	.006	.003	.003	.052	.075	.003	.0016
%RSD	2.473	.5290	.0760	.0369	.0368	.6629	.9283	.0341	.2549
#1	7.739	8.007	7.970	7.963	8.133	7.911	8.147	8.003	.6267
#2	7.910	8.091	7.975	7.959	8.129	7.839	8.030	7.998	.6237
#3	8.130	8.038	7.982	7.957	8.135	7.941	8.170	7.999	.6260
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	7.995	8.216	8.021	8.230	8.102	8.069	8.125	.0937	.0044
Stddev	.077	.005	.004	.018	.001	.011	.012	.0176	.0164
%RSD	.9632	.0612	.0505	.2141	.0071	.1325	.1455	18.82	370.1
#1	8.077	8.219	8.024	8.214	8.103	8.075	8.127	.0834	-.0057
#2	7.924	8.219	8.022	8.226	8.102	8.056	8.112	.0837	-.0043
#3	7.986	8.210	8.016	8.249	8.102	8.074	8.135	.1141	.0233
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	-.0056	.0032	.5292	.1372	8.193	8.237	26.00	8.354	8.317
Stddev	.0076	.0152	.0209	.0057	.017	.004	.04	.005	.040
%RSD	134.1	476.4	3.941	4.171	.2029	.0471	.1730	.0639	.4850
#1	-.0097	-.0021	.5316	.1338	8.202	8.236	25.99	8.357	8.346
#2	-.0103	-.0086	.5072	.1340	8.174	8.241	25.97	8.356	8.271
#3	.0031	.0204	.5487	.1438	8.204	8.233	26.05	8.347	8.334
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: 5/3/2019 12:34:12 Type: QC
Method: SGS 3 NO Valve(v337) 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	8.067	8.365	7.870	95.95	8.453	7.945	8.100
Stddev	.050	.008	.118	.10	.019	.035	.024
%RSD	.6189	.1005	1.494	.1063	.2197	.4364	.3002
#1	8.109	8.373	7.783	95.83	8.460	7.953	8.097
#2	8.012	8.366	7.823	96.00	8.432	7.974	8.077
#3	8.081	8.356	8.004	96.02	8.467	7.907	8.126
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	147530.	27632.	6230.2	9743.3
Stddev	647.	105.	11.3	20.3
%RSD	.43840	.38112	.18078	.20846
#1	147340.	27536.	6233.1	9748.6
#2	148250.	27744.	6239.8	9760.4
#3	147000.	27615.	6217.8	9720.8

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/3/2019 12:40:15 Type: QC
Method: SGS 3 NO Valve(v337) 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	.0007	.0003	.0016	-.0002	-.0034	.0024	.0003	.0024
Stddev	.0001	.0001	.0002	.0001	.0001	.0005	.0003	.0003	.0009
%RSD	13.53	9.718	74.05	6.686	57.45	15.71	11.80	96.03	38.65
#1	.0007	.0008	.0006	.0016	-.0001	-.0032	.0025	.0004	.0027
#2	.0009	.0007	.0001	.0014	-.0004	-.0031	.0026	.0006	.0032
#3	.0008	.0006	.0003	.0016	-.0002	-.0040	.0021	-.0000	.0014
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	-.0025	-.0001	-.0014	-.0012	-.0011	.0006	.0015	308.9	203.0
Stddev	.0002	.0002	.0010	.0009	.0017	.0017	.0009	4.3	1.6
%RSD	7.287	152.1	69.48	74.84	146.7	272.4	59.71	1.399	.7933
#1	-.0024	-.0002	-.0007	-.0005	-.0001	-.0011	.0007	310.0	202.6
#2	-.0028	-.0002	-.0026	-.0023	-.0003	.0022	.0025	312.6	204.8
#3	-.0025	.0001	-.0010	-.0009	-.0031	.0007	.0013	304.2	201.7
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	198.6	305.8	201.5	201.3	.0082	.0013	.0109	-.0033	-.0001
Stddev	2.4	1.4	.8	3.4	.0018	.0005	.0011	.0001	.0000
%RSD	1.200	.4721	.4103	1.675	21.46	41.59	9.856	2.291	41.85
#1	198.5	304.9	201.1	204.9	.0099	.0014	.0101	-.0034	-.0001
#2	201.0	307.4	202.4	200.9	.0083	.0018	.0121	-.0033	-.0001
#3	196.2	305.0	200.9	198.2	.0064	.0007	.0106	-.0032	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/3/2019 12:40:15 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0014**	**.0018**	**-.0015**	**.0031**	**.0164**
Stddev	.0003	.0007	.0001	.0025	.0015	.0009	.0017
%RSD	114.3	135.1	10.84	141.2	97.96	28.83	10.58
#1	-.0006	-.0013	.0015	.0046	-.0015	.0020	.0178
#2	-.0002	.0001	.0014	-.0003	-.0030	.0036	.0170
#3	.0000	-.0004	.0012	.0010	-.0000	.0036	.0145
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	**133410.**	**26571.**	**5862.0**	**8356.0**
Stddev	453.	176.	6.2	10.2
%RSD	.33956	.66413	.10522	.12196
#1	133910.	26542.	5868.0	8362.3
#2	133030.	26410.	5862.4	8361.5
#3	133300.	26760.	5855.7	8344.3

Zoom In Zoom Out

Sample Name: FECONF Acquired: 5/3/2019 12:45:50 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.0007**	**-.0000**	**-.0003**	**.0011**	**-.0006**	**-.0045**	**.0024**	**.0001**	**.0005**
Stddev	.0002	.0000	.0001	.0001	.0001	.0005	.0002	.0002	.0008
%RSD	37.10	226.4	27.59	8.991	17.92	11.29	8.672	421.7	158.6
#1	.0005	.0000	-.0002	.0012	-.0008	-.0050	.0023	.0003	.0003
#2	.0009	-.0000	-.0002	.0010	-.0006	-.0046	.0027	-.0000	.0013
#3	.0006	-.0000	-.0004	.0012	-.0006	-.0040	.0023	-.0001	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0026**	**-.0014**	**-.0019**	**-.0010**	**-.0009**	**-.0049**	**-.0005**	**.0056**	**.0178**
Stddev	.0003	.0001	.0007	.0007	.0005	.0002	.0012	.0029	.0046
%RSD	13.07	8.571	35.78	70.29	50.82	3.602	245.0	52.26	25.79
#1	-.0027	-.0013	-.0023	-.0004	-.0007	-.0049	.0009	.0041	.0200
#2	-.0029	-.0013	-.0021	-.0008	-.0006	-.0050	-.0010	.0090	.0209
#3	-.0023	-.0015	-.0011	-.0018	-.0014	-.0047	-.0013	.0038	.0125

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**193.6**	**-.0155**	**.3277**	**.1587**	**.0049**	**.0001**	**.0050**	**-.0007**	**.0000**
Stddev	1.3	.0055	.0323	.0085	.0003	.0001	.0007	.0002	.0001
%RSD	.6885	35.42	9.852	5.380	6.905	66.79	14.31	31.58	236.6
#1	192.8	-.0203	.3547	.1651	.0050	.0001	.0046	-.0005	.0000
#2	195.2	-.0168	.2919	.1619	.0045	.0002	.0058	-.0007	.0002
#3	192.9	-.0095	.3364	.1490	.0051	.0000	.0045	-.0009	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0007**	**.0005**	**-.0050**	**.0039**	**-.0154**	**.0036**
Stddev	.0002	.0004	.0001	.0009	.0022	.0021	.0016
%RSD	123.9	53.49	21.36	18.67	55.45	13.97	43.98
#1	.0003	-.0003	.0006	-.0056	.0061	-.0178	.0053
#2	-.0001	-.0009	.0005	-.0039	.0018	-.0139	.0021
#3	.0003	-.0010	.0004	-.0054	.0039	-.0144	.0034

Zoom In Zoom Out

Sample Name: FECONF Acquired: 5/3/2019 12:45:50 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**149040.**	**27494.**	**6393.7**	**10032.**
Stddev	457.	38.	19.3	25.
%RSD	.30679	.14002	.30124	.24667
#1	149560.	27490.	6393.4	10018.
#2	148690.	27534.	6374.6	10018.
#3	148870.	27457.	6413.1	10061.

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 5/3/2019 12:51:04 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**-.0008**	F **9.925**	**.0005**	**-.0014**	**.0002**	**-.0003**
Stddev	.0002	.0000	.0001	.0002	.066	.0002	.0000	.0001	.0002
%RSD	107.2	18.58	77.63	18.94	.6605	37.37	2.075	84.33	59.30
#1	.0000	-.0001	-.0002	-.0009	9.853	.0003	-.0014	.0000	-.0003
#2	.0003	-.0001	-.0002	-.0009	9.941	.0007	-.0014	.0002	-.0001
#3	.0001	-.0001	-.0000	-.0007	9.981	.0006	-.0014	.0003	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060**	**.0018**	**.0020**	**-.0003**	**-.0000**	**.0010**	**.0002**	**.0045**	**.0437**
Stddev	.0004	.0001	.0008	.0003	.0001	.0005	.0007	.0030	.0021
%RSD	7.371	6.992	41.51	100.3	324.4	54.00	325.6	66.47	4.900
#1	.0061	.0018	.0014	-.0003	-.0001	.0007	.0009	.0079	.0445
#2	.0055	.0019	.0029	.0000	.0001	.0007	-.0006	.0024	.0412
#3	.0063	.0016	.0016	-.0005	-.0001	.0016	.0004	.0031	.0453

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096**	**.0096**	**.1253**	**.0894**	**.0051**	**.0005**	**.0113**	**-.0017**	**.0003**
Stddev	.0025	.0072	.0403	.0028	.0003	.0002	.0012	.0008	.0001
%RSD	26.37	75.15	32.19	3.104	6.706	32.56	10.61	43.88	32.21
#1	.0124	.0133	.1399	.0865	.0049	.0004	.0106	-.0024	.0003
#2	.0092	.0013	.0797	.0897	.0055	.0004	.0106	-.0009	.0003
#3	.0074	.0143	.1563	.0921	.0050	.0007	.0127	-.0019	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0025**	**.0041**	**.0026**	**.0005**	**.0007**	**.0017**	**-.0021**
Stddev	.0002	.0006	.0001	.0008	.0019	.0013	.0030
%RSD	7.386	15.68	2.757	186.6	281.6	75.60	142.9
#1	-.0023	.0038	.0026	.0009	-.0000	.0002	-.0030
#2	-.0025	.0036	.0025	.0009	-.0008	.0023	-.0046
#3	-.0027	.0048	.0026	-.0005	.0028	.0025	.0012

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 5/3/2019 12:51:04 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152070.**	**27773.**	**6277.8**	**10022.**
Stddev	640.	68.	12.4	13.
%RSD	.42072	.24616	.19826	.13295
#1	152640.	27785.	6273.6	10022.
#2	151380.	27835.	6291.8	10036.
#3	152180.	27700.	6268.0	10009.

Zoom In Zoom Out

Sample Name: crid Acquired: 5/3/2019 12:56:20 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.0041**	**.0009**	**.0010**	**.0029**	F **.0025**	F **.0006**	**.0032**	**.0045**
Stddev	.0002	.0000	.0001	.0001	.0001	.0004	.0000	.0001
%RSD	3.948	2.880	6.534	2.626	5.289	62.80	.4974	2.409
#1	.0039	.0009	.0010	.0030	.0026	.0004	.0032	.0044
#2	.0042	.0009	.0011	.0030	.0024	.0004	.0033	.0045
#3	.0040	.0009	.0010	.0028	.0026	.0010	.0032	.0046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value					.0020	.0020		
Range					20.00%	-20.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0001**	F **.0015**	**.0102**	**.0030**	F **.0038**	F **-.0000**	F **.0036**	F **.0009**
Stddev	.0001	.0002	.0001	.0017	.0005	.0012	.0012	.0009
%RSD	142.4	12.80	.8813	56.69	12.31	2574.	33.94	93.65
#1	-.0003	.0016	.0102	.0038	.0042	-.0012	.0043	.0009
#2	-.0001	.0013	.0102	.0010	.0033	.0011	.0022	.0001
#3	.0000	.0016	.0104	.0041	.0040	.0001	.0043	.0019
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.0020	.0020			.0020	.0025	.0050	.0030
Range	-20.00%	-20.00%			20.00%	-20.00%	-20.00%	-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0945**	**1.035**	**.0035**	**.1095**	**2.115**	**1.127**	**.0042**	**.0002**
Stddev	.0011	.011	.0028	.0094	.042	.020	.0003	.0003
%RSD	1.120	1.011	79.80	8.583	1.963	1.774	6.981	188.3
#1	.0957	1.038	.0022	.1075	2.128	1.130	.0040	.0003
#2	.0938	1.044	.0016	.1197	2.148	1.146	.0041	.0003
#3	.0940	1.023	.0066	.1012	2.068	1.106	.0046	-.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Zoom In Zoom Out

Sample Name: crid Acquired: 5/3/2019 12:56:20 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.0014**	**-.0011**	**.0000**	**.0005**	**-.0005**	**.0000**	**.0012**	**.0001**
Stddev	.0003	.0005	.0001	.0002	.0006	.0001	.0020	.0012
%RSD	24.04	43.73	304.6	40.19	123.6	651.1	166.8	968.2
#1	.0016	-.0015	.0001	.0007	-.0008	-.0000	-.0011	-.0012
#2	.0010	-.0006	-.0001	.0004	.0002	.0001	.0025	.0006
#3	.0014	-.0012	.0001	.0004	-.0010	-.0000	.0021	.0010
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0007**	**.0007**
Stddev	.0007	.0007
%RSD	106.9	99.81
#1	-.0003	.0002
#2	-.0002	.0005
#3	-.0015	.0016
Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**151650.**	**27903.**	**6474.4**	**10019.**
Stddev	314.	274.	12.3	27.
%RSD	.20676	.98175	.19061	.26943
#1	151510.	27817.	6488.4	10049.
#2	152010.	27683.	6469.7	9996.7
#3	151430.	28210.	6465.1	10011.

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 5/3/2019 13:01:28 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**.0016**	**-.0001**	**.0003**	**.0005**	**.0000**	**.0001**	**-.0003**
Stddev	.0003	.0001	.0003	.0001	.0001	.0002	.0000	.0003	.0002
%RSD	1038.	345.4	17.93	77.05	27.00	49.36	39.31	343.1	76.40
#1	.0001	-.0001	.0013	-.0002	.0003	.0007	.0000	.0005	-.0000
#2	-.0004	.0000	.0016	-.0001	.0002	.0005	.0001	-.0000	-.0005
#3	.0002	.0000	.0019	-.0001	.0003	.0002	.0000	-.0002	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**5.140**	**.0002**	**-.0003**	**.0009**	**.0000**	**-.0103**	**-.0483**
Stddev	.0001	.0000	.002	.0008	.0005	.0019	.0005	.0084	.0005
%RSD	49.63	5.058	.0328	481.0	169.9	218.7	79260.	81.87	.9729
#1	-.0001	-.0001	5.139	-.0007	-.0008	.0010	-.0006	-.0148	-.0487
#2	-.0001	-.0001	5.141	.0003	-.0003	.0027	.0005	-.0155	-.0485
#3	-.0002	-.0001	5.138	.0009	.0002	-.0011	.0001	-.0006	-.0478

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0011**	**.0499**	**.0443**	**.0025**	**-.0000**	**.0065**	**-.0009**	**.0000**
Stddev	.0005	.0072	.0334	.0122	.0003	.0001	.0010	.0002	.0000
%RSD	143.1	654.3	66.90	27.45	11.58	610.4	16.03	18.23	599.2
#1	-.0006	.0059	.0126	.0317	.0022	.0001	.0071	-.0007	-.0000
#2	-.0006	-.0007	.0771	.0453	.0026	-.0001	.0071	-.0010	.0001
#3	.0002	-.0085	.0601	.0559	.0028	-.0000	.0053	-.0010	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0010**	**.0001**	**.0019**	**-.0000**	**-.0004**	**.0059**
Stddev	.0002	.0006	.0001	.0010	.0011	.0012	.0014
%RSD	85.00	60.77	174.2	54.15	2432.	296.8	24.37
#1	.0003	-.0010	.0001	.0027	-.0011	.0010	.0073
#2	.0003	-.0004	.0002	.0022	.0010	-.0008	.0059
#3	.0000	-.0017	-.0001	.0007	-.0000	-.0014	.0045

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 5/3/2019 13:01:28 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152380.**	**27904.**	**6516.2**	**10118.**
Stddev	780.	208.	34.0	33.
%RSD	.51175	.74479	.52113	.32291
#1	152380.	27682.	6554.6	10156.
#2	151600.	27937.	6503.6	10101.
#3	153160.	28093.	6490.3	10098.

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/3/2019 13:06:34 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.978**	**2.017**	**1.998**	**2.022**	**1.992**	**1.991**	**2.040**	**2.031**	**.2464**
Stddev	.002	.003	.001	.001	.002	.001	.018	.001	.0002
%RSD	.1180	.1421	.0653	.0512	.0884	.0550	.8897	.0432	.0970
#1	1.981	2.020	1.998	2.023	1.992	1.992	2.020	2.031	.2466
#2	1.976	2.014	1.999	2.021	1.991	1.990	2.047	2.030	.2465
#3	1.978	2.018	1.997	2.023	1.994	1.992	2.054	2.031	.2462
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	**1.991**	**2.003**	**1.981**	**2.059**	**2.016**	**1.991**	**1.986**	**39.86**	**40.55**
Stddev	.002	.004	.002	.007	.001	.004	.004	.03	.05
%RSD	.1018	.1788	.1119	.3553	.0631	.2201	.1880	.0706	.1193
#1	1.989	2.007	1.983	2.062	2.017	1.987	1.983	39.88	40.60
#2	1.993	2.001	1.982	2.065	2.017	1.996	1.986	39.83	40.51
#3	1.990	2.001	1.979	2.051	2.015	1.990	1.990	39.86	40.52
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	**40.61**	**40.60**	**39.87**	**40.63**	**2.061**	**1.999**	**5.253**	**2.002**	**2.057**
Stddev	.06	.03	.08	.03	.002	.002	.003	.003	.002
%RSD	.1434	.0798	.1978	.0628	.0731	.0937	.0602	.1522	.0855
#1	40.67	40.64	39.96	40.66	2.059	2.001	5.252	2.003	2.059
#2	40.55	40.60	39.82	40.61	2.061	1.999	5.257	2.004	2.056
#3	40.62	40.58	39.83	40.62	2.062	1.997	5.251	1.998	2.056
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: 5/3/2019 13:06:34 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.995**	**1.948**	**1.989**	**1.950**	**2.028**	**1.963**	**1.876**
Stddev	.002	.002	.001	.007	.001	.001	.004
%RSD	.0970	.0872	.0552	.3842	.0646	.0374	.2213
#1	1.993	1.949	1.988	1.953	2.027	1.963	1.878
#2	1.997	1.947	1.990	1.956	2.030	1.962	1.879
#3	1.996	1.950	1.989	1.942	2.028	1.964	1.872
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	**143970.**	**27218.**	**6210.8**	**9111.5**
Stddev	178.	52.	12.1	15.8
%RSD	.12350	.19149	.19522	.17368
#1	144080.	27172.	6201.4	9105.9
#2	144060.	27209.	6206.5	9099.3
#3	143770.	27274.	6224.5	9129.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/3/2019 13:11:36 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0004**	**.0003**	**.0002**	**.0005**	**.0008**	**.0004**	**.0002**	**-.0003**
Stddev	.0002	.0000	.0001	.0002	.0001	.0002	.0000	.0001	.0003
%RSD	50.24	11.44	24.59	119.1	18.54	27.81	1.041	61.89	104.7
#1	.0005	.0004	.0004	.0004	.0006	.0011	.0004	.0003	.0000
#2	.0005	.0005	.0003	.0001	.0006	.0006	.0004	.0004	-.0003
#3	.0002	.0004	.0003	.0000	.0004	.0009	.0004	.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	**.0002**	**-.0000**	**.0010**	**.0013**	**-.0004**	**.0013**	**.0005**	**-.0036**	**.0016**
Stddev	.0003	.0001	.0010	.0005	.0002	.0013	.0019	.0032	.0019
%RSD	144.9	312.7	102.8	40.29	39.36	97.11	352.7	89.09	120.0
#1	.0006	-.0001	.0020	.0014	-.0003	.0026	.0021	-.0058	-.0003
#2	.0001	.0001	.0008	.0017	-.0004	.0012	.0011	.0001	.0035
#3	.0000	-.0001	.0001	.0007	-.0006	.0001	-.0016	-.0052	.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0099**	**.0158**	**.0881**	**.0613**	**.0035**	**.0007**	**.0019**	**-.0003**	**.0005**
Stddev	.0009	.0024	.0314	.0122	.0004	.0001	.0014	.0001	.0001
%RSD	8.870	15.51	35.67	19.92	12.06	19.77	71.11	47.33	29.88
#1	.0109	.0164	.0652	.0736	.0032	.0006	.0010	-.0004	.0004
#2	.0098	.0179	.0753	.0611	.0033	.0008	.0035	-.0003	.0007
#3	.0091	.0131	.1240	.0492	.0040	.0006	.0013	-.0002	.0004
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: 5/3/2019 13:11:36 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**-.0003**	**.0005**	**-.0011**	**-.0007**	**.0006**	**.0114**
Stddev	.0003	.0006	.0001	.0026	.0014	.0012	.0028
%RSD	74.97	207.1	11.93	235.6	204.8	211.2	24.56
#1	.0005	-.0008	.0005	-.0015	-.0019	-.0007	.0082
#2	.0000	.0003	.0005	.0017	-.0010	.0017	.0133
#3	.0005	-.0003	.0004	-.0035	.0009	.0006	.0126
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	**151490.**	**27605.**	**6473.7**	**10058.**
Stddev	430.	115.	24.0	24.
%RSD	.28367	.41838	.37106	.23579
#1	151180.	27486.	6449.2	10031.
#2	151300.	27613.	6497.2	10075.
#3	151980.	27716.	6474.7	10069.

Zoom In Zoom Out

Sample Name: mp14736-m1conf Acquired: 5/3/2019 13:16:43 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**-.0001**	**.0012**	**.0015**	**.0003**	**.0005**	**-.0001**
Stddev	.0002	.0001	.0001	.0001	.0002	.0004	.0000	.0002	.0004
%RSD	211.2	13040.	144.0	54.07	15.82	27.57	12.62	31.27	290.5
#1	.0000	-.0000	.0003	-.0002	.0010	.0011	.0002	.0006	-.0002
#2	-.0003	.0001	.0000	-.0002	.0013	.0019	.0003	.0006	.0003
#3	.0000	-.0000	.0000	-.0001	.0013	.0016	.0003	.0003	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0085**	**-.0002**	**.0006**	**.0001**	**.0015**	**.0007**	**.0001**	**.0480**
Stddev	.0001	.0003	.0002	.0006	.0005	.0005	.0004	.0061	.0018
%RSD	43.37	3.260	136.1	107.6	483.5	34.98	51.50	7642.	3.720
#1	-.0002	.0086	.0000	.0007	-.0003	.0021	.0005	.0022	.0460
#2	-.0002	.0087	-.0001	.0011	.0006	.0012	.0005	-.0067	.0492
#3	-.0004	.0082	-.0004	-.0001	-.0000	.0012	.0011	.0048	.0490

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0162**	**.0167**	**.0685**	**.1001**	**.0037**	**.0005**	**.0107**	**.0185**	**.0003**
Stddev	.0008	.0026	.0237	.0049	.0002	.0003	.0011	.0009	.0001
%RSD	4.758	15.90	34.57	4.932	4.579	64.61	9.909	4.866	24.51
#1	.0153	.0183	.0412	.0991	.0035	.0003	.0107	.0188	.0003
#2	.0165	.0136	.0838	.0957	.0038	.0009	.0118	.0192	.0003
#3	.0167	.0181	.0804	.1054	.0038	.0003	.0096	.0175	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0002**	**.0002**	**.0080**	**.0007**	**-.0001**	**.0294**
Stddev	.0003	.0006	.0002	.0024	.0009	.0012	.0021
%RSD	52.90	260.5	93.31	30.23	130.2	1309.	6.985
#1	.0003	.0006	.0004	.0105	.0018	.0002	.0271
#2	.0004	-.0004	.0003	.0076	.0002	-.0014	.0302
#3	.0008	.0005	-.0000	.0057	.0002	.0009	.0309

Zoom In Zoom Out

Sample Name: mp14736-m1conf Acquired: 5/3/2019 13:16:43 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152550.**	**28138.**	**6622.5**	**10247.**
Stddev	410.	341.	174.2	230.
%RSD	.26867	1.2120	2.6309	2.2403
#1	152880.	28490.	6535.5	10137.
#2	152090.	28114.	6508.8	10092.
#3	152660.	27809.	6823.0	10511.

Zoom In Zoom Out

Sample Name: jc87123-14 7 Acquired: 5/3/2019 13:21:48 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.3646**	**.0034**	**.0004**	**.0634**	**.1571**	**.1010**	**3.879**	**.1554**	**.0001**
Stddev	.0008	.0000	.0002	.0006	.0012	.0004	.033	.0006	.0010
%RSD	.2098	.7118	62.34	.8807	.7785	.4216	.8481	.3962	683.4
#1	.3641	.0034	.0006	.0635	.1584	.1009	3.891	.1551	.0001
#2	.3643	.0034	.0001	.0638	.1560	.1006	3.905	.1561	-.0008
#3	.3655	.0034	.0004	.0627	.1568	.1015	3.842	.1550	.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1828**	**.3905**	**.0405**	**.0013**	**.0925**	**.0006**	**.0001**	**104.5**	**8.324**
Stddev	.0018	.0016	.0010	.0013	.0008	.0013	.0008	.2	.018
%RSD	.9759	.4080	2.574	101.3	.9014	206.5	812.9	.2108	.2185
#1	.1849	.3911	.0393	.0012	.0934	.0010	.0004	104.4	8.312
#2	.1818	.3917	.0407	.0025	.0917	-.0008	-.0009	104.4	8.317
#3	.1818	.3887	.0414	.0000	.0924	.0017	.0008	104.8	8.345

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**150.2**	**33.93**	**5.912**	**.5556**	**.0044**	**.0026**	**1.946**	**.0154**	**.0561**
Stddev	1.9	.08	.025	.0031	.0006	.0002	.003	.0004	.0002
%RSD	1.267	.2248	.4268	.5546	12.48	7.058	.1341	2.640	.3290
#1	149.1	33.87	5.886	.5526	.0039	.0029	1.949	.0150	.0560
#2	149.1	33.91	5.936	.5554	.0050	.0025	1.944	.0158	.0560
#3	152.4	34.02	5.913	.5587	.0045	.0026	1.944	.0155	.0563

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.272**	**-.0003**	**.0041**	**.9431**	**.1210**	**.1172**	**7.508**
Stddev	.026	.0011	.0001	.0027	.0024	.0022	.031
%RSD	.7897	386.4	2.118	.2892	2.016	1.870	.4106
#1	3.301	.0010	.0042	.9410	.1234	.1157	7.472
#2	3.253	-.0010	.0041	.9462	.1210	.1197	7.525
#3	3.260	-.0008	.0041	.9421	.1186	.1162	7.526

Zoom In Zoom Out

Sample Name: jc87123-14 7 Acquired: 5/3/2019 13:21:48 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**153120.**	**29459.**	**6668.5**	**9581.9**
Stddev	638.	85.	13.9	17.3
%RSD	.41691	.28967	.20821	.18022
#1	152630.	29552.	6653.7	9562.6
#2	153840.	29384.	6670.7	9587.0
#3	152880.	29441.	6681.2	9596.0

Zoom In Zoom Out

Sample Name: mp14721-mb1conf Acquired: 5/3/2019 13:27:02 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**.0002**	**.0013**	**.0018**	**.0008**	**.0007**	**-.0001**
Stddev	.0003	.0001	.0001	.0001	.0001	.0002	.0000	.0002	.0003
%RSD	97.40	51.80	34.88	76.11	8.649	12.96	5.359	24.94	264.5
#1	-.0000	.0001	.0002	.0003	.0014	.0021	.0008	.0005	.0002
#2	.0005	.0001	.0003	.0002	.0012	.0016	.0007	.0008	-.0004
#3	.0004	.0002	.0004	.0000	.0013	.0017	.0007	.0007	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0169**	**-.0002**	**.0017**	**.0001**	**.0004**	**.0013**	**.0058**	**.1664**
Stddev	.0002	.0001	.0003	.0004	.0009	.0017	.0014	.0073	.0015
%RSD	492.6	.7926	138.8	26.28	849.7	419.1	110.3	125.2	.9019
#1	-.0002	.0170	-.0006	.0012	.0003	-.0016	.0022	.0069	.1679
#2	.0001	.0170	.0001	.0017	-.0008	.0015	-.0004	.0125	.1649
#3	.0002	.0168	-.0003	.0021	.0009	.0013	.0020	-.0019	.1664

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0450**	**.0275**	**.0850**	**.1087**	**.0041**	**.0002**	**.0149**	**.0198**	**.0005**
Stddev	.0017	.0090	.0081	.0066	.0002	.0000	.0004	.0003	.0001
%RSD	3.671	32.76	9.525	6.029	4.039	17.99	2.649	1.431	19.64
#1	.0468	.0365	.0943	.1154	.0041	.0003	.0147	.0198	.0005
#2	.0447	.0276	.0793	.1083	.0042	.0002	.0153	.0201	.0004
#3	.0436	.0184	.0815	.1023	.0039	.0002	.0146	.0196	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**-.0006**	**.0002**	**.0141**	**.0012**	**-.0017**	**.0289**
Stddev	.0003	.0008	.0001	.0023	.0014	.0019	.0015
%RSD	23.70	127.2	65.98	16.47	115.6	112.8	5.286
#1	.0015	.0002	.0001	.0159	.0004	-.0019	.0278
#2	.0015	-.0014	.0001	.0149	.0004	.0003	.0282
#3	.0009	-.0006	.0003	.0115	.0028	-.0035	.0307

Zoom In Zoom Out

Sample Name: mp14721-mb1conf Acquired: 5/3/2019 13:27:02 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152300.**	**27999.**	**6508.2**	**10109.**
Stddev	413.	54.	7.2	10.
%RSD	.27093	.19200	.11061	.09653
#1	152070.	28002.	6516.3	10120.
#2	152050.	27944.	6505.7	10107.
#3	152780.	28051.	6502.6	10101.

Zoom In Zoom Out

Sample Name: jc87093-1 Acquired: 5/3/2019 13:32:06 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.8311**	**.0051**	**.0111**	**.0736**	**.9291**	**.5285**	**4.452**	**.1583**	**.0058**
Stddev	.0014	.0001	.0003	.0004	.0024	.0011	.065	.0004	.0011
%RSD	.1646	1.466	2.651	.5936	.2629	.2136	1.450	.2675	18.84
#1	.8300	.0051	.0112	.0732	.9319	.5297	4.526	.1586	.0066
#2	.8327	.0051	.0114	.0741	.9282	.5275	4.417	.1578	.0046
#3	.8307	.0052	.0108	.0736	.9272	.5281	4.412	.1584	.0062

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1515**	**3.409**	**.2200**	**.0012**	**1.114**	**.0058**	**.0062**	**77.59**	**27.46**
Stddev	.0002	.005	.0022	.0018	.001	.0018	.0018	.08	.02
%RSD	.1185	.1520	1.014	143.5	.0409	31.49	28.22	.1079	.0802
#1	.1517	3.413	.2225	.0021	1.114	.0037	.0046	77.49	27.44
#2	.1515	3.411	.2184	.0024	1.115	.0067	.0059	77.65	27.48
#3	.1514	3.403	.2191	-.0008	1.114	.0070	.0081	77.61	27.45

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**246.8**	**24.13**	**9.692**	**1.100**	**.0402**	**.0085**	**2.451**	**.1715**	**.1615**
Stddev	3.5	.07	.027	.009	.0008	.0010	.029	.0006	.0002
%RSD	1.423	.2845	.2795	.8411	2.062	11.24	1.187	.3326	.1218
#1	249.9	24.17	9.674	1.105	.0397	.0096	2.471	.1717	.1614
#2	243.0	24.17	9.724	1.089	.0411	.0079	2.464	.1709	.1617
#3	247.6	24.05	9.679	1.106	.0396	.0080	2.417	.1720	.1613

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.158**	**-.0031**	**.0587**	**105.7**	**.0839**	**.0951**	**4.455**
Stddev	.003	.0016	.0002	.4	.0033	.0007	.004
%RSD	.1549	51.84	.4081	.3333	3.881	.6938	.0883
#1	2.158	-.0014	.0588	105.5	.0831	.0959	4.460
#2	2.162	-.0033	.0585	105.5	.0875	.0949	4.454
#3	2.155	-.0045	.0589	106.1	.0811	.0946	4.452

Zoom In Zoom Out

Sample Name: jc87093-1 Acquired: 5/3/2019 13:32:06 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**150910.**	**28778.**	**6563.8**	**9686.1**
Stddev	1029.	22.	12.0	11.6
%RSD	.68161	.07797	.18223	.11939
#1	149750.	28752.	6569.0	9694.8
#2	151270.	28795.	6550.1	9673.0
#3	151710.	28785.	6572.3	9690.5

Zoom In Zoom Out

Sample Name: jc87093-2 Acquired: 5/3/2019 13:37:17 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**1.425**	**.0087**	**.0153**	**.1551**	**1.439**	**1.025**	**6.177**	**.2538**	**.0115**
Stddev	.001	.0001	.0003	.0014	.004	.001	.045	.0003	.0003
%RSD	.0543	.7581	2.081	.9053	.2587	.1270	.7303	.1082	2.551
#1	1.424	.0086	.0155	.1564	1.437	1.023	6.221	.2537	.0111
#2	1.425	.0087	.0154	.1536	1.444	1.026	6.131	.2536	.0116
#3	1.425	.0087	.0149	.1552	1.437	1.025	6.180	.2541	.0117

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2316**	**5.535**	**.4138**	**.0042**	**2.003**	**.0095**	**.0043**	**124.0**	**25.80**
Stddev	.0010	.004	.0028	.0027	.006	.0027	.0024	.2	.03
%RSD	.4463	.0781	.6808	63.39	.3058	27.91	55.23	.1220	.1148
#1	.2316	5.534	.4159	.0072	2.007	.0083	.0065	123.8	25.76
#2	.2327	5.531	.4106	.0030	1.996	.0077	.0018	123.9	25.81
#3	.2306	5.539	.4148	.0024	2.006	.0126	.0045	124.1	25.82

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**268.2**	**28.12**	**12.81**	**2.077**	**.0411**	**.0077**	**1.881**	**.2513**	**.1690**
Stddev	2.8	.04	.09	.013	.0012	.0010	.009	.0000	.0001
%RSD	1.048	.1294	.6944	.6334	2.980	13.27	.4808	.0158	.0849
#1	264.9	28.08	12.73	2.078	.0407	.0071	1.889	.2513	.1691
#2	269.5	28.14	12.79	2.064	.0425	.0089	1.882	.2512	.1688
#3	270.0	28.14	12.91	2.090	.0402	.0071	1.871	.2513	.1690

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.388**	**-.0066**	**.0595**	**9.122**	**.0949**	**.1499**	**8.624**
Stddev	.005	.0025	.0002	.034	.0017	.0028	.005
%RSD	.2140	38.62	.3480	.3718	1.775	1.891	.0557
#1	2.387	-.0037	.0594	9.141	.0930	.1466	8.624
#2	2.393	-.0084	.0594	9.082	.0961	.1515	8.628
#3	2.383	-.0077	.0598	9.141	.0957	.1515	8.619

Zoom In Zoom Out

Sample Name: jc87093-2 Acquired: 5/3/2019 13:37:17 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152560.**	**29040.**	**6614.3**	**9603.3**
Stddev	845.	243.	8.0	11.5
%RSD	.55369	.83526	.12112	.11947
#1	153040.	29318.	6623.4	9613.0
#2	151580.	28932.	6611.4	9606.2
#3	153050.	28871.	6608.2	9590.6

Zoom In Zoom Out

Sample Name: jc87093-3 Acquired: 5/3/2019 13:42:31 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.4262**	**.0031**	**.0013**	**.0388**	**.2107**	**.2699**	**3.041**	**.1472**	**.0003**
Stddev	.0009	.0000	.0001	.0003	.0007	.0004	.048	.0014	.0002
%RSD	.2115	1.387	4.766	.8406	.3230	.1560	1.567	.9652	73.07
#1	.4256	.0031	.0014	.0387	.2111	.2694	3.023	.1465	.0005
#2	.4272	.0031	.0013	.0386	.2111	.2702	3.095	.1463	.0002
#3	.4257	.0032	.0013	.0392	.2099	.2700	3.005	.1489	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1093**	**.7422**	**.0377**	**.0003**	**.4176**	**.0003**	**.0023**	**34.15**	**24.15**
Stddev	.0005	.0065	.0009	.0011	.0036	.0025	.0001	.09	.06
%RSD	.4774	.8772	2.430	322.9	.8546	841.9	4.541	.2709	.2394
#1	.1087	.7384	.0384	-.0009	.4161	.0032	.0024	34.16	24.16
#2	.1097	.7386	.0379	.0012	.4149	-.0014	.0022	34.24	24.21
#3	.1094	.7498	.0366	.0007	.4216	-.0009	.0023	34.05	24.09

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**127.8**	**10.16**	**3.917**	**.9728**	**.0191**	**.0116**	**1.583**	**.0414**	**.2019**
Stddev	1.1	.03	.017	.0061	.0003	.0001	.020	.0002	.0004
%RSD	.8486	.3152	.4211	.6239	1.639	.9939	1.270	.4305	.1986
#1	128.9	10.17	3.913	.9786	.0194	.0117	1.570	.0413	.2015
#2	127.9	10.18	3.935	.9733	.0188	.0117	1.572	.0416	.2023
#3	126.7	10.12	3.903	.9665	.0192	.0115	1.606	.0413	.2019

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.655**	**-.0005**	**.0345**	**47.06**	**.0628**	**.0404**	**1.421**
Stddev	.003	.0012	.0001	.61	.0012	.0015	.020
%RSD	.1486	248.7	.2654	1.296	1.865	3.792	1.435
#1	1.655	.0006	.0345	46.79	.0641	.0405	1.405
#2	1.657	-.0017	.0345	46.62	.0618	.0419	1.414
#3	1.652	-.0003	.0344	47.75	.0626	.0389	1.444

Zoom In Zoom Out

Sample Name: jc87093-3 Acquired: 5/3/2019 13:42:31 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152060.**	**28918.**	**6542.6**	**9664.5**
Stddev	1265.	211.	64.0	82.4
%RSD	.83190	.73010	.97836	.85255
#1	152750.	28690.	6568.4	9695.9
#2	150600.	28956.	6589.7	9726.5
#3	152840.	29107.	6469.7	9571.0

Zoom In Zoom Out

Sample Name: jc87093-4 Acquired: 5/3/2019 13:47:47 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**1.624**	**.0099**	**.0227**	**.1585**	**2.694**	**1.270**	**6.991**	**.2809**	**.0139**
Stddev	.011	.0000	.0003	.0003	.009	.003	.017	.0005	.0015
%RSD	.6792	.4552	1.287	.1795	.3496	.2448	.2443	.1633	10.97
#1	1.614	.0100	.0230	.1586	2.696	1.271	6.990	.2804	.0129
#2	1.622	.0099	.0224	.1588	2.702	1.273	7.008	.2811	.0132
#3	1.636	.0099	.0226	.1582	2.684	1.267	6.974	.2813	.0157

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2639**	**9.767**	**.8114**	**.0046**	**3.244**	**.0133**	**.0047**	**138.5**	**30.97**
Stddev	.0021	.013	.0036	.0016	.006	.0019	.0020	1.1	.22
%RSD	.7779	.1369	.4412	34.67	.1982	14.25	42.37	.7628	.6977
#1	.2636	9.762	.8078	.0061	3.237	.0126	.0045	137.6	30.82
#2	.2662	9.782	.8112	.0030	3.250	.0118	.0067	138.2	30.88
#3	.2621	9.757	.8150	.0047	3.245	.0154	.0028	139.7	31.22

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**243.8**	**30.84**	**13.81**	**2.119**	**.0483**	**.0083**	**2.076**	**.4298**	**.1833**
Stddev	6.0	.20	.08	.019	.0003	.0002	.007	.0026	.0010
%RSD	2.478	.6574	.5526	.8977	.5240	2.841	.3564	.5989	.5572
#1	239.0	30.70	13.74	2.111	.0480	.0084	2.085	.4270	.1825
#2	241.9	30.74	13.79	2.106	.0483	.0085	2.073	.4321	.1830
#3	250.6	31.07	13.89	2.141	.0485	.0080	2.071	.4303	.1844

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.513**	**-.0109**	**.0431**	**23.74**	**.1089**	**.1628**	**9.664**
Stddev	.004	.0024	.0003	.08	.0029	.0021	.030
%RSD	.1627	22.05	.6548	.3573	2.700	1.297	.3058
#1	2.517	-.0083	.0428	23.64	.1122	.1604	9.641
#2	2.514	-.0117	.0433	23.79	.1081	.1642	9.653
#3	2.509	-.0129	.0433	23.79	.1065	.1638	9.697

Zoom In Zoom Out

Sample Name: jc87093-4 Acquired: 5/3/2019 13:47:47 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152920.**	**29046.**	**6699.9**	**9611.9**
Stddev	1375.	62.	3.7	8.1
%RSD	.89899	.21203	.05583	.08411
#1	152250.	29035.	6697.0	9618.1
#2	152020.	29113.	6704.1	9614.9
#3	154500.	28991.	6698.5	9602.8

Zoom In Zoom Out

Sample Name: jc87093-8 Acquired: 5/3/2019 13:53:00 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.2111**	**.0135**	**.0074**	**.0696**	**.1624**	**2.319**	**3.190**	**.1512**	**.0009**
Stddev	.0011	.0000	.0001	.0005	.0016	.015	.027	.0009	.0021
%RSD	.5027	.3303	1.746	.7128	.9697	.6544	.8359	.5765	224.8
#1	.2116	.0135	.0074	.0693	.1629	2.311	3.184	.1503	.0028
#2	.2099	.0135	.0076	.0702	.1637	2.337	3.219	.1521	-.0014
#3	.2118	.0135	.0073	.0693	.1607	2.310	3.166	.1512	.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1040**	**.9335**	**.0953**	**.0008**	**.6326**	**.0343**	**.0074**	**67.71**	**21.21**
Stddev	.0009	.0056	.0002	.0003	.0042	.0027	.0017	.17	.07
%RSD	.8693	.6044	.2530	41.64	.6560	7.979	22.75	.2476	.3138
#1	.1035	.9280	.0956	.0005	.6280	.0373	.0072	67.72	21.21
#2	.1050	.9393	.0953	.0012	.6359	.0320	.0058	67.54	21.15
#3	.1034	.9332	.0951	.0008	.6340	.0335	.0091	67.87	21.28

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**291.9**	**3.615**	**4.628**	**.6663**	**.0351**	**.0140**	**2.298**	**.0593**	**.1514**
Stddev	6.9	.028	.023	.0085	.0018	.0004	.006	.0011	.0005
%RSD	2.357	.7652	.4922	1.271	5.219	2.505	.2834	1.936	.3160
#1	295.2	3.632	4.630	.6620	.0350	.0139	2.302	.0580	.1516
#2	284.0	3.583	4.650	.6609	.0369	.0145	2.302	.0601	.1509
#3	296.6	3.629	4.604	.6761	.0332	.0138	2.291	.0598	.1518

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7622**	**.0046**	**.0325**	**142.3**	**.0263**	**.0572**	**2.972**
Stddev	.0067	.0018	.0002	.8	.0039	.0036	.028
%RSD	.8789	39.97	.6866	.5753	14.99	6.212	.9519
#1	.7612	.0053	.0324	142.0	.0218	.0554	2.969
#2	.7693	.0059	.0324	143.2	.0291	.0613	3.002
#3	.7560	.0025	.0328	141.7	.0280	.0549	2.946

Zoom In Zoom Out

Sample Name: jc87093-8 Acquired: 5/3/2019 13:53:00 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**148350.**	**28025.**	**6445.2**	**9784.3**
Stddev	1020.	77.	22.6	35.7
%RSD	.68737	.27410	.34998	.36490
#1	148910.	28073.	6441.1	9781.1
#2	147180.	27936.	6425.0	9750.3
#3	148970.	28065.	6469.5	9821.5

Zoom In Zoom Out

Sample Name: jc87093-10 Acquired: 5/3/2019 13:58:08 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**1.447**	**.0265**	**.0005**	**.2366**	**.4818**	**.1620**	**3.017**	**1.251**	**-.0011**
Stddev	.005	.0002	.0001	.0004	.0007	.0009	.002	.002	.0013
%RSD	.3358	.7275	20.02	.1886	.1466	.5448	.0690	.1244	123.8
#1	1.442	.0265	.0006	.2366	.4812	.1628	3.014	1.249	-.0014
#2	1.447	.0263	.0004	.2370	.4826	.1622	3.018	1.252	.0004
#3	1.452	.0267	.0004	.2362	.4816	.1611	3.017	1.252	-.0022

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1387**	**2.038**	**.0472**	**-.0015**	**.1222**	**.0023**	**.0001**	**175.4**	**100.0**
Stddev	.0001	.003	.0010	.0036	.0017	.0025	.0018	.6	.3
%RSD	.0700	.1573	2.157	238.5	1.351	110.6	2878.	.3311	.3138
#1	.1388	2.035	.0463	-.0029	.1204	-.0006	-.0017	174.8	99.71
#2	.1386	2.041	.0483	.0026	.1236	.0041	.0019	175.4	100.1
#3	.1386	2.038	.0470	-.0043	.1227	.0032	-.0000	176.0	100.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**240.2**	**48.91**	**11.35**	**.8895**	**.0237**	**.0155**	**1.733**	**.0211**	**.8757**
Stddev	2.8	.17	.07	.0214	.0007	.0006	.004	.0006	.0016
%RSD	1.164	.3527	.5855	2.409	3.146	3.618	.2021	2.617	.1832
#1	238.7	48.79	11.28	.8899	.0241	.0156	1.729	.0213	.8741
#2	243.4	48.82	11.38	.8679	.0229	.0160	1.734	.0205	.8756
#3	238.5	49.11	11.40	.9107	.0242	.0149	1.736	.0216	.8774

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.781**	**.0004**	**.2338**	**121.7**	**.2170**	**.0161**	**2.108**
Stddev	.006	.0015	.0003	.2	.0038	.0029	.012
%RSD	.1020	335.0	.1483	.1343	1.774	17.94	.5782
#1	5.775	-.0004	.2335	121.6	.2127	.0160	2.099
#2	5.787	-.0004	.2336	121.5	.2202	.0132	2.104
#3	5.781	.0022	.2342	121.8	.2181	.0190	2.122

Zoom In Zoom Out

Sample Name: jc87093-10 Acquired: 5/3/2019 13:58:08 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**154940.**	**30028.**	**6815.4**	**9454.3**
Stddev	252.	107.	7.3	6.4
%RSD	.16274	.35644	.10692	.06724
#1	154740.	30050.	6819.0	9459.4
#2	154840.	30122.	6820.2	9456.3
#3	155220.	29911.	6807.0	9447.2

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/3/2019 14:03:14 Type: QC
Method: SGS 3 NO Valve(v337) 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	**2.010**	**2.038**	**2.010**	**2.043**	**2.019**	**2.023**	**2.065**	**2.056**	**.2498**
Stddev	.002	.004	.002	.003	.002	.005	.018	.003	.0006
%RSD	.0847	.1994	.0752	.1507	.0741	.2474	.8529	.1587	.2426
#1	2.008	2.033	2.009	2.046	2.020	2.029	2.085	2.059	.2505
#2	2.011	2.039	2.012	2.042	2.020	2.020	2.051	2.054	.2496
#3	2.010	2.041	2.009	2.040	2.018	2.021	2.060	2.053	.2494
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**	**2.014**	**2.001**	**2.103**	**2.039**	**2.024**	**2.001**	**40.32**	**41.15**
Stddev	.002	.001	.002	.002	.003	.004	.003	.07	.06
%RSD	.0842	.0544	.0726	.1053	.1221	.1973	.1313	.1786	.1356
#1	2.002	2.015	1.999	2.101	2.041	2.022	1.998	40.25	41.09
#2	2.004	2.014	2.002	2.101	2.038	2.028	2.002	40.33	41.20
#3	2.005	2.013	2.001	2.105	2.037	2.020	2.003	40.39	41.16
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	**41.12**	**40.80**	**40.39**	**41.05**	**2.075**	**2.024**	**5.301**	**2.013**	**2.086**
Stddev	.02	.03	.03	.04	.003	.002	.003	.004	.000
%RSD	.0593	.0754	.0769	.0886	.1645	.0820	.0497	.1893	.0196
#1	41.11	40.77	40.35	41.09	2.071	2.025	5.298	2.017	2.087
#2	41.15	40.80	40.42	41.04	2.078	2.025	5.303	2.014	2.087
#3	41.11	40.83	40.39	41.02	2.075	2.022	5.301	2.009	2.086
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: 5/3/2019 14:03:14 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**1.971**	**2.006**	**1.996**	**2.061**	**1.969**	**2.007**
Stddev	.001	.002	.003	.004	.003	.001	.015
%RSD	.0583	.1126	.1559	.1792	.1382	.0594	.7244
#1	2.021	1.972	2.004	1.994	2.058	1.968	1.995
#2	2.022	1.972	2.004	2.000	2.063	1.971	2.004
#3	2.024	1.968	2.009	1.993	2.063	1.969	2.023
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	**142340.**	**27141.**	**6220.3**	**9087.2**
Stddev	619.	56.	18.0	22.4
%RSD	.43497	.20702	.28875	.24601
#1	141920.	27205.	6241.0	9112.9
#2	142060.	27118.	6209.5	9077.3
#3	143050.	27100.	6210.3	9071.6

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/3/2019 14:08:16 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0003**	**.0002**	**.0005**	**.0002**	**.0003**	**-.0001**
Stddev	.0003	.0000	.0001	.0003	.0003	.0003	.0000	.0003	.0004
%RSD	169.1	33.34	21.18	107.4	202.5	53.96	24.37	80.63	337.9
#1	-.0000	.0001	.0003	.0005	-.0002	.0006	.0002	.0000	.0001
#2	.0006	.0001	.0004	-.0001	.0005	.0002	.0002	.0004	-.0005
#3	.0001	.0001	.0003	.0004	.0002	.0007	.0001	.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0001**	**.0001**	**.0008**	**.0000**	**.0012**	**.0011**	**-.0104**	**-.0036**
Stddev	.0003	.0000	.0005	.0009	.0003	.0013	.0004	.0036	.0004
%RSD	672.4	32.33	344.3	119.7	660.8	111.7	41.22	35.16	10.77
#1	.0001	-.0001	-.0003	.0007	.0003	.0026	.0013	-.0072	-.0037
#2	.0001	-.0002	.0006	.0017	-.0000	.0009	.0013	-.0096	-.0032
#3	-.0003	-.0001	.0001	-.0001	-.0002	.0000	.0006	-.0143	-.0040
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	**.0022**	**.0009**	**.1225**	**.0463**	**.0022**	**.0003**	**.0008**	**-.0002**	**.0001**
Stddev	.0020	.0121	.0443	.0026	.0006	.0002	.0010	.0002	.0001
%RSD	91.47	1375.	36.16	5.586	24.74	53.72	126.2	77.83	69.98
#1	.0045	.0097	.1219	.0441	.0026	.0002	.0020	-.0003	.0000
#2	.0006	.0059	.1671	.0492	.0025	.0005	.0006	-.0000	.0002
#3	.0016	-.0130	.0785	.0457	.0016	.0002	-.0001	-.0003	.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: 5/3/2019 14:08:16 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0004**	**.0003**	**.0005**	**.0002**	**.0001**	**.0064**
Stddev	.0002	.0017	.0002	.0002	.0008	.0012	.0013
%RSD	45.83	470.0	83.70	42.71	340.4	1957.	19.75
#1	.0003	.0023	.0004	.0004	.0004	-.0010	.0069
#2	.0007	-.0004	.0003	.0008	.0009	-.0002	.0074
#3	.0005	-.0008	.0000	.0004	-.0006	.0013	.0050
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	**150500.**	**27383.**	**6442.3**	**9989.1**
Stddev	362.	193.	16.6	25.4
%RSD	.24035	.70510	.25840	.25448
#1	150820.	27160.	6425.2	9969.4
#2	150570.	27484.	6443.4	9980.1
#3	150110.	27504.	6458.4	10018.

Zoom In Zoom Out

Sample Name: jc87093-11 Acquired: 5/3/2019 14:13:25 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.5663**	**.0033**	**.0032**	**.0523**	**.4143**	**.2668**	**2.332**	**.1013**	**.0021**
Stddev	.0011	.0001	.0001	.0001	.0016	.0011	.021	.0004	.0002
%RSD	.1931	1.504	2.934	.1565	.3823	.3941	.9234	.4099	9.962
#1	.5671	.0034	.0032	.0522	.4126	.2656	2.309	.1009	.0020
#2	.5667	.0033	.0032	.0524	.4157	.2674	2.336	.1017	.0019
#3	.5650	.0034	.0033	.0523	.4145	.2674	2.351	.1014	.0023

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0976**	**1.378**	**.0826**	**.0022**	**.6820**	**.0002**	**.0025**	**53.16**	**15.10**
Stddev	.0004	.004	.0023	.0009	.0030	.0018	.0017	.10	.02
%RSD	.4129	.2992	2.790	38.49	.4460	808.9	68.05	.1955	.1098
#1	.0973	1.374	.0800	.0032	.6788	-.0013	.0012	53.24	15.12
#2	.0980	1.379	.0834	.0021	.6823	.0022	.0018	53.21	15.11
#3	.0975	1.382	.0844	.0015	.6848	-.0002	.0044	53.04	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	**104.4**	**16.86**	**6.858**	**.9523**	**.0271**	**.0034**	**1.697**	**.0974**	**.0818**
Stddev	.1	.01	.011	.0075	.0002	.0002	.006	.0004	.0002
%RSD	.1272	.0497	.1633	.7823	.7083	5.548	.3612	.3745	.2553
#1	104.5	16.86	6.849	.9437	.0273	.0032	1.690	.0971	.0818
#2	104.5	16.86	6.870	.9567	.0269	.0034	1.701	.0979	.0819
#3	104.3	16.87	6.854	.9565	.0271	.0036	1.701	.0973	.0815

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.688**	**-.0025**	**.0376**	**8.994**	**.0614**	**.0823**	**3.436**
Stddev	.006	.0010	.0003	.051	.0016	.0013	.030
%RSD	.3446	40.49	.7730	.5641	2.616	1.606	.8706
#1	1.682	-.0013	.0374	8.936	.0596	.0838	3.402
#2	1.694	-.0031	.0379	9.026	.0619	.0814	3.446
#3	1.688	-.0031	.0374	9.022	.0627	.0816	3.460

Zoom In Zoom Out

Sample Name: jc87093-11 Acquired: 5/3/2019 14:13:25 Type: Unk
Method: SGS 3 NO Valve(v337) 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	153980.	29080.	6650.1	9634.7
Stddev	784.	23.	32.4	37.2
%RSD	.50944	.07905	.48713	.38632
#1	154760.	29100.	6684.5	9675.4
#2	153190.	29055.	6645.6	9626.5
#3	153990.	29086.	6620.2	9602.3

Zoom In Zoom Out

Sample Name: jc87232-1 Acquired: 5/3/2019 14:18:33 Type: Unk
Method: SGS 3 NO Valve(v337) 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	.3547	.0094	.0007	.0698	.2598	.0432	.8108	.1654	-.0014
Stddev	.0008	.0001	.0002	.0005	.0008	.0017	.0031	.0007	.0013
%RSD	.2121	.5372	29.13	.6451	.3071	3.850	.3803	.4335	90.98
#1	.3556	.0094	.0009	.0700	.2590	.0425	.8087	.1657	-.0013
#2	.3543	.0094	.0006	.0702	.2600	.0451	.8094	.1660	-.0002
#3	.3544	.0093	.0005	.0693	.2606	.0419	.8144	.1646	-.0027

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2699	.4770	.1307	-.0007	.0678	.0029	.0005	123.2	20.30
Stddev	.0013	.0024	.0021	.0016	.0021	.0019	.0020	.3	.04
%RSD	.4994	.4952	1.602	223.2	3.089	65.10	385.6	.2410	.2020
#1	.2683	.4762	.1291	-.0020	.0683	.0023	-.0010	123.5	20.34
#2	.2704	.4797	.1331	-.0012	.0696	.0050	-.0003	123.0	20.27
#3	.2709	.4752	.1300	.0011	.0655	.0014	.0028	123.0	20.28

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	372.1	34.25	51.55	2.156	.3084	.0467	1.991	.0204	.1458
Stddev	4.6	.06	.11	.008	.0005	.0007	.004	.0007	.0003
%RSD	1.232	.1826	.2067	.3711	.1781	1.506	.2045	3.579	.1881
#1	372.5	34.32	51.68	2.158	.3089	.0466	1.987	.0210	.1461
#2	376.4	34.20	51.49	2.147	.3085	.0475	1.992	.0206	.1460
#3	367.3	34.23	51.49	2.162	.3078	.0461	1.995	.0196	.1455

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.313	-.0024	.0659	77.56	.0450	.2648	4.114
Stddev	.004	.0012	.0002	.43	.0017	.0053	.034
%RSD	.2772	48.85	.3233	.5494	3.754	2.012	.8209
#1	1.310	-.0035	.0659	77.31	.0435	.2661	4.076
#2	1.312	-.0012	.0661	78.06	.0446	.2589	4.137
#3	1.317	-.0025	.0657	77.32	.0468	.2693	4.131

Zoom In Zoom Out

Sample Name: jc87232-1 Acquired: 5/3/2019 14:18:33 Type: Unk
Method: SGS 3 NO Valve(v337) 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	147680.	28271.	6479.0	9581.8
Stddev	876.	120.	16.4	19.7
%RSD	.59298	.42509	.25363	.20566
#1	147400.	28141.	6497.0	9602.1
#2	148660.	28295.	6464.8	9562.7
#3	146980.	28378.	6475.2	9580.7

Zoom In Zoom Out

Sample Name: jc87232-2 Acquired: 5/3/2019 14:23:40 Type: Unk
Method: SGS 3 NO Valve(v337) 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	.3360	.0104	.0011	.0919	.2682	.0501	.8152	.2069	.0003
Stddev	.0005	.0001	.0001	.0002	.0017	.0003	.0023	.0011	.0008
%RSD	.1494	.7682	11.23	.2560	.6196	.5082	.2775	.5190	289.2
#1	.3357	.0105	.0012	.0921	.2686	.0503	.8167	.2057	.0012
#2	.3358	.0104	.0010	.0916	.2697	.0502	.8163	.2079	.0000
#3	.3366	.0104	.0012	.0920	.2664	.0498	.8126	.2070	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2652	.5701	.1034	-.0020	.0662	.0014	.0013	112.0	18.83
Stddev	.0008	.0003	.0030	.0015	.0014	.0027	.0013	.1	.04
%RSD	.2929	.0603	2.944	78.31	2.043	195.2	101.7	.1229	.2101
#1	.2657	.5699	.1049	-.0035	.0670	.0039	.0024	112.1	18.87
#2	.2656	.5705	.1054	-.0004	.0646	.0016	-.0001	111.8	18.79
#3	.2643	.5698	.0999	-.0019	.0669	-.0014	.0015	112.1	18.83

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	273.7	36.65	58.00	2.406	.3543	.0270	2.016	.0204	.1303
Stddev	2.5	.12	.06	.013	.0028	.0002	.005	.0006	.0003
%RSD	.9273	.3333	.1018	.5492	.7917	.5655	.2739	2.819	.2020
#1	276.3	36.77	58.04	2.418	.3511	.0271	2.015	.0198	.1301
#2	271.2	36.65	58.03	2.392	.3554	.0269	2.011	.0207	.1303
#3	273.5	36.53	57.93	2.407	.3564	.0269	2.022	.0208	.1306

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.285	-.0034	.0802	66.03	.0396	.2550	3.820
Stddev	.003	.0003	.0001	.20	.0023	.0013	.036
%RSD	.2282	8.779	.0656	.3039	5.928	.5042	.9317
#1	1.287	-.0035	.0802	66.21	.0371	.2560	3.850
#2	1.286	-.0037	.0802	66.07	.0399	.2535	3.829
#3	1.282	-.0031	.0801	65.81	.0418	.2554	3.780

Zoom In Zoom Out

Sample Name: jc87232-2 Acquired: 5/3/2019 14:23:40 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**149230.**	**28479.**	**6542.3**	**9563.3**
Stddev	1430.	231.	11.1	17.9
%RSD	.95844	.81018	.16987	.18747
#1	147770.	28245.	6540.8	9565.0
#2	149270.	28485.	6554.0	9580.3
#3	150630.	28707.	6532.0	9544.6

Zoom In Zoom Out

Sample Name: jc87232-4 Acquired: 5/3/2019 14:28:44 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.2026**	**.0075**	**.0002**	**.0647**	**.2034**	**.0269**	**.6577**	**.1284**	**-.0007**
Stddev	.0002	.0001	.0002	.0003	.0007	.0007	.0008	.0001	.0007
%RSD	.1122	1.803	79.37	.4973	.3383	2.747	.1196	.0972	97.52
#1	.2024	.0073	.0004	.0645	.2027	.0273	.6570	.1286	-.0015
#2	.2025	.0075	.0001	.0651	.2034	.0274	.6585	.1284	-.0003
#3	.2029	.0076	.0002	.0645	.2041	.0261	.6574	.1284	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2046**	**.4666**	**.0530**	**-.0008**	**.0411**	**-.0006**	**.0003**	**71.40**	**7.352**
Stddev	.0003	.0003	.0020	.0018	.0011	.0007	.0013	.11	.005
%RSD	.1644	.0628	3.750	218.3	2.790	121.6	389.5	.1501	.0708
#1	.2048	.4664	.0517	-.0010	.0418	-.0002	.0017	71.29	7.350
#2	.2043	.4669	.0553	.0010	.0398	-.0014	-.0000	71.43	7.348
#3	.2049	.4665	.0520	-.0025	.0418	-.0001	-.0007	71.50	7.358

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**180.1**	**26.38**	**44.00**	**2.128**	**.2912**	**.0086**	**1.899**	**.0206**	**.0572**
Stddev	2.3	.05	.05	.002	.0017	.0002	.006	.0007	.0001
%RSD	1.249	.1801	.1029	.1097	.5691	1.929	.3095	3.436	.1705
#1	177.9	26.41	43.95	2.126	.2916	.0086	1.892	.0199	.0573
#2	182.4	26.39	44.04	2.130	.2893	.0088	1.903	.0213	.0571
#3	179.9	26.32	44.01	2.130	.2925	.0085	1.900	.0206	.0573

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.429**	**-.0014**	**.0769**	**32.57**	**.0488**	**.1126**	**.8182**
Stddev	.003	.0010	.0002	.17	.0004	.0011	.0031
%RSD	.2175	68.59	.3020	.5180	.8400	.9874	.3741
#1	1.431	-.0008	.0766	32.39	.0484	.1114	.8180
#2	1.431	-.0025	.0770	32.61	.0492	.1128	.8152
#3	1.426	-.0009	.0770	32.71	.0489	.1136	.8213

Zoom In Zoom Out

Sample Name: jc87232-4 Acquired: 5/3/2019 14:28:44 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**149490.**	**28591.**	**6534.9**	**9452.9**
Stddev	715.	93.	13.5	27.6
%RSD	.47841	.32402	.20677	.29247
#1	150310.	28599.	6543.8	9475.0
#2	149020.	28679.	6541.6	9461.7
#3	149140.	28494.	6519.4	9421.9

Zoom In Zoom Out

Sample Name: jc87232-6 Acquired: 5/3/2019 14:33:48 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.2742**	**.0094**	**.0010**	**.0860**	**.2482**	**.0419**	**.8224**	**.1970**	**-.0027**
Stddev	.0048	.0002	.0004	.0015	.0037	.0008	.0049	.0014	.0012
%RSD	1.753	2.122	41.16	1.752	1.472	1.932	.5961	.6880	43.85
#1	.2704	.0092	.0008	.0846	.2445	.0421	.8169	.1962	-.0021
#2	.2726	.0093	.0014	.0858	.2483	.0426	.8243	.1962	-.0019
#3	.2796	.0096	.0007	.0876	.2518	.0410	.8262	.1985	-.0041

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2600**	**.6132**	**.1078**	**-.0018**	**.0725**	**.0006**	**-.0000**	**99.17**	**11.51**
Stddev	.0014	.0042	.0005	.0012	.0004	.0037	.0012	1.57	.17
%RSD	.5298	.6771	.4636	65.98	.5310	642.0	3403.	1.583	1.518
#1	.2584	.6093	.1074	-.0022	.0721	.0006	-.0003	97.81	11.37
#2	.2607	.6127	.1084	-.0004	.0726	.0042	.0012	98.82	11.46
#3	.2608	.6176	.1077	-.0026	.0728	-.0031	-.0011	100.9	11.71

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**243.5**	**33.81**	**51.05**	**1.637**	**.3288**	**.0422**	**2.201**	**.0202**	**.0833**
Stddev	3.3	.56	.83	.016	.0043	.0007	.020	.0009	.0011
%RSD	1.335	1.658	1.636	.9995	1.306	1.542	.9100	4.553	1.290
#1	243.9	33.27	50.38	1.622	.3248	.0419	2.190	.0193	.0823
#2	246.6	33.76	50.79	1.633	.3284	.0418	2.188	.0211	.0831
#3	240.1	34.39	51.99	1.654	.3333	.0430	2.224	.0200	.0844

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.477**	**-.0009**	**.0854**	**70.02**	**.0537**	**.2079**	**1.323**
Stddev	.011	.0008	.0004	.78	.0042	.0017	.027
%RSD	.7552	89.01	.4634	1.108	7.902	.8110	2.021
#1	1.465	-.0008	.0850	69.29	.0516	.2062	1.296
#2	1.480	-.0018	.0855	69.93	.0509	.2080	1.322
#3	1.487	-.0002	.0857	70.84	.0586	.2096	1.349

Zoom In Zoom Out

Sample Name: jc87232-6 Acquired: 5/3/2019 14:33:48 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**148290.**	**28299.**	**6469.2**	**9468.7**
Stddev	485.	103.	23.3	29.9
%RSD	.32704	.36234	.35984	.31622
#1	148670.	28184.	6476.7	9474.0
#2	147750.	28382.	6487.9	9495.6
#3	148460.	28331.	6443.1	9436.4

Zoom In Zoom Out

Sample Name: jc87232-7 Acquired: 5/3/2019 14:38:48 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.3303**	**.0101**	**.0008**	**.0847**	**.2704**	**.0507**	**.8826**	**.1947**	**-.0001**
Stddev	.0007	.0001	.0004	.0002	.0009	.0009	.0004	.0004	.0006
%RSD	.2220	1.426	47.40	.2644	.3508	1.741	.0441	.2064	889.4
#1	.3297	.0099	.0012	.0845	.2706	.0516	.8830	.1944	.0006
#2	.3300	.0102	.0005	.0849	.2713	.0506	.8825	.1945	-.0006
#3	.3311	.0102	.0007	.0847	.2694	.0498	.8822	.1952	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2661**	**.5428**	**.1060**	**.0006**	**.0713**	**-.0016**	**.0028**	**111.1**	**18.60**
Stddev	.0005	.0004	.0007	.0016	.0016	.0057	.0052	.3	.05
%RSD	.1882	.0825	.6923	268.5	2.309	344.8	189.8	.2933	.2882
#1	.2662	.5432	.1061	-.0004	.0720	.0032	-.0015	110.9	18.56
#2	.2666	.5423	.1053	.0024	.0724	-.0079	.0086	111.0	18.59
#3	.2656	.5430	.1067	-.0002	.0694	-.0003	.0011	111.5	18.66

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**267.5**	**35.78**	**54.97**	**1.633**	**.3354**	**.0259**	**2.215**	**.0201**	**.1263**
Stddev	4.4	.04	.17	.008	.0022	.0004	.006	.0005	.0001
%RSD	1.634	.1003	.3131	.5052	.6529	1.579	.2565	2.709	.0834
#1	272.5	35.76	54.90	1.626	.3355	.0264	2.214	.0195	.1263
#2	264.2	35.76	54.84	1.642	.3331	.0260	2.210	.0206	.1261
#3	265.9	35.82	55.16	1.630	.3375	.0255	2.221	.0201	.1263

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.394**	**-.0000**	**.0790**	**68.20**	**.0456**	**.2602**	**3.196**
Stddev	.002	.0003	.0007	.56	.0012	.0037	.005
%RSD	.1652	1711.	.9059	.8272	2.736	1.441	.1701
#1	1.392	.0000	.0798	68.44	.0463	.2644	3.200
#2	1.397	.0003	.0785	67.56	.0464	.2572	3.190
#3	1.394	-.0004	.0786	68.61	.0442	.2590	3.197

Zoom In Zoom Out

Sample Name: jc87232-7 Acquired: 5/3/2019 14:38:48 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**147110.**	**28255.**	**6501.5**	**9503.4**
Stddev	543.	201.	2.7	8.6
%RSD	.36939	.71144	.04183	.09025
#1	147480.	28118.	6501.5	9495.9
#2	146480.	28162.	6498.7	9501.5
#3	147350.	28486.	6504.2	9512.7

Zoom In Zoom Out

Sample Name: mp14646-sd1 Acquired: 5/3/2019 14:43:54 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.2342**	**.0003**	**-.0004**	**.0111**	**.6789**	**.0517**	**3.981**	**.0125**	**-.0019**
Stddev	.0022	.0003	.0003	.0006	.0051	.0017	.044	.0012	.0012
%RSD	.9233	83.26	79.86	5.848	.7554	3.343	1.110	9.644	67.06
#1	.2319	.0000	-.0007	.0118	.6781	.0498	3.966	.0117	-.0026
#2	.2345	.0005	-.0003	.0110	.6844	.0532	4.031	.0118	-.0026
#3	.2362	.0004	-.0001	.0105	.6742	.0521	3.947	.0138	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0166**	**.0581**	**.0103**	**.0068**	**.2013**	**.0050**	**.0123**	**6.573**	**282.9**
Stddev	.0023	.0008	.0018	.0052	.0071	.0052	.0066	.073	.4
%RSD	13.75	1.341	17.91	75.49	3.542	104.4	53.62	1.108	.1416
#1	.0191	.0573	.0083	.0051	.2010	-.0005	.0154	6.537	282.5
#2	.0163	.0580	.0119	.0127	.1943	.0099	.0168	6.525	283.1
#3	.0145	.0588	.0107	.0028	.2086	.0055	.0047	6.657	283.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.26**	**70.52**	**57.64**	**126.4**	**.2222**	**.0323**	**29.86**	**-.0092**	**.5153**
Stddev	.08	.19	.26	.0	.0024	.0002	.32	.0000	.0005
%RSD	.1454	.2758	.4461	.0327	1.075	.6109	1.072	.4870	.0919
#1	56.16	70.38	57.44	126.4	.2238	.0324	29.58	-.0092	.5148
#2	56.32	70.45	57.55	126.5	.2195	.0321	29.80	-.0092	.5157
#3	56.29	70.74	57.93	126.4	.2234	.0325	30.21	-.0091	.5154

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2463**	**.0013**	**.0075**	**61.79**	**.0082**	**.4851**	**1.050**
Stddev	.0021	.0011	.0012	.66	.0074	.0025	.010
%RSD	.8416	83.22	16.25	1.063	90.10	.5212	.9796
#1	.2462	.0024	.0067	61.12	.0167	.4879	1.045
#2	.2484	.0014	.0089	61.82	.0040	.4830	1.044
#3	.2443	.0002	.0068	62.44	.0039	.4844	1.062

Zoom In Zoom Out

Sample Name: mp14646-sd1 Acquired: 5/3/2019 14:43:54 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**147440.**	**27997.**	**6341.5**	**9336.9**
Stddev	1839.	64.	74.8	95.2
%RSD	1.2470	.22798	1.1794	1.0199
#1	148840.	28056.	6403.7	9413.6
#2	145350.	28005.	6362.3	9366.7
#3	148120.	27929.	6258.5	9230.3

Zoom In Zoom Out

Sample Name: mp14646-s1 Acquired: 5/3/2019 14:48:57 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**2.176**	**1.979**	**1.906**	**1.944**	**2.558**	**1.971**	**5.709**	**1.961**	**.2467**
Stddev	.009	.007	.007	.004	.012	.006	.083	.005	.0020
%RSD	.4207	.3472	.3754	.2290	.4799	.3115	1.453	.2501	.8082
#1	2.185	1.986	1.913	1.947	2.570	1.975	5.774	1.966	.2490
#2	2.177	1.978	1.907	1.946	2.559	1.974	5.739	1.963	.2453
#3	2.167	1.973	1.899	1.939	2.545	1.964	5.616	1.956	.2458

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.913**	**1.916**	**1.884**	**1.969**	**2.096**	**1.919**	**1.834**	**35.09**	**296.7**
Stddev	.006	.003	.006	.008	.005	.004	.011	.19	2.5
%RSD	.3238	.1618	.3206	.4030	.2262	.1834	.5963	.5494	.8337
#1	1.921	1.918	1.888	1.973	2.099	1.923	1.845	35.30	299.1
#2	1.910	1.917	1.887	1.975	2.099	1.918	1.833	35.07	297.0
#3	1.910	1.912	1.877	1.960	2.090	1.916	1.823	34.92	294.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**74.57**	**92.22**	**82.64**	**147.0**	**2.152**	**1.899**	**39.42**	**1.825**	**2.507**
Stddev	.31	.42	.26	.6	.012	.006	.21	.003	.009
%RSD	.4092	.4585	.3110	.4134	.5375	.3156	.5257	.1783	.3423
#1	74.84	92.55	82.87	147.5	2.164	1.901	39.64	1.828	2.515
#2	74.63	92.37	82.68	147.1	2.153	1.903	39.39	1.825	2.507
#3	74.24	91.75	82.36	146.3	2.141	1.892	39.22	1.821	2.498

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.012**	**1.778**	**1.871**	**59.62**	**.1093**	**.4808**	**2.905**
Stddev	.009	.007	.006	.18	.0006	.0035	.007
%RSD	.4278	.4194	.3356	.2959	.5577	.7362	.2449
#1	2.020	1.779	1.877	59.78	.1086	.4827	2.910
#2	2.013	1.784	1.872	59.65	.1098	.4830	2.907
#3	2.003	1.769	1.864	59.43	.1094	.4767	2.897

Zoom In Zoom Out

Sample Name: mp14646-s1 Acquired: 5/3/2019 14:48:57 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**141130.**	**27509.**	**6162.1**	**8835.8**
Stddev	307.	175.	6.6	11.4
%RSD	.21753	.63500	.10725	.12952
#1	140790.	27427.	6165.5	8836.0
#2	141390.	27390.	6154.5	8824.2
#3	141220.	27709.	6166.2	8847.1

Zoom In Zoom Out

Sample Name: mp14646-s2 Acquired: 5/3/2019 14:54:05 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**2.216**	**2.018**	**1.925**	**1.963**	**2.584**	**1.993**	**5.805**	**1.984**	**.2504**
Stddev	.013	.012	.001	.004	.011	.009	.091	.003	.0007
%RSD	.5976	.5974	.0653	.2109	.4120	.4622	1.576	.1618	.2610
#1	2.227	2.027	1.926	1.967	2.596	2.003	5.907	1.988	.2501
#2	2.220	2.022	1.926	1.963	2.577	1.990	5.780	1.982	.2511
#3	2.202	2.004	1.924	1.959	2.578	1.985	5.729	1.982	.2499

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.934**	**1.934**	**1.895**	**1.986**	**2.121**	**1.933**	**1.875**	**35.97**	**306.2**
Stddev	.011	.001	.004	.006	.005	.005	.004	.22	2.0
%RSD	.5501	.0728	.2398	.3145	.2432	.2448	.2214	.6122	.6552
#1	1.944	1.935	1.901	1.990	2.126	1.938	1.880	36.15	305.4
#2	1.935	1.934	1.893	1.989	2.121	1.931	1.873	36.03	308.5
#3	1.922	1.932	1.893	1.979	2.116	1.929	1.872	35.72	304.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**79.55**	**94.41**	**84.69**	**150.4**	**2.174**	**1.912**	**34.17**	**1.834**	**2.566**
Stddev	.56	.54	.54	1.1	.003	.003	.07	.005	.017
%RSD	.7040	.5751	.6345	.7480	.1469	.1609	.2030	.2677	.6677
#1	79.99	94.72	85.15	151.4	2.177	1.915	34.23	1.838	2.581
#2	79.73	94.72	84.83	150.8	2.172	1.913	34.20	1.835	2.570
#3	78.92	93.78	84.10	149.2	2.172	1.909	34.09	1.829	2.547

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.101**	**1.818**	**1.892**	**60.29**	**.1127**	**.4949**	**2.973**
Stddev	.013	.002	.011	.27	.0017	.0050	.008
%RSD	.6105	.0860	.5727	.4497	1.530	1.006	.2675
#1	2.113	1.818	1.903	60.53	.1121	.5003	2.978
#2	2.102	1.820	1.893	60.34	.1114	.4938	2.977
#3	2.088	1.817	1.881	60.00	.1147	.4905	2.964

Zoom In Zoom Out

Sample Name: mp14646-s2 Acquired: 5/3/2019 14:54:05 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**141780.**	**27638.**	**6169.7**	**8815.9**
Stddev	75.	137.	12.6	10.8
%RSD	.05317	.49604	.20425	.12286
#1	141820.	27789.	6184.1	8828.3
#2	141820.	27522.	6164.5	8811.2
#3	141690.	27604.	6160.6	8808.2

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/3/2019 14:59:15 Type: QC
Method: SGS 3 NO Valve(v337) 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	**2.025**	**2.051**	**2.025**	**2.056**	**2.017**	**2.034**	**2.071**	**2.075**	**.2509**
Stddev	.002	.001	.004	.004	.007	.008	.012	.005	.0010
%RSD	.0858	.0429	.1799	.2110	.3274	.4004	.5626	.2354	.3965
#1	2.025	2.050	2.028	2.056	2.024	2.042	2.075	2.074	.2515
#2	2.026	2.052	2.021	2.051	2.016	2.032	2.080	2.070	.2515
#3	2.023	2.052	2.024	2.060	2.010	2.026	2.057	2.080	.2498
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	**2.005**	**2.023**	**2.022**	**2.117**	**2.050**	**2.042**	**2.019**	**40.57**	**41.44**
Stddev	.007	.004	.008	.009	.001	.005	.002	.03	.04
%RSD	.3667	.1857	.4067	.4348	.0651	.2627	.0883	.0792	.1085
#1	2.012	2.025	2.024	2.113	2.048	2.043	2.021	40.55	41.39
#2	2.005	2.019	2.013	2.111	2.049	2.036	2.018	40.61	41.48
#3	1.997	2.026	2.029	2.128	2.051	2.047	2.018	40.55	41.44
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	**41.39**	**40.92**	**40.52**	**41.22**	**2.099**	**2.045**	**5.359**	**2.022**	**2.106**
Stddev	.05	.12	.07	.03	.007	.005	.013	.004	.003
%RSD	.1253	.2968	.1630	.0769	.3332	.2619	.2344	.1897	.1270
#1	41.34	40.80	40.46	41.18	2.106	2.046	5.370	2.022	2.105
#2	41.44	40.92	40.59	41.24	2.092	2.039	5.345	2.019	2.109
#3	41.41	41.04	40.52	41.23	2.099	2.050	5.361	2.026	2.105
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: 5/3/2019 14:59:15 Type: QC
Method: SGS 3 NO Valve(v337) 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	**2.033**	**1.994**	**2.010**	**2.023**	**2.089**	**1.972**	**2.118**
Stddev	.009	.004	.007	.008	.003	.003	.025
%RSD	.4232	.2039	.3580	.3949	.1497	.1670	1.173
#1	2.041	1.992	2.017	2.019	2.092	1.969	2.104
#2	2.034	1.991	2.010	2.017	2.089	1.975	2.104
#3	2.024	1.999	2.003	2.032	2.086	1.972	2.147
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	**143330.**	**27318.**	**6178.8**	**9015.1**
Stddev	770.	205.	12.1	12.1
%RSD	.53705	.74996	.19541	.13404
#1	142510.	27443.	6165.4	9003.0
#2	143440.	27428.	6182.0	9015.0
#3	144040.	27081.	6188.9	9027.2

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/3/2019 15:04:17 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0001**	**.0003**	**.0007**	**.0003**	**.0002**	**.0000**
Stddev	.0002	.0001	.0001	.0001	.0002	.0001	.0001	.0003	.0004
%RSD	90.56	77.15	18.20	95.81	69.46	17.48	17.41	164.3	3052.
#1	.0001	.0001	.0003	.0002	.0002	.0008	.0003	-.0001	-.0004
#2	.0001	.0000	.0002	-.0000	.0001	.0006	.0003	.0004	.0005
#3	.0004	.0002	.0003	.0003	.0005	.0007	.0004	.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	**-.0001**	**-.0001**	**.0005**	**.0007**	**.0003**	**.0016**	**.0002**	**-.0071**	**-.0023**
Stddev	.0002	.0001	.0022	.0007	.0006	.0007	.0013	.0057	.0011
%RSD	127.5	79.72	405.1	101.0	232.5	41.65	508.7	79.61	49.32
#1	-.0002	-.0000	-.0020	.0009	-.0003	.0012	-.0012	-.0090	-.0027
#2	-.0002	-.0002	.0017	-.0001	.0009	.0024	.0009	-.0117	-.0032
#3	.0001	-.0001	.0018	.0014	.0002	.0013	.0011	-.0008	-.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040**	**.0120**	**.1900**	**.0938**	**.0028**	**.0005**	**.0043**	**-.0006**	**.0002**
Stddev	.0019	.0074	.0288	.0080	.0002	.0001	.0006	.0003	.0001
%RSD	46.29	62.23	15.15	8.535	6.764	25.57	13.36	43.19	40.46
#1	.0061	.0185	.1856	.0875	.0027	.0004	.0037	-.0009	.0002
#2	.0031	.0136	.2207	.0912	.0027	.0006	.0047	-.0004	.0001
#3	.0027	.0039	.1636	.1028	.0030	.0004	.0046	-.0005	.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: 5/3/2019 15:04:17 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0002**	**-.0005**	**.0019**	**-.0004**	**.0054**
Stddev	.0003	.0008	.0000	.0027	.0014	.0018	.0028
%RSD	91.38	172.9	23.35	537.3	74.22	471.3	52.21
#1	.0000	-.0003	.0002	-.0036	.0013	-.0018	.0038
#2	.0006	-.0014	.0002	.0007	.0036	-.0008	.0086
#3	.0003	.0002	.0001	.0013	.0009	.0016	.0038
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	**152130.**	**27852.**	**6437.8**	**9950.3**
Stddev	808.	150.	77.2	107.7
%RSD	.53122	.53991	1.1985	1.0824
#1	152560.	27838.	6480.0	10012.
#2	152630.	28009.	6484.7	10013.
#3	151200.	27709.	6348.7	9826.0

Zoom In Zoom Out

Sample Name: jc87116-1 Acquired: 5/3/2019 15:09:26 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.2460**	**.0004**	**.0000**	**.0113**	**.6862**	**.0492**	**3.997**	**.0140**	**-.0000**
Stddev	.0030	.0001	.0004	.0003	.0069	.0015	.036	.0005	.0012
%RSD	1.206	36.08	3709.	2.656	1.007	3.037	.8927	3.627	3917.
#1	.2490	.0004	.0004	.0116	.6941	.0507	4.035	.0140	-.0005
#2	.2458	.0002	-.0003	.0113	.6825	.0477	3.993	.0144	-.0009
#3	.2431	.0005	-.0001	.0110	.6819	.0491	3.964	.0134	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0173**	**.0559**	**.0132**	**-.0018**	**.1916**	**.0020**	**.0090**	**6.896**	**292.8**
Stddev	.0006	.0003	.0018	.0010	.0010	.0030	.0004	.078	4.7
%RSD	3.275	.6184	13.35	54.62	.5014	145.0	4.848	1.125	1.606
#1	.0179	.0563	.0148	-.0022	.1921	-.0014	.0093	6.980	296.2
#2	.0170	.0558	.0135	-.0025	.1905	.0035	.0092	6.880	287.4
#3	.0168	.0556	.0113	-.0007	.1923	.0040	.0085	6.827	294.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**58.57**	**72.66**	**60.52**	**130.9**	**.2158**	**.0322**	**29.32**	**-.0036**	**.5385**
Stddev	.73	1.05	.73	1.7	.0025	.0002	.25	.0006	.0061
%RSD	1.242	1.450	1.209	1.265	1.145	.5916	.8371	15.49	1.134
#1	59.37	73.85	61.33	132.7	.2186	.0323	29.60	-.0038	.5450
#2	58.38	72.28	60.34	130.4	.2149	.0322	29.23	-.0040	.5375
#3	57.96	71.84	59.90	129.5	.2140	.0320	29.14	-.0029	.5329

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2524**	**.0024**	**.0075**	**61.36**	**.0087**	**.5112**	**1.044**
Stddev	.0025	.0010	.0002	.51	.0035	.0081	.012
%RSD	.9717	42.78	2.079	.8240	40.34	1.588	1.175
#1	.2548	.0013	.0077	61.87	.0050	.5200	1.058
#2	.2525	.0026	.0075	61.35	.0090	.5095	1.038
#3	.2499	.0034	.0074	60.85	.0120	.5040	1.036

Zoom In Zoom Out

Sample Name: jc87116-1 Acquired: 5/3/2019 15:09:26 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**142010.**	**27678.**	**6135.6**	**8867.6**
Stddev	65.	289.	15.0	14.4
%RSD	.04606	1.0424	.24456	.16207
#1	142090.	27345.	6152.4	8880.7
#2	141960.	27839.	6131.0	8869.8
#3	141990.	27850.	6123.5	8852.2

Zoom In Zoom Out

Sample Name: mp14646-sd1 Acquired: 5/3/2019 15:14:45 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.2498**	**-.0004**	**-.0008**	**.0102**	**.6928**	**.0586**	**4.055**	**.0123**	**.0008**
Stddev	.0055	.0008	.0022	.0028	.0074	.0012	.055	.0018	.0028
%RSD	2.186	208.1	269.3	27.35	1.067	2.034	1.357	14.43	327.4
#1	.2553	.0004	-.0016	.0116	.6997	.0594	4.106	.0126	.0035
#2	.2497	-.0011	.0017	.0070	.6850	.0593	3.997	.0139	-.0021
#3	.2444	-.0004	-.0025	.0120	.6937	.0573	4.061	.0104	.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0179**	**.0657**	**.0081**	**.0146**	**.1811**	**.0084**	**.0141**	**7.105**	**302.1**
Stddev	.0035	.0016	.0053	.0107	.0025	.0176	.0052	.111	3.7
%RSD	19.48	2.446	65.52	73.09	1.405	208.9	36.62	1.557	1.238
#1	.0169	.0669	.0121	.0178	.1782	.0179	.0173	7.229	305.8
#2	.0150	.0662	.0100	.0234	.1823	-.0119	.0168	7.069	302.2
#3	.0217	.0638	.0021	.0027	.1829	.0193	.0081	7.016	298.4

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.99**	**75.21**	**62.27**	**134.6**	**.2186**	**.0325**	**28.59**	**-.0201**	**.5480**
Stddev	.69	.97	.63	1.7	.0072	.0013	.72	.0060	.0060
%RSD	1.152	1.290	1.004	1.278	3.313	4.059	2.533	29.89	1.102
#1	60.62	76.23	62.83	136.3	.2245	.0339	29.41	-.0131	.5540
#2	60.10	75.09	62.38	134.5	.2207	.0324	28.35	-.0236	.5479
#3	59.25	74.30	61.60	132.9	.2105	.0313	28.02	-.0235	.5420

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2560**	**.0126**	**.0089**	**58.77**	**-.0020**	**.5183**	**1.052**
Stddev	.0056	.0138	.0013	1.48	.0168	.0060	.036
%RSD	2.180	109.4	15.00	2.523	855.1	1.153	3.423
#1	.2605	-.0010	.0079	60.39	-.0151	.5247	1.093
#2	.2498	.0122	.0104	58.45	.0169	.5175	1.038
#3	.2576	.0266	.0084	57.47	-.0077	.5128	1.025

Zoom In Zoom Out

Sample Name: mp14646-sd1 Acquired: 5/3/2019 15:14:45 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**148300.**	**28073.**	**6484.9**	**9692.6**
Stddev	1303.	105.	23.9	46.3
%RSD	.87874	.37376	.36826	.47741
#1	148640.	28158.	6467.9	9654.8
#2	149400.	27956.	6474.5	9678.6
#3	146860.	28106.	6512.2	9744.2

Zoom In Zoom Out

Sample Name: p2conf Acquired: 5/3/2019 15:19:50 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**.0000**	**-.0001**	**.0010**	**.0001**	**.0002**	**.0001**
Stddev	.0003	.0000	.0001	.0001	.0002	.0001	.0000	.0002	.0007
%RSD	531.1	49.91	75.60	285.7	247.9	13.94	30.86	91.39	819.9
#1	.0002	-.0001	-.0001	-.0001	-.0002	.0011	.0001	.0001	.0008
#2	-.0003	-.0000	-.0004	.0002	-.0002	.0011	.0002	.0004	-.0007
#3	-.0001	-.0001	-.0001	.0001	.0001	.0009	.0001	.0001	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0014**	**-.0001**	**.0006**	**-.0005**	**.0017**	**.0008**	**-.0142**	**.0738**
Stddev	.0003	.0000	.0004	.0008	.0004	.0019	.0011	.0059	.0013
%RSD	65.83	2.523	374.1	125.5	81.73	110.8	138.2	41.52	1.738
#1	-.0009	.0015	.0003	.0010	-.0006	.0007	.0011	-.0079	.0740
#2	-.0003	.0015	-.0005	.0012	-.0001	.0006	-.0004	-.0151	.0724
#3	-.0004	.0014	-.0001	-.0003	-.0009	.0039	.0017	-.0195	.0749

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**-.0009**	**.0528**	**.0353**	**.0008**	**-.0001**	**.0030**	**-.0018**	**.0002**
Stddev	.0008	.0033	.0198	.0082	.0005	.0002	.0006	.0002	.0000
%RSD	74.92	365.3	37.41	23.13	67.41	270.9	20.37	13.58	20.34
#1	.0009	.0029	.0341	.0263	.0008	.0002	.0023	-.0018	.0002
#2	.0019	-.0029	.0735	.0374	.0014	-.0003	.0032	-.0016	.0001
#3	.0003	-.0026	.0510	.0421	.0003	-.0002	.0035	-.0021	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0008**	**-.0001**	**.0101**	**.0006**	**-.0042**	**.0126**
Stddev	.0000	.0011	.0001	.0022	.0022	.0004	.0002
%RSD	14.55	136.7	251.3	22.08	369.7	8.659	1.950
#1	.0002	-.0020	.0001	.0111	-.0005	-.0045	.0123
#2	.0002	-.0001	-.0002	.0117	-.0008	-.0043	.0128
#3	.0003	-.0002	-.0001	.0076	.0031	-.0038	.0126

Zoom In Zoom Out

Sample Name: p2conf Acquired: 5/3/2019 15:19:50 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**152980.**	**28194.**	**6544.9**	**10235.**
Stddev	668.	213.	17.7	23.
%RSD	.43650	.75641	.27098	.22317
#1	153700.	27948.	6564.3	10256.
#2	152840.	28310.	6540.9	10239.
#3	152390.	28325.	6529.5	10211.

Zoom In Zoom Out

Sample Name: jc87127-3 Acquired: 5/3/2019 15:24:57 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.1146**	**.0006**	**.0000**	**.0240**	**.0385**	**.0532**	**1.371**	**.0526**	**-.0001**
Stddev	.0001	.0000	.0002	.0002	.0007	.0000	.002	.0004	.0014
%RSD	.1299	3.929	674.0	.8987	1.787	.0580	.1780	.7474	975.6
#1	.1146	.0006	.0003	.0241	.0378	.0532	1.372	.0531	-.0009
#2	.1144	.0006	-.0002	.0241	.0391	.0532	1.373	.0523	.0015
#3	.1147	.0006	.0000	.0237	.0388	.0532	1.368	.0526	-.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0465**	**.0915**	**.0275**	**.0017**	**.0181**	**-.0015**	**.0065**	**22.10**	**8.001**
Stddev	.0001	.0006	.0018	.0004	.0012	.0010	.0037	.07	.042
%RSD	.2055	.7033	6.498	25.67	6.825	68.67	57.91	.3058	.5183
#1	.0465	.0922	.0281	.0015	.0167	-.0011	.0026	22.15	8.041
#2	.0464	.0910	.0255	.0014	.0186	-.0007	.0100	22.13	8.004
#3	.0466	.0913	.0289	.0022	.0190	-.0026	.0068	22.03	7.958

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**47.98**	**9.624**	**4.217**	**6.516**	**.0036**	**.0030**	**27.45**	**-.0065**	**.0536**
Stddev	.06	.039	.067	.026	.0017	.0005	.20	.0008	.0002
%RSD	.1245	.4098	1.587	.4019	47.06	16.33	.7182	11.86	.3260
#1	48.01	9.644	4.277	6.545	.0056	.0031	27.66	-.0074	.0537
#2	48.01	9.651	4.145	6.496	.0024	.0033	27.42	-.0060	.0537
#3	47.91	9.579	4.229	6.506	.0028	.0024	27.26	-.0062	.0534

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9137**	**-.0020**	**.0052**	**.2476**	**.0291**	**.0276**	**1.561**
Stddev	.0015	.0007	.0005	.0049	.0032	.0013	.008
%RSD	.1696	33.70	10.47	1.976	11.10	4.674	.5061
#1	.9148	-.0018	.0052	.2532	.0264	.0285	1.570
#2	.9143	-.0014	.0058	.2451	.0327	.0262	1.556
#3	.9119	-.0027	.0047	.2445	.0282	.0283	1.556

Zoom In Zoom Out

Sample Name: jc87127-3 Acquired: 5/3/2019 15:24:57 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**151920.**	**28154.**	**6584.1**	**9819.1**
Stddev	581.	45.	58.2	68.8
%RSD	.38249	.16051	.88435	.70048
#1	151530.	28198.	6524.8	9754.1
#2	151650.	28156.	6586.2	9812.2
#3	152590.	28108.	6641.2	9891.1

Zoom In Zoom Out

Sample Name: mp14684-b1 Acquired: 5/3/2019 15:30:00 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**2.037**	**2.065**	**2.011**	**2.054**	**2.029**	**2.048**	**2.069**	**2.074**	**.2528**
Stddev	.003	.002	.032	.028	.005	.004	.032	.027	.0005
%RSD	.1636	.1048	1.582	1.357	.2253	.1790	1.530	1.290	.2093
#1	2.033	2.063	2.041	2.079	2.028	2.049	2.065	2.098	.2530
#2	2.038	2.066	1.977	2.024	2.026	2.045	2.039	2.045	.2523
#3	2.039	2.067	2.014	2.059	2.034	2.052	2.102	2.080	.2533

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.001**	**2.022**	**1.965**	**2.150**	**2.059**	**2.030**	**1.975**	**25.31**	**26.01**
Stddev	.002	.030	.028	.029	.027	.031	.031	.04	.05
%RSD	.0999	1.491	1.438	1.329	1.318	1.528	1.586	.1615	.1743
#1	2.001	2.045	1.991	2.177	2.082	2.057	2.006	25.27	25.96
#2	1.999	1.988	1.935	2.120	2.029	1.996	1.943	25.33	26.01
#3	2.003	2.034	1.970	2.154	2.065	2.036	1.977	25.34	26.05

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.03**	**25.55**	**25.31**	**25.85**	**2.044**	**2.028**	**.0024**	**1.995**	**2.115**
Stddev	.05	.04	.07	.04	.034	.030	.0029	.029	.003
%RSD	.2084	.1711	.2696	.1658	1.658	1.471	122.3	1.441	.1365
#1	25.97	25.50	25.26	25.81	2.076	2.051	.0047	2.019	2.111
#2	26.07	25.55	25.28	25.90	2.009	1.994	-.0009	1.963	2.116
#3	26.06	25.59	25.39	25.84	2.048	2.038	.0032	2.004	2.117

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.002**	**1.953**	**1.977**	**.0135**	**.1135**	**-.0019**	**1.999**
Stddev	.002	.028	.001	.0037	.0007	.0005	.032
%RSD	.1027	1.444	.0648	27.03	.5916	28.84	1.587
#1	2.004	1.977	1.978	.0177	.1132	-.0016	2.027
#2	2.000	1.922	1.976	.0108	.1131	-.0016	1.965
#3	2.002	1.960	1.978	.0121	.1143	-.0025	2.005

Zoom In Zoom Out

Sample Name: mp14684-b1 Acquired: 5/3/2019 15:30:00 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**147090.**	**27980.**	**6332.0**	**9278.9**
Stddev	790.	39.	79.1	104.2
%RSD	.53715	.14102	1.2487	1.1225
#1	146900.	28011.	6264.0	9184.0
#2	147950.	27994.	6418.8	9390.3
#3	146410.	27935.	6313.3	9262.4

Zoom In Zoom Out

Sample Name: jc87185-2f Acquired: 5/3/2019 15:34:59 Type: Unk
Method: SGS 3 NO Valve(v337) Mode: CONC Corr. Factor: 2.000000
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	**.1490**	**-.0002**	**-.0007**	**.0370**	**.0017**	**.0077**	**13.91**	**.0382**	**-.0013**
Stddev	.0014	.0000	.0004	.0003	.0006	.0000	.18	.0004	.0007
%RSD	.9524	9.050	53.07	.8712	38.59	.3477	1.283	.9529	52.07
#1	.1501	-.0002	-.0005	.0370	.0011	.0078	13.99	.0378	-.0006
#2	.1494	-.0002	-.0011	.0373	.0016	.0078	14.02	.0385	-.0020
#3	.1474	-.0002	-.0005	.0367	.0023	.0077	13.70	.0383	-.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0058**	**.0113**	**-.0013**	**.0013**	**.0006**	**.0028**	**-.0001**	**.1377**	**41.49**
Stddev	.0007	.0002	.0008	.0030	.0012	.0011	.0025	.0132	.28
%RSD	11.45	1.857	62.63	226.4	200.1	38.92	4768.	9.601	.6799
#1	.0064	.0112	-.0004	.0041	.0016	.0039	.0012	.1508	41.76
#2	.0051	.0115	-.0018	.0015	-.0007	.0026	-.0029	.1244	41.50
#3	.0060	.0111	-.0018	-.0018	.0009	.0018	.0016	.1379	41.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.93**	**10.52**	**3.141**	**197.5**	**.0218**	**-.0002**	**5.736**	**-.0032**	**.2121**
Stddev	.10	.03	.024	3.7	.0011	.0003	.041	.0012	.0012
%RSD	.5423	.3298	.7686	1.873	4.947	141.9	.7148	36.62	.5602
#1	18.02	10.56	3.148	198.5	.0216	-.0002	5.772	-.0020	.2131
#2	17.95	10.50	3.114	200.6	.0230	-.0005	5.743	-.0043	.2124
#3	17.83	10.51	3.161	193.4	.0209	.0001	5.691	-.0034	.2108

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0051**	**.0015**	**.0009**	**29.09**	**-.0031**	**.0026**	**.1185**
Stddev	.0005	.0019	.0003	.17	.0016	.0023	.0041
%RSD	9.206	125.3	38.80	.6004	53.15	88.84	3.435
#1	.0048	.0033	.0011	29.29	-.0049	.0006	.1190
#2	.0049	.0018	.0011	29.04	-.0017	.0021	.1223
#3	.0057	-.0005	.0005	28.95	-.0027	.0052	.1142

Zoom In Zoom Out

Sample Name: jc87185-2f Acquired: 5/3/2019 15:34:59 Type: Unk
Method: SGS 3 NO Valve(v337) Mode: CONC Corr. Factor: 2.000000
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	**144310.**	**28241.**	**6238.2**	**9136.7**
Stddev	1419.	119.	16.2	21.2
%RSD	.98342	.42301	.26019	.23252
#1	145940.	28103.	6222.9	9113.1
#2	143370.	28314.	6236.5	9142.9
#3	143620.	28305.	6255.3	9154.2

Zoom In Zoom Out

Sample Name: jc87185-9f Acquired: 5/3/2019 15:40:20 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**.1468**	**-.0002**	**-.0004**	**.0364**	**.0020**	**.0075**	**13.81**	**.0372**	**-.0012**
Stddev	.0000	.0001	.0003	.0008	.0003	.0007	.19	.0005	.0006
%RSD	.0331	29.89	66.79	2.145	12.33	8.904	1.402	1.228	47.13
#1	.1468	-.0001	-.0001	.0366	.0023	.0069	13.60	.0376	-.0012
#2	.1468	-.0002	-.0005	.0356	.0019	.0082	13.84	.0373	-.0007
#3	.1467	-.0002	-.0006	.0371	.0019	.0072	13.98	.0367	-.0019

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060**	**.0129**	**-.0016**	**.0039**	**.0020**	**-.0000**	**.0021**	**.1266**	**40.95**
Stddev	.0009	.0001	.0022	.0033	.0018	.0056	.0003	.0052	.07
%RSD	14.85	.5708	134.3	85.35	92.56	892000.	14.87	4.127	.1689
#1	.0051	.0129	-.0034	.0075	-.0001	-.0059	.0024	.1309	40.91
#2	.0061	.0128	-.0024	.0012	.0031	.0053	.0018	.1208	41.03
#3	.0068	.0130	.0008	.0028	.0030	.0006	.0021	.1281	40.91

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.68**	**10.37**	**3.158**	**194.1**	**.0193**	**-.0007**	**5.686**	**-.0029**	**.2087**
Stddev	.02	.03	.049	2.5	.0015	.0006	.029	.0008	.0004
%RSD	.1134	.3037	1.549	1.308	7.874	86.82	.5154	28.22	.2026
#1	17.67	10.40	3.109	195.8	.0199	-.0012	5.699	-.0020	.2083
#2	17.70	10.36	3.156	191.2	.0205	-.0010	5.653	-.0032	.2091
#3	17.66	10.34	3.207	195.4	.0176	-.0000	5.707	-.0036	.2085

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0048**	**-.0006**	**-.0000**	**28.32**	**.0011**	**.0055**	**.1123**
Stddev	.0006	.0031	.0003	.04	.0046	.0035	.0038
%RSD	12.12	549.8	585.1	.1552	413.4	64.19	3.401
#1	.0047	-.0005	-.0003	28.34	-.0028	.0072	.1095
#2	.0043	.0025	.0002	28.27	-.0001	.0014	.1167
#3	.0054	-.0038	.0001	28.36	.0063	.0078	.1108

Zoom In Zoom Out

Sample Name: jc87185-9f Acquired: 5/3/2019 15:40:20 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**145070.**	**27731.**	**6278.2**	**9182.8**
Stddev	430.	38.	22.3	33.4
%RSD	.29619	.13738	.35492	.36404
#1	145070.	27687.	6300.2	9213.8
#2	145500.	27756.	6278.8	9187.3
#3	144650.	27750.	6255.7	9147.4

Zoom In Zoom Out

Sample Name: mp14618-mb1conf Acquired: 5/3/2019 15:45:37 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**-.0003**	**.0005**	**.0012**	**.0007**	**.0004**	**-.0003**
Stddev	.0002	.0000	.0001	.0001	.0002	.0003	.0000	.0001	.0005
%RSD	149.9	130.9	197.8	38.87	34.92	26.24	1.061	20.12	174.3
#1	.0004	.0000	-.0000	-.0004	.0004	.0014	.0007	.0005	-.0009
#2	-.0001	-.0000	.0002	-.0003	.0007	.0014	.0007	.0004	.0001
#3	.0001	-.0001	-.0000	-.0002	.0004	.0009	.0007	.0003	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0080**	**-.0003**	**.0007**	**-.0004**	**.0012**	**.0014**	**.0073**	**.0370**
Stddev	.0004	.0000	.0012	.0003	.0004	.0004	.0018	.0079	.0039
%RSD	85.87	.2582	463.9	37.73	108.7	31.61	128.6	108.2	10.47
#1	-.0004	.0080	-.0004	.0007	.0000	.0008	-.0004	.0104	.0398
#2	-.0001	.0080	.0010	.0010	-.0004	.0013	.0032	.0133	.0325
#3	-.0008	.0080	-.0014	.0004	-.0008	.0016	.0013	-.0017	.0386

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0303**	**.0160**	**.1676**	**.1406**	**.0015**	**.0003**	**.0136**	**.0184**	**.0002**
Stddev	.0012	.0034	.0166	.0012	.0004	.0002	.0010	.0002	.0001
%RSD	4.012	21.04	9.895	.8210	25.41	52.50	7.707	1.008	37.62
#1	.0317	.0184	.1608	.1417	.0018	.0002	.0143	.0181	.0002
#2	.0297	.0121	.1865	.1394	.0011	.0003	.0124	.0185	.0002
#3	.0294	.0173	.1555	.1408	.0016	.0005	.0140	.0184	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0017**	**.0004**	**.0059**	**-.0008**	**.0001**	**.0286**
Stddev	.0004	.0011	.0001	.0005	.0012	.0011	.0038
%RSD	24.43	61.65	29.06	8.401	157.9	1665.	13.21
#1	.0019	.0018	.0002	.0062	-.0012	.0012	.0290
#2	.0012	.0006	.0004	.0053	.0006	-.0009	.0321
#3	.0015	.0028	.0004	.0062	-.0017	-.0001	.0246

Zoom In Zoom Out

Sample Name: mp14618-mb1conf Acquired: 5/3/2019 15:45:37 Type: Unk
Method: SGS 3 NO Valve(v337) 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	153220.	28353.	6551.0	10089.
Stddev	1055.	71.	21.0	34.
%RSD	.68844	.25065	.32023	.33774
#1	154200.	28354.	6563.9	10107.
#2	152100.	28281.	6562.3	10109.
#3	153350.	28423.	6526.8	10049.

Zoom In Zoom Out

Sample Name: jc86994-23 Acquired: 5/3/2019 15:50:45 Type: Unk
Method: SGS 3 NO Valve(v337) 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	.3038	.0026	.0006	.1004	.3510	.3187	3.352	.2365	.0001
Stddev	.0021	.0000	.0001	.0003	.0015	.0016	.007	.0007	.0012
%RSD	.6950	.8126	12.95	.2694	.4357	.5160	.1984	.2833	980.3
#1	.3015	.0025	.0006	.1002	.3493	.3171	3.345	.2370	-.0006
#2	.3046	.0026	.0005	.1007	.3521	.3204	3.353	.2357	.0016
#3	.3055	.0026	.0006	.1003	.3516	.3186	3.359	.2366	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3767	1.160	.0508	.0023	.1185	-.0051	.0005	110.6	20.83
Stddev	.0014	.001	.0006	.0022	.0006	.0018	.0002	.5	.09
%RSD	.3700	.1077	1.123	93.47	.4936	36.09	42.55	.4486	.4342
#1	.3751	1.159	.0514	.0015	.1188	-.0035	.0004	110.0	20.73
#2	.3772	1.159	.0502	.0007	.1189	-.0071	.0007	110.7	20.86
#3	.3777	1.161	.0509	.0048	.1178	-.0046	.0003	111.0	20.90

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	221.4	75.65	10.36	4.306	.1244	.0083	1.699	.0188	.0521
Stddev	1.0	.40	.02	.029	.0012	.0004	.004	.0010	.0005
%RSD	.4471	.5338	.1684	.6755	.9701	5.241	.2297	5.455	.8850
#1	220.2	75.20	10.37	4.272	.1232	.0084	1.697	.0191	.0516
#2	221.7	75.81	10.37	4.321	.1256	.0079	1.704	.0196	.0524
#3	222.1	75.96	10.34	4.324	.1242	.0087	1.697	.0177	.0524

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.429	.0031	.0133	15.17	.2075	.1464	3.983
Stddev	.015	.0017	.0004	.09	.0042	.0008	.021
%RSD	.2716	52.77	2.914	.6027	2.045	.5236	.5220
#1	5.415	.0039	.0130	15.08	.2094	.1458	3.997
#2	5.429	.0043	.0138	15.17	.2104	.1462	3.994
#3	5.445	.0012	.0131	15.26	.2026	.1472	3.959

Zoom In Zoom Out

Sample Name: jc86994-23 Acquired: 5/3/2019 15:50:45 Type: Unk
Method: SGS 3 NO Valve(v337) 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	148890.	28178.	6472.9	9450.7
Stddev	214.	200.	12.6	8.7
%RSD	.14383	.71113	.19422	.09188
#1	149130.	27948.	6484.4	9457.0
#2	148830.	28310.	6459.5	9440.8
#3	148710.	28277.	6474.8	9454.4

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/3/2019 15:55:46 Type: QC
Method: SGS 3 NO Valve(v337) 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	1.997	2.022	2.023	2.052	2.001	2.011	2.047	2.075	.2480
Stddev	.005	.004	.035	.035	.001	.001	.015	.034	.0005
%RSD	.2432	.1932	1.754	1.693	.0265	.0259	.7212	1.652	.1825
#1	1.993	2.019	2.003	2.034	2.002	2.011	2.036	2.057	.2482
#2	2.002	2.026	2.001	2.030	2.002	2.011	2.042	2.054	.2475
#3	1.997	2.021	2.064	2.092	2.001	2.012	2.064	2.115	.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	1.984	2.022	2.020	2.113	2.052	2.043	2.015	40.05	41.04
Stddev	.001	.034	.036	.031	.034	.036	.035	.11	.14
%RSD	.0393	1.677	1.799	1.483	1.649	1.767	1.716	.2642	.3422
#1	1.983	2.006	1.998	2.093	2.036	2.022	1.996	39.94	40.90
#2	1.983	2.000	2.001	2.096	2.029	2.021	1.995	40.15	41.18
#3	1.985	2.061	2.062	2.149	2.091	2.084	2.055	40.05	41.04
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	40.94	40.44	40.03	40.92	2.098	2.050	5.345	2.014	2.087
Stddev	.09	.14	.16	.06	.038	.037	.097	.034	.003
%RSD	.2099	.3454	.3961	.1470	1.805	1.822	1.814	1.683	.1317
#1	40.85	40.30	39.87	40.85	2.075	2.030	5.287	1.994	2.084
#2	41.02	40.58	40.18	40.96	2.078	2.028	5.291	1.995	2.087
#3	40.95	40.44	40.03	40.94	2.142	2.093	5.457	2.054	2.089
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: 5/3/2019 15:55:46 Type: QC
Method: SGS 3 NO Valve(v337) 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	**2.015**	**1.994**	**1.991**	**1.998**	**2.089**	**1.938**	**2.039**
Stddev	.001	.035	.000	.033	.035	.008	.035
%RSD	.0635	1.742	.0163	1.670	1.688	.4028	1.706
#1	2.016	1.975	1.990	1.976	2.070	1.930	2.021
#2	2.014	1.973	1.991	1.982	2.067	1.946	2.017
#3	2.016	2.034	1.991	2.037	2.129	1.938	2.079
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	**143960.**	**27393.**	**6153.3**	**8969.9**
Stddev	23.	394.	80.0	107.0
%RSD	.01591	1.4386	1.3006	1.1925
#1	143960.	27729.	6192.2	9021.8
#2	143980.	26960.	6206.4	9041.0
#3	143940.	27492.	6061.2	8846.9

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/3/2019 16:00:49 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0003**	**.0005**	**.0003**	**.0004**	**.0011**	**.0005**	**.0007**	**.0000**
Stddev	.0002	.0001	.0001	.0001	.0002	.0003	.0001	.0001	.0002
%RSD	116.0	35.86	32.06	14.78	51.66	22.96	17.05	16.63	1357.
#1	.0003	.0004	.0003	.0004	.0002	.0008	.0004	.0008	.0002
#2	-.0001	.0002	.0004	.0003	.0005	.0013	.0005	.0006	-.0002
#3	.0004	.0003	.0006	.0004	.0006	.0013	.0006	.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0003**	**-.0007**	**.0008**	**.0005**	**.0010**	**.0007**	**.0001**	**.0005**
Stddev	.0003	.0001	.0008	.0013	.0007	.0003	.0022	.0040	.0006
%RSD	145.3	24.17	118.5	148.1	134.6	32.79	317.4	5360.	126.5
#1	-.0006	.0004	-.0004	.0020	.0010	.0013	-.0007	-.0031	-.0001
#2	-.0003	.0003	-.0016	.0010	.0008	.0006	.0033	.0045	.0004
#3	.0001	.0003	-.0001	-.0005	-.0003	.0012	-.0005	-.0012	.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	**.0072**	**.0121**	**.1650**	**.0873**	**.0030**	**.0006**	**.0020**	**-.0006**	**.0004**
Stddev	.0013	.0046	.0279	.0132	.0004	.0002	.0006	.0005	.0000
%RSD	18.29	38.27	16.92	15.13	13.39	39.44	28.11	71.72	5.336
#1	.0064	.0082	.1947	.0983	.0026	.0003	.0015	-.0011	.0004
#2	.0088	.0108	.1392	.0726	.0034	.0007	.0020	-.0006	.0004
#3	.0065	.0172	.1612	.0908	.0029	.0007	.0026	-.0002	.0004
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: 5/3/2019 16:00:49 Type: QC
Method: SGS 3 NO Valve(v337) 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	**.0007**	**.0006**	**.0006**	**-.0003**	**.0011**	**-.0004**	**.0147**
Stddev	.0002	.0010	.0002	.0012	.0010	.0022	.0037
%RSD	24.40	173.5	33.67	365.5	86.68	519.1	24.97
#1	.0005	.0008	.0005	.0008	.0010	-.0011	.0183
#2	.0008	-.0005	.0004	-.0017	.0003	.0021	.0149
#3	.0008	.0014	.0008	-.0001	.0022	-.0022	.0109
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	**151670.**	**27748.**	**6471.9**	**9976.2**
Stddev	497.	35.	6.6	10.2
%RSD	.32773	.12471	.10233	.10195
#1	152220.	27786.	6471.1	9982.6
#2	151520.	27738.	6465.8	9964.5
#3	151250.	27719.	6479.0	9981.5

Zoom In Zoom Out

Sample Name: mp14776-mb1 7 Acquired: 5/3/2019 16:05:58 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**-.0000**	**.0000**	**-.0000**	**.0013**	**.0016**	**.0008**	**.0008**	**-.0005**
Stddev	.0000	.0001	.0001	.0001	.0005	.0001	.0000	.0000	.0002
%RSD	11.39	225.7	438.5	246.1	34.32	7.285	3.395	1.976	31.80
#1	.0004	.0001	-.0000	-.0000	.0010	.0016	.0008	.0008	-.0006
#2	.0004	-.0001	.0001	-.0001	.0011	.0015	.0008	.0008	-.0003
#3	.0003	-.0001	-.0001	.0000	.0019	.0017	.0008	.0008	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0098**	**-.0000**	**.0013**	**-.0003**	**.0006**	**.0006**	**.0107**	**.1643**
Stddev	.0004	.0000	.0012	.0006	.0007	.0011	.0009	.0058	.0009
%RSD	82.00	.0966	2795.	46.97	224.5	182.6	157.0	53.99	.5341
#1	-.0002	.0098	-.0012	.0012	-.0005	-.0006	.0001	.0170	.1633
#2	-.0003	.0098	.0011	.0019	.0005	.0008	.0016	.0057	.1649
#3	-.0008	.0098	-.0001	.0007	-.0008	.0016	-.0000	.0094	.1647

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0304**	**.0276**	**.1623**	**.1768**	**.0015**	**.0005**	**.0085**	**.0180**	**.0006**
Stddev	.0018	.0205	.0040	.0082	.0007	.0002	.0003	.0003	.0001
%RSD	6.040	74.22	2.483	4.623	44.49	47.94	3.988	1.766	13.36
#1	.0316	.0075	.1669	.1677	.0021	.0002	.0087	.0181	.0005
#2	.0313	.0267	.1593	.1791	.0008	.0007	.0087	.0177	.0005
#3	.0283	.0484	.1606	.1836	.0016	.0005	.0081	.0183	.0007

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0008**	**.0004**	**.0158**	**.0014**	**-.0014**	**.0346**
Stddev	.0001	.0001	.0001	.0022	.0025	.0011	.0012
%RSD	9.695	10.70	23.63	13.75	183.4	82.62	3.454
#1	.0014	.0007	.0003	.0134	.0027	-.0008	.0336
#2	.0016	.0008	.0004	.0176	.0028	-.0027	.0360
#3	.0015	.0008	.0004	.0165	-.0015	-.0006	.0343

Zoom In Zoom Out

Sample Name: mp14776-mb1 7 Acquired: 5/3/2019 16:05:58 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**151920.**	**28016.**	**6516.9**	**10032.**
Stddev	646.	30.	8.5	13.
%RSD	.42492	.10640	.13094	.12673
#1	151330.	27991.	6507.5	10018.
#2	152610.	28049.	6519.2	10042.
#3	151810.	28010.	6524.1	10037.

Zoom In Zoom Out

Sample Name: mp14776-b1 Acquired: 5/3/2019 16:11:06 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**1.983**	**2.016**	**1.964**	**2.001**	**1.973**	**2.006**	**2.027**	**2.022**	**.2445**
Stddev	.006	.005	.002	.005	.010	.007	.018	.004	.0012
%RSD	.2828	.2627	.0782	.2303	.5258	.3506	.8762	.1952	.4746
#1	1.984	2.016	1.963	2.004	1.970	2.004	2.026	2.025	.2444
#2	1.976	2.011	1.963	1.996	1.985	2.013	2.046	2.018	.2458
#3	1.987	2.021	1.966	2.003	1.965	1.999	2.010	2.024	.2435

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.942**	**1.969**	**1.953**	**2.093**	**2.006**	**1.967**	**1.951**	**24.90**	**25.81**
Stddev	.006	.003	.004	.006	.004	.005	.002	.07	.08
%RSD	.2888	.1553	.1823	.2987	.2152	.2705	.0797	.2834	.3012
#1	1.943	1.966	1.952	2.090	2.008	1.967	1.951	24.91	25.83
#2	1.946	1.968	1.950	2.089	2.001	1.961	1.952	24.83	25.73
#3	1.935	1.972	1.957	2.100	2.009	1.972	1.949	24.97	25.88

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.67**	**25.14**	**24.96**	**25.63**	**1.960**	**1.991**	**-.0478**	**1.980**	**2.066**
Stddev	.04	.09	.11	.01	.001	.002	.0016	.006	.000
%RSD	.1735	.3485	.4277	.0302	.0336	.1191	3.367	.3147	.0144
#1	25.66	25.14	24.95	25.62	1.960	1.990	-.0476	1.974	2.066
#2	25.62	25.06	24.87	25.63	1.959	1.989	-.0494	1.978	2.065
#3	25.71	25.23	25.08	25.64	1.961	1.994	-.0462	1.986	2.066

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.986**	**1.626**	**1.952**	**.0326**	**.1089**	**-.0027**	**1.928**
Stddev	.006	.003	.006	.0010	.0007	.0015	.013
%RSD	.3293	.1962	.2848	2.927	.6820	57.00	.6917
#1	1.989	1.626	1.954	.0337	.1097	-.0033	1.915
#2	1.990	1.624	1.956	.0324	.1085	-.0010	1.927
#3	1.978	1.630	1.945	.0318	.1084	-.0039	1.942

Zoom In Zoom Out

Sample Name: mp14776-b1 Acquired: 5/3/2019 16:11:06 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**146840.**	**27894.**	**6351.8**	**9303.1**
Stddev	1036.	271.	24.3	20.1
%RSD	.70580	.97053	.38289	.21564
#1	147060.	27941.	6378.4	9323.3
#2	145710.	28137.	6330.6	9283.2
#3	147740.	27602.	6346.4	9302.6

Zoom In Zoom Out

Sample Name: jc87428-2 Acquired: 5/3/2019 16:16:07 Type: Unk
Method: SGS 3 NO Valve(v337) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: due

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4767**	**.0047**	**.0002**	**.0537**	**.1213**	**.0884**	**2.164**	**.2511**
Stddev	.0008	.0000	.0001	.0019	.0141	.0072	.241	.0006
%RSD	.1582	.7344	51.71	3.516	11.63	8.163	11.14	.2445
#1	.4767	.0047	.0002	.0528	.1137	.0928	2.032	.2508
#2	.4774	.0047	.0001	.0524	.1126	.0924	2.018	.2508
#3	.4759	.0047	.0003	.0559	.1376	.0801	2.443	.2518

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0140**	**.1702**	**.3350**	**.0409**	**-.0017**	**.0817**	F **-.0104**	**.0008**
Stddev	.0234	.0182	.0005	.0014	.0051	.0073	.0194	.0026
%RSD	167.5	10.67	.1482	3.340	305.1	8.952	186.4	340.5
#1	-.0005	.1596	.3354	.0415	.0014	.0863	.0006	.0009
#2	-.0005	.1599	.3345	.0419	.0011	.0855	.0010	-.0019
#3	-.0410	.1912	.3351	.0393	-.0075	.0732	-.0328	.0033

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**115.6**	**14.88**	**125.3**	**21.05**	**5.364**	**.9451**	**.0454**	**.0024**
Stddev	.1	.02	.9	.05	.061	.0127	.0005	.0012
%RSD	.1168	.1641	.6828	.2242	1.130	1.340	1.048	50.48
#1	115.6	14.89	125.8	21.10	5.379	.9565	.0449	.0030
#2	115.7	14.89	125.8	21.06	5.416	.9315	.0458	.0033
#3	115.4	14.85	124.3	21.00	5.298	.9472	.0456	.0010

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.125**	**.0152**	**.1007**	**1.016**	**.0036**	**.0186**	**3.101**	**.0165**
Stddev	.036	.0009	.0002	.119	.0015	.0040	.009	.0263
%RSD	1.149	5.859	.1574	11.70	40.35	21.78	.2980	159.6
#1	3.128	.0160	.1007	.9470	.0026	.0211	3.110	.0304
#2	3.088	.0153	.1006	.9485	.0029	.0207	3.092	.0329
#3	3.160	.0143	.1009	1.154	.0053	.0139	3.102	-.0138

Zoom In Zoom Out

Sample Name: jc87428-2 Acquired: 5/3/2019 16:16:07 Type: Unk
Method: SGS 3 NO Valve(v337) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: due

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.1167**	**3.566**
Stddev	.0072	.030
%RSD	6.209	.8290
#1	.1125	3.593
#2	.1124	3.571
#3	.1250	3.535

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	*****	**29921.**	**6890.9**	**9407.9**
Stddev	-----	196.	12.7	11.2
%RSD	-----	.65446	.18481	.11886
#1	155260.	29950.	6884.1	9404.8
#2	155500.	29713.	6883.1	9398.5
#3	-----	30101.	6905.6	9420.3

Zoom In Zoom Out

Sample Name: mp14772-b1 Acquired: 5/3/2019 16:21:24 Type: Unk
Method: SGS 3 NO Valve(v337) 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**	**2.020**	**1.985**	**2.016**	**1.989**	**2.022**	**2.036**	**2.037**	**.2462**
Stddev	.006	.007	.004	.002	.001	.002	.023	.001	.0002
%RSD	.3039	.3569	.1829	.0854	.0643	.1106	1.110	.0698	.0864
#1	1.987	2.017	1.989	2.018	1.988	2.020	2.053	2.038	.2463
#2	1.997	2.029	1.984	2.015	1.991	2.024	2.010	2.036	.2462
#3	1.987	2.016	1.982	2.014	1.990	2.021	2.044	2.038	.2459

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.946**	**1.984**	**1.964**	**2.119**	**2.024**	**1.986**	**1.963**	**24.95**	**25.75**
Stddev	.003	.002	.002	.011	.001	.004	.003	.11	.10
%RSD	.1262	.0863	.1194	.5095	.0327	.1984	.1515	.4471	.3988
#1	1.943	1.986	1.964	2.112	2.025	1.989	1.967	24.88	25.70
#2	1.946	1.983	1.966	2.132	2.024	1.988	1.962	25.08	25.87
#3	1.948	1.983	1.962	2.114	2.024	1.981	1.961	24.90	25.68

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.66**	**25.13**	**24.95**	**25.58**	**1.982**	**1.989**	**-.0406**	**1.992**	**2.071**
Stddev	.08	.07	.06	.07	.004	.001	.0009	.004	.004
%RSD	.3274	.2952	.2339	.2754	.2289	.0327	2.326	.1798	.2001
#1	25.64	25.10	24.90	25.59	1.987	1.989	-.0417	1.993	2.071
#2	25.76	25.21	25.01	25.64	1.979	1.989	-.0399	1.994	2.075
#3	25.60	25.07	24.95	25.50	1.980	1.988	-.0403	1.988	2.067

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.988**	**1.330**	**1.955**	**.0196**	**.1014**	**-.0023**	**1.976**
Stddev	.002	.001	.002	.0014	.0019	.0005	.016
%RSD	.1069	.0765	.1182	6.942	1.832	21.22	.8271
#1	1.986	1.330	1.952	.0199	.1007	-.0020	1.973
#2	1.989	1.329	1.957	.0207	.0999	-.0029	1.993
#3	1.990	1.331	1.955	.0181	.1035	-.0021	1.961

Zoom In Zoom Out

Sample Name: mp14772-b1 Acquired: 5/3/2019 16:21:24 Type: Unk
Method: SGS 3 NO Valve(v337) 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	**145670.**	**27578.**	**6323.5**	**9268.8**
Stddev	409.	281.	4.9	6.4
%RSD	.28076	1.0177	.07741	.06852
#1	145640.	27747.	6318.7	9263.3
#2	146100.	27254.	6323.3	9267.4
#3	145280.	27734.	6328.5	9275.7

Zoom In Zoom Out

Sample Name: mp14772-mb1 Acquired: 5/3/2019 16:26:24 Type: Unk
Method: SGS 3 NO Valve(v337) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: new

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0000**	**.0001**	**.0000**	**.0008**	**.0012**	**.0002**	**.0010**	**-.0001**
Stddev	.0002	.0000	.0001	.0001	.0003	.0003	.0001	.0002	.0005
%RSD	481.3	152.2	70.64	196.5	39.36	24.42	23.66	23.56	728.1
#1	.0002	-.0000	.0002	.0001	.0012	.0011	.0002	.0007	-.0003
#2	.0001	-.0000	.0001	.0000	.0008	.0010	.0003	.0011	-.0003
#3	-.0002	-.0001	.0001	-.0000	.0005	.0015	.0002	.0011	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0021**	**.0001**	**.0012**	**.0002**	**.0007**	**.0011**	**.0017**	**.0381**
Stddev	.0003	.0001	.0009	.0008	.0002	.0003	.0008	.0089	.0009
%RSD	422.0	4.982	1705.	65.11	143.4	38.33	70.09	524.4	2.245
#1	-.0003	.0020	.0011	.0020	-.0001	.0004	.0008	-.0083	.0371
#2	-.0001	.0022	-.0003	.0011	.0002	.0007	.0005	.0048	.0385
#3	.0002	.0021	-.0006	.0005	.0003	.0009	.0019	.0086	.0386

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0175**	**.0083**	**.1128**	**.1073**	**.0036**	**.0004**	**.0066**	**.0195**	**.0004**
Stddev	.0006	.0078	.0226	.0027	.0003	.0003	.0002	.0005	.0001
%RSD	3.228	95.06	20.04	2.542	9.462	59.42	3.513	2.527	17.63
#1	.0169	.0084	.1243	.1058	.0034	.0007	.0067	.0194	.0004
#2	.0177	.0160	.0868	.1057	.0033	.0002	.0063	.0200	.0005
#3	.0179	.0003	.1274	.1104	.0040	.0004	.0067	.0190	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0059**	**.0007**	**.0037**	**.0011**	**-.0030**	**.0303**
Stddev	.0002	.0006	.0002	.0006	.0004	.0004	.0022
%RSD	25.78	9.375	33.52	15.75	35.18	12.72	7.319
#1	.0006	.0061	.0008	.0043	.0016	-.0034	.0324
#2	.0009	.0063	.0009	.0035	.0009	-.0028	.0304
#3	.0010	.0053	.0004	.0032	.0009	-.0027	.0280

Zoom In Zoom Out

Sample Name: mp14772-mb1 Acquired: 5/3/2019 16:26:24 Type: Unk
Method: SGS 3 NO Valve(v337) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: new

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	153180.	28199.	6504.9	10027.
Stddev	429.	138.	65.3	77.
%RSD	.27991	.49066	1.0046	.76764
#1	153520.	28068.	6549.6	10076.
#2	153320.	28185.	6429.9	9938.0
#3	152700.	28343.	6535.2	10066.

Zoom In Zoom Out

Sample Name: icsa Acquired: 5/3/2019 16:31:30 Type: QC
Method: SGS 3 NO Valve(v337) 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	.0007	.0000	-.0001	.0014	-.0001	-.0036	.0016	-.0002	.0005
Stddev	.0003	.0000	.0002	.0001	.0002	.0006	.0002	.0004	.0009
%RSD	39.86	300.0	333.3	5.904	181.5	17.37	12.78	242.3	185.5
#1	.0005	-.0000	.0002	.0014	-.0001	-.0042	.0014	-.0003	-.0004
#2	.0005	.0000	-.0002	.0013	.0001	-.0036	.0017	.0003	.0004
#3	.0010	.0000	-.0002	.0013	-.0003	-.0030	.0018	-.0005	.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	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	-.0020	-.0004	-.0020	.0023	-.0040	.0004	508.5	385.7
Stddev	.0003	.0004	.0014	.0014	.0010	.0005	.0013	5.3	5.7
%RSD	16.18	18.30	332.0	68.44	42.36	11.73	316.1	1.043	1.467
#1	-.0022	-.0016	.0012	-.0028	.0014	-.0036	-.0010	508.4	388.0
#2	-.0018	-.0023	-.0014	-.0027	.0034	-.0046	.0017	513.9	389.9
#3	-.0025	-.0020	-.0010	-.0004	.0022	-.0039	.0006	503.3	379.3
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	192.4	496.2	.4284	.1910	.0004	.0007	.0021	-.0044	-.0002
Stddev	1.9	.3	.0199	.0146	.0008	.0003	.0017	.0004	.0001
%RSD	.9963	.0522	4.637	7.655	219.4	45.39	79.45	8.942	80.84
#1	190.3	496.2	.4440	.1743	.0014	.0010	.0033	-.0042	-.0002
#2	193.0	496.0	.4060	.2014	-.0001	.0009	.0002	-.0042	-.0003
#3	194.0	496.5	.4352	.1973	-.0001	.0004	.0028	-.0049	-.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: icsa Acquired: 5/3/2019 16:31:30 Type: QC
Method: SGS 3 NO Valve(v337) 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	.0035	.0007	.0001	-.0029	-.0059	.0307
Stddev	.0005	.0007	.0002	.0024	.0020	.0022	.0021
%RSD	42.79	19.91	21.85	3960.	68.74	37.80	6.803
#1	-.0011	.0033	.0007	-.0005	-.0015	-.0039	.0312
#2	-.0006	.0043	.0006	-.0020	-.0020	-.0055	.0285
#3	-.0015	.0029	.0009	.0027	-.0052	-.0083	.0326
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	131170.	26501.	5825.4	8276.5
Stddev	722.	198.	6.3	5.3
%RSD	.55017	.74568	.10882	.06402
#1	130790.	26724.	5830.6	8280.8
#2	130720.	26348.	5818.3	8270.6
#3	132010.	26431.	5827.2	8278.0

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 5/3/2019 16:36:53 Type: QC
Method: SGS 3 NO Valve(v337) 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	.5112	.4978	1.012	.4931	.4893	.5051	.5178	.9852	1.068
Stddev	.0001	.0011	.001	.0009	.0001	.0006	.0011	.0024	.001
%RSD	.0142	.2176	.1426	.1858	.0295	.1121	.2107	.2485	.1233
#1	.5112	.4970	1.013	.4933	.4892	.5055	.5170	.9874	1.069
#2	.5113	.4973	1.012	.4939	.4895	.5054	.5173	.9856	1.069
#3	.5112	.4990	1.010	.4921	.4893	.5045	.5190	.9825	1.067
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	.4929	.9445	1.056	.9812	.9631	1.054	1.055	499.3	381.6
Stddev	.0005	.0005	.001	.0039	.0040	.003	.003	10.9	1.6
%RSD	.1096	.0491	.1271	.3974	.4103	.2834	.2459	2.189	.4258
#1	.4934	.9448	1.055	.9839	.9676	1.054	1.057	508.7	383.2
#2	.4923	.9448	1.058	.9830	.9602	1.058	1.057	487.3	380.0
#3	.4929	.9440	1.056	.9768	.9616	1.052	1.052	501.9	381.7
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	197.4	501.8	.3689	.1842	.4918	.4791	.5063	.4535	.5329
Stddev	3.6	.2	.0284	.0024	.0013	.0014	.0029	.0006	.0003
%RSD	1.826	.0362	7.711	1.305	.2643	.2970	.5783	.1245	.0507
#1	193.4	501.7	.3637	.1870	.4928	.4794	.5095	.4535	.5327
#2	198.7	502.0	.3996	.1829	.4923	.4803	.5055	.4540	.5328
#3	200.3	501.7	.3434	.1828	.4904	.4775	.5039	.4529	.5332
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: 5/3/2019 16:36:53 Type: QC
Method: SGS 3 NO Valve(v337) 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	.4959	.4706	.4807	.5033	.5138	.5104	.5425
Stddev	.0013	.0030	.0001	.0054	.0021	.0012	.0050
%RSD	.2677	.6447	.0303	1.075	.4150	.2392	.9128
#1	.4974	.4691	.4806	.5072	.5153	.5114	.5481
#2	.4948	.4685	.4808	.5055	.5148	.5090	.5405
#3	.4955	.4741	.4808	.4971	.5114	.5106	.5388
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	132580.	26671.	5780.8	8268.0
Stddev	707.	92.	8.5	6.8
%RSD	.53313	.34501	.14646	.08210
#1	132710.	26637.	5789.3	8272.1
#2	133210.	26601.	5772.4	8260.2
#3	131820.	26775.	5780.6	8271.8

Zoom In Zoom Out

Sample Name: jc87389-1 Acquired: 5/3/2019 16:42:10 Type: Unk
Method: SGS 3 NO Valve(v337) 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	.3334	.0038	.0005	.0469	.1949	.1594	1.400	.1508	-.0002
Stddev	.0027	.0001	.0002	.0001	.0004	.0011	.001	.0003	.0006
%RSD	.7998	2.284	30.19	.2341	.1902	.6804	.1035	.2291	297.7
#1	.3349	.0038	.0006	.0468	.1953	.1596	1.401	.1506	.0004
#2	.3304	.0037	.0003	.0469	.1945	.1583	1.399	.1507	-.0008
#3	.3351	.0038	.0006	.0470	.1949	.1604	1.401	.1512	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1578	.3407	.0294	.0010	.3257	-.0007	.0004	66.93	38.42
Stddev	.0001	.0013	.0004	.0018	.0007	.0018	.0004	.54	.30
%RSD	.0407	.3943	1.420	178.8	.2029	256.3	111.7	.7995	.7846
#1	.1577	.3398	.0296	-.0008	.3251	.0004	.0003	67.23	38.60
#2	.1579	.3400	.0290	.0028	.3255	-.0028	.0000	66.31	38.08
#3	.1578	.3422	.0298	.0010	.3264	.0002	.0009	67.25	38.60

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	126.2	21.05	8.107	6.395	.0386	.0053	2.104	.0244	.2062
Stddev	2.0	.15	.073	.040	.0004	.0001	.035	.0004	.0016
%RSD	1.598	.7111	.9015	.6207	1.111	1.663	1.661	1.590	.7545
#1	127.8	21.15	8.183	6.428	.0386	.0054	2.129	.0239	.2067
#2	123.9	20.88	8.037	6.351	.0382	.0053	2.119	.0245	.2044
#3	126.9	21.13	8.103	6.406	.0391	.0052	2.064	.0246	.2074

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.496	.0020	.0468	1.132	.0924	.0686	3.119
Stddev	.006	.0013	.0003	.008	.0029	.0009	.035
%RSD	.2381	64.51	.7025	.6765	3.130	1.372	1.112
#1	2.501	.0031	.0471	1.127	.0895	.0685	3.094
#2	2.490	.0024	.0465	1.129	.0924	.0677	3.104
#3	2.498	.0006	.0469	1.141	.0953	.0696	3.159

Zoom In Zoom Out

Sample Name: jc87389-1 Acquired: 5/3/2019 16:42:10 Type: Unk
Method: SGS 3 NO Valve(v337) 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	154720.	29501.	6723.7	9350.9
Stddev	429.	195.	26.2	28.5
%RSD	.27714	.66218	.38961	.30530
#1	154380.	29288.	6737.3	9362.6
#2	154570.	29671.	6740.2	9371.8
#3	155200.	29544.	6693.5	9318.4

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/3/2019 16:47:19 Type: QC
Method: SGS 3 NO Valve(v337) 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	1.992	2.015	1.995	2.023	1.993	1.993	2.016	2.042	.2457
Stddev	.001	.002	.008	.004	.014	.011	.037	.006	.0012
%RSD	.0613	.1152	.3849	.2171	.6791	.5742	1.830	.2807	.4980
#1	1.992	2.016	1.987	2.018	1.977	1.981	1.983	2.036	.2443
#2	1.993	2.017	2.003	2.026	1.998	1.993	2.011	2.047	.2464
#3	1.991	2.013	1.994	2.024	2.002	2.004	2.056	2.043	.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	1.971	1.993	1.983	2.075	2.028	2.006	1.990	39.86	40.71
Stddev	.012	.004	.005	.010	.004	.006	.007	.06	.04
%RSD	.5969	.1781	.2715	.4696	.2229	.3029	.3460	.1411	.0860
#1	1.958	1.989	1.977	2.072	2.023	2.000	1.983	39.88	40.69
#2	1.976	1.996	1.988	2.086	2.032	2.012	1.997	39.91	40.75
#3	1.980	1.995	1.984	2.066	2.030	2.007	1.990	39.80	40.68
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	40.64	40.10	39.68	40.38	2.059	2.018	5.256	1.984	2.065
Stddev	.06	.04	.06	.06	.009	.005	.020	.005	.003
%RSD	.1572	.1121	.1435	.1462	.4507	.2442	.3838	.2475	.1537
#1	40.63	40.06	39.62	40.39	2.050	2.014	5.237	1.979	2.066
#2	40.70	40.15	39.68	40.43	2.068	2.024	5.277	1.989	2.067
#3	40.57	40.10	39.73	40.31	2.058	2.018	5.255	1.985	2.061
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: 5/3/2019 16:47:19 Type: QC
Method: SGS 3 NO Valve(v337) 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	**1.992**	**1.965**	**1.979**	**1.938**	**2.048**	**1.930**	**1.811**
Stddev	.010	.002	.012	.008	.009	.002	.017
%RSD	.5025	.1178	.5787	.3904	.4211	.1092	.9228
#1	1.981	1.962	1.967	1.935	2.040	1.933	1.823
#2	1.993	1.966	1.981	1.947	2.057	1.929	1.818
#3	2.001	1.966	1.990	1.933	2.047	1.929	1.792
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	**143770.**	**27568.**	**6200.9**	**9037.4**
Stddev	961.	36.	30.2	46.9
%RSD	.66826	.13226	.48671	.51931
#1	144870.	27587.	6231.7	9080.2
#2	143120.	27590.	6171.3	8987.2
#3	143320.	27526.	6199.8	9044.8

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/3/2019 16:52:22 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**-.0002**	**.0002**	**.0005**	**.0001**	**.0001**	**-.0001**
Stddev	.0001	.0000	.0001	.0001	.0003	.0001	.0000	.0002	.0002
%RSD	91.01	62.53	1494.	80.43	143.1	25.59	18.35	143.0	180.9
#1	.0003	.0000	-.0000	-.0001	-.0001	.0005	.0001	.0002	.0001
#2	.0001	.0000	.0001	-.0003	.0004	.0004	.0001	-.0001	-.0004
#3	.0000	.0001	-.0001	-.0001	.0004	.0007	.0001	.0003	-.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**	**-.0003**	**.0001**	**.0002**	**-.0009**	**.0000**	**.0004**	**-.0112**	**-.0052**
Stddev	.0002	.0001	.0001	.0007	.0004	.0020	.0011	.0061	.0036
%RSD	212.0	23.06	259.1	460.7	39.96	4656.	305.7	54.00	69.97
#1	.0000	-.0002	.0002	.0002	-.0006	.0023	.0005	-.0043	-.0070
#2	-.0003	-.0003	-.0001	.0009	-.0013	-.0012	.0014	-.0136	-.0076
#3	.0000	-.0004	.0001	-.0006	-.0009	-.0011	-.0008	-.0157	-.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0039**	**.1140**	**.0657**	**.0022**	**.0001**	**.0003**	**-.0005**	**.0001**
Stddev	.0006	.0103	.0415	.0055	.0005	.0001	.0002	.0002	.0001
%RSD	41.80	265.6	36.38	8.379	23.90	58.21	63.33	45.57	72.45
#1	.0008	.0151	.0976	.0700	.0020	.0001	.0006	-.0008	.0001
#2	.0017	-.0054	.1611	.0595	.0028	.0002	.0002	-.0003	.0001
#3	.0019	.0020	.0832	.0674	.0019	.0000	.0002	-.0005	.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: 5/3/2019 16:52:22 Type: QC
Method: SGS 3 NO Valve(v337) 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**	**.0003**	**-.0004**	**.0010**	**-.0004**	**.0189**
Stddev	.0001	.0007	.0001	.0019	.0008	.0011	.0031
%RSD	56.11	49.80	18.49	532.1	79.10	281.6	16.14
#1	.0002	.0020	.0003	.0010	.0002	.0008	.0168
#2	.0002	.0014	.0004	.0005	.0019	-.0012	.0176
#3	.0004	.0006	.0003	-.0025	.0010	-.0007	.0224
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	**150760.**	**27667.**	**6496.4**	**10028.**
Stddev	924.	299.	59.2	77.
%RSD	.61319	1.0800	.91200	.77206
#1	149750.	27541.	6464.8	9987.6
#2	151570.	27453.	6459.7	9980.1
#3	150950.	28008.	6564.8	10118.

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}	☒	1	Zr	0.001245	0.000000	No
Be 313.042 {108}	☒	6	V	0.001276	0.000000	No
			Mo	-0.000047	0.000000	No
			Ti	-0.000331	0.000000	No
			Mn	0.000010	0.000000	No
			Cu	0.000014	0.000000	No
			Bi	0.000060	0.000000	No
Cd 228.802 {448}	☒	11	As	0.010200	0.000000	No
			Ni	-0.000628	0.000000	No
			Fe	-0.000003	0.000000	No
			V	0.000091	0.000000	No
			Ba	0.000064	0.000000	No
			Co	-0.001130	0.000000	No
			Sr	-0.000020	0.000000	No
			Mn	0.000050	0.000000	No
			Cu	-0.000026	0.000000	No
			Zn	-0.000018	0.000000	No
			W	-0.000482	0.000000	No
Co 228.616 {448}	☒	7	Fe	0.000009	0.000000	No
			Mo	-0.000790	0.000000	No
			Ni	0.000091	0.000000	No
			Ti	0.002192	0.000000	No
			Ba	0.000140	0.000000	No
			W	0.000327	0.000000	No
			Cd	-0.000510	0.000000	No
Cr 267.716 {126}	☒	9	Mn	0.000348	0.000000	No
			V	0.000090	0.000000	No
			Mo	-0.000082	0.000000	No
			Fe	-0.000005	0.000000	No
			Ti	0.000060	0.000000	No
			Ba	0.000045	0.000000	No
			Cu	0.000100	0.000000	No
			Sr	-0.000100	0.000000	No
			W	0.000404	0.000000	No
Cu 324.754 {104}2	☒	13	Cr	-0.000004	0.000000	No
			V	-0.000397	0.000000	No
			Mo	0.000544	0.000000	No
			Ti	-0.000208	0.000000	No
			Fe	-0.000226	0.000000	No
			Zn	-0.000041	0.000000	No
			Co	-0.001373	0.000000	No
			Si	0.000016	0.000000	No
			Mn	0.000003	0.000000	No
			Se	0.000050	0.000000	No
			Sb	0.000069	0.000000	No
			W	0.000000	0.000000	No
			Al	0.000004	0.000000	No
Mn 257.610 {131}	☒	4	Fe	-0.000107	0.000000	No
			Si	0.000010	0.000000	No
			Ba	0.000004	0.000000	No
			Ni	0.000028	0.000000	No
Ni 231.604 {446}	☒	8	Fe	0.000008	0.000000	No
			Zn	-0.000013	0.000000	No
			Be	0.000213	0.000000	No
			Co	-0.000220	0.000000	No
			Tl	0.000209	0.000000	No
			Mo	0.000026	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cu	0.000050	0.000000	No
			Se	0.000100	0.000000	No
Ag 328.068 {103}	☒	14	Mn	0.000252	0.000000	No
			Mo	0.000012	-0.000003	No
			Ti	-0.000090	0.000000	No
			Fe	-0.000255	0.000000	No
			Zn	-0.000120	0.000000	No
			Ca	-0.000001	0.000000	No
			Zr	0.007615	0.000000	No
			Sr	-0.000020	0.000000	No
			Mg	0.000000	0.000000	No
			Ba	0.000071	0.000000	No
			Cr	0.000022	0.000000	No
			V	-0.003500	0.000000	No
			Al	-0.000006	0.000000	No
			W	0.000000	0.000000	No
V 292.402 {115}	☒	6	Ti	0.000689	0.000000	No
			Mo	-0.000304	0.000000	No
			Fe	0.000029	0.000000	No
			Sr	-0.000100	0.000000	No
			Cr	-0.007536	0.000000	No
			Mn	-0.002777	0.000000	No
Zn 206.200 {464}	☒	9	Cr	-0.000850	0.000000	No
			Fe	0.000011	0.000000	No
			Si	0.000015	0.000000	No
			Mn	-0.000045	0.000000	No
			Ba	-0.000060	0.000000	No
			Sn	-0.000023	0.000000	No
			Cu	0.000148	0.000000	No
			As	0.000055	0.000000	No
			Be	0.000058	0.000000	No
As 189.042 {478}	☒	18	Al	0.000008	0.000000	No
			Fe	-0.000037	0.000000	No
			Ca	0.000001	0.000000	No
			Mo	0.002250	0.000000	No
			Cr	0.000100	0.000000	No
			Ba	-0.000114	0.000000	No
			Sn	-0.000130	0.000000	No
			Cd	-0.000328	0.000000	No
			Si	0.000024	0.000000	No
			Zn	-0.000082	0.000000	No
			Sr	-0.000045	0.000000	No
			W	0.010000	0.000000	No
			Cu	-0.000058	0.000000	No
			Co	-0.000045	0.000000	No
			Zr	0.000036	0.000000	No
			Mn	0.000022	0.000000	No
			S	0.000010	0.000000	No
			Ti	0.000100	0.000000	No
Tl 190.856 {477}	☒	24	Cr	0.000315	0.000000	No
			Mo	-0.009500	0.000000	No
			Al	-0.000003	0.000000	No
			Fe	-0.000032	0.000000	No
			V	-0.028288	0.000000	No
			Mn	0.001890	0.000000	No
			Si	-0.000018	0.000000	No
			Ca	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ti	-0.002790	0.000000	No
			Mg	0.000000	0.000000	No
			Co	0.004280	0.000000	No
			Sr	0.000010	0.000000	No
			B	-0.000003	0.000000	No
			Ba	0.000034	0.000000	No
			Zn	-0.000053	0.000000	No
			As	0.000068	0.000000	No
			W	-0.007000	0.000000	No
			Cu	0.000142	0.000000	No
			Pb	-0.000020	0.000000	No
			S	0.000010	0.000000	No
			Sn	-0.000086	0.000000	No
			Li	0.000000	0.000000	No
			K	0.000000	0.000000	No
			Zr	0.000000	0.000000	No
Pb 220.353 {453}	☒	20	Al	-0.000143	0.000000	No
			Fe	0.000039	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	0.000154	0.000000	No
			Mo	-0.001500	0.000000	No
			Cu	0.000154	0.000000	No
			Co	0.000264	0.000000	No
			Ti	-0.000900	0.000000	No
			Si	-0.000067	0.000000	No
			Ba	-0.000022	0.000000	No
			Sb	-0.000084	0.000000	No
			Sr	-0.000033	0.000000	No
			W	0.000000	0.000000	No
			Mg	0.000004	0.000000	No
			Cd	0.000012	0.000000	No
			Cr	-0.000031	0.000000	No
			Zr	-0.000281	0.000000	No
			Ni	0.000371	0.000000	No
			S	0.000010	0.000000	No
			Zn	-0.000106	0.000000	No
Se 196.090 {472}	☒	23	Al	-0.000002	0.000000	No
			Ca	-0.000007	0.000000	No
			Mn	0.000594	0.000000	No
			Mo	0.000400	0.000000	No
			Fe	-0.000272	0.000000	No
			Co	-0.000182	0.000000	No
			Sr	-0.000011	0.000000	No
			Cu	-0.000087	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000054	0.000000	No
			Be	-0.000347	0.000000	No
			Zn	0.000050	0.000000	No
			B	0.000028	0.000000	No
			Ti	-0.000020	0.000000	No
			Cd	0.000090	0.000000	No
			Zr	-0.000297	0.000000	No
			Ba	-0.000046	0.000000	No
			Mg	-0.000000	0.000000	No
			Pb	-0.000078	0.000000	No
			Ni	-0.000100	0.000000	No
			Cr	-0.000024	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			S	-0.000014	0.000000	No
			V	0.000188	0.000000	No
Sb 206.833 {463}	☒	17	Fe	0.000005	0.000000	No
			Al	0.000015	0.000000	No
			Ca	0.000001	0.000000	No
			Ni	-0.000716	0.000000	No
			Cr	0.022200	0.000000	No
			V	-0.003422	0.000000	No
			Zn	-0.000115	0.000000	No
			Mo	0.000589	0.000000	No
			Ti	0.000630	0.000000	No
			Sn	-0.010725	0.000000	No
			Mg	-0.000003	0.000000	No
			Zr	-0.000463	0.000000	No
			Sr	0.000031	0.000000	No
			B	-0.000100	0.000000	No
			Co	-0.000251	0.000000	No
			W	0.000000	0.000000	No
			Si	-0.000170	0.000000	No
Al 396.152 { 85}	☒	5	Si	0.000652	0.000000	No
			Ca	0.000018	0.000000	No
			Mo	0.043916	0.000000	No
			Zr	0.005268	0.000000	No
			Ti	-0.000583	0.000000	No
Ca 317.933 {106}	☒	14	Fe	0.000012	0.000000	No
			W	0.003960	0.000000	No
			Tl	-0.000152	0.000000	No
			Be	0.001840	0.000000	No
			Ba	-0.001224	0.000000	No
			Cu	-0.000822	0.000000	No
			Cd	-0.007593	0.000000	No
			Ni	0.000667	0.000000	No
			B	-0.000210	0.000000	No
			Se	0.000923	0.000000	No
			Co	-0.000408	0.000000	No
			Cr	0.000640	0.000000	No
			Al	-0.000000	0.000000	No
			As	0.010000	0.000000	No
Fe 259.940 {130}	☒	10	Si	0.000819	0.000000	No
			Tl	-0.000051	0.000000	No
			Cr	0.000310	0.000000	No
			Mn	-0.000196	0.000000	No
			V	-0.000064	0.000000	No
			Cu	-0.000015	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}	☒	3	Mo	-0.013702	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.007074	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Sn	-0.004700	0.000000	No
			Ba	-0.010574	0.000000	No
			Mo	-0.000850	0.000000	No
			Cu	-0.011483	0.000000	No
			Ni	-0.010000	0.000000	No
Na 589.592 { 57}	☒	4	K	-0.000560	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000180	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	☒	1	Mo	0.038137	0.000000	No
Mo 202.030 {467}	☒	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	☒	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.034932	0.000000	No
			V	0.036950	0.000000	No
			Ti	0.004593	0.000000	No
			Al	-0.000010	0.000000	No
			Cd	0.001043	0.000000	No
			Ba	0.001987	0.000000	No
			Sn	0.007500	0.000000	No
			Zn	0.000385	0.000000	No
			Be	-0.000048	0.000000	No
			W	0.000000	0.000000	No
Sn 189.989 {478}	☒	4	Ti	-0.001964	0.000000	No
			Fe	0.000004	0.000000	No
			Si	0.000131	0.000000	No
			Zr	0.000908	0.000000	No
Sr 407.771 { 83}	☒	2	Ca	0.000018	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	☒	3	Cr	0.000189	0.000000	No
			Mo	0.001351	0.000000	No
			Si	0.000035	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}	☒	20	Si	0.000105	0.000000	No
			As	0.000100	0.000000	No
			Mn	0.000066	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	0.013026	0.000000	No
			Sn	0.001300	0.000000	No
			Zr	0.000061	0.000000	No
			B	0.000009	0.000000	No
			Sb	-0.000300	0.000000	No
			Co	-0.001000	0.000000	No
			Ni	-0.003000	0.000000	No
			Be	-0.000185	0.000000	No
			Se	-0.000105	0.000000	No
			Cu	-0.000138	0.000000	No
			Tl	-0.000220	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Zr 339.198 { 99}	☒	6	Mo	0.001069	0.000000	No
			Ti	0.000203	0.000000	No
			Fe	-0.000070	0.000000	No
			Si	0.000074	0.000000	No
			S	-0.000002	0.000000	No
			Cr	-0.000700	0.000000	No
S 182.034 {485}	☒	7	Mo	-0.004201	0.000000	No
			Al	-0.000034	0.000000	No
			Fe	0.000002	0.000000	No
			Mn	0.004620	0.000000	No
			W	-0.032564	0.000000	No
			Ca	0.000032	0.000000	No
			Mg	0.000005	0.000000	No
Bi 223.061 {451}	☒	9	Ti	-0.072020	0.000000	No
			V	-0.000704	0.000000	No
			Co	-0.002380	0.000000	No
			Ca	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Fe	0.000187	0.000000	No
			Cr	0.001595	0.000000	No
			Cu	-0.001148	0.000000	No
			W	-0.020000	0.000000	No
Li 670.784 { 50}	☒	2	Ca	0.000023	0.000000	No
			Fe	0.000081	0.000000	No
P 177.495 {490}	☒	9	Mn	-0.006184	0.000000	No
			Al	-0.000060	0.000000	No
			V	-0.001953	0.000000	No
			Si	-0.001622	0.000000	No
			Ti	0.000000	-0.001185	No
			Mo	-0.001880	0.000000	No
			S	-0.000189	0.000000	No
			Co	-0.002198	0.000000	No
			Cu	-0.023500	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}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.012547	1.913584	0.000000	1.000000
Be 313.042 {108}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000721	2.901440	0.000000	1.000000
Cd 228.802 {448}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000443	1.147886	0.000000	1.000000
Co 228.616 {448}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000017	0.737075	0.000000	1.000000
Cr 267.716 {126}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000089	0.162386	0.000000	1.000000
Cu 324.754 {104}2	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.002508	0.263279	0.000000	1.000000
Mn 257.610 {131}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000056	0.877777	0.000000	1.000000
Ni 231.604 {446}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000090	0.598180	0.000000	1.000000
Ag 328.068 {103}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000277	0.159321	0.000000	1.000000
V 292.402 {115}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000361	0.228860	0.000000	1.000000
Zn 206.200 {464}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000044	1.710053	0.000000	1.000000
As 189.042 {478}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000082	0.122521	0.000000	1.000000
Tl 190.856 {477}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000221	0.080375	0.000000	1.000000
Pb 220.353 {453}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000482	0.268440	0.000000	1.000000
Se 196.090 {472}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000047	0.092931	0.000000	1.000000
Sb 206.833 {463}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000560	0.161453	0.000000	1.000000
Al 396.152 { 85}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000521	0.043853	0.000000	1.000000
Ca 317.933 {106}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.008489	0.102955	0.000000	1.000000
Fe 259.940 {130}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	0.000086	0.063009	0.000000	1.000000
Mg 279.079 {121}	5/6/2019 8:38:12	5/3/2019 11:34:40	Linear	None	-0.000009	0.011407	0.000000	1.000000
K 766.490 { 44}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.001440	0.022080	0.000000	1.000000
Na 589.592 { 57}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	-0.014223	0.081285	0.000000	1.000000
B 208.959 {462}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.000680	0.237241	0.000000	1.000000
Mo 202.030 {467}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	-0.000476	0.768256	0.000000	1.000000
Si 212.412 {459}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.003105	0.211849	0.000000	1.000000
Sn 189.989 {478}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.000483	0.238349	0.000000	1.000000
Sr 407.771 { 83}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	-0.001561	3.371524	0.000000	1.000000
Ti 334.904 {101}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.000056	0.182370	0.000000	1.000000
Y 360.073 { 94}*	5/6/2019 8:38:12	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	5/6/2019 8:38:12	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	5/6/2019 8:38:12	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	5/6/2019 8:38:12	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.000530	0.393722	0.000000	1.000000
Zr 339.198 { 99}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	-0.000492	0.525492	0.000000	1.000000
S 182.034 {485}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	0.000037	0.052056	0.000000	1.000000
Bi 223.061 {451}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	-0.000054	0.186077	0.000000	1.000000
Li 670.784 { 50}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	None	-0.003043	0.483801	0.000000	1.000000
P 177.495 {490}	5/6/2019 8:38:12	5/3/2019 11:34:41	Linear	1/Conc	-0.005406	0.038994	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	0.000256	0.000854	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000063	0.000212	OK.	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000195	0.000651	OK.	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000233	0.000776	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000304	0.001013	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000428	0.001425	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000050	0.000167	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000329	0.001095	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000463	0.001542	OK.	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000362	0.001208	OK.	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000109	0.000363	OK.	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001132	0.003773	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001313	0.004378	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.001039	0.003465	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.002050	0.006835	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001528	0.005094	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.009310	0.031035	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.002231	0.007437	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.001840	0.006132	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.012875	0.042916	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.032860	0.109532	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.009493	0.031644	OK.	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000719	0.002397	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000277	0.000922	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.001159	0.003864	OK.	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000579	0.001928	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000100	0.000332	OK.	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000359	0.001196	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	0.001076	0.003587	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000177	0.000589	OK.	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.002478	0.008262	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001782	0.005940	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.001618	0.005394	OK.	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.002932	0.009773	OK.	1.000000	0.000000	1	0

Zoom In ▶
Zoom Out

Sample Name: STDA Acquired: 5/6/2019 16:41:56 Type: Cal
Method: SGS 3(v354) 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	**.0032**	**-.0003**	**.0002**	**-.0004**	**-.0000**	**.0021**	**.0000**	**-.0001**	**-.0004**
Stddev	.0006	.0002	.0001	.0001	.0000	.0000	.0000	.0001	.0000
%RSD	19.85	52.04	43.26	16.88	48.25	2.283	46.36	56.84	8.278
#1	.0032	-.0003	.0001	-.0004	-.0000	.0021	.0000	-.0002	-.0004
#2	.0025	-.0004	.0002	-.0003	-.0000	.0021	.0000	-.0000	-.0003
#3	.0038	-.0001	.0001	-.0004	-.0000	.0020	.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**	**.0003**	**-.0002**	**-.0001**	**-.0003**	**.0002**	**-.0002**	**-.0014**	**.0046**
Stddev	.0000	.0002	.0001	.0000	.0001	.0001	.0001	.0006	.0002
%RSD	116.1	61.38	73.89	31.58	22.12	30.81	38.34	46.05	4.906
#1	.0000	.0001	-.0002	-.0001	-.0003	.0003	-.0003	-.0007	.0046
#2	.0000	.0004	-.0000	-.0001	-.0002	.0002	-.0003	-.0019	.0044
#3	-.0000	.0002	-.0003	-.0002	-.0003	.0003	-.0001	-.0016	.0048

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**	**.0056**	**.0025**	**.0001**	**.0000**	**.0023**	**.0001**	**.0006**
Stddev	.0001	.0001	.0005	.0011	.0000	.0001	.0001	.0001	.0004
%RSD	89.83	144.7	9.405	42.63	45.11	370.5	5.386	110.5	70.73
#1	.0002	-.0001	.0050	.0026	.0001	-.0001	.0024	.0001	.0001
#2	.0001	.0000	.0061	.0036	.0002	.0000	.0023	-.0000	.0009
#3	-.0000	-.0000	.0057	.0014	.0001	.0001	.0022	.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	**-.0000**	**.0006**	**-.0001**	**-.0015**	**-.0008**	**-.0001**	**-.0080**
Stddev	.0000	.0001	.0000	.0000	.0002	.0007	.0000
%RSD	44.10	14.79	24.91	2.573	25.75	885.7	.2533
#1	-.0000	.0006	-.0001	-.0015	-.0006	-.0005	-.0080
#2	-.0000	.0006	-.0001	-.0015	-.0008	.0007	-.0080
#3	-.0000	.0007	-.0001	-.0015	-.0010	-.0004	-.0080

◀ Zoom In ▶
Zoom Out

Sample Name: STDA Acquired: 5/6/2019 16:41:56 Type: Cal
Method: SGS 3(v354) 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	**137250.**	**4958.1**	**4797.0**	**11578.**
Stddev	247.	27.3	2.5	9.
%RSD	.17982	.55088	.05188	.07753
#1	136960.	4989.3	4794.1	11568.
#2	137400.	4938.3	4798.7	11579.
#3	137390.	4946.7	4798.1	11586.

Zoom In ▶
Zoom Out

Sample Name: STDB Acquired: 5/6/2019 16:47:24 Type: Cal
Method: SGS 3(v354) 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	**6.350**	**4.856**	**3.028**	**1.571**	**.1525**	**.5610**	**.8999**	**1.143**	**.0366**
Stddev	.013	.012	.005	.001	.0004	.0008	.0009	.001	.0000
%RSD	.2014	.2391	.1529	.0801	.2804	.1469	.0964	.0899	.1351
#1	6.352	4.860	3.031	1.569	.1520	.5602	.8995	1.142	.0366
#2	6.362	4.864	3.022	1.572	.1528	.5610	.9009	1.144	.0366
#3	6.337	4.843	3.030	1.571	.1526	.5619	.8993	1.144	.0366

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	**.3040**	**4.091**	**.4121**	**.1944**	**.5477**	**.3300**	**.5994**	**2.250**	**2.883**
Stddev	.0003	.008	.0004	.0002	.0003	.0009	.0004	.005	.005
%RSD	.1132	.1896	.1056	.1081	.0546	.2598	.0694	.2261	.1618
#1	.3037	4.082	.4125	.1942	.5478	.3306	.5997	2.249	2.886
#2	.3044	4.092	.4116	.1943	.5474	.3290	.5990	2.245	2.878
#3	.3039	4.098	.4121	.1946	.5480	.3304	.5997	2.255	2.885

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	**1.034**	**.2078**	**2.413**	**6.851**	**.7312**	**2.958**	**1.958**	**.6712**	**11.60**
Stddev	.002	.0005	.005	.009	.0014	.002	.004	.0006	.03
%RSD	.1610	.2435	.1914	.1301	.1927	.0741	.1877	.0874	.2175
#1	1.034	.2080	2.414	6.856	.7314	2.959	1.961	.6706	11.60
#2	1.035	.2082	2.417	6.855	.7297	2.955	1.953	.6713	11.63
#3	1.032	.2072	2.408	6.840	.7325	2.960	1.958	.6718	11.58

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	**.3803**	**1.489**	**1.003**	**.1808**	**.7199**	**2.439**	**.4200**
Stddev	.0003	.000	.001	.0002	.0021	.003	.0003
%RSD	.0837	.0198	.0908	.1347	.2896	.1185	.0745
#1	.3800	1.489	1.001	.1808	.7220	2.441	.4196
#2	.3807	1.489	1.003	.1811	.7179	2.440	.4202
#3	.3803	1.489	1.003	.1806	.7198	2.436	.4202

◀ Zoom In ▶
Zoom Out

Sample Name: STDB Acquired: 5/6/2019 16:47:24 Type: Cal
Method: SGS 3(v354) 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	**128440.**	**4894.1**	**4514.5**	**9916.5**
Stddev	195.	13.6	8.0	10.9
%RSD	.15175	.27797	.17726	.11039
#1	128610.	4899.0	4516.0	9924.5
#2	128230.	4904.7	4521.7	9920.9
#3	128480.	4878.8	4505.9	9904.0

Zoom In Zoom Out

Sample Name: ccvconf Acquired: 5/6/2019 16:52:30 Type: QC
Method: SGS 3(v354) 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**	**2.042**	**2.015**	**1.997**	**2.022**	**1.966**	**2.038**	**2.021**	**.2460**
Stddev	.003	.005	.003	.002	.005	.003	.004	.001	.0002
%RSD	.1458	.2283	.1643	.0800	.2494	.1642	.1881	.0666	.0695
#1	2.016	2.042	2.018	1.999	2.024	1.963	2.037	2.022	.2461
#2	2.017	2.038	2.012	1.996	2.016	1.968	2.035	2.020	.2461
#3	2.021	2.047	2.015	1.996	2.026	1.968	2.043	2.020	.2458
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	**2.012**	**2.043**	**2.006**	**2.061**	**2.026**	**1.997**	**2.022**	**39.90**	**40.59**
Stddev	.004	.003	.006	.001	.001	.003	.005	.10	.07
%RSD	.1779	.1211	.2776	.0456	.0692	.1715	.2477	.2489	.1760
#1	2.011	2.045	2.008	2.062	2.028	1.996	2.025	39.79	40.65
#2	2.008	2.040	1.999	2.061	2.025	1.994	2.016	39.95	40.51
#3	2.015	2.044	2.009	2.061	2.026	2.001	2.024	39.97	40.60
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**	**40.68**	**39.92**	**40.10**	**2.033**	**2.052**	**5.175**	**2.070**	**2.023**
Stddev	.02	.10	.10	.02	.004	.004	.015	.003	.002
%RSD	.0479	.2486	.2546	.0575	.2046	.1842	.2894	.1420	.1184
#1	40.75	40.79	40.04	40.12	2.035	2.054	5.180	2.073	2.022
#2	40.72	40.59	39.90	40.08	2.028	2.047	5.158	2.068	2.022
#3	40.76	40.68	39.84	40.10	2.035	2.053	5.187	2.068	2.026
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: 5/6/2019 16:52:30 Type: QC
Method: SGS 3(v354) 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**	**2.028**	**2.014**	**1.971**	**2.030**	**2.024**	**1.997**
Stddev	.001	.003	.001	.009	.005	.003	.006
%RSD	.0525	.1527	.0518	.4546	.2505	.1515	.2783
#1	2.023	2.030	2.013	1.979	2.034	2.022	2.003
#2	2.022	2.025	2.015	1.961	2.025	2.024	1.994
#3	2.024	2.031	2.015	1.974	2.032	2.028	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	**131670.**	**4890.0**	**4630.1**	**10338.**
Stddev	389.	12.2	6.5	5.
%RSD	.29541	.24986	.14089	.04446
#1	131820.	4876.2	4627.2	10333.
#2	131970.	4894.7	4637.6	10342.
#3	131230.	4899.3	4625.5	10340.

Zoom In Zoom Out

Sample Name: ccbconf Acquired: 5/6/2019 16:57:33 Type: QC
Method: SGS 3(v354) 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**	**.0000**	**.0001**	**.0002**	**.0002**	**.0004**	**.0000**	**-.0001**	**-.0006**
Stddev	.0003	.0002	.0002	.0001	.0002	.0001	.0000	.0000	.0006
%RSD	69.79	1112.	208.6	78.40	88.10	35.09	664.5	31.26	96.28
#1	.0001	-.0001	.0001	.0003	-.0000	.0005	-.0000	-.0000	-.0005
#2	.0007	-.0000	-.0001	.0001	.0003	.0004	.0000	-.0001	-.0012
#3	.0005	.0002	.0003	.0001	.0004	.0002	-.0000	-.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	**.0000**	**-.0001**	**.0006**	**.0007**	**.0002**	**-.0005**	**.0009**	**-.0007**	**.0020**
Stddev	.0002	.0001	.0006	.0004	.0013	.0009	.0013	.0029	.0038
%RSD	12230.	84.05	104.0	64.53	797.6	188.6	148.4	428.1	191.0
#1	-.0002	-.0000	.0010	.0002	-.0011	-.0013	-.0004	-.0026	.0063
#2	.0002	-.0002	-.0001	.0011	.0001	.0004	.0009	.0027	-.0003
#3	.0000	-.0002	.0008	.0007	.0015	-.0005	.0022	-.0022	-.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	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**-.0371**	**.0750**	**.0224**	**.0033**	**.0001**	**-.0002**	**-.0002**	**-.0001**
Stddev	.0016	.0264	.0223	.0045	.0009	.0000	.0005	.0003	.0001
%RSD	44.29	71.12	29.79	20.29	26.02	34.01	220.2	177.6	114.3
#1	.0026	-.0583	.0507	.0188	.0029	.0001	.0001	-.0004	-.0001
#2	.0056	-.0456	.0797	.0275	.0043	.0000	-.0007	-.0003	-.0002
#3	.0029	-.0075	.0946	.0210	.0027	.0000	-.0000	.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: ccbconf Acquired: 5/6/2019 16:57:33 Type: QC
Method: SGS 3(v354) 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**	**.0007**	**-.0001**	**-.0005**	**-.0007**	F **.0042**	**.0011**
Stddev	.0001	.0008	.0002	.0015	.0002	.0003	.0009
%RSD	51.11	115.6	200.0	316.3	22.90	6.300	83.95
#1	-.0004	.0009	-.0001	-.0001	-.0007	.0045	.0021
#2	-.0001	-.0002	-.0002	-.0021	-.0006	.0042	.0004
#3	-.0002	.0014	.0001	.0008	-.0009	.0039	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.0040	
Low Limit						-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**137430.**	**4924.9**	**4797.5**	**11565.**
Stddev	402.	15.0	.8	9.
%RSD	.29257	.30501	.01678	.07451
#1	137000.	4927.4	4798.4	11574.
#2	137790.	4938.4	4796.9	11563.
#3	137500.	4908.7	4797.1	11558.

Zoom In Zoom Out

Sample Name: icv 7 Acquired: 5/6/2019 17:03:06 Type: QC
Method: SGS 3(v354) 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	**1.983**	**2.006**	**1.988**	**1.994**	**1.965**	**1.922**	**1.988**	**1.975**	F **.2368**
Stddev	.007	.009	.001	.000	.001	.001	.000	.001	.0004
%RSD	.3329	.4578	.0508	.0211	.0585	.0669	.0153	.0623	.1542
#1	1.985	2.006	1.988	1.994	1.964	1.922	1.988	1.973	.2369
#2	1.988	2.015	1.989	1.994	1.966	1.924	1.989	1.975	.2364
#3	1.976	1.997	1.987	1.993	1.964	1.921	1.988	1.975	.2371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value									.2500
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	**1.966**	**1.985**	**1.968**	**2.017**	**1.976**	**1.951**	**1.965**	**39.25**	**39.58**
Stddev	.002	.003	.003	.002	.002	.003	.002	.01	.08
%RSD	.1151	.1489	.1488	.1021	.0844	.1740	.0766	.0250	.1930
#1	1.966	1.985	1.968	2.015	1.977	1.955	1.966	39.24	39.50
#2	1.967	1.988	1.965	2.018	1.974	1.949	1.963	39.25	39.66
#3	1.963	1.982	1.971	2.019	1.976	1.950	1.966	39.25	39.59
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	**40.19**	**40.23**	**39.54**	**39.67**	**2.010**	**1.990**	**5.226**	**2.011**	**1.983**
Stddev	.11	.23	.11	.05	.001	.001	.009	.001	.008
%RSD	.2792	.5629	.2874	.1191	.0551	.0687	.1660	.0225	.4010
#1	40.14	40.30	39.61	39.68	2.011	1.992	5.236	2.011	1.987
#2	40.31	40.42	39.60	39.72	2.010	1.990	5.224	2.011	1.989
#3	40.10	39.98	39.41	39.62	2.009	1.989	5.219	2.010	1.974
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 7 Acquired: 5/6/2019 17:03:06 Type: QC
Method: SGS 3(v354) 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	**1.974**	**1.954**	**1.952**	**1.968**	**1.972**	**1.995**	**2.008**
Stddev	.002	.002	.001	.003	.003	.003	.008
%RSD	.0888	.0781	.0544	.1694	.1509	.1269	.3825
#1	1.974	1.955	1.954	1.972	1.973	1.995	2.005
#2	1.976	1.955	1.952	1.966	1.975	1.998	2.017
#3	1.973	1.952	1.952	1.967	1.969	1.993	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	**132440.**	**4919.3**	**4650.2**	**10379.**
Stddev	29.	5.3	5.0	3.
%RSD	.02227	.10698	.10689	.02750
#1	132470.	4914.3	4648.5	10381.
#2	132420.	4918.7	4646.3	10376.
#3	132420.	4924.8	4655.8	10381.

Zoom In Zoom Out

Sample Name: icb Acquired: 5/6/2019 17:08:10 Type: QC
Method: SGS 3(v354) 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**	**.0002**	**.0002**	**.0001**	**-.0000**	**.0000**	**.0000**	**-.0005**
Stddev	.0003	.0001	.0000	.0000	.0004	.0002	.0001	.0001	.0003
%RSD	84.39	54.39	14.61	11.34	723.8	550.2	1407.	251.3	59.92
#1	.0007	.0001	.0001	.0002	.0002	.0002	.0001	.0001	-.0003
#2	.0005	.0003	.0002	.0002	.0003	-.0002	.0000	-.0001	-.0009
#3	.0000	.0002	.0002	.0002	-.0004	-.0001	-.0001	.0001	-.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	**.0000**	**.0000**	**.0004**	**.0008**	**-.0002**	**.0007**	**.0011**	**.0082**	**.0083**
Stddev	.0002	.0001	.0016	.0003	.0006	.0018	.0003	.0079	.0019
%RSD	1099.	391.5	421.8	32.74	316.5	260.3	24.29	97.02	23.21
#1	.0000	-.0001	.0019	.0007	-.0003	-.0013	.0008	-.0006	.0068
#2	-.0002	.0001	-.0013	.0006	-.0007	.0012	.0012	.0104	.0104
#3	.0002	.0001	.0006	.0011	.0004	.0021	.0013	.0148	.0076
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	**-.0072**	**-.0159**	**.0723**	**.0278**	**.0029**	**.0002**	**.0001**	**-.0003**	**.0000**
Stddev	.0070	.0347	.1009	.0076	.0002	.0001	.0009	.0007	.0001
%RSD	97.77	218.7	139.4	27.29	7.027	31.87	1046.	215.9	484.2
#1	-.0109	-.0510	.0549	.0207	.0030	.0001	-.0006	.0004	.0001
#2	.0009	.0185	.1808	.0358	.0026	.0002	-.0003	-.0009	-.0001
#3	-.0116	-.0151	-.0187	.0269	.0030	.0002	.0012	-.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: icb Acquired: 5/6/2019 17:08:10 Type: QC
Method: SGS 3(v354) 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**	**.0016**	**-.0000**	**-.0005**	**.0005**	**.0034**	**.0010**
Stddev	.0002	.0004	.0001	.0020	.0002	.0013	.0009
%RSD	124.5	21.80	1093.	380.8	36.35	38.76	88.80
#1	-.0003	.0013	-.0001	.0018	.0005	.0040	.0015
#2	-.0000	.0020	.0001	-.0016	.0003	.0042	.0015
#3	-.0000	.0017	-.0001	-.0018	.0006	.0019	-.0000
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	**137290.**	**4943.4**	**4794.0**	**11564.**
Stddev	385.	37.8	5.2	5.
%RSD	.28027	.76480	.10755	.04402
#1	137620.	4943.1	4788.2	11558.
#2	136870.	4905.8	4797.9	11564.
#3	137370.	4981.4	4796.1	11568.

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/6/2019 17:13:43 Type: QC
Method: SGS 3(v354) 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	**2.013**	**2.047**	**2.012**	**1.995**	**2.020**	**1.958**	**2.035**	**2.017**	**.2451**
Stddev	.007	.009	.003	.001	.004	.002	.001	.001	.0004
%RSD	.3491	.4335	.1658	.0703	.1803	.0787	.0392	.0227	.1598
#1	2.020	2.057	2.016	1.996	2.016	1.956	2.036	2.017	.2451
#2	2.006	2.040	2.010	1.994	2.021	1.960	2.035	2.017	.2446
#3	2.014	2.046	2.012	1.994	2.023	1.958	2.035	2.016	.2454
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	**2.008**	**2.036**	**1.998**	**2.058**	**2.025**	**1.989**	**2.017**	**39.75**	**40.42**
Stddev	.001	.002	.004	.003	.002	.006	.006	.14	.12
%RSD	.0325	.1154	.2011	.1290	.1154	.3190	.2766	.3640	.2902
#1	2.008	2.036	2.002	2.056	2.027	1.995	2.023	39.82	40.47
#2	2.007	2.033	1.995	2.061	2.023	1.991	2.015	39.59	40.29
#3	2.008	2.038	1.996	2.058	2.024	1.982	2.012	39.85	40.51
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	**40.77**	**40.64**	**39.93**	**40.04**	**2.025**	**2.048**	**5.158**	**2.063**	**2.021**
Stddev	.20	.16	.06	.14	.004	.002	.011	.001	.006
%RSD	.4792	.3977	.1588	.3375	.2198	.1122	.2065	.0437	.3201
#1	40.99	40.73	39.96	40.14	2.030	2.051	5.169	2.064	2.028
#2	40.61	40.46	39.86	39.89	2.024	2.046	5.157	2.062	2.016
#3	40.72	40.74	39.97	40.10	2.021	2.048	5.148	2.063	2.019
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: 5/6/2019 17:13:43 Type: QC
Method: SGS 3(v354) 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	**2.015**	**2.025**	**2.009**	**1.963**	**2.024**	**2.025**	**1.990**
Stddev	.002	.005	.001	.005	.004	.005	.005
%RSD	.0887	.2252	.0296	.2624	.1796	.2690	.2724
#1	2.014	2.030	2.009	1.969	2.028	2.029	1.995
#2	2.015	2.022	2.010	1.959	2.022	2.018	1.991
#3	2.017	2.024	2.010	1.961	2.022	2.027	1.984
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	**131960.**	**4900.7**	**4641.2**	**10357.**
Stddev	59.	32.1	3.9	5.
%RSD	.04479	.65415	.08474	.04379
#1	131950.	4889.3	4638.1	10355.
#2	131900.	4936.9	4645.6	10363.
#3	132020.	4875.9	4640.0	10354.

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/6/2019 17:18:46 Type: QC
Method: SGS 3(v354) 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**	**.0000**	**.0002**	**-.0000**	**.0002**	**-.0000**	**.0000**	**-.0007**
Stddev	.0002	.0002	.0002	.0001	.0002	.0003	.0001	.0001	.0002
%RSD	131.7	201.8	1318.	35.62	1012.	178.9	261.5	173.1	22.83
#1	-.0001	.0002	-.0001	.0001	-.0002	.0002	.0000	.0000	-.0008
#2	.0002	-.0001	-.0001	.0003	-.0001	.0004	.0000	.0001	-.0006
#3	.0004	.0001	.0003	.0003	.0002	-.0001	-.0001	-.0000	-.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**	**.0002**	**.0008**	**.0004**	**.0002**	**-.0010**	**.0014**	**.0032**	**.0030**
Stddev	.0004	.0001	.0005	.0005	.0005	.0010	.0012	.0028	.0021
%RSD	379.1	47.19	55.09	133.0	325.0	93.09	84.88	86.85	70.84
#1	-.0003	.0003	.0010	.0010	.0006	-.0018	.0008	.0057	.0014
#2	.0003	.0002	.0012	.0000	.0002	.0000	.0028	.0038	.0054
#3	.0003	.0001	.0003	.0002	-.0004	-.0013	.0007	.0002	.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	**.0031**	**-.0160**	**.0542**	**.0181**	**.0028**	**-.0000**	**-.0004**	**-.0007**	**-.0000**
Stddev	.0054	.0212	.0390	.0048	.0006	.0000	.0004	.0003	.0002
%RSD	175.6	132.6	71.95	26.58	20.32	37.41	90.55	46.17	1012.
#1	-.0024	-.0385	.0354	.0130	.0024	-.0000	-.0006	-.0003	.0002
#2	.0033	-.0131	.0282	.0186	.0026	-.0000	.0000	-.0008	-.0001
#3	.0084	.0036	.0991	.0226	.0034	-.0001	-.0006	-.0009	-.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: 5/6/2019 17:18:46 Type: QC
Method: SGS 3(v354) 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**	**.0000**	**-.0000**	**.0002**	**.0030**	**.0017**
Stddev	.0004	.0006	.0001	.0027	.0003	.0016	.0011
%RSD	127.7	86.24	258.4	10840.	175.3	52.45	63.47
#1	.0001	.0013	.0001	-.0031	.0005	.0047	.0005
#2	-.0005	.0001	.0002	.0009	-.0001	.0027	.0024
#3	-.0005	.0008	-.0001	.0021	.0001	.0016	.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	**138100.**	**4916.3**	**4791.8**	**11541.**
Stddev	460.	34.1	12.0	17.
%RSD	.33329	.69274	.24964	.14830
#1	137840.	4878.1	4778.7	11522.
#2	137830.	4927.7	4802.2	11555.
#3	138630.	4943.3	4794.5	11546.

Zoom In Zoom Out

Sample Name: cri Acquired: 5/6/2019 17:24:19 Type: QC
Method: SGS 3(v354) 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	**.2088**	**.0021**	**.0033**	**.0500**	**.0109**	**.0101**	**.0163**	**.0100**	**.0049**
Stddev	.0007	.0000	.0002	.0001	.0001	.0001	.0001	.0001	.0004
%RSD	.3358	2.387	4.836	.1970	.6880	1.269	.4398	1.249	8.279
#1	.2086	.0021	.0033	.0499	.0109	.0102	.0162	.0101	.0048
#2	.2095	.0020	.0034	.0499	.0108	.0101	.0163	.0100	.0045
#3	.2082	.0021	.0031	.0501	.0108	.0099	.0164	.0099	.0053
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	**.0528**	**.0216**	**.0085**	**.0105**	**.0025**	**.0106**	**.0072**	**.2062**	**5.390**
Stddev	.0005	.0001	.0002	.0009	.0006	.0013	.0017	.0152	.028
%RSD	.9246	.3169	2.925	8.286	23.52	12.21	23.95	7.393	.5193
#1	.0534	.0216	.0085	.0113	.0030	.0091	.0061	.2044	5.359
#2	.0527	.0217	.0088	.0106	.0019	.0111	.0063	.1920	5.412
#3	.0524	.0216	.0083	.0096	.0026	.0115	.0092	.2223	5.399
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	**.1141**	**5.375**	**5.240**	**5.305**	**.1067**	**.0220**	**.2211**	**.0116**	**.0105**
Stddev	.0074	.054	.013	.023	.0001	.0002	.0011	.0004	.0001
%RSD	6.460	1.001	.2442	.4269	.0930	.6910	.4756	3.037	.5365
#1	.1103	5.435	5.255	5.293	.1066	.0219	.2222	.0113	.0105
#2	.1094	5.331	5.233	5.331	.1066	.0222	.2201	.0120	.0104
#3	.1226	5.358	5.233	5.291	.1068	.0220	.2210	.0114	.0105
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: 5/6/2019 17:24:19 Type: QC
Method: SGS 3(v354) 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	**.0098**	**.0533**	**.0098**	**.0524**	**.0225**	**.0594**	**.0528**
Stddev	.0001	.0004	.0001	.0007	.0005	.0015	.0013
%RSD	1.280	.8026	1.254	1.261	2.207	2.492	2.485
#1	.0100	.0534	.0096	.0518	.0222	.0586	.0542
#2	.0097	.0529	.0098	.0531	.0222	.0584	.0516
#3	.0099	.0537	.0099	.0523	.0231	.0611	.0526
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	**134800.**	**4902.2**	**4698.2**	**11150.**
Stddev	337.	20.0	6.0	14.
%RSD	.25020	.40732	.12832	.12426
#1	134410.	4890.2	4704.9	11166.
#2	135040.	4891.2	4693.2	11140.
#3	134930.	4925.3	4696.5	11144.

Zoom In Zoom Out

Sample Name: crid Acquired: 5/6/2019 17:29:47 Type: QC
Method: SGS 3(v354) 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	**.0043**	**.0011**	**.0012**	**.0030**	**.0022**	F **.0006**	**.0032**	**.0041**
Stddev	.0005	.0001	.0002	.0003	.0003	.0003	.0000	.0002
%RSD	10.70	10.11	14.06	9.833	14.29	51.64	.6543	5.089
#1	.0048	.0011	.0011	.0032	.0022	.0003	.0032	.0039
#2	.0041	.0010	.0014	.0032	.0020	.0007	.0032	.0041
#3	.0039	.0012	.0011	.0027	.0026	.0009	.0031	.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 **-.0001**	**.0020**	**.0110**	**.0036**	F **.0016**	F **.0002**	**.0045**	F **-.0000**
Stddev	.0000	.0001	.0001	.0007	.0011	.0003	.0015	.0010
%RSD	50.00	6.189	1.005	19.75	66.66	194.9	33.46	2110.
#1	-.0000	.0021	.0109	.0028	.0023	-.0001	.0061	.0011
#2	-.0001	.0020	.0109	.0038	.0004	.0001	.0031	-.0007
#3	-.0001	.0019	.0111	.0041	.0021	.0005	.0044	-.0006
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	**.1074**	**1.067**	**.0117**	F **.0651**	**2.055**	**1.079**	F **.0010**	**-.0001**
Stddev	.0071	.006	.0050	.0387	.025	.014	.0005	.0001
%RSD	6.655	.5958	42.84	59.38	1.228	1.265	49.15	98.58
#1	.1142	1.074	.0063	.0216	2.026	1.085	.0013	-.0001
#2	.1079	1.065	.0125	.0784	2.073	1.088	.0013	-.0000
#3	.1000	1.061	.0163	.0954	2.067	1.063	.0004	-.0003
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Fail	None
Value				.1000			.0100	
Range				-30.00%			-30.00%	

Zoom In Zoom Out

Sample Name: crid Acquired: 5/6/2019 17:29:47 Type: QC
Method: SGS 3(v354) 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	**.0006**	**-.0004**	**-.0000**	**-.0003**	F **.0003**	F **-.0000**	F **-.0008**	F **.0011**
Stddev	.0008	.0005	.0001	.0001	.0006	.0001	.0008	.0009
%RSD	135.3	120.4	272.0	22.94	218.3	851.6	103.4	79.82
#1	.0004	-.0010	.0000	-.0003	-.0002	.0001	-.0010	.0001
#2	-.0001	-.0000	.0000	-.0003	.0000	-.0001	.0001	.0018
#3	.0014	-.0003	-.0002	-.0002	.0009	-.0001	-.0014	.0012
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	**.0037**	F **.0003**
Stddev	.0012	.0004
%RSD	33.45	123.6
#1	.0023	.0008
#2	.0041	-.0000
#3	.0047	.0003
Check ?	Chk Pass	Chk Fail
Value		.0040
Range		-30.00%

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**137860.**	**4961.3**	**4812.2**	**11548.**
Stddev	124.	30.6	4.2	5.
%RSD	.09016	.61585	.08818	.04279
#1	138000.	4982.6	4816.4	11549.
#2	137760.	4975.1	4807.9	11552.
#3	137830.	4926.3	4812.2	11542.

Zoom In Zoom Out

Sample Name: icsa Acquired: 5/6/2019 17:35:19 Type: QC
Method: SGS 3(v354) 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**	**.0004**	**.0002**	**-.0010**	**.0002**	**.0006**	**.0023**	**-.0000**	**.0009**
Stddev	.0001	.0002	.0003	.0001	.0003	.0002	.0002	.0005	.0004
%RSD	88.98	36.05	128.7	12.31	174.1	36.86	8.096	2289.	43.24
#1	.0000	.0006	.0004	-.0010	.0004	.0007	.0021	-.0006	.0005
#2	-.0002	.0004	.0003	-.0011	-.0002	.0004	.0023	.0001	.0008
#3	-.0002	.0003	-.0001	-.0009	.0003	.0008	.0025	.0005	.0013
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	**.0013**	**.0000**	**.0003**	**-.0001**	**.0020**	**-.0029**	**.0008**	**510.3**	**391.8**
Stddev	.0002	.0002	.0008	.0018	.0013	.0002	.0020	.7	.6
%RSD	16.49	7343.	262.5	1210.	66.93	7.981	236.7	.1354	.1628
#1	.0011	.0002	.0003	.0010	.0013	-.0027	.0002	510.9	392.4
#2	.0015	-.0002	-.0005	-.0022	.0011	-.0032	.0030	509.5	391.2
#3	.0014	.0000	.0011	.0008	.0035	-.0029	-.0007	510.4	391.8
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	**192.5**	**510.5**	**-.3802**	**.0281**	**-.0032**	**-.0018**	**-.0089**	**-.0015**	**-.0031**
Stddev	.3	1.4	.0284	.0067	.0008	.0002	.0016	.0009	.0001
%RSD	.1558	.2776	7.460	23.98	24.45	8.400	17.75	60.59	2.314
#1	192.7	511.9	-.4028	.0313	-.0040	-.0020	-.0097	-.0005	-.0031
#2	192.2	509.1	-.3895	.0204	-.0029	-.0017	-.0071	-.0018	-.0032
#3	192.7	510.4	-.3484	.0326	-.0026	-.0018	-.0099	-.0021	-.0032
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: 5/6/2019 17:35:19 Type: QC
Method: SGS 3(v354) 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	**-.0007**	**.0056**	**-.0015**	**-.0344**	**.0055**	**-.0101**	**.0031**
Stddev	.0004	.0012	.0002	.0027	.0019	.0017	.0008
%RSD	58.82	21.05	13.98	7.909	33.48	17.38	26.88
#1	-.0011	.0068	-.0017	-.0322	.0064	-.0096	.0024
#2	-.0005	.0055	-.0013	-.0374	.0068	-.0120	.0041
#3	-.0004	.0045	-.0014	-.0335	.0034	-.0086	.0030
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	**122010.**	**4762.1**	**4291.3**	**9052.9**
Stddev	204.	15.8	5.2	14.2
%RSD	.16755	.33229	.12178	.15640
#1	121780.	4764.3	4297.2	9069.0
#2	122170.	4776.6	4289.2	9042.5
#3	122090.	4745.2	4287.4	9047.2

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 5/6/2019 17:40:40 Type: QC
Method: SGS 3(v354) 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	**.5118**	**.5017**	**1.025**	**.4917**	**.4843**	**.5052**	**.4989**	**.9910**	**1.038**
Stddev	.0011	.0025	.001	.0009	.0005	.0009	.0008	.0014	.001
%RSD	.2132	.4966	.0654	.1824	.0947	.1800	.1545	.1395	.0901
#1	.5130	.5038	1.024	.4906	.4846	.5054	.4987	.9897	1.038
#2	.5109	.5023	1.026	.4920	.4846	.5042	.4998	.9925	1.039
#3	.5115	.4989	1.026	.4923	.4838	.5060	.4983	.9907	1.037
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	**.4919**	**.9521**	**1.063**	**.9672**	**.9818**	**1.050**	**1.079**	**514.0**	**385.6**
Stddev	.0013	.0018	.002	.0040	.0016	.006	.002	.5	1.0
%RSD	.2553	.1943	.1645	.4102	.1651	.5388	.1746	.0933	.2591
#1	.4916	.9541	1.063	.9641	.9817	1.056	1.077	513.5	385.3
#2	.4933	.9504	1.062	.9658	.9834	1.050	1.080	514.5	386.8
#3	.4909	.9518	1.065	.9716	.9802	1.045	1.079	514.0	384.9
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	**195.8**	**511.7**	**-.3495**	**.0551**	**.4768**	**.4846**	**.5208**	**.4733**	**.5122**
Stddev	.8	3.5	.0334	.0130	.0011	.0003	.0016	.0011	.0018
%RSD	.4236	.6753	9.558	23.56	.2243	.0552	.2992	.2390	.3514
#1	196.3	513.4	-.3727	.0681	.4780	.4847	.5203	.4729	.5137
#2	196.2	513.9	-.3112	.0422	.4760	.4843	.5225	.4746	.5128
#3	194.8	507.7	-.3647	.0549	.4765	.4848	.5195	.4725	.5102
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: 5/6/2019 17:40:40 Type: QC
Method: SGS 3(v354) 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	**.4998**	**.4864**	**.4887**	**.4738**	**.5105**	**.5336**	**.5259**
Stddev	.0018	.0010	.0002	.0036	.0006	.0038	.0022
%RSD	.3511	.2113	.0322	.7543	.1161	.7123	.4271
#1	.4980	.4862	.4886	.4758	.5112	.5368	.5247
#2	.5015	.4855	.4889	.4759	.5101	.5345	.5285
#3	.4998	.4875	.4886	.4696	.5103	.5294	.5245
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	**122530.**	**4787.3**	**4289.0**	**9054.2**
Stddev	351.	35.0	1.4	6.3
%RSD	.28645	.73051	.03279	.06994
#1	122770.	4805.8	4287.6	9061.4
#2	122130.	4746.9	4289.1	9049.4
#3	122690.	4809.1	4290.4	9051.7

Zoom In Zoom Out

Sample Name: hstd 7 Acquired: 5/6/2019 17:45:42 Type: QC
Method: SGS 3(v354) 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	**8.102**	**8.149**	**7.901**	**7.894**	**8.290**	**8.236**	**8.071**	**7.895**	**.6273**
Stddev	.023	.007	.005	.008	.002	.011	.025	.006	.0013
%RSD	.2815	.0875	.0607	.0968	.0241	.1309	.3132	.0790	.1997
#1	8.099	8.147	7.906	7.893	8.293	8.246	8.091	7.897	.6285
#2	8.081	8.143	7.897	7.901	8.289	8.225	8.043	7.901	.6260
#3	8.126	8.157	7.899	7.886	8.289	8.239	8.080	7.888	.6275
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	**8.218**	**8.193**	**8.113**	**8.229**	**8.016**	**8.041**	**8.287**	**.1608**	**-.1310**
Stddev	.013	.018	.012	.001	.008	.013	.009	.0091	.0030
%RSD	.1559	.2148	.1467	.0112	.1041	.1620	.1117	5.691	2.269
#1	8.230	8.210	8.120	8.228	8.018	8.054	8.283	.1502	-.1290
#2	8.205	8.193	8.099	8.230	8.023	8.028	8.280	.1660	-.1344
#3	8.220	8.175	8.120	8.229	8.006	8.042	8.297	.1662	-.1296
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	**.0339**	**-.0339**	**.2534**	**.0764**	**8.087**	**8.341**	**26.02**	**8.567**	**8.089**
Stddev	.0041	.0195	.0403	.0123	.006	.008	.03	.010	.019
%RSD	12.07	57.63	15.89	16.07	.0697	.0919	.1212	.1143	.2400
#1	.0375	-.0487	.2436	.0790	8.082	8.350	26.01	8.578	8.085
#2	.0294	-.0411	.2188	.0631	8.085	8.336	25.99	8.564	8.071
#3	.0348	-.0118	.2976	.0872	8.093	8.337	26.05	8.559	8.109
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: 5/6/2019 17:45:42 Type: QC
Method: SGS 3(v354) 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	**8.410**	**8.536**	**8.105**	**100.9**	**8.305**	**7.953**	**8.015**
Stddev	.010	.010	.036	.1	.009	.001	.010
%RSD	.1232	.1157	.4397	.1288	.1096	.0151	.1300
#1	8.420	8.547	8.100	101.0	8.304	7.954	8.022
#2	8.399	8.527	8.072	100.8	8.296	7.952	8.003
#3	8.409	8.536	8.143	100.9	8.314	7.954	8.020
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	**133870.**	**4949.7**	**4719.8**	**11128.**
Stddev	21.	16.5	6.7	16.
%RSD	.01557	.33434	.14140	.14380
#1	133870.	4939.3	4712.4	11117.
#2	133850.	4968.8	4721.4	11122.
#3	133900.	4941.0	4725.5	11147.

Zoom In Zoom Out

Sample Name: hstd Acquired: 5/6/2019 17:51:03 Type: QC
Method: SGS 3(v354) 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	**.0006**	**.0009**	**.0001**	**-.0009**	**.0007**	**.0011**	**.0026**	**.0009**	**.0177**
Stddev	.0001	.0000	.0002	.0003	.0006	.0003	.0001	.0004	.0004
%RSD	21.88	5.004	125.3	37.60	84.80	29.58	4.377	50.55	2.457
#1	.0005	.0009	.0003	-.0007	.0010	.0015	.0026	.0007	.0181
#2	.0005	.0009	-.0000	-.0012	.0011	.0010	.0027	.0005	.0178
#3	.0007	.0009	.0002	-.0007	.0000	.0008	.0025	.0013	.0172
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	**.0013**	**.0001**	**.0021**	**.0006**	**-.0008**	**.0018**	**.0005**	**318.3**	**202.6**
Stddev	.0005	.0001	.0008	.0007	.0008	.0011	.0014	.4	.4
%RSD	36.73	172.7	38.01	126.7	102.1	64.14	319.3	.1300	.1801
#1	.0015	-.0001	.0017	-.0001	-.0017	.0015	-.0012	318.3	202.5
#2	.0015	.0002	.0030	.0013	-.0001	.0030	.0010	318.6	203.0
#3	.0007	.0001	.0016	.0005	-.0006	.0008	.0015	317.8	202.3
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	**199.2**	**313.0**	**203.5**	**203.4**	**.0018**	**-.0006**	**-.0035**	**-.0027**	**-.0018**
Stddev	.6	2.1	.6	.5	.0009	.0001	.0004	.0008	.0001
%RSD	.2850	.6687	.3158	.2563	48.95	24.66	11.24	28.28	8.283
#1	199.4	315.1	203.7	203.4	.0027	-.0007	-.0030	-.0021	-.0019
#2	199.6	313.0	204.1	203.9	.0016	-.0005	-.0036	-.0023	-.0018
#3	198.6	310.9	202.8	202.9	.0010	-.0005	-.0037	-.0035	-.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: hstd Acquired: 5/6/2019 17:51:03 Type: QC
Method: SGS 3(v354) 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**	**.0042**	**-.0008**	**-.0148**	**.0088**	**.0108**	**.0039**
Stddev	.0001	.0007	.0002	.0014	.0004	.0029	.0014
%RSD	21.11	16.44	23.32	9.420	4.242	26.84	37.04
#1	-.0005	.0049	-.0009	-.0159	.0084	.0140	.0024
#2	-.0006	.0035	-.0006	-.0133	.0092	.0084	.0039
#3	-.0004	.0044	-.0010	-.0152	.0088	.0100	.0053
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	**122480.**	**4737.9**	**4294.2**	**9070.9**
Stddev	395.	23.8	5.5	11.4
%RSD	.32220	.50141	.12858	.12549
#1	122870.	4745.4	4289.2	9063.7
#2	122510.	4711.3	4293.1	9064.9
#3	122080.	4756.9	4300.1	9084.0

Zoom In Zoom Out

Sample Name: feconf Acquired: 5/6/2019 17:56:27 Type: Unk
Method: SGS 3(v354) 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**	**.0005**	**-.0000**	**-.0005**	**-.0001**	**-.0008**	**.0027**	**.0003**
Stddev	.0004	.0001	.0000	.0002	.0003	.0005	.0000	.0001
%RSD	37.19	30.49	473.6	34.22	342.4	67.12	1.765	24.92
#1	.0006	.0006	-.0000	-.0003	-.0005	-.0003	.0027	.0002
#2	.0013	.0003	-.0000	-.0005	.0002	-.0007	.0027	.0004
#3	.0011	.0005	.0000	-.0007	.0000	-.0013	.0027	.0003

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.0020**	**.0010**	**.0008**	**.0005**	**.0014**	**.0018**	**.0013**
Stddev	.0005	.0001	.0002	.0013	.0006	.0007	.0009	.0011
%RSD	31.61	7.161	16.58	176.3	105.2	48.05	49.11	79.25
#1	.0015	.0021	.0009	-.0007	.0012	.0013	.0012	.0024
#2	.0023	.0021	.0012	.0010	.0002	.0021	.0014	.0003
#3	.0013	.0019	.0009	.0019	.0003	.0007	.0028	.0013

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0092**	**-.0042**	**196.7**	**-.0480**	**.2541**	**.0712**	**.0001**	**.0004**
Stddev	.0181	.0089	.9	.0200	.0285	.0042	.0002	.0001
%RSD	196.3	212.1	.4589	41.56	11.22	5.965	155.4	24.33
#1	.0283	.0056	196.2	-.0300	.2775	.0734	-.0000	.0003
#2	.0069	-.0066	197.8	-.0446	.2625	.0663	.0004	.0003
#3	-.0076	-.0116	196.3	-.0694	.2224	.0740	.0001	.0005

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**.0004**	**-.0004**	**-.0002**	**.0016**	W **-.0010**	**-.0024**	**.0092**
Stddev	.0004	.0006	.0001	.0003	.0005	.0001	.0021	.0011
%RSD	20.94	149.1	29.05	144.1	29.56	11.45	88.71	11.58
#1	-.0017	-.0002	-.0005	.0002	.0017	-.0012	-.0001	.0098
#2	-.0024	.0004	-.0005	-.0004	.0020	-.0009	-.0026	.0099
#3	-.0016	.0010	-.0003	-.0004	.0011	-.0010	-.0043	.0080

Zoom In Zoom Out

Sample Name: feconf Acquired: 5/6/2019 17:56:27 Type: Unk
Method: SGS 3(v354) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0060**	**.0018**
Stddev	.0010	.0009
%RSD	17.40	47.38
#1	.0071	.0014
#2	.0050	.0028
#3	.0059	.0012

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**135200.**	**4907.4**	**4732.3**	**11349.**
Stddev	404.	8.0	9.2	21.
%RSD	.29850	.16332	.19375	.18855
#1	134940.	4916.1	4721.9	11324.
#2	135670.	4900.4	4735.7	11362.
#3	135000.	4905.5	4739.3	11360.

Zoom In Zoom Out

Sample Name: crconf Acquired: 5/6/2019 18:01:59 Type: Unk
Method: SGS 3(v354) 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**	**-.0000**	**-.0002**	**.0013**	F **10.27**	**.0003**	**-.0002**	**.0004**	**-.0000**
Stddev	.0001	.0001	.0002	.0002	.02	.0003	.0001	.0003	.0002
%RSD	18.99	710.6	93.28	15.64	.1911	111.6	71.16	60.62	812.2
#1	.0006	.0001	.0000	.0011	10.25	.0005	-.0002	.0007	-.0000
#2	.0004	-.0002	-.0004	.0015	10.29	-.0001	-.0003	.0003	.0002
#3	.0005	-.0000	-.0002	.0014	10.27	.0004	-.0000	.0002	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0000**	**.0005**	**-.0007**	**.0024**	**.0006**	**.0036**	**.0054**	**.0002**
Stddev	.0004	.0001	.0009	.0006	.0006	.0004	.0002	.0176	.0047
%RSD	17.30	314.9	194.0	83.15	25.32	71.65	5.750	327.3	1917.
#1	.0020	-.0001	-.0004	-.0012	.0018	.0008	.0038	.0230	-.0015
#2	.0019	.0000	.0004	-.0009	.0031	.0001	.0035	.0055	.0056
#3	.0026	.0002	.0014	-.0000	.0023	.0009	.0035	-.0123	-.0034

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0647**	**.0689**	**.0270**	**.0021**	**.0005**	**.0101**	**-.0006**	**.0001**
Stddev	.0061	.0544	.0504	.0069	.0007	.0001	.0007	.0002	.0002
%RSD	59370.	84.02	73.09	25.46	34.55	15.25	6.498	34.64	375.0
#1	-.0035	-.0187	.1114	.0264	.0019	.0005	.0095	-.0003	.0000
#2	.0070	-.1247	.0822	.0204	.0029	.0005	.0108	-.0007	-.0002
#3	-.0034	-.0507	.0132	.0341	.0015	.0004	.0100	-.0007	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0039**	**.0059**	**.0011**	**-.0010**	**.0040**	**-.0015**
Stddev	.0002	.0006	.0002	.0022	.0008	.0015	.0014
%RSD	48.25	14.67	2.776	206.7	75.41	37.00	90.78
#1	.0003	.0043	.0057	-.0004	-.0019	.0053	-.0003
#2	.0006	.0043	.0061	.0036	-.0006	.0024	-.0013
#3	.0002	.0033	.0060	.0000	-.0006	.0042	-.0030

Zoom In Zoom Out

Sample Name: crconf Acquired: 5/6/2019 18:01:59 Type: Unk
Method: SGS 3(v354) 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	**137050.**	**4885.0**	**4732.8**	**11543.**
Stddev	125.	13.1	1.7	5.
%RSD	.09139	.26917	.03670	.04588
#1	137100.	4898.6	4730.8	11538.
#2	136910.	4884.0	4734.0	11548.
#3	137140.	4872.3	4733.7	11542.

Zoom In Zoom Out

Sample Name: asconf Acquired: 5/6/2019 18:07:31 Type: Unk
Method: SGS 3(v354) 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**	**-.0000**	**-.0005**	**.0003**	**.0003**	**.0000**	**.0002**	**-.0002**
Stddev	.0004	.0000	.0001	.0001	.0004	.0002	.0000	.0001	.0002
%RSD	123.2	27.64	3324.	25.32	129.4	58.65	78.30	57.87	89.38
#1	.0002	.0001	-.0000	-.0004	.0007	.0005	.0001	.0001	-.0003
#2	-.0000	.0000	-.0001	-.0007	.0002	.0001	.0000	.0002	.0000
#3	.0007	.0001	.0001	-.0005	-.0000	.0003	.0001	.0003	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0008**	**5.222**	**-.0002**	**-.0006**	**-.0005**	**.0014**	**.0063**	**.0065**
Stddev	.0002	.0001	.007	.0009	.0006	.0006	.0005	.0121	.0078
%RSD	148.7	16.80	.1427	571.9	103.5	122.7	34.96	192.4	121.2
#1	-.0003	.0007	5.226	.0006	-.0013	-.0002	.0008	.0169	.0130
#2	.0001	.0009	5.214	.0000	-.0006	-.0001	.0015	.0089	.0086
#3	-.0002	.0009	5.227	-.0012	-.0000	-.0011	.0018	-.0069	-.0022

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096**	**-.0275**	**.0690**	**.0232**	**.0012**	**-.0001**	**.0050**	**-.0005**	**-.0000**
Stddev	.0059	.0271	.0191	.0074	.0003	.0001	.0008	.0003	.0001
%RSD	61.33	98.41	27.63	32.02	25.92	162.2	16.97	59.22	149.6
#1	.0163	-.0514	.0886	.0316	.0014	.0001	.0049	-.0003	-.0001
#2	.0055	-.0331	.0680	.0204	.0013	-.0001	.0042	-.0008	.0000
#3	.0070	.0019	.0505	.0175	.0008	-.0002	.0059	-.0004	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0009**	**.0000**	**.0002**	**.0013**	**.0033**	**-.0016**
Stddev	.0003	.0009	.0001	.0015	.0004	.0015	.0006
%RSD	1341.	94.85	375.8	907.6	33.41	45.61	35.03
#1	-.0003	.0016	.0002	-.0007	.0008	.0046	-.0020
#2	.0001	-.0001	.0000	-.0007	.0015	.0035	-.0017
#3	.0002	.0012	-.0001	.0019	.0016	.0017	-.0010

Zoom In Zoom Out

Sample Name: asconf Acquired: 5/6/2019 18:07:31 Type: Unk
Method: SGS 3(v354) 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	**138400.**	**4916.0**	**4820.1**	**11617.**
Stddev	1893.	14.3	.5	11.
%RSD	1.3677	.29162	.00952	.09276
#1	137390.	4899.5	4820.0	11605.
#2	137230.	4923.4	4820.6	11627.
#3	140580.	4925.1	4819.8	11618.

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/6/2019 18:13:01 Type: QC
Method: SGS 3(v354) 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	**2.032**	**2.044**	**2.021**	**1.977**	**2.025**	**1.980**	**2.049**	**2.015**	**.2484**
Stddev	.002	.004	.002	.002	.046	.051	.049	.002	.0060
%RSD	.1108	.1719	.1183	.1180	2.264	2.599	2.368	.1034	2.418
#1	2.032	2.043	2.022	1.975	2.015	1.972	2.042	2.014	.2469
#2	2.030	2.042	2.023	1.980	1.985	1.933	2.005	2.017	.2432
#3	2.034	2.048	2.018	1.977	2.075	2.035	2.101	2.013	.2550
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**	**2.028**	**1.992**	**2.051**	**2.013**	**1.987**	**2.006**	**40.02**	**40.44**
Stddev	.049	.002	.004	.001	.001	.002	.005	.01	.01
%RSD	2.426	.0872	.1822	.0626	.0523	.0750	.2404	.0261	.0313
#1	2.020	2.029	1.996	2.049	2.012	1.987	2.010	40.03	40.44
#2	1.979	2.030	1.991	2.052	2.014	1.988	2.008	40.01	40.42
#3	2.077	2.027	1.988	2.051	2.012	1.985	2.001	40.01	40.45
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	**40.92**	**40.73**	**39.95**	**40.21**	**2.016**	**2.041**	**5.150**	**2.061**	**2.042**
Stddev	.11	.23	.12	.02	.002	.003	.007	.005	.003
%RSD	.2803	.5759	.3109	.0375	.1133	.1354	.1293	.2272	.1463
#1	40.91	40.64	39.84	40.23	2.014	2.039	5.147	2.060	2.040
#2	40.82	40.55	39.93	40.21	2.018	2.045	5.157	2.066	2.040
#3	41.05	41.00	40.09	40.20	2.016	2.041	5.145	2.057	2.045
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: 5/6/2019 18:13:01 Type: QC
Method: SGS 3(v354) 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	**2.038**	**2.023**	**2.027**	**1.958**	**2.015**	**2.026**	**2.007**
Stddev	.051	.002	.051	.006	.003	.002	.001
%RSD	2.495	.0856	2.498	.3017	.1298	.0749	.0379
#1	2.031	2.022	2.022	1.955	2.017	2.026	2.006
#2	1.991	2.022	1.979	1.965	2.016	2.025	2.008
#3	2.092	2.025	2.080	1.954	2.012	2.028	2.007
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	**131320.**	**4870.1**	**4642.4**	**10387.**
Stddev	2285.	25.6	1.4	6.
%RSD	1.7403	.52603	.03074	.05887
#1	131850.	4888.9	4641.8	10393.
#2	133300.	4880.6	4641.3	10382.
#3	128820.	4840.9	4644.0	10384.

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/6/2019 18:18:05 Type: QC
Method: SGS 3(v354) 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**	**.0002**	**.0008**	**-.0000**	**-.0001**	**.0005**
Stddev	.0003	.0000	.0002	.0002	.0001	.0002	.0001	.0004	.0002
%RSD	498.7	71.55	180.0	119.8	32.46	26.04	248.1	298.1	44.99
#1	.0004	.0001	.0003	-.0000	.0003	.0006	.0000	.0003	.0002
#2	-.0002	.0001	.0000	.0003	.0002	.0010	-.0001	-.0004	.0006
#3	-.0000	.0000	-.0000	.0001	.0003	.0007	-.0000	-.0004	.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**	**.0001**	**.0009**	**.0001**	**-.0005**	**-.0006**	**.0002**	**.0120**	**.0104**
Stddev	.0001	.0000	.0004	.0005	.0009	.0010	.0009	.0182	.0021
%RSD	215.0	24.64	47.46	486.6	195.3	163.6	441.3	151.7	20.06
#1	.0001	.0001	.0011	-.0004	-.0014	.0004	.0011	.0198	.0125
#2	.0002	.0001	.0010	.0003	-.0003	-.0016	-.0007	.0250	.0104
#3	-.0001	.0002	.0004	.0004	.0004	-.0007	.0002	-.0088	.0083
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	**.0010**	**-.0111**	**.0855**	**.0054**	**.0024**	**.0001**	**.0008**	**-.0001**	**-.0001**
Stddev	.0076	.0278	.0208	.0152	.0002	.0003	.0005	.0001	.0001
%RSD	727.8	249.9	24.37	279.3	10.15	236.2	57.83	92.78	103.5
#1	.0098	-.0140	.1079	-.0121	.0022	-.0002	.0012	-.0001	-.0001
#2	-.0038	.0180	.0667	.0138	.0027	.0004	.0003	-.0002	-.0000
#3	-.0028	-.0373	.0819	.0146	.0023	.0001	.0008	-.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 Acquired: 5/6/2019 18:18:05 Type: QC
Method: SGS 3(v354) 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**	**.0002**	**-.0000**	**-.0006**	**-.0000**	**.0028**	**-.0024**
Stddev	.0001	.0008	.0002	.0036	.0011	.0014	.0004
%RSD	23.88	490.7	959.1	619.0	2336.	51.66	16.06
#1	-.0002	.0010	-.0001	-.0033	-.0014	.0013	-.0027
#2	-.0003	-.0002	-.0001	-.0020	.0007	.0042	-.0020
#3	-.0002	-.0004	.0002	.0035	.0005	.0029	-.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	**136950.**	**4899.4**	**4796.8**	**11584.**
Stddev	301.	21.1	7.1	11.
%RSD	.21969	.43109	.14900	.09912
#1	136740.	4914.9	4788.7	11571.
#2	136820.	4907.9	4799.3	11587.
#3	137300.	4875.3	4802.4	11594.

Zoom In Zoom Out

Sample Name: mp14721-mb1conf Acquired: 5/6/2019 18:23:38 Type: Unk
Method: SGS 3(v354) 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**	**.0002**	**.0005**	**.0007**	**.0020**	**.0006**	**.0006**	**.0002**
Stddev	.0002	.0001	.0001	.0000	.0002	.0000	.0000	.0001	.0005
%RSD	30.27	53.81	54.07	6.879	25.54	2.200	3.169	13.80	239.3
#1	.0006	.0002	.0003	.0005	.0005	.0021	.0005	.0005	-.0000
#2	.0007	.0001	.0001	.0005	.0009	.0021	.0006	.0006	-.0001
#3	.0004	.0003	.0003	.0005	.0007	.0020	.0005	.0007	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0192**	**.0008**	**.0008**	**.0014**	**-.0006**	**.0011**	**.0283**	**.1746**
Stddev	.0002	.0001	.0004	.0008	.0006	.0014	.0003	.0127	.0042
%RSD	70.63	.6882	48.58	95.34	43.42	228.3	30.55	44.70	2.412
#1	.0004	.0192	.0004	.0017	.0020	-.0012	.0010	.0425	.1772
#2	.0001	.0191	.0012	.0003	.0009	.0010	.0009	.0245	.1768
#3	.0001	.0194	.0009	.0004	.0012	-.0017	.0015	.0180	.1697

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0412**	**-.0061**	**.0409**	**.0652**	**.0039**	**.0006**	**.0108**	**.0221**	**.0003**
Stddev	.0085	.0650	.0126	.0032	.0001	.0001	.0006	.0006	.0002
%RSD	20.54	1065.	30.90	4.896	2.997	15.44	5.548	2.652	66.43
#1	.0492	.0418	.0363	.0689	.0040	.0006	.0113	.0216	.0004
#2	.0421	-.0800	.0552	.0634	.0040	.0005	.0109	.0219	.0005
#3	.0323	.0199	.0312	.0634	.0038	.0006	.0101	.0227	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0022**	**.0005**	**.0156**	**.0018**	**-.0008**	**.0209**
Stddev	.0004	.0003	.0001	.0020	.0015	.0007	.0006
%RSD	41.03	13.38	18.54	12.50	85.02	94.79	2.787
#1	.0011	.0022	.0005	.0137	.0019	-.0015	.0205
#2	.0012	.0024	.0005	.0176	.0002	-.0000	.0206
#3	.0005	.0019	.0004	.0156	.0033	-.0008	.0216

Zoom In Zoom Out

Sample Name: mp14721-mb1conf Acquired: 5/6/2019 18:23:38 Type: Unk
Method: SGS 3(v354) 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	**138370.**	**5025.0**	**4816.2**	**11686.**
Stddev	151.	19.3	9.9	22.
%RSD	.10924	.38475	.20493	.19214
#1	138270.	5002.6	4824.4	11711.
#2	138550.	5035.4	4819.0	11678.
#3	138300.	5036.8	4805.3	11668.

Zoom In Zoom Out

Sample Name: mp14721-ps1 7 Acquired: 5/6/2019 18:29:09 Type: Unk
Method: SGS 3(v354) 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	**2.731**	**2.051**	**2.075**	**2.061**	**2.168**	**2.117**	**3.915**	**2.158**	**.2508**
Stddev	.006	.008	.002	.003	.005	.001	.008	.003	.0006
%RSD	.2310	.4116	.0941	.1408	.2366	.0379	.1967	.1414	.2448
#1	2.738	2.060	2.077	2.065	2.163	2.118	3.906	2.161	.2501
#2	2.726	2.044	2.073	2.060	2.168	2.117	3.919	2.156	.2511
#3	2.730	2.049	2.074	2.060	2.173	2.116	3.920	2.156	.2513

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.168**	**2.329**	**2.124**	**2.131**	**2.185**	**2.076**	**2.096**	**99.79**	**45.41**
Stddev	.002	.004	.004	.001	.006	.001	.001	.13	.13
%RSD	.0861	.1667	.2018	.0517	.2586	.0672	.0658	.1265	.2809
#1	2.166	2.334	2.121	2.131	2.191	2.075	2.095	99.94	45.55
#2	2.169	2.326	2.129	2.130	2.179	2.076	2.098	99.73	45.36
#3	2.169	2.328	2.122	2.132	2.184	2.078	2.096	99.71	45.32

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**110.5**	**43.49**	**33.06**	**27.16**	**2.096**	**2.041**	**1.639**	**2.124**	**2.173**
Stddev	.4	.35	.14	.06	.002	.002	.003	.001	.004
%RSD	.3404	.7961	.4316	.2143	.1047	.1195	.2073	.0668	.1888
#1	111.0	43.73	33.22	27.23	2.095	2.040	1.637	2.124	2.177
#2	110.3	43.09	32.96	27.12	2.099	2.040	1.643	2.124	2.169
#3	110.3	43.65	32.99	27.14	2.095	2.044	1.637	2.122	2.172

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.375**	**1.941**	**2.133**	**10.57**	**.0032**	**.1041**	**4.144**
Stddev	.005	.010	.000	.02	.0009	.0008	.010
%RSD	.1235	.5037	.0198	.1814	27.26	.7741	.2391
#1	4.369	1.935	2.133	10.56	.0029	.1048	4.146
#2	4.377	1.937	2.132	10.56	.0025	.1041	4.133
#3	4.379	1.953	2.133	10.59	.0041	.1032	4.152

Zoom In Zoom Out

Sample Name: mp14721-ps1 7 Acquired: 5/6/2019 18:29:09 Type: Unk
Method: SGS 3(v354) 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	**135060.**	**5106.9**	**4742.4**	**10362.**
Stddev	449.	15.8	1.4	8.
%RSD	.33209	.30913	.02911	.08158
#1	135580.	5094.0	4742.5	10352.
#2	134850.	5102.2	4741.0	10365.
#3	134760.	5124.5	4743.7	10368.

Zoom In Zoom Out

Sample Name: mp14810-mb1 Acquired: 5/6/2019 18:34:10 Type: Unk
Method: SGS 3(v354) 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	**.0170**	**.0010**	**.0003**	**.0020**	**-.0008**	**.0036**	**.0059**	**.0073**	**.0004**
Stddev	.0010	.0009	.0005	.0005	.0010	.0005	.0002	.0006	.0019
%RSD	5.892	90.04	159.2	25.34	116.3	14.91	2.667	8.384	452.5
#1	.0171	.0005	-.0001	.0024	.0002	.0039	.0058	.0080	.0010
#2	.0159	.0004	.0009	.0020	-.0017	.0030	.0058	.0067	-.0017
#3	.0179	.0021	.0001	.0014	-.0011	.0039	.0061	.0073	.0019

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**.0715**	**.0021**	**.0034**	**.0010**	**-.0055**	**.0017**	**.1139**	**3.066**
Stddev	.0013	.0031	.0041	.0022	.0054	.0042	.0045	.0466	.111
%RSD	43.00	4.369	191.6	65.60	535.4	75.64	268.0	40.88	3.623
#1	.0045	.0747	.0051	.0027	.0058	-.0018	-.0027	.0790	3.175
#2	.0026	.0712	-.0025	.0059	.0020	-.0100	.0015	.1667	3.068
#3	.0020	.0685	.0038	.0016	-.0048	-.0046	.0062	.0959	2.953

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0075**	**.2606**	**.5510**	**.9852**	**.0134**	**.0114**	**3.066**	**-.0016**	**.0639**
Stddev	.0025	.0548	.1041	.0526	.0031	.0014	.141	.0025	.0015
%RSD	33.49	21.03	18.90	5.336	23.15	11.87	4.610	153.4	2.278
#1	-.0064	.2429	.6664	.9299	.0162	.0130	3.214	-.0043	.0656
#2	-.0057	.3221	.5226	1.035	.0101	.0104	3.054	-.0011	.0629
#3	-.0104	.2168	.4641	.9911	.0140	.0110	2.932	.0006	.0632

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0754**	**-.0009**	**.0382**	**.0057**	**.0134**	**.0032**
Stddev	.0032	.0079	.0009	.0202	.0035	.0149	.0042
%RSD	599.4	10.43	95.06	52.72	60.81	111.1	131.9
#1	.0026	.0837	-.0019	.0615	.0095	.0152	-.0005
#2	.0021	.0746	-.0007	.0261	.0026	-.0023	.0023
#3	-.0032	.0680	-.0002	.0271	.0051	.0274	.0078

Zoom In Zoom Out

Sample Name: mp14810-mb1 Acquired: 5/6/2019 18:34:10 Type: Unk
Method: SGS 3(v354) 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	**137370.**	**4922.9**	**4801.6**	**11590.**
Stddev	312.	10.1	5.0	19.
%RSD	.22708	.20528	.10316	.16022
#1	137630.	4933.6	4796.0	11577.
#2	137450.	4921.4	4803.6	11581.
#3	137020.	4913.6	4805.3	11611.

Zoom In Zoom Out

Sample Name: mp14810-b1 Acquired: 5/6/2019 18:39:40 Type: Unk
Method: SGS 3(v354) Mode: CONC Corr. Factor: 5.000000
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	**2.428**	**2.430**	**2.059**	**1.941**	**2.251**	**2.129**	**2.308**	**1.995**
Stddev	.058	.061	.098	.096	.041	.030	.040	.097
%RSD	2.405	2.517	4.780	4.949	1.817	1.398	1.727	4.849
#1	2.483	2.488	2.156	2.037	2.294	2.159	2.349	2.092
#2	2.434	2.435	2.061	1.942	2.246	2.130	2.306	1.994
#3	2.367	2.366	1.959	1.845	2.213	2.099	2.269	1.898

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2743**	**2.231**	**2.139**	**2.010**	**2.118**	**2.020**	**2.011**	**2.060**
Stddev	.0055	.042	.104	.096	.099	.100	.101	.105
%RSD	1.995	1.897	4.850	4.760	4.656	4.966	5.004	5.117
#1	.2783	2.276	2.244	2.104	2.216	2.124	2.112	2.167
#2	.2766	2.228	2.137	2.014	2.120	2.011	2.009	2.056
#3	.2681	2.191	2.037	1.913	2.018	1.924	1.911	1.956

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.92**	**34.07**	**31.01**	**30.73**	**30.07**	**31.47**	**2.049**	**2.131**
Stddev	.75	.71	.88	.47	.96	.78	.101	.102
%RSD	2.510	2.093	2.851	1.532	3.184	2.480	4.938	4.764
#1	30.63	34.74	31.96	30.85	31.04	32.29	2.151	2.234
#2	29.99	34.15	30.87	31.13	30.06	31.37	2.047	2.129
#3	29.14	33.32	30.20	30.21	29.12	30.74	1.949	2.031

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.750**	**2.165**	**2.495**	**2.273**	**2.107**	**2.214**	W **-.0651**	**.0072**
Stddev	.176	.105	.063	.039	.102	.040	.0056	.0047
%RSD	4.693	4.854	2.526	1.705	4.824	1.822	8.662	66.09
#1	3.928	2.272	2.560	2.314	2.210	2.255	-.0660	.0119
#2	3.744	2.160	2.492	2.267	2.106	2.213	-.0591	.0071
#3	3.577	2.062	2.434	2.237	2.006	2.174	-.0702	.0025

Zoom In Zoom Out

Sample Name: mp14810-b1 Acquired: 5/6/2019 18:39:40 Type: Unk
Method: SGS 3(v354) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0122**	**2.016**
Stddev	.0021	.100
%RSD	16.92	4.955
#1	.0143	2.113
#2	.0103	2.021
#3	.0119	1.913

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**136160.**	**4935.4**	**4764.0**	**11276.**
Stddev	67.	18.0	7.6	23.
%RSD	.04909	.36426	.15970	.20812
#1	136090.	4955.7	4755.8	11251.
#2	136170.	4929.3	4770.7	11282.
#3	136220.	4921.3	4765.6	11297.

Zoom In Zoom Out

Sample Name: mp14810-s1 Acquired: 5/6/2019 18:44:50 Type: Unk
Method: SGS 3(v354) 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	**1.948**	**1.958**	**2.048**	**1.886**	**1.890**	**1.887**	**1.957**	**1.929**	**.2419**
Stddev	.004	.006	.004	.004	.007	.002	.002	.003	.0003
%RSD	.2278	.3175	.1889	.2157	.3855	.1154	.0998	.1486	.1072
#1	1.950	1.955	2.048	1.888	1.884	1.889	1.955	1.932	.2417
#2	1.943	1.954	2.052	1.888	1.887	1.886	1.957	1.928	.2417
#3	1.951	1.965	2.044	1.881	1.898	1.885	1.959	1.927	.2422

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.911**	**3.564**	**1.946**	**1.949**	**1.917**	**1.923**	**1.926**	**24.25**	**32.76**
Stddev	.000	.006	.005	.003	.003	.004	.003	.02	.04
%RSD	.0132	.1577	.2754	.1454	.1420	.2134	.1634	.0688	.1292
#1	1.911	3.564	1.940	1.949	1.917	1.927	1.930	24.24	32.72
#2	1.911	3.570	1.951	1.952	1.919	1.919	1.925	24.23	32.76
#3	1.911	3.559	1.948	1.946	1.913	1.922	1.924	24.26	32.81

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.03**	**25.86**	**35.42**	**127.8**	**1.926**	**1.924**	**9.021**	**1.891**	**1.968**
Stddev	.10	.19	.08	.2	.004	.003	.014	.004	.005
%RSD	.3859	.7192	.2238	.1871	.2067	.1383	.1594	.1846	.2344
#1	24.97	25.65	35.40	127.9	1.927	1.926	9.031	1.892	1.968
#2	24.97	25.90	35.35	127.6	1.929	1.925	9.027	1.894	1.964
#3	25.14	26.02	35.50	128.0	1.922	1.921	9.004	1.887	1.973

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.887**	**1.886**	**.9875**	**5.598**	**.0020**	**.0048**	**6.135**
Stddev	.002	.001	.0012	.007	.0004	.0020	.014
%RSD	.1129	.0610	.1216	.1197	20.56	41.99	.2303
#1	1.886	1.886	.9880	5.604	.0025	.0039	6.134
#2	1.887	1.888	.9862	5.599	.0018	.0072	6.149
#3	1.890	1.886	.9885	5.591	.0018	.0035	6.121

Zoom In Zoom Out

Sample Name: mp14810-s1 Acquired: 5/6/2019 18:44:50 Type: Unk
Method: SGS 3(v354) 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	**129130.**	**4773.5**	**4551.0**	**10091.**
Stddev	129.	14.8	6.4	13.
%RSD	.09979	.31010	.14041	.12993
#1	129200.	4789.5	4554.2	10090.
#2	129200.	4770.8	4543.6	10079.
#3	128980.	4760.3	4555.2	10105.

Zoom In Zoom Out

Sample Name: mp14810-s2 Acquired: 5/6/2019 18:49:52 Type: Unk
Method: SGS 3(v354) 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	**1.965**	**1.981**	**2.054**	**1.905**	**1.933**	**1.908**	**1.983**	**1.946**	**.2439**
Stddev	.049	.051	.001	.000	.001	.004	.003	.002	.0007
%RSD	2.499	2.561	.0621	.0068	.0424	.1922	.1313	.1040	.3036
#1	1.919	1.936	2.053	1.905	1.933	1.911	1.981	1.944	.2437
#2	2.016	2.036	2.055	1.905	1.934	1.904	1.981	1.946	.2433
#3	1.960	1.971	2.053	1.905	1.932	1.910	1.986	1.948	.2447

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.935**	**3.393**	**1.963**	**1.971**	**1.939**	**1.940**	**1.952**	**24.71**	**32.48**
Stddev	.003	.003	.003	.002	.004	.004	.003	.62	.81
%RSD	.1728	.0826	.1347	.0760	.2150	.1976	.1350	2.509	2.487
#1	1.933	3.390	1.964	1.969	1.940	1.936	1.949	24.14	31.74
#2	1.933	3.392	1.966	1.972	1.943	1.941	1.954	25.37	33.34
#3	1.939	3.396	1.960	1.970	1.935	1.944	1.952	24.63	32.38

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.42**	**26.28**	**34.59**	**116.0**	**1.946**	**1.951**	**7.970**	**1.928**	**1.983**
Stddev	.68	.72	.81	2.7	.003	.001	.007	.000	.049
%RSD	2.675	2.728	2.338	2.297	.1567	.0466	.0837	.0115	2.451
#1	24.75	25.72	33.86	113.6	1.943	1.951	7.978	1.928	1.936
#2	26.11	27.08	35.46	118.9	1.945	1.952	7.968	1.928	2.033
#3	25.40	26.03	34.44	115.6	1.949	1.951	7.965	1.928	1.979

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.931**	**1.913**	**1.170**	**4.914**	**.0020**	**.0038**	**5.682**
Stddev	.002	.003	.001	.007	.0010	.0005	.016
%RSD	.0812	.1480	.0813	.1363	48.54	11.93	.2747
#1	1.932	1.910	1.171	4.906	.0031	.0035	5.684
#2	1.929	1.916	1.169	4.916	.0013	.0036	5.697
#3	1.932	1.913	1.170	4.919	.0016	.0043	5.666

Zoom In Zoom Out

Sample Name: mp14810-s2 Acquired: 5/6/2019 18:49:52 Type: Unk
Method: SGS 3(v354) 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	**129000.**	**4759.0**	**4571.6**	**10160.**
Stddev	211.	103.0	1.7	6.
%RSD	.16373	2.1632	.03610	.06345
#1	129210.	4851.6	4573.0	10167.
#2	129010.	4648.1	4571.9	10159.
#3	128790.	4777.4	4569.8	10155.

Zoom In Zoom Out

Sample Name: jc87377-1a Acquired: 5/6/2019 18:54:54 Type: Unk
Method: SGS 3(v354) 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	**.0209**	**.0001**	**.1172**	**.0007**	**.0022**	**.0142**	**.0327**	**.0043**	**.0039**
Stddev	.0001	.0002	.0005	.0001	.0004	.0002	.0002	.0000	.0003
%RSD	.5229	110.9	.4003	15.91	16.55	1.176	.4723	.3258	6.955
#1	.0209	.0001	.1177	.0007	.0020	.0143	.0327	.0043	.0039
#2	.0208	.0000	.1171	.0005	.0021	.0140	.0325	.0043	.0041
#3	.0210	.0003	.1168	.0008	.0027	.0142	.0328	.0043	.0036

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**1.762**	**.0280**	**.0007**	**.0025**	**.0002**	**.0011**	**.1575**	**9.089**
Stddev	.0003	.006	.0004	.0010	.0005	.0010	.0016	.0064	.036
%RSD	51.02	.3231	1.391	145.0	18.56	545.3	147.4	4.094	.3960
#1	.0003	1.766	.0275	.0003	.0020	-.0004	-.0006	.1598	9.130
#2	.0009	1.764	.0283	-.0001	.0029	.0014	.0026	.1626	9.063
#3	.0006	1.755	.0282	.0018	.0025	-.0004	.0012	.1503	9.074

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3122**	**1.662**	**11.74**	**107.5**	**.0320**	**.0032**	**8.936**	**.0043**	**.0312**
Stddev	.0111	.043	.08	.1	.0005	.0002	.023	.0010	.0002
%RSD	3.539	2.580	.6684	.0773	1.507	6.412	.2586	23.43	.6168
#1	.2999	1.668	11.77	107.6	.0322	.0030	8.948	.0034	.0310
#2	.3214	1.616	11.65	107.5	.0323	.0034	8.950	.0054	.0311
#3	.3153	1.701	11.80	107.4	.0314	.0033	8.909	.0042	.0314

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050**	**.0146**	**.0007**	**5.899**	**.0001**	**.0046**	**5.192**
Stddev	.0005	.0005	.0001	.029	.0013	.0023	.021
%RSD	10.54	3.485	17.11	.4861	899.7	50.44	.4150
#1	.0045	.0146	.0008	5.915	-.0010	.0065	5.200
#2	.0055	.0141	.0006	5.916	-.0002	.0054	5.209
#3	.0049	.0151	.0006	5.866	.0016	.0020	5.168

Zoom In Zoom Out

Sample Name: jc87377-1a Acquired: 5/6/2019 18:54:54 Type: Unk
Method: SGS 3(v354) 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	**129290.**	**4806.1**	**4591.1**	**10485.**
Stddev	154.	15.0	11.7	31.
%RSD	.11946	.31302	.25454	.29595
#1	129130.	4815.9	4584.5	10472.
#2	129310.	4788.8	4584.2	10463.
#3	129440.	4813.7	4604.5	10521.

Zoom In Zoom Out

Sample Name: mp14810-sd1 Acquired: 5/6/2019 19:00:16 Type: Unk
Method: SGS 3(v354) 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	**.0212**	**-.0003**	**.1136**	**.0020**	**.0050**	**.0193**	**.0312**	**.0026**	**.0054**
Stddev	.0009	.0010	.0000	.0009	.0022	.0009	.0002	.0012	.0007
%RSD	4.064	349.5	.0195	46.53	43.72	4.807	.6326	48.28	13.17
#1	.0222	-.0009	.1136	.0023	.0044	.0199	.0309	.0015	.0060
#2	.0207	.0009	.1136	.0027	.0074	.0196	.0312	.0022	.0046
#3	.0208	-.0008	.1136	.0009	.0032	.0182	.0313	.0039	.0056

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**1.691**	**.0277**	**-.0008**	**.0030**	**-.0046**	**.0027**	**.2232**	**8.805**
Stddev	.0010	.005	.0062	.0036	.0016	.0076	.0071	.0881	.057
%RSD	280.6	.3068	22.41	459.8	51.67	163.6	267.9	39.48	.6431
#1	.0013	1.696	.0316	-.0042	.0048	-.0042	-.0025	.1556	8.795
#2	-.0007	1.690	.0205	.0030	.0023	-.0124	.0108	.3229	8.867
#3	.0005	1.686	.0309	-.0011	.0020	.0027	-.0003	.1912	8.755

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3249**	**1.520**	**11.15**	**104.5**	**.0389**	**.0043**	**8.848**	**.0064**	**.0307**
Stddev	.0215	.092	.19	.2	.0019	.0008	.054	.0011	.0011
%RSD	6.617	6.026	1.704	.2130	4.989	18.04	.6140	17.88	3.584
#1	.3107	1.414	11.19	104.4	.0366	.0050	8.910	.0057	.0317
#2	.3142	1.575	11.32	104.5	.0398	.0035	8.822	.0058	.0308
#3	.3496	1.570	10.95	104.8	.0401	.0046	8.811	.0077	.0295

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0203**	**.0065**	**5.604**	**.0035**	**.0144**	**4.986**
Stddev	.0009	.0013	.0009	.024	.0036	.0046	.011
%RSD	34.66	6.417	13.15	.4277	102.6	31.66	.2223
#1	.0031	.0196	.0061	5.631	.0074	.0189	4.990
#2	.0015	.0218	.0059	5.587	.0002	.0097	4.995
#3	.0029	.0195	.0075	5.593	.0030	.0146	4.973

Zoom In Zoom Out

Sample Name: mp14810-sd1 Acquired: 5/6/2019 19:00:16 Type: Unk
Method: SGS 3(v354) 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	**136150.**	**4947.4**	**4759.4**	**11347.**
Stddev	196.	42.8	4.3	10.
%RSD	.14375	.86578	.09016	.09179
#1	136380.	4985.9	4757.3	11349.
#2	136060.	4901.3	4764.3	11357.
#3	136020.	4955.0	4756.5	11336.

Zoom In Zoom Out

Sample Name: mp14736-mb1conf Acquired: 5/6/2019 19:05:42 Type: Unk
Method: SGS 3(v354) 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**	**-.0000**	**.0001**	**.0005**	**.0006**	**.0016**	**.0003**	**.0007**	**.0003**
Stddev	.0001	.0001	.0001	.0002	.0002	.0007	.0001	.0001	.0002
%RSD	27.24	41420.	215.1	41.50	30.83	43.97	27.98	14.92	74.98
#1	.0007	-.0002	.0000	.0005	.0004	.0012	.0003	.0007	.0004
#2	.0004	.0001	-.0000	.0006	.0007	.0012	.0002	.0007	.0003
#3	.0005	.0001	.0002	.0002	.0007	.0024	.0004	.0009	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0128**	**-.0003**	**.0004**	**.0003**	**.0000**	**.0003**	**.0277**	**.0601**
Stddev	.0003	.0000	.0006	.0008	.0006	.0016	.0012	.0151	.0040
%RSD	244.5	.2722	203.0	213.3	184.5	5690.	471.5	54.64	6.684
#1	-.0002	.0128	-.0004	.0002	.0011	-.0018	.0000	.0439	.0581
#2	.0004	.0127	-.0009	.0013	-.0000	.0009	-.0008	.0251	.0575
#3	.0001	.0128	.0004	-.0003	-.0000	.0009	.0016	.0140	.0647

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0173**	**-.0091**	**.0248**	**.0773**	**.0019**	**.0002**	**.0098**	**.0202**	**.0002**
Stddev	.0083	.0441	.0264	.0123	.0005	.0002	.0010	.0006	.0002
%RSD	48.01	484.4	106.4	15.92	28.64	78.96	10.69	2.909	75.68
#1	.0264	.0227	.0091	.0633	.0013	.0003	.0093	.0205	.0004
#2	.0100	-.0595	.0552	.0865	.0021	.0000	.0110	.0196	.0002
#3	.0156	.0095	.0100	.0822	.0023	.0004	.0091	.0207	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0016**	**.0001**	**.0116**	**.0010**	**.0031**	**.0173**
Stddev	.0001	.0007	.0001	.0004	.0002	.0008	.0005
%RSD	22.00	42.67	55.65	3.010	17.27	25.14	2.935
#1	.0003	.0010	.0002	.0114	.0011	.0032	.0175
#2	.0003	.0024	.0001	.0121	.0008	.0022	.0177
#3	.0004	.0015	.0001	.0115	.0012	.0038	.0167

Zoom In Zoom Out

Sample Name: mp14736-mb1conf Acquired: 5/6/2019 19:05:42 Type: Unk
Method: SGS 3(v354) 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	**134990.**	**5045.0**	**4827.3**	**11730.**
Stddev	8967.	6.1	13.5	15.
%RSD	6.6425	.12026	.27893	.12412
#1	139560.	5051.9	4836.6	11736.
#2	140750.	5040.2	4833.4	11741.
#3	124660.	5043.0	4811.9	11713.

Zoom In Zoom Out

Sample Name: mp14736-ps1 Acquired: 5/6/2019 19:11:12 Type: Unk
Method: SGS 3(v354) 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	**2.269**	**2.105**	**2.114**	**2.062**	**2.142**	**2.115**	**3.629**	**2.170**
Stddev	.004	.004	.001	.002	.004	.001	.005	.003
%RSD	.1734	.2040	.0340	.0882	.1980	.0613	.1467	.1155
#1	2.266	2.100	2.115	2.064	2.145	2.114	3.634	2.172
#2	2.268	2.108	2.114	2.062	2.144	2.116	3.629	2.169
#3	2.273	2.108	2.113	2.060	2.137	2.115	3.624	2.168

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2543**	**2.162**	**2.245**	**2.155**	**2.131**	**2.085**	**2.076**	**2.131**
Stddev	.0003	.001	.006	.002	.002	.003	.002	.003
%RSD	.1315	.0487	.2864	.1088	.0917	.1299	.0859	.1612
#1	.2542	2.163	2.251	2.153	2.129	2.086	2.076	2.127
#2	.2547	2.163	2.245	2.156	2.131	2.088	2.074	2.132
#3	.2541	2.161	2.238	2.158	2.133	2.083	2.077	2.134

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**69.80**	**33.56**	**114.2**	**49.97**	**30.34**	**27.32**	**2.091**	**2.089**
Stddev	.08	.03	.4	.18	.09	.05	.004	.000
%RSD	.1092	.0807	.3737	.3636	.3129	.1882	.1677	.0063
#1	69.76	33.54	113.7	49.80	30.23	27.27	2.091	2.089
#2	69.89	33.59	114.5	50.16	30.41	27.32	2.088	2.089
#3	69.76	33.55	114.3	49.94	30.37	27.37	2.095	2.090

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.329**	**2.168**	**2.183**	**4.479**	**1.934**	**2.144**	W **-.0330**	**.0013**
Stddev	.001	.003	.004	.009	.007	.002	.0031	.0003
%RSD	.0708	.1342	.1790	.1890	.3870	.0992	9.381	18.71
#1	1.329	2.169	2.179	4.487	1.926	2.146	-.0295	.0014
#2	1.328	2.170	2.184	4.480	1.935	2.143	-.0339	.0011
#3	1.330	2.165	2.187	4.470	1.941	2.142	-.0355	.0016

Zoom In Zoom Out

Sample Name: mp14736-ps1 Acquired: 5/6/2019 19:11:12 Type: Unk
Method: SGS 3(v354) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0855**	**3.831**
Stddev	.0003	.004
%RSD	.2961	.1055
#1	.0856	3.836
#2	.0852	3.828
#3	.0857	3.829

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**133290.**	**4979.1**	**4647.0**	**10415.**
Stddev	206.	22.1	4.7	10.
%RSD	.15418	.44407	.10118	.09297
#1	133280.	4996.0	4643.7	10406.
#2	133090.	4954.1	4644.9	10413.
#3	133500.	4987.2	4652.4	10425.

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/6/2019 19:16:14 Type: QC
Method: SGS 3(v354) 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	**2.030**	**2.038**	**2.008**	**1.957**	**1.983**	**1.957**	**2.022**	**1.997**	**.2463**
Stddev	.006	.005	.002	.001	.006	.002	.003	.002	.0007
%RSD	.2984	.2254	.0808	.0589	.3277	.1125	.1449	.1001	.2789
#1	2.036	2.043	2.010	1.958	1.977	1.960	2.019	1.998	.2458
#2	2.029	2.034	2.007	1.957	1.990	1.955	2.025	1.999	.2459
#3	2.024	2.037	2.008	1.956	1.980	1.957	2.022	1.995	.2470
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	**2.002**	**1.998**	**1.975**	**2.033**	**1.989**	**1.978**	**1.995**	**39.75**	**40.02**
Stddev	.001	.007	.005	.003	.002	.002	.001	.08	.05
%RSD	.0676	.3309	.2395	.1343	.0943	.1152	.0373	.1951	.1209
#1	2.001	2.005	1.981	2.035	1.991	1.976	1.996	39.79	40.08
#2	2.004	1.992	1.973	2.030	1.988	1.980	1.995	39.80	40.00
#3	2.003	1.996	1.972	2.035	1.987	1.977	1.995	39.66	39.99
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	**40.72**	**40.38**	**39.83**	**40.01**	**2.005**	**2.027**	**5.108**	**2.042**	**2.040**
Stddev	.06	.09	.03	.12	.003	.002	.006	.006	.006
%RSD	.1549	.2268	.0811	.2922	.1312	.0879	.1185	.2953	.2798
#1	40.79	40.46	39.84	40.14	2.008	2.029	5.113	2.048	2.047
#2	40.70	40.41	39.85	39.92	2.003	2.027	5.109	2.036	2.038
#3	40.67	40.28	39.79	39.98	2.003	2.025	5.101	2.042	2.036
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: 5/6/2019 19:16:14 Type: QC
Method: SGS 3(v354) 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	**2.013**	**2.025**	**2.000**	**1.955**	**2.008**	**2.014**	**2.011**
Stddev	.002	.004	.002	.006	.001	.007	.001
%RSD	.0877	.2022	.0851	.3066	.0299	.3703	.0606
#1	2.011	2.030	2.001	1.962	2.007	2.022	2.013
#2	2.014	2.024	2.001	1.952	2.008	2.011	2.011
#3	2.014	2.022	1.998	1.950	2.009	2.008	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	**131750.**	**4852.0**	**4636.0**	**10383.**
Stddev	331.	9.1	9.7	14.
%RSD	.25091	.18704	.20927	.13158
#1	132040.	4861.7	4624.8	10367.
#2	131390.	4850.6	4642.2	10388.
#3	131830.	4843.7	4640.9	10393.

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/6/2019 19:21:18 Type: QC
Method: SGS 3(v354) 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**	**.0001**	**.0001**	**.0003**	**.0000**	**.0005**	**.0000**	**.0001**	**.0004**
Stddev	.0002	.0001	.0001	.0003	.0003	.0002	.0000	.0001	.0002
%RSD	43.80	116.2	138.4	95.39	603.4	28.95	2699.	93.99	42.14
#1	.0007	.0001	.0001	.0005	.0004	.0006	-.0000	.0000	.0003
#2	.0006	.0002	-.0000	.0002	-.0001	.0006	-.0000	.0002	.0006
#3	.0003	.0000	.0000	.0000	-.0001	.0004	.0000	.0001	.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	**.0003**	**-.0001**	**.0015**	**-.0000**	**.0009**	**.0004**	**-.0004**	**.0005**	**.0056**
Stddev	.0002	.0001	.0009	.0005	.0009	.0015	.0011	.0068	.0068
%RSD	64.08	85.94	60.49	1992.	107.4	349.3	243.8	1431.	120.3
#1	.0004	-.0002	.0021	-.0004	.0019	-.0012	.0007	-.0005	-.0002
#2	.0003	-.0001	.0005	.0006	.0001	.0017	-.0007	-.0058	.0040
#3	.0001	-.0000	.0020	-.0002	.0006	.0008	-.0013	.0077	.0130
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	F **.0101**	**-.0180**	**.0768**	**.0148**	**.0026**	**.0013**	**.0002**	**-.0004**	**-.0000**
Stddev	.0092	.0439	.0290	.0089	.0004	.0002	.0001	.0002	.0001
%RSD	91.19	243.9	37.74	59.85	17.15	11.72	41.34	52.72	246.6
#1	.0075	-.0429	.0696	.0053	.0023	.0015	.0001	-.0006	.0000
#2	.0203	-.0437	.1087	.0163	.0024	.0012	.0003	-.0005	-.0001
#3	.0024	.0327	.0521	.0229	.0031	.0013	.0003	-.0002	.0000
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.0100								
Low Limit	-.0100								

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/6/2019 19:21:18 Type: QC
Method: SGS 3(v354) 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**	F **.0087**	**-.0001**	**.0008**	**.0008**	F **.0043**	**-.0028**
Stddev	.0001	.0003	.0001	.0022	.0005	.0004	.0010
%RSD	84.72	3.933	145.4	271.4	55.79	10.23	35.81
#1	-.0002	.0091	.0000	-.0003	.0007	.0040	-.0017
#2	-.0000	.0084	-.0002	-.0007	.0004	.0048	-.0033
#3	-.0003	.0086	-.0001	.0034	.0014	.0041	-.0036
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit		.0063				.0040	
Low Limit		-.0063				-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**137490.**	**4898.1**	**4792.7**	**11580.**
Stddev	704.	10.0	4.5	12.
%RSD	.51198	.20468	.09491	.10165
#1	136770.	4909.1	4787.5	11568.
#2	137520.	4895.6	4794.6	11591.
#3	138180.	4889.5	4796.0	11582.

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	0.000121	0.000000	No
			Mo	-0.000030	0.000000	No
			Ti	-0.000780	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	0.004520	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	-0.000570	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	-0.001250	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	0.000172	0.000000	No
			Ti	0.000170	0.000000	No
			Fe	-0.000132	0.000000	No
			Al	0.000000	0.000000	No
			Sn	0.000703	0.000000	No
			Co	-0.001580	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	-0.000295	0.000000	No
			V	-0.001262	0.000000	No
			Zn	-0.000230	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	0.005770	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	-0.014100	0.000000	No
			Fe	0.000010	0.000000	No
			Sr	0.000000	0.000000	No
			Cr	-0.003090	0.000000	No
			Mn	-0.002450	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	-0.000023	0.000000	No
			Ca	0.000001	0.000000	No
			Mn	-0.000010	0.000000	No
			Mo	0.003463	0.000000	No
			Cr	-0.008710	0.000000	No
			V	0.000052	0.000000	No
			Co	-0.000629	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	-0.001800	0.000000	No
			Al	-0.000004	0.000000	No
			Fe	-0.000052	0.000000	No
			V	-0.021700	0.000000	No
			Mn	0.001620	0.000000	No
			Si	-0.000016	0.000000	No
			Ca	-0.000003	0.000000	No
			Ti	-0.002600	0.000000	No
			Mg	-0.000000	0.000000	No
			Co	0.004440	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	-0.010000	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	-0.000141	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	-0.000770	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	0.000016	0.000000	No
			Ti	-0.000040	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	-0.000250	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	-0.000170	0.000000	No
			Co	-0.000029	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	-0.000220	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	0.000017	0.000000	No
			Al	-0.000009	0.000000	No
			Ca	-0.000006	0.000000	No
			Ni	-0.001077	0.000000	No
			Cr	0.022300	0.000000	No
			V	-0.004307	0.000000	No
			Zn	-0.000200	0.000000	No
			Mo	-0.001100	0.000000	No
			Ti	0.001400	0.000000	No
			Sn	-0.009000	0.000000	No
			Mg	0.000004	0.000000	No
			Zr	-0.000627	0.000000	No
			Sr	0.000209	0.000000	No
			W	0.010000	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	0.045410	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	0.003820	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	0.000000	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}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.003180	1.585568	0.000000	1.000000
	Be 313.042 {108}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000290	1.214910	0.000000	1.000000
	Cd 228.802 {448}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000163	0.754799	0.000000	1.000000
	Co 228.616 {448}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000394	0.392374	0.000000	1.000000
	Cr 267.716 {126}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000009	0.038105	0.000000	1.000000
	Cu 324.754 {104}2	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.002083	0.140219	0.000000	1.000000
	Mn 257.610 {131}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000017	0.225382	0.000000	1.000000
	Ni 231.604 {446}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000134	0.285435	0.000000	1.000000
	Ag 328.068 {103}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000357	0.076402	0.000000	1.000000
	V 292.402 {115}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000008	0.077439	0.000000	1.000000
	Zn 206.200 {464}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000251	1.023515	0.000000	1.000000
	As 189.042 {478}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000166	0.103693	0.000000	1.000000
	Tl 190.856 {477}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000135	0.050179	0.000000	1.000000
	Pb 220.353 {453}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000274	0.137238	0.000000	1.000000
	Se 196.090 {472}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000231	0.082677	0.000000	1.000000
	Sb 206.833 {463}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000247	0.147313	0.000000	1.000000
	Al 396.152 { 85}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.001381	0.028074	0.000000	1.000000
	Ca 317.933 {106}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.004577	0.035940	0.000000	1.000000
	Fe 259.940 {130}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000104	0.012924	0.000000	1.000000
	Mg 279.079 {121}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000042	0.002601	0.000000	1.000000
	K 766.490 { 44}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.005601	0.030097	0.000000	1.000000
	Na 589.592 { 57}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.002550	0.085608	0.000000	1.000000
	B 208.959 {462}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000110	0.174831	0.000000	1.000000
	Mo 202.030 {467}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000015	0.739751	0.000000	1.000000
	Si 212.412 {459}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.002309	0.194034	0.000000	1.000000
	Sn 189.989 {478}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000094	0.167823	0.000000	1.000000
	Sr 407.771 { 83}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000554	2.899578	0.000000	1.000000
	Ti 334.904 {101}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000025	0.094944	0.000000	1.000000
	Y 360.073 { 94}*	5/7/2019 10:20:09	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 371.030 { 91}*	5/7/2019 10:20:09	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 224.306 {451}*	5/7/2019 10:20:09	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	In 230.606 {446}*	5/7/2019 10:20:09	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	W 207.911 {462}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	0.000647	0.378653	0.000000	1.000000
	Zr 339.198 { 99}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000102	0.246351	0.000000	1.000000
	S 182.034 {485}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.001500	0.045567	0.000000	1.000000
	Bi 223.061 {451}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000799	0.181134	0.000000	1.000000
	Li 670.784 { 50}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.000074	0.609146	0.000000	1.000000
	P 177.495 {490}	5/7/2019 10:20:09	5/6/2019 16:52:19	Linear	1/Conc	-0.008016	0.107535	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	0.000409	0.001363	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000191	0.000638	OK.	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000212	0.000707	OK.	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000276	0.000919	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000493	0.001644	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000394	0.001313	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000074	0.000247	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000325	0.001085	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000480	0.001599	OK.	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000363	0.001209	OK.	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000144	0.000480	OK.	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001378	0.004592	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001120	0.003735	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.001029	0.003429	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.001911	0.006371	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001376	0.004587	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.021025	0.070082	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.007428	0.024759	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.010012	0.033372	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.063652	0.212175	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.046931	0.156438	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.014824	0.049415	OK.	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000743	0.002477	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000237	0.000791	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.001007	0.003356	OK.	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000683	0.002278	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000175	0.000582	OK.	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000365	0.001216	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	0.000937	0.003123	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000186	0.000620	OK.	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.002850	0.009499	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001454	0.004847	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.002302	0.007674	OK.	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.001336	0.004452	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 #: MA46615
Analyst: LL
Date: 4/30/2019
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M72

Hot Block # 7 Start Time: 8:00 End Time: 8:30 Tube # 1-24
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 # 7 Start Time: 8:30 End Time: 9:00 Tube # 25-40
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)		
1	MP14633-MB1	0.6001	100				MP14633	
2	MP14633-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-362-HGA1, IN. V
3	MP14633-S1	0.7716	100	2.0 ml	Y	0.1		JC87045-1, HG-19-144-362-HGA1, IN. V
4	MP14633-S2	0.7540	100	2.0 ml	Y	0.1		JC87045-1, HG-19-144-362-HGA1, IN. V
5	JC87045-1	0.7843	100					
6	JC87045-2	0.8379	100					
7	JC87045-3	0.6714	100					
8	JC87045-4	0.8007	100					
9	JC87045-5	0.8618	100					
10	JC87045-6	0.6734	100					
11	JC87045-7	0.8028	100					
12	JC87045-8	0.7209	100					
13	JC87045-9	0.7023	100					
14	JC87045-10	0.6822	100					
15	JC87045-11	0.7737	100					
16	JC87071-3	0.6542	100					
17	JC87071-4	0.8324	100					
18	JC87071-5	0.7164	100					
19	JC87071-6	0.7398	100					
20	JC87074-1	0.6977	100					
21	JC87074-9	0.6278	100					
22	JC87096-1	0.6158	100					
23	JC87096-2	0.7186	100					
24	JC87096-3	0.6840	100					
25	MP14638-MB1	0.6001	100				MP14638	
26	MP14638-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-362-HGA1, IN. V
27	MP14638-S1	0.6878	100	2.0 ml	Y	0.1		JC87093-7, HG-19-144-362-HGA1, IN. V
28	MP14638-S2	0.6341	100	2.0 ml	Y	0.1		JC87093-7, HG-19-144-362-HGA1, IN. V
29	JC87093-7	0.6578	100					
30	JC87093-1	0.6647	100					
31	JC87093-2	0.6974	100					
32	JC87093-3	0.7779	100					
33	JC87093-4	0.7501	100					
34	JC87093-5	0.7130	100					
35	JC87093-6	0.7641	100					

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Form: HG-022F-02
Revision Date:08/24/15

ANALYST: LL
SPIKE WITNESS: EAL
QC REVIERER:

DATE: 4/30/19
DATE: 4/30/19
DATE:

SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

MA Batch #: MA46615
Analyst: LL
Date: 4/30/2019
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M72

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3C.

Hot Block # 7 Start Time: 8:00 End Time: 8:30 Tube # 1-24.
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 # 7 Start Time: 8:30 End Time: 9:00 Tube # 25-40.
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)		
36	JC87093-8	0.7034	100					
37	JC87093-9	0.7922	100					
38	JC87093-10	0.6770	100					
39	JC87093-11	0.7303	100					
40	JC87093-12	0.7107	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					

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Form: HG-022F-02
Revision Date:08/24/15

ANALYST: LL
SPIKE WITNESS: EM
QC REVIERER:

DATE: 4/30/19
DATE: 4/30/19
DATE:

SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

MA Batch #: MA46615
Analyst: LL
Date: 4/30/2019
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-19-144-363-HGA2, IN. V
S-3	0.50 ug/l standard	0.6	100 ml	5.0 ml	Y	0.0100	N/A	HG-19-144-363-HGA2, IN. V
S-4	1.00 ug/l standard	0.6	100 ml	1.0 ml	Y	0.1000	N/A	HG-19-144-362-HGA1, IN. V
S-5	2.50 ug/l standard	0.6	100 ml	2.5 ml	Y	0.1000	N/A	HG-19-144-362-HGA1, IN. V
S-6	5.00 ug/l standard	0.6	100 ml	5.0 ml	Y	0.1000	N/A	HG-19-144-362-HGA1, IN. V
ICV	ICV (External)	0.6	100 ml	3.0 ml	Y	0.1		HG-19-144-364-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-19-144-362-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-19-144-363-HGA2, IN. V

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Reagent Information Log- Hg Soil

MA # 46615

Reagents	Exp. Date	Reagent # or manufacturer lot #
Conc. HydroChloric Acid	4/19/2021	Baker 221681
Conc. Nitric Acid	4/19/2021	Baker 205793
Sodium Chloride-Hydroxylamine Hydrochloride	10/22/2019	HG-19-144 360 -HGHCL
Potassium Permanganate	10/22/2019	HG-19-144 358 -HGKM2
Stannous Chloride	5/1/2019	HG-19-144 365 -HGS
STD Hg standard solution 1000 ppm	3/1/2020	Inorganic Ventures K2-HG669550
STD Hg standard solution 100 ppb	5/1/2019	HG-19-144 362 -HGA1
STD Hg standard solution 10 ppb	5/1/2019	HG-19-144 363 -HGA2
ICV Hg standard solution 1000 ppm	6/30/2021	Ultra T00601
ICV Hg standard solution 100 ppb	5/1/2019	HG-19-144 364 -HGB1
Solid Lab control/Soil LC	3/31/2020	ERA D094-540
Aqua Regia	5/1/2019	HG-19-144 366 -HGKAQ
Dilution acid	10/22/2019	HG-19-144 361 -HGD1
Digestion Tubes	N/A	Environmental Express 1812114
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
MP14721	5/1/2019	16:40	5/1/2019	21:40	JC87093-7	

Temperature

		Block ID	Therm. ID#	Balance ID	Temperature	Correction	Corrected Temp
1	Start	9	4156488	B-41	95	0	95
1	End	9	4156488	NA	95	0	95
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
MP14721-MB1	N/A	100	1.05	ABCD		
MP14721-B1	N/A	100	1.02	ABCD	ABCD	
MP14721-S1	5	100	0.99	ABCD	ABCD	
MP14721-S2	5	100	1.01	ABCD	ABCD	
MP14721-SD1	5	100	1.03	ABCD		
JC87093-1	2	100	1.00	ABCD		
JC87093-10	2	100	0.97	ABCD		
JC87093-11	2	100	1.01	ABCD		
JC87093-12	2	100	0.99	ABCD		
JC87093-2	2	100	0.97	ABCD		
JC87093-3	2	100	0.95	ABCD		
JC87093-4	2	100	1.00	ABCD		
JC87093-5	2	100	0.98	ABCD		
JC87093-6	2	100	1.01	ABCD		
JC87093-7	5	100	1.03	ABCD		
JC87093-8	2	100	0.98	ABCD		
JC87093-9	2	100	1.02	ABCD		
JC87232-1	2	100	0.98	ABCD		
JC87232-2	2	100	1.01	ABCD		
JC87232-3	2	100	1.01	ABCD		
JC87232-4	2	100	1.05	ABCD		
JC87232-5	2	100	1.02	ABCD		
JC87232-6	2	100	1.04	ABCD		
JC87232-7	2	100	1.00	ABCD		
JC87232-8	2	100	1.01	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** 5/2/2019

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

Document Control #: NJ-MET-PREP-SO-01 (2456482.5460764432) Validated by: Validated on:

SGS

Metals Digestion Reagents Information Log

Digestion Batch ID: MP 14721 **Date:** 5/1/2019

Matrix: ALL

Standard/Reagent Type	Exp. Date	Standard/Reagent ID
Spiking Solution - (ACCUTEST-13A REV1)	10/16/2019	MP-015-1159
Spiking Solution - (ACCUTEST-14A REV1)	10/16/2019	MP-015-1160
Spiking Solution - 5000 mg/l Minerals	4/25/2020	P2-MEB678659 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	4/12/2020	N2-BI669548 MFG: INO. VENT.
Spiking Solution - Se 20ppm	10/10/2019	MP-015-1156
Spiking Solution - Li 1000ppm	4/18/2020	N2-LI665824 MFG: INO. VENT.
Spiking Solution- Ag 20 ppm	10/23/2019	MP-015-1163
Spiking Solution - (ACCUTEST-13B REV1)	10/10/2019	MP-015-1157
Spiking Solution - (ACCUTEST-14B REV1)	9/27/2019	MP-015-1148
Spiking Solution - 1000ppm Minerals	6/4/2019	MP-015-1117
Spiking Solution- P		
Nitric Acid	4/30/2021	LOT: 213500 MFG: J.T. BAKER
Nitric Acid (1:1)	10/29/2019	MP-018-42-196 1:1 HNO3
Hydrochloric Acid	4/30/2021	LOT: 221681 MFG: J.T. BAKER
Hydrochloric Acid (1:1)	10/30/2019	MP-018-42-197 1:1 HCL
Hydrogen Peroxide	4/26/2021	LOT: 189267 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 5/6/2019 Analyst NP MP # ~~14736~~ 14721 14736

QC sample #

Post spike for ICP Method 6010D

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 672948	11/28/19	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: JC87093
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	GP21029/GN94976	0.24	0.0	mg/kg	2	2.18	109.0	90-110%
Cyanide	GP21053/GN95026	0.24	0.14	mg/kg	2	2.16	108.0	90-110%
Cyanide	GP21104/GN95077	0.24	0.0	mg/kg	2	2.13	106.5	90-110%

Associated Samples:
Batch GP21029: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11
Batch GP21053: JC87093-12
Batch GP21104: JC87093-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP21029/GN94976	JC87073-9	mg/kg	0.46	0.34	30.0	0-49%
Cyanide	GP21053/GN95026	JC87525-5	mg/kg	0.0	0.22	0.0	0-49%
Cyanide	GP21104/GN95077	JC87495-2	mg/kg	0.0	0.0	0.0	0-49%
Solids, Percent	GN94892	JC87372-18	%	90.9	90.9	0.0	0-5%
Solids, Percent	GN94893	JC87093-7	%	58.9	57	3.3	0-5%

Associated Samples:
Batch GN94892: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-6
Batch GN94893: JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11, JC87093-12
Batch GP21029: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11
Batch GP21053: JC87093-12
Batch GP21104: JC87093-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC87093
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	GP21029/GN94976	JC87073-9	mg/kg	0.46	2.45	3.6	128.3N(a)	75-125%
Cyanide	GP21053/GN95026	JC87525-5	mg/kg	0.0	1.62	0.99	61.2N(a)	75-125%
Cyanide	GP21104/GN95077	JC87495-2	mg/kg	0.0	2.64	2.6	98.3	75-125%

Associated Samples:
Batch GP21029: JC87093-1, JC87093-2, JC87093-3, JC87093-4, JC87093-5, JC87093-7, JC87093-8, JC87093-9, JC87093-10, JC87093-11
Batch GP21053: JC87093-12
Batch GP21104: JC87093-6
(*) 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: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050619W1.CN Date Analyzed: 05/06/19 Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN I-20
Analyst: KI Run ID: GN94976
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:49	GN94976-STD1	1		STDA
11:51	GN94976-STD2	1		STDB
11:52	GN94976-STD3	1		STDC
11:54	GN94976-STD4	1		STDD
11:55	GN94976-STD5	1		STDE
11:56	GN94976-STD6	1		STDF
11:58	GN94976-STD7	1		STDG
11:59	GN94976-ICV1	1		
12:00	GN94976-ICB1	1		
12:02	GN94976-CCV1	1		
12:03	GN94976-CCB1	1		
12:04	GP21013-MB1	1		
12:06	GP21013-B1	1		
12:07	GP21013-D1	1		
12:08	JC87130-1A	1		(sample used for QC only; not part of login JC87093)
12:10	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:14	ZZZZZZ	1		
12:15	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:18	GN94976-CCV2	1		
12:19	GN94976-CCB2	1		
12:21	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:33	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050619W1.CN Date Analyzed: 05/06/19 Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN I-20
Analyst: KI Run ID: GN94976
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:34	GN94976-CCV3	1		
12:36	GN94976-CCB3	1		
12:37	GP21024-MB1	1		
12:38	ZZZZZZ	1		
12:40	GP21025-MB1	1		
12:41	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:44	GP21026-MB1	1		
12:45	ZZZZZZ	1		
12:47	GP21028-MB1	1		
12:48	GP21028-B1	1		
12:49	GP21028-S1	1		
12:51	GN94976-CCV4	1		
12:52	GN94976-CCB4	1		
12:53	GP21028-D1	1		
12:55	JC87221-6	1		(sample used for QC only; not part of login JC87093)
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:06	GP21027-MB1	1		
13:07	GN94976-CCV5	1		
13:08	GN94976-CCB5	1		
13:10	GP21027-B1	1		ccv failed, see rerun
13:11	GP21027-S1	1		ccv failed, see rerun
13:12	GP21027-S2	1		ccv failed, see rerun
13:14	GP21027-D1	1		ccv failed, see rerun
13:15	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:18	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050619W1.CN Date Analyzed: 05/06/19 Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN I-20
Analyst: KI Run ID: GN94976
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:19	ZZZZZZ	1		
13:21	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:23	GN94976-CCV6	1		
13:25	GN94976-CCB6	1		
13:29	GN94976-CCV7	1		
13:31	GN94976-CCB7	1		
13:32	GP21027-B1	1		
13:34	GP21027-S1	1		
13:35	GP21027-S2	1		
13:36	GP21027-D1	1		
13:38	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:46	GN94976-CCV8	1		
13:47	GN94976-CCB8	1		
13:48	JC87124-6	1		(sample used for QC only; not part of login JC87093)
13:50	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:55	ZZZZZZ	1		
13:57	ZZZZZZ	1		
13:58	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:02	GN94976-CCV9	1		
14:03	GN94976-CCB9	1		
14:05	ZZZZZZ	1		
14:06	JC87221-3	1		(sample used for QC only; not part of login JC87093)

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050619W1.CN Date Analyzed: 05/06/19 Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN I-20
Analyst: KI Run ID: GN94976
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:08	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:10	GP21029-MB1	1		ccb failed, see rerun
14:12	GP21029-B1	1		ccb failed, see rerun
14:13	GP21029-S1	1		ccb failed, see rerun
14:14	GP21029-S2	1		ccb failed, see rerun
14:16	GP21029-D1	1		ccb failed, see rerun
14:17	ZZZZZZ	1		
14:18	GN94976-CCV10	1		
14:24	GN94976-CCV11	1		
14:26	GN94976-CCB10	1		
14:27	ZZZZZZ	1		
14:28	JC87221-3	1		(sample used for QC only; not part of login JC87093)
14:30	ZZZZZZ	1		
14:31	ZZZZZZ	1		
14:33	GP21029-MB1	1		
14:34	GP21029-B1	1		
14:35	GP21029-S1	1		
14:37	GP21029-S2	1		
14:38	GP21029-D1	1		
14:39	ZZZZZZ	1		
14:41	GN94976-CCV12	1		
14:42	GN94976-CCB11	1		
14:43	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:46	JC87073-7	1		(sample used for QC only; not part of login JC87093)
14:48	JC87073-9	1		(sample used for QC only; not part of login JC87093)
14:49	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:54	JC87093-1	1		
14:56	JC87093-2	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050619W1.CN Date Analyzed: 05/06/19 Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN I-20
Analyst: KI Run ID: GN94976
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:57	GN94976-CCV13	1		
14:58	GN94976-CCB12	1		
15:00	JC87093-3	1		
15:01	JC87093-4	1		
15:02	JC87093-5	1		
15:04	JC87093-6	1		Over calibration curve. See rerun at dilution.
15:05	JC87093-7	1		
15:07	JC87093-8	1		
15:08	JC87093-9	1		
15:09	JC87093-10	1		
15:12	JC87093-11	1		
15:14	GN94976-CCV14	1		
15:15	GN94976-CCB13	1		
15:43	GN94976-CCV15	1		
15:44	GN94976-CCB14	1		
15:45	JC87093-6	3		back to need, dilution did not match
15:48	GN94976-CCV16	1		
15:50	GN94976-CCB15	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050619W1.CN Date Analyzed: 05/06/19 Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN I-20
Run ID: GN94976 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN94976-ICV1	Cyanide	0.326	0.010	0.0041	.3	108.7	90-110
GN94976-ICB1	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV1	Cyanide	0.413	0.010	0.0041	.4	103.3	90-110
GN94976-CCB1	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV2	Cyanide	0.406	0.010	0.0041	.4	101.5	90-110
GN94976-CCB2	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV3	Cyanide	0.408	0.010	0.0041	.4	102.0	90-110
GN94976-CCB3	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV4	Cyanide	0.410	0.010	0.0041	.4	102.5	90-110
GN94976-CCB4	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV5	Cyanide	0.430	0.010	0.0041	.4	107.5	90-110
GN94976-CCB5	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV6	Cyanide	0.441	0.010	0.0041	.4	110.3!(a)	90-110
GN94976-CCB6	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV7	Cyanide	0.389	0.010	0.0041	.4	97.3	90-110
GN94976-CCB7	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV8	Cyanide	0.388	0.010	0.0041	.4	97.0	90-110
GN94976-CCB8	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV9	Cyanide	0.388	0.010	0.0041	.4	97.0	90-110
GN94976-CCB9	Cyanide	0.0041 U	0.010	0.0041			
GN94976-CCV10	Cyanide	0.388	0.010	0.0041	.4	97.0	90-110
GN94976-CCV11	Cyanide	0.415	0.010	0.0041	.4	103.8	90-110
GN94976-CCB10	Cyanide	-0.00455	0.010	0.0041			
GN94976-CCV12	Cyanide	0.418	0.010	0.0041	.4	104.5	90-110
GN94976-CCB11	Cyanide	-0.00593	0.010	0.0041			
GN94976-CCV13	Cyanide	0.417	0.010	0.0041	.4	104.3	90-110
GN94976-CCB12	Cyanide	-0.00709	0.010	0.0041			
GN94976-CCV14	Cyanide	0.418	0.010	0.0041	.4	104.5	90-110
GN94976-CCB13	Cyanide	-0.00692	0.010	0.0041			
GN94976-CCV15	Cyanide	0.388	0.010	0.0041	.4	97.0	90-110
GN94976-CCB14	Cyanide	-0.00427	0.010	0.0041			
GN94976-CCV16	Cyanide	0.388	0.010	0.0041	.4	97.0	90-110
GN94976-CCB15	Cyanide	-0.00517	0.010	0.0041			

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: D050719W1.CN Date Analyzed: 05/07/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: KI Run ID: GN95026
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:18	GN95026-STD1	1		STDB
16:19	GN95026-STD2	1		STDC
16:20	GN95026-STD3	1		STDD
16:21	GN95026-STD4	1		STDE
16:22	GN95026-STD5	1		STDF
16:23	GN95026-STD6	1		STDG
16:24	GN95026-ICV1	1		
16:34	GN95026-ICV2	1		
16:35	GN95026-ICB1	1		
16:36	GN95026-CCV1	1		
16:41	GN95026-CCV2	1		
16:42	GN95026-CCB1	1		
16:43	GP21060-MB1	1		
16:44	GP21060-B1	1		
16:45	GP21060-D1	1		
16:46	JC87244-1	1		(sample used for QC only; not part of login JC87093)
16:47	ZZZZZZ	1		
16:48	ZZZZZZ	1		
16:49	ZZZZZZ	1		
16:50	ZZZZZZ	1		
16:51	ZZZZZZ	1		
16:52	ZZZZZZ	1		
16:53	GN95026-CCV3	1		
16:54	GN95026-CCB2	1		
16:55	ZZZZZZ	1		
16:56	ZZZZZZ	1		
16:57	ZZZZZZ	1		
16:58	ZZZZZZ	1		
16:59	ZZZZZZ	1		
17:00	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:02	GP21051-MB1	1		
17:03	GP21051-B1	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: D050719W1.CN Date Analyzed: 05/07/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: KI Run ID: GN95026
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:04	GP21051-S1	1		
17:05	GN95026-CCV4	1		
17:06	GN95026-CCB3	1		
17:07	GP21051-D1	1		
17:08	JC87377-1	1		(sample used for QC only; not part of login JC87093)
17:09	GP21052-MB1	1		
17:10	GP21052-B1	1		
17:11	GP21052-S1	1		
17:12	GP21052-S2	1		
17:13	GP21052-D1	1		
17:14	JC87414-5	1		(sample used for QC only; not part of login JC87093)
17:15	ZZZZZZ	1		
17:17	ZZZZZZ	1		
17:18	GN95026-CCV5	1		
17:19	GN95026-CCB4	1		
17:22	GN95026-CCV6	1		
17:23	GN95026-CCB5	1		
17:24	JC87413-1	1		(sample used for QC only; not part of login JC87093)
17:25	ZZZZZZ	1		
17:27	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:30	ZZZZZZ	1		
17:31	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:33	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:35	GN95026-CCV7	1		
17:36	GN95026-CCB6	1		
17:37	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:40	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: D050719W1.CN Date Analyzed: 05/07/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: KI Run ID: GN95026
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:41	ZZZZZZ	1		
17:42	ZZZZZZ	1		
17:43	ZZZZZZ	1		
17:44	GP21053-MB1	1		
17:45	GP21053-B1	1		
17:46	GP21053-S1	1		
17:47	GN95026-CCV8	1		
17:48	GN95026-CCB7	1		
17:49	GP21053-D1	1		
17:50	JC87525-5	1		(sample used for QC only; not part of login JC87093)
17:51	ZZZZZZ	1		
17:52	ZZZZZZ	1		
17:53	ZZZZZZ	1		
17:54	ZZZZZZ	1		
17:55	ZZZZZZ	1		
17:56	ZZZZZZ	1		
17:57	ZZZZZZ	1		
17:58	JC87093-12	1		
17:59	GN95026-CCV9	1		
18:00	GN95026-CCB8	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: D050719W1.CN Date Analyzed: 05/07/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Run ID: GN95026 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN95026-ICV1	Cyanide	0.338	0.010	0.0041	.3	112.7!(a)	90-110
GN95026-ICV2	Cyanide	0.321	0.010	0.0041	.3	107.0	90-110
GN95026-ICB1	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV1	Cyanide	0.445	0.010	0.0041	.4	111.3!(a)	90-110
GN95026-CCV2	Cyanide	0.429	0.010	0.0041	.4	107.3	90-110
GN95026-CCB1	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV3	Cyanide	0.428	0.010	0.0041	.4	107.0	90-110
GN95026-CCB2	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV4	Cyanide	0.430	0.010	0.0041	.4	107.5	90-110
GN95026-CCB3	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV5	Cyanide	0.429	0.010	0.0041	.4	107.3	90-110
GN95026-CCB4	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV6	Cyanide	0.427	0.010	0.0041	.4	106.8	90-110
GN95026-CCB5	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV7	Cyanide	0.425	0.010	0.0041	.4	106.3	90-110
GN95026-CCB6	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV8	Cyanide	0.430	0.010	0.0041	.4	107.5	90-110
GN95026-CCB7	Cyanide	0.0041 U	0.010	0.0041			
GN95026-CCV9	Cyanide	0.428	0.010	0.0041	.4	107.0	90-110
GN95026-CCB8	Cyanide	0.0041 U	0.010	0.0041			

(!) Outside of QC limits
(a) see rerun

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050819W1.CN Date Analyzed: 05/08/19 Methods: SW846 9012B/LACHAT
Analyst: KI Run ID: GN95077
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:40	GN95077-STD1	1		STDA
14:42	GN95077-STD2	1		STDB
14:43	GN95077-STD3	1		STDC
14:44	GN95077-STD4	1		STDD
14:46	GN95077-STD5	1		STDE
14:47	GN95077-STD6	1		STDF
14:49	GN95077-STD7	1		STDG
14:50	GN95077-ICV1	1		
14:51	GN95077-ICB1	1		
14:53	GN95077-CCV1	1		
14:54	GN95077-CCB1	1		
14:55	GP21104-MB1	1		
14:57	GP21104-B1	1		
14:58	GP21104-S1	1		
14:59	GP21104-S2	1		
15:01	GP21104-D1	1		
15:02	ZZZZZZ	1		
15:03	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:06	JC87495-2	1		(sample used for QC only; not part of login JC87093)
15:08	JC87498-1	1		(sample used for QC only; not part of login JC87093)
15:09	GN95077-CCV2	1		
15:10	GN95077-CCB2	1		
15:14	GN95077-CCV3	1		
15:16	GN95077-CCB3	1		
15:17	JC87093-6	1		Over calibration curve. See rerun at dilution.
15:19	ZZZZZZ	1		
15:20	ZZZZZZ	1		
15:21	ZZZZZZ	1		
15:23	ZZZZZZ	1		
15:24	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:27	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050819W1.CN Date Analyzed: 05/08/19 Methods: SW846 9012B/LACHAT
Analyst: KI Run ID: GN95077
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:28	ZZZZZZ	1		
15:29	ZZZZZZ	1		
15:31	GN95077-CCV4	1		
15:32	GN95077-CCB4	1		
15:34	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:36	JC87093-6	3		difficult matrix, 1:3 dilution
15:39	GN95077-CCV5	1		
15:41	GN95077-CCB5	1		
15:44	GN95077-CCV6	1		
15:46	GN95077-CCB6	1		
15:47	JC87093-6	3		1:3 dilution, confirmation only
15:50	GN95077-CCV7	1		
15:52	GN95077-CCB7	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC87093
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050819W1.CN Date Analyzed: 05/08/19 Methods: SW846 9012B/LACHAT
Run ID: GN95077 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN95077-ICV1	Cyanide	0.322	0.010	0.0050	.3	107.3	90-110
GN95077-ICB1	Cyanide	-0.00698	0.010	0.0050			
GN95077-CCV1	Cyanide	0.425	0.010	0.0050	.4	106.3	90-110
GN95077-CCB1	Cyanide	-0.00690	0.010	0.0050			
GN95077-CCV2	Cyanide	0.424	0.010	0.0050	.4	106.0	90-110
GN95077-CCB2	Cyanide	-0.00726	0.010	0.0050			
GN95077-CCV3	Cyanide	0.429	0.010	0.0050	.4	107.3	90-110
GN95077-CCB3	Cyanide	-0.00612	0.010	0.0050			
GN95077-CCV4	Cyanide	0.428	0.010	0.0050	.4	107.0	90-110
GN95077-CCB4	Cyanide	-0.00749	0.010	0.0050			
GN95077-CCV5	Cyanide	0.428	0.010	0.0050	.4	107.0	90-110
GN95077-CCB5	Cyanide	-0.00579	0.010	0.0050			
GN95077-CCV6	Cyanide	0.429	0.010	0.0050	.4	107.3	90-110
GN95077-CCB6	Cyanide	-0.00600	0.010	0.0050			
GN95077-CCV7	Cyanide	0.429	0.010	0.0050	.4	107.3	90-110
GN95077-CCB7	Cyanide	-0.00553	0.010	0.0050			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC87093-1 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-155 (10-12)

Wet Weight (Total)	38.87	g
Tare Weight	28.59	g
Dry Weight (Total)	35.15	g
Solids, Percent	63.8	%

Sample: JC87093-2 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-155 (13-15)

Wet Weight (Total)	29.1	g
Tare Weight	18.04	g
Dry Weight (Total)	24.06	g
Solids, Percent	54.4	%

Sample: JC87093-3 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-154 (9-11)

Wet Weight (Total)	36.24	g
Tare Weight	26.2	g
Dry Weight (Total)	34.09	g
Solids, Percent	78.6	%

Sample: JC87093-4 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED M
ClientID: S-154 (12-14)

Wet Weight (Total)	32.59	g
Tare Weight	23.32	g
Dry Weight (Total)	28.68	g
Solids, Percent	57.8	%

Sample: JC87093-5 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: SO-DUP-0426-1

Wet Weight (Total)	31.08	g
Tare Weight	20.57	g
Dry Weight (Total)	26.33	g
Solids, Percent	54.8	%

Sample: JC87093-6 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-158 (11-13)

Wet Weight (Total)	40.22	g
Tare Weight	27.35	g
Dry Weight (Total)	37.37	g
Solids, Percent	77.9	%

Percent Solids Raw Data Summary

Job Number: JC87093
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC87093-7 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-158 (18-20)

Wet Weight (Total)	36.71	g
Tare Weight	26.6	g
Dry Weight (Total)	32.55	g
Solids, Percent	58.9	%

Sample: JC87093-8 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-159 (11-13)

Wet Weight (Total)	38.64	g
Tare Weight	23.44	g
Dry Weight (Total)	35.73	g
Solids, Percent	80.9	%

Sample: JC87093-9 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-159 (18-20)

Wet Weight (Total)	39.95	g
Tare Weight	24.67	g
Dry Weight (Total)	35.53	g
Solids, Percent	71.1	%

Sample: JC87093-10 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED M
ClientID: S-153 (7-9)

Wet Weight (Total)	36.27	g
Tare Weight	23.91	g
Dry Weight (Total)	31.26	g
Solids, Percent	59.5	%

Sample: JC87093-11 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-153 (13.5-15)

Wet Weight (Total)	27.13	g
Tare Weight	17.63	g
Dry Weight (Total)	23.65	g
Solids, Percent	63.4	%

Sample: JC87093-12 **Analyzed:** 03-MAY-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: SO-DUP2-0426

Wet Weight (Total)	41.39	g
Tare Weight	26.34	g
Dry Weight (Total)	36.72	g
Solids, Percent	69	%

General Chemistry

Raw Data

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E050619W1.CN
Analyst: KI

Date Analyzed: 05/06/19
Run ID: GN94976

Methods: EPA 335.4/LACHAT, SM4500CN I-2011, SM4500CN

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 5/6/19

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 _____

e050619w1.cn

GN94976

Author: Chemistry

Date : 5/6/2019

Original Run Filename: OM_5-6-2019_11-48-45AM.OMN Created: 5/6/2019 11:48:45 AM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-6-2019_11-48-45AM.OMN Last Modified: 5/6/2019 1:27:25 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

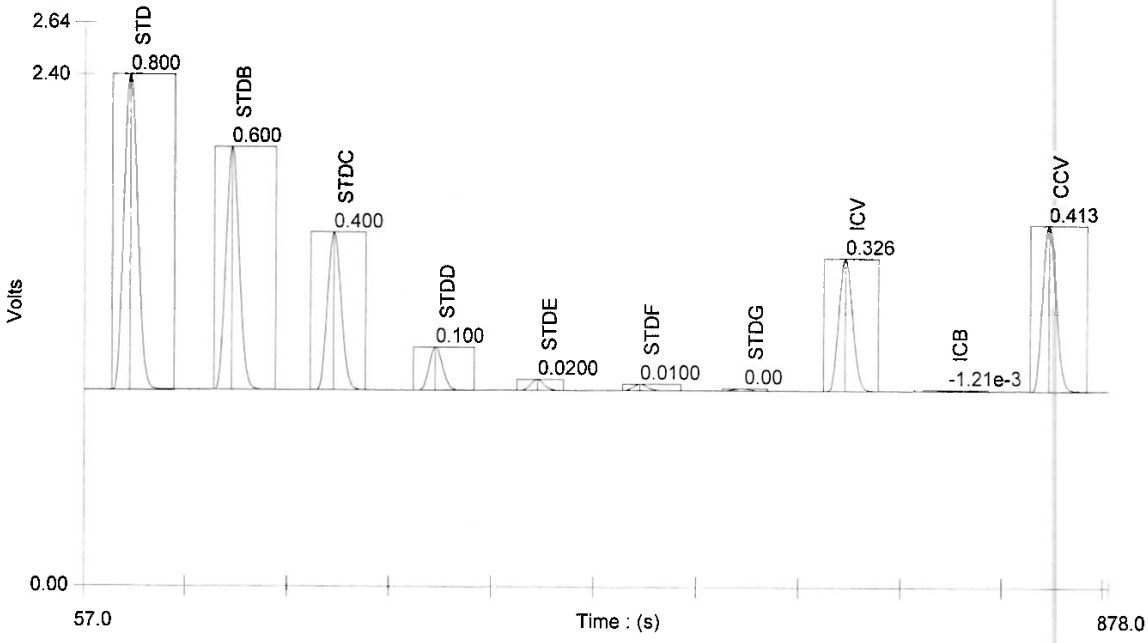
Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	+1.5%
STDA	1	1	0.800	5/6/2019@11:49:54 AM		
STDB	1	2	0.600	5/6/2019@11:51:16 AM		
STDC	1	3	0.400	5/6/2019@11:52:38 AM		
STDD	1	4	0.100	5/6/2019@11:54:00 AM		
STDE	1	5	0.0200	5/6/2019@11:55:22 AM		
STDF	1	6	0.0100	5/6/2019@11:56:43 AM		
STDG	1	7	0.00	5/6/2019@11:58:05 AM		
ICV	1	8	0.326	5/6/2019@11:59:27 AM		
	Known Conc:		0.300			108.7
	Calibration:		Table/Fig. : 1			
ICB	1	9	-1.21e-3	5/6/2019@12:00:48 PM		
	Known Conc:		0.00			
CCV	1	S9	0.413	5/6/2019@12:02:10 PM		
	Known Conc:		0.400			103.25
CCB	1	S10	-3.52e-3	5/6/2019@12:03:32 PM		
	Known Conc:		0.00			
GP21013-MB1	1	10	-6.16e-3	5/6/2019@12:04:53 PM		
GP21013-B1	1	11	0.551	5/6/2019@12:06:14 PM		27.6
GP21013-D1	1	12	-4.48e-3	5/6/2019@12:07:35 PM		
JC87130-1A	1	13	-6.18e-3	5/6/2019@12:08:56 PM		
JC87130-2A	1	14	-7.03e-3	5/6/2019@12:10:17 PM		
JC87130-3A	1	15	-6.41e-3	5/6/2019@12:11:38 PM		
JC87130-4A	1	16	-6.14e-3	5/6/2019@12:13:00 PM		
JC87130-5A	1	17	-6.11e-3	5/6/2019@12:14:23 PM		
JC87091-3A	1	18	-8.77e-3	5/6/2019@12:15:45 PM		
JC87091-7A	1	19	-7.56e-3	5/6/2019@12:17:07 PM		
CCV	1	S9	0.406	5/6/2019@12:18:29 PM		
	Known Conc:		0.400			101.5
CCB	1	S10	-3.13e-3	5/6/2019@12:19:50 PM		
	Known Conc:		0.00			
JC87091-13A	1	20	-6.80e-3	5/6/2019@12:21:12 PM		
JC87091-19A	1	21	-7.08e-3	5/6/2019@12:22:34 PM		
JC86794-1	1	22	-6.72e-3	5/6/2019@12:23:58 PM		
JC87229-1	1	23	-7.67e-3	5/6/2019@12:25:16 PM		
JC87241-1	1	24	-5.36e-3	5/6/2019@12:26:38 PM		
JC87241-2	1	25	-7.55e-3	5/6/2019@12:27:59 PM		
JC87241-3	1	26	-7.76e-3	5/6/2019@12:29:20 PM		
JC87241-4	1	27	-6.99e-3	5/6/2019@12:30:42 PM		
JC87241-5	1	28	2.94e-3	5/6/2019@12:32:03 PM		
JC87242-1	1	29	-4.81e-3	5/6/2019@12:33:23 PM		
CCV	1	S9	0.408	5/6/2019@12:34:45 PM		
	Known Conc:		0.400			102
CCB	1	S10	-2.77e-3	5/6/2019@12:36:07 PM		
	Known Conc:		0.00			
GP21024-MB1	1	30	-5.38e-4	5/6/2019@12:37:28 PM		
JC85413-37A	1	31	0.0103	5/6/2019@12:38:50 PM		
GP21025-MB1	1	32	6.98e-4	5/6/2019@12:40:12 PM		
JC80479-2A	1	33	-2.41e-4	5/6/2019@12:41:35 PM		
JC80479-2	1	34	0.0110	5/6/2019@12:42:57 PM		
GP21026-MB1	1	35	-1.09e-3	5/6/2019@12:44:19 PM		
JC85414-13A	1	36	0.0201	5/6/2019@12:45:41 PM		
GP21028-MB1	1	37	2.67e-3	5/6/2019@12:47:03 PM		
GP21028-B1	1	38	0.0900	5/6/2019@12:48:24 PM		108
GP21028-S1	1	39	0.0839	5/6/2019@12:49:46 PM		
CCV	1	S9	0.410	5/6/2019@12:51:07 PM		
	Known Conc:		0.400			102.5
CCB	1	S10	-3.32e-3	5/6/2019@12:52:29 PM		
	Known Conc:		0.00			
GP21028-D1	1	40	2.28e-3	5/6/2019@12:53:51 PM		
JC87221-6	1	41	2.91e-3	5/6/2019@12:55:12 PM		

Author: Chemistry

Date : 5/6/2019

JC87221-7	1	42	3.23e-3	5/6/2019@12:56:33 PM	
JC87221-8	1	43	6.02e-3	5/6/2019@12:57:54 PM	
JC87221-9	1	44	5.95e-3	5/6/2019@12:59:15 PM	
JC87221-10	1	45	6.64e-3	5/6/2019@1:00:36 PM	
JC80498-2A	1	46	5.76e-3	5/6/2019@1:01:59 PM	
JC80498-2	1	47	0.0132	5/6/2019@1:03:21 PM	
JC87402-1	1	48	2.86e-3	5/6/2019@1:04:43 PM	
GP21027-MB1	1	49	-2.16e-4	5/6/2019@1:06:05 PM	
CCV	1	S9	0.430	5/6/2019@1:07:26 PM	
	Known Conc:		0.400		107.5
CCB	1	S10	-1.39e-3	5/6/2019@1:08:48 PM	
	Known Conc:		0.00		
GP21027-B1	1	50	0.0889	5/6/2019@1:10:10 PM	
GP21027-S1	1	51	0.0874	5/6/2019@1:11:32 PM	
GP21027-S2	1	52	0.0901	5/6/2019@1:12:54 PM	
GP21027-D1	1	53	4.02e-3	5/6/2019@1:14:15 PM	
JC87074-13	1	54	-2.97e-3	5/6/2019@1:15:37 PM	CCV failed, see rerun
JC87100-2	1	55	1.36e-3	5/6/2019@1:16:58 PM	
JC87124-1	1	56	4.26e-4	5/6/2019@1:18:20 PM	
JC87124-3	1	58	1.33e-3	5/6/2019@1:19:41 PM	
JC87124-4	1	59	8.24e-4	5/6/2019@1:21:02 PM	
JC87124-5	1	60	2.38e-3	5/6/2019@1:22:23 PM	
CCV	1	S9	0.441	5/6/2019@1:23:44 PM	
	Known Conc:		0.400		110.25
CCB	1	S10	-1.47e-3	5/6/2019@1:25:06 PM	
	Known Conc:		0.00		

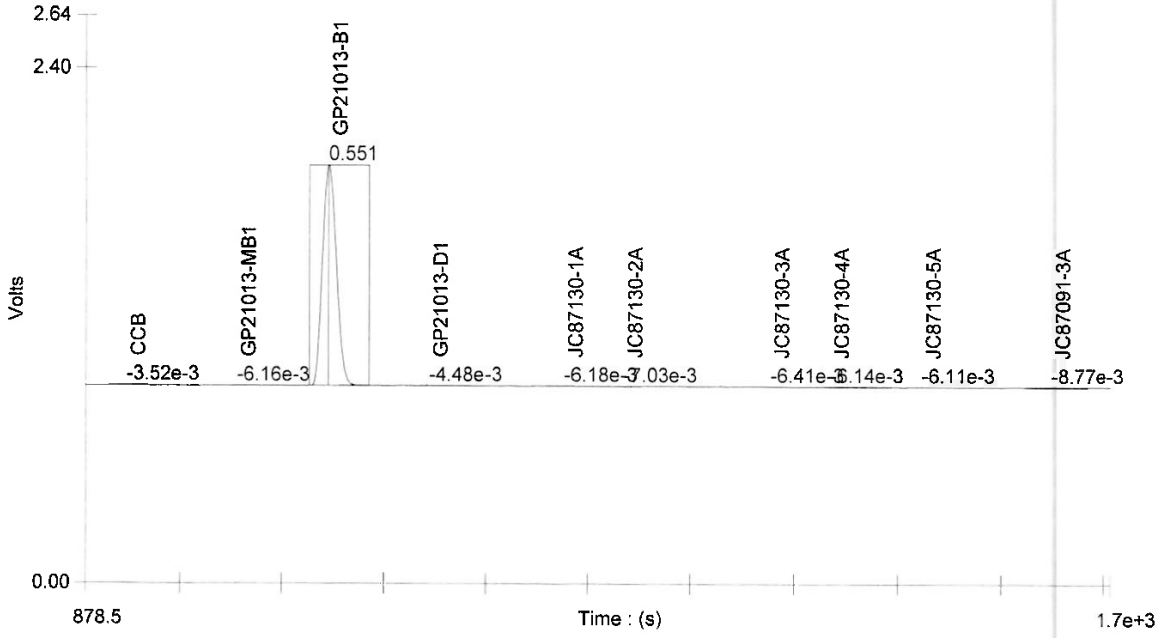
Channel 1 - Set: 1 / 8



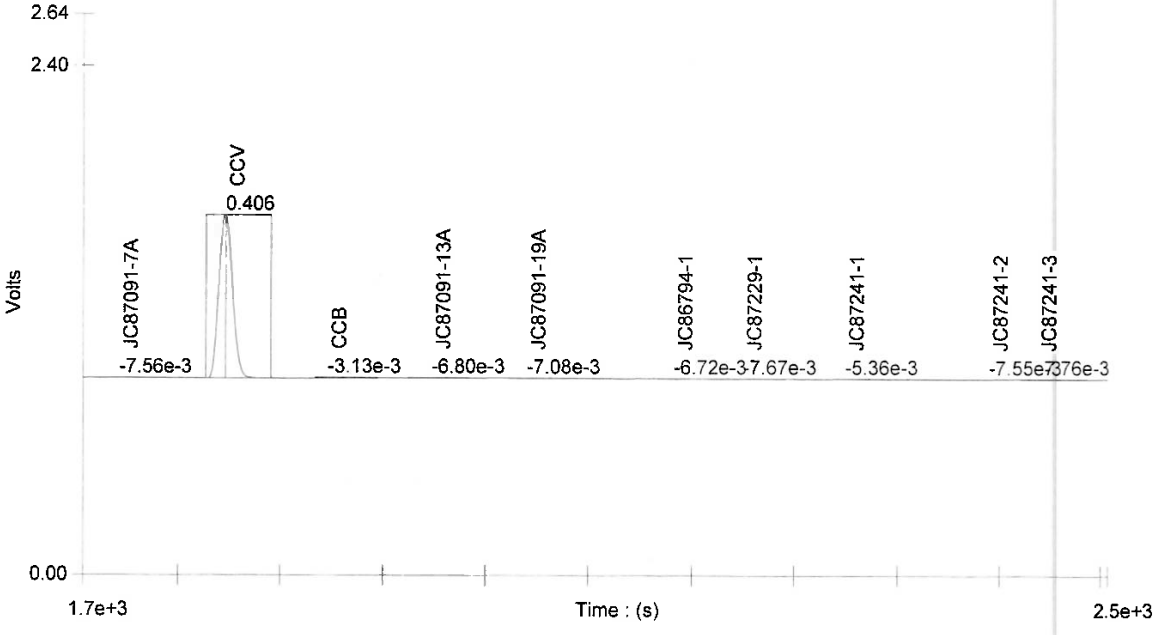
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 2 / 8



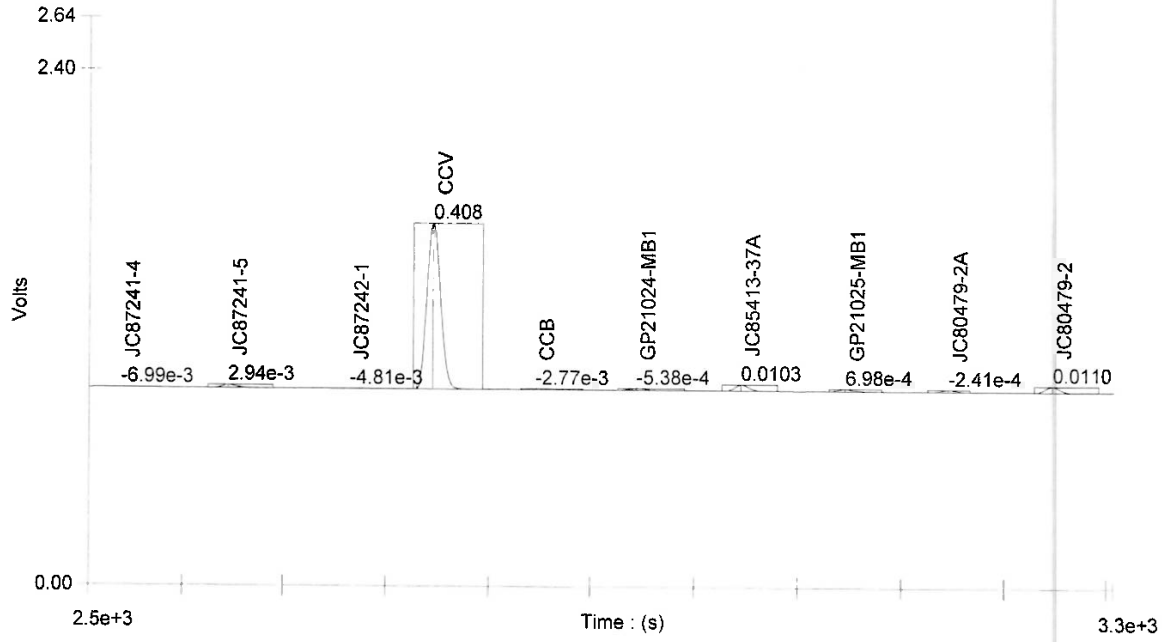
Channel 1 - Set: 3 / 8



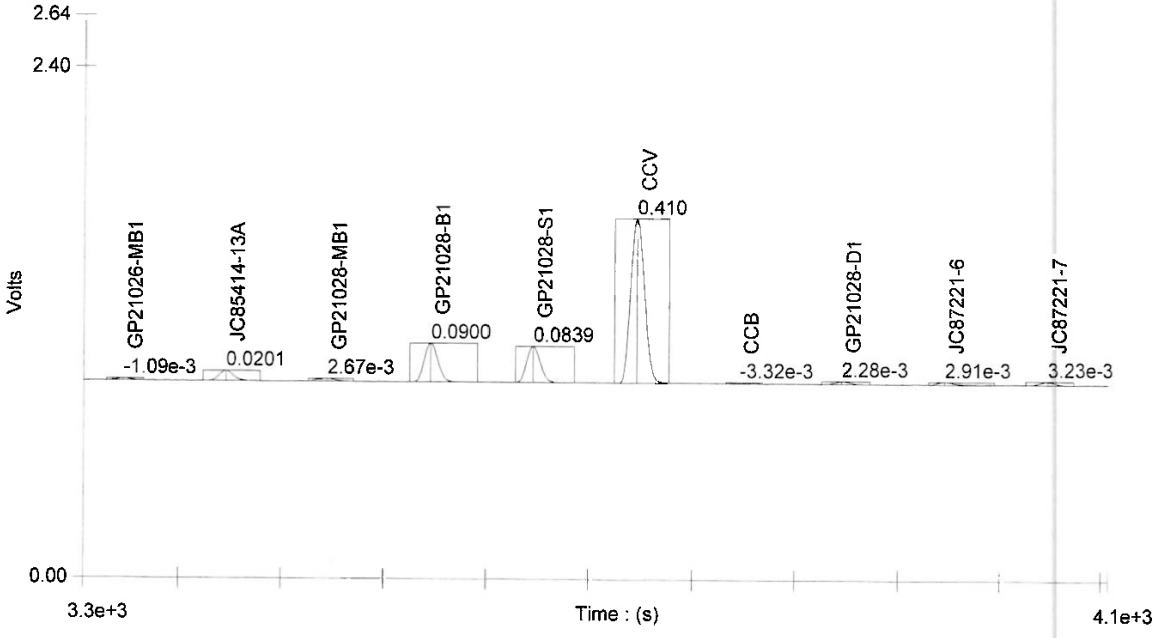
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 4 / 8



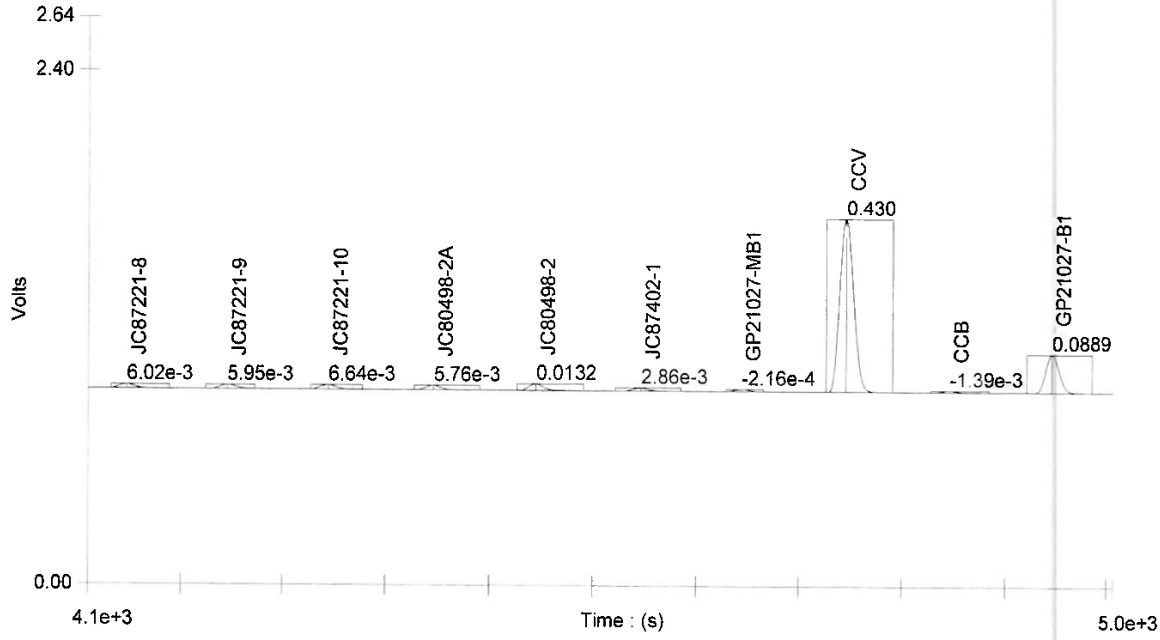
Channel 1 - Set: 5 / 8



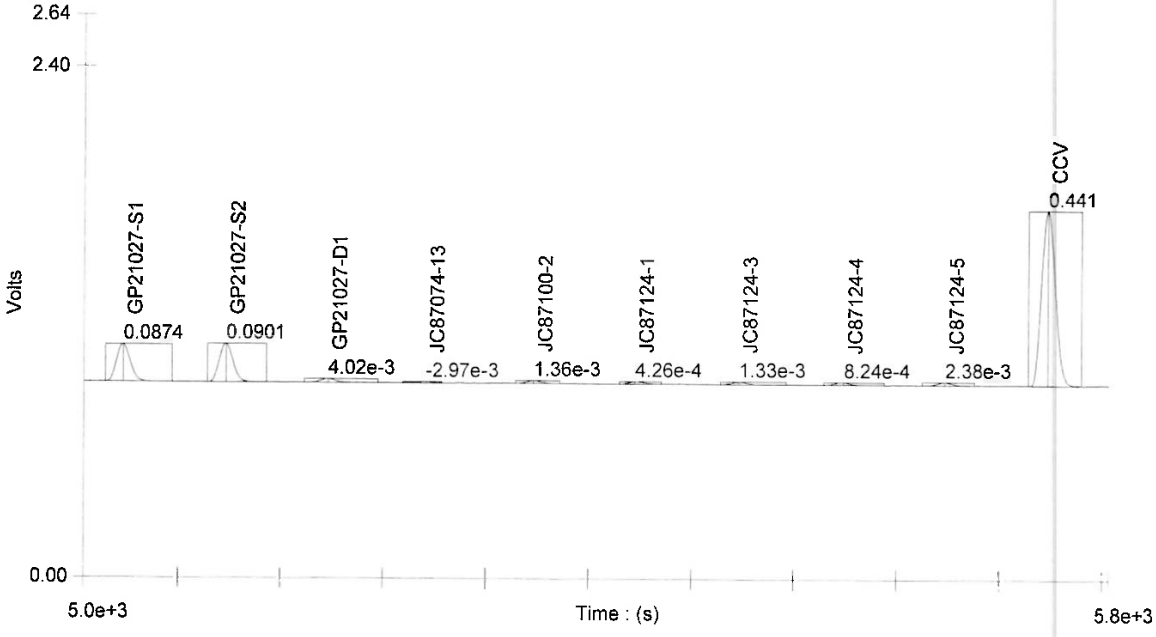
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 6 / 8



Channel 1 - Set: 7 / 8



Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 8 / 8

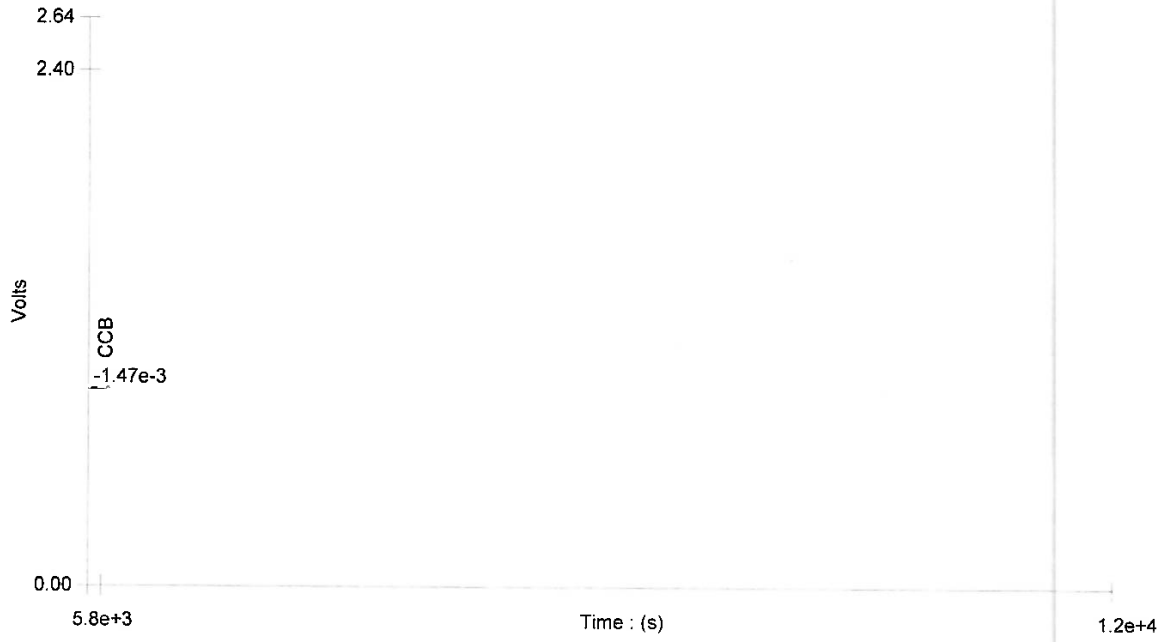
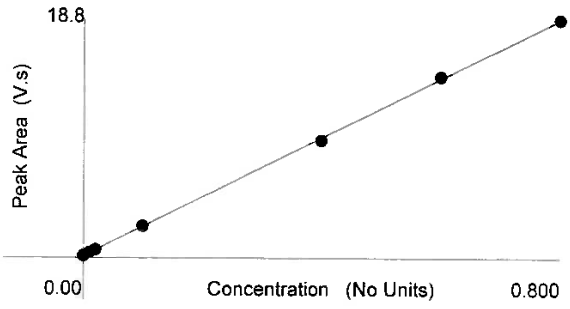


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	18.8	1.48	0.0	7.0e-3	0.800	5/6/2019	11:49:54 AM
2	0.600	1	14.3	1.14	0.0	-1.0	0.606	5/6/2019	11:51:16 AM
3	0.400	1	9.26	0.739	0.0	2.3	0.391	5/6/2019	11:52:38 AM
4	0.100	1	2.49	0.200	0.0	-0.6	0.101	5/6/2019	11:54:00 AM
5	0.0200	1	0.636	0.0504	0.0	-4.1	0.0211	5/6/2019	11:55:22 AM
6	0.0100	1	0.400	0.0298	0.0	-6.0	0.0110	5/6/2019	11:56:43 AM
7	0.00	1	0.157	0.0108			6.08e-4	5/6/2019	11:58:05 AM

Figure : 1 (CN)



Area = 23.3 * Conc + 0.144
Conc = 0.0428 * Area - 6.13e-3
Correlation Coefficient (r) = 0.99990

Weighting : None

e050619w2.cn

Author: Chemistry

Date : 5/6/2019

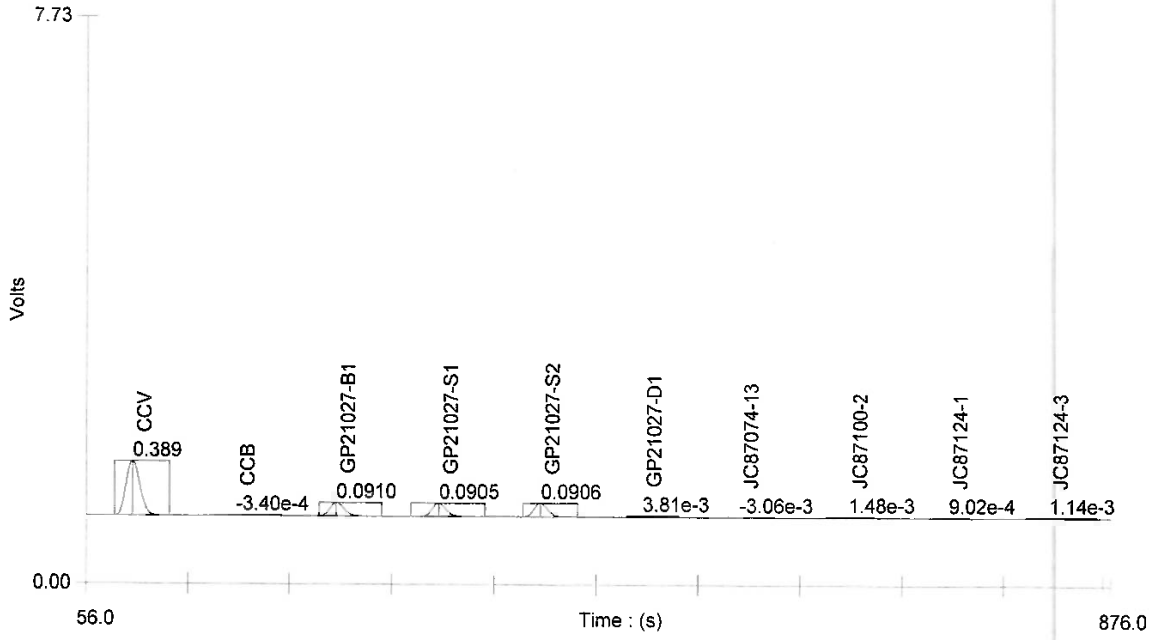
Original Run Filename: OM_5-6-2019_01-28-47PM.OMN Created: 5/6/2019 1:28:47 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-6-2019_01-28-47PM.OMN Last Modified: 5/6/2019 2:21:47 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	*to rec
CCV	1	S9	0.389	5/6/2019@1:29:56 PM		
	Known Conc:		0.400			97.25
CCB	1	S10	-3.40e-4	5/6/2019@1:31:18 PM		
	Known Conc:		0.00			
	Calibration:		Table/Fig. : 1			
GP21027-B1	1	50	0.0910	5/6/2019@1:32:40 PM		109.2
GP21027-S1	1	51	0.0905	5/6/2019@1:34:02 PM		
GP21027-S2	1	52	0.0906	5/6/2019@1:35:24 PM		
GP21027-D1	1	53	3.81e-3	5/6/2019@1:36:45 PM		
JC87074-13	1	54	-3.06e-3	5/6/2019@1:38:06 PM		
JC87100-2	1	55	1.48e-3	5/6/2019@1:39:28 PM		
JC87124-1	1	56	9.02e-4	5/6/2019@1:40:49 PM		
JC87124-3	1	58	1.14e-3	5/6/2019@1:42:10 PM		
JC87124-4	1	59	5.34e-4	5/6/2019@1:43:31 PM		
JC87124-5	1	60	1.78e-3	5/6/2019@1:44:52 PM		
CCV	1	S9	0.388	5/6/2019@1:46:14 PM		
	Known Conc:		0.400			97
CCB	1	S10	-1.02e-3	5/6/2019@1:47:36 PM		
	Known Conc:		0.00			
JC87124-6	1	61	9.81e-4	5/6/2019@1:48:58 PM		
JC87124-7	1	62	1.01e-3	5/6/2019@1:50:20 PM		
JC87124-8	1	63	1.07e-3	5/6/2019@1:51:42 PM		
JC87124-9	1	64	-1.41e-3	5/6/2019@1:53:05 PM		
JC87124-10	1	65	-2.24e-4	5/6/2019@1:54:27 PM		
JC87175-1	1	66	2.24e-4	5/6/2019@1:55:48 PM		
JC87175-2	1	67	-3.85e-4	5/6/2019@1:57:10 PM		
JC87175-3	1	68	-1.62e-4	5/6/2019@1:58:32 PM		
JC87175-4	1	69	1.30e-4	5/6/2019@1:59:54 PM		
JC87175-5	1	70	-3.04e-3	5/6/2019@2:01:15 PM		
CCV	1	S9	0.388	5/6/2019@2:02:37 PM		
	Known Conc:		0.400			97
CCB	1	S10	-2.56e-4	5/6/2019@2:03:58 PM		
	Known Conc:		0.00			
JC87221-1 (2)	1	71	4.37e-3	5/6/2019@2:05:20 PM		
JC87221-3	1	72	3.88e-3	5/6/2019@2:06:51 PM		
JC87221-4	1	73	2.66e-3	5/6/2019@2:08:02 PM		
JC87221-5	1	74	-8.79e-4	5/6/2019@2:09:23 PM		
GP21029-MB1	1	75	-1.25e-3	5/6/2019@2:10:44 PM		see review, ccb failed
GP21029-B1	1	76	0.0909	5/6/2019@2:12:06 PM		
GP21029-S1	1	77	0.122	5/6/2019@2:13:29 PM		
GP21029-S2	1	78	0.0794	5/6/2019@2:14:51 PM		
GP21029-D1	1	79	0.0101	5/6/2019@2:16:13 PM		
JC87073-1	1	80	3.86e-3	5/6/2019@2:17:35 PM		
CCV	1	S9	0.388	5/6/2019@2:18:57 PM		
	Known Conc:		0.400			97

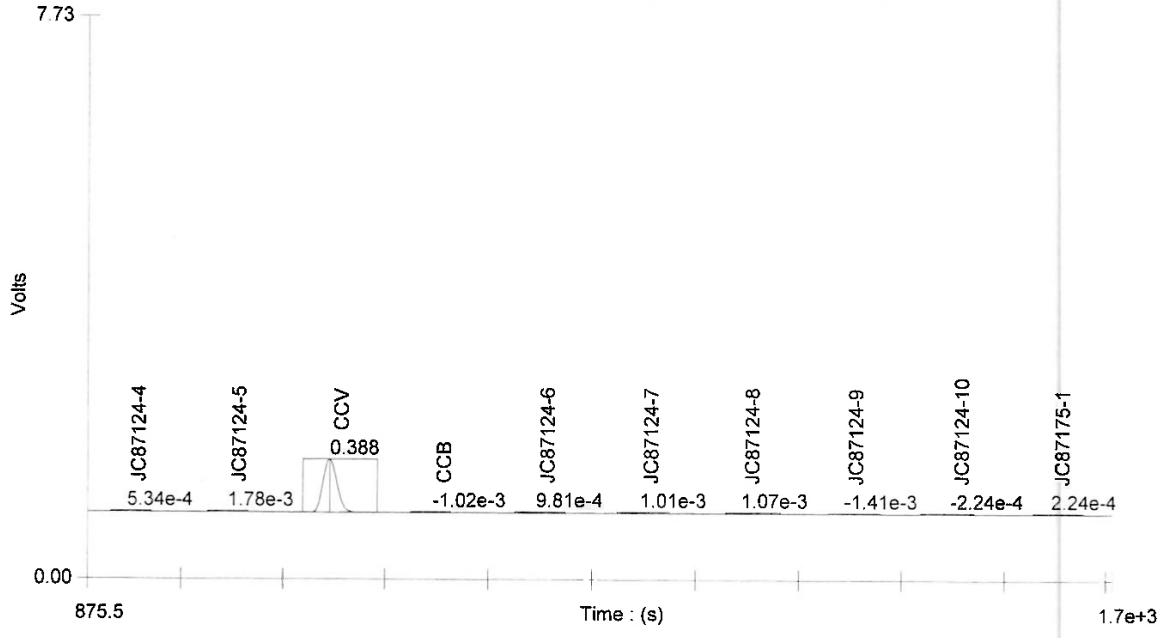
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 1 / 4



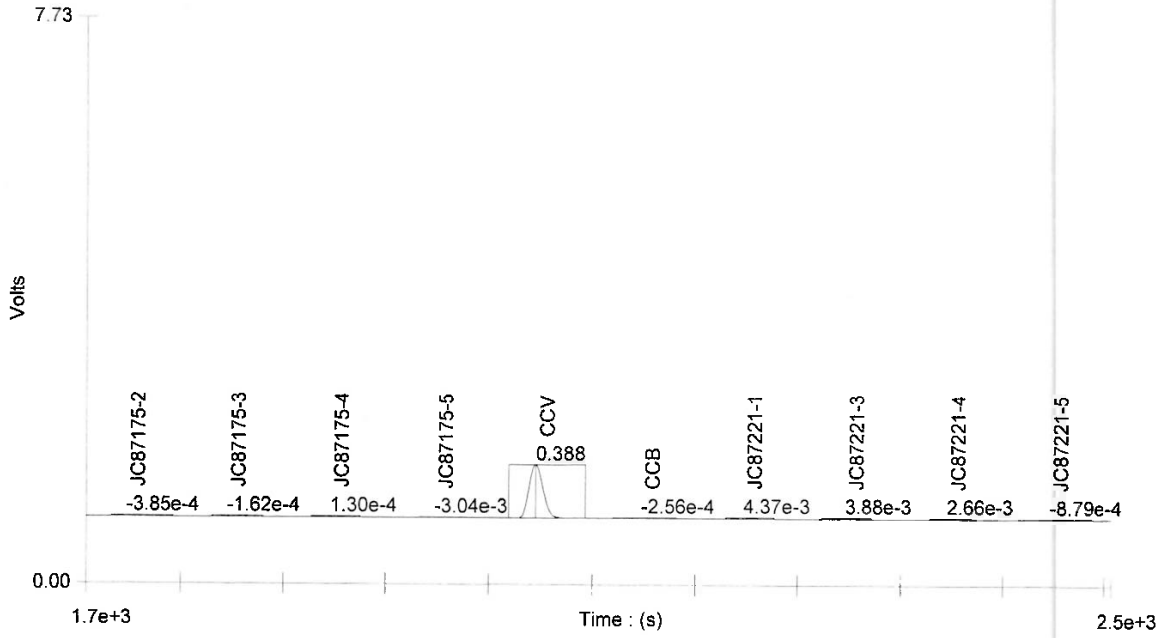
Channel 1 - Set: 2 / 4



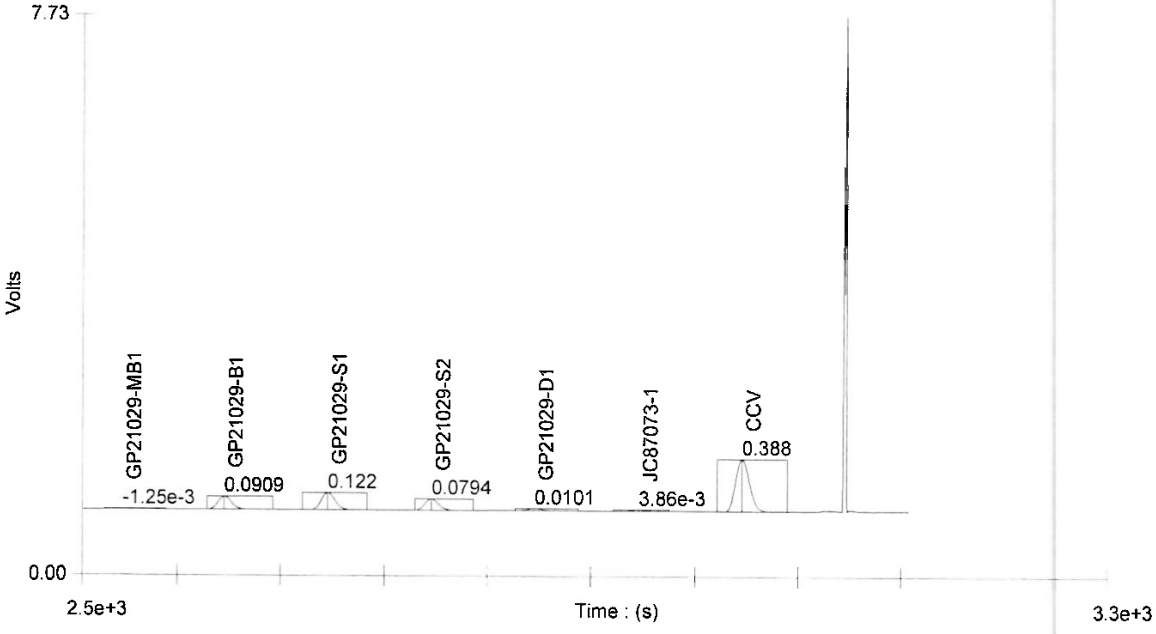
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 3 / 4



Channel 1 - Set: 4 / 4



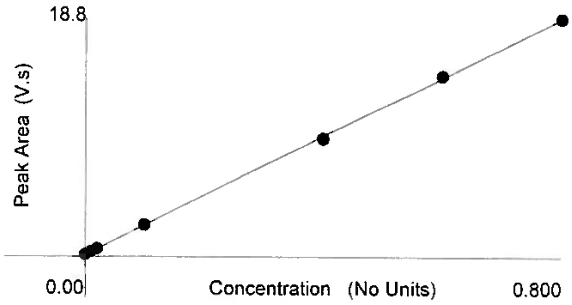
Author: Chemistry

Date : 5/6/2019

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	18.8	1.48	0.0	7.0e-3	0.800	5/6/2019	11:49:54 AM
2	0.600	1	14.3	1.14	0.0	-1.0	0.606	5/6/2019	11:51:16 AM
3	0.400	1	9.26	0.739	0.0	2.3	0.391	5/6/2019	11:52:38 AM
4	0.100	1	2.49	0.200	0.0	-0.6	0.101	5/6/2019	11:54:00 AM
5	0.0200	1	0.636	0.0504	0.0	-4.1	0.0211	5/6/2019	11:55:22 AM
6	0.0100	1	0.400	0.0298	0.0	-6.0	0.0110	5/6/2019	11:56:43 AM
7	0.00	1	0.157	0.0108			6.08e-4	5/6/2019	11:58:05 AM

Figure : 1 (CN)



Area = 23.3 * Conc + 0.144
Conc = 0.0428 * Area - 6.13e-3
Correlation Coefficient (r) = 0.99990

Weighting : None

e050619w3.cn

Author: Chemistry

Date : 5/6/2019

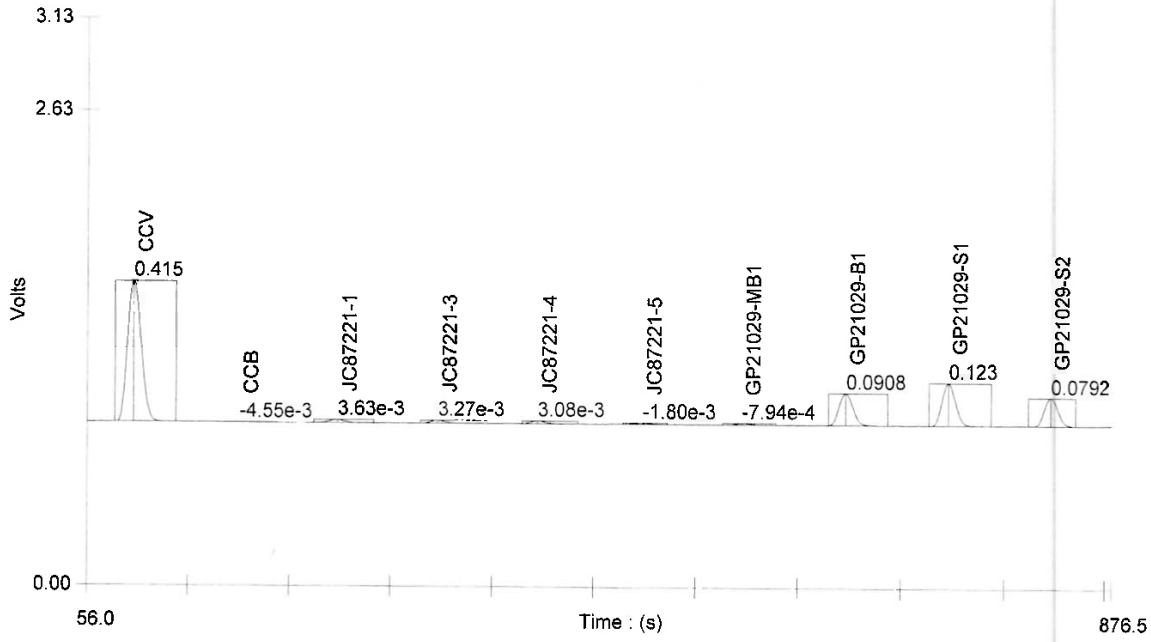
Original Run Filename: OM_5-6-2019_02-23-44PM.OMN Created: 5/6/2019 2:23:44 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-6-2019_02-23-44PM.OMN Last Modified: 5/6/2019 3:17:45 PM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	
CCV	1	S9	0.415	5/6/2019@2:24:53 PM		-6 rec
	Known Conc:		0.400			103.75
CCB	1	S10	-4.55e-3	5/6/2019@2:26:15 PM		
	Known Conc:		0.00			
	Calibration:		Table/Fig. : 1			
JC87221-1	1	71	3.63e-3	5/6/2019@2:27:36 PM		
JC87221-3	1	72	3.27e-3	5/6/2019@2:28:57 PM		
JC87221-4	1	73	3.08e-3	5/6/2019@2:30:18 PM		
JC87221-5	1	74	-1.80e-3	5/6/2019@2:31:39 PM		
GP21029-MB1	1	75	-7.94e-4	5/6/2019@2:33:00 PM		
GP21029-B1	1	76	0.0908	5/6/2019@2:34:23 PM		109
GP21029-S1	1	77	0.123	5/6/2019@2:35:45 PM		
GP21029-S2	1	78	0.0792	5/6/2019@2:37:07 PM		
GP21029-D1	1	79	0.0100	5/6/2019@2:38:29 PM		
JC87073-1	1	80	4.18e-3	5/6/2019@2:39:51 PM		
CCV	1	S9	0.418	5/6/2019@2:41:13 PM		
	Known Conc:		0.400			104.5
CCB	1	S10	-5.93e-3	5/6/2019@2:42:35 PM		
	Known Conc:		0.00			
JC87073-3	1	81	6.77e-3	5/6/2019@2:43:57 PM		
JC87073-5	1	82	2.51e-3	5/6/2019@2:45:18 PM		
JC87073-7	1	83	9.74e-3	5/6/2019@2:46:40 PM		
JC87073-9	1	84	0.0135	5/6/2019@2:48:02 PM		
JC87073-11	1	85	4.86e-3	5/6/2019@2:49:23 PM		
JC87073-13	1	86	0.0103	5/6/2019@2:50:44 PM		
JC87074-1	1	87	3.12e-3	5/6/2019@2:52:05 PM		
JC87074-9	1	88	3.11e-3	5/6/2019@2:53:26 PM		
JC87093-1	1	89	0.176	5/6/2019@2:54:48 PM		
JC87093-2	1	90	0.0350	5/6/2019@2:56:09 PM		
CCV	1	S9	0.417	5/6/2019@2:57:30 PM		
	Known Conc:		0.400			104.25
CCB	1	S10	-7.09e-3	5/6/2019@2:58:52 PM		
	Known Conc:		0.00			
JC87093-3	1	91	0.209	5/6/2019@3:00:15 PM		
JC87093-4	1	92	0.0857	5/6/2019@3:01:37 PM		
JC87093-5	1	93	0.0332	5/6/2019@3:02:59 PM		
JC87093-6 (2)	1	94	0.961	5/6/2019@3:04:21 PM		overrange, see rerun
JC87093-7	1	95	8.25e-3	5/6/2019@3:05:43 PM		
JC87093-8	1	96	0.0197	5/6/2019@3:07:05 PM		
JC87093-9	1	97	6.09e-3	5/6/2019@3:08:27 PM		
JC87093-10	1	98	0.0574	5/6/2019@3:09:49 PM		
JC87093-11	1	99	0.140	5/6/2019@3:12:53 PM		
CCV	1	S9	0.418	5/6/2019@3:14:15 PM		
	Known Conc:		0.400			104.5
CCB	1	S10	-6.92e-3	5/6/2019@3:15:37 PM		
	Known Conc:		0.00			

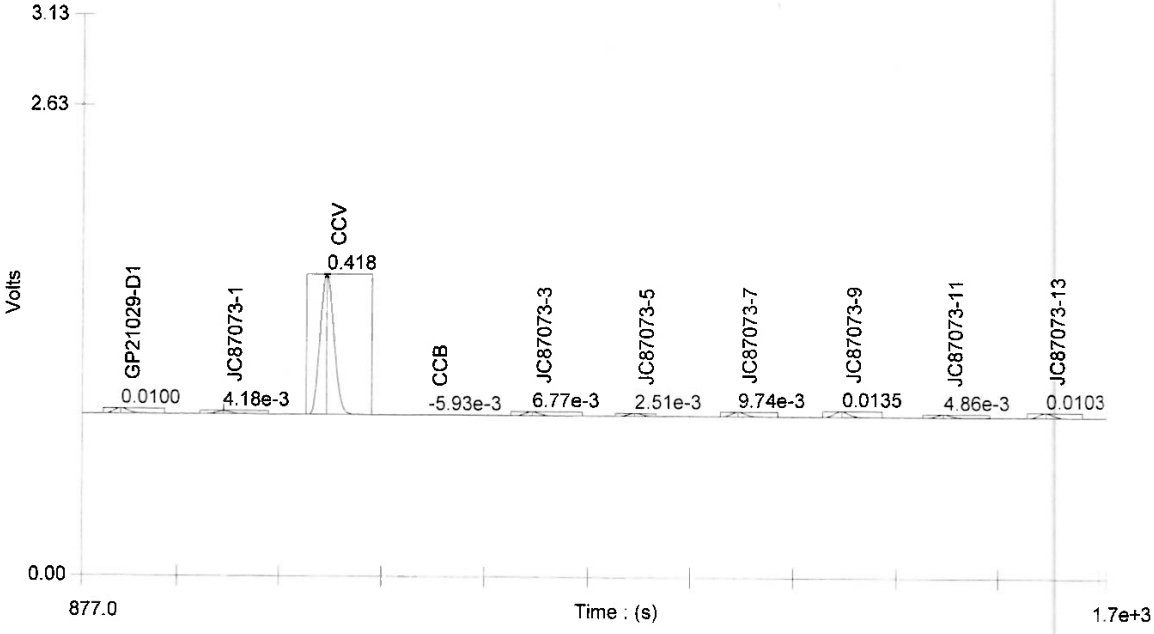
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 1 / 4



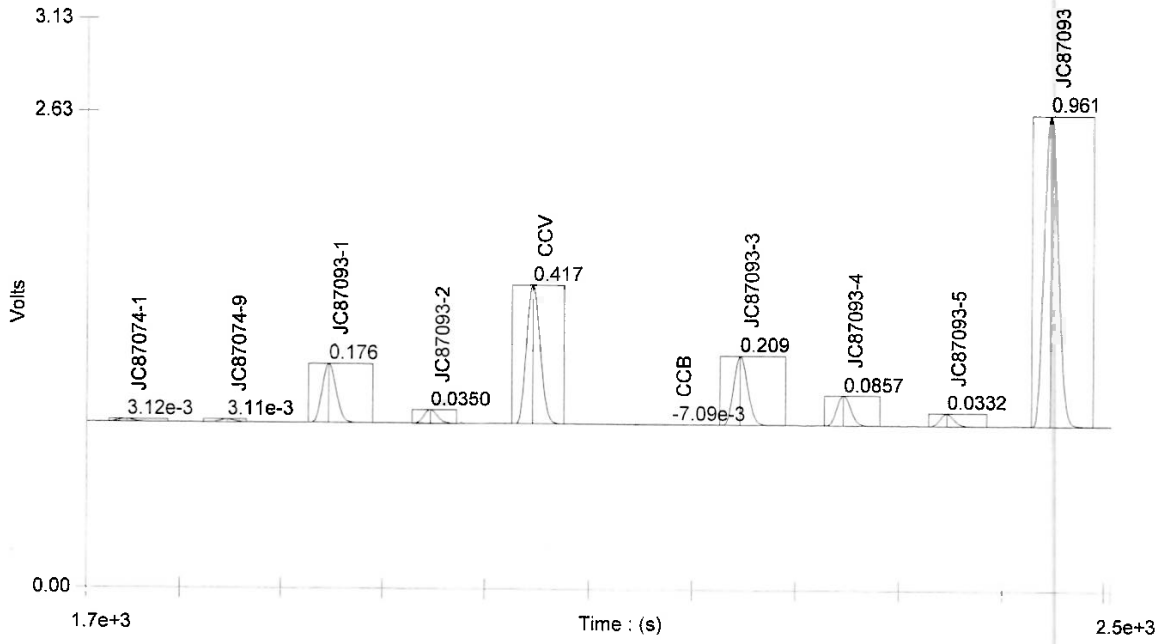
Channel 1 - Set: 2 / 4



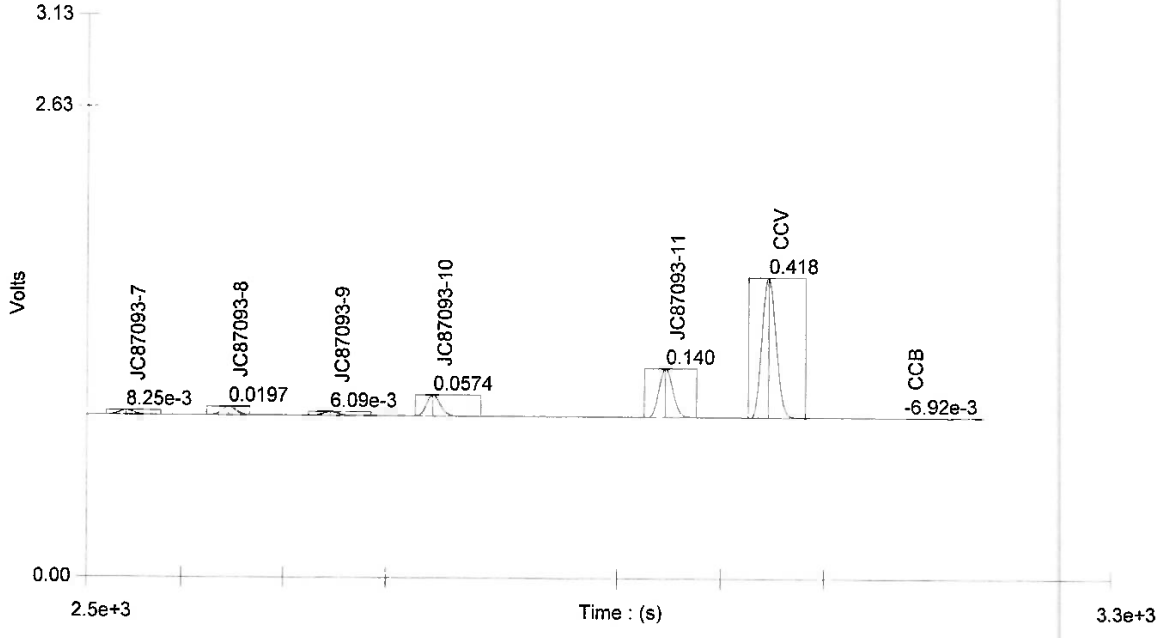
Author: Chemistry

Date : 5/6/2019

Channel 1 - Set: 3 / 4



Channel 1 - Set: 4 / 4



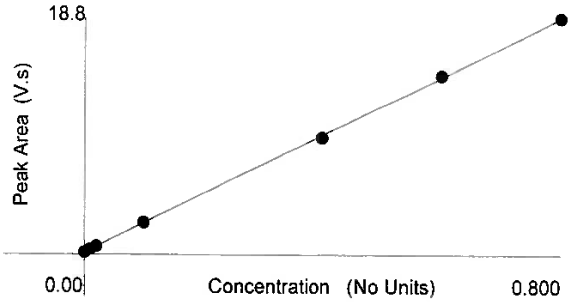
Author: Chemistry

Date : 5/6/2019

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	18.8	1.48	0.0	7.0e-3	0.800	5/6/2019	11:49:54 AM
2	0.600	1	14.3	1.14	0.0	-1.0	0.606	5/6/2019	11:51:16 AM
3	0.400	1	9.26	0.739	0.0	2.3	0.391	5/6/2019	11:52:38 AM
4	0.100	1	2.49	0.200	0.0	-0.6	0.101	5/6/2019	11:54:00 AM
5	0.0200	1	0.636	0.0504	0.0	-4.1	0.0211	5/6/2019	11:55:22 AM
6	0.0100	1	0.400	0.0298	0.0	-6.0	0.0110	5/6/2019	11:56:43 AM
7	0.00	1	0.157	0.0108			6.08e-4	5/6/2019	11:58:05 AM

Figure : 1 (CN)



Area = 23.3 * Conc + 0.144
Conc = 0.0428 * Area - 6.13e-3
Correlation Coefficient (r) = 0.99990

Weighting : None

e050619w4.cn

Author: Chemistry

Date : 5/6/2019

Original Run Filename: OM_5-6-2019_03-42-00PM.OMN Created: 5/6/2019 3:42:00 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-6-2019_03-42-00PM.OMN Last Modified: 5/6/2019 3:52:26 PM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	
CCV	1	S9	0.388	5/6/2019@3:43:09 PM		
	Known Conc:		0.400			97
	Calibration:		Table/Fig. : 1			
CCB	1	S10	-4.27e-3	5/6/2019@3:44:31 PM		
	Known Conc:		0.00			
JC87093-6	1	100	0.388	5/6/2019@3:45:53 PM	3.00	back toxeed, dilution didn't match
CCV	1	S9	0.388	5/6/2019@3:48:57 PM		
	Known Conc:		0.400			
CCB	1	S10	-5.17e-3	5/6/2019@3:50:19 PM		97
	Known Conc:		0.00			

Channel 1 - Set: 1 / 1

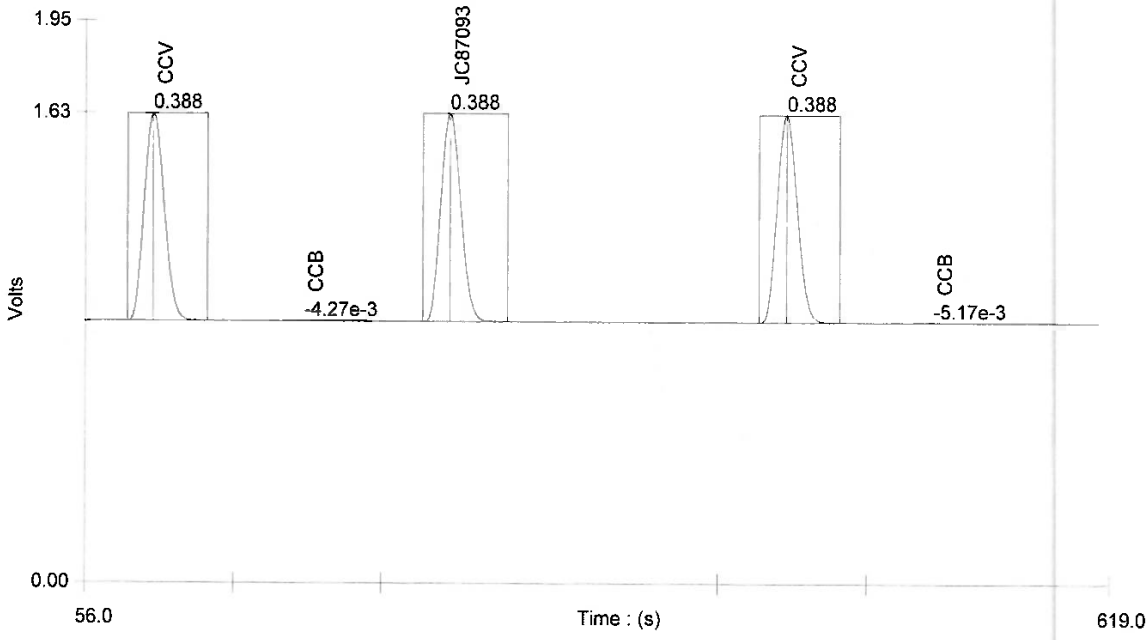


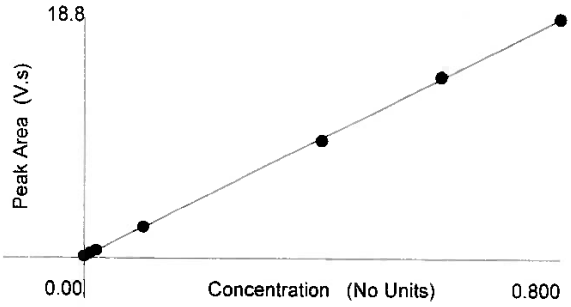
Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	18.8	1.48	0.0	7.0e-3	0.800	5/6/2019	11:49:54 AM
2	0.600	1	14.3	1.14	0.0	-1.0	0.606	5/6/2019	11:51:16 AM
3	0.400	1	9.26	0.739	0.0	2.3	0.391	5/6/2019	11:52:38 AM
4	0.100	1	2.49	0.200	0.0	-0.6	0.101	5/6/2019	11:54:00 AM
5	0.0200	1	0.636	0.0504	0.0	-4.1	0.0211	5/6/2019	11:55:22 AM
6	0.0100	1	0.400	0.0298	0.0	-6.0	0.0110	5/6/2019	11:56:43 AM
7	0.00	1	0.157	0.0108			6.08e-4	5/6/2019	11:58:05 AM

Author: Chemistry

Date : 5/6/2019

Figure : 1 (CN)



Area = 23.3 * Conc + 0.144
Conc = 0.0428 * Area - 6.13e-3
Correlation Coefficient (r) = 0.99990

Weighting : None

SGS

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: GN94976

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituric Acid Reagent	GNE2-57177-CN	8/7/2019
Chloramine-T	GNE4-57882-CN	5/7/2019
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

Analyst KI Product CN Autopipette # 43

Date 5/6/19 Batch ID Class A Vol. Flask

Sample Dilution Prep Log

Sample ID	Dilution	Initial Volume	Final Volume	Comments
JC87093-6	1:3	1	3	

QC Reviewer:_____ Date:_____

Form: GN165-01
Rev. Date: 2/25/03

13.1 13

LABORATORIES

CYANIDE WEAK ACID DISSOCIABLE DISTILLATION LOG (~~WATERS~~ SOIL - MICRO DISTILLATION) #48M

GP 210 25

Method: SM4500CN I-11

Batch ID:

Autopipette ID: 43

Balance ID: ~~MA-827~~

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial ~~Volume~~ Weight (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	4	MB1	12	–	✓	0.25	6	120	14:30	15:00	5/3/19	GP -MB1			BM
												GP -B1	0.10 ml of 5.0 mg/l (c)		
												GP -S1	0.10 ml of 5.0 mg/l		
		JC80479-2A				0.25						GP -S2	0.10 ml of 5.0 mg/l		
		-2				0.25						GP -D1			

) Check if sulfamic acid was added.

) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

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.

omments: 5 PPM SPIKE = mL of PPM CN STD to 200 mL with 0.25 N NaOH.

Reviewer:

Date:

Form: GN0012-05

Rev. Date: 06/8/13

SGS

LOD and LOQ Scheduling

LOD Sample ID: 7C80479-2A

Product: CNWAD
Matrix: SO
LOD Concentration: 0.12 (0.005)
Units: mg/kg
LOD Prep: 0.1 ml of 5ppm CNSTD up to 100ml 0.25N NaOH

Manufacturer/Lot: GNE3-57465-CN
Expiration Date: 9/11/19
GN ID: GN94976
Analysis Date: 5/6/19
Result/Units: -0.000241 mg/L
Recovery: 4.82
Within range of 50 to 150%? ** NO

LOQ (RL) Sample ID: 7C80479-2

Product: CNWAD
Matrix: SO
LOQ Concentration: 0.24 (0.01)
Units: mg/kg
LOQ Prep: 0.2 ml of 5ppm CNSTD up to 100 ml of 0.25N NaOH

Manufacturer/Lot: GNE3-57465-CN
Expiration Date: 9/11/19
GN ID: GN94976
Analysis Date: 5/6/19
Result/Units: 0.0110 mg/L
Recovery: 110.2
Within range of 70 to 130%? ** yes

** if outside of range, notify supervisory team immediately to reschedule

Analyst: BM
Date: 5/3/19
QC Review:
Date:

Form: GN271-02
Rev. Date: 3/2/18

13.1 13

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or Go Number: GP21027

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CNWAD - Distillation

GP Numbers: GP21025

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Sodium Hydroxide 1.25N/0.25 N	GNE3-57468-CN	9/11/2019
Acetate Buffer	gne2-57262-cnwad	8/15/2019
Zinc Acetate	gne8-57261-cnwad	8/15/2019
1:9 Acetic Acid	gne2-57263-cnwad	8/15/2019
Methyl Red	gne3-57943-cnwad	11/3/2019
Micro Distillation tubes	env.818270-8332-ca	N/A
.95 NaOH	GNE2-57182-CN	7/8/2019
Cyanide Stock Solution A - spiking/standards	GNE1-56946-CN	7/11/2019
Cyanide Stock Solution B- externals	GNE1-56947-CN	7/11/2019
Acetic Acid Buffer Solution	gne2-57263-cnwad	8/15/2019
Lead Acetate Test Paper	FISHER Lot:12/8/2016	N/A
pH paper - range 12.5 to 14	HYDRON 210114B	3/20/2020
pH paper - range 1 to 12	HYDRON 223016	9/15/2019

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-28
Rev. Date: 03/19/13

LABORATORIES

CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

GP21028

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

Batch ID:

Autopipette ID: 43

Balance ID: 827

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	2	MB1	12	–	✓	6	6	120	14:30	15:00	5/3/19	GP -MB1			RBM
		B1										GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
		S1 JC87221-6										GP -S1	0.10 ml of 5.0 mg/l		
		D1 JC87221-6										GP -S2	0.10 ml of 5.0 mg/l	✓	
IS		JC87221-6										GP -D1			
IS		-7													
IS		-8													
IS		-9													
IS		-10													
N/A		JC80498-2A													
N/A		-2													
1		JC87402-1													

heck if sulfamic acid was added.

ecord temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

he 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.

nents:

eviewer:

Form: GN0012-04

Rev. Date: 03/09/13

Date:

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21028

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

LOD and LOQ Scheduling

LOD Sample ID: VC80498-2A

Product: CN
Matrix: AQ
LOD Concentration: 0.005
Units: mg/L
LOD Prep: 0.1ml of 5ppm CN STD 100ml of 0.25N NaOH

Manufacturer/Lot: GNE3-57465-CN
Expiration Date: 9/11/19
GN ID: GN94976
Analysis Date: 5/6/19
Result/Units: 0.00576 mg/L
Recovery: 115.2
Within range of 50 to 150%? ** yes

LOQ (RL) Sample ID: VC80498-2

Product: CN
Matrix: SO
LOQ Concentration: 0.01
Units: mg/L
LOQ Prep: 0.2ml of 5ppm CN STD 100ml of 0.25N NaOH

Manufacturer/Lot: GNE3-57465-CN
Expiration Date: 9/11/19
GN ID: GN94976
Analysis Date: 5/6/19
Result/Units: 0.0132 mg/L
Recovery: 132
Within range of 70 to 130%? ** yes

** if outside of range, notify supervisory team immediately to reschedule

Analyst: BM
Date: 5/3/19
QC Review:
Date:

Form: GN271-02
Rev. Date: 3/2/18

13.1 13

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP21028

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction: 2 s

Form: GN087A-28
Rev. Date: 03/19/13

13.1 13

LABORATORIES

CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

GP21027

Batch ID:

Autopipette ID: 43

Balance ID: B27

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	1	MB1	12	—	✓	6	6	120	14:30	15:00	5/3/19	GP -MB1			BM
		B1										GP -B1	0.10 ml of 5.0 mg/l (c)		
		S1 JC87124-6										GP -S1	0.10 ml of 5.0 mg/l		
		S2 JC87221-3										GP -S2	0.10 ml of 5.0 mg/l		
		D1 JC87124-6										GP -D1			
8		JC87074-13													
1		JC87100-2													
14		JC87124-1													
19		-3													
14		-4													
14		-5													
40		-6 QC													
14		-7													
14		-8													
14		-9													
4		-10													
5		JC87175-1													
5		-2													
5		-3													
5		-4													
-		-5													
5	2	JC87221-1													
4		-3 QC													
-		-4													
-		-5													

eck if sulfamic acid was added.

cord temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

e 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.

ents:

viewer:

Form: GN0012-04

Rev. Date: 03/09/13

Date:

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21027

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CN - Distillation

GP Numbers: GP21027

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction: 2 s

Form: GN087A-28
Rev. Date: 03/19/13

13.1 13

SGS

Batch ID: _____

Autopipette ID: 43

Balance ID: B27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

GP 21029

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	–	✓	0.25	6	120	14:30	15:00	5/3/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
		S1 JC87073-9				0.23						GP -S1	0.10 ml of 5.0 mg/l	✓	
		S2 JC87093-7				0.30						GP -S2	0.10 ml of 5.0 mg/l	✓	
		D1 JC87073-9				0.20						GP -D1			
2		JC87073-1				0.25									
2		-3				0.26									
2		-5				0.23									
1		-7				0.21									
1		-9				0.20									
2		-11				0.27									
1		-13				0.23									
1		JC87074-1				0.23									
1		-9				0.25									
2		JC87093-1				0.23									
2		-2				0.25									
2		-3				0.29									
2		-4				0.28									
2		-5				0.25									
2		-6				0.26									
6		-7 QC				0.25									
2	4	-8				0.21									
–		-9				0.24									
2		-10				0.26									
2		-11				0.27									

(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

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP 21029

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CN - Distillation

GP Numbers: GP 21029

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction: 2 s

Form: GN087A-28
Rev. Date: 03/19/13

13.1 13

SGS

REACTIVITY DISTILLATION LOG (SOILS)

Method: SW846 Chapter 7

SREAC / CREAC
GP21012 / GP21013

Batch ID:

Autopipette ID: class 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	500	11:06	11:36	5/3/19	GP -MB	both			CZO
	B1 creac						GP -B	CREAC	✓	10ml of 100ppm	
	B1 sreac						GP -B	SREAC	✓	10ml of 537ppm	
2	JC87130-1A (S1)	10.01					GP -S	SREAC	✓	10ml of 537 ppm	
2	(D1)	9.96					GP -D	both			
2	(DC)	9.97									
3	JC87130-2A	10.02									
2	JC87130-3A	9.91									
1	JC87130-4A	9.96									
4	JC87130-5A	10.00									
1	JC87091-3A	10.02									
1	JC87091-7A	10.05		13:04	13:34						
1	JC87091-13A	9.96									
1	JC87091-19A	10.05									
1	JC 86794-1	9.95									
2	JC87229-1	9.95									
1	JC87241-1	9.98									
1	JC87241-2	10.04									
1	JC87241-3	10.05									
1	JC87241-4	9.95									
1	JC87241-5	10.03									
1	JC 87242-1	9.98									

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

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers:

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE1-56946-CN	7/11/2019	4/19/2019
Sulfide Spike Solution	FISHER # 161566	4/22/2022	NA
Sulfuric Acid, 0.010 N	GNE4-57873-REAC	10/29/2019	NA
Sodium Hydroxide, 0.25 N	GNE4-57872-REAC	10/29/2019	NA
Sodium Hydroxide, 0.25 N	GNE4-57872-REAC	10/29/2019	NA

Form: GN087A-64
Rev. Date: 3/12/04

LABORATORIES

GP 21024 MDL DAY 1

CYANIDE WEAK ACID DISSOCIABLE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: SM4500CN I-11

Batch ID:

Autopipette ID:

Balance ID: N/A

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	4	MB1	12	—	✓	6	6	120	14:30	15:00	5/3/19	GP -MB1			PM
												GP -B1	0.10 ml of 5.0 mg/l (c)		
												GP -S1	0.10 ml of 5.0 mg/l		
		JC85413-37A										GP -S2	0.10 ml of 5.0 mg/l		
												GP -D1			

) Check if sulfamic acid was added.

) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

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 mg/l for one and 0.15 ml of 20.0 mg/l for the other.

omments: 5 PPM SPIKE = ml of . PPM CN STD , T200 ml with 0.25 N NaOH.

C Reviewer:

Date:

Form: GN0012-05

Rev. Date: 06/8/13

SGS

MDL Schedule Log

Product: CNWAD

Matrix: AQ

Instrument: lachat E

Day 1

+ MB

Sample #: JC85413 - 37A MDL or MDLVER x 1

Concentration: 0.01 mg/L or mg/kg or

Prep: 0.2ml of 5ppm CN STD up to 100ml 0.25N NaOH

Sample #: MDL or MDLVER x

Concentration: mg/L or mg/kg or

Prep:

Date: 5/3/19

Analyst: BM

Batch #: GP21024

Form: GN278-04
Revised: 3/2/18

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21024

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CNWAD - Distillation

GP Numbers: GP21024

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Sodium Hydroxide 1.25N/0.25 N	GNE3-57468-CN	9/11/2019
Acetate Buffer	gne2-57262-cnwad	8/15/2019
Zinc Acetate	gne8-57261-cnwad	8/15/2019
1:9 Acetic Acid	gne2-57263-cnwad	8/15/2019
Methyl Red	gne3-57943-cnwad	11/3/2019
Micro Distillation tubes	env.818270-8332-ca	N/A
.95 NaOH	GNE2-57182-CN	7/8/2019
Cyanide Stock Solution A - spiking/standards	GNE1-56946-CN	7/11/2019
Cyanide Stock Solution B- externals	GNE1-56947-CN	7/11/2019
Acetic Acid Buffer Solution	gne2-57263-cnwad	8/15/2019
Lead Acetate Test Paper	FISHER Lot:12/8/2016	N/A
pH paper - range 12.5 to 14	HYDRON 210114B	3/20/2020
pH paper - range 1 to 12	HYDRON 223016	9/15/2019

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-28
Rev. Date: 03/19/13

GP21026 SOIL CNWAD MDL DA41

CYANIDE WEAK ACID DISSOCIABLE DISTILLATION LOG (~~WATERS~~ #4671 - MICRO DISTILLATION)

Method: SM4500CN I-11

Batch ID:

Autopipette ID: 43

Balance ID: ~~MA~~ 827

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	4	MB1	12	—	✓	0.25	6	120	14:30	15:00	5/3/19	GP -MB1			AM
												GP -B1	0.10 ml of 5.0 mg/l (c)		
	4	VC85414-13A										GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		
												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 mg/l for one and 0.15 ml of 20.0 mg/l for the other.

Comments: 5 PPM SPIKE = mL of PPM CN STD T200 mL with 0.25 N NaOH.

QC Reviewer:

Date:

Form: GN0012-05

Rev. Date: 06/8/13

SGS

MDL Schedule Log

Day 1

+ MB

Product: CNWAD

Matrix: Soil

Instrument: lachat E

Sample #: JC85414-13A MDL or MDLVER x 1

Concentration: 0.48 (0.02) mg/L or mg/kg or

Prep: 0.4ml of 5ppm CN STD, 100ml 0.25N NaOH

Sample #: MDL or MDLVER x

Concentration: mg/L or mg/kg or

Prep:

Date: 5/3/19

Analyst: BM

Batch #: GP21026

Form: GN278-04
Revised: 3/2/18

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21026

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CNWAD - Distillation

GP Numbers: GP21026

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Sodium Hydroxide 1.25N/0.25 N	GNE3-57468-CN	9/11/2019
Acetate Buffer	gne2-57262-cnwad	8/15/2019
Zinc Acetate	gne8-57261-cnwad	8/15/2019
1:9 Acetic Acid	gne2-57263-cnwad	8/15/2019
Methyl Red	gne3-57943-cnwad	11/3/2019
Micro Distillation tubes	env.818270-8332-ca	N/A
.95 NaOH	GNE2-57182-CN	7/8/2019
Cyanide Stock Solution A - spiking/standards	GNE1-56946-CN	7/11/2019
Cyanide Stock Solution B- externals	GNE1-56947-CN	7/11/2019
Acetic Acid Buffer Solution	gne2-57263-cnwad	8/15/2019
Lead Acetate Test Paper	FISHER Lot:12/8/2016	N/A
pH paper - range 12.5 to 14	HYDRON 210114B	3/20/2020
pH paper - range 1 to 12	HYDRON 223016	9/15/2019

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-28
Rev. Date: 03/19/13

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: D050719W1.CN
Analyst: KI

Date Analyzed: 05/07/19
Run ID: GN95026

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846

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 5/8/19

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 _____

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: D050719W1A.CN
Analyst: KI

Date Analyzed: 05/07/19
Run ID: GN95061

Methods: SW846 CHAP7/9012B

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 5/8/19

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 _____

GN95026 / GN95061 d050719w1.cn

Author: Chemistry

Date : 5/7/2019

Original Run Filename: OM_5-7-2019_04-16-16PM.OMN Created: 5/7/2019 4:16:16 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-7-2019_04-16-16PM.OMN Last Modified: 5/7/2019 4:26:41 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	5/7/2019@4:17:06 PM	
STDB	1	2	0.600	5/7/2019@4:18:06 PM	
STDC	1	3	0.400	5/7/2019@4:19:05 PM	
STDD	1	4	0.100	5/7/2019@4:20:05 PM	
STDE	1	5	0.0200	5/7/2019@4:21:05 PM	
STDF	1	6	0.0100	5/7/2019@4:22:06 PM	
STDG	1	7	0.00	5/7/2019@4:23:06 PM	
ICV	1	8	0.338	5/7/2019@4:24:07 PM	
		Known Conc:	0.300		
		Calibration:	Table/Fig. : 1		

0.60 ICL

112.7

Channel 1 (NO3) - Set: 1 / 1

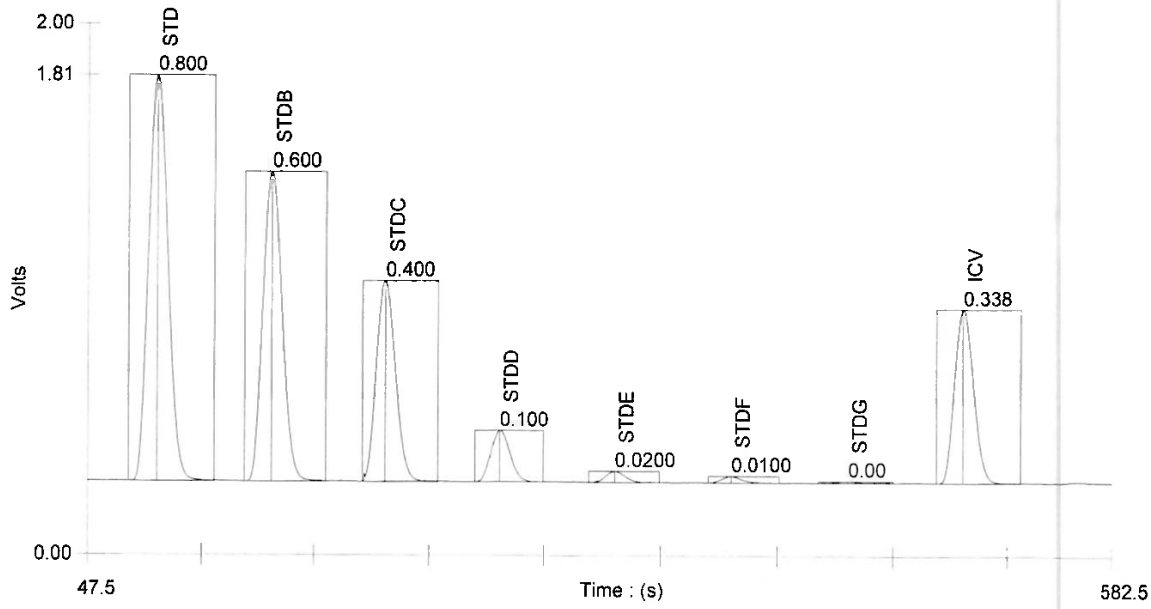


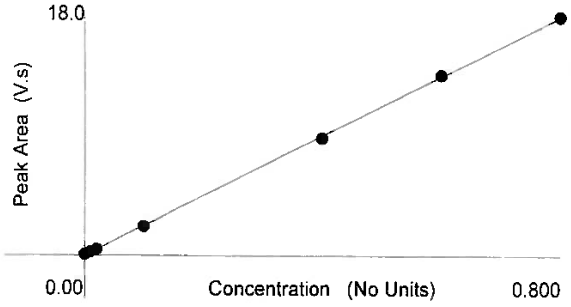
Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	18.0	1.53	0.0	-0.1	0.801	5/7/2019	4:17:06 PM
2	0.600	1	13.6	1.17	0.0	-0.8	0.605	5/7/2019	4:18:06 PM
3	0.400	1	8.80	0.764	0.0	2.0	0.392	5/7/2019	4:19:05 PM
4	0.100	1	2.20	0.192	0.0	2.6	0.0974	5/7/2019	4:20:05 PM
5	0.0200	1	0.468	0.0405	0.0	-1.3	0.0203	5/7/2019	4:21:05 PM
6	0.0100	1	0.282	0.0234	0.0	-18.5	0.0120	5/7/2019	4:22:06 PM
7	0.00	1	0.0795	5.81e-3			2.98e-3	5/7/2019	4:23:06 PM

Author: Chemistry

Date : 5/7/2019

Figure : 1 (CN)



Area = 22.4 * Conc + 0.0138
Conc = 0.0446 * Area - 5.70e-4
Correlation Coefficient (r) = 0.99991

Weighting : None

d050719w2.cn

Author: Chemistry

Date : 5/7/2019

Original Run Filename: OM_5-7-2019_04-34-05PM.OMN Created: 5/7/2019 4:34:05 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-7-2019_04-34-05PM.OMN Last Modified: 5/7/2019 4:39:16 PM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF
ICV	1	8	0.321	5/7/2019@4:34:55 PM	
	Known Conc:		0.300		
	Calibration:		Table/Fig. : 1		
ICB	1	9	3.66e-3	5/7/2019@4:35:55 PM	
	Known Conc:		0.00		
CCV	1	10	0.445	5/7/2019@4:36:54 PM	
	Known Conc:		0.400		

107

111.3

Channel 1 (NO3) - Set: 1 / 1

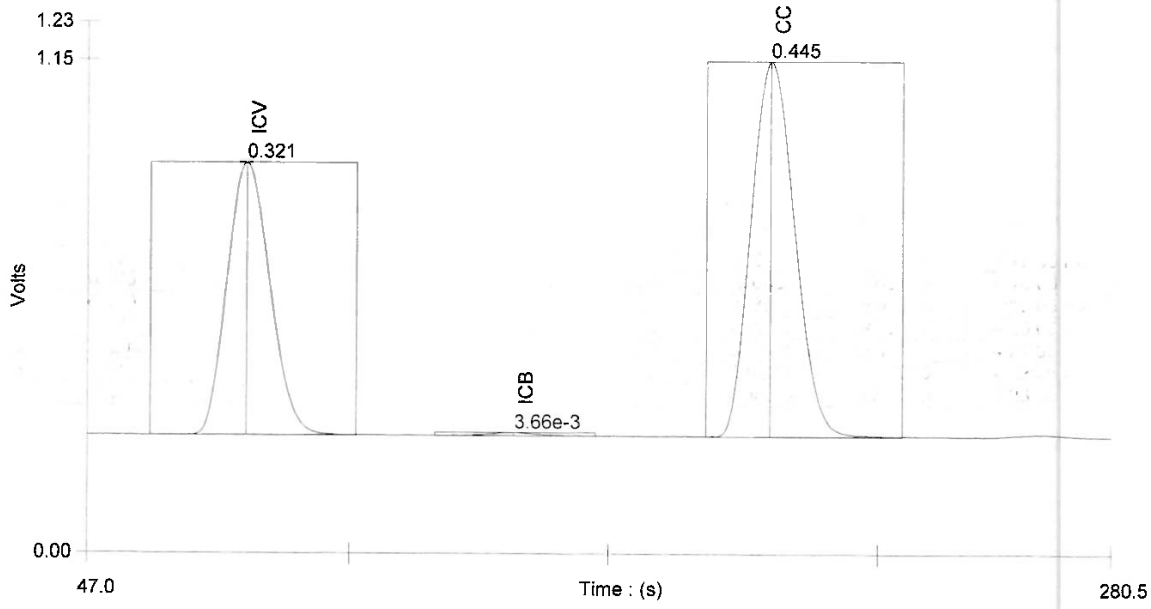


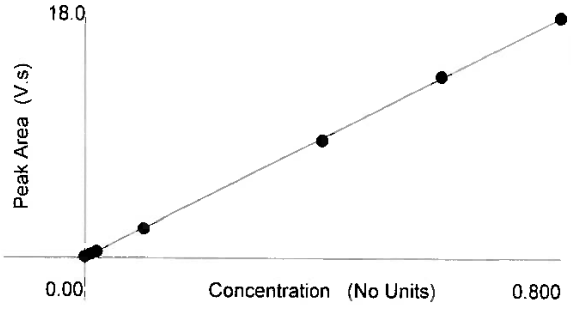
Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	18.0	1.53	0.0	-0.1	0.801	5/7/2019	4:17:06 PM
2	0.600	1	13.6	1.17	0.0	-0.8	0.605	5/7/2019	4:18:06 PM
3	0.400	1	8.80	0.764	0.0	2.0	0.392	5/7/2019	4:19:05 PM
4	0.100	1	2.20	0.192	0.0	2.6	0.0974	5/7/2019	4:20:05 PM
5	0.0200	1	0.468	0.0405	0.0	-1.3	0.0203	5/7/2019	4:21:05 PM
6	0.0100	1	0.282	0.0234	0.0	-18.5	0.0120	5/7/2019	4:22:06 PM
7	0.00	1	0.0795	5.81e-3			2.98e-3	5/7/2019	4:23:06 PM

Author: Chemistry

Date : 5/7/2019

Figure : 1 (CN)



Area = 22.4 * Conc + 0.0138
Conc = 0.0446 * Area - 5.70e-4
Correlation Coefficient (r) = 0.99991

Weighting : None

a050719w3.cn

Author: Chemistry

Date : 5/7/2019

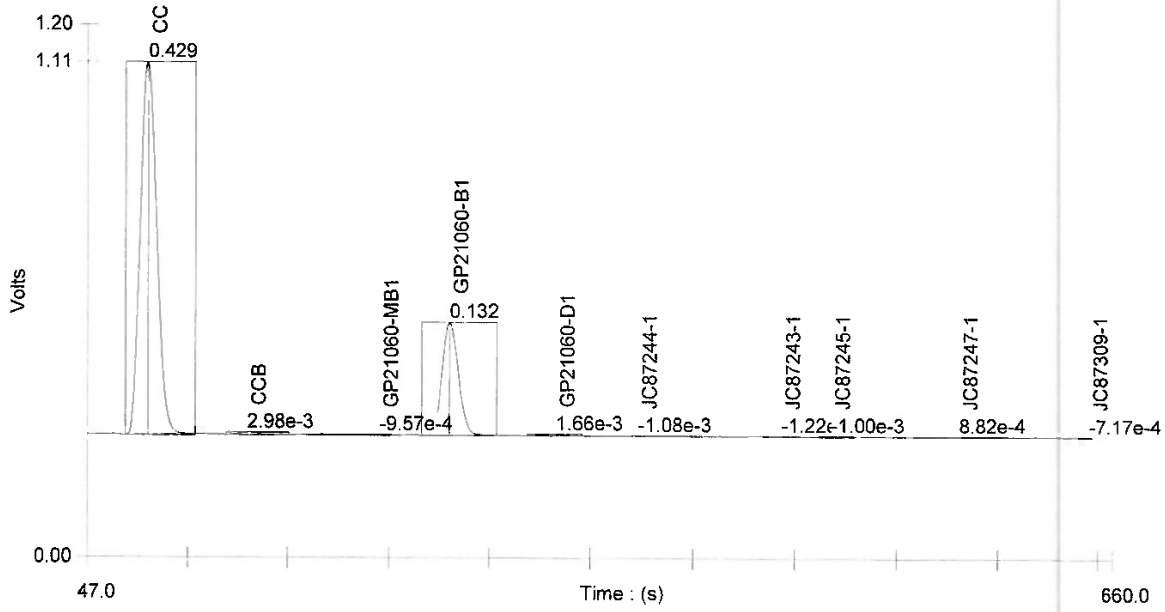
Original Run Filename: OM_5-7-2019_04-40-41PM.OMN Created: 5/7/2019 4:40:41 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-7-2019_04-40-41PM.OMN Last Modified: 5/7/2019 5:21:03 PM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	
CCV	1	10	0.429	5/7/2019@4:41:30 PM		
	Known Conc:		0.400			107.25
	Calibration:		Table/Fig. : 1			
CCB	1	11	2.98e-3	5/7/2019@4:42:31 PM		
	Known Conc:		0.00			
GP21060-MB1	1	12	-9.57e-4	5/7/2019@4:43:31 PM		
GP21060-B1	1	13	0.132	5/7/2019@4:44:32 PM		6.6
GP21060-D1	1	14	1.66e-3	5/7/2019@4:45:32 PM		
JC87244-1	1	15	-1.08e-3	5/7/2019@4:46:32 PM		
JC87243-1	1	16	-1.22e-3	5/7/2019@4:47:33 PM		
JC87245-1	1	17	-1.00e-3	5/7/2019@4:48:34 PM		
JC87247-1	1	18	8.82e-4	5/7/2019@4:49:35 PM		
JC87309-1	1	19	-7.17e-4	5/7/2019@4:50:35 PM		
JC87318-2	1	20	3.84e-4	5/7/2019@4:51:36 PM		
JC87231-5A	1	21	-1.25e-3	5/7/2019@4:52:37 PM		
CCV	1	10	0.428	5/7/2019@4:53:37 PM		
	Known Conc:		0.400			107
CCB	1	11	1.45e-3	5/7/2019@4:54:38 PM		
	Known Conc:		0.00			
JC87231-9A	1	22	-8.87e-4	5/7/2019@4:55:39 PM		
JC87379-1A	1	23	-9.44e-4	5/7/2019@4:56:39 PM		
JC87379-2A	1	24	6.93e-4	5/7/2019@4:57:40 PM		
JC87379-3A	1	25	-4.67e-4	5/7/2019@4:58:41 PM		
JC87379-4A	1	26	-9.10e-4	5/7/2019@4:59:42 PM		
JC87379-5A	1	27	0.160	5/7/2019@5:00:43 PM		
JC87429-1	1	28	2.58e-3	5/7/2019@5:01:44 PM		
GP21051-MB1	1	29	8.85e-3	5/7/2019@5:02:45 PM		
GP21051-B1	1	30	0.0912	5/7/2019@5:03:46 PM		109.4
GP21051-S1	1	31	0.0105	5/7/2019@5:04:47 PM		
CCV	1	10	0.430	5/7/2019@5:05:47 PM		
	Known Conc:		0.400			107.5
CCB	1	11	7.66e-5	5/7/2019@5:06:48 PM		
	Known Conc:		0.00			
GP21051-D1	1	32	5.61e-3	5/7/2019@5:07:50 PM		
JC87377-1	1	33	1.12e-3	5/7/2019@5:08:51 PM		
GP21052-MB1	1	34	7.42e-3	5/7/2019@5:09:51 PM		
GP21052-B1	1	35	0.0940	5/7/2019@5:10:52 PM		112.8
GP21052-S1	1	36	0.0593	5/7/2019@5:11:54 PM		> DSP failed high, back to need
GP21052-S2	1	37	0.0836	5/7/2019@5:12:56 PM		
GP21052-D1	1	38	3.46e-4	5/7/2019@5:13:57 PM		
JC87414-5	1	39	2.05e-3	5/7/2019@5:14:58 PM		
JC87414-10	1	40	0.0120	5/7/2019@5:15:59 PM		DSP failed high, back to need
JC87414-15	1	41	4.97e-3	5/7/2019@5:17:01 PM		
CCV	1	10	0.429	5/7/2019@5:18:01 PM		
	Known Conc:		0.400			107.25
CCB	1	11	2.95e-3	5/7/2019@5:19:02 PM		
	Known Conc:		0.00			

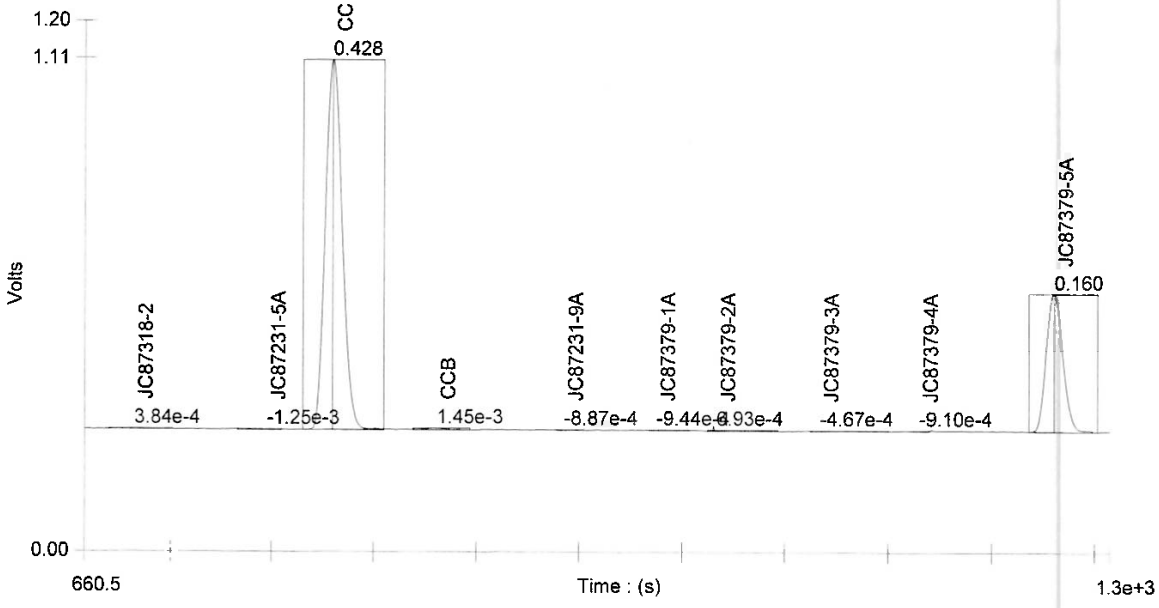
Author: Chemistry

Date : 5/7/2019

Channel 1 (NO3) - Set: 1 / 4



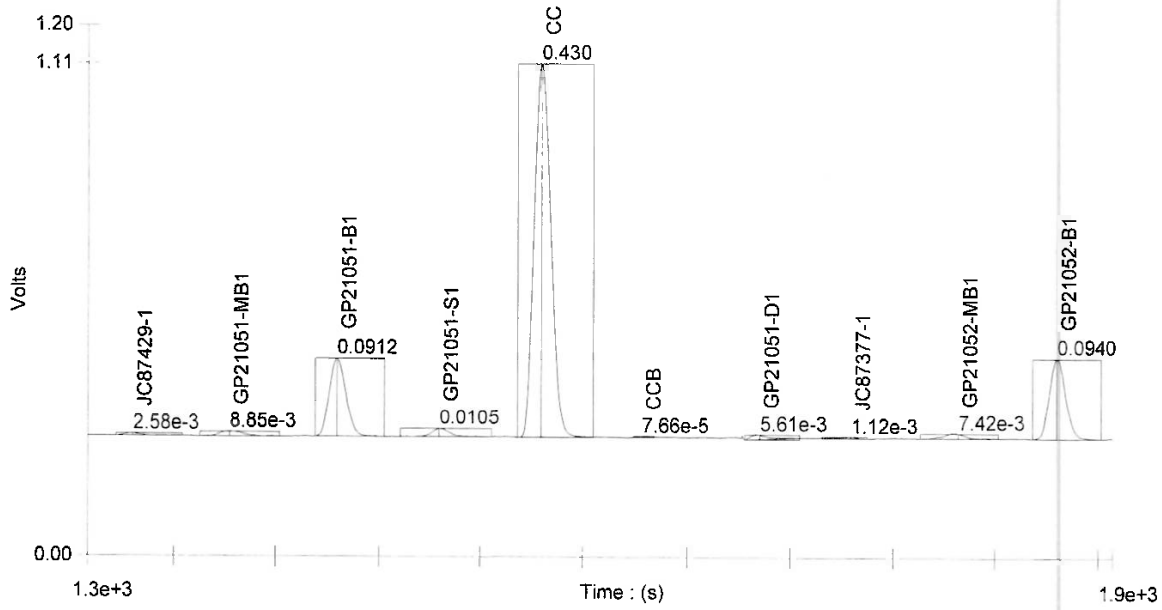
Channel 1 (NO3) - Set: 2 / 4



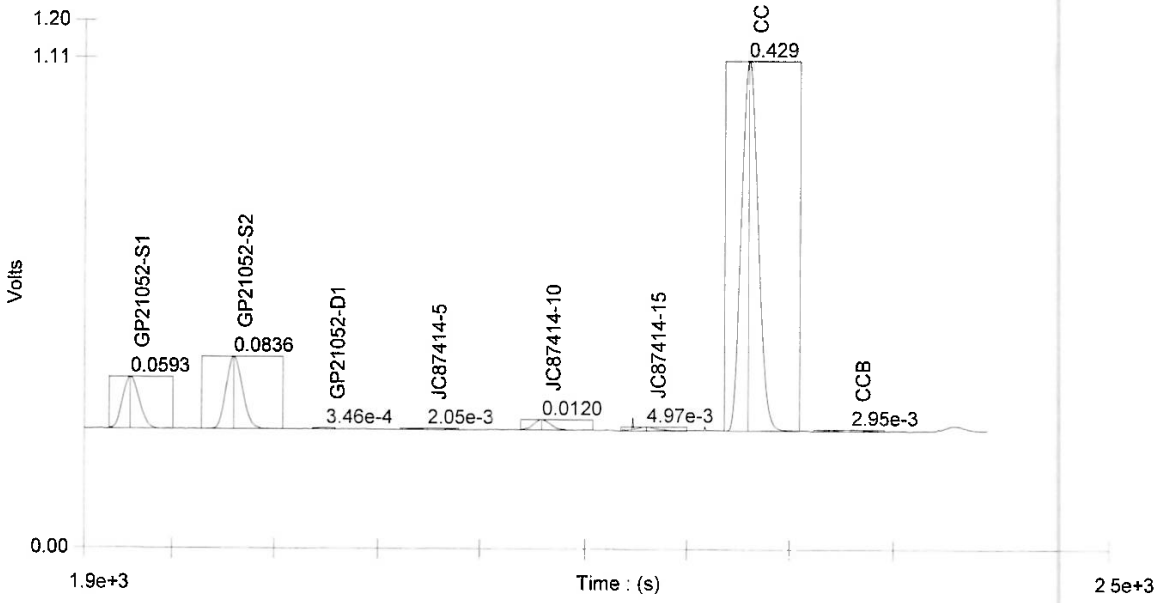
Author: Chemistry

Date : 5/7/2019

Channel 1 (NO3) - Set: 3 / 4



Channel 1 (NO3) - Set: 4 / 4



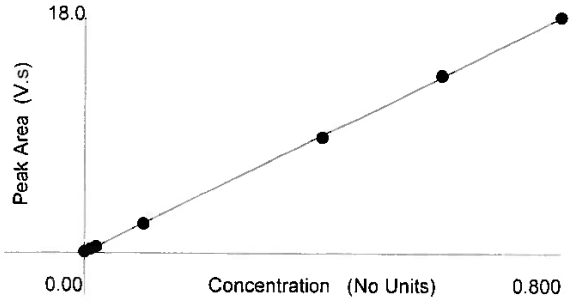
Author: Chemistry

Date : 5/7/2019

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	18.0	1.53	0.0	-0.1	0.801	5/7/2019	4:17:06 PM
2	0.600	1	13.6	1.17	0.0	-0.8	0.605	5/7/2019	4:18:06 PM
3	0.400	1	8.80	0.764	0.0	2.0	0.392	5/7/2019	4:19:05 PM
4	0.100	1	2.20	0.192	0.0	2.6	0.0974	5/7/2019	4:20:05 PM
5	0.0200	1	0.468	0.0405	0.0	-1.3	0.0203	5/7/2019	4:21:05 PM
6	0.0100	1	0.282	0.0234	0.0	-18.5	0.0120	5/7/2019	4:22:06 PM
7	0.00	1	0.0795	5.81e-3			2.98e-3	5/7/2019	4:23:06 PM

Figure : 1 (CN)



Area = 22.4 * Conc + 0.0138
Conc = 0.0446 * Area - 5.70e-4
Correlation Coefficient (r) = 0.99991

Weighting : None

d050719w4.cn

Author: Chemistry

Date : 5/7/2019

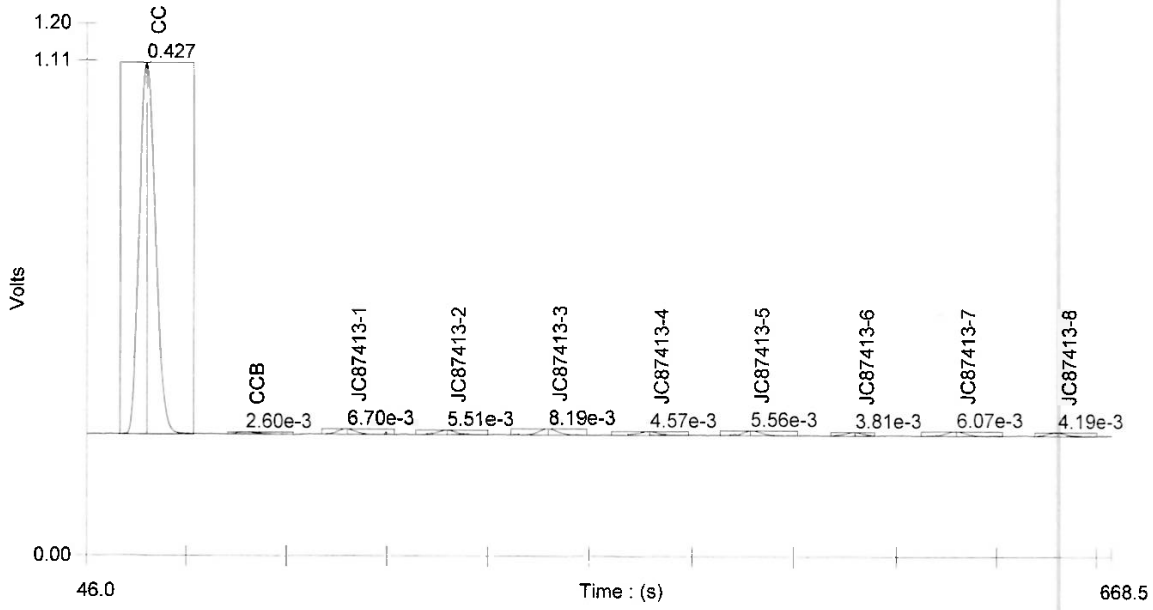
Original Run Filename: OM_5-7-2019_05-22-06PM.OMN Created: 5/7/2019 5:22:06 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-7-2019_05-22-06PM.OMN Last Modified: 5/7/2019 6:11:09 PM
Current Run Author's Signature: [Chemistry]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	% Rec
CCV	1	10	0.427	5/7/2019@5:22:55 PM		
	Known Conc:		0.400			106.75
CCB	1	11	2.60e-3	5/7/2019@5:23:56 PM		
	Known Conc:		0.00			
	Calibration:		Table/Fig. : 1			
JC87413-1	1	42	6.70e-3	5/7/2019@5:24:57 PM		
JC87413-2	1	43	5.51e-3	5/7/2019@5:25:58 PM		
JC87413-3	1	44	8.19e-3	5/7/2019@5:27:00 PM		
JC87413-4	1	45	4.57e-3	5/7/2019@5:28:01 PM		
JC87413-5	1	46	5.56e-3	5/7/2019@5:29:03 PM		
JC87413-6	1	47	3.81e-3	5/7/2019@5:30:05 PM		
JC87413-7	1	48	6.07e-3	5/7/2019@5:31:07 PM		
JC87413-8	1	49	4.19e-3	5/7/2019@5:32:08 PM		
JC87413-9	1	50	3.84e-3	5/7/2019@5:33:09 PM		
JC87413-10	1	51	5.18e-3	5/7/2019@5:34:12 PM		
CCV	1	10	0.425	5/7/2019@5:35:11 PM		
	Known Conc:		0.400			106.25
CCB	1	11	3.34e-3	5/7/2019@5:36:12 PM		
	Known Conc:		0.00			
JC87413-11	1	52	4.42e-3	5/7/2019@5:37:14 PM		
JC87413-12	1	53	7.55e-3	5/7/2019@5:38:16 PM		
JC87413-13	1	54	1.37e-3	5/7/2019@5:39:18 PM		
JC87413-14	1	55	2.22e-3	5/7/2019@5:40:19 PM		
JC87413-15	1	56	5.16e-3	5/7/2019@5:41:22 PM		
JC87413-16	1	57	7.77e-3	5/7/2019@5:42:24 PM		
JC87413-17	1	58	7.14e-3	5/7/2019@5:43:26 PM		
GP21053-MB1	1	59	5.74e-3	5/7/2019@5:44:28 PM		
GP21053-B1	1	60	0.0902	5/7/2019@5:45:30 PM		108.3
GP21053-S1	1	1	0.0509	5/7/2019@5:46:30 PM		
CCV	1	10	0.430	5/7/2019@5:47:30 PM		
	Known Conc:		0.400			107.5
CCB	1	11	3.08e-3	5/7/2019@5:48:31 PM		
	Known Conc:		0.00			
GP21053-D1	1	2	8.90e-3	5/7/2019@5:49:31 PM		
JC87525-5	1	3	3.48e-3	5/7/2019@5:50:31 PM		
JC87525-10	1	4	5.57e-3	5/7/2019@5:51:31 PM		
JC87525-15	1	5	3.61e-3	5/7/2019@5:52:31 PM		
JC87379-1	1	6	6.53e-3	5/7/2019@5:53:32 PM		
JC87379-2	1	7	9.92e-3	5/7/2019@5:54:32 PM		
JC87379-3	1	8	8.72e-3	5/7/2019@5:55:33 PM		
JC87379-4	1	9	8.87e-3	5/7/2019@5:56:33 PM		
JC87379-5	1	12	8.24e-3	5/7/2019@5:57:34 PM		
JC87093-12	1	13	0.208	5/7/2019@5:58:34 PM		
CCV	1	10	0.428	5/7/2019@5:59:34 PM		
	Known Conc:		0.400			107
CCB	1	11	1.86e-3	5/7/2019@6:00:35 PM		
	Known Conc:		0.00			
GP21058-MB1	1	14	-6.07e-5	5/7/2019@6:01:35 PM		
GP21058-B1	1	15	0.134	5/7/2019@6:02:35 PM		6.7
GP21058-D1	1	16	-9.99e-4	5/7/2019@6:03:36 PM		
JC87309-2	1	17	-1.39e-3	5/7/2019@6:04:37 PM		
JC87377-1	1	18	-1.18e-3	5/7/2019@6:05:38 PM		
CCV	1	10	0.430	5/7/2019@6:08:18 PM		
	Known Conc:		0.400			107.5
CCB	1	11	1.52e-3	5/7/2019@6:09:18 PM		
	Known Conc:		0.00			

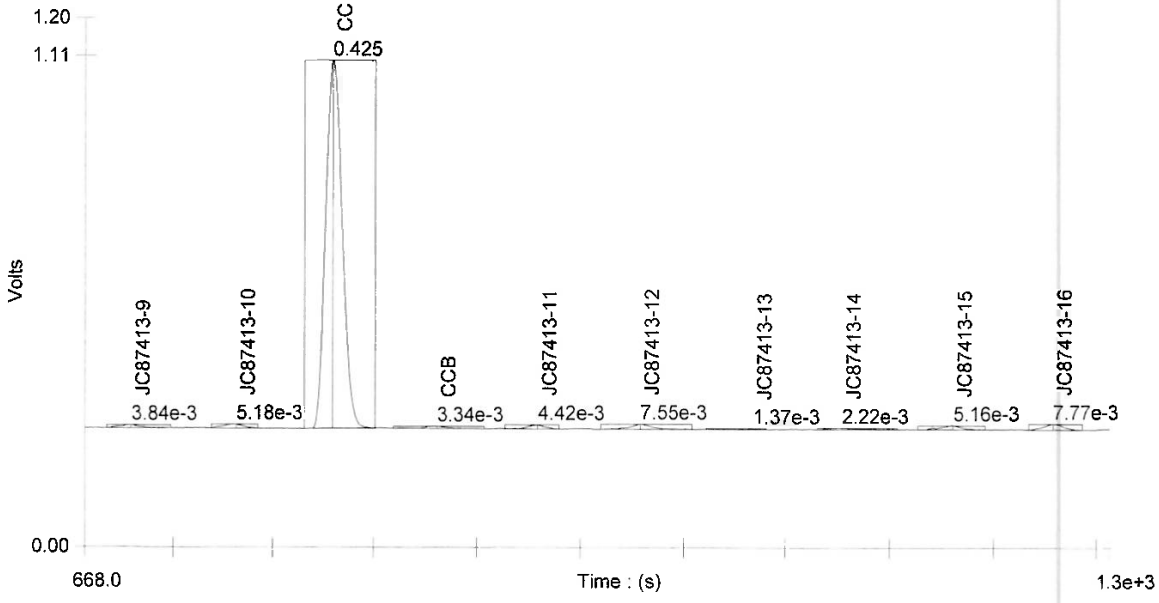
Author: Chemistry

Date : 5/7/2019

Channel 1 (NO3) - Set: 1 / 5



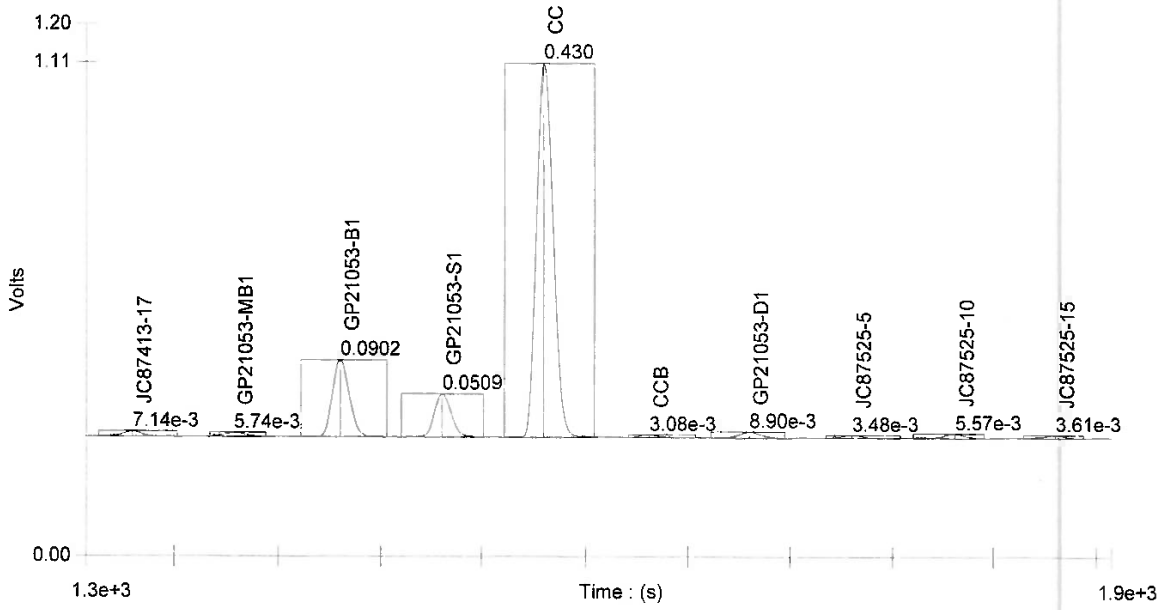
Channel 1 (NO3) - Set: 2 / 5



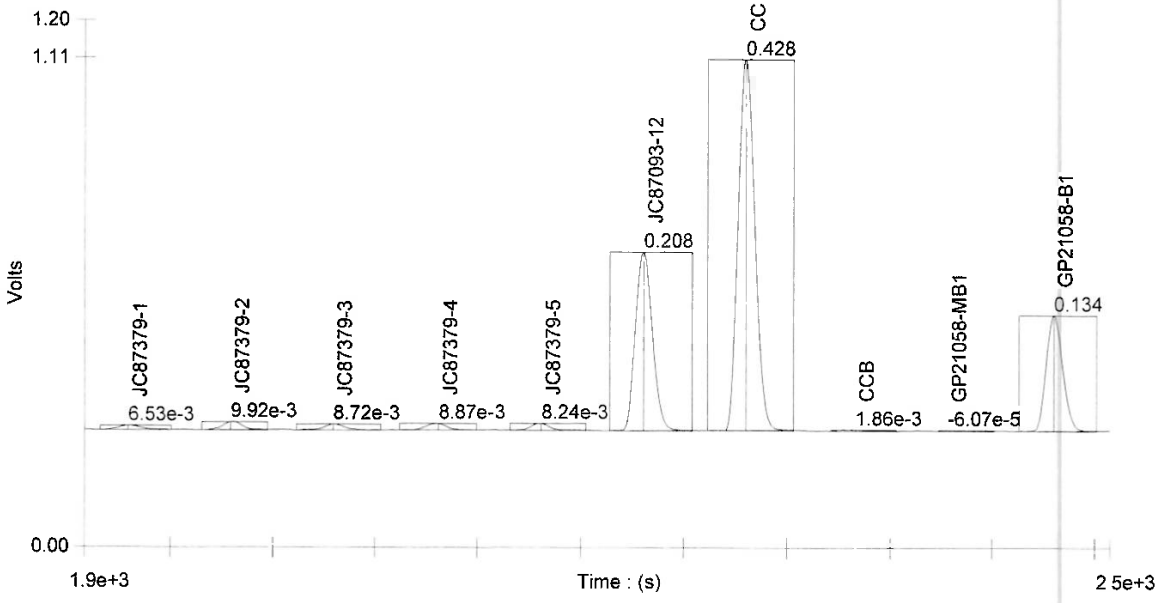
Author: Chemistry

Date : 5/7/2019

Channel 1 (NO3) - Set: 3 / 5



Channel 1 (NO3) - Set: 4 / 5



Author: Chemistry

Date : 5/7/2019

Channel 1 (NO3) - Set: 5 / 5

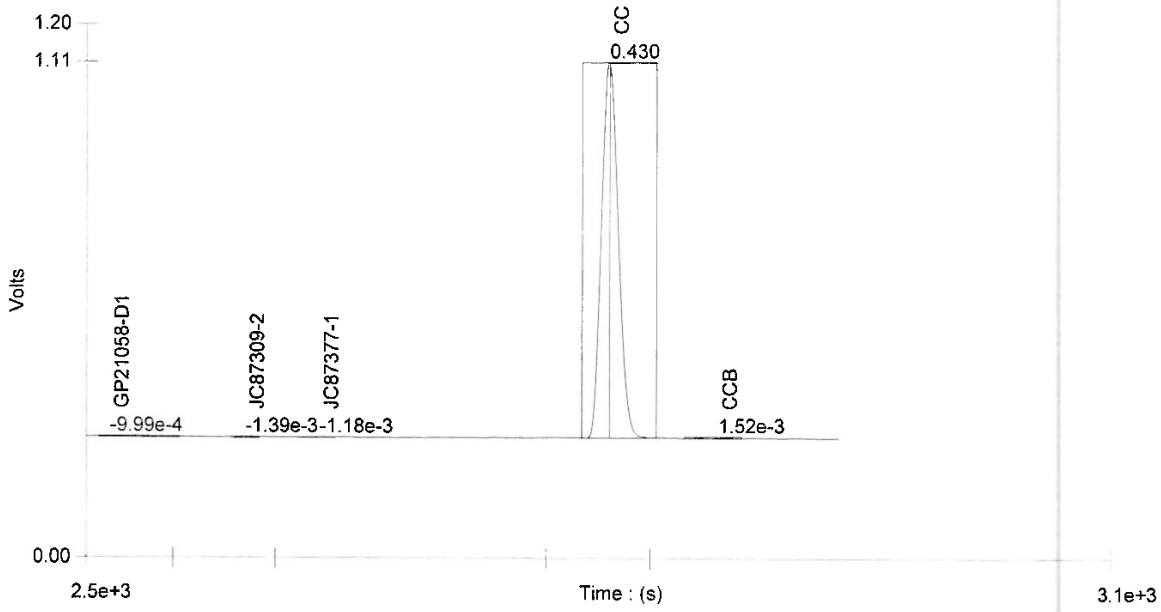
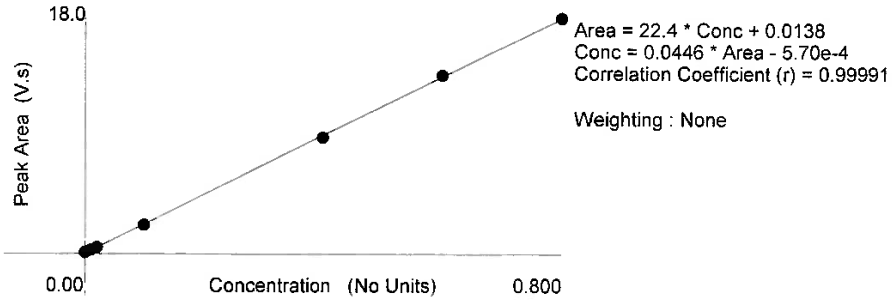


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	18.0	1.53	0.0	-0.1	0.801	5/7/2019	4:17:06 PM
2	0.600	1	13.6	1.17	0.0	-0.8	0.605	5/7/2019	4:18:06 PM
3	0.400	1	8.80	0.764	0.0	2.0	0.392	5/7/2019	4:19:05 PM
4	0.100	1	2.20	0.192	0.0	2.6	0.0974	5/7/2019	4:20:05 PM
5	0.0200	1	0.468	0.0405	0.0	-1.3	0.0203	5/7/2019	4:21:05 PM
6	0.0100	1	0.282	0.0234	0.0	-18.5	0.0120	5/7/2019	4:22:06 PM
7	0.00	1	0.0795	5.81e-3			2.98e-3	5/7/2019	4:23:06 PM

Figure : 1 (CN)



SGS

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: GN95026 | GN95061

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituric Acid Reagent	GNE2-57177-CN	8/7/2019
Chloramine-T	GNE4-57882-CN	5/7/2019
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

REACTIVITY DISTILLATION LOG (WATERS)

Method: SW846 Chapter 7

SREAC / CREAC
GP21057 / GP21058

Batch ID: _____

Autopipette ID: class 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	9:51	10:21	5/7/19	GP -MB1	both			CZD
	B1 creac						GP -B1	CREAC	✓	10mL of 100ppm	
	B1 sreac						GP -B1	SREAC	✓	10mL of 537ppm	
4	JC87309-2 (S1)						GP -S1	SREAC	✓	10mL of 537ppm	
4	(D1)						GP -D1	both			
4	(QC)										
15	JC87377-1										

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

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers:

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE1-56946-CN	7/11/2019	4/19/2019
Sulfide Spike Solution	FISHER # 161566	4/22/2022	NA
Sulfuric Acid, 0.010 N	GNE4-57873-REAC	10/29/2019	NA
Sodium Hydroxide, 0.25 N	GNE4-57872-REAC	10/29/2019	NA
Sodium Hydroxide, 0.25 N	GNE4-57872-REAC	10/29/2019	NA

Form: GN087A-64
Rev. Date: 3/12/04

LABORATORIES

GP 21051

CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

Batch ID: _____

Autopipette ID: _____

Balance ID: _____

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	1	MB1	12	–	✓	6	6	120	19:45	20:15	5/6/19	GP -MB1			KI
		B1										GP -B1	0.10 ml of 5.0 mg/l (c)	–	
19		JC87377-1 S1										GP -S1	0.10 ml of 5.0 mg/l	–	
		D1										GP -S2	0.10 ml of 5.0 mg/l	–	
19		JC87377-1										GP -D1			

heck if sulfamic acid was added.

ecord temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

he 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.

nents:

eviewer: _____ Date: _____

Form: GN0012-04
Rev. Date: 03/09/13

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21051

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CN - Distillation

GP Numbers: GP 21051

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction; 2 s

Form: GN087A-28
Rev. Date: 03/19/13

13.2 13

SGS

GP 21052

Batch ID:_____

Autopipette ID:_____

Balance ID:_____

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

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
	2	MB1	12	–	✓	0.25	6	120	19:45	20:15	5/6/19	GP -MB1			KI
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
2		JC87414-5 S1				0.39						GP -S1	0.10 ml of 5.0 mg/l	✓	
2		JC87413-1 S2				0.28						GP -S2	0.10 ml of 5.0 mg/l	✓	
2		JC87414-5 D1				0.33						GP -D1			
2		JC87414-5 QC				0.45									
1		-10				0.31									
2		-15				0.27									
2		JC87413-1 QC				0.32									
2		-2				0.33									
2		-3				0.31									
2		-4				0.29									
2		-5				0.38									
2		-6				0.44									
2		-7				0.46									
2		-8				0.36									
2		-9				0.27									
2		-10				0.33									
2		-11				0.36									
2		-12				0.36									
2		-13				0.29									
2		-14				0.41									
2		-15				0.35									
2		-16				0.34									
2		-17				0.40									

(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

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21052

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

Reagent Information Log - CN - Distillation

GP Numbers: GP21052

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction: 2 s

Form: GN087A-28
Rev. Date: 03/19/13

13.2 13

SGS

GP 21053

Batch ID:_____

Autopipette ID:_____

Balance ID:_____

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

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
	1	MB1	12	-	✓	0.25	6	120	19:45	20:15	5/6/19	GP -MB1			KI
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
2		JC87525-5 S1				0.35						GP -S1	0.10 ml of 5.0 mg/l	✓	
												GP -S2	0.10 ml of 5.0 mg/l	✓	
2		D1				0.28						GP -D1			
2		JC87525-5 DL				0.35									
2		-10				0.29									
2		-15				0.29									
4		JC87379-1				0.35									
3		-2				0.35									
1		-3				0.31									
3		-4				0.29									
3		-5				0.40									
2		JC87093-12				0.35									

(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: GP21053

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction: 2 s

Form: GN087A-28
Rev. Date: 03/19/13

13.2 13

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21053

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/7/19	RC	4/30/2019

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		5/7/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/7/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/7/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/7/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/7/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/7/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	8/7/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	8/7/19	BM	4/30/2019
						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

REACTIVITY DISTILLATION LOG (SOILS)

Method: SW846 Chapter 7

SREAC / CREAC
GP21059 / GP21060

Batch ID: _____

Autopipette ID: _____

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	500	9:51	10:21	5/17/19	GP -MB	both			CXD
	B1 creac	↓	↓	↓	↓	↓	GP -B	CREAC	✓	10ml of 100ppm	↓
	B1 sreac	↓	↓	↓	↓	↓	GP -B	SREAC	✓	10ml of 537ppm	↓
1	JC87244-1 (S1)	9.97	↓	↓	↓	↓	GP -S	SREAC	✓	10ml of 537 ppm	↓
1	↓ (D1)	9.98	↓	↓	↓	↓	GP -D	both			↓
1	↓ (DC)	10.00	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87243-1	9.95	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87245-1	9.96	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87247-1	10.03	↓	11:27	11:57	↓	↓	↓	↓	↓	↓
1	JC87309-1	9.96	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87318-2	10.05	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87231-5A	10.04	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87231-9A	9.95	↓	↓	↓	↓	↓	↓	↓	↓	↓
3	JC87379-1A	9.98	↓	↓	↓	↓	↓	↓	↓	↓	↓
2	JC87379-2A	10.04	↓	↓	↓	↓	↓	↓	↓	↓	↓
2	JC87379-3A	9.97	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87379-4A	10.05	↓	↓	↓	↓	↓	↓	↓	↓	↓
2	JC87379-5A	10.02	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	JC87429-1	9.99	↓	↓	↓	↓	↓	↓	↓	↓	↓

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

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers:

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE1-56946-CN	7/11/2019	4/19/2019
Sulfide Spike Solution	FISHER # 161566	4/22/2022	NA
Sulfuric Acid, 0.010 N	GNE4-57873-REAC	10/29/2019	NA
Sodium Hydroxide, 0.25 N	GNE4-57872-REAC	10/29/2019	NA
Sodium Hydroxide, 0.25 N	GNE4-57872-REAC	10/29/2019	NA

Form: GN087A-64
Rev. Date: 3/12/04

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E050819W1.CN
Analyst: KI

Date Analyzed: 05/08/19
Run ID: GN95077

Methods: SW846 9012B/LACHAT

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 5/8/19

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): [signature] Date 5/8/19

GN95077

e050819w1.cn

Author: Chemistry

Date : 5/8/2019

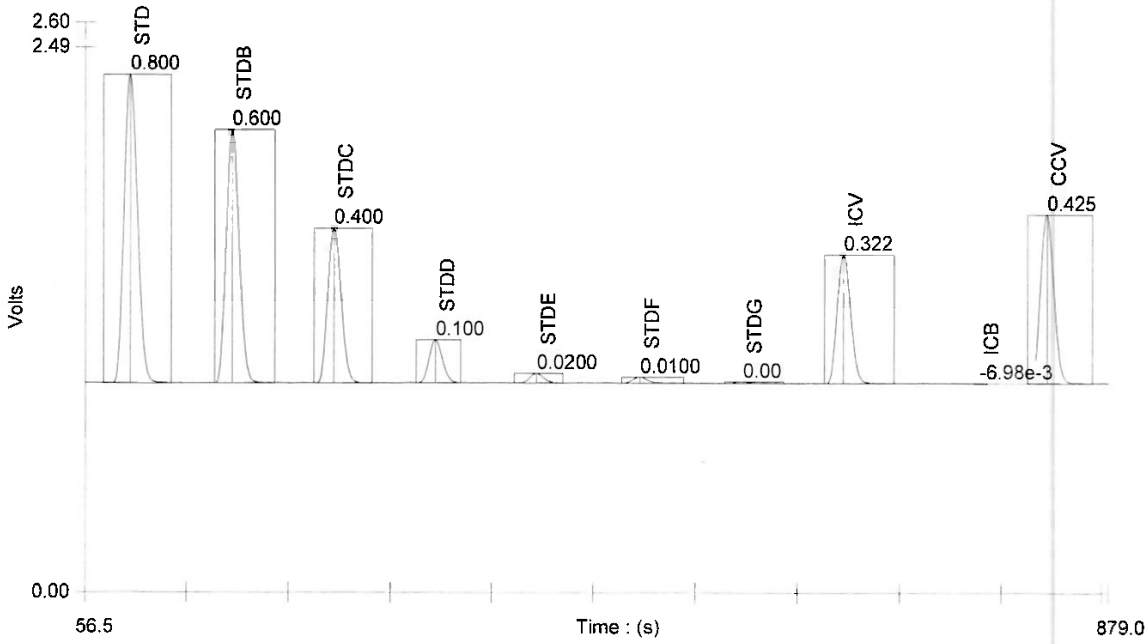
Original Run Filename: OM_5-8-2019_02-39-41PM.OMN Created: 5/8/2019 2:39:41 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-8-2019_02-39-41PM.OMN Last Modified: 5/8/2019 3:13:08 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	% rec
STDA	1	1	0.800	5/8/2019@2:40:50 PM		
STDB	1	2	0.600	5/8/2019@2:42:12 PM		
STDC	1	3	0.400	5/8/2019@2:43:35 PM		
STDD	1	4	0.100	5/8/2019@2:44:57 PM		
STDE	1	5	0.0200	5/8/2019@2:46:19 PM		
STDF	1	6	0.0100	5/8/2019@2:47:41 PM		
STDG	1	7	0.00	5/8/2019@2:49:02 PM		
ICV	1	8	0.322	5/8/2019@2:50:24 PM		
	Known Conc:		0.300			107.3
	Calibration:		Table/Fig. : 1			
ICB	1	9	-6.98e-3	5/8/2019@2:51:46 PM		
	Known Conc:		0.00			
CCV	1	S9	0.425	5/8/2019@2:53:07 PM		
	Known Conc:		0.400			106.25
CCB	1	S10	-6.90e-3	5/8/2019@2:54:29 PM		
	Known Conc:		0.00			
GP21104-MB1	1	10	-2.86e-4	5/8/2019@2:55:50 PM		
GP21104-B1	1	11	0.0886	5/8/2019@2:57:12 PM		106.4
GP21104-S1	1	12	0.0811	5/8/2019@2:58:33 PM		
GP21104-S2	1	13	0.0830	5/8/2019@2:59:54 PM		
GP21104-D1	1	14	4.66e-4	5/8/2019@3:01:15 PM		
JC87414-5	1	15	7.12e-3	5/8/2019@3:02:36 PM		
JC87414-10	1	16	0.0205	5/8/2019@3:03:58 PM		
JC87414-15	1	17	9.67e-3	5/8/2019@3:05:20 PM		
JC87495-2	1	18	-1.93e-3	5/8/2019@3:06:42 PM		
JC87498-1	1	19	-3.68e-4	5/8/2019@3:08:05 PM		
CCV	1	S9	0.424	5/8/2019@3:09:26 PM		
	Known Conc:		0.400			106
CCB	1	S10	-7.26e-3	5/8/2019@3:10:48 PM		
	Known Conc:		0.00			

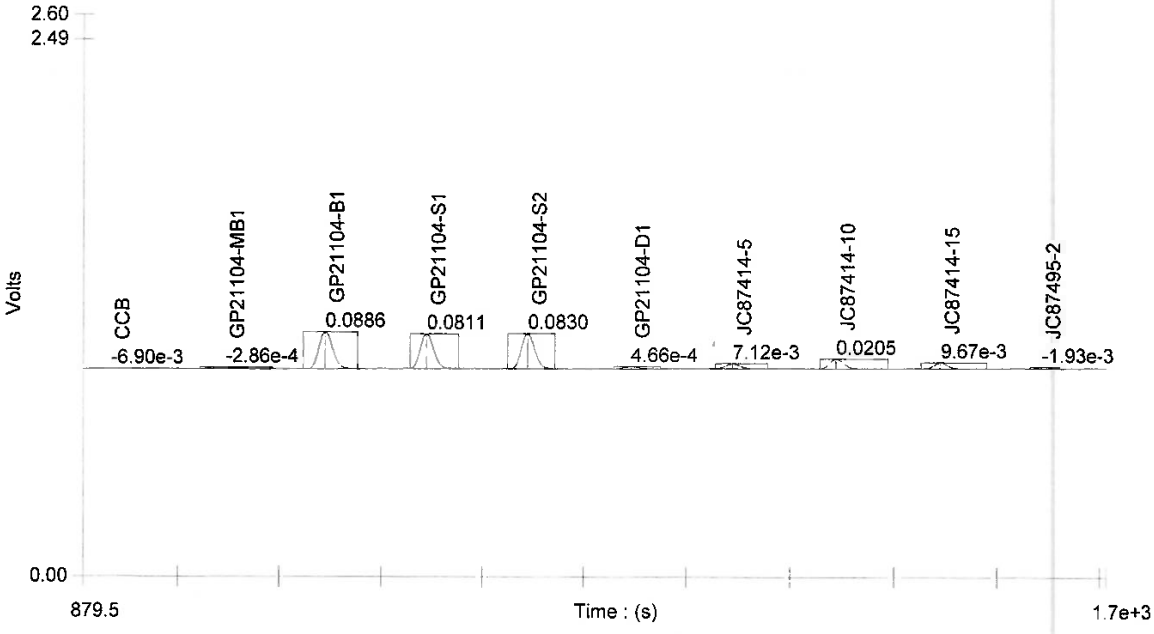
Author: Chemistry

Date : 5/8/2019

Channel 1 - Set: 1 / 3



Channel 1 - Set: 2 / 3



Author: Chemistry

Date : 5/8/2019

Channel 1 - Set: 3 / 3

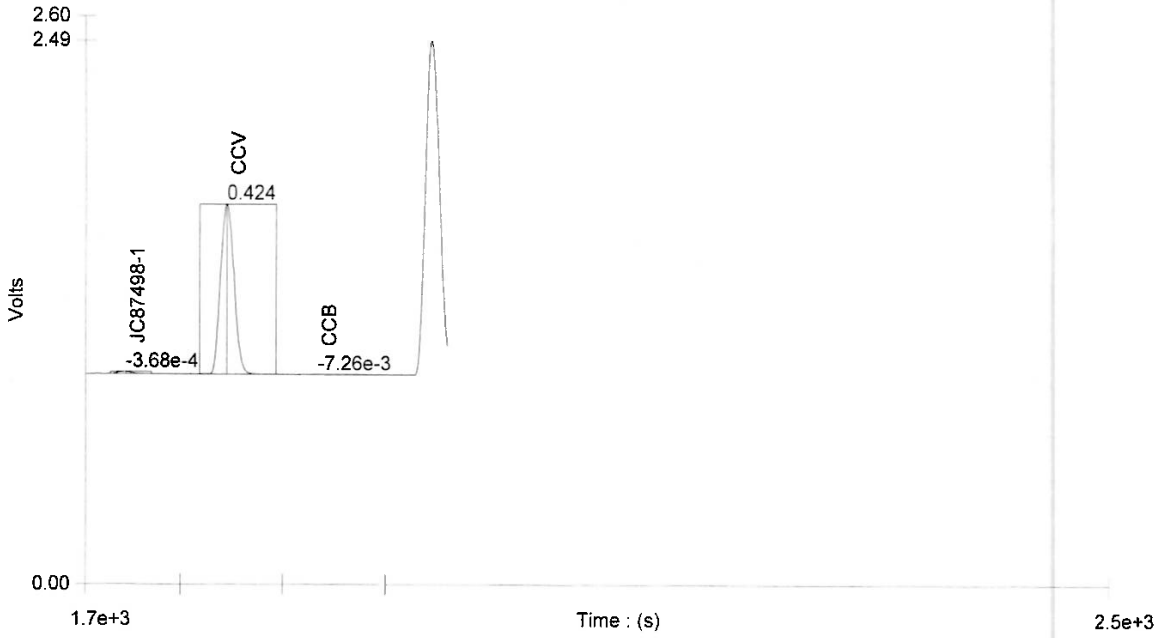
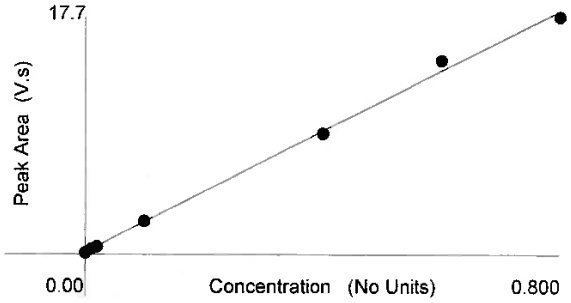


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	17.7	1.40	0.0	2.5	0.779	5/8/2019	2:40:50 PM
2	0.600	1	14.4	1.16	0.0	-5.5	0.633	5/8/2019	2:42:12 PM
3	0.400	1	8.93	0.719	0.0	2.5	0.390	5/8/2019	2:43:35 PM
4	0.100	1	2.43	0.197	0.0	-1.0	0.101	5/8/2019	2:44:57 PM
5	0.0200	1	0.559	0.0446	0.0	8.4	0.0184	5/8/2019	2:46:19 PM
6	0.0100	1	0.394	0.0282	0.0	-2.1	0.0110	5/8/2019	2:47:41 PM
7	0.00	1	0.107	7.18e-3			-1.67e-3	5/8/2019	2:49:02 PM

Figure : 1 (CN)



Area = 22.5 * Conc + 0.161
Conc = 0.0444 * Area - 6.44e-3
Correlation Coefficient (r) = 0.99871

Weighting : None

2050819 w2.cn

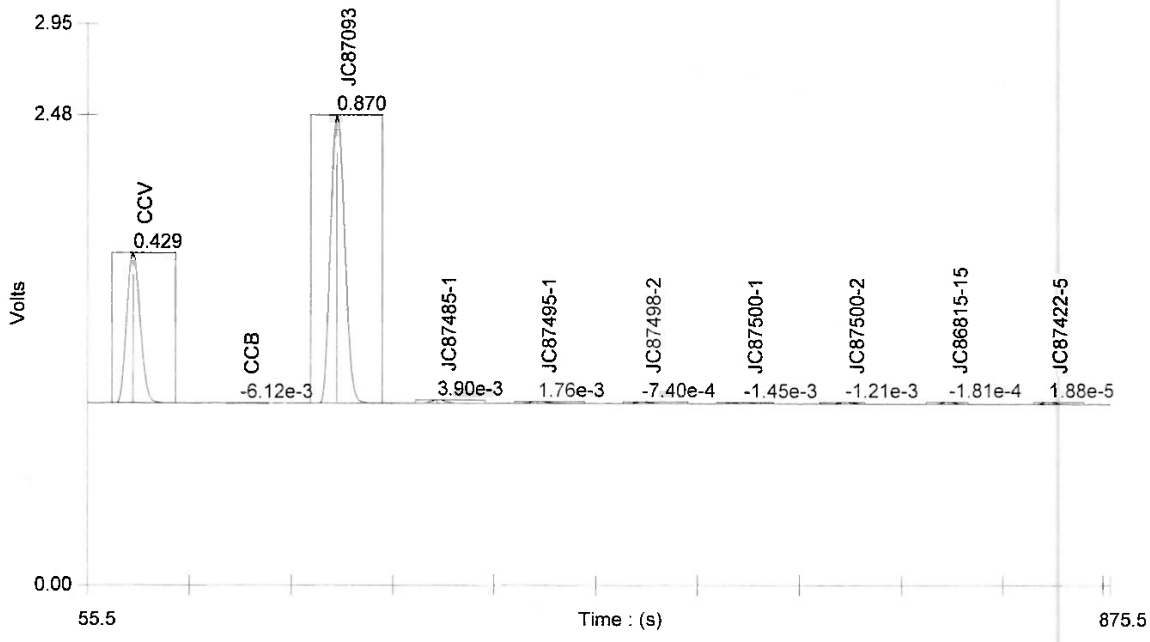
Author: Chemistry

Date : 5/8/2019

Original Run Filename: OM_5-8-2019_03-13-51PM.OMN Created: 5/8/2019 3:13:51 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-8-2019_03-13-51PM.OMN Last Modified: 5/8/2019 3:43:18 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	
CCV	1	S9	0.429	5/8/2019@3:14:59 PM		+6 rec
	Known Conc:		0.400			107.25
CCB	1	S10	-6.12e-3	5/8/2019@3:16:21 PM		
	Known Conc:		0.00			
	Calibration:		Table/Fig. : 1			
JC87093-6 (2)	1	20	0.870	5/8/2019@3:17:43 PM		overrange, see rerun, difficult matrix
JC87485-1	1	21	3.90e-3	5/8/2019@3:19:05 PM		
JC87495-1	1	22	1.76e-3	5/8/2019@3:20:27 PM		
JC87498-2	1	23	-7.40e-4	5/8/2019@3:21:48 PM		
JC87500-1	1	24	-1.45e-3	5/8/2019@3:23:09 PM		
JC87500-2	1	25	-1.21e-3	5/8/2019@3:24:31 PM		
JC86815-15	1	26	-1.81e-4	5/8/2019@3:25:52 PM		
JC87422-5	1	27	1.88e-5	5/8/2019@3:27:14 PM		
JC87396-1	1	28	2.39e-3	5/8/2019@3:28:35 PM		
JC87435-3	1	29	7.22e-3	5/8/2019@3:29:56 PM		
CCV	1	S9	0.428	5/8/2019@3:31:17 PM		
	Known Conc:		0.400			107
CCB	1	S10	-7.49e-3	5/8/2019@3:32:39 PM		
	Known Conc:		0.00			
JC87423-4A	1	30	-2.43e-3	5/8/2019@3:34:00 PM		
JC87423-5A	1	31	-3.15e-3	5/8/2019@3:35:22 PM		
JC87093-6	1	32	0.369	5/8/2019@3:36:45 PM	3.00	
CCV	1	S9	0.428	5/8/2019@3:39:49 PM		
	Known Conc:		0.400			107
CCB	1	S10	-5.79e-3	5/8/2019@3:41:11 PM		
	Known Conc:		0.00			

Channel 1 - Set: 1 / 2



Author: Chemistry

Date : 5/8/2019

Channel 1 - Set: 2 / 2

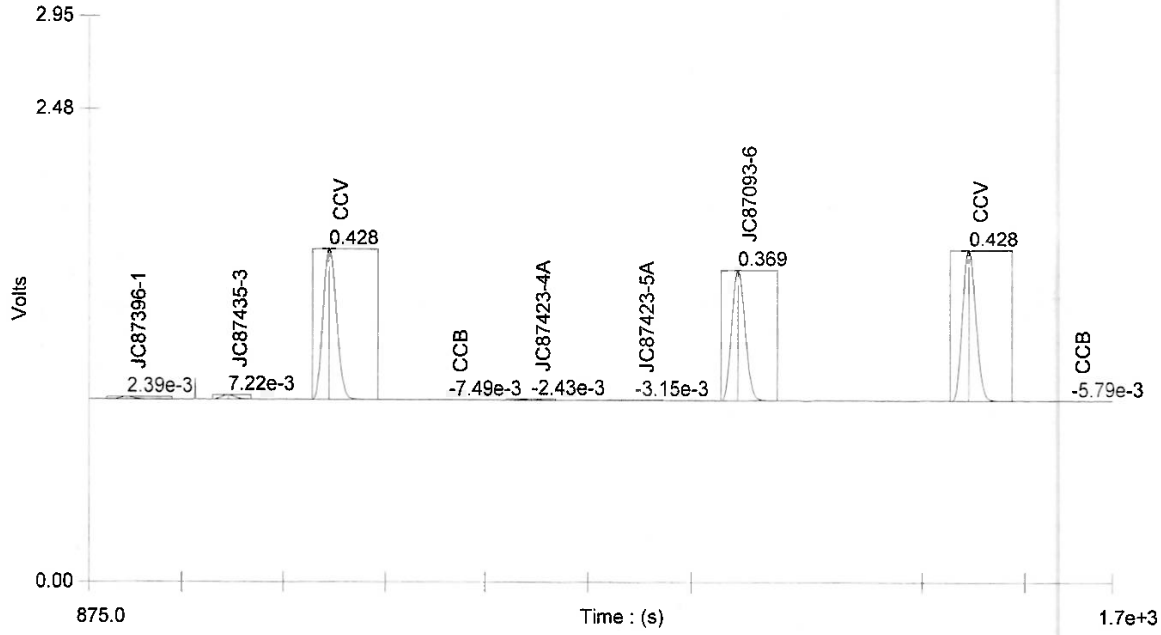
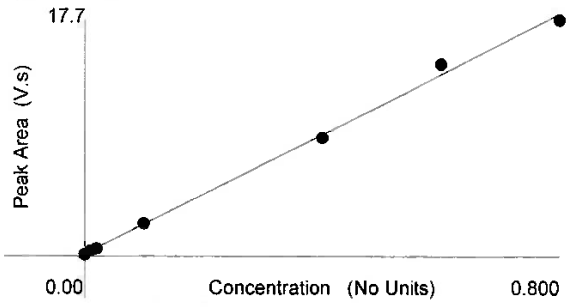


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	17.7	1.40	0.0	2.5	0.779	5/8/2019	2:40:50 PM
2	0.600	1	14.4	1.16	0.0	-5.5	0.633	5/8/2019	2:42:12 PM
3	0.400	1	8.93	0.719	0.0	2.5	0.390	5/8/2019	2:43:35 PM
4	0.100	1	2.43	0.197	0.0	-1.0	0.101	5/8/2019	2:44:57 PM
5	0.0200	1	0.559	0.0446	0.0	8.4	0.0184	5/8/2019	2:46:19 PM
6	0.0100	1	0.394	0.0282	0.0	-2.1	0.0110	5/8/2019	2:47:41 PM
7	0.00	1	0.107	7.18e-3			-1.67e-3	5/8/2019	2:49:02 PM

Figure : 1 (CN)



Area = 22.5 * Conc + 0.161
Conc = 0.0444 * Area - 6.44e-3
Correlation Coefficient (r) = 0.99871

Weighting : None

e050819w3 cn

Author: Chemistry

Date : 5/8/2019

Original Run Filename: OM_5-8-2019_03-43-45PM.OMN Created: 5/8/2019 3:43:45 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-8-2019_03-43-45PM.OMN Last Modified: 5/8/2019 3:54:12 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	% rec
CCV	1	S9	0.429	5/8/2019@3:44:54 PM		
	Known Conc:		0.400			107.25
	Calibration:		Table/Fig. : 1			
CCB	1	S10	-6.00e-3	5/8/2019@3:46:16 PM		
	Known Conc:		0.00			
JC87093-6 7	1	33	0.371	5/8/2019@3:47:38 PM	3.00	confirmation only
CCV	1	S9	0.429	5/8/2019@3:50:43 PM		
	Known Conc:		0.400			107.25
CCB	1	S10	-5.53e-3	5/8/2019@3:52:04 PM		
	Known Conc:		0.00			

Channel 1 - Set: 1 / 1

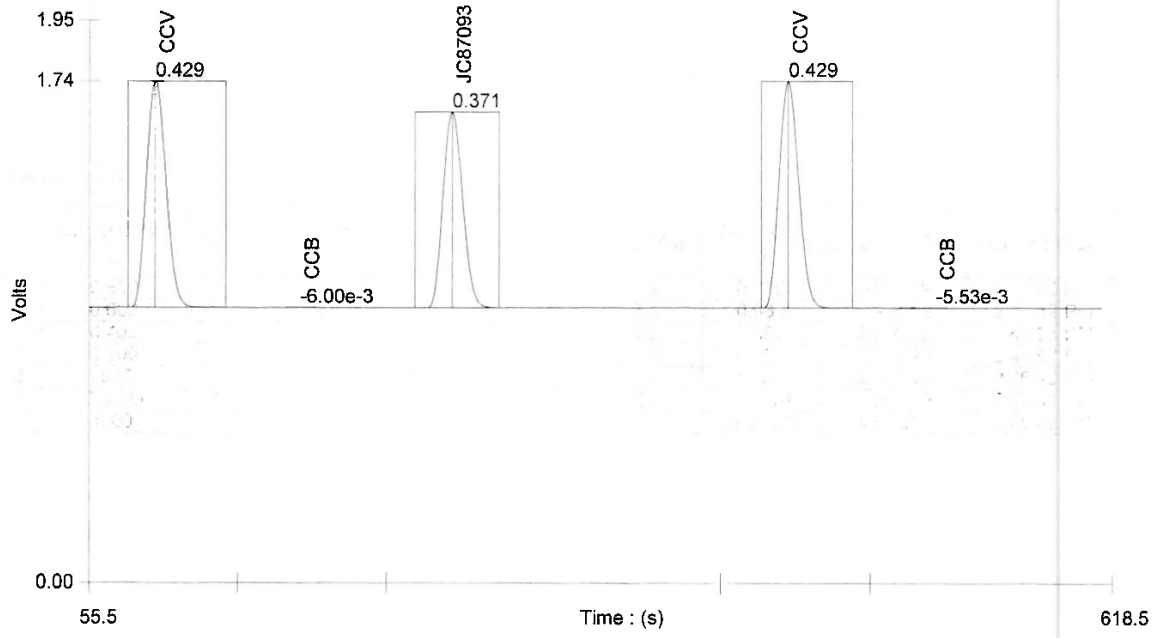


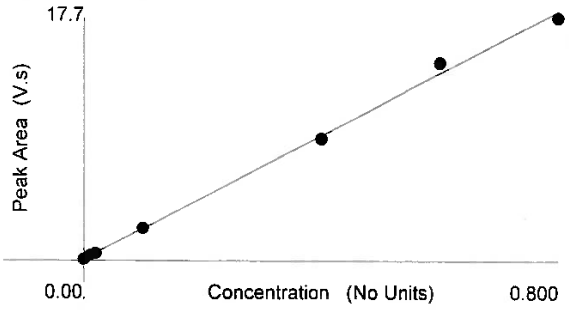
Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	17.7	1.40	0.0	2.5	0.779	5/8/2019	2:40:50 PM
2	0.600	1	14.4	1.16	0.0	-5.5	0.633	5/8/2019	2:42:12 PM
3	0.400	1	8.93	0.719	0.0	2.5	0.390	5/8/2019	2:43:35 PM
4	0.100	1	2.43	0.197	0.0	-1.0	0.101	5/8/2019	2:44:57 PM
5	0.0200	1	0.559	0.0446	0.0	8.4	0.0184	5/8/2019	2:46:19 PM
6	0.0100	1	0.394	0.0282	0.0	-2.1	0.0110	5/8/2019	2:47:41 PM
7	0.00	1	0.107	7.18e-3			-1.67e-3	5/8/2019	2:49:02 PM

Author: Chemistry

Date : 5/8/2019

Figure : 1 (CN)



Area = 22.5 * Conc + 0.161
Conc = 0.0444 * Area - 6.44e-3
Correlation Coefficient (r) = 0.99871

Weighting : None

SGS

Analyst KJ Product CN Autopipette # 43

Date 5/8/19 Batch ID Class A Vol. Flask

Sample Dilution Prep Log

Sample ID	Dilution	Initial Volume	Final Volume	Comments
JC87093-6	1:3	1	3	

QC Reviewer: [signature] Date: 5/9/19

Form: GN165-01
Rev. Date: 2/25/03

SGS

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: GN95077

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituric Acid Reagent	GNE2-57177-CN	8/7/2019
Chloramine-T	GNE5-57974-CN	5/13/2019
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

Batch ID: _____

Autopipette ID: 43

Balance ID: B27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

GP21104

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	MB1	12	—	✓	0.25	6	120	13:20	13:50	5/8/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	/	
		S1 JC87495-2				0.20						GP -S1	0.10 ml of 5.0 mg/l	/	
		S2 JC87498-1				0.23						GP -S2	0.10 ml of 5.0 mg/l	/	
		D1 JC87495-2				0.20						GP -D1			
1		JC87414-5				0.20									
2		↓ -10				0.23									
1		↓ -15				0.25									
2		JC87093-6				0.29									
2		JC87485-1				0.27									
1		JC87495-1				0.25									
1		↓ -2				0.29									
1		JC87498-1				0.22									
1		↓ -2				0.21									
1		JC87500-1				0.22									
1		↓ -2				0.30									
1		JC86815-15				0.20									
1		JC87422-5				0.23									
1		JC87396-1				0.24									
1		JC87435-3				0.21									
1		JC87423-4A				0.23									
1	↓	↓ -5A	↓	↓	↓	0.20	↓	↓	↓	↓	↓				↓

(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

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP21104

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	4/30/19	1000	1.000	42	.25 N NaOH	200	5.00	5/8/19	RC	4/30/2019
5 PPM ext.	GNE1-56947-CN	4/30/19	1000	1	42	.25 N NaOH	200	5.00	5/8/19	RC	4/30/2019

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		5/8/19	RC	4/30/2019
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	5/8/19	RC	4/30/2019
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	5/8/19	RC	4/30/2019
D	5.0 ppm CN STD		5.0	2.00	42	.25 N NaOH	100	0.10	5/8/19	RC	4/30/2019
E	5.0 ppm CN STD		5.0	0.40	42	.25 N NaOH	100	0.02	5/8/19	RC	4/30/2019
F	5.0 ppm CN STD	0.3	5.0	0.20	42	.25 N NaOH	100	0.01	5/8/19	RC	4/30/2019
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	42	.25 N NaOH	100	0.30	5/8/19	BM	4/30/2019
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18	0.4	8.00	42	.25 N NaOH	100	0.40	5/8/19	BM	4/30/2019
						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

Reagent Information Log - CN - Distillation

GP Numbers: GP 21104

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	9/11/2019
Magnesium Chloride Solution	gne12-56762-cn	6/21/2019
Sulfamic Acid	RICCA 1705K24	7/19/2021
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 1805T07	10/1/2019

Reason codes for data corrections: 1-reviewer error correction: 2 s

Form: GN087A-28
Rev. Date: 03/19/13

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Misc. Raw Data

Raw Data

Methanol Prep Log

Vial Track #:	Lims ID:	Initial Tare Wt (g)	Total Wt (g)	Weight of Sample (g)	Date Prepared	Lot #:	Prep By	Vial Desc:	Comments
	JC87093-1.3	36.2800	41.6800	5.4000				NAB	
	JC87093-1.4	35.4800	40.5800	5.1000				NAB	
	JC87093-1.5	35.5600	40.6700	5.1100				NAB	
	JC87093-10.3	36.4000	41.2100	4.8100				NAB	
	JC87093-10.4	35.1900	39.2800	4.0900				NAB	
	JC87093-10.5	35.8500	39.6400	3.7900				NAB	
	JC87093-11.3	36.8100	41.6000	4.7900				NAB	
	JC87093-11.4	35.3100	40.2600	4.9500				NAB	
	JC87093-11.5	35.7200	41.3200	5.6000				NAB	
	JC87093-12.3	36.6700	41.0400	4.3700				NAB	
	JC87093-12.4	35.6600	40.3300	4.6700				NAB	
	JC87093-12.5	35.7300	39.8600	4.1300				NAB	
	JC87093-2.3	36.0600	40.6900	4.6300				NAB	
	JC87093-2.4	35.3700	40.2000	4.8300				NAB	
	JC87093-2.5	35.4700	39.5700	4.1000				NAB	

Methanol Prep Log

Vial Track #:	Lims ID:	Initial Tare Wt (g)	Total Wt (g)	Weight of Sample (g)	Date Prepared	Lot #:	Prep By	Vial Desc:	Comments
	JC87093-3.3	36.4800	40.7500	4.2700				NAB	
	JC87093-3.4	36.0700	41.4700	5.4000				NAB	
	JC87093-3.5	35.7100	41.1000	5.3900				NAB	
	JC87093-4.3	36.3800	40.7700	4.3900				NAB	
	JC87093-4.4	35.5200	40.6500	5.1300				NAB	
	JC87093-4.5	35.7600	39.8000	4.0400				NAB	
	JC87093-5.3	36.7600	41.6100	4.8500				NAB	
	JC87093-5.4	35.6600	39.8900	4.2300				NAB	
	JC87093-5.5	35.9900	40.0000	4.0100				NAB	
	JC87093-6.3	36.6900	41.6200	4.9300				NAB	
	JC87093-6.4	35.7900	40.6400	4.8500				NAB	
	JC87093-6.5	35.5000	40.9200	5.4200				NAB	
	JC87093-7.10	36.1400	41.5700	5.4300				NAB	
	JC87093-7.11	35.6000	39.8500	4.2500				NAB	
	JC87093-7.12	35.7500	41.1500	5.4000				NAB	

Methanol Prep Log

Vial Track #:	Lims ID:	Initial Tare Wt (g)	Total Wt (g)	Weight of Sample (g)	Date Prepared	Lot #:	Prep By	Vial Desc:	Comments
	JC87093-7.13	35.7500	40.9300	5.1800				NAB	
	JC87093-7.14	35.9600	41.5800	5.6200				NAB	
	JC87093-7.15	35.8700	40.7400	4.8700				NAB	
	JC87093-7.7	36.5000	41.8200	5.3200				NAB	
	JC87093-7.8	36.9200	41.6500	4.7300				NAB	
	JC87093-7.9	36.8100	42.1200	5.3100				NAB	
	JC87093-8.3	36.5800	39.8000	3.2200				NAB	
	JC87093-8.4	35.7300	40.1100	4.3800				NAB	
	JC87093-8.5	35.5300	38.6000	3.0700				NAB	
	JC87093-9.3	36.6500	41.1200	4.4700				NAB	
	JC87093-9.4	35.4800	40.8900	5.4100				NAB	
	JC87093-9.5	35.5100	40.3800	4.8700				NAB	