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Technical Report for

Arcadis

National Grid, Philly Coke, Philadelphia, PA

B0036790.0001

SGS Job Number: JC86837

Sampling Dates: 04/22/19 - 04/23/19

Report to:

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ATTN: John Brussel

Total number of pages in report: **1895**

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

Mike Earp
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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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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 # JC86837 – Reissues

Dear Mr. Brussel,

The final report for SGS job number JC86837 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.

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SGS North America Inc.

Sample Summary

Arcadis

Job No: JC86837

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC86837-1	04/22/19	09:10	GB	04/23/19	SO	Soil	PSCB-41R(0.5-2)
JC86837-2	04/22/19	10:10	GB	04/23/19	SO	Soil	PSCB-41R(9-11)
JC86837-3	04/22/19	10:35	GB	04/23/19	SO	Soil	TP-44R(3-5)
JC86837-4	04/22/19	10:50	GB	04/23/19	SO	Soil	TP-44R(5-7)
JC86837-5	04/22/19	11:05	GB	04/23/19	SO	Soil	TP-44R(7-9)
JC86837-6	04/22/19	11:55	GB	04/23/19	SO	Soil	S-135(4-6)
JC86837-7	04/22/19	12:10	GB	04/23/19	SO	Soil	S-135(8-10)
JC86837-8	04/22/19	13:06	GB	04/23/19	SO	Soil	S-136(4-6)
JC86837-9	04/22/19	13:10	GB	04/23/19	SO	Soil	S-136(7-9)
JC86837-10	04/23/19	12:10	GB	04/23/19	SO	Soil	S-111(2-4)
JC86837-11	04/23/19	12:20	GB	04/23/19	SO	Soil	S-111(4.5-6.5)
JC86837-12	04/23/19	13:35	GB	04/23/19	SO	Soil	S-107(2-4)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Arcadis	**Job No**	JC86837
Site:	National Grid, Philly Coke, Philadelphia, PA	**Report Date**	5/7/2019 12:13:14 PM

On 04/23/2019, 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 2.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC86837 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:** V3C6814

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC86916-5MS, JC86916-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for MSD for 1,2-Dichlorobenzene, 1,4-Dichlorobenzene are outside control limits for sample JC86916-5MSD. Outside control limits due to matrix interference.
- JC86837-10 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC86837-11 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC86837-12 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-12 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC86837-11 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-10 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-9 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-9 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC86837-7 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-7 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC86837-5 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-5 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.
- JC86837-2 for Trichlorofluoromethane: Associated CCV outside of control limits low.
- JC86837-2 for 4-Methyl-2-pentanone(MIBK): Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VI9098

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86716-2MS, JC86716-2MSD were used as the QC samples indicated.
- JC86837-1: Diluted due to high concentration of target and non-target compound.
- JC86837-1 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VI9099

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC87030-1MS, JC87030-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC86837-4: Diluted due to high concentration of non-target compound.

MS Volatiles By Method SW846 8260C

Matrix: SO **Batch ID:** VI9099

- JC86837-3: Diluted due to high concentration of non-target compound.
- JC86837-6: Diluted due to high concentration of target and non-target compound.
- JC86837-3 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- JC86837-4 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- JC86837-6 for Chloromethane: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** VY8023

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC87031-3MS, JC86877-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Duplicate for Acetone are outside control limits for sample JC86877-1DUP. High RPD due to possible sample nonhomogeneity.
- JC86837-8 for Freon 113: Associated CCV outside of control limits high, sample was ND.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO **Batch ID:** OP20021

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86768-7MS, JC86768-7MSD were used as the QC samples indicated.
- JC86837-6 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-1 for Phenol-d5: Outside control limits due to dilution.
- JC86837-3 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-1 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-3 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-1 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-1 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-3 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-7 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-1 for 2-Fluorophenol: Outside control limits due to dilution.
- JC86837-6 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-6 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-1 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-2 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-4 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-3 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-4 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-5 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-5 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-5 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-7 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-5 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-2 for Pentachlorophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-4 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-2 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-4 for 1,4-Dioxane: Associated CCV outside of control limits low.
- JC86837-7 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-7 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-2 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC86837-6 for 2-Nitrophenol: Associated CCV outside of control limits high, sample was ND.

Matrix: SO **Batch ID:** OP20035

- All samples were extracted within the recommended method holding time.
- Sample(s) JC86837-8MS, JC86837-8MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP20035-BSD for Acetophenone: Outside of in house control limits.
- JC86837-8 for 2,4-Dinitrophenol: Associated CCV outside of control limits low.
- JC86837-9 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-8 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO **Batch ID:** OP20035

- OP20035-BSD for 3&4-Methylphenol: Outside of in house control limits.
- JC86837-9 for Di-n-butyl phthalate: Associated CCV outside of control limits high, sample was ND.
- OP20035-BSD for Hexachloroethane: Outside of in house control limits.
- JC86837-8 for Di-n-butyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-8 for 4,6-Dinitro-o-cresol: Associated CCV outside of control limits low.
- OP20035-BSD for N-Nitroso-di-n-propylamine: Outside of in house control limits.
- JC86837-9 for bis(2-Ethylhexyl)phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-8 for bis(2-Ethylhexyl)phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-9 for Butyl benzyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-11 for bis(2-Ethylhexyl)phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-9 for 4,6-Dinitro-o-cresol: Associated CCV outside of control limits low.
- JC86837-9 for 2,4-Dinitrophenol: Associated CCV outside of control limits low.
- JC86837-11 for Butyl benzyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-12 for bis(2-Ethylhexyl)phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for 2-Nitroaniline: Associated CCV outside of control limits high, sample was ND.
- JC86837-12 for 4,6-Dinitro-o-cresol: Associated CCV outside of control limits low.
- JC86837-12 for 2,4-Dinitrophenol: Associated CCV outside of control limits low.
- JC86837-12 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-12 for Butyl benzyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-11 for 4,6-Dinitro-o-cresol: Associated CCV outside of control limits low.
- JC86837-11 for 2,4-Dinitrophenol: Associated CCV outside of control limits low.
- JC86837-11 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for Hexachlorocyclopentadiene: Associated CCV outside of control limits low.
- JC86837-12 for Di-n-butyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for 2,4-Dinitrophenol: Associated CCV outside of control limits low.
- JC86837-10 for Butyl benzyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for Di-n-butyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for 2,4-Dimethylphenol: Associated CCV outside of control limits high, sample was ND.
- JC86837-10 for bis(2-Ethylhexyl)phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-11 for Di-n-butyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JC86837-8 for Butyl benzyl phthalate: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: SO **Batch ID:** OP20020

- All samples were extracted within the recommended method holding time.
- Sample(s) JC86768-1MS, JC86768-1MSD, OP20020-MSMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP20020-BS1 for Aldrin: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- JC86837-1 for Decachlorobiphenyl: Outside control limits due to matrix interference.
- JC86837-1 for 4,4'-DDD: More than 40 % RPD for detected concentrations between the two GC columns.
- OP20020-BS1 for alpha-BHC: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO **Batch ID:** OP20019

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86768-1MS, JC86768-1MSD, OP20019-MSMSD were used as the QC samples indicated.
- JC86837-1 for Tetrachloro-m-xylene: Outside control limits due to matrix interference.
- JC86837-1 for Decachlorobiphenyl: Outside control limits due to matrix interference.

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP14579

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86916-5MSD, JC86916-5PS, JC86916-5SDL, JC86916-5MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Aluminum, Antimony, Barium, Calcium, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony, Barium, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Iron are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for Serial Dilution for Selenium are outside control limits for sample MP14579-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JC86837-1 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC86837-1 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC86837-1 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC86837-1 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC86837-1 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC86837-1 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC86837-1 for Silver: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 7471B

Matrix: SO	Batch ID: MP14565

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86837-10MS, JC86837-10MSD were used as the QC samples for metals.
- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO	Batch ID: GN94689

- Sample(s) JC87152-1DUP were used as the QC samples for Solids, Percent.

Matrix: SO	Batch ID: GN94706

- Sample(s) JC86825-1DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 9012B/LACHAT

Matrix: SO	Batch ID: GP20977

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86837-5MS, JC87130-1DUP were used as the QC samples for Cyanide.

Matrix: SO	Batch ID: GP20999

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC86916-5DUP, JC86916-5MS were used as the QC samples for Cyanide.
- Matrix Spike Recovery(s) for Cyanide are outside control limits. Spike recovery indicates possible matrix interference.

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: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC86837-1	**PSCB-41R(0.5-2)**					
Benzene [a]		6320	70	53	ug/kg	SW846 8260C
Cyclohexane [a]		4890	280	57	ug/kg	SW846 8260C
Ethylbenzene [a]		12300	140	78	ug/kg	SW846 8260C
Isopropylbenzene [a]		943	280	98	ug/kg	SW846 8260C
Methylcyclohexane [a]		8780	280	99	ug/kg	SW846 8260C
Toluene		53400	1400	530	ug/kg	SW846 8260C
m,p-Xylene [a]		51900	140	100	ug/kg	SW846 8260C
o-Xylene [a]		19100	140	82	ug/kg	SW846 8260C
Xylene (total) [a]		71000	140	82	ug/kg	SW846 8260C
Acenaphthene		66200	4000	1400	ug/kg	SW846 8270D
Acenaphthylene		1150	40	20	ug/kg	SW846 8270D
Anthracene		28100	400	250	ug/kg	SW846 8270D
Benzo(a)anthracene		19400	400	110	ug/kg	SW846 8270D
Benzo(a)pyrene		14400	400	180	ug/kg	SW846 8270D
Benzo(b)fluoranthene		17800	400	180	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		8460	400	200	ug/kg	SW846 8270D
Benzo(k)fluoranthene		6970	400	190	ug/kg	SW846 8270D
1,1'-Biphenyl		6430	810	55	ug/kg	SW846 8270D
Carbazole		9890	810	58	ug/kg	SW846 8270D
Chrysene		17700	400	130	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		2690	40	18	ug/kg	SW846 8270D
Dibenzofuran		32500	810	160	ug/kg	SW846 8270D
Fluoranthene		97900	4000	1800	ug/kg	SW846 8270D
Fluorene		48500	4000	1800	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		9140	400	190	ug/kg	SW846 8270D
2-Methylnaphthalene		22800	400	91	ug/kg	SW846 8270D
Naphthalene		14100	400	110	ug/kg	SW846 8270D
Phenanthrene		158000	4000	1400	ug/kg	SW846 8270D
Pyrene		61600	4000	1300	ug/kg	SW846 8270D
4,4'-DDD [b]		4.4	0.79	0.72	ug/kg	SW846 8081B
4,4'-DDE		5.4	0.79	0.69	ug/kg	SW846 8081B
4,4'-DDT		5.6	0.79	0.70	ug/kg	SW846 8081B
Aluminum		7590	61	9.8	mg/kg	SW846 6010D
Antimony		20.6	2.4	0.50	mg/kg	SW846 6010D
Arsenic [c]		19.5	4.8	0.68	mg/kg	SW846 6010D
Barium		175	24	2.3	mg/kg	SW846 6010D
Beryllium		0.91	0.24	0.097	mg/kg	SW846 6010D
Cadmium		1.4	0.61	0.085	mg/kg	SW846 6010D
Calcium		11500	610	54	mg/kg	SW846 6010D
Chromium		26.0	1.2	0.45	mg/kg	SW846 6010D
Cobalt		7.8	6.1	0.34	mg/kg	SW846 6010D
Copper [c]		193	6.1	2.0	mg/kg	SW846 6010D
Iron		28300	120	47	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead [c]		986	4.8	0.99	mg/kg	SW846 6010D
Magnesium		4570	610	17	mg/kg	SW846 6010D
Manganese [c]		552	3.6	0.99	mg/kg	SW846 6010D
Mercury		0.34	0.037	0.016	mg/kg	SW846 7471B
Nickel		38.4	4.8	0.42	mg/kg	SW846 6010D
Potassium		1120 J	1200	39	mg/kg	SW846 6010D
Sodium		208 J	1200	94	mg/kg	SW846 6010D
Vanadium		32.1	6.1	0.23	mg/kg	SW846 6010D
Zinc		530	6.1	2.8	mg/kg	SW846 6010D
Cyanide		0.53	0.32	0.16	mg/kg	SW846 9012B/LACHAT
JC86837-2	**PSCB-41R(9-11)**					
Acetone		184	13	6.5	ug/kg	SW846 8260C
Benzene		1.5	0.65	0.49	ug/kg	SW846 8260C
2-Butanone (MEK)		11.3 J	13	4.9	ug/kg	SW846 8260C
Cyclohexane		2.3 J	2.6	0.53	ug/kg	SW846 8260C
Ethylbenzene		7.7	1.3	0.72	ug/kg	SW846 8260C
Isopropylbenzene		1.1 J	2.6	0.91	ug/kg	SW846 8260C
Methylcyclohexane		5.4	2.6	0.92	ug/kg	SW846 8260C
Toluene		12.4	1.3	0.49	ug/kg	SW846 8260C
m,p-Xylene		73.5	1.3	0.97	ug/kg	SW846 8260C
o-Xylene		31.6	1.3	0.76	ug/kg	SW846 8260C
Xylene (total)		105	1.3	0.76	ug/kg	SW846 8260C
Aluminum		16700	69	11	mg/kg	SW846 6010D
Arsenic		5.5	2.8	0.39	mg/kg	SW846 6010D
Barium		117	28	2.6	mg/kg	SW846 6010D
Beryllium		0.83	0.28	0.11	mg/kg	SW846 6010D
Cadmium		0.097 J	0.69	0.097	mg/kg	SW846 6010D
Calcium		2630	690	61	mg/kg	SW846 6010D
Chromium		38.5	1.4	0.51	mg/kg	SW846 6010D
Cobalt		9.8	6.9	0.39	mg/kg	SW846 6010D
Copper		9.0	3.5	1.2	mg/kg	SW846 6010D
Iron		19800	69	27	mg/kg	SW846 6010D
Lead		19.4	2.8	0.57	mg/kg	SW846 6010D
Magnesium		4730	690	19	mg/kg	SW846 6010D
Manganese		341	2.1	0.57	mg/kg	SW846 6010D
Nickel		24.2	5.5	0.48	mg/kg	SW846 6010D
Potassium		2010	1400	44	mg/kg	SW846 6010D
Sodium		256 J	1400	110	mg/kg	SW846 6010D
Vanadium		34.8	6.9	0.26	mg/kg	SW846 6010D
Zinc		59.4	6.9	3.2	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC86837-3	**TP-44R(3-5)**					
Benzene [d]		494	100	76	ug/kg	SW846 8260C
Ethylbenzene [d]		2290	200	110	ug/kg	SW846 8260C
Toluene [d]		1040	200	75	ug/kg	SW846 8260C
m,p-Xylene [d]		2950	200	150	ug/kg	SW846 8260C
o-Xylene [d]		354	200	120	ug/kg	SW846 8260C
Xylene (total) [d]		3300	200	120	ug/kg	SW846 8260C
Acenaphthene		70.7	41	14	ug/kg	SW846 8270D
Anthracene		35.1 J	41	25	ug/kg	SW846 8270D
Benzo(a)anthracene		16.5 J	41	12	ug/kg	SW846 8270D
Benzo(b)fluoranthene		19.2 J	41	18	ug/kg	SW846 8270D
1,1'-Biphenyl		227	83	5.7	ug/kg	SW846 8270D
Carbazole		63.2 J	83	6.0	ug/kg	SW846 8270D
Chrysene		39.8 J	41	13	ug/kg	SW846 8270D
Dibenzofuran		219	83	17	ug/kg	SW846 8270D
Fluoranthene		23.2 J	41	18	ug/kg	SW846 8270D
Fluorene		161	41	19	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		31.6 J	41	19	ug/kg	SW846 8270D
2-Methylnaphthalene		4110	41	9.3	ug/kg	SW846 8270D
Naphthalene		1420	41	12	ug/kg	SW846 8270D
Phenanthrene		284	41	14	ug/kg	SW846 8270D
Pyrene		70.2	41	13	ug/kg	SW846 8270D
Aluminum		2730	62	9.9	mg/kg	SW846 6010D
Antimony		2.5	2.5	0.51	mg/kg	SW846 6010D
Arsenic		17.0	2.5	0.35	mg/kg	SW846 6010D
Barium		57.7	25	2.3	mg/kg	SW846 6010D
Beryllium		0.38	0.25	0.099	mg/kg	SW846 6010D
Calcium		852	620	54	mg/kg	SW846 6010D
Chromium		8.9	1.2	0.46	mg/kg	SW846 6010D
Cobalt		3.5 J	6.2	0.35	mg/kg	SW846 6010D
Copper		154	3.1	1.0	mg/kg	SW846 6010D
Iron		10700	62	24	mg/kg	SW846 6010D
Lead		220	2.5	0.51	mg/kg	SW846 6010D
Magnesium		332 J	620	17	mg/kg	SW846 6010D
Manganese		23.0	1.9	0.51	mg/kg	SW846 6010D
Mercury		0.23	0.041	0.018	mg/kg	SW846 7471B
Nickel		8.2	4.9	0.43	mg/kg	SW846 6010D
Potassium		361 J	1200	39	mg/kg	SW846 6010D
Selenium		1.2 J	2.5	0.80	mg/kg	SW846 6010D
Vanadium		11.2	6.2	0.23	mg/kg	SW846 6010D
Zinc		19.5	6.2	2.8	mg/kg	SW846 6010D
Cyanide		2.7	0.32	0.16	mg/kg	SW846 9012B/LACHAT

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC86837-4	**TP-44R(5-7)**					
Toluene [d]		68.4 J	130	49	ug/kg	SW846 8260C
Acenaphthene		671	44	15	ug/kg	SW846 8270D
Anthracene		226	44	27	ug/kg	SW846 8270D
Benzo(a)anthracene		32.7 J	44	12	ug/kg	SW846 8270D
Benzo(b)fluoranthene		21.8 J	44	19	ug/kg	SW846 8270D
Chrysene		29.6 J	44	14	ug/kg	SW846 8270D
Dibenzofuran		600	87	18	ug/kg	SW846 8270D
Fluoranthene		134	44	19	ug/kg	SW846 8270D
Fluorene		1210	44	20	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		34.7 J	44	20	ug/kg	SW846 8270D
Phenanthrene		236	44	15	ug/kg	SW846 8270D
Pyrene		154	44	14	ug/kg	SW846 8270D
Aluminum		4720	66	11	mg/kg	SW846 6010D
Antimony		0.92 J	2.7	0.54	mg/kg	SW846 6010D
Arsenic		7.0	2.7	0.37	mg/kg	SW846 6010D
Barium		407	27	2.5	mg/kg	SW846 6010D
Beryllium		0.20 J	0.27	0.11	mg/kg	SW846 6010D
Calcium		640 J	660	59	mg/kg	SW846 6010D
Chromium		14.3	1.3	0.49	mg/kg	SW846 6010D
Cobalt		3.4 J	6.6	0.37	mg/kg	SW846 6010D
Copper		17.8	3.3	1.1	mg/kg	SW846 6010D
Iron		9770	66	25	mg/kg	SW846 6010D
Lead		2840	13	2.7	mg/kg	SW846 6010D
Magnesium		1810	660	18	mg/kg	SW846 6010D
Manganese		95.2	2.0	0.54	mg/kg	SW846 6010D
Mercury		0.67	0.035	0.015	mg/kg	SW846 7471B
Nickel		8.1	5.3	0.46	mg/kg	SW846 6010D
Potassium		1220 J	1300	42	mg/kg	SW846 6010D
Vanadium		8.4	6.6	0.25	mg/kg	SW846 6010D
Zinc		79.1	6.6	3.1	mg/kg	SW846 6010D
JC86837-5	**TP-44R(7-9)**					
Acetone		44.9	12	6.1	ug/kg	SW846 8260C
Benzene		1.2	0.61	0.46	ug/kg	SW846 8260C
Toluene		2.3	1.2	0.46	ug/kg	SW846 8260C
Acenaphthene		29.3 J	42	14	ug/kg	SW846 8270D
1,1'-Biphenyl		6.7 J	84	5.7	ug/kg	SW846 8270D
2-Methylnaphthalene		14.7 J	42	9.5	ug/kg	SW846 8270D
Aluminum		5920	64	10	mg/kg	SW846 6010D
Arsenic		5.9	2.6	0.36	mg/kg	SW846 6010D
Barium		35.2	26	2.4	mg/kg	SW846 6010D
Beryllium		0.35	0.26	0.10	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Cadmium		0.46 J	0.64	0.090	mg/kg	SW846 6010D
Calcium		484 J	640	57	mg/kg	SW846 6010D
Chromium		13.5	1.3	0.47	mg/kg	SW846 6010D
Cobalt		4.7 J	6.4	0.36	mg/kg	SW846 6010D
Copper		8.4	3.2	1.1	mg/kg	SW846 6010D
Iron		11300	64	25	mg/kg	SW846 6010D
Lead		18.8	2.6	0.53	mg/kg	SW846 6010D
Magnesium		1580	640	18	mg/kg	SW846 6010D
Manganese		83.7	1.9	0.53	mg/kg	SW846 6010D
Mercury		0.026 J	0.041	0.018	mg/kg	SW846 7471B
Nickel		9.0	5.1	0.45	mg/kg	SW846 6010D
Potassium		985 J	1300	41	mg/kg	SW846 6010D
Vanadium		12.3	6.4	0.24	mg/kg	SW846 6010D
Zinc		167	6.4	3.0	mg/kg	SW846 6010D
JC86837-6	**S-135(4-6)**					
Ethylbenzene [a]		119 J	170	92	ug/kg	SW846 8260C
Toluene [a]		2070	170	62	ug/kg	SW846 8260C
m,p-Xylene [a]		212	170	120	ug/kg	SW846 8260C
Xylene (total) [a]		212	170	97	ug/kg	SW846 8260C
3&4-Methylphenol		82.7 J	93	38	ug/kg	SW846 8270D
Acenaphthene		216	46	16	ug/kg	SW846 8270D
Anthracene		114	46	28	ug/kg	SW846 8270D
Benzo(a)anthracene		126	46	13	ug/kg	SW846 8270D
Benzo(a)pyrene		143	46	21	ug/kg	SW846 8270D
Benzo(b)fluoranthene		152	46	21	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		96.6	46	23	ug/kg	SW846 8270D
Benzo(k)fluoranthene		62.3	46	22	ug/kg	SW846 8270D
Chrysene		150	46	15	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		28.7 J	46	21	ug/kg	SW846 8270D
Dibenzofuran		131	93	19	ug/kg	SW846 8270D
Fluoranthene		305	46	21	ug/kg	SW846 8270D
Fluorene		302	46	21	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		105	46	22	ug/kg	SW846 8270D
2-Methylnaphthalene		108	46	10	ug/kg	SW846 8270D
Naphthalene		104	46	13	ug/kg	SW846 8270D
Phenanthrene		142	46	16	ug/kg	SW846 8270D
Pyrene		274	46	15	ug/kg	SW846 8270D
Aluminum		12300	70	11	mg/kg	SW846 6010D
Arsenic		52.2	2.8	0.39	mg/kg	SW846 6010D
Barium		136	28	2.7	mg/kg	SW846 6010D
Beryllium		0.95	0.28	0.11	mg/kg	SW846 6010D
Cadmium		1.6	0.70	0.098	mg/kg	SW846 6010D
Calcium		2810	700	62	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86837
Account: Arcadis
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Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chromium		125	1.4	0.52	mg/kg	SW846 6010D
Cobalt		13.2	7.0	0.39	mg/kg	SW846 6010D
Copper		104	3.5	1.2	mg/kg	SW846 6010D
Iron		23100	70	27	mg/kg	SW846 6010D
Lead		189	2.8	0.58	mg/kg	SW846 6010D
Magnesium		3340	700	19	mg/kg	SW846 6010D
Manganese		557	2.1	0.58	mg/kg	SW846 6010D
Mercury		0.99	0.040	0.017	mg/kg	SW846 7471B
Nickel		24.2	5.6	0.49	mg/kg	SW846 6010D
Potassium		1530	1400	45	mg/kg	SW846 6010D
Selenium		1.3 J	2.8	0.91	mg/kg	SW846 6010D
Silver		0.79	0.70	0.24	mg/kg	SW846 6010D
Sodium		121 J	1400	110	mg/kg	SW846 6010D
Vanadium		24.7	7.0	0.27	mg/kg	SW846 6010D
Zinc		531	7.0	3.2	mg/kg	SW846 6010D
Cyanide		0.67	0.38	0.19	mg/kg	SW846 9012B/LACHAT
JC86837-7	**S-135(8-10)**					
Acetone		105	13	6.4	ug/kg	SW846 8260C
2-Butanone (MEK)		9.6 J	13	4.8	ug/kg	SW846 8260C
Toluene		0.80 J	1.3	0.48	ug/kg	SW846 8260C
Benzo(a)anthracene		42.2 J	47	13	ug/kg	SW846 8270D
Benzo(a)pyrene		40.8 J	47	22	ug/kg	SW846 8270D
Benzo(b)fluoranthene		49.2	47	21	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		29.1 J	47	24	ug/kg	SW846 8270D
1,1'-Biphenyl		9.1 J	95	6.5	ug/kg	SW846 8270D
Carbazole		7.1 J	95	6.9	ug/kg	SW846 8270D
Chrysene		39.1 J	47	15	ug/kg	SW846 8270D
Fluoranthene		48.1	47	21	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		46.4 J	47	22	ug/kg	SW846 8270D
Naphthalene		25.8 J	47	13	ug/kg	SW846 8270D
Phenanthrene		34.3 J	47	16	ug/kg	SW846 8270D
Pyrene		57.4	47	15	ug/kg	SW846 8270D
Aluminum		7510	70	11	mg/kg	SW846 6010D
Arsenic		4.6	2.8	0.39	mg/kg	SW846 6010D
Barium		46.6	28	2.7	mg/kg	SW846 6010D
Beryllium		0.36	0.28	0.11	mg/kg	SW846 6010D
Cadmium		0.14 J	0.70	0.098	mg/kg	SW846 6010D
Calcium		1940	700	62	mg/kg	SW846 6010D
Chromium		23.7	1.4	0.52	mg/kg	SW846 6010D
Cobalt		6.8 J	7.0	0.39	mg/kg	SW846 6010D
Copper		10.1	3.5	1.2	mg/kg	SW846 6010D
Iron		13500	70	27	mg/kg	SW846 6010D
Lead		25.6	2.8	0.58	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Magnesium		3200	700	19	mg/kg	SW846 6010D
Manganese		401	2.1	0.58	mg/kg	SW846 6010D
Mercury		0.051	0.043	0.019	mg/kg	SW846 7471B
Nickel		15.3	5.6	0.49	mg/kg	SW846 6010D
Potassium		1150 J	1400	45	mg/kg	SW846 6010D
Sodium		116 J	1400	110	mg/kg	SW846 6010D
Vanadium		15.9	7.0	0.27	mg/kg	SW846 6010D
Zinc		61.9	7.0	3.2	mg/kg	SW846 6010D
JC86837-8	**S-136(4-6)**					
Acetone		176	15	7.3	ug/kg	SW846 8260C
Benzene		2.2	0.73	0.55	ug/kg	SW846 8260C
2-Butanone (MEK)		22.9	15	5.5	ug/kg	SW846 8260C
Toluene		1.3 J	1.5	0.55	ug/kg	SW846 8260C
Acenaphthene		37.5 J	46	16	ug/kg	SW846 8270D
Acenaphthylene		47.3	46	23	ug/kg	SW846 8270D
Anthracene		61.6	46	28	ug/kg	SW846 8270D
Benzo(a)anthracene		79.9	46	13	ug/kg	SW846 8270D
Benzo(a)pyrene		99.0	46	21	ug/kg	SW846 8270D
Benzo(b)fluoranthene		102	46	20	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		73.1	46	23	ug/kg	SW846 8270D
Benzo(k)fluoranthene		44.1 J	46	21	ug/kg	SW846 8270D
1,1'-Biphenyl		24.2 J	91	6.2	ug/kg	SW846 8270D
Benzaldehyde		14.9 J	230	11	ug/kg	SW846 8270D
Chrysene		84.1	46	14	ug/kg	SW846 8270D
Fluoranthene		111	46	20	ug/kg	SW846 8270D
Fluorene		33.1 J	46	21	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		53.7	46	21	ug/kg	SW846 8270D
2-Methylnaphthalene		76.5	46	10	ug/kg	SW846 8270D
Naphthalene		395	46	13	ug/kg	SW846 8270D
Phenanthrene		72.2	46	15	ug/kg	SW846 8270D
Pyrene		156	46	15	ug/kg	SW846 8270D
Aluminum		10400	71	11	mg/kg	SW846 6010D
Arsenic		20.8	2.8	0.40	mg/kg	SW846 6010D
Barium		123	28	2.7	mg/kg	SW846 6010D
Beryllium		0.70	0.28	0.11	mg/kg	SW846 6010D
Cadmium		2.1	0.71	0.099	mg/kg	SW846 6010D
Calcium		1820	710	63	mg/kg	SW846 6010D
Chromium		79.0	1.4	0.53	mg/kg	SW846 6010D
Cobalt		8.0	7.1	0.40	mg/kg	SW846 6010D
Copper		74.3	3.6	1.2	mg/kg	SW846 6010D
Iron		17600	71	27	mg/kg	SW846 6010D
Lead		137	2.8	0.58	mg/kg	SW846 6010D
Magnesium		2690	710	19	mg/kg	SW846 6010D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Manganese		144	2.1	0.58	mg/kg	SW846 6010D
Mercury		0.80	0.040	0.018	mg/kg	SW846 7471B
Nickel		21.4	5.7	0.50	mg/kg	SW846 6010D
Potassium		1230 J	1400	45	mg/kg	SW846 6010D
Selenium		1.1 J	2.8	0.92	mg/kg	SW846 6010D
Silver		0.43 J	0.71	0.24	mg/kg	SW846 6010D
Sodium		121 J	1400	110	mg/kg	SW846 6010D
Vanadium		22.0	7.1	0.27	mg/kg	SW846 6010D
Zinc		332	7.1	3.3	mg/kg	SW846 6010D
Cyanide		2.7	0.33	0.17	mg/kg	SW846 9012B/LACHAT
JC86837-9	**S-136(7-9)**					
Acetone		66.4	11	5.7	ug/kg	SW846 8260C
Toluene		0.68 J	1.1	0.43	ug/kg	SW846 8260C
Aluminum		4850	63	10	mg/kg	SW846 6010D
Arsenic		5.7	2.5	0.35	mg/kg	SW846 6010D
Barium		29.3	25	2.4	mg/kg	SW846 6010D
Beryllium		0.22 J	0.25	0.10	mg/kg	SW846 6010D
Cadmium		0.10 J	0.63	0.089	mg/kg	SW846 6010D
Calcium		1040	630	56	mg/kg	SW846 6010D
Chromium		12.4	1.3	0.47	mg/kg	SW846 6010D
Cobalt		6.2 J	6.3	0.35	mg/kg	SW846 6010D
Copper		6.8	3.2	1.1	mg/kg	SW846 6010D
Iron		10400	63	24	mg/kg	SW846 6010D
Lead		9.0	2.5	0.52	mg/kg	SW846 6010D
Magnesium		1820	630	17	mg/kg	SW846 6010D
Manganese		304	1.9	0.52	mg/kg	SW846 6010D
Mercury		0.037 J	0.038	0.017	mg/kg	SW846 7471B
Nickel		10.1	5.1	0.44	mg/kg	SW846 6010D
Potassium		774 J	1300	40	mg/kg	SW846 6010D
Vanadium		8.1	6.3	0.24	mg/kg	SW846 6010D
Zinc		86.6	6.3	2.9	mg/kg	SW846 6010D
Cyanide		0.72	0.32	0.16	mg/kg	SW846 9012B/LACHAT
JC86837-10	**S-111(2-4)**					
Carbon disulfide		1.3 J	2.6	1.2	ug/kg	SW846 8260C
3&4-Methylphenol		53.3 J	76	31	ug/kg	SW846 8270D
Phenol		49.0 J	76	20	ug/kg	SW846 8270D
Acenaphthene		121	38	13	ug/kg	SW846 8270D
Acenaphthylene		3140	38	19	ug/kg	SW846 8270D
Acetophenone		31.8 J	190	8.1	ug/kg	SW846 8270D
Anthracene		2210	38	23	ug/kg	SW846 8270D
Benzo(a)anthracene		4480	190	53	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(a)pyrene		7110	190	86	ug/kg	SW846 8270D
Benzo(b)fluoranthene		8790	190	84	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		5670	190	94	ug/kg	SW846 8270D
Benzo(k)fluoranthene		2720	190	88	ug/kg	SW846 8270D
1,1'-Biphenyl		101	76	5.2	ug/kg	SW846 8270D
Carbazole		354	76	5.5	ug/kg	SW846 8270D
Chrysene		4260	190	60	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		2020	38	17	ug/kg	SW846 8270D
Dibenzofuran		387	76	15	ug/kg	SW846 8270D
Fluoranthene		6890	190	84	ug/kg	SW846 8270D
Fluorene		448	38	17	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		4870	190	89	ug/kg	SW846 8270D
2-Methylnaphthalene		447	38	8.5	ug/kg	SW846 8270D
Naphthalene		1470	38	11	ug/kg	SW846 8270D
Phenanthrene		3220	38	13	ug/kg	SW846 8270D
Pyrene		6440	190	60	ug/kg	SW846 8270D
Aluminum		5750	59	9.5	mg/kg	SW846 6010D
Antimony		0.65 J	2.4	0.49	mg/kg	SW846 6010D
Arsenic		6.7	2.4	0.33	mg/kg	SW846 6010D
Barium		66.5	24	2.2	mg/kg	SW846 6010D
Beryllium		0.41	0.24	0.095	mg/kg	SW846 6010D
Cadmium		0.50 J	0.59	0.083	mg/kg	SW846 6010D
Calcium		6330	590	52	mg/kg	SW846 6010D
Chromium		16.2	1.2	0.44	mg/kg	SW846 6010D
Cobalt		5.2 J	5.9	0.33	mg/kg	SW846 6010D
Copper		49.0	3.0	0.99	mg/kg	SW846 6010D
Iron		15400	59	23	mg/kg	SW846 6010D
Lead		137	2.4	0.49	mg/kg	SW846 6010D
Magnesium		3330	590	16	mg/kg	SW846 6010D
Manganese		143	1.8	0.49	mg/kg	SW846 6010D
Mercury		0.44	0.035	0.015	mg/kg	SW846 7471B
Nickel		16.6	4.7	0.41	mg/kg	SW846 6010D
Potassium		697 J	1200	38	mg/kg	SW846 6010D
Vanadium		27.1	5.9	0.22	mg/kg	SW846 6010D
Zinc		126	5.9	2.7	mg/kg	SW846 6010D
Cyanide		0.78	0.30	0.15	mg/kg	SW846 9012B/LACHAT
JC86837-11	**S-111(4.5-6.5)**					
Acetone		64.3	11	5.5	ug/kg	SW846 8260C
Toluene		0.60 J	1.1	0.41	ug/kg	SW846 8260C
Acenaphthylene		104	37	19	ug/kg	SW846 8270D
Anthracene		33.0 J	37	23	ug/kg	SW846 8270D
Benzo(a)anthracene		42.7	37	10	ug/kg	SW846 8270D
Benzo(a)pyrene		312	37	17	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(b)fluoranthene		353	37	16	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		233	37	18	ug/kg	SW846 8270D
Benzo(k)fluoranthene		131	37	17	ug/kg	SW846 8270D
Chrysene		76.5	37	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		58.9	37	16	ug/kg	SW846 8270D
Fluoranthene		16.8 J	37	16	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		207	37	17	ug/kg	SW846 8270D
Naphthalene		13.3 J	37	10	ug/kg	SW846 8270D
Pyrene		45.4	37	12	ug/kg	SW846 8270D
Aluminum		8310	58	9.3	mg/kg	SW846 6010D
Arsenic		4.5	2.3	0.32	mg/kg	SW846 6010D
Barium		23.9	23	2.2	mg/kg	SW846 6010D
Beryllium		1.0	0.23	0.092	mg/kg	SW846 6010D
Cadmium		0.34 J	0.58	0.081	mg/kg	SW846 6010D
Calcium		358 J	580	51	mg/kg	SW846 6010D
Chromium		31.0	1.2	0.43	mg/kg	SW846 6010D
Cobalt		6.8	5.8	0.32	mg/kg	SW846 6010D
Copper		41.5	2.9	0.97	mg/kg	SW846 6010D
Iron		19600	58	22	mg/kg	SW846 6010D
Lead		44.8	2.3	0.47	mg/kg	SW846 6010D
Magnesium		1410	580	16	mg/kg	SW846 6010D
Manganese		89.5	1.7	0.47	mg/kg	SW846 6010D
Mercury		0.16	0.029	0.013	mg/kg	SW846 7471B
Nickel		15.1	4.6	0.40	mg/kg	SW846 6010D
Potassium		872 J	1200	37	mg/kg	SW846 6010D
Vanadium		18.7	5.8	0.22	mg/kg	SW846 6010D
Zinc		144	5.8	2.7	mg/kg	SW846 6010D
Cyanide		2.8	0.29	0.14	mg/kg	SW846 9012B/LACHAT
JC86837-12	**S-107(2-4)**					
Acenaphthene		146	37	13	ug/kg	SW846 8270D
Acenaphthylene		1610	37	19	ug/kg	SW846 8270D
Anthracene		3960	370	230	ug/kg	SW846 8270D
Benzo(a)anthracene		6510	370	100	ug/kg	SW846 8270D
Benzo(a)pyrene		5540	370	170	ug/kg	SW846 8270D
Benzo(b)fluoranthene		6860	370	160	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		3600	370	180	ug/kg	SW846 8270D
Benzo(k)fluoranthene		3070	37	17	ug/kg	SW846 8270D
1,1'-Biphenyl		143	74	5.0	ug/kg	SW846 8270D
Carbazole		459	74	5.3	ug/kg	SW846 8270D
Chrysene		5800	370	120	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		1450	37	16	ug/kg	SW846 8270D
Dibenzofuran		989	74	15	ug/kg	SW846 8270D
Fluoranthene		14400	370	160	ug/kg	SW846 8270D

Summary of Hits

Job Number: JC86837
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Collected: 04/22/19 thru 04/23/19

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Fluorene	2280	37	17	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	2990	370	170	ug/kg	SW846 8270D
2-Methylnaphthalene	359	37	8.3	ug/kg	SW846 8270D
Naphthalene	627	37	10	ug/kg	SW846 8270D
Phenanthrene	11300	370	120	ug/kg	SW846 8270D
Pyrene	10500	370	120	ug/kg	SW846 8270D
Aluminum	8800	57	9.2	mg/kg	SW846 6010D
Antimony	2.7	2.3	0.47	mg/kg	SW846 6010D
Arsenic	57.7	2.3	0.32	mg/kg	SW846 6010D
Barium	85.0	23	2.2	mg/kg	SW846 6010D
Beryllium	0.63	0.23	0.091	mg/kg	SW846 6010D
Cadmium	0.46 J	0.57	0.080	mg/kg	SW846 6010D
Calcium	757	570	50	mg/kg	SW846 6010D
Chromium	15.4	1.1	0.42	mg/kg	SW846 6010D
Cobalt	5.0 J	5.7	0.32	mg/kg	SW846 6010D
Copper	52.7	2.8	0.96	mg/kg	SW846 6010D
Iron	18500	57	22	mg/kg	SW846 6010D
Lead	683	2.3	0.47	mg/kg	SW846 6010D
Magnesium	1490	570	16	mg/kg	SW846 6010D
Manganese	131	1.7	0.47	mg/kg	SW846 6010D
Mercury	0.36	0.038	0.017	mg/kg	SW846 7471B
Nickel	13.4	4.6	0.40	mg/kg	SW846 6010D
Potassium	660 J	1100	36	mg/kg	SW846 6010D
Vanadium	16.7	5.7	0.22	mg/kg	SW846 6010D
Zinc	144	5.7	2.6	mg/kg	SW846 6010D
Cyanide	12.3	0.29	0.14	mg/kg	SW846 9012B/LACHAT

(a) Diluted due to high concentration of target and non-target compound.
(b) More than 40 % RPD for detected concentrations between the two GC columns.
(c) Elevated detection limit due to dilution required for high interfering element.
(d) Diluted due to high concentration of non-target compound.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
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]	I225838.D	1	04/30/19 17:18	TDN	n/a	n/a	VI9098
Run #2	I225861.D	1	05/01/19 10:27	TDN	n/a	n/a	VI9099

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.8 g	10.0 ml	100 ul
Run #2	4.8 g	10.0 ml	10.0 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1400	700	ug/kg	
71-43-2	Benzene	6320	70	53	ug/kg	
74-97-5	Bromochloromethane	ND	700	60	ug/kg	
75-27-4	Bromodichloromethane	ND	280	62	ug/kg	
75-25-2	Bromoform	ND	700	57	ug/kg	
74-83-9	Bromomethane	ND	700	140	ug/kg	
78-93-3	2-Butanone (MEK)	ND	1400	530	ug/kg	
75-15-0	Carbon disulfide	ND	280	130	ug/kg	
56-23-5	Carbon tetrachloride	ND	280	77	ug/kg	
108-90-7	Chlorobenzene	ND	280	50	ug/kg	
75-00-3	Chloroethane	ND	700	97	ug/kg	
67-66-3	Chloroform	ND	280	52	ug/kg	
74-87-3	Chloromethane	ND	700	280	ug/kg	
110-82-7	Cyclohexane	4890	280	57	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	280	120	ug/kg	
124-48-1	Dibromochloromethane	ND	280	48	ug/kg	
106-93-4	1,2-Dibromoethane	ND	140	46	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	140	43	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	140	50	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	140	48	ug/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	700	89	ug/kg	
75-34-3	1,1-Dichloroethane	ND	140	54	ug/kg	
107-06-2	1,2-Dichloroethane	ND	140	66	ug/kg	
75-35-4	1,1-Dichloroethene	ND	140	92	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	140	130	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	140	94	ug/kg	
78-87-5	1,2-Dichloropropane	ND	280	57	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	280	49	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	280	46	ug/kg	
100-41-4	Ethylbenzene	12300	140	78	ug/kg	
76-13-1	Freon 113	ND	700	110	ug/kg	
591-78-6	2-Hexanone	ND	700	180	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:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
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	943	280	98	ug/kg	
79-20-9	Methyl Acetate	ND	700	200	ug/kg	
108-87-2	Methylcyclohexane	8780	280	99	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	140	49	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	700	220	ug/kg	
75-09-2	Methylene chloride	ND	700	350	ug/kg	
100-42-5	Styrene	ND	280	81	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	280	55	ug/kg	
127-18-4	Tetrachloroethene	ND	280	65	ug/kg	
108-88-3	Toluene	53400 [c]	1400	530	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	700	140	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	700	140	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	280	60	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	280	48	ug/kg	
79-01-6	Trichloroethene	ND	140	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	700	96	ug/kg	
75-01-4	Vinyl chloride	ND	280	66	ug/kg	
	m,p-Xylene	51900	140	100	ug/kg	
95-47-6	o-Xylene	19100	140	82	ug/kg	
1330-20-7	Xylene (total)	71000	140	82	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	105%	112%	75-130%
2037-26-5	Toluene-D8	103%	103%	80-120%
460-00-4	4-Bromofluorobenzene	115%	109%	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) 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:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153945.D	1	05/01/19 18:57	CC	04/28/19 13:30	OP20021	EM6577
Run #2	M153987.D	10	05/02/19 19:25	CC	04/28/19 13:30	OP20021	EM6579
Run #3	M153986.D	100	05/02/19 18:57	CC	04/28/19 13:30	OP20021	EM6579

	Initial Weight	Final Volume
Run #1	30.7 g	1.0 ml
Run #2	30.7 g	1.0 ml
Run #3	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	81	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	72	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	81	26	ug/kg	
	3&4-Methylphenol	ND	81	33	ug/kg	
88-75-5	2-Nitrophenol [a]	ND	200	27	ug/kg	
100-02-7	4-Nitrophenol	ND	400	110	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	160	38	ug/kg	
108-95-2	Phenol	ND	81	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	66200 [b]	4000	1400	ug/kg	
208-96-8	Acenaphthylene	1150	40	20	ug/kg	
98-86-2	Acetophenone	ND	200	8.7	ug/kg	
120-12-7	Anthracene	28100 [c]	400	250	ug/kg	
1912-24-9	Atrazine [a]	ND	81	17	ug/kg	
56-55-3	Benzo(a)anthracene	19400 [c]	400	110	ug/kg	
50-32-8	Benzo(a)pyrene	14400 [c]	400	180	ug/kg	
205-99-2	Benzo(b)fluoranthene	17800 [c]	400	180	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8460 [c]	400	200	ug/kg	
207-08-9	Benzo(k)fluoranthene	6970 [c]	400	190	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	81	16	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	81	9.8	ug/kg	
92-52-4	1,1'-Biphenyl	6430 [c]	810	55	ug/kg	
100-52-7	Benzaldehyde	ND	200	10	ug/kg	
91-58-7	2-Chloronaphthalene	ND	81	9.6	ug/kg	

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

Report of Analysis

Client Sample ID:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**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	9890 c	810	58	ug/kg	
105-60-2	Caprolactam	ND	81	16	ug/kg	
218-01-9	Chrysene	17700 c	400	130	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	81	8.6	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	81	17	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	81	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	81	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	81	34	ug/kg	
123-91-1	1,4-Dioxane d	ND	40	27	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	2690	40	18	ug/kg	
132-64-9	Dibenzofuran	32500 c	810	160	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	81	6.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	81	10	ug/kg	
84-66-2	Diethyl phthalate	ND	81	8.6	ug/kg	
131-11-3	Dimethyl phthalate	ND	81	7.2	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	81	9.4	ug/kg	
206-44-0	Fluoranthene	97900 b	4000	1800	ug/kg	
86-73-7	Fluorene	48500 b	4000	1800	ug/kg	
118-74-1	Hexachlorobenzene	ND	81	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	9140 c	400	190	ug/kg	
78-59-1	Isophorone	ND	81	8.6	ug/kg	
91-57-6	2-Methylnaphthalene	22800 c	400	91	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	14100 c	400	110	ug/kg	
98-95-3	Nitrobenzene	ND	81	16	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	81	12	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	15	ug/kg	
85-01-8	Phenanthrene	158000 b	4000	1400	ug/kg	
129-00-0	Pyrene	61600 b	4000	1300	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	200	10	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:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**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	57%	48%	0% [e]	23-115%
4165-62-2	Phenol-d5	51%	56%	0% [e]	27-114%
118-79-6	2,4,6-Tribromophenol	84%	86%	123%	19-152%
4165-60-0	Nitrobenzene-d5	67%	72%	83%	26-134%
321-60-8	2-Fluorobiphenyl	68%	72%	73%	39-124%
1718-51-0	Terphenyl-d14	60%	69%	69%	36-134%

(a) Associated CCV outside of control limits high, sample was ND.
(b) Result is from Run# 3
(c) Result is from Run# 2
(d) Associated CCV outside of control limits low.
(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:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8081B 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	6G64659.D	1	05/03/19 19:01	MH	05/02/19 10:30	OP20020	G6G2001
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.79	0.65	ug/kg	
319-84-6	alpha-BHC	ND	0.79	0.64	ug/kg	
319-85-7	beta-BHC	ND	0.79	0.71	ug/kg	
319-86-8	delta-BHC	ND	0.79	0.76	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.79	0.58	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.79	0.64	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.79	0.36	ug/kg	
60-57-1	Dieldrin	ND	0.79	0.54	ug/kg	
72-54-8	4,4'-DDD [a]	4.4	0.79	0.72	ug/kg	
72-55-9	4,4'-DDE	5.4	0.79	0.69	ug/kg	
50-29-3	4,4'-DDT	5.6	0.79	0.70	ug/kg	
72-20-8	Endrin	ND	0.79	0.61	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.79	0.61	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.79	0.45	ug/kg	
959-98-8	Endosulfan-I	ND	0.79	0.45	ug/kg	
33213-65-9	Endosulfan-II	ND	0.79	0.49	ug/kg	
76-44-8	Heptachlor	ND	0.79	0.68	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.79	0.55	ug/kg	
72-43-5	Methoxychlor	ND	1.6	0.63	ug/kg	
53494-70-5	Endrin ketone	ND	0.79	0.57	ug/kg	
8001-35-2	Toxaphene	ND	20	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		25-135%
877-09-8	Tetrachloro-m-xylene	63%		25-135%
2051-24-3	Decachlorobiphenyl	59%		10-156%
2051-24-3	Decachlorobiphenyl	171% [b]		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Outside control limits due to matrix interference.

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8082A 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	XX2434623.D	1	05/04/19 17:47	TR	05/02/19 10:30	OP20019	GXX6680
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	39	18	ug/kg	
11104-28-2	Aroclor 1221	ND	39	20	ug/kg	
11141-16-5	Aroclor 1232	ND	39	30	ug/kg	
53469-21-9	Aroclor 1242	ND	39	16	ug/kg	
12672-29-6	Aroclor 1248	ND	39	35	ug/kg	
11097-69-1	Aroclor 1254	ND	39	21	ug/kg	
11096-82-5	Aroclor 1260	ND	39	17	ug/kg	
11100-14-4	Aroclor 1268	ND	39	17	ug/kg	
37324-23-5	Aroclor 1262	ND	39	26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	140%		31-146%
877-09-8	Tetrachloro-m-xylene	335% [a]		31-146%
2051-24-3	Decachlorobiphenyl	67%		17-164%
2051-24-3	Decachlorobiphenyl	210% [a]		17-164%

(a) Outside control limits due to matrix interference.

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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: PSCB-41R(0.5-2)
Lab Sample ID: JC86837-1
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 80.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7590	61	9.8	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony	20.6	2.4	0.50	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic [a]	19.5	4.8	0.68	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Barium	175	24	2.3	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.91	0.24	0.097	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cadmium	1.4	0.61	0.085	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	11500	610	54	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium	26.0	1.2	0.45	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cobalt	7.8	6.1	0.34	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper [a]	193	6.1	2.0	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	28300	120	47	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead [a]	986	4.8	0.99	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	4570	610	17	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese [a]	552	3.6	0.99	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.34	0.037	0.016	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	38.4	4.8	0.42	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	1120 J	1200	39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium [a]	1.6 U	4.8	1.6	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Silver [a]	0.41 U	1.2	0.41	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	208 J	1200	94	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium [a]	1.4 U	2.4	1.4	mg/kg	2	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Vanadium	32.1	6.1	0.23	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	530	6.1	2.8	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Instrument QC Batch: MA46638
(4) Prep QC Batch: MP14565
(5) Prep QC Batch: MP14579

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

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	PSCB-41R(0.5-2)		
Lab Sample ID:	JC86837-1	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	80.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.53	0.32	0.16	mg/kg	1	05/03/19 14:14	KI	SW846 9012B/LACHAT
Solids, Percent	80.9			%	1	04/30/19 14:13	JMP	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:	PSCB-41R(9-11)		
Lab Sample ID:	JC86837-2	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	70.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151614.D	1	05/01/19 16:35	PS	n/a	n/a	V3C6814
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	184	13	6.5	ug/kg	
71-43-2	Benzene	1.5	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	0.53	ug/kg	
74-83-9	Bromomethane	ND	6.5	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	11.3	13	4.9	ug/kg	J
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	0.90	ug/kg	
67-66-3	Chloroform	ND	2.6	0.49	ug/kg	
74-87-3	Chloromethane	ND	6.5	2.6	ug/kg	
110-82-7	Cyclohexane	2.3	2.6	0.53	ug/kg	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.6	1.1	ug/kg	
124-48-1	Dibromochloromethane	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	0.86	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	7.7	1.3	0.72	ug/kg	
76-13-1	Freon 113	ND	6.5	1.0	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:	PSCB-41R(9-11)		
Lab Sample ID:	JC86837-2	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	70.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	1.1	2.6	0.91	ug/kg	J
79-20-9	Methyl Acetate	ND	6.5	1.8	ug/kg	
108-87-2	Methylcyclohexane	5.4	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 [a]	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	12.4	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	0.56	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.6	0.45	ug/kg	
79-01-6	Trichloroethene	ND	1.3	1.0	ug/kg	
75-69-4	Trichlorofluoromethane [b]	ND	6.5	0.89	ug/kg	
75-01-4	Vinyl chloride	ND	2.6	0.61	ug/kg	
	m,p-Xylene	73.5	1.3	0.97	ug/kg	
95-47-6	o-Xylene	31.6	1.3	0.76	ug/kg	
1330-20-7	Xylene (total)	105	1.3	0.76	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	97%		75-130%
2037-26-5	Toluene-D8	108%		80-120%
460-00-4	4-Bromofluorobenzene	114%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	PSCB-41R(9-11)		
Lab Sample ID:	JC86837-2	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	70.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153938.D	1	05/01/19 15:10	CC	04/28/19 13:30	OP20021	EM6577
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	93	23	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	28	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	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	230	50	ug/kg	
95-48-7	2-Methylphenol	ND	93	30	ug/kg	
	3&4-Methylphenol	ND	93	38	ug/kg	
88-75-5	2-Nitrophenol [a]	ND	230	31	ug/kg	
100-02-7	4-Nitrophenol	ND	460	120	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	190	44	ug/kg	
108-95-2	Phenol	ND	93	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	46	16	ug/kg	
208-96-8	Acenaphthylene	ND	46	24	ug/kg	
98-86-2	Acetophenone	ND	230	10	ug/kg	
120-12-7	Anthracene	ND	46	28	ug/kg	
1912-24-9	Atrazine [a]	ND	93	20	ug/kg	
56-55-3	Benzo(a)anthracene	ND	46	13	ug/kg	
50-32-8	Benzo(a)pyrene	ND	46	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	46	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	46	23	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	46	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	93	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	93	11	ug/kg	
92-52-4	1,1'-Biphenyl	ND	93	6.4	ug/kg	
100-52-7	Benzaldehyde	ND	230	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	93	11	ug/kg	
106-47-8	4-Chloroaniline	ND	230	17	ug/kg	
86-74-8	Carbazole	ND	93	6.7	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: PSCB-41R(9-11)
Lab Sample ID: JC86837-2
Matrix: SO - Soil
Method: SW846 8270D SW846 8151/3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 70.9

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	93	18	ug/kg	
218-01-9	Chrysene	ND	46	15	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	93	9.9	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	93	20	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	93	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	93	15	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	46	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	46	23	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	93	39	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	46	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	46	21	ug/kg	
132-64-9	Dibenzofuran	ND	93	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	93	7.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	93	12	ug/kg	
84-66-2	Diethyl phthalate	ND	93	9.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	93	8.3	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	93	11	ug/kg	
206-44-0	Fluoranthene	ND	46	21	ug/kg	
86-73-7	Fluorene	ND	46	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	93	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	46	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	460	18	ug/kg	
67-72-1	Hexachloroethane	ND	230	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	46	22	ug/kg	
78-59-1	Isophorone	ND	93	9.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	46	10	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	46	13	ug/kg	
98-95-3	Nitrobenzene	ND	93	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	93	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	17	ug/kg	
85-01-8	Phenanthrene	ND	46	16	ug/kg	
129-00-0	Pyrene	ND	46	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	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:	PSCB-41R(9-11)		
Lab Sample ID:	JC86837-2	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	70.9
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	62%		27-114%
118-79-6	2,4,6-Tribromophenol	105%		19-152%
4165-60-0	Nitrobenzene-d5	76%		26-134%
321-60-8	2-Fluorobiphenyl	87%		39-124%
1718-51-0	Terphenyl-d14	81%		36-134%

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

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

Report of Analysis

Client Sample ID: PSCB-41R(9-11)
Lab Sample ID: JC86837-2
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 70.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	16700	69	11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.57 U	2.8	0.57	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	5.5	2.8	0.39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	117	28	2.6	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.83	0.28	0.11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.097 J	0.69	0.097	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	2630	690	61	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	38.5	1.4	0.51	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	9.8	6.9	0.39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	9.0	3.5	1.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	19800	69	27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	19.4	2.8	0.57	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	4730	690	19	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	341	2.1	0.57	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.019 U	0.043	0.019	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	24.2	5.5	0.48	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	2010	1400	44	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.90 U	2.8	0.90	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.24 U	0.69	0.24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	256 J	1400	110	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.80 U	1.4	0.80	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	34.8	6.9	0.26	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	59.4	6.9	3.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	PSCB-41R(9-11)		
Lab Sample ID:	JC86837-2	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	70.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.15 U	0.29	0.15	mg/kg	1	05/03/19 14:15	KI	SW846 9012B/LACHAT
Solids, Percent	70.9			%	1	04/30/19 14:13	JMP	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:	TP-44R(3-5)		
Lab Sample ID:	JC86837-3	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	78.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I225876.D	1	05/01/19 17:47	TDN	n/a	n/a	VI9099
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.4 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	2000	1000	ug/kg	
71-43-2	Benzene	494	100	76	ug/kg	
74-97-5	Bromochloromethane	ND	1000	86	ug/kg	
75-27-4	Bromodichloromethane	ND	400	89	ug/kg	
75-25-2	Bromoform	ND	1000	81	ug/kg	
74-83-9	Bromomethane	ND	1000	200	ug/kg	
78-93-3	2-Butanone (MEK)	ND	2000	750	ug/kg	
75-15-0	Carbon disulfide	ND	400	190	ug/kg	
56-23-5	Carbon tetrachloride	ND	400	110	ug/kg	
108-90-7	Chlorobenzene	ND	400	71	ug/kg	
75-00-3	Chloroethane	ND	1000	140	ug/kg	
67-66-3	Chloroform	ND	400	75	ug/kg	
74-87-3	Chloromethane [b]	ND	1000	390	ug/kg	
110-82-7	Cyclohexane	ND	400	81	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	400	170	ug/kg	
124-48-1	Dibromochloromethane	ND	400	68	ug/kg	
106-93-4	1,2-Dibromoethane	ND	200	65	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	61	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	72	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	69	ug/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	1000	130	ug/kg	
75-34-3	1,1-Dichloroethane	ND	200	77	ug/kg	
107-06-2	1,2-Dichloroethane	ND	200	94	ug/kg	
75-35-4	1,1-Dichloroethene	ND	200	130	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	200	190	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	200	130	ug/kg	
78-87-5	1,2-Dichloropropane	ND	400	82	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	400	71	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	400	66	ug/kg	
100-41-4	Ethylbenzene	2290	200	110	ug/kg	
76-13-1	Freon 113	ND	1000	150	ug/kg	
591-78-6	2-Hexanone	ND	1000	250	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:	TP-44R(3-5)		
Lab Sample ID:	JC86837-3	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	78.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	400	140	ug/kg	
79-20-9	Methyl Acetate	ND	1000	280	ug/kg	
108-87-2	Methylcyclohexane	ND	400	140	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	200	71	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	1000	310	ug/kg	
75-09-2	Methylene chloride	ND	1000	500	ug/kg	
100-42-5	Styrene	ND	400	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	400	78	ug/kg	
127-18-4	Tetrachloroethene	ND	400	93	ug/kg	
108-88-3	Toluene	1040	200	75	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	400	85	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	400	69	ug/kg	
79-01-6	Trichloroethene	ND	200	150	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1000	140	ug/kg	
75-01-4	Vinyl chloride [b]	ND	400	94	ug/kg	
	m,p-Xylene	2950	200	150	ug/kg	
95-47-6	o-Xylene	354	200	120	ug/kg	
1330-20-7	Xylene (total)	3300	200	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		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	113%		79-127%

(a) Diluted due to high concentration of non-target compound.
(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: TP-44R(3-5)
Lab Sample ID: JC86837-3
Matrix: SO - Soil
Method: SW846 8270D SW846 8151/3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 78.7

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153943.D	1	05/01/19 18:00	CC	04/28/19 13:30	OP20021	EM6577
Run #2							

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

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	83	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	25	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	35	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	73	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	210	160	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	210	44	ug/kg	
95-48-7	2-Methylphenol	ND	83	26	ug/kg	
	3&4-Methylphenol	ND	83	34	ug/kg	
88-75-5	2-Nitrophenol [a]	ND	210	27	ug/kg	
100-02-7	4-Nitrophenol	ND	410	110	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	170	39	ug/kg	
108-95-2	Phenol	ND	83	22	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	210	27	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	31	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	25	ug/kg	
83-32-9	Acenaphthene	70.7	41	14	ug/kg	
208-96-8	Acenaphthylene	ND	41	21	ug/kg	
98-86-2	Acetophenone	ND	210	8.9	ug/kg	
120-12-7	Anthracene	35.1	41	25	ug/kg	J
1912-24-9	Atrazine [a]	ND	83	18	ug/kg	
56-55-3	Benzo(a)anthracene	16.5	41	12	ug/kg	J
50-32-8	Benzo(a)pyrene	ND	41	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19.2	41	18	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	41	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	41	19	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	83	16	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	83	10	ug/kg	
92-52-4	1,1'-Biphenyl	227	83	5.7	ug/kg	
100-52-7	Benzaldehyde	ND	210	10	ug/kg	
91-58-7	2-Chloronaphthalene	ND	83	9.8	ug/kg	
106-47-8	4-Chloroaniline	ND	210	15	ug/kg	
86-74-8	Carbazole	63.2	83	6.0	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:	TP-44R(3-5)		
Lab Sample ID:	JC86837-3	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	78.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	83	16	ug/kg	
218-01-9	Chrysene	39.8	41	13	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	83	8.8	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	83	18	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	83	15	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	83	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	41	13	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	41	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	83	34	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	41	27	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	41	18	ug/kg	
132-64-9	Dibenzofuran	219	83	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	83	6.7	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	83	10	ug/kg	
84-66-2	Diethyl phthalate	ND	83	8.8	ug/kg	
131-11-3	Dimethyl phthalate	ND	83	7.3	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	83	9.7	ug/kg	
206-44-0	Fluoranthene	23.2	41	18	ug/kg	J
86-73-7	Fluorene	161	41	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	83	10	ug/kg	
87-68-3	Hexachlorobutadiene	ND	41	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	410	16	ug/kg	
67-72-1	Hexachloroethane	ND	210	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	31.6	41	19	ug/kg	J
78-59-1	Isophorone	ND	83	8.8	ug/kg	
91-57-6	2-Methylnaphthalene	4110	41	9.3	ug/kg	
88-74-4	2-Nitroaniline	ND	210	9.7	ug/kg	
99-09-2	3-Nitroaniline	ND	210	10	ug/kg	
100-01-6	4-Nitroaniline	ND	210	11	ug/kg	
91-20-3	Naphthalene	1420	41	12	ug/kg	
98-95-3	Nitrobenzene	ND	83	16	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	83	12	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	15	ug/kg	
85-01-8	Phenanthrene	284	41	14	ug/kg	
129-00-0	Pyrene	70.2	41	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	210	10	ug/kg	

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

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

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

Report of Analysis

Client Sample ID:	TP-44R(3-5)		
Lab Sample ID:	JC86837-3	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	78.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	47%		27-114%
118-79-6	2,4,6-Tribromophenol	89%		19-152%
4165-60-0	Nitrobenzene-d5	62%		26-134%
321-60-8	2-Fluorobiphenyl	72%		39-124%
1718-51-0	Terphenyl-d14	60%		36-134%

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

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

Report of Analysis

Client Sample ID: TP-44R(3-5)
Lab Sample ID: JC86837-3
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 78.7

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2730	62	9.9	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	2.5	2.5	0.51	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	17.0	2.5	0.35	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	57.7	25	2.3	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.38	0.25	0.099	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.086 U	0.62	0.086	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	852	620	54	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	8.9	1.2	0.46	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	3.5 J	6.2	0.35	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	154	3.1	1.0	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	10700	62	24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	220	2.5	0.51	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	332 J	620	17	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	23.0	1.9	0.51	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.23	0.041	0.018	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	8.2	4.9	0.43	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	361 J	1200	39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.2 J	2.5	0.80	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.21 U	0.62	0.21	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	96 U	1200	96	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.72 U	1.2	0.72	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	11.2	6.2	0.23	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	19.5	6.2	2.8	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TP-44R(3-5)		
Lab Sample ID:	JC86837-3	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	78.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	2.7	0.32	0.16	mg/kg	1	05/03/19 14:16	KI	SW846 9012B/LACHAT
Solids, Percent	78.7			%	1	04/30/19 14:13	JMP	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:	TP-44R(5-7)		
Lab Sample ID:	JC86837-4	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	76.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I225877.D	1	05/01/19 18:16	TDN	n/a	n/a	VI9099
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.7 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1300	650	ug/kg	
71-43-2	Benzene	ND	65	49	ug/kg	
74-97-5	Bromochloromethane	ND	650	56	ug/kg	
75-27-4	Bromodichloromethane	ND	260	58	ug/kg	
75-25-2	Bromoform	ND	650	53	ug/kg	
74-83-9	Bromomethane	ND	650	130	ug/kg	
78-93-3	2-Butanone (MEK)	ND	1300	490	ug/kg	
75-15-0	Carbon disulfide	ND	260	120	ug/kg	
56-23-5	Carbon tetrachloride	ND	260	72	ug/kg	
108-90-7	Chlorobenzene	ND	260	46	ug/kg	
75-00-3	Chloroethane	ND	650	90	ug/kg	
67-66-3	Chloroform	ND	260	49	ug/kg	
74-87-3	Chloromethane [b]	ND	650	260	ug/kg	
110-82-7	Cyclohexane	ND	260	53	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	260	110	ug/kg	
124-48-1	Dibromochloromethane	ND	260	44	ug/kg	
106-93-4	1,2-Dibromoethane	ND	130	43	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	130	40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	130	47	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	130	45	ug/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	650	83	ug/kg	
75-34-3	1,1-Dichloroethane	ND	130	50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	130	62	ug/kg	
75-35-4	1,1-Dichloroethene	ND	130	86	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	130	130	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	130	87	ug/kg	
78-87-5	1,2-Dichloropropane	ND	260	53	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	260	46	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	260	43	ug/kg	
100-41-4	Ethylbenzene	ND	130	72	ug/kg	
76-13-1	Freon 113	ND	650	100	ug/kg	
591-78-6	2-Hexanone	ND	650	170	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:	TP-44R(5-7)		
Lab Sample ID:	JC86837-4	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	76.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	260	91	ug/kg	
79-20-9	Methyl Acetate	ND	650	180	ug/kg	
108-87-2	Methylcyclohexane	ND	260	93	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	130	46	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	650	200	ug/kg	
75-09-2	Methylene chloride	ND	650	330	ug/kg	
100-42-5	Styrene	ND	260	75	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	260	51	ug/kg	
127-18-4	Tetrachloroethene	ND	260	61	ug/kg	
108-88-3	Toluene	68.4	130	49	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	650	130	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	650	130	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	260	56	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	260	45	ug/kg	
79-01-6	Trichloroethene	ND	130	100	ug/kg	
75-69-4	Trichlorofluoromethane	ND	650	89	ug/kg	
75-01-4	Vinyl chloride [b]	ND	260	61	ug/kg	
	m,p-Xylene	ND	130	98	ug/kg	
95-47-6	o-Xylene	ND	130	76	ug/kg	
1330-20-7	Xylene (total)	ND	130	76	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-127%
17060-07-0	1,2-Dichloroethane-D4	106%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	116%		79-127%

(a) Diluted due to high concentration of non-target compound.
(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:	TP-44R(5-7)		
Lab Sample ID:	JC86837-4	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	76.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153940.D	1	05/01/19 16:07	CC	04/28/19 13:30	OP20021	EM6577
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	87	21	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	220	27	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	220	37	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	220	77	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	220	160	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	220	47	ug/kg	
95-48-7	2-Methylphenol	ND	87	28	ug/kg	
	3&4-Methylphenol	ND	87	36	ug/kg	
88-75-5	2-Nitrophenol [a]	ND	220	29	ug/kg	
100-02-7	4-Nitrophenol	ND	440	120	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	170	41	ug/kg	
108-95-2	Phenol	ND	87	23	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	220	29	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	220	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	220	26	ug/kg	
83-32-9	Acenaphthene	671	44	15	ug/kg	
208-96-8	Acenaphthylene	ND	44	22	ug/kg	
98-86-2	Acetophenone	ND	220	9.4	ug/kg	
120-12-7	Anthracene	226	44	27	ug/kg	
1912-24-9	Atrazine [a]	ND	87	19	ug/kg	
56-55-3	Benzo(a)anthracene	32.7	44	12	ug/kg	J
50-32-8	Benzo(a)pyrene	ND	44	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	21.8	44	19	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	44	22	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	44	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	87	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	87	11	ug/kg	
92-52-4	1,1'-Biphenyl	ND	87	6.0	ug/kg	
100-52-7	Benzaldehyde	ND	220	11	ug/kg	
91-58-7	2-Chloronaphthalene	ND	87	10	ug/kg	
106-47-8	4-Chloroaniline	ND	220	16	ug/kg	
86-74-8	Carbazole	ND	87	6.3	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:	TP-44R(5-7)		
Lab Sample ID:	JC86837-4	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	76.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	87	17	ug/kg	
218-01-9	Chrysene	29.6	44	14	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	87	9.3	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	87	19	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	87	16	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	87	14	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	44	13	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	44	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	87	36	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	44	29	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	44	19	ug/kg	
132-64-9	Dibenzofuran	600	87	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	87	7.1	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	87	11	ug/kg	
84-66-2	Diethyl phthalate	ND	87	9.3	ug/kg	
131-11-3	Dimethyl phthalate	ND	87	7.7	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	87	10	ug/kg	
206-44-0	Fluoranthene	134	44	19	ug/kg	
86-73-7	Fluorene	1210	44	20	ug/kg	
118-74-1	Hexachlorobenzene	ND	87	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	44	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	440	17	ug/kg	
67-72-1	Hexachloroethane	ND	220	22	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	34.7	44	20	ug/kg	J
78-59-1	Isophorone	ND	87	9.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	44	9.8	ug/kg	
88-74-4	2-Nitroaniline	ND	220	10	ug/kg	
99-09-2	3-Nitroaniline	ND	220	11	ug/kg	
100-01-6	4-Nitroaniline	ND	220	11	ug/kg	
91-20-3	Naphthalene	ND	44	12	ug/kg	
98-95-3	Nitrobenzene	ND	87	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	87	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	220	16	ug/kg	
85-01-8	Phenanthrene	236	44	15	ug/kg	
129-00-0	Pyrene	154	44	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	220	11	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:	TP-44R(5-7)		
Lab Sample ID:	JC86837-4	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	76.1
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	60%		27-114%
118-79-6	2,4,6-Tribromophenol	112%		19-152%
4165-60-0	Nitrobenzene-d5	81%		26-134%
321-60-8	2-Fluorobiphenyl	95%		39-124%
1718-51-0	Terphenyl-d14	63%		36-134%

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

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

Report of Analysis

Client Sample ID: TP-44R(5-7)
Lab Sample ID: JC86837-4
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 76.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4720	66	11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.92 J	2.7	0.54	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic	7.0	2.7	0.37	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Barium	407	27	2.5	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.20 J	0.27	0.11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.093 U	0.66	0.093	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	640 J	660	59	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium	14.3	1.3	0.49	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cobalt	3.4 J	6.6	0.37	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper	17.8	3.3	1.1	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Iron	9770	66	25	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Lead	2840	13	2.7	mg/kg	5	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Magnesium	1810	660	18	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese	95.2	2.0	0.54	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Mercury	0.67	0.035	0.015	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.1	5.3	0.46	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	1220 J	1300	42	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium	0.86 U	2.7	0.86	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Silver	0.23 U	0.66	0.23	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Sodium	100 U	1300	100	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium	0.77 U	1.3	0.77	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Vanadium	8.4	6.6	0.25	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	79.1	6.6	3.1	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Instrument QC Batch: MA46638
(4) Prep QC Batch: MP14565
(5) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TP-44R(5-7)		
Lab Sample ID:	JC86837-4	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	76.1
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.16 U	0.33	0.16	mg/kg	1	05/03/19 14:18	KI	SW846 9012B/LACHAT
Solids, Percent	76.1			%	1	04/30/19 14:13	JMP	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:	TP-44R(7-9)		
Lab Sample ID:	JC86837-5	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
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	3C151615.D	1	05/01/19 16:58	PS	n/a	n/a	V3C6814
Run #2							

	Initial Weight
Run #1	5.3 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	44.9	12	6.1	ug/kg	
71-43-2	Benzene	1.2	0.61	0.46	ug/kg	
74-97-5	Bromochloromethane	ND	6.1	0.52	ug/kg	
75-27-4	Bromodichloromethane	ND	2.4	0.54	ug/kg	
75-25-2	Bromoform	ND	6.1	0.49	ug/kg	
74-83-9	Bromomethane	ND	6.1	1.2	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	4.5	ug/kg	
75-15-0	Carbon disulfide	ND	2.4	1.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.4	0.67	ug/kg	
108-90-7	Chlorobenzene	ND	2.4	0.43	ug/kg	
75-00-3	Chloroethane	ND	6.1	0.83	ug/kg	
67-66-3	Chloroform	ND	2.4	0.45	ug/kg	
74-87-3	Chloromethane	ND	6.1	2.4	ug/kg	
110-82-7	Cyclohexane	ND	2.4	0.49	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.4	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	2.4	0.41	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.39	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.2	0.37	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.2	0.43	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.2	0.42	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.1	0.77	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.2	0.47	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.57	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.2	0.79	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.2	1.2	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.2	0.81	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.4	0.49	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.4	0.43	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.4	0.40	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.67	ug/kg	
76-13-1	Freon 113	ND	6.1	0.92	ug/kg	
591-78-6	2-Hexanone	ND	6.1	1.5	ug/kg	

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

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

Report of Analysis

Client Sample ID:	TP-44R(7-9)		
Lab Sample ID:	JC86837-5	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
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	2.4	0.84	ug/kg	
79-20-9	Methyl Acetate	ND	6.1	1.7	ug/kg	
108-87-2	Methylcyclohexane	ND	2.4	0.86	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.43	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [a]	ND	6.1	1.9	ug/kg	
75-09-2	Methylene chloride	ND	6.1	3.0	ug/kg	
100-42-5	Styrene	ND	2.4	0.70	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.4	0.47	ug/kg	
127-18-4	Tetrachloroethene	ND	2.4	0.56	ug/kg	
108-88-3	Toluene	2.3	1.2	0.46	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.1	1.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.1	1.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.4	0.52	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.4	0.41	ug/kg	
79-01-6	Trichloroethene	ND	1.2	0.92	ug/kg	
75-69-4	Trichlorofluoromethane [b]	ND	6.1	0.82	ug/kg	
75-01-4	Vinyl chloride	ND	2.4	0.57	ug/kg	
	m,p-Xylene	ND	1.2	0.90	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.71	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.71	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-127%
17060-07-0	1,2-Dichloroethane-D4	95%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	102%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID: TP-44R(7-9)
Lab Sample ID: JC86837-5
Matrix: SO - Soil
Method: SW846 8270D SW846 8151/3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 77.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153939.D	1	05/01/19 15:38	CC	04/28/19 13:30	OP20021	EM6577
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 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	84	21	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	26	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	36	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	75	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	210	160	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	210	45	ug/kg	
95-48-7	2-Methylphenol	ND	84	27	ug/kg	
	3&4-Methylphenol	ND	84	34	ug/kg	
88-75-5	2-Nitrophenol [a]	ND	210	28	ug/kg	
100-02-7	4-Nitrophenol	ND	420	110	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	170	39	ug/kg	
108-95-2	Phenol	ND	84	22	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	210	28	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	31	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	25	ug/kg	
83-32-9	Acenaphthene	29.3	42	14	ug/kg	J
208-96-8	Acenaphthylene	ND	42	21	ug/kg	
98-86-2	Acetophenone	ND	210	9.0	ug/kg	
120-12-7	Anthracene	ND	42	26	ug/kg	
1912-24-9	Atrazine [a]	ND	84	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	42	12	ug/kg	
50-32-8	Benzo(a)pyrene	ND	42	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	42	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	42	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	42	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	84	16	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	84	10	ug/kg	
92-52-4	1,1'-Biphenyl	6.7	84	5.7	ug/kg	J
100-52-7	Benzaldehyde	ND	210	10	ug/kg	
91-58-7	2-Chloronaphthalene	ND	84	10	ug/kg	
106-47-8	4-Chloroaniline	ND	210	15	ug/kg	
86-74-8	Carbazole	ND	84	6.1	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: TP-44R(7-9)
Lab Sample ID: JC86837-5
Matrix: SO - Soil
Method: SW846 8270D SW846 8151/3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 77.9

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	84	17	ug/kg	
218-01-9	Chrysene	ND	42	13	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	84	9.0	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	84	18	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	84	15	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	84	14	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	42	13	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	42	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	84	35	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	42	28	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	42	19	ug/kg	
132-64-9	Dibenzofuran	ND	84	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	84	6.8	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	84	10	ug/kg	
84-66-2	Diethyl phthalate	ND	84	8.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	84	7.5	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	84	9.8	ug/kg	
206-44-0	Fluoranthene	ND	42	19	ug/kg	
86-73-7	Fluorene	ND	42	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	84	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	42	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	420	17	ug/kg	
67-72-1	Hexachloroethane	ND	210	21	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	42	20	ug/kg	
78-59-1	Isophorone	ND	84	9.0	ug/kg	
91-57-6	2-Methylnaphthalene	14.7	42	9.5	ug/kg	J
88-74-4	2-Nitroaniline	ND	210	9.9	ug/kg	
99-09-2	3-Nitroaniline	ND	210	10	ug/kg	
100-01-6	4-Nitroaniline	ND	210	11	ug/kg	
91-20-3	Naphthalene	ND	42	12	ug/kg	
98-95-3	Nitrobenzene	ND	84	16	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	84	12	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	15	ug/kg	
85-01-8	Phenanthrene	ND	42	14	ug/kg	
129-00-0	Pyrene	ND	42	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	210	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		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:	TP-44R(7-9)		
Lab Sample ID:	JC86837-5	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**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	Limits
4165-62-2	Phenol-d5	63%		27-114%
118-79-6	2,4,6-Tribromophenol	109%		19-152%
4165-60-0	Nitrobenzene-d5	77%		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.
(b) Associated CCV outside of control limits low.

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

Report of Analysis

Client Sample ID: TP-44R(7-9)
Lab Sample ID: JC86837-5
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 77.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5920	64	10	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.53 U	2.6	0.53	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	5.9	2.6	0.36	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	35.2	26	2.4	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.35	0.26	0.10	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.46 J	0.64	0.090	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	484 J	640	57	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	13.5	1.3	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	4.7 J	6.4	0.36	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	8.4	3.2	1.1	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	11300	64	25	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	18.8	2.6	0.53	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1580	640	18	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	83.7	1.9	0.53	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.026 J	0.041	0.018	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	9.0	5.1	0.45	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	985 J	1300	41	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.83 U	2.6	0.83	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.22 U	0.64	0.22	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	100 U	1300	100	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.74 U	1.3	0.74	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	12.3	6.4	0.24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	167	6.4	3.0	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TP-44R(7-9)		
Lab Sample ID:	JC86837-5	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	77.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.17 U	0.33	0.17	mg/kg	1	05/03/19 14:19	KI	SW846 9012B/LACHAT
Solids, Percent	77.9			%	1	04/30/19 14:13	JMP	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-135(4-6)		
Lab Sample ID:	JC86837-6	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	71.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I225878.D	1	05/01/19 18:45	TDN	n/a	n/a	VI9099
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.8 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1700	830	ug/kg	
71-43-2	Benzene	ND	83	63	ug/kg	
74-97-5	Bromochloromethane	ND	830	71	ug/kg	
75-27-4	Bromodichloromethane	ND	330	74	ug/kg	
75-25-2	Bromoform	ND	830	67	ug/kg	
74-83-9	Bromomethane	ND	830	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	1700	620	ug/kg	
75-15-0	Carbon disulfide	ND	330	150	ug/kg	
56-23-5	Carbon tetrachloride	ND	330	91	ug/kg	
108-90-7	Chlorobenzene	ND	330	59	ug/kg	
75-00-3	Chloroethane	ND	830	110	ug/kg	
67-66-3	Chloroform	ND	330	62	ug/kg	
74-87-3	Chloromethane [b]	ND	830	330	ug/kg	
110-82-7	Cyclohexane	ND	330	67	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	330	140	ug/kg	
124-48-1	Dibromochloromethane	ND	330	56	ug/kg	
106-93-4	1,2-Dibromoethane	ND	170	54	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	51	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	60	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	57	ug/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	830	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	170	64	ug/kg	
107-06-2	1,2-Dichloroethane	ND	170	78	ug/kg	
75-35-4	1,1-Dichloroethene	ND	170	110	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	170	160	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	170	110	ug/kg	
78-87-5	1,2-Dichloropropane	ND	330	68	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	330	59	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	330	54	ug/kg	
100-41-4	Ethylbenzene	119	170	92	ug/kg	J
76-13-1	Freon 113	ND	830	130	ug/kg	
591-78-6	2-Hexanone	ND	830	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-135(4-6)		
Lab Sample ID:	JC86837-6	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	71.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	330	120	ug/kg	
79-20-9	Methyl Acetate	ND	830	230	ug/kg	
108-87-2	Methylcyclohexane	ND	330	120	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	170	59	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	830	260	ug/kg	
75-09-2	Methylene chloride	ND	830	420	ug/kg	
100-42-5	Styrene	ND	330	96	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	330	65	ug/kg	
127-18-4	Tetrachloroethene	ND	330	77	ug/kg	
108-88-3	Toluene	2070	170	62	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	830	170	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	830	170	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	330	71	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	330	57	ug/kg	
79-01-6	Trichloroethene	ND	170	130	ug/kg	
75-69-4	Trichlorofluoromethane	ND	830	110	ug/kg	
75-01-4	Vinyl chloride [b]	ND	330	78	ug/kg	
	m,p-Xylene	212	170	120	ug/kg	
95-47-6	o-Xylene	ND	170	97	ug/kg	
1330-20-7	Xylene (total)	212	170	97	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	100%		75-130%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	124%		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.

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-135(4-6)		
Lab Sample ID:	JC86837-6	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	71.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153942.D	1	05/01/19 17:32	CC	04/28/19 13:30	OP20021	EM6577
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	93	23	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	28	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	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	230	50	ug/kg	
95-48-7	2-Methylphenol	ND	93	30	ug/kg	
	3&4-Methylphenol	82.7	93	38	ug/kg	J
88-75-5	2-Nitrophenol [a]	ND	230	31	ug/kg	
100-02-7	4-Nitrophenol	ND	460	120	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	190	44	ug/kg	
108-95-2	Phenol	ND	93	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	216	46	16	ug/kg	
208-96-8	Acenaphthylene	ND	46	24	ug/kg	
98-86-2	Acetophenone	ND	230	10	ug/kg	
120-12-7	Anthracene	114	46	28	ug/kg	
1912-24-9	Atrazine [a]	ND	93	20	ug/kg	
56-55-3	Benzo(a)anthracene	126	46	13	ug/kg	
50-32-8	Benzo(a)pyrene	143	46	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	152	46	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	96.6	46	23	ug/kg	
207-08-9	Benzo(k)fluoranthene	62.3	46	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	93	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	93	11	ug/kg	
92-52-4	1,1'-Biphenyl	ND	93	6.4	ug/kg	
100-52-7	Benzaldehyde	ND	230	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	93	11	ug/kg	
106-47-8	4-Chloroaniline	ND	230	17	ug/kg	
86-74-8	Carbazole	ND	93	6.7	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-135(4-6)		
Lab Sample ID:	JC86837-6	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	71.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	93	18	ug/kg	
218-01-9	Chrysene	150	46	15	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	93	9.9	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	93	20	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	93	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	93	15	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	46	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	46	23	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	93	39	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	46	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	28.7	46	21	ug/kg	J
132-64-9	Dibenzofuran	131	93	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	93	7.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	93	12	ug/kg	
84-66-2	Diethyl phthalate	ND	93	9.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	93	8.3	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	93	11	ug/kg	
206-44-0	Fluoranthene	305	46	21	ug/kg	
86-73-7	Fluorene	302	46	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	93	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	46	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	460	18	ug/kg	
67-72-1	Hexachloroethane	ND	230	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	105	46	22	ug/kg	
78-59-1	Isophorone	ND	93	9.9	ug/kg	
91-57-6	2-Methylnaphthalene	108	46	10	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	104	46	13	ug/kg	
98-95-3	Nitrobenzene	ND	93	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	93	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	17	ug/kg	
85-01-8	Phenanthrene	142	46	16	ug/kg	
129-00-0	Pyrene	274	46	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	59%		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-135(4-6)		
Lab Sample ID:	JC86837-6	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	71.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	56%		27-114%
118-79-6	2,4,6-Tribromophenol	100%		19-152%
4165-60-0	Nitrobenzene-d5	75%		26-134%
321-60-8	2-Fluorobiphenyl	89%		39-124%
1718-51-0	Terphenyl-d14	70%		36-134%

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

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

Report of Analysis

Client Sample ID: S-135(4-6)
Lab Sample ID: JC86837-6
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 71.3

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12300	70	11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.58 U	2.8	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	52.2	2.8	0.39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	136	28	2.7	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.95	0.28	0.11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	1.6	0.70	0.098	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	2810	700	62	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	125	1.4	0.52	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	13.2	7.0	0.39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	104	3.5	1.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	23100	70	27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	189	2.8	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3340	700	19	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	557	2.1	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.99	0.040	0.017	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	24.2	5.6	0.49	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1530	1400	45	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.3 J	2.8	0.91	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.79	0.70	0.24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	121 J	1400	110	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.81 U	1.4	0.81	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	24.7	7.0	0.27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	531	7.0	3.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-135(4-6)		
Lab Sample ID:	JC86837-6	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	71.3
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.67	0.38	0.19	mg/kg	1	05/03/19 14:21	KI	SW846 9012B/LACHAT
Solids, Percent	71.3			%	1	04/30/19 14:13	JMP	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-135(8-10)		
Lab Sample ID:	JC86837-7	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	69.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151616.D	1	05/01/19 17:21	PS	n/a	n/a	V3C6814
Run #2							

	Initial Weight
Run #1	5.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	105	13	6.4	ug/kg	
71-43-2	Benzene	ND	0.64	0.48	ug/kg	
74-97-5	Bromochloromethane	ND	6.4	0.55	ug/kg	
75-27-4	Bromodichloromethane	ND	2.6	0.57	ug/kg	
75-25-2	Bromoform	ND	6.4	0.51	ug/kg	
74-83-9	Bromomethane	ND	6.4	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	9.6	13	4.8	ug/kg	J
75-15-0	Carbon disulfide	ND	2.6	1.2	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.6	0.70	ug/kg	
108-90-7	Chlorobenzene	ND	2.6	0.45	ug/kg	
75-00-3	Chloroethane	ND	6.4	0.88	ug/kg	
67-66-3	Chloroform	ND	2.6	0.48	ug/kg	
74-87-3	Chloromethane	ND	6.4	2.5	ug/kg	
110-82-7	Cyclohexane	ND	2.6	0.52	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.6	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	2.6	0.43	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.3	0.42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.39	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.46	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.44	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.4	0.81	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.3	0.49	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.60	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.3	0.84	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	0.85	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.6	0.52	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.6	0.45	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.6	0.42	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.71	ug/kg	
76-13-1	Freon 113	ND	6.4	0.97	ug/kg	
591-78-6	2-Hexanone	ND	6.4	1.6	ug/kg	

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

Report of Analysis

Client Sample ID:	S-135(8-10)		
Lab Sample ID:	JC86837-7	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	69.9
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	0.89	ug/kg	
79-20-9	Methyl Acetate	ND	6.4	1.8	ug/kg	
108-87-2	Methylcyclohexane	ND	2.6	0.90	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.45	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [a]	ND	6.4	2.0	ug/kg	
75-09-2	Methylene chloride	ND	6.4	3.2	ug/kg	
100-42-5	Styrene	ND	2.6	0.73	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.6	0.50	ug/kg	
127-18-4	Tetrachloroethene	ND	2.6	0.59	ug/kg	
108-88-3	Toluene	0.80	1.3	0.48	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	6.4	1.3	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.4	1.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.6	0.54	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.6	0.44	ug/kg	
79-01-6	Trichloroethene	ND	1.3	0.97	ug/kg	
75-69-4	Trichlorofluoromethane [b]	ND	6.4	0.87	ug/kg	
75-01-4	Vinyl chloride	ND	2.6	0.60	ug/kg	
	m,p-Xylene	ND	1.3	0.95	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.74	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.74	ug/kg	

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

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-135(8-10)		
Lab Sample ID:	JC86837-7	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	69.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M153941.D	1	05/01/19 16:35	CC	04/28/19 13:30	OP20021	EM6577
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	95	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	95	30	ug/kg	
	3&4-Methylphenol	ND	95	39	ug/kg	
88-75-5	2-Nitrophenol [a]	ND	240	31	ug/kg	
100-02-7	4-Nitrophenol	ND	470	130	ug/kg	
87-86-5	Pentachlorophenol [a]	ND	190	44	ug/kg	
108-95-2	Phenol	ND	95	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	ND	47	16	ug/kg	
208-96-8	Acenaphthylene	ND	47	24	ug/kg	
98-86-2	Acetophenone	ND	240	10	ug/kg	
120-12-7	Anthracene	ND	47	29	ug/kg	
1912-24-9	Atrazine [a]	ND	95	20	ug/kg	
56-55-3	Benzo(a)anthracene	42.2	47	13	ug/kg	J
50-32-8	Benzo(a)pyrene	40.8	47	22	ug/kg	J
205-99-2	Benzo(b)fluoranthene	49.2	47	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	29.1	47	24	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	47	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	95	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	95	12	ug/kg	
92-52-4	1,1'-Biphenyl	9.1	95	6.5	ug/kg	J
100-52-7	Benzaldehyde	ND	240	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	95	11	ug/kg	
106-47-8	4-Chloroaniline	ND	240	17	ug/kg	
86-74-8	Carbazole	7.1	95	6.9	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: S-135(8-10)
Lab Sample ID: JC86837-7
Matrix: SO - Soil
Method: SW846 8270D SW846 8151/3546
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 69.9

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	95	19	ug/kg	
218-01-9	Chrysene	39.1	47	15	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	95	10	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	95	20	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	95	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	95	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	95	40	ug/kg	
123-91-1	1,4-Dioxane [b]	ND	47	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	47	21	ug/kg	
132-64-9	Dibenzofuran	ND	95	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	95	7.7	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	95	12	ug/kg	
84-66-2	Diethyl phthalate	ND	95	10	ug/kg	
131-11-3	Dimethyl phthalate	ND	95	8.4	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	95	11	ug/kg	
206-44-0	Fluoranthene	48.1	47	21	ug/kg	
86-73-7	Fluorene	ND	47	22	ug/kg	
118-74-1	Hexachlorobenzene	ND	95	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	46.4	47	22	ug/kg	J
78-59-1	Isophorone	ND	95	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	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	25.8	47	13	ug/kg	J
98-95-3	Nitrobenzene	ND	95	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	95	14	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	17	ug/kg	
85-01-8	Phenanthrene	34.3	47	16	ug/kg	J
129-00-0	Pyrene	57.4	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	59%		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-135(8-10)		
Lab Sample ID:	JC86837-7	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 8151/3546	**Percent Solids:**	69.9
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	58%		27-114%
118-79-6	2,4,6-Tribromophenol	102%		19-152%
4165-60-0	Nitrobenzene-d5	75%		26-134%
321-60-8	2-Fluorobiphenyl	81%		39-124%
1718-51-0	Terphenyl-d14	73%		36-134%

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

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

Report of Analysis

Client Sample ID: S-135(8-10)
Lab Sample ID: JC86837-7
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 69.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7510	70	11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.58 U	2.8	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.6	2.8	0.39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	46.6	28	2.7	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.36	0.28	0.11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.14 J	0.70	0.098	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	1940	700	62	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	23.7	1.4	0.52	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	6.8 J	7.0	0.39	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	10.1	3.5	1.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	13500	70	27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	25.6	2.8	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3200	700	19	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	401	2.1	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.051	0.043	0.019	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	15.3	5.6	0.49	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1150 J	1400	45	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.91 U	2.8	0.91	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.24 U	0.70	0.24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	116 J	1400	110	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.81 U	1.4	0.81	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	15.9	7.0	0.27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	61.9	7.0	3.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-135(8-10)		
Lab Sample ID:	JC86837-7	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	69.9
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.19 U	0.37	0.19	mg/kg	1	05/03/19 14:22	KI	SW846 9012B/LACHAT
Solids, Percent	69.9			%	1	04/30/19 14:13	JMP	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-136(4-6)		
Lab Sample ID:	JC86837-8	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	72.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y184888.D	1	05/02/19 14:26	PS	n/a	n/a	VY8023
Run #2							

	Initial Weight
Run #1	4.7 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	176	15	7.3	ug/kg	
71-43-2	Benzene	2.2	0.73	0.55	ug/kg	
74-97-5	Bromochloromethane	ND	7.3	0.63	ug/kg	
75-27-4	Bromodichloromethane	ND	2.9	0.65	ug/kg	
75-25-2	Bromoform	ND	7.3	0.59	ug/kg	
74-83-9	Bromomethane	ND	7.3	1.5	ug/kg	
78-93-3	2-Butanone (MEK)	22.9	15	5.5	ug/kg	
75-15-0	Carbon disulfide	ND	2.9	1.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.9	0.81	ug/kg	
108-90-7	Chlorobenzene	ND	2.9	0.52	ug/kg	
75-00-3	Chloroethane	ND	7.3	1.0	ug/kg	
67-66-3	Chloroform	ND	2.9	0.55	ug/kg	
74-87-3	Chloromethane	ND	7.3	2.9	ug/kg	
110-82-7	Cyclohexane	ND	2.9	0.59	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.9	1.2	ug/kg	
124-48-1	Dibromochloromethane	ND	2.9	0.50	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.5	0.48	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.5	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.5	0.53	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.5	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.3	0.93	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.5	0.56	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.5	0.69	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.5	0.96	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.5	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	0.98	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.9	0.60	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.9	0.52	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.9	0.48	ug/kg	
100-41-4	Ethylbenzene	ND	1.5	0.81	ug/kg	
76-13-1	Freon 113 [a]	ND	7.3	1.1	ug/kg	
591-78-6	2-Hexanone	ND	7.3	1.9	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-136(4-6)		
Lab Sample ID:	JC86837-8	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	72.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.9	1.0	ug/kg	
79-20-9	Methyl Acetate	ND	7.3	2.0	ug/kg	
108-87-2	Methylcyclohexane	ND	2.9	1.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.5	0.52	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.3	2.3	ug/kg	
75-09-2	Methylene chloride	ND	7.3	3.7	ug/kg	
100-42-5	Styrene	ND	2.9	0.84	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.9	0.57	ug/kg	
127-18-4	Tetrachloroethene	ND	2.9	0.68	ug/kg	
108-88-3	Toluene	1.3	1.5	0.55	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	7.3	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.3	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.9	0.62	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.9	0.50	ug/kg	
79-01-6	Trichloroethene	ND	1.5	1.1	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.3	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	2.9	0.69	ug/kg	
	m,p-Xylene	ND	1.5	1.1	ug/kg	
95-47-6	o-Xylene	ND	1.5	0.85	ug/kg	
1330-20-7	Xylene (total)	ND	1.5	0.85	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		75-127%
17060-07-0	1,2-Dichloroethane-D4	105%		75-130%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	96%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-136(4-6)		
Lab Sample ID:	JC86837-8	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	72.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P481465.D	1	04/29/19 14:02	AR	04/28/19 13:30	OP20035	E6P2576
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	91	23	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	28	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	230	39	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	230	81	ug/kg	
51-28-5	2,4-Dinitrophenol [a]	ND	230	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol [a]	ND	230	49	ug/kg	
95-48-7	2-Methylphenol	ND	91	29	ug/kg	
	3&4-Methylphenol	ND	91	37	ug/kg	
88-75-5	2-Nitrophenol	ND	230	30	ug/kg	
100-02-7	4-Nitrophenol	ND	460	120	ug/kg	
87-86-5	Pentachlorophenol	ND	180	43	ug/kg	
108-95-2	Phenol	ND	91	24	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	230	30	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	34	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	27	ug/kg	
83-32-9	Acenaphthene	37.5	46	16	ug/kg	J
208-96-8	Acenaphthylene	47.3	46	23	ug/kg	
98-86-2	Acetophenone	ND	230	9.8	ug/kg	
120-12-7	Anthracene	61.6	46	28	ug/kg	
1912-24-9	Atrazine	ND	91	20	ug/kg	
56-55-3	Benzo(a)anthracene	79.9	46	13	ug/kg	
50-32-8	Benzo(a)pyrene	99.0	46	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	102	46	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	73.1	46	23	ug/kg	
207-08-9	Benzo(k)fluoranthene	44.1	46	21	ug/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	91	18	ug/kg	
85-68-7	Butyl benzyl phthalate [b]	ND	91	11	ug/kg	
92-52-4	1,1'-Biphenyl	24.2	91	6.2	ug/kg	J
100-52-7	Benzaldehyde	14.9	230	11	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	91	11	ug/kg	
106-47-8	4-Chloroaniline	ND	230	16	ug/kg	
86-74-8	Carbazole	ND	91	6.6	ug/kg	

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

Report of Analysis

Client Sample ID:	S-136(4-6)		
Lab Sample ID:	JC86837-8	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	72.6
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	ND	91	18	ug/kg	
218-01-9	Chrysene	84.1	46	14	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	91	9.8	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	91	20	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	91	16	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	91	15	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	46	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	46	23	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	91	38	ug/kg	
123-91-1	1,4-Dioxane	ND	46	30	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	46	20	ug/kg	
132-64-9	Dibenzofuran	ND	91	19	ug/kg	
84-74-2	Di-n-butyl phthalate [b]	ND	91	7.4	ug/kg	
117-84-0	Di-n-octyl phthalate [b]	ND	91	11	ug/kg	
84-66-2	Diethyl phthalate	ND	91	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	91	8.1	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate [b]	ND	91	11	ug/kg	
206-44-0	Fluoranthene	111	46	20	ug/kg	
86-73-7	Fluorene	33.1	46	21	ug/kg	J
118-74-1	Hexachlorobenzene	ND	91	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	46	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	460	18	ug/kg	
67-72-1	Hexachloroethane	ND	230	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	53.7	46	21	ug/kg	
78-59-1	Isophorone	ND	91	9.8	ug/kg	
91-57-6	2-Methylnaphthalene	76.5	46	10	ug/kg	
88-74-4	2-Nitroaniline	ND	230	11	ug/kg	
99-09-2	3-Nitroaniline	ND	230	11	ug/kg	
100-01-6	4-Nitroaniline	ND	230	12	ug/kg	
91-20-3	Naphthalene	395	46	13	ug/kg	
98-95-3	Nitrobenzene	ND	91	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	91	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	17	ug/kg	
85-01-8	Phenanthrene	72.2	46	15	ug/kg	
129-00-0	Pyrene	156	46	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	86%		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-136(4-6)		
Lab Sample ID:	JC86837-8	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	72.6
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	79%		27-114%
118-79-6	2,4,6-Tribromophenol	75%		19-152%
4165-60-0	Nitrobenzene-d5	74%		26-134%
321-60-8	2-Fluorobiphenyl	78%		39-124%
1718-51-0	Terphenyl-d14	84%		36-134%

(a) Associated CCV outside of control limits low.
(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

Report of Analysis

Client Sample ID: S-136(4-6)
Lab Sample ID: JC86837-8
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 72.6

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10400	71	11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.58 U	2.8	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	20.8	2.8	0.40	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	123	28	2.7	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.70	0.28	0.11	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	2.1	0.71	0.099	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	1820	710	63	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	79.0	1.4	0.53	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	8.0	7.1	0.40	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	74.3	3.6	1.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	17600	71	27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	137	2.8	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2690	710	19	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	144	2.1	0.58	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.80	0.040	0.018	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	21.4	5.7	0.50	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1230 J	1400	45	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	1.1 J	2.8	0.92	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.43 J	0.71	0.24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	121 J	1400	110	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.82 U	1.4	0.82	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	22.0	7.1	0.27	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	332	7.1	3.3	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-136(4-6)		
Lab Sample ID:	JC86837-8	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	72.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	2.7	0.33	0.17	mg/kg	1	05/03/19 14:23	KI	SW846 9012B/LACHAT
Solids, Percent	72.6			%	1	04/30/19 14:13	JMP	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-136(7-9)		
Lab Sample ID:	JC86837-9	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	81.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151617.D	1	05/01/19 17:44	PS	n/a	n/a	V3C6814
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	66.4	11	5.7	ug/kg	
71-43-2	Benzene	ND	0.57	0.43	ug/kg	
74-97-5	Bromochloromethane	ND	5.7	0.49	ug/kg	
75-27-4	Bromodichloromethane	ND	2.3	0.50	ug/kg	
75-25-2	Bromoform	ND	5.7	0.46	ug/kg	
74-83-9	Bromomethane	ND	5.7	1.1	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	4.3	ug/kg	
75-15-0	Carbon disulfide	ND	2.3	1.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.3	0.63	ug/kg	
108-90-7	Chlorobenzene	ND	2.3	0.40	ug/kg	
75-00-3	Chloroethane	ND	5.7	0.78	ug/kg	
67-66-3	Chloroform	ND	2.3	0.42	ug/kg	
74-87-3	Chloromethane	ND	5.7	2.2	ug/kg	
110-82-7	Cyclohexane	ND	2.3	0.46	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.3	0.95	ug/kg	
124-48-1	Dibromochloromethane	ND	2.3	0.38	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.1	0.37	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.35	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.39	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.7	0.72	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.1	0.44	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.53	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.1	0.75	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	1.1	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.76	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.3	0.46	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	0.40	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	0.37	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.63	ug/kg	
76-13-1	Freon 113	ND	5.7	0.87	ug/kg	
591-78-6	2-Hexanone	ND	5.7	1.4	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-136(7-9)		
Lab Sample ID:	JC86837-9	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	81.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.3	0.79	ug/kg	
79-20-9	Methyl Acetate	ND	5.7	1.6	ug/kg	
108-87-2	Methylcyclohexane	ND	2.3	0.80	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.40	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [a]	ND	5.7	1.8	ug/kg	
75-09-2	Methylene chloride	ND	5.7	2.8	ug/kg	
100-42-5	Styrene	ND	2.3	0.65	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	0.44	ug/kg	
127-18-4	Tetrachloroethene	ND	2.3	0.53	ug/kg	
108-88-3	Toluene	0.68	1.1	0.43	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.7	1.1	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.7	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.3	0.39	ug/kg	
79-01-6	Trichloroethene	ND	1.1	0.87	ug/kg	
75-69-4	Trichlorofluoromethane [b]	ND	5.7	0.77	ug/kg	
75-01-4	Vinyl chloride	ND	2.3	0.53	ug/kg	
	m,p-Xylene	ND	1.1	0.85	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.66	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.66	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		75-127%
17060-07-0	1,2-Dichloroethane-D4	95%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	103%		79-127%

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

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-136(7-9)		
Lab Sample ID:	JC86837-9	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	81.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P481475.D	1	04/29/19 18:48	AR	04/28/19 13:30	OP20035	E6P2576
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	80	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	24	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	34	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	71	ug/kg	
51-28-5	2,4-Dinitrophenol [a]	ND	200	150	ug/kg	
534-52-1	4,6-Dinitro-o-cresol [a]	ND	200	43	ug/kg	
95-48-7	2-Methylphenol	ND	80	25	ug/kg	
	3&4-Methylphenol	ND	80	33	ug/kg	
88-75-5	2-Nitrophenol	ND	200	26	ug/kg	
100-02-7	4-Nitrophenol	ND	400	110	ug/kg	
87-86-5	Pentachlorophenol	ND	160	37	ug/kg	
108-95-2	Phenol	ND	80	21	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	200	26	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	30	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	24	ug/kg	
83-32-9	Acenaphthene	ND	40	14	ug/kg	
208-96-8	Acenaphthylene	ND	40	20	ug/kg	
98-86-2	Acetophenone	ND	200	8.5	ug/kg	
120-12-7	Anthracene	ND	40	24	ug/kg	
1912-24-9	Atrazine	ND	80	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	40	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	40	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	40	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	40	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	40	19	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	80	15	ug/kg	
85-68-7	Butyl benzyl phthalate [b]	ND	80	9.7	ug/kg	
92-52-4	1,1'-Biphenyl	ND	80	5.4	ug/kg	
100-52-7	Benzaldehyde	ND	200	9.9	ug/kg	
91-58-7	2-Chloronaphthalene	ND	80	9.5	ug/kg	
106-47-8	4-Chloroaniline	ND	200	14	ug/kg	
86-74-8	Carbazole	ND	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-136(7-9)		
Lab Sample ID:	JC86837-9	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	81.4
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	ND	80	16	ug/kg	
218-01-9	Chrysene	ND	40	13	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	80	8.5	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	ND	40	26	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	40	18	ug/kg	
132-64-9	Dibenzofuran	ND	80	16	ug/kg	
84-74-2	Di-n-butyl phthalate [b]	ND	80	6.5	ug/kg	
117-84-0	Di-n-octyl phthalate [b]	ND	80	9.9	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 [b]	ND	80	9.3	ug/kg	
206-44-0	Fluoranthene	ND	40	18	ug/kg	
86-73-7	Fluorene	ND	40	18	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	ND	40	19	ug/kg	
78-59-1	Isophorone	ND	80	8.5	ug/kg	
91-57-6	2-Methylnaphthalene	ND	40	9.0	ug/kg	
88-74-4	2-Nitroaniline	ND	200	9.4	ug/kg	
99-09-2	3-Nitroaniline	ND	200	9.9	ug/kg	
100-01-6	4-Nitroaniline	ND	200	10	ug/kg	
91-20-3	Naphthalene	ND	40	11	ug/kg	
98-95-3	Nitrobenzene	ND	80	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	80	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	15	ug/kg	
85-01-8	Phenanthrene	ND	40	13	ug/kg	
129-00-0	Pyrene	ND	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	80%		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-136(7-9)		
Lab Sample ID:	JC86837-9	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	81.4
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	79%		27-114%
118-79-6	2,4,6-Tribromophenol	71%		19-152%
4165-60-0	Nitrobenzene-d5	95%		26-134%
321-60-8	2-Fluorobiphenyl	79%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

(a) Associated CCV outside of control limits low.
(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

Report of Analysis

Client Sample ID: S-136(7-9)
Lab Sample ID: JC86837-9
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/22/19
Date Received: 04/23/19
Percent Solids: 81.4

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4850	63	10	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Antimony	0.52 U	2.5	0.52	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic	5.7	2.5	0.35	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Barium	29.3	25	2.4	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Beryllium	0.22 J	0.25	0.10	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cadmium	0.10 J	0.63	0.089	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	1040	630	56	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Chromium	12.4	1.3	0.47	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Cobalt	6.2 J	6.3	0.35	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper	6.8	3.2	1.1	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Iron	10400	63	24	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Lead	9.0	2.5	0.52	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Magnesium	1820	630	17	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Manganese	304	1.9	0.52	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Mercury	0.037 J	0.038	0.017	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.1	5.1	0.44	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	774 J	1300	40	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Selenium	0.82 U	2.5	0.82	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Silver	0.22 U	0.63	0.22	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	99 U	1300	99	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium	0.73 U	1.3	0.73	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Vanadium	8.1	6.3	0.24	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Zinc	86.6	6.3	2.9	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Instrument QC Batch: MA46638
(4) Prep QC Batch: MP14565
(5) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-136(7-9)		
Lab Sample ID:	JC86837-9	**Date Sampled:**	04/22/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	81.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.72	0.32	0.16	mg/kg	1	05/03/19 14:27	KI	SW846 9012B/LACHAT
Solids, Percent	81.4			%	1	04/30/19 14:13	JMP	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-111(2-4)		
Lab Sample ID:	JC86837-10	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	86.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151618.D	1	05/01/19 18:07	PS	n/a	n/a	V3C6814
Run #2							

	Initial Weight
Run #1	4.5 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	13	6.4	ug/kg	
71-43-2	Benzene	ND	0.64	0.49	ug/kg	
74-97-5	Bromochloromethane	ND	6.4	0.55	ug/kg	
75-27-4	Bromodichloromethane	ND	2.6	0.57	ug/kg	
75-25-2	Bromoform	ND	6.4	0.52	ug/kg	
74-83-9	Bromomethane	ND	6.4	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	4.8	ug/kg	
75-15-0	Carbon disulfide	1.3	2.6	1.2	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.6	0.71	ug/kg	
108-90-7	Chlorobenzene	ND	2.6	0.46	ug/kg	
75-00-3	Chloroethane	ND	6.4	0.89	ug/kg	
67-66-3	Chloroform	ND	2.6	0.48	ug/kg	
74-87-3	Chloromethane	ND	6.4	2.5	ug/kg	
110-82-7	Cyclohexane	ND	2.6	0.52	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.6	1.1	ug/kg	
124-48-1	Dibromochloromethane	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	0.39	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.46	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.44	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.4	0.82	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	0.86	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.6	0.52	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.6	0.45	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.6	0.42	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.71	ug/kg	
76-13-1	Freon 113	ND	6.4	0.98	ug/kg	
591-78-6	2-Hexanone	ND	6.4	1.6	ug/kg	

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

Report of Analysis

Client Sample ID:	S-111(2-4)		
Lab Sample ID:	JC86837-10	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	86.2
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	0.90	ug/kg	
79-20-9	Methyl Acetate	ND	6.4	1.8	ug/kg	
108-87-2	Methylcyclohexane	ND	2.6	0.91	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.45	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [a]	ND	6.4	2.0	ug/kg	
75-09-2	Methylene chloride	ND	6.4	3.2	ug/kg	
100-42-5	Styrene	ND	2.6	0.74	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.6	0.50	ug/kg	
127-18-4	Tetrachloroethene	ND	2.6	0.60	ug/kg	
108-88-3	Toluene	ND	1.3	0.48	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.4	1.3	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.4	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	0.44	ug/kg	
79-01-6	Trichloroethene	ND	1.3	0.98	ug/kg	
75-69-4	Trichlorofluoromethane [b]	ND	6.4	0.88	ug/kg	
75-01-4	Vinyl chloride	ND	2.6	0.60	ug/kg	
	m,p-Xylene	ND	1.3	0.96	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.75	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.75	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	96%		75-130%
2037-26-5	Toluene-D8	112%		80-120%
460-00-4	4-Bromofluorobenzene	120%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-111(2-4)		
Lab Sample ID:	JC86837-10	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P481545.D	1	05/01/19 21:02	AR	04/28/19 13:30	OP20035	E6P2578
Run #2	6P481539.D	5	05/01/19 18:37	AR	04/28/19 13:30	OP20035	E6P2578

	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	76	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	32	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	67	ug/kg	
51-28-5	2,4-Dinitrophenol [b]	ND	190	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	190	40	ug/kg	
95-48-7	2-Methylphenol	ND	76	24	ug/kg	
	3&4-Methylphenol	53.3	76	31	ug/kg	J
88-75-5	2-Nitrophenol	ND	190	25	ug/kg	
100-02-7	4-Nitrophenol	ND	380	100	ug/kg	
87-86-5	Pentachlorophenol	ND	150	35	ug/kg	
108-95-2	Phenol	49.0	76	20	ug/kg	J
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	25	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	28	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	23	ug/kg	
83-32-9	Acenaphthene	121	38	13	ug/kg	
208-96-8	Acenaphthylene	3140	38	19	ug/kg	
98-86-2	Acetophenone	31.8	190	8.1	ug/kg	J
120-12-7	Anthracene	2210	38	23	ug/kg	
1912-24-9	Atrazine	ND	76	16	ug/kg	
56-55-3	Benzo(a)anthracene	4480 [c]	190	53	ug/kg	
50-32-8	Benzo(a)pyrene	7110 [c]	190	86	ug/kg	
205-99-2	Benzo(b)fluoranthene	8790 [c]	190	84	ug/kg	
191-24-2	Benzo(g,h,i)perylene	5670 [c]	190	94	ug/kg	
207-08-9	Benzo(k)fluoranthene	2720 [c]	190	88	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	76	15	ug/kg	
85-68-7	Butyl benzyl phthalate [a]	ND	76	9.2	ug/kg	
92-52-4	1,1'-Biphenyl	101	76	5.2	ug/kg	
100-52-7	Benzaldehyde	ND	190	9.4	ug/kg	
91-58-7	2-Chloronaphthalene	ND	76	9.0	ug/kg	
106-47-8	4-Chloroaniline	ND	190	14	ug/kg	
86-74-8	Carbazole	354	76	5.5	ug/kg	

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

Report of Analysis

Client Sample ID:	S-111(2-4)		
Lab Sample ID:	JC86837-10	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	76	15	ug/kg	
218-01-9	Chrysene	4260 [c]	190	60	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	76	8.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	76	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	76	14	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	76	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	38	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	38	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	76	32	ug/kg	
123-91-1	1,4-Dioxane	ND	38	25	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	2020	38	17	ug/kg	
132-64-9	Dibenzofuran	387	76	15	ug/kg	
84-74-2	Di-n-butyl phthalate [a]	ND	76	6.2	ug/kg	
117-84-0	Di-n-octyl phthalate [a]	ND	76	9.4	ug/kg	
84-66-2	Diethyl phthalate	ND	76	8.0	ug/kg	
131-11-3	Dimethyl phthalate	ND	76	6.7	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	76	8.8	ug/kg	
206-44-0	Fluoranthene	6890 [c]	190	84	ug/kg	
86-73-7	Fluorene	448	38	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	76	9.6	ug/kg	
87-68-3	Hexachlorobutadiene	ND	38	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene [b]	ND	380	15	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	4870 [c]	190	89	ug/kg	
78-59-1	Isophorone	ND	76	8.1	ug/kg	
91-57-6	2-Methylnaphthalene	447	38	8.5	ug/kg	
88-74-4	2-Nitroaniline [a]	ND	190	8.9	ug/kg	
99-09-2	3-Nitroaniline	ND	190	9.4	ug/kg	
100-01-6	4-Nitroaniline	ND	190	9.8	ug/kg	
91-20-3	Naphthalene	1470	38	11	ug/kg	
98-95-3	Nitrobenzene	ND	76	15	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	76	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	14	ug/kg	
85-01-8	Phenanthrene	3220	38	13	ug/kg	
129-00-0	Pyrene	6440 [c]	190	60	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	9.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	78%	69%	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-111(2-4)		
Lab Sample ID:	JC86837-10	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	80%	74%	27-114%
118-79-6	2,4,6-Tribromophenol	79%	73%	19-152%
4165-60-0	Nitrobenzene-d5	94%	88%	26-134%
321-60-8	2-Fluorobiphenyl	84%	82%	39-124%
1718-51-0	Terphenyl-d14	78%	79%	36-134%

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

Report of Analysis

Client Sample ID: S-111(2-4)
Lab Sample ID: JC86837-10
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/23/19
Date Received: 04/23/19
Percent Solids: 86.2

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5750	59	9.5	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.65 J	2.4	0.49	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	6.7	2.4	0.33	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	66.5	24	2.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.41	0.24	0.095	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.50 J	0.59	0.083	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	6330	590	52	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	16.2	1.2	0.44	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	5.2 J	5.9	0.33	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	49.0	3.0	0.99	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	15400	59	23	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	137	2.4	0.49	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	3330	590	16	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	143	1.8	0.49	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.44	0.035	0.015	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	16.6	4.7	0.41	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	697 J	1200	38	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.77 U	2.4	0.77	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.20 U	0.59	0.20	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	92 U	1200	92	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.69 U	1.2	0.69	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	27.1	5.9	0.22	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	126	5.9	2.7	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-111(2-4)		
Lab Sample ID:	JC86837-10	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	86.2
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.78	0.30	0.15	mg/kg	1	05/03/19 14:29	KI	SW846 9012B/LACHAT
Solids, Percent	86.2			%	1	04/30/19 08:30	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-111(4.5-6.5)		
Lab Sample ID:	JC86837-11	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	87.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151619.D	1	05/01/19 18:30	PS	n/a	n/a	V3C6814
Run #2							

	Initial Weight
Run #1	5.2 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	64.3	11	5.5	ug/kg	
71-43-2	Benzene	ND	0.55	0.41	ug/kg	
74-97-5	Bromochloromethane	ND	5.5	0.47	ug/kg	
75-27-4	Bromodichloromethane	ND	2.2	0.49	ug/kg	
75-25-2	Bromoform	ND	5.5	0.44	ug/kg	
74-83-9	Bromomethane	ND	5.5	1.1	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	4.1	ug/kg	
75-15-0	Carbon disulfide	ND	2.2	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.2	0.61	ug/kg	
108-90-7	Chlorobenzene	ND	2.2	0.39	ug/kg	
75-00-3	Chloroethane	ND	5.5	0.76	ug/kg	
67-66-3	Chloroform	ND	2.2	0.41	ug/kg	
74-87-3	Chloromethane	ND	5.5	2.2	ug/kg	
110-82-7	Cyclohexane	ND	2.2	0.45	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.2	0.92	ug/kg	
124-48-1	Dibromochloromethane	ND	2.2	0.37	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.1	0.36	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.34	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.39	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.38	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.5	0.70	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.1	0.42	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.52	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.1	0.72	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.1	1.1	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.73	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.2	0.45	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.39	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.36	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.61	ug/kg	
76-13-1	Freon 113	ND	5.5	0.84	ug/kg	
591-78-6	2-Hexanone	ND	5.5	1.4	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-111(4.5-6.5)		
Lab Sample ID:	JC86837-11	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	87.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.2	0.77	ug/kg	
79-20-9	Methyl Acetate	ND	5.5	1.5	ug/kg	
108-87-2	Methylcyclohexane	ND	2.2	0.78	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.39	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [a]	ND	5.5	1.7	ug/kg	
75-09-2	Methylene chloride	ND	5.5	2.8	ug/kg	
100-42-5	Styrene	ND	2.2	0.63	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.43	ug/kg	
127-18-4	Tetrachloroethene	ND	2.2	0.51	ug/kg	
108-88-3	Toluene	0.60	1.1	0.41	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.5	1.1	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.5	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.47	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.38	ug/kg	
79-01-6	Trichloroethene	ND	1.1	0.84	ug/kg	
75-69-4	Trichlorofluoromethane [b]	ND	5.5	0.75	ug/kg	
75-01-4	Vinyl chloride	ND	2.2	0.52	ug/kg	
	m,p-Xylene	ND	1.1	0.82	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.64	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.64	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		75-127%
17060-07-0	1,2-Dichloroethane-D4	98%		75-130%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	101%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-111(4.5-6.5)		
Lab Sample ID:	JC86837-11	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P481476.D	1	04/29/19 19:12	AR	04/28/19 13:30	OP20035	E6P2576
Run #2							

	Initial Weight	Final Volume
Run #1	31.0 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	74	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	31	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	66	ug/kg	
51-28-5	2,4-Dinitrophenol [a]	ND	180	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol [a]	ND	180	39	ug/kg	
95-48-7	2-Methylphenol	ND	74	24	ug/kg	
	3&4-Methylphenol	ND	74	30	ug/kg	
88-75-5	2-Nitrophenol	ND	180	24	ug/kg	
100-02-7	4-Nitrophenol	ND	370	99	ug/kg	
87-86-5	Pentachlorophenol	ND	150	35	ug/kg	
108-95-2	Phenol	ND	74	19	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	24	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	28	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	22	ug/kg	
83-32-9	Acenaphthene	ND	37	13	ug/kg	
208-96-8	Acenaphthylene	104	37	19	ug/kg	
98-86-2	Acetophenone	ND	180	7.9	ug/kg	
120-12-7	Anthracene	33.0	37	23	ug/kg	J
1912-24-9	Atrazine	ND	74	16	ug/kg	
56-55-3	Benzo(a)anthracene	42.7	37	10	ug/kg	
50-32-8	Benzo(a)pyrene	312	37	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	353	37	16	ug/kg	
191-24-2	Benzo(g,h,i)perylene	233	37	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	131	37	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	74	14	ug/kg	
85-68-7	Butyl benzyl phthalate [b]	ND	74	9.0	ug/kg	
92-52-4	1,1'-Biphenyl	ND	74	5.1	ug/kg	
100-52-7	Benzaldehyde	ND	180	9.2	ug/kg	
91-58-7	2-Chloronaphthalene	ND	74	8.8	ug/kg	
106-47-8	4-Chloroaniline	ND	180	13	ug/kg	
86-74-8	Carbazole	ND	74	5.4	ug/kg	

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

Report of Analysis

Client Sample ID:	S-111(4.5-6.5)		
Lab Sample ID:	JC86837-11	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.4
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	ND	74	15	ug/kg	
218-01-9	Chrysene	76.5	37	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	74	7.9	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	74	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	74	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	74	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	37	11	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	37	19	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	74	31	ug/kg	
123-91-1	1,4-Dioxane	ND	37	24	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	58.9	37	16	ug/kg	
132-64-9	Dibenzofuran	ND	74	15	ug/kg	
84-74-2	Di-n-butyl phthalate [b]	ND	74	6.0	ug/kg	
117-84-0	Di-n-octyl phthalate [b]	ND	74	9.2	ug/kg	
84-66-2	Diethyl phthalate	ND	74	7.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	74	6.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate [b]	ND	74	8.6	ug/kg	
206-44-0	Fluoranthene	16.8	37	16	ug/kg	J
86-73-7	Fluorene	ND	37	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	74	9.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	37	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	370	15	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	207	37	17	ug/kg	
78-59-1	Isophorone	ND	74	7.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	37	8.3	ug/kg	
88-74-4	2-Nitroaniline	ND	180	8.7	ug/kg	
99-09-2	3-Nitroaniline	ND	180	9.2	ug/kg	
100-01-6	4-Nitroaniline	ND	180	9.6	ug/kg	
91-20-3	Naphthalene	13.3	37	10	ug/kg	J
98-95-3	Nitrobenzene	ND	74	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	74	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	14	ug/kg	
85-01-8	Phenanthrene	ND	37	12	ug/kg	
129-00-0	Pyrene	45.4	37	12	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	9.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		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-111(4.5-6.5)		
Lab Sample ID:	JC86837-11	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.4
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	75%		27-114%
118-79-6	2,4,6-Tribromophenol	64%		19-152%
4165-60-0	Nitrobenzene-d5	89%		26-134%
321-60-8	2-Fluorobiphenyl	74%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

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

Report of Analysis

Client Sample ID: S-111(4.5-6.5)
Lab Sample ID: JC86837-11
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/23/19
Date Received: 04/23/19
Percent Solids: 87.4

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8310	58	9.3	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	0.47 U	2.3	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.5	2.3	0.32	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	23.9	23	2.2	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.0	0.23	0.092	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	0.34 J	0.58	0.081	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	358 J	580	51	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	31.0	1.2	0.43	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	6.8	5.8	0.32	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	41.5	2.9	0.97	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	19600	58	22	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	44.8	2.3	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1410	580	16	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	89.5	1.7	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	0.16	0.029	0.013	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [3]
Nickel	15.1	4.6	0.40	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	872 J	1200	37	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	0.75 U	2.3	0.75	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.20 U	0.58	0.20	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	90 U	1200	90	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	0.67 U	1.2	0.67	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	18.7	5.8	0.22	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	144	5.8	2.7	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Prep QC Batch: MP14565
(4) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-111(4.5-6.5)		
Lab Sample ID:	JC86837-11	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	87.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	2.8	0.29	0.14	mg/kg	1	05/03/19 14:30	KI	SW846 9012B/LACHAT
Solids, Percent	87.4			%	1	04/30/19 14:13	JMP	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-107(2-4)		
Lab Sample ID:	JC86837-12	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C151620.D	1	05/01/19 18:54	PS	n/a	n/a	V3C6814
Run #2							

	Initial Weight
Run #1	3.5 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	16	8.2	ug/kg	
71-43-2	Benzene	ND	0.82	0.62	ug/kg	
74-97-5	Bromochloromethane	ND	8.2	0.71	ug/kg	
75-27-4	Bromodichloromethane	ND	3.3	0.73	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)	ND	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	ND	8.2	3.2	ug/kg	
110-82-7	Cyclohexane	ND	3.3	0.67	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.3	1.4	ug/kg	
124-48-1	Dibromochloromethane	ND	3.3	0.56	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	0.67	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.3	0.58	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.3	0.54	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.91	ug/kg	
76-13-1	Freon 113	ND	8.2	1.3	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-107(2-4)		
Lab Sample ID:	JC86837-12	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8260C	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	3.3	1.1	ug/kg	
79-20-9	Methyl Acetate	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	0.58	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK [a]	ND	8.2	2.6	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	0.76	ug/kg	
108-88-3	Toluene	ND	1.6	0.62	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	1.3	ug/kg	
75-69-4	Trichlorofluoromethane [b]	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	0.96	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.96	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		75-127%
17060-07-0	1,2-Dichloroethane-D4	99%		75-130%
2037-26-5	Toluene-D8	109%		80-120%
460-00-4	4-Bromofluorobenzene	111%		79-127%

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

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

SGS North America Inc.

Report of Analysis

Client Sample ID:	S-107(2-4)		
Lab Sample ID:	JC86837-12	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P481481.D	1	04/29/19 21:14	AR	04/28/19 13:30	OP20035	E6P2576
Run #2	6P481536.D	10	05/01/19 17:25	AR	04/28/19 13:30	OP20035	E6P2578

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

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	74	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	23	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	31	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	66	ug/kg	
51-28-5	2,4-Dinitrophenol [a]	ND	180	140	ug/kg	
534-52-1	4,6-Dinitro-o-cresol [a]	ND	180	39	ug/kg	
95-48-7	2-Methylphenol	ND	74	24	ug/kg	
	3&4-Methylphenol	ND	74	30	ug/kg	
88-75-5	2-Nitrophenol	ND	180	24	ug/kg	
100-02-7	4-Nitrophenol	ND	370	98	ug/kg	
87-86-5	Pentachlorophenol	ND	150	35	ug/kg	
108-95-2	Phenol	ND	74	19	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	24	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	28	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	22	ug/kg	
83-32-9	Acenaphthene	146	37	13	ug/kg	
208-96-8	Acenaphthylene	1610	37	19	ug/kg	
98-86-2	Acetophenone	ND	180	7.9	ug/kg	
120-12-7	Anthracene	3960 [b]	370	230	ug/kg	
1912-24-9	Atrazine	ND	74	16	ug/kg	
56-55-3	Benzo(a)anthracene	6510 [b]	370	100	ug/kg	
50-32-8	Benzo(a)pyrene	5540 [b]	370	170	ug/kg	
205-99-2	Benzo(b)fluoranthene	6860 [b]	370	160	ug/kg	
191-24-2	Benzo(g,h,i)perylene	3600 [b]	370	180	ug/kg	
207-08-9	Benzo(k)fluoranthene	3070	37	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	74	14	ug/kg	
85-68-7	Butyl benzyl phthalate [c]	ND	74	9.0	ug/kg	
92-52-4	1,1'-Biphenyl	143	74	5.0	ug/kg	
100-52-7	Benzaldehyde	ND	180	9.1	ug/kg	
91-58-7	2-Chloronaphthalene	ND	74	8.8	ug/kg	
106-47-8	4-Chloroaniline	ND	180	13	ug/kg	
86-74-8	Carbazole	459	74	5.3	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-107(2-4)		
Lab Sample ID:	JC86837-12	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	74	15	ug/kg	
218-01-9	Chrysene	5800 [b]	370	120	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	74	7.9	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	74	16	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	74	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	74	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	37	11	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	37	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	74	31	ug/kg	
123-91-1	1,4-Dioxane	ND	37	24	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	1450	37	16	ug/kg	
132-64-9	Dibenzofuran	989	74	15	ug/kg	
84-74-2	Di-n-butyl phthalate [c]	ND	74	6.0	ug/kg	
117-84-0	Di-n-octyl phthalate [c]	ND	74	9.2	ug/kg	
84-66-2	Diethyl phthalate	ND	74	7.8	ug/kg	
131-11-3	Dimethyl phthalate	ND	74	6.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate [c]	ND	74	8.6	ug/kg	
206-44-0	Fluoranthene	14400 [b]	370	160	ug/kg	
86-73-7	Fluorene	2280	37	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	74	9.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	37	15	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	370	15	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2990 [b]	370	170	ug/kg	
78-59-1	Isophorone	ND	74	7.9	ug/kg	
91-57-6	2-Methylnaphthalene	359	37	8.3	ug/kg	
88-74-4	2-Nitroaniline	ND	180	8.7	ug/kg	
99-09-2	3-Nitroaniline	ND	180	9.2	ug/kg	
100-01-6	4-Nitroaniline	ND	180	9.5	ug/kg	
91-20-3	Naphthalene	627	37	10	ug/kg	
98-95-3	Nitrobenzene	ND	74	14	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	74	11	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	13	ug/kg	
85-01-8	Phenanthrene	11300 [b]	370	120	ug/kg	
129-00-0	Pyrene	10500 [b]	370	120	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	9.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%	59%	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-107(2-4)		
Lab Sample ID:	JC86837-12	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	77%	68%	27-114%
118-79-6	2,4,6-Tribromophenol	70%	64%	19-152%
4165-60-0	Nitrobenzene-d5	84%	75%	26-134%
321-60-8	2-Fluorobiphenyl	72%	66%	39-124%
1718-51-0	Terphenyl-d14	63%	70%	36-134%

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

Report of Analysis

Client Sample ID: S-107(2-4)
Lab Sample ID: JC86837-12
Matrix: SO - Soil
Project: National Grid, Philly Coke, Philadelphia, PA

Date Sampled: 04/23/19
Date Received: 04/23/19
Percent Solids: 87.0

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8800	57	9.2	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Antimony	2.7	2.3	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Arsenic	57.7	2.3	0.32	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Barium	85.0	23	2.2	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Beryllium	0.63	0.23	0.091	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Cadmium	0.46 J	0.57	0.080	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Calcium	757	570	50	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Chromium	15.4	1.1	0.42	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Cobalt	5.0 J	5.7	0.32	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Copper	52.7	2.8	0.96	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Iron	18500	57	22	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Lead	683	2.3	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Magnesium	1490	570	16	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Manganese	131	1.7	0.47	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Mercury	0.36	0.038	0.017	mg/kg	1	04/25/19	04/25/19	LL	SW846 7471B [1]	SW846 7471B [4]
Nickel	13.4	4.6	0.40	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Potassium	660 J	1100	36	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Selenium	0.74 U	2.3	0.74	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Silver	0.19 U	0.57	0.19	mg/kg	1	04/26/19	05/02/19	MET	SW846 6010D [3]	SW846 3050B [5]
Sodium	89 U	1100	89	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Thallium	0.66 U	1.1	0.66	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Vanadium	16.7	5.7	0.22	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]
Zinc	144	5.7	2.6	mg/kg	1	04/26/19	05/01/19	ND	SW846 6010D [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA46581
(2) Instrument QC Batch: MA46628
(3) Instrument QC Batch: MA46638
(4) Prep QC Batch: MP14565
(5) Prep QC Batch: MP14579

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	S-107(2-4)		
Lab Sample ID:	JC86837-12	**Date Sampled:**	04/23/19
Matrix:	SO - Soil	**Date Received:**	04/23/19
		Percent Solids:	87.0
Project:	National Grid, Philly Coke, Philadelphia, PA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	12.3	0.29	0.14	mg/kg	1	05/02/19 16:39	KI	SW846 9012B/LACHAT
Solids, Percent	87			%	1	04/30/19 14:13	JMP	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

SZL

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 1

FED-EX Tracking #
Bottle Order Control # ER-041619-205
SGS Quote #
SGS Job # JC86837

Client / Reporting Information	Project Information	Requested Analysis
Company Name: Arcadis-US	Project Name: Philadelphia Cole	
Street Address: 110 W Fayette St #300	Street: 4801 Richmond St	Billing Information (if different from Report to)
City: Syracuse State: NY Zip: 13202	City: Philadelphia State: PA	Company Name: Same
Project Contact: Corey Healy E-mail: Lawrence.Healy@Arcadis.com	Project #: B0036790.0001	Street Address:
Phone #: 315-335-9493	Client Purchase Order #: B0036790.0001	City: State: Zip:
Sampler(s) Name(s): Evan Green Phone #: (603)305-2692	Project Manager: John Brussel	Attention:

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

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	Methanol	V8260TCL20	CN	AB270TCL20	MTAL	P8081 PESTTCL	P8082 PCB11						LAB USE ONLY
1	PSCB-41R (0.5-2)		4/22/19	910	GB	G	SO	6					3	2			1	X	X	X	X	X	X						D45
2	PSCB-41R (4-11)			1010				5					2					X	X	X	X								P1
3	TP-44R (3-5)			1035				5										X	X	X	X								14M6
4	TP-44R (5-7)			1050				5										X	X	X	X								4011P
5	TP-44R (7-9)			1105				5										X	X	X	X								
6	S-135 (4-6)			1155				5										X	X	X	X								
7	S-135 (8-10)			1210				5										X	X	X	X								
8	S-136 (4-6)			1306				5										X	X	X	X								
9	S-136 (7-9)			1310				5										X	X	X	X								
10	S-111 (2-4)		4/23/19	1210	EG	G	SO	5					2	2			1	X	X	X	X								
11	S-111 (4.5-6.5)		4/23/19	1220	EG	G	SO	5					2	2			1	X	X	X	X								
12	S-107 (2-4)		4/23/19	1335	EG	G	SO	5					2	2			1	X	X	X	X								

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

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

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

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

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

Comments / Special Instructions

INITIAL ASESSMENT 3A (1)

LABEL VERIFICATION

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

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

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	4/23/19 1620	1 [signature]	2 [signature]	4/23/19 1735	2 [signature]
3		3	4		4
5		5	Custody Seal #		

☐ Intact ☐ Not intact

Preserved where applicable: Absent ☐ Therm. ID:

On Ice ☐ 3.3 Cooler Temp °C

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

5.1

5

JC86837: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JC86837 **Client:** ARCADIS U.S. **Project:** NATIONAL GRID, PHILLY COKE, PHILADELPHI

Date / Time Received: 4/23/2019 5:35:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.3);

Cooler Temps (Corrected) °C: Cooler 1: (2.3);

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

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

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

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

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

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

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

Comments

SM089-03
Rev. Date 12/7/17

JC86837: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86837

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86837-1	Collected: 22-APR-19 09:10 By: GB			Received: 23-APR-19	By: AS	
PSCB-41R(0.5-2)						
JC86837-1	SW846 7471B	25-APR-19 11:22	LL	25-APR-19	LL	HG
JC86837-1	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-1	SW846 8260C	30-APR-19 17:18	TDN			V8260TCL20
JC86837-1	SW846 8260C	01-MAY-19 10:27	TDN			V8260TCL20
JC86837-1	SW846 8270D	01-MAY-19 18:57	CC	28-APR-19	SA	AB8270TCL20
JC86837-1	SW846 6010D	01-MAY-19 20:14	ND	26-APR-19	BP	AL,BA,BE,CA,CD,CO,CR,K,MG, NA,NI,SB,V,ZN
JC86837-1	SW846 6010D	02-MAY-19 14:19	MET	26-APR-19	BP	AG,AS,CU,FE,MN,PB,SE,TL
JC86837-1	SW846 8270D	02-MAY-19 18:57	CC	28-APR-19	SA	AB8270TCL20
JC86837-1	SW846 8270D	02-MAY-19 19:25	CC	28-APR-19	SA	AB8270TCL20
JC86837-1	SW846 9012B/LACHAT	03-MAY-19 14:14	KI	01-MAY-19	BM	CN
JC86837-1	SW846 8081B	03-MAY-19 19:01	MH	02-MAY-19	CC	P8081PESTTCL
JC86837-1	SW846 8082A	04-MAY-19 17:47	TR	02-MAY-19	CC	P8082PCB11
JC86837-2	Collected: 22-APR-19 10:10 By: GB			Received: 23-APR-19	By: AS	
PSCB-41R(9-11)						
JC86837-2	SW846 7471B	25-APR-19 11:24	LL	25-APR-19	LL	HG
JC86837-2	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-2	SW846 8270D	01-MAY-19 15:10	CC	28-APR-19	SA	AB8270TCL20
JC86837-2	SW846 8260C	01-MAY-19 16:35	PS			V8260TCL20
JC86837-2	SW846 6010D	01-MAY-19 20:20	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86837-2	SW846 9012B/LACHAT	03-MAY-19 14:15	KI	01-MAY-19	BM	CN
JC86837-3	Collected: 22-APR-19 10:35 By: GB			Received: 23-APR-19	By: AS	
TP-44R(3-5)						
JC86837-3	SW846 7471B	25-APR-19 11:26	LL	25-APR-19	LL	HG
JC86837-3	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-3	SW846 8260C	01-MAY-19 17:47	TDN			V8260TCL20
JC86837-3	SW846 8270D	01-MAY-19 18:00	CC	28-APR-19	SA	AB8270TCL20
JC86837-3	SW846 6010D	01-MAY-19 20:25	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86837-3	SW846 9012B/LACHAT	03-MAY-19 14:16	KI	01-MAY-19	BM	CN

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86837

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86837-4	Collected: 22-APR-19 10:50 By: GB			Received: 23-APR-19	By: AS	
TP-44R(5-7)						
JC86837-4	SW846 7471B	25-APR-19 11:27	LL	25-APR-19	LL	HG
JC86837-4	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-4	SW846 8270D	01-MAY-19 16:07	CC	28-APR-19	SA	AB8270TCL20
JC86837-4	SW846 8260C	01-MAY-19 18:16	TDN			V8260TCL20
JC86837-4	SW846 6010D	01-MAY-19 20:30	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, TL,V,ZN
JC86837-4	SW846 6010D	02-MAY-19 14:24	MET	26-APR-19	BP	PB
JC86837-4	SW846 9012B/LACHAT	03-MAY-19 14:18	KI	01-MAY-19	BM	CN
JC86837-5	Collected: 22-APR-19 11:05 By: GB			Received: 23-APR-19	By: AS	
TP-44R(7-9)						
JC86837-5	SW846 7471B	25-APR-19 11:33	LL	25-APR-19	LL	HG
JC86837-5	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-5	SW846 8270D	01-MAY-19 15:38	CC	28-APR-19	SA	AB8270TCL20
JC86837-5	SW846 8260C	01-MAY-19 16:58	PS			V8260TCL20
JC86837-5	SW846 6010D	01-MAY-19 20:35	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86837-5	SW846 9012B/LACHAT	03-MAY-19 14:19	KI	01-MAY-19	BM	CN
JC86837-6	Collected: 22-APR-19 11:55 By: GB			Received: 23-APR-19	By: AS	
S-135(4-6)						
JC86837-6	SW846 7471B	25-APR-19 11:34	LL	25-APR-19	LL	HG
JC86837-6	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-6	SW846 8270D	01-MAY-19 17:32	CC	28-APR-19	SA	AB8270TCL20
JC86837-6	SW846 8260C	01-MAY-19 18:45	TDN			V8260TCL20
JC86837-6	SW846 6010D	01-MAY-19 20:40	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86837-6	SW846 9012B/LACHAT	03-MAY-19 14:21	KI	01-MAY-19	BM	CN

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86837

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86837-7 S-135(8-10)	Collected: 22-APR-19 12:10 By: GB		Received: 23-APR-19 By: AS			
JC86837-7	SW846 7471B	25-APR-19 11:36	LL	25-APR-19	LL	HG
JC86837-7	SM2540 G 18TH ED MOD.	30-APR-19 14:13	JMP			SOL104
JC86837-7	SW846 8270D	01-MAY-19 16:35	CC	28-APR-19	SA	AB8270TCL20
JC86837-7	SW846 8260C	01-MAY-19 17:21	PS			V8260TCL20
JC86837-7	SW846 6010D	01-MAY-19 20:55	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86837-7	SW846 9012B/LACHAT	03-MAY-19 14:22	KI	01-MAY-19	BM	CN
JC86837-8 S-136(4-6)	Collected: 22-APR-19 13:06 By: GB		Received: 23-APR-19 By: AS			
JC86837-8	SW846 7471B	25-APR-19 11:38	LL	25-APR-19	LL	HG
JC86837-8	SW846 8270D	29-APR-19 14:02	AR	28-APR-19	SA	AB8270TCL20
JC86837-8	SM2540 G 18TH ED MOD.	30-APR-19 14:13	JMP			SOL104
JC86837-8	SW846 6010D	01-MAY-19 21:00	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC86837-8	SW846 8260C	02-MAY-19 14:26	PS			V8260TCL20
JC86837-8	SW846 9012B/LACHAT	03-MAY-19 14:23	KI	01-MAY-19	BM	CN
JC86837-9 S-136(7-9)	Collected: 22-APR-19 13:10 By: GB		Received: 23-APR-19 By: AS			
JC86837-9	SW846 7471B	25-APR-19 11:39	LL	25-APR-19	LL	HG
JC86837-9	SW846 8270D	29-APR-19 18:48	AR	28-APR-19	SA	AB8270TCL20
JC86837-9	SM2540 G 18TH ED MOD.	30-APR-19 14:13	JMP			SOL104
JC86837-9	SW846 8260C	01-MAY-19 17:44	PS			V8260TCL20
JC86837-9	SW846 6010D	01-MAY-19 21:05	ND	26-APR-19	BP	AL,AS,BA,BE,CA,CD,CO,FE,K, MG,NA,NI,PB,SB,SE,TL,ZN
JC86837-9	SW846 6010D	02-MAY-19 14:39	MET	26-APR-19	BP	AG,CR,CU,MN,V
JC86837-9	SW846 9012B/LACHAT	03-MAY-19 14:27	KI	01-MAY-19	BM	CN
JC86837-10 S-111(2-4)	Collected: 23-APR-19 12:10 By: GB		Received: 23-APR-19 By: AS			

Internal Sample Tracking Chronicle

Arcadis

Job No: JC86837

National Grid, Philly Coke, Philadelphia, PA
Project No: B0036790.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC86837-10	SW846 7471B	25-APR-19 11:21	LL	25-APR-19	LL	HG
JC86837-10	SM2540 G 18TH ED MOD	30-APR-19 08:30	RC			SOL104
JC86837-10	SW846 8260C	01-MAY-19 18:07	PS			V8260TCL20
JC86837-10	SW846 8270D	01-MAY-19 18:37	AR	28-APR-19	SA	AB8270TCL20
JC86837-10	SW846 8270D	01-MAY-19 21:02	AR	28-APR-19	SA	AB8270TCL20
JC86837-10	SW846 6010D	01-MAY-19 21:10	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC86837-10	SW846 9012B/LACHAT	03-MAY-19 14:29	KI	01-MAY-19	BM	CN
JC86837-11	Collected: 23-APR-19 12:20 By: GB S-111(4.5-6.5)			Received: 23-APR-19 By: AS		
JC86837-11	SW846 7471B	25-APR-19 11:41	LL	25-APR-19	LL	HG
JC86837-11	SW846 8270D	29-APR-19 19:12	AR	28-APR-19	SA	AB8270TCL20
JC86837-11	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-11	SW846 8260C	01-MAY-19 18:30	PS			V8260TCL20
JC86837-11	SW846 6010D	01-MAY-19 21:15	ND	26-APR-19	BP	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC86837-11	SW846 9012B/LACHAT	03-MAY-19 14:30	KI	01-MAY-19	BM	CN
JC86837-12	Collected: 23-APR-19 13:35 By: GB S-107(2-4)			Received: 23-APR-19 By: AS		
JC86837-12	SW846 7471B	25-APR-19 11:43	LL	25-APR-19	LL	HG
JC86837-12	SW846 8270D	29-APR-19 21:14	AR	28-APR-19	SA	AB8270TCL20
JC86837-12	SM2540 G 18TH ED MOD	30-APR-19 14:13	JMP			SOL104
JC86837-12	SW846 8270D	01-MAY-19 17:25	AR	28-APR-19	SA	AB8270TCL20
JC86837-12	SW846 8260C	01-MAY-19 18:54	PS			V8260TCL20
JC86837-12	SW846 6010D	01-MAY-19 21:20	ND	26-APR-19	BP	AS,CD,CO,CR,CU,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC86837-12	SW846 6010D	02-MAY-19 14:44	MET	26-APR-19	BP	AG,AL,BA,BE,CA,FE,K,MG
JC86837-12	SW846 9012B/LACHAT	02-MAY-19 16:39	KI	02-MAY-19	BM	CN

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-1.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-1.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-1.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-1.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-1.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-1.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-1.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-1.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-1.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-1.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-1.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-1.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-1.1	Secured Storage	Sahara Feliciano	05/01/19 18:19	Retrieve from Storage
JC86837-1.1	Sahara Feliciano	Secured Staging Area	05/01/19 18:19	Return to Storage
JC86837-1.1	Secured Staging Area	Sarah Halim	05/01/19 18:42	Retrieve from Storage
JC86837-1.1	Sarah Halim	Secured Storage	05/02/19 00:14	Return to Storage
JC86837-1.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-1.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-1.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-1.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-1.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-1.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-1.1
JC86837-1.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-1.1
JC86837-1.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-1.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-1.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument
JC86837-1.1.1	GCMSM	Christine Change	05/03/19 15:09	Unload from Instrument
JC86837-1.1.1	Christine Change	Extract Freezer	05/03/19 15:09	Return to Storage
JC86837-1.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-1.1.2	Sarah Halim	Organics Prep	05/01/19 21:42	Extract from JC86837-1.1
JC86837-1.1.2	Organics Prep	Chatiyah Canaday	05/02/19 15:14	Extract from JC86837-1.1
JC86837-1.1.2	Chatiyah Canaday	Extract Storage	05/02/19 15:14	Return to Storage
JC86837-1.1.2	Extract Storage	Tianwei Ruan	05/02/19 15:52	Retrieve from Storage
JC86837-1.1.2	Tianwei Ruan	GC5G	05/02/19 15:52	Load on Instrument
JC86837-1.1.2	GC5G	Tianwei Ruan	07/10/19 15:54	Unload from Instrument
JC86837-1.1.2	Tianwei Ruan	Extract Freezer	07/10/19 15:55	Return to Storage
JC86837-1.1.2	Extract Freezer		07/11/19 09:00	Disposed
JC86837-1.1.3	Sarah Halim	Organics Prep	05/01/19 21:43	Extract from JC86837-1.1
JC86837-1.1.3	Organics Prep	Chatiyah Canaday	05/02/19 15:14	Extract from JC86837-1.1
JC86837-1.1.3	Chatiyah Canaday	Extract Storage	05/02/19 15:14	Return to Storage
JC86837-1.1.3	Extract Storage	Mailisi Heshuote	05/03/19 15:30	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-1.1.3	Mailisi Heshuote	GC6G	05/03/19 15:30	Load on Instrument
JC86837-1.3	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-1.3	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-1.3	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-1.3	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-1.3	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-1.3	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-1.3	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-1.3	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-1.3	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-1.3.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-1.3
JC86837-1.3.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-1.3
JC86837-1.3.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-1.3.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-1.4	Secured Storage	Thien Nguyen	04/30/19 07:35	Retrieve from Storage
JC86837-1.4	Thien Nguyen	Secured Storage	04/30/19 07:35	Return to Storage
JC86837-1.4	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-2.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-2.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-2.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-2.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-2.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-2.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-2.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-2.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-2.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-2.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-2.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-2.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-2.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-2.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-2.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-2.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-2.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-2.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-2.1
JC86837-2.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-2.1
JC86837-2.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-2.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-2.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-2.1.1	GCMSM	Christine Change	05/02/19 14:38	Unload from Instrument
JC86837-2.1.1	Christine Change	Extract Freezer	05/02/19 14:38	Return to Storage
JC86837-2.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-2.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-2.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-2.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-2.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-2.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-2.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-2.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-2.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-2.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-2.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-2.2
JC86837-2.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-2.2
JC86837-2.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-2.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-2.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-2.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-2.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument
JC86837-2.4	Prashant Shukla		05/02/19 11:00	Depleted
JC86837-3.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-3.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-3.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-3.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-3.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-3.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-3.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-3.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-3.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-3.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-3.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-3.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-3.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-3.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-3.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-3.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-3.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-3.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-3.1
JC86837-3.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-3.1

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-3.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-3.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-3.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument
JC86837-3.1.1	GCMSM	Christine Change	05/02/19 14:38	Unload from Instrument
JC86837-3.1.1	Christine Change	Extract Freezer	05/02/19 14:38	Return to Storage
JC86837-3.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-3.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-3.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-3.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-3.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-3.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-3.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-3.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-3.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-3.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-3.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-3.2
JC86837-3.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-3.2
JC86837-3.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-3.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-3.3	Secured Storage	Thien Nguyen	05/01/19 13:17	Retrieve from Storage
JC86837-3.3	Thien Nguyen	Secured Storage	05/01/19 13:17	Return to Storage
JC86837-3.3	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-4.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-4.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-4.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-4.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-4.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-4.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-4.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-4.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-4.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-4.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-4.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-4.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-4.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-4.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-4.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-4.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-4.1	Dave Hunkele		06/06/19 05:03	Disposed

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-4.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-4.1
JC86837-4.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-4.1
JC86837-4.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-4.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-4.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument
JC86837-4.1.1	GCMSM	Christine Change	05/02/19 14:38	Unload from Instrument
JC86837-4.1.1	Christine Change	Extract Freezer	05/02/19 14:38	Return to Storage
JC86837-4.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-4.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-4.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-4.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-4.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-4.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-4.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-4.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-4.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-4.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-4.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-4.2
JC86837-4.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-4.2
JC86837-4.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-4.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-4.3	Secured Storage	Thien Nguyen	05/01/19 13:17	Retrieve from Storage
JC86837-4.3	Thien Nguyen	Secured Storage	05/01/19 13:17	Return to Storage
JC86837-4.3	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-5.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-5.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-5.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-5.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-5.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-5.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-5.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-5.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-5.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-5.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-5.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-5.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-5.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-5.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-5.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-5.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-5.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-5.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-5.1
JC86837-5.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-5.1
JC86837-5.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-5.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-5.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument
JC86837-5.1.1	GCMSM	Christine Change	05/02/19 14:38	Unload from Instrument
JC86837-5.1.1	Christine Change	Extract Freezer	05/02/19 14:38	Return to Storage
JC86837-5.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-5.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-5.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-5.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-5.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-5.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-5.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-5.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-5.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-5.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-5.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-5.2
JC86837-5.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-5.2
JC86837-5.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-5.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-5.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-5.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-5.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument
JC86837-5.4	Prashant Shukla		05/02/19 11:00	Depleted
JC86837-6.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-6.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-6.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-6.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-6.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-6.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-6.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-6.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-6.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-6.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-6.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-6.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-6.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-6.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-6.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-6.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-6.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-6.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-6.1
JC86837-6.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-6.1
JC86837-6.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-6.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-6.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument
JC86837-6.1.1	GCMSM	Christine Change	05/02/19 14:38	Unload from Instrument
JC86837-6.1.1	Christine Change	Extract Freezer	05/02/19 14:38	Return to Storage
JC86837-6.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-6.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-6.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-6.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-6.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-6.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-6.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-6.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-6.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-6.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-6.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-6.2
JC86837-6.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-6.2
JC86837-6.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-6.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-6.3	Secured Storage	Thien Nguyen	05/01/19 13:17	Retrieve from Storage
JC86837-6.3	Thien Nguyen	Secured Storage	05/01/19 13:17	Return to Storage
JC86837-6.3	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-7.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-7.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-7.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-7.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-7.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-7.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-7.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-7.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-7.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-7.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-7.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-7.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-7.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-7.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-7.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-7.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-7.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-7.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:17	Extract from JC86837-7.1
JC86837-7.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:27	Extract from JC86837-7.1
JC86837-7.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-7.1.1	Extract Storage	Christine Change	05/01/19 09:30	Retrieve from Storage
JC86837-7.1.1	Christine Change	GCMSM	05/01/19 09:30	Load on Instrument
JC86837-7.1.1	GCMSM	Christine Change	05/02/19 14:38	Unload from Instrument
JC86837-7.1.1	Christine Change	Extract Freezer	05/02/19 14:38	Return to Storage
JC86837-7.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-7.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-7.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-7.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-7.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-7.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-7.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-7.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-7.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-7.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-7.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-7.2
JC86837-7.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-7.2
JC86837-7.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-7.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-7.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-7.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-7.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument
JC86837-7.4	Prashant Shukla		05/02/19 11:00	Depleted
JC86837-8.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-8.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-8.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-8.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-8.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-8.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-8.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-8.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-8.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-8.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-8.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-8.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-8.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-8.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-8.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-8.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-8.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-8.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:20	Extract from JC86837-8.1
JC86837-8.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:28	Extract from JC86837-8.1
JC86837-8.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-8.1.1	Extract Storage	Angela Rastelli	04/29/19 10:40	Retrieve from Storage
JC86837-8.1.1	Angela Rastelli	GCMS6P	04/29/19 10:41	Load on Instrument
JC86837-8.1.1	GCMS6P	Angela Rastelli	04/30/19 11:14	Unload from Instrument
JC86837-8.1.1	Angela Rastelli	Extract Freezer	04/30/19 11:14	Return to Storage
JC86837-8.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-8.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-8.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-8.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-8.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-8.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-8.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-8.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-8.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-8.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-8.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-8.2
JC86837-8.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-8.2
JC86837-8.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-8.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-8.3	Secured Storage	Thien Nguyen	05/01/19 13:17	Retrieve from Storage
JC86837-8.3	Thien Nguyen	Secured Storage	05/01/19 13:17	Return to Storage
JC86837-8.3	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-8.4	Secured Storage	Thien Nguyen	05/02/19 11:08	Retrieve from Storage
JC86837-8.4	Thien Nguyen	GCMSY	05/02/19 11:08	Load on Instrument
JC86837-8.4	GCMSY	Prashant Shukla	05/04/19 11:31	Unload from Instrument
JC86837-8.4	Prashant Shukla		05/04/19 11:31	Depleted
JC86837-9.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-9.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-9.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-9.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-9.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-9.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-9.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-9.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-9.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-9.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-9.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-9.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-9.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-9.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-9.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-9.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-9.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-9.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:20	Extract from JC86837-9.1
JC86837-9.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:28	Extract from JC86837-9.1
JC86837-9.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-9.1.1	Extract Storage	Angela Rastelli	04/29/19 10:40	Retrieve from Storage
JC86837-9.1.1	Angela Rastelli	GCMS6P	04/29/19 10:41	Load on Instrument
JC86837-9.1.1	GCMS6P	Angela Rastelli	04/30/19 11:14	Unload from Instrument
JC86837-9.1.1	Angela Rastelli	Extract Freezer	04/30/19 11:14	Return to Storage
JC86837-9.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-9.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-9.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-9.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-9.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-9.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-9.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-9.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-9.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-9.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-9.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-9.2
JC86837-9.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-9.2
JC86837-9.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-9.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-9.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-9.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-9.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-9.4	Prashant Shukla		05/02/19 11:00	Depleted
JC86837-10.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-10.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-10.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-10.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-10.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-10.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-10.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-10.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-10.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-10.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-10.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-10.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-10.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-10.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-10.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-10.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-10.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-10.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:20	Extract from JC86837-10.1
JC86837-10.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:28	Extract from JC86837-10.1
JC86837-10.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-10.1.1	Extract Storage	Angela Rastelli	04/29/19 10:40	Retrieve from Storage
JC86837-10.1.1	Angela Rastelli	GCMS6P	04/29/19 10:41	Load on Instrument
JC86837-10.1.1	GCMS6P	Angela Rastelli	04/30/19 11:14	Unload from Instrument
JC86837-10.1.1	Angela Rastelli	Extract Freezer	04/30/19 11:14	Return to Storage
JC86837-10.1.1	Extract Freezer	Angela Rastelli	05/01/19 10:34	Retrieve from Storage
JC86837-10.1.1	Angela Rastelli	GCMS6P	05/01/19 10:34	Load on Instrument
JC86837-10.1.1	GCMS6P	Angela Rastelli	05/02/19 10:06	Unload from Instrument
JC86837-10.1.1	Angela Rastelli	Extract Freezer	05/02/19 10:06	Return to Storage
JC86837-10.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-10.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-10.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-10.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-10.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-10.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-10.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-10.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-10.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-10.2	Secured Storage	Dwayne Johnson	04/30/19 09:28	Retrieve from Storage
JC86837-10.2	Dwayne Johnson	Secured Staging Area	04/30/19 09:28	Return to Storage
JC86837-10.2	Secured Staging Area	Ruchitaben Chauhan	04/30/19 09:32	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-10.2	Ruchitaben Chauhan	Secured Storage	04/30/19 17:42	Return to Storage
JC86837-10.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-10.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-10.2
JC86837-10.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-10.2
JC86837-10.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-10.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-10.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-10.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-10.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument
JC86837-10.4	Prashant Shukla		05/02/19 11:00	Depleted
JC86837-11.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-11.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-11.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-11.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-11.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-11.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-11.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-11.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-11.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-11.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-11.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-11.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-11.1	Secured Storage	Todd Shoemaker	05/03/19 08:48	Retrieve from Storage
JC86837-11.1	Todd Shoemaker	Secured Staging Area	05/03/19 08:48	Return to Storage
JC86837-11.1	Secured Staging Area	Beatrice Marcelino	05/03/19 10:09	Retrieve from Storage
JC86837-11.1	Beatrice Marcelino	Secured Storage	05/03/19 16:46	Return to Storage
JC86837-11.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-11.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:20	Extract from JC86837-11.1
JC86837-11.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:28	Extract from JC86837-11.1
JC86837-11.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-11.1.1	Extract Storage	Angela Rastelli	04/29/19 10:40	Retrieve from Storage
JC86837-11.1.1	Angela Rastelli	GCMS6P	04/29/19 10:41	Load on Instrument
JC86837-11.1.1	GCMS6P	Angela Rastelli	04/30/19 11:14	Unload from Instrument
JC86837-11.1.1	Angela Rastelli	Extract Freezer	04/30/19 11:14	Return to Storage
JC86837-11.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-11.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-11.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-11.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-11.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-11.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-11.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-11.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-11.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-11.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-11.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-11.2
JC86837-11.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-11.2
JC86837-11.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-11.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-11.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-11.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-11.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument
JC86837-11.4	Prashant Shukla		05/02/19 11:00	Depleted
JC86837-12.1	Secured Staging Area	Sahara Feliciano	04/27/19 13:57	Retrieve from Storage
JC86837-12.1	Sahara Feliciano	Secured Staging Area	04/27/19 13:57	Return to Storage
JC86837-12.1	Secured Staging Area	Sauvelson Auguste	04/28/19 05:04	Retrieve from Storage
JC86837-12.1	Sauvelson Auguste	Secured Storage	04/28/19 13:25	Return to Storage
JC86837-12.1	Secured Storage	Dwayne Johnson	04/30/19 11:28	Retrieve from Storage
JC86837-12.1	Dwayne Johnson	Secured Staging Area	04/30/19 11:28	Return to Storage
JC86837-12.1	Secured Staging Area	Jayna Patel	04/30/19 12:46	Retrieve from Storage
JC86837-12.1	Jayna Patel	Secured Storage	04/30/19 17:16	Return to Storage
JC86837-12.1	Secured Storage	Benjamin Gaines	05/01/19 09:07	Retrieve from Storage
JC86837-12.1	Benjamin Gaines	Secured Staging Area	05/01/19 09:07	Return to Storage
JC86837-12.1	Secured Staging Area	Beatrice Marcelino	05/01/19 12:12	Retrieve from Storage
JC86837-12.1	Beatrice Marcelino	Secured Storage	05/01/19 16:02	Return to Storage
JC86837-12.1	Secured Storage	Benjamin Gaines	05/02/19 09:10	Retrieve from Storage
JC86837-12.1	Benjamin Gaines	Secured Staging Area	05/02/19 09:10	Return to Storage
JC86837-12.1	Secured Staging Area	Beatrice Marcelino	05/02/19 09:24	Retrieve from Storage
JC86837-12.1	Beatrice Marcelino	Secured Storage	05/02/19 13:38	Return to Storage
JC86837-12.1	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-12.1.1	Sauvelson Auguste	Organics Prep	04/28/19 05:20	Extract from JC86837-12.1
JC86837-12.1.1	Organics Prep	Sauvelson Auguste	04/28/19 13:28	Extract from JC86837-12.1
JC86837-12.1.1	Sauvelson Auguste	Extract Storage	04/28/19 13:28	Return to Storage
JC86837-12.1.1	Extract Storage	Angela Rastelli	04/29/19 10:40	Retrieve from Storage
JC86837-12.1.1	Angela Rastelli	GCMS6P	04/29/19 10:41	Load on Instrument
JC86837-12.1.1	GCMS6P	Angela Rastelli	04/30/19 11:14	Unload from Instrument
JC86837-12.1.1	Angela Rastelli	Extract Freezer	04/30/19 11:14	Return to Storage
JC86837-12.1.1	Extract Freezer	Angela Rastelli	05/01/19 10:34	Retrieve from Storage
JC86837-12.1.1	Angela Rastelli	GCMS6P	05/01/19 10:34	Load on Instrument
JC86837-12.1.1	GCMS6P	Angela Rastelli	05/02/19 10:06	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA
Received: 04/23/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC86837-12.1.1	Angela Rastelli	Extract Freezer	05/02/19 10:06	Return to Storage
JC86837-12.1.1	Extract Freezer		06/10/19 09:00	Disposed
JC86837-12.2	Secured Storage	Sahara Feliciano	04/24/19 20:18	Retrieve from Storage
JC86837-12.2	Sahara Feliciano	Secured Staging Area	04/24/19 20:18	Return to Storage
JC86837-12.2	Secured Staging Area	Lindsey Lee	04/25/19 07:24	Retrieve from Storage
JC86837-12.2	Lindsey Lee	Secured Storage	04/25/19 11:34	Return to Storage
JC86837-12.2	Secured Storage	Sahara Feliciano	04/25/19 17:45	Retrieve from Storage
JC86837-12.2	Sahara Feliciano	Secured Staging Area	04/25/19 17:45	Return to Storage
JC86837-12.2	Secured Staging Area	Colleen Hill	04/26/19 05:57	Retrieve from Storage
JC86837-12.2	Colleen Hill	Secured Storage	04/26/19 09:56	Return to Storage
JC86837-12.2	Dave Hunkele		06/06/19 05:03	Disposed
JC86837-12.2.1	Colleen Hill	Metals Digestion	04/26/19 08:02	Digestate from JC86837-12.2
JC86837-12.2.1	Metals Digestion	Colleen Hill	04/26/19 08:02	Digestate from JC86837-12.2
JC86837-12.2.1	Colleen Hill	Metals Digestate Storage	04/26/19 08:02	Return to Storage
JC86837-12.2.1	Metals Digestate Storage		07/03/19 09:00	Disposed
JC86837-12.4	Secured Storage	Prashant Shukla	05/01/19 11:58	Retrieve from Storage
JC86837-12.4	Prashant Shukla	GCMS3C	05/01/19 11:58	Load on Instrument
JC86837-12.4	GCMS3C	Prashant Shukla	05/02/19 10:59	Unload from Instrument
JC86837-12.4	Prashant Shukla		05/02/19 11:00	Depleted

MS Volatiles

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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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9098-MB	I225822.D	1	04/30/19	TDN	n/a	n/a	VI9098

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

JC86837-1

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9098-MB	I225822.D	1	04/30/19	TDN	n/a	n/a	VI9098

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

JC86837-1

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	
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	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	110%	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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9099-MB	I225860.D	1	05/01/19	TDN	n/a	n/a	VI9099

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

JC86837-1, JC86837-3, JC86837-4, JC86837-6

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9099-MB	I225860.D	1	05/01/19	TDN	n/a	n/a	VI9099

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

JC86837-1, JC86837-3, JC86837-4, JC86837-6

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	107%	75-127%
17060-07-0	1,2-Dichloroethane-D4	118%	75-130%
2037-26-5	Toluene-D8	102%	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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6814-MB	3C151599.D	1	05/01/19	PS	n/a	n/a	V3C6814

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

JC86837-2, JC86837-5, JC86837-7, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6814-MB	3C151599.D	1	05/01/19	PS	n/a	n/a	V3C6814

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

JC86837-2, JC86837-5, JC86837-7, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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	98%	75-127%
17060-07-0	1,2-Dichloroethane-D4	95%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	103%	79-127%

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

Method Blank Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8023-MB	Y184882.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8023-MB	Y184882.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

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	109%	75-127%
17060-07-0	1,2-Dichloroethane-D4	101%	75-130%
2037-26-5	Toluene-D8	93%	80-120%
460-00-4	4-Bromofluorobenzene	94%	79-127%

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

Method Blank Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8023-MB2	Y184936A.D	1	05/04/19	PS	n/a	n/a	VY8023

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

JC86877-1DUP

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8023-MB2	Y184936A.D	1	05/04/19	PS	n/a	n/a	VY8023

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

JC86877-1DUP

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	99%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	95%	79-127%

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

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9098-BS	I225821.D	1	04/30/19	TDN	n/a	n/a	VI9098

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

JC86837-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	11000	110	48-149
71-43-2	Benzene	2500	2260	90	74-117
74-97-5	Bromochloromethane	2500	2520	101	82-121
75-27-4	Bromodichloromethane	2500	2400	96	78-119
75-25-2	Bromoform	2500	2630	105	76-130
74-83-9	Bromomethane	2500	2580	103	58-137
78-93-3	2-Butanone (MEK)	10000	10600	106	65-143
75-15-0	Carbon disulfide	2500	2100	84	66-140
56-23-5	Carbon tetrachloride	2500	2410	96	69-136
108-90-7	Chlorobenzene	2500	2440	98	79-117
75-00-3	Chloroethane	2500	2420	97	62-139
67-66-3	Chloroform	2500	2430	97	76-119
74-87-3	Chloromethane	2500	2520	101	52-144
110-82-7	Cyclohexane	2500	2160	86	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2630	105	72-124
124-48-1	Dibromochloromethane	2500	2480	99	78-122
106-93-4	1,2-Dibromoethane	2500	2490	100	80-116
95-50-1	1,2-Dichlorobenzene	2500	2580	103	77-117
541-73-1	1,3-Dichlorobenzene	2500	2520	101	75-117
106-46-7	1,4-Dichlorobenzene	2500	2510	100	76-115
75-71-8	Dichlorodifluoromethane	2500	3050	122	43-156
75-34-3	1,1-Dichloroethane	2500	2310	92	75-124
107-06-2	1,2-Dichloroethane	2500	2580	103	74-124
75-35-4	1,1-Dichloroethene	2500	2320	93	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2280	91	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2360	94	71-125
78-87-5	1,2-Dichloropropane	2500	2130	85	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2370	95	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2580	103	78-119
100-41-4	Ethylbenzene	2500	2350	94	75-118
76-13-1	Freon 113	2500	2390	96	60-181
591-78-6	2-Hexanone	10000	10100	101	63-138
98-82-8	Isopropylbenzene	2500	2340	94	74-122
79-20-9	Methyl Acetate	2500	2240	90	61-140
108-87-2	Methylcyclohexane	2500	1970	79	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2630	105	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9098-BS	I225821.D	1	04/30/19	TDN	n/a	n/a	VI9098

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

JC86837-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	10100	101	73-136
75-09-2	Methylene chloride	2500	2180	87	73-120
100-42-5	Styrene	2500	2350	94	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2560	102	72-120
127-18-4	Tetrachloroethene	2500	2390	96	69-128
87-61-6	1,2,3-Trichlorobenzene	2500	2530	101	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	2590	104	73-132
71-55-6	1,1,1-Trichloroethane	2500	2470	99	73-131
79-00-5	1,1,2-Trichloroethane	2500	2410	96	79-117
79-01-6	Trichloroethene	2500	2260	90	80-120
75-69-4	Trichlorofluoromethane	2500	2470	99	63-141
75-01-4	Vinyl chloride	2500	2750	110	55-145
	m,p-Xylene	5000	4680	94	75-120
95-47-6	o-Xylene	2500	2260	90	75-119
1330-20-7	Xylene (total)	7500	6940	93	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	110%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	109%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9099-BS	I225858.D	1	05/01/19	TDN	n/a	n/a	VI9099

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

JC86837-1, JC86837-3, JC86837-4, JC86837-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	10400	104	48-149
71-43-2	Benzene	2500	2200	88	74-117
74-97-5	Bromochloromethane	2500	2360	94	82-121
75-27-4	Bromodichloromethane	2500	2320	93	78-119
75-25-2	Bromoform	2500	2480	99	76-130
74-83-9	Bromomethane	2500	2760	110	58-137
78-93-3	2-Butanone (MEK)	10000	9540	95	65-143
75-15-0	Carbon disulfide	2500	2070	83	66-140
56-23-5	Carbon tetrachloride	2500	2500	100	69-136
108-90-7	Chlorobenzene	2500	2360	94	79-117
75-00-3	Chloroethane	2500	2710	108	62-139
67-66-3	Chloroform	2500	2390	96	76-119
74-87-3	Chloromethane	2500	2770	111	52-144
110-82-7	Cyclohexane	2500	2360	94	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2300	92	72-124
124-48-1	Dibromochloromethane	2500	2380	95	78-122
106-93-4	1,2-Dibromoethane	2500	2300	92	80-116
95-50-1	1,2-Dichlorobenzene	2500	2370	95	77-117
541-73-1	1,3-Dichlorobenzene	2500	2360	94	75-117
106-46-7	1,4-Dichlorobenzene	2500	2370	95	76-115
75-71-8	Dichlorodifluoromethane	2500	3640	146	43-156
75-34-3	1,1-Dichloroethane	2500	2270	91	75-124
107-06-2	1,2-Dichloroethane	2500	2470	99	74-124
75-35-4	1,1-Dichloroethene	2500	2360	94	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2210	88	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2320	93	71-125
78-87-5	1,2-Dichloropropane	2500	2060	82	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2260	90	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2430	97	78-119
100-41-4	Ethylbenzene	2500	2300	92	75-118
76-13-1	Freon 113	2500	2400	96	60-181
591-78-6	2-Hexanone	10000	8790	88	63-138
98-82-8	Isopropylbenzene	2500	2290	92	74-122
79-20-9	Methyl Acetate	2500	2050	82	61-140
108-87-2	Methylcyclohexane	2500	2010	80	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2390	96	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI9099-BS	I225858.D	1	05/01/19	TDN	n/a	n/a	VI9099

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

JC86837-1, JC86837-3, JC86837-4, JC86837-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	8930	89	73-136
75-09-2	Methylene chloride	2500	2170	87	73-120
100-42-5	Styrene	2500	2260	90	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2310	92	72-120
127-18-4	Tetrachloroethene	2500	2370	95	69-128
108-88-3	Toluene	2500	2320	93	74-117
87-61-6	1,2,3-Trichlorobenzene	2500	2300	92	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	2450	98	73-132
71-55-6	1,1,1-Trichloroethane	2500	2510	100	73-131
79-00-5	1,1,2-Trichloroethane	2500	2240	90	79-117
79-01-6	Trichloroethene	2500	2250	90	80-120
75-69-4	Trichlorofluoromethane	2500	2770	111	63-141
75-01-4	Vinyl chloride	2500	3060	122	55-145
	m,p-Xylene	5000	4540	91	75-120
95-47-6	o-Xylene	2500	2200	88	75-119
1330-20-7	Xylene (total)	7500	6740	90	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	114%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	105%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6814-BS	3C151597.D	1	05/01/19	PS	n/a	n/a	V3C6814

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

JC86837-2, JC86837-5, JC86837-7, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	192	96	48-149
71-43-2	Benzene	50	46.0	92	74-117
74-97-5	Bromochloromethane	50	46.8	94	82-121
75-27-4	Bromodichloromethane	50	49.7	99	78-119
75-25-2	Bromoform	50	53.3	107	76-130
74-83-9	Bromomethane	50	41.1	82	58-137
78-93-3	2-Butanone (MEK)	200	193	97	65-143
75-15-0	Carbon disulfide	50	44.1	88	66-140
56-23-5	Carbon tetrachloride	50	47.4	95	69-136
108-90-7	Chlorobenzene	50	45.1	90	79-117
75-00-3	Chloroethane	50	43.1	86	62-139
67-66-3	Chloroform	50	41.9	84	76-119
74-87-3	Chloromethane	50	42.6	85	52-144
110-82-7	Cyclohexane	50	45.1	90	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	52.7	105	72-124
124-48-1	Dibromochloromethane	50	56.8	114	78-122
106-93-4	1,2-Dibromoethane	50	42.6	85	80-116
95-50-1	1,2-Dichlorobenzene	50	43.7	87	77-117
541-73-1	1,3-Dichlorobenzene	50	43.9	88	75-117
106-46-7	1,4-Dichlorobenzene	50	42.9	86	76-115
75-71-8	Dichlorodifluoromethane	50	50.5	101	43-156
75-34-3	1,1-Dichloroethane	50	43.1	86	75-124
107-06-2	1,2-Dichloroethane	50	42.4	85	74-124
75-35-4	1,1-Dichloroethene	50	45.6	91	64-129
156-59-2	cis-1,2-Dichloroethene	50	44.4	89	74-118
156-60-5	trans-1,2-Dichloroethene	50	44.0	88	71-125
78-87-5	1,2-Dichloropropane	50	44.8	90	80-119
10061-01-5	cis-1,3-Dichloropropene	50	49.0	98	80-119
10061-02-6	trans-1,3-Dichloropropene	50	49.0	98	78-119
100-41-4	Ethylbenzene	50	43.5	87	75-118
76-13-1	Freon 113	50	49.2	98	60-181
591-78-6	2-Hexanone	200	191	96	63-138
98-82-8	Isopropylbenzene	50	44.7	89	74-122
79-20-9	Methyl Acetate	50	42.2	84	61-140
108-87-2	Methylcyclohexane	50	42.4	85	67-136
1634-04-4	Methyl Tert Butyl Ether	50	45.6	91	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C6814-BS	3C151597.D	1	05/01/19	PS	n/a	n/a	V3C6814

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

JC86837-2, JC86837-5, JC86837-7, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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	44.4	89	73-120
100-42-5	Styrene	50	45.5	91	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	43.4	87	72-120
127-18-4	Tetrachloroethene	50	49.9	100	69-128
108-88-3	Toluene	50	44.4	89	74-117
87-61-6	1,2,3-Trichlorobenzene	50	48.7	97	72-133
120-82-1	1,2,4-Trichlorobenzene	50	48.8	98	73-132
71-55-6	1,1,1-Trichloroethane	50	43.4	87	73-131
79-00-5	1,1,2-Trichloroethane	50	44.7	89	79-117
79-01-6	Trichloroethene	50	46.5	93	80-120
75-69-4	Trichlorofluoromethane	50	44.3	89	63-141
75-01-4	Vinyl chloride	50	44.3	89	55-145
	m,p-Xylene	100	87.8	88	75-120
95-47-6	o-Xylene	50	44.5	89	75-119
1330-20-7	Xylene (total)	150	132	88	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	75-127%
17060-07-0	1,2-Dichloroethane-D4	100%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	101%	79-127%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8023-BS	Y184880.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	181	91	48-149
71-43-2	Benzene	50	46.5	93	74-117
74-97-5	Bromochloromethane	50	50.5	101	82-121
75-27-4	Bromodichloromethane	50	50.2	100	78-119
75-25-2	Bromoform	50	50.8	102	76-130
74-83-9	Bromomethane	50	46.0	92	58-137
78-93-3	2-Butanone (MEK)	200	207	104	65-143
75-15-0	Carbon disulfide	50	48.3	97	66-140
56-23-5	Carbon tetrachloride	50	53.6	107	69-136
108-90-7	Chlorobenzene	50	45.6	91	79-117
75-00-3	Chloroethane	50	52.3	105	62-139
67-66-3	Chloroform	50	47.3	95	76-119
74-87-3	Chloromethane	50	57.2	114	52-144
110-82-7	Cyclohexane	50	46.9	94	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	49.1	98	72-124
124-48-1	Dibromochloromethane	50	52.3	105	78-122
106-93-4	1,2-Dibromoethane	50	40.2	80	80-116
95-50-1	1,2-Dichlorobenzene	50	44.5	89	77-117
541-73-1	1,3-Dichlorobenzene	50	45.9	92	75-117
106-46-7	1,4-Dichlorobenzene	50	44.3	89	76-115
75-71-8	Dichlorodifluoromethane	50	50.0	100	43-156
75-34-3	1,1-Dichloroethane	50	47.9	96	75-124
107-06-2	1,2-Dichloroethane	50	47.0	94	74-124
75-35-4	1,1-Dichloroethene	50	52.9	106	64-129
156-59-2	cis-1,2-Dichloroethene	50	47.9	96	74-118
156-60-5	trans-1,2-Dichloroethene	50	47.3	95	71-125
78-87-5	1,2-Dichloropropane	50	48.5	97	80-119
10061-01-5	cis-1,3-Dichloropropene	50	51.5	103	80-119
10061-02-6	trans-1,3-Dichloropropene	50	49.2	98	78-119
100-41-4	Ethylbenzene	50	46.8	94	75-118
76-13-1	Freon 113	50	54.1	108	60-181
591-78-6	2-Hexanone	200	194	97	63-138
98-82-8	Isopropylbenzene	50	50.0	100	74-122
79-20-9	Methyl Acetate	50	48.7	97	61-140
108-87-2	Methylcyclohexane	50	50.8	102	67-136
1634-04-4	Methyl Tert Butyl Ether	50	48.3	97	75-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY8023-BS	Y184880.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	199	100	73-136
75-09-2	Methylene chloride	50	45.8	92	73-120
100-42-5	Styrene	50	48.3	97	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	45.0	90	72-120
127-18-4	Tetrachloroethene	50	50.4	101	69-128
108-88-3	Toluene	50	46.2	92	74-117
87-61-6	1,2,3-Trichlorobenzene	50	49.1	98	72-133
120-82-1	1,2,4-Trichlorobenzene	50	48.1	96	73-132
71-55-6	1,1,1-Trichloroethane	50	51.9	104	73-131
79-00-5	1,1,2-Trichloroethane	50	46.3	93	79-117
79-01-6	Trichloroethene	50	51.9	104	80-120
75-69-4	Trichlorofluoromethane	50	52.8	106	63-141
75-01-4	Vinyl chloride	50	49.3	99	55-145
	m,p-Xylene	100	92.9	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	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	97%	75-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	95%	79-127%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87031-3MS	Y184892.D	1	05/02/19	PS	n/a	n/a	VY8023
JC87031-3	Y184885.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

CAS No.	Compound	JC87031-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	21.1		169	139	70	10-157
71-43-2	Benzene	ND		42.3	38.1	90	58-125
74-97-5	Bromochloromethane	ND		42.3	39.4	93	60-127
75-27-4	Bromodichloromethane	ND		42.3	35.3	84	57-128
75-25-2	Bromoform	ND		42.3	34.6	82	48-133
74-83-9	Bromomethane	ND		42.3	38.6	91	31-141
78-93-3	2-Butanone (MEK)	ND		169	154	91	29-146
75-15-0	Carbon disulfide	ND		42.3	39.9	94	47-145
56-23-5	Carbon tetrachloride	ND		42.3	41.1	97	51-143
108-90-7	Chlorobenzene	ND		42.3	35.8	85	54-130
75-00-3	Chloroethane	ND		42.3	43.0	102	22-153
67-66-3	Chloroform	ND		42.3	37.3	88	61-125
74-87-3	Chloromethane	ND		42.3	37.5	89	43-142
110-82-7	Cyclohexane	ND		42.3	40.9	97	37-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		42.3	35.9	85	41-127
124-48-1	Dibromochloromethane	ND		42.3	37.2	88	56-127
106-93-4	1,2-Dibromoethane	ND		42.3	36.8	87	54-121
95-50-1	1,2-Dichlorobenzene	ND		42.3	34.3	81	41-134
541-73-1	1,3-Dichlorobenzene	ND		42.3	35.7	84	41-135
106-46-7	1,4-Dichlorobenzene	ND		42.3	34.3	81	41-133
75-71-8	Dichlorodifluoromethane	ND		42.3	37.4	88	30-153
75-34-3	1,1-Dichloroethane	ND		42.3	39.9	94	61-131
107-06-2	1,2-Dichloroethane	ND		42.3	33.2	79	56-126
75-35-4	1,1-Dichloroethene	ND		42.3	43.4	103	53-132
156-59-2	cis-1,2-Dichloroethene	ND		42.3	39.0	92	57-125
156-60-5	trans-1,2-Dichloroethene	ND		42.3	38.7	92	56-130
78-87-5	1,2-Dichloropropane	ND		42.3	37.6	89	63-126
10061-01-5	cis-1,3-Dichloropropene	ND		42.3	37.0	88	55-126
10061-02-6	trans-1,3-Dichloropropene	ND		42.3	34.5	82	51-126
100-41-4	Ethylbenzene	ND		42.3	37.6	89	49-132
76-13-1	Freon 113	ND		42.3	43.2	102	42-179
591-78-6	2-Hexanone	ND		169	147	87	25-150
98-82-8	Isopropylbenzene	ND		42.3	38.4	91	43-141
79-20-9	Methyl Acetate	ND		42.3	37.7	89	32-158
108-87-2	Methylcyclohexane	ND		42.3	39.6	94	22-158
1634-04-4	Methyl Tert Butyl Ether	ND		42.3	38.7	92	58-123

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87031-3MS	Y184892.D	1	05/02/19	PS	n/a	n/a	VY8023
JC87031-3	Y184885.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

CAS No.	Compound	JC87031-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		169	148	88	40-140
75-09-2	Methylene chloride	2.4	J	42.3	37.2	82	57-123
100-42-5	Styrene	ND		42.3	37.2	88	46-139
79-34-5	1,1,2,2-Tetrachloroethane	ND		42.3	34.5	82	44-127
127-18-4	Tetrachloroethene	ND		42.3	37.8	89	39-154
108-88-3	Toluene	0.72	J	42.3	37.6	87	54-127
87-61-6	1,2,3-Trichlorobenzene	ND		42.3	38.3	91	17-151
120-82-1	1,2,4-Trichlorobenzene	ND		42.3	36.9	87	19-153
71-55-6	1,1,1-Trichloroethane	ND		42.3	40.7	96	57-138
79-00-5	1,1,2-Trichloroethane	ND		42.3	35.5	84	53-127
79-01-6	Trichloroethene	ND		42.3	40.4	96	52-140
75-69-4	Trichlorofluoromethane	ND		42.3	40.0	95	46-142
75-01-4	Vinyl chloride	ND		42.3	43.6	103	43-146
	m,p-Xylene	ND		84.5	74.7	88	45-137
95-47-6	o-Xylene	ND		42.3	37.1	88	48-135
1330-20-7	Xylene (total)	ND		127	112	88	46-137

CAS No.	Surrogate Recoveries	MS	JC87031-3	Limits
1868-53-7	Dibromofluoromethane	101%	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	86%	86%	75-130%
2037-26-5	Toluene-D8	97%	99%	80-120%
460-00-4	4-Bromofluorobenzene	97%	99%	79-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86716-2MS	I225835.D	1	04/30/19	TDN	n/a	n/a	VI9098
JC86716-2MSD	I225836.D	1	04/30/19	TDN	n/a	n/a	VI9098
JC86716-2 [a]	I225831.D	1	04/30/19	TDN	n/a	n/a	VI9098

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

JC86837-1

CAS No.	Compound	JC86716-2 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	ND		2640000	3060000	116	2640000	2990000	113	2	10-157/31
71-43-2	Benzene	44300		661000	619000	87	661000	635000	89	3	58-125/22
74-97-5	Bromochloromethane	ND		661000	626000	95	661000	635000	96	1	60-127/22
75-27-4	Bromodichloromethane	ND		661000	598000	90	661000	604000	91	1	57-128/22
75-25-2	Bromoform	ND		661000	638000	96	661000	630000	95	1	48-133/21
74-83-9	Bromomethane	ND		661000	687000	104	661000	694000	105	1	31-141/28
78-93-3	2-Butanone (MEK)	ND		2640000	2890000	109	2640000	2900000	110	0	29-146/27
75-15-0	Carbon disulfide	ND		661000	547000	83	661000	561000	85	3	47-145/24
56-23-5	Carbon tetrachloride	ND		661000	635000	96	661000	634000	96	0	51-143/25
108-90-7	Chlorobenzene	ND		661000	609000	92	661000	613000	93	1	54-130/22
75-00-3	Chloroethane	ND		661000	671000	101	661000	683000	103	2	22-153/32
67-66-3	Chloroform	ND		661000	625000	95	661000	623000	94	0	61-125/22
74-87-3	Chloromethane	ND		661000	693000	105	661000	711000	108	3	43-142/27
110-82-7	Cyclohexane	ND		661000	577000	87	661000	593000	90	3	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		661000	684000	103	661000	662000	100	3	41-127/23
124-48-1	Dibromochloromethane	ND		661000	618000	93	661000	614000	93	1	56-127/21
106-93-4	1,2-Dibromoethane	ND		661000	612000	93	661000	615000	93	0	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		661000	630000	95	661000	624000	94	1	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		661000	616000	93	661000	623000	94	1	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		661000	609000	92	661000	623000	94	2	41-133/22
75-71-8	Dichlorodifluoromethane	ND		661000	829000	125	661000	824000	125	1	30-153/29
75-34-3	1,1-Dichloroethane	ND		661000	605000	92	661000	609000	92	1	61-131/23
107-06-2	1,2-Dichloroethane	ND		661000	643000	97	661000	641000	97	0	56-126/21
75-35-4	1,1-Dichloroethene	ND		661000	626000	95	661000	634000	96	1	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		661000	583000	88	661000	603000	91	3	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		661000	611000	92	661000	628000	95	3	56-130/23
78-87-5	1,2-Dichloropropane	ND		661000	537000	81	661000	550000	83	2	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		661000	570000	86	661000	589000	89	3	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		661000	620000	94	661000	632000	96	2	51-126/21
100-41-4	Ethylbenzene	11600	J	661000	611000	91	661000	621000	92	2	49-132/23
76-13-1	Freon 113	ND		661000	604000	91	661000	612000	93	1	42-179/25
591-78-6	2-Hexanone	ND		2640000	2540000	96	2640000	2550000	96	0	25-150/25
98-82-8	Isopropylbenzene	ND		661000	605000	92	661000	612000	93	1	43-141/25
79-20-9	Methyl Acetate	ND		661000	578000	87	661000	596000	90	3	32-158/26
108-87-2	Methylcyclohexane	ND		661000	493000	75	661000	511000	77	4	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		661000	643000	97	661000	651000	98	1	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86716-2MS	I225835.D	1	04/30/19	TDN	n/a	n/a	VI9098
JC86716-2MSD	I225836.D	1	04/30/19	TDN	n/a	n/a	VI9098
JC86716-2 [a]	I225831.D	1	04/30/19	TDN	n/a	n/a	VI9098

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

JC86837-1

CAS No.	Compound	JC86716-2 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		2640000	2510000	95	2640000	2500000	95	0	40-140/24
75-09-2	Methylene chloride	ND		661000	561000	85	661000	574000	87	2	57-123/23
100-42-5	Styrene	ND		661000	603000	91	661000	598000	90	1	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		661000	615000	93	661000	607000	92	1	44-127/26
127-18-4	Tetrachloroethene	ND		661000	602000	91	661000	600000	91	0	39-154/26
87-61-6	1,2,3-Trichlorobenzene	ND		661000	623000	94	661000	623000	94	0	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		661000	638000	96	661000	651000	98	2	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		661000	646000	98	661000	661000	100	2	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		661000	587000	89	661000	598000	90	2	53-127/22
79-01-6	Trichloroethene	ND		661000	576000	87	661000	600000	91	4	52-140/24
75-69-4	Trichlorofluoromethane	ND		661000	677000	102	661000	680000	103	0	46-142/27
75-01-4	Vinyl chloride	ND		661000	761000	115	661000	770000	116	1	43-146/26
	m,p-Xylene	80900		1320000	1280000	91	1320000	1290000	91	1	45-137/23
95-47-6	o-Xylene	29700		661000	614000	88	661000	617000	89	0	48-135/22
1330-20-7	Xylene (total)	111000		1980000	1890000	90	1980000	1910000	91	1	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC86716-2	Limits
1868-53-7	Dibromofluoromethane	105%	104%	105%	75-127%
17060-07-0	1,2-Dichloroethane-D4	111%	109%	106%	75-130%
2037-26-5	Toluene-D8	103%	102%	102%	80-120%
460-00-4	4-Bromofluorobenzene	105%	105%	110%	79-127%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86916-5MS	3C151605.D	1	05/01/19	PS	n/a	n/a	V3C6814
JC86916-5MSD	3C151606.D	1	05/01/19	PS	n/a	n/a	V3C6814
JC86916-5	3C151600.D	1	05/01/19	PS	n/a	n/a	V3C6814

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

JC86837-2, JC86837-5, JC86837-7, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	JC86916-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		313	268	86	297	247	83	8	10-157/31
71-43-2	Benzene	ND		78.3	80.8	103	74.3	73.1	98	10	58-125/22
74-97-5	Bromochloromethane	ND		78.3	75.4	96	74.3	68.6	92	9	60-127/22
75-27-4	Bromodichloromethane	ND		78.3	83.6	107	74.3	77.4	104	8	57-128/22
75-25-2	Bromoform	ND		78.3	80.5	103	74.3	72.9	98	10	48-133/21
74-83-9	Bromomethane	ND		78.3	67.5	86	74.3	59.6	80	12	31-141/28
78-93-3	2-Butanone (MEK)	ND		313	266	85	297	247	83	7	29-146/27
75-15-0	Carbon disulfide	ND		78.3	64.5	82	74.3	54.7	74	16	47-145/24
56-23-5	Carbon tetrachloride	ND		78.3	88.0	112	74.3	81.9	110	7	51-143/25
108-90-7	Chlorobenzene	ND		78.3	73.5	94	74.3	62.1	84	17	54-130/22
75-00-3	Chloroethane	ND		78.3	72.1	92	74.3	67.1	90	7	22-153/32
67-66-3	Chloroform	ND		78.3	74.2	95	74.3	68.7	92	8	61-125/22
74-87-3	Chloromethane	ND		78.3	63.0	80	74.3	61.5	83	2	43-142/27
110-82-7	Cyclohexane	ND		78.3	69.7	89	74.3	64.4	87	8	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		78.3	93.0	119	74.3	81.3	109	13	41-127/23
124-48-1	Dibromochloromethane	ND		78.3	98.2	125	74.3	89.9	121	9	56-127/21
106-93-4	1,2-Dibromoethane	ND		78.3	82.5	105	74.3	72.7	98	13	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		78.3	68.9	88	74.3	54.4	73	24* [a]	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		78.3	70.4	90	74.3	56.4	76	22	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		78.3	66.5	85	74.3	51.6	69	25* [a]	41-133/22
75-71-8	Dichlorodifluoromethane	ND		78.3	79.8	102	74.3	73.9	99	8	30-153/29
75-34-3	1,1-Dichloroethane	ND		78.3	78.3	100	74.3	73.1	98	7	61-131/23
107-06-2	1,2-Dichloroethane	ND		78.3	69.9	89	74.3	62.7	84	11	56-126/21
75-35-4	1,1-Dichloroethene	ND		78.3	79.4	101	74.3	71.3	96	11	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		78.3	72.4	92	74.3	64.2	86	12	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		78.3	69.3	89	74.3	59.9	81	15	56-130/23
78-87-5	1,2-Dichloropropane	ND		78.3	78.5	100	74.3	72.9	98	7	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		78.3	72.2	92	74.3	62.5	84	14	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		78.3	75.7	97	74.3	64.2	86	16	51-126/21
100-41-4	Ethylbenzene	ND		78.3	79.8	102	74.3	70.7	95	12	49-132/23
76-13-1	Freon 113	ND		78.3	86.3	110	74.3	81.1	109	6	42-179/25
591-78-6	2-Hexanone	ND		313	289	92	297	252	85	14	25-150/25
98-82-8	Isopropylbenzene	ND		78.3	81.3	104	74.3	72.1	97	12	43-141/25
79-20-9	Methyl Acetate	ND		78.3	115	147	74.3	99.7	134	14	32-158/26
108-87-2	Methylcyclohexane	ND		78.3	64.6	83	74.3	57.9	78	11	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		78.3	74.5	95	74.3	70.2	95	6	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86916-5MS	3C151605.D	1	05/01/19	PS	n/a	n/a	V3C6814
JC86916-5MSD	3C151606.D	1	05/01/19	PS	n/a	n/a	V3C6814
JC86916-5	3C151600.D	1	05/01/19	PS	n/a	n/a	V3C6814

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

JC86837-2, JC86837-5, JC86837-7, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	JC86916-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		313	319	102	297	287	97	11	40-140/24
75-09-2	Methylene chloride	ND		78.3	75.4	96	74.3	67.1	90	12	57-123/23
100-42-5	Styrene	ND		78.3	66.1	84	74.3	54.2	73	20	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		78.3	93.7	120	74.3	85.5	115	9	44-127/26
127-18-4	Tetrachloroethene	ND		78.3	91.4	117	74.3	81.7	110	11	39-154/26
108-88-3	Toluene	ND		78.3	84.6	108	74.3	75.2	101	12	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		78.3	38.9	50	74.3	28.9	39	29	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		78.3	42.0	54	74.3	30.6	41	31	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		78.3	82.2	105	74.3	76.1	102	8	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		78.3	80.3	103	74.3	74.2	100	8	53-127/22
79-01-6	Trichloroethene	ND		78.3	75.6	97	74.3	67.7	91	11	52-140/24
75-69-4	Trichlorofluoromethane	ND		78.3	76.3	97	74.3	71.7	97	6	46-142/27
75-01-4	Vinyl chloride	ND		78.3	67.4	86	74.3	62.6	84	7	43-146/26
	m,p-Xylene	ND		157	157	100	149	138	93	13	45-137/23
95-47-6	o-Xylene	ND		78.3	81.1	104	74.3	71.4	96	13	48-135/22
1330-20-7	Xylene (total)	ND		235	238	101	223	209	94	13	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC86916-5	Limits
1868-53-7	Dibromofluoromethane	97%	97%	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	96%	96%	99%	75-130%
2037-26-5	Toluene-D8	115%	116%	103%	80-120%
460-00-4	4-Bromofluorobenzene	122%	123%	106%	79-127%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87030-1MS	I225869.D	1	05/01/19	TDN	n/a	n/a	VI9099
JC87030-1MSD	I225870.D	1	05/01/19	TDN	n/a	n/a	VI9099
JC87030-1 [a]	I225862.D	1	05/01/19	TDN	n/a	n/a	VI9099

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

JC86837-1, JC86837-3, JC86837-4, JC86837-6

CAS No.	Compound	JC87030-1 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		12300	15200	124	12300	15400	125	1	10-157/31
71-43-2	Benzene	51.6		3070	2510	80	3070	2700	86	7	58-125/22
74-97-5	Bromochloromethane	ND		3070	2680	87	3070	2850	93	6	60-127/22
75-27-4	Bromodichloromethane	ND		3070	2530	82	3070	2680	87	6	57-128/22
75-25-2	Bromoform	ND		3070	2900	94	3070	2920	95	1	48-133/21
74-83-9	Bromomethane	ND		3070	1290	42	3070	1470	48	13	31-141/28
78-93-3	2-Butanone (MEK)	ND		12300	13800	112	12300	13900	113	1	29-146/27
75-15-0	Carbon disulfide	ND		3070	2330	76	3070	2520	82	8	47-145/24
56-23-5	Carbon tetrachloride	ND		3070	2420	79	3070	2580	84	6	51-143/25
108-90-7	Chlorobenzene	ND		3070	2550	83	3070	2750	90	8	54-130/22
75-00-3	Chloroethane	ND		3070	2860	93	3070	3080	100	7	22-153/32
67-66-3	Chloroform	ND		3070	2750	90	3070	2940	96	7	61-125/22
74-87-3	Chloromethane	ND		3070	3060	100	3070	3390	110	10	43-142/27
110-82-7	Cyclohexane	ND		3070	2670	87	3070	2830	92	6	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		3070	2710	88	3070	2880	94	6	41-127/23
124-48-1	Dibromochloromethane	ND		3070	2630	86	3070	2760	90	5	56-127/21
106-93-4	1,2-Dibromoethane	ND		3070	2820	92	3070	2950	96	5	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		3070	2640	86	3070	2800	91	6	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		3070	2570	84	3070	2760	90	7	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		3070	2530	82	3070	2710	88	7	41-133/22
75-71-8	Dichlorodifluoromethane	ND		3070	3200	104	3070	3520	115	10	30-153/29
75-34-3	1,1-Dichloroethane	ND		3070	2610	85	3070	2800	91	7	61-131/23
107-06-2	1,2-Dichloroethane	ND		3070	2590	84	3070	2820	92	9	56-126/21
75-35-4	1,1-Dichloroethene	ND		3070	2590	84	3070	2860	93	10	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		3070	2520	82	3070	2690	88	7	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		3070	2620	85	3070	2800	91	7	56-130/23
78-87-5	1,2-Dichloropropane	ND		3070	2430	79	3070	2630	86	8	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		3070	2340	76	3070	2490	81	6	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		3070	2580	84	3070	2660	87	3	51-126/21
100-41-4	Ethylbenzene	1930		3070	4280	77	3070	4590	87	7	49-132/23
76-13-1	Freon 113	ND		3070	2400	78	3070	2560	83	6	42-179/25
591-78-6	2-Hexanone	ND		12300	13500	110	12300	13600	111	1	25-150/25
98-82-8	Isopropylbenzene	1950		3070	4290	76	3070	4610	87	7	43-141/25
79-20-9	Methyl Acetate	ND		3070	2820	92	3070	2900	94	3	32-158/26
108-87-2	Methylcyclohexane	2010		3070	3730	56	3070	4060	67	8	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		3070	2970	97	3070	3130	102	5	58-123/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC87030-1MS	I225869.D	1	05/01/19	TDN	n/a	n/a	VI9099
JC87030-1MSD	I225870.D	1	05/01/19	TDN	n/a	n/a	VI9099
JC87030-1 [a]	I225862.D	1	05/01/19	TDN	n/a	n/a	VI9099

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

JC86837-1, JC86837-3, JC86837-4, JC86837-6

CAS No.	Compound	JC87030-1 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		12300	12100	98	12300	12600	103	4	40-140/24
75-09-2	Methylene chloride	ND		3070	2710	88	3070	2890	94	6	57-123/23
100-42-5	Styrene	ND		3070	2590	84	3070	2740	89	6	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND		3070	2940	96	3070	3040	99	3	44-127/26
127-18-4	Tetrachloroethene	ND		3070	2390	78	3070	2550	83	6	39-154/26
108-88-3	Toluene	35.4	J	3070	2570	83	3070	2730	88	6	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND		3070	2350	77	3070	2450	80	4	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND		3070	2410	78	3070	2570	84	6	19-153/32
71-55-6	1,1,1-Trichloroethane	ND		3070	2520	82	3070	2720	89	8	57-138/24
79-00-5	1,1,2-Trichloroethane	ND		3070	2680	87	3070	3060	100	13	53-127/22
79-01-6	Trichloroethene	ND		3070	2410	78	3070	2570	84	6	52-140/24
75-69-4	Trichlorofluoromethane	ND		3070	2700	88	3070	2900	94	7	46-142/27
75-01-4	Vinyl chloride	ND		3070	3360	109	3070	3570	116	6	43-146/26
	m,p-Xylene	4520		6140	9010	73	6140	9730	85	8	45-137/23
95-47-6	o-Xylene	682		3070	3130	80	3070	3310	86	6	48-135/22
1330-20-7	Xylene (total)	5200		9220	12100	75	9220	13000	85	7	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC87030-1	Limits
1868-53-7	Dibromofluoromethane	106%	103%	104%	75-127%
17060-07-0	1,2-Dichloroethane-D4	105%	105%	108%	75-130%
2037-26-5	Toluene-D8	106%	104%	101%	80-120%
460-00-4	4-Bromofluorobenzene	111%	112%	107%	79-127%

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

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86877-1DUP	Y184937.D	1	05/04/19	PS	n/a	n/a	VY8023
JC86877-1	Y184899.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

CAS No.	Compound	JC86877-1 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	ND		11.5		200* [a]	40
71-43-2	Benzene	ND		ND		nc	30
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	30
78-93-3	2-Butanone (MEK)	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	30
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
76-13-1	Freon 113	ND		ND		nc	30
591-78-6	2-Hexanone	ND		ND		nc	30
98-82-8	Isopropylbenzene	ND		ND		nc	30
79-20-9	Methyl Acetate	ND		ND		nc	30
108-87-2	Methylcyclohexane	ND		ND		nc	30
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC86877-1DUP	Y184937.D	1	05/04/19	PS	n/a	n/a	VY8023
JC86877-1	Y184899.D	1	05/02/19	PS	n/a	n/a	VY8023

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

JC86837-8

CAS No.	Compound	JC86877-1 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	30
75-09-2	Methylene chloride	ND		ND		nc	36
100-42-5	Styrene	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethene	ND		ND		nc	30
108-88-3	Toluene	ND		ND		nc	24
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethene	ND		ND		nc	30
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	32
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	33

CAS No.	Surrogate Recoveries	DUP	JC86877-1	Limits
1868-53-7	Dibromofluoromethane	104%	107%	75-127%
17060-07-0	1,2-Dichloroethane-D4	103%	92%	75-130%
2037-26-5	Toluene-D8	98%	94%	80-120%
460-00-4	4-Bromofluorobenzene	97%	96%	79-127%

(a) High RPD due to possible sample nonhomogeneity.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

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

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6814-BFB
Lab File ID: 3C151595.D
Instrument ID: GCMS3C
Injection Date: 05/01/19
Injection Time: 08:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9216	15.6		Pass
75	30.0 - 60.0% of mass 95	27364	46.4		Pass
95	Base peak, 100% relative abundance	58995	100.0		Pass
96	5.0 - 9.0% of mass 95	3921	6.65		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	57686	97.8		Pass
175	5.0 - 9.0% of mass 174	4496	7.62	(7.79) [a]	Pass
176	95.0 - 101.0% of mass 174	56477	95.7	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	3758	6.37	(6.65) [b]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3C6814-CC6743	3C151595.D	05/01/19	08:36	00:00	Continuing cal 20
V3C6814-BS	3C151597.D	05/01/19	09:39	01:03	Blank Spike
V3C6814-MB	3C151599.D	05/01/19	10:48	02:12	Method Blank
JC86916-5	3C151600.D	05/01/19	11:11	02:35	(used for QC only; not part of job JC86837)
ZZZZZZ	3C151601.D	05/01/19	11:34	02:58	(unrelated sample)
ZZZZZZ	3C151602.D	05/01/19	11:57	03:21	(unrelated sample)
ZZZZZZ	3C151603.D	05/01/19	12:20	03:44	(unrelated sample)
JC86916-5MS	3C151605.D	05/01/19	13:07	04:31	Matrix Spike
JC86916-5MSD	3C151606.D	05/01/19	13:30	04:54	Matrix Spike Duplicate
ZZZZZZ	3C151608.D	05/01/19	14:16	05:40	(unrelated sample)
ZZZZZZ	3C151609.D	05/01/19	14:39	06:03	(unrelated sample)
ZZZZZZ	3C151610.D	05/01/19	15:02	06:26	(unrelated sample)
ZZZZZZ	3C151611.D	05/01/19	15:25	06:49	(unrelated sample)
ZZZZZZ	3C151612.D	05/01/19	15:48	07:12	(unrelated sample)
ZZZZZZ	3C151613.D	05/01/19	16:12	07:36	(unrelated sample)
JC86837-2	3C151614.D	05/01/19	16:35	07:59	PSCB-41R(9-11)
JC86837-5	3C151615.D	05/01/19	16:58	08:22	TP-44R(7-9)
JC86837-7	3C151616.D	05/01/19	17:21	08:45	S-135(8-10)
JC86837-9	3C151617.D	05/01/19	17:44	09:08	S-136(7-9)
JC86837-10	3C151618.D	05/01/19	18:07	09:31	S-111(2-4)
JC86837-11	3C151619.D	05/01/19	18:30	09:54	S-111(4.5-6.5)
JC86837-12	3C151620.D	05/01/19	18:54	10:18	S-107(2-4)
ZZZZZZ	3C151621.D	05/01/19	19:17	10:41	(unrelated sample)
ZZZZZZ	3C151622.D	05/01/19	19:40	11:04	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

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

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9909	18.4		Pass
75	30.0 - 60.0% of mass 95	25472	47.3		Pass
95	Base peak, 100% relative abundance	53864	100.0		Pass
96	5.0 - 9.0% of mass 95	3552	6.59		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	52357	97.2		Pass
175	5.0 - 9.0% of mass 174	4272	7.93	(8.16) [a]	Pass
176	95.0 - 101.0% of mass 174	51597	95.8	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	3571	6.63	(6.92) [b]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VI8986-IC8986	I223175.D	11/27/18	18:23	00:42	Initial cal 0.5
VI8986-IC8986	I223176.D	11/27/18	18:52	01:11	Initial cal 1
VI8986-IC8986	I223177.D	11/27/18	19:22	01:41	Initial cal 2
VI8986-IC8986	I223178.D	11/27/18	19:51	02:10	Initial cal 4
VI8986-IC8986	I223179.D	11/27/18	20:21	02:40	Initial cal 8
VI8986-IC8986	I223180.D	11/27/18	20:51	03:10	Initial cal 20
VI8986-ICC8986	I223181.D	11/27/18	21:20	03:39	Initial cal 50
VI8986-IC8986	I223182.D	11/27/18	21:50	04:09	Initial cal 100
VI8986-IC8986	I223183.D	11/27/18	22:20	04:39	Initial cal 200
VI8986-ICV8986	I223186.D	11/27/18	23:48	06:07	Initial cal verification 50
VI8986-ICV8986	I223187.D	11/28/18	00:18	06:37	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VI9098-BFB	**Injection Date:**	04/30/19
Lab File ID:	I225820.D	**Injection Time:**	08:27
Instrument ID:	GCMSI		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11410	19.3		Pass
75	30.0 - 60.0% of mass 95	29501	49.9		Pass
95	Base peak, 100% relative abundance	59128	100.0		Pass
96	5.0 - 9.0% of mass 95	3754	6.35		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	56277	95.2		Pass
175	5.0 - 9.0% of mass 174	4314	7.30	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	55659	94.1	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	3751	6.34	(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
VI9098-CC8986	I225820.D	04/30/19	08:27	00:00	Continuing cal 50
VI9098-BS	I225821.D	04/30/19	09:01	00:34	Blank Spike
VI9098-MB	I225822.D	04/30/19	09:30	01:03	Method Blank
ZZZZZZ	I225822A.D	04/30/19	09:30	01:03	(unrelated sample)
ZZZZZZ	I225823.D	04/30/19	09:59	01:32	(unrelated sample)
ZZZZZZ	I225824.D	04/30/19	10:28	02:01	(unrelated sample)
ZZZZZZ	I225825.D	04/30/19	10:57	02:30	(unrelated sample)
ZZZZZZ	I225827.D	04/30/19	11:56	03:29	(unrelated sample)
ZZZZZZ	I225829.D	04/30/19	12:55	04:28	(unrelated sample)
ZZZZZZ	I225830.D	04/30/19	13:24	04:57	(unrelated sample)
JC86716-2	I225831.D	04/30/19	13:53	05:26	(used for QC only; not part of job JC86837)
ZZZZZZ	I225832.D	04/30/19	14:23	05:56	(unrelated sample)
ZZZZZZ	I225833.D	04/30/19	14:52	06:25	(unrelated sample)
ZZZZZZ	I225834.D	04/30/19	15:21	06:54	(unrelated sample)
JC86716-2MS	I225835.D	04/30/19	15:50	07:23	Matrix Spike
JC86716-2MSD	I225836.D	04/30/19	16:20	07:53	Matrix Spike Duplicate
JC86837-1	I225838.D	04/30/19	17:18	08:51	PSCB-41R(0.5-2)
ZZZZZZ	I225840.D	04/30/19	18:17	09:50	(unrelated sample)
ZZZZZZ	I225841.D	04/30/19	18:46	10:19	(unrelated sample)
ZZZZZZ	I225842.D	04/30/19	19:15	10:48	(unrelated sample)
ZZZZZZ	I225843.D	04/30/19	19:44	11:17	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9099-BFB
Lab File ID: I225857.D
Instrument ID: GCMSI
Injection Date: 05/01/19
Injection Time: 08:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	10504	19.7		Pass
75	30.0 - 60.0% of mass 95	26515	49.8		Pass
95	Base peak, 100% relative abundance	53285	100.0		Pass
96	5.0 - 9.0% of mass 95	3509	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	52712	98.9		Pass
175	5.0 - 9.0% of mass 174	4066	7.63	(7.71) [a]	Pass
176	95.0 - 101.0% of mass 174	50907	95.5	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	3539	6.64	(6.95) [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
VI9099-CC8986	I225857.D	05/01/19	08:24	00:00	Continuing cal 20
VI9099-BS	I225858.D	05/01/19	08:59	00:35	Blank Spike
VI9099-MB	I225860.D	05/01/19	09:58	01:34	Method Blank
JC86837-1	I225861.D	05/01/19	10:27	02:03	PSCB-41R(0.5-2)
JC87030-1	I225862.D	05/01/19	10:56	02:32	(used for QC only; not part of job JC86837)
ZZZZZZ	I225863.D	05/01/19	11:25	03:01	(unrelated sample)
ZZZZZZ	I225864.D	05/01/19	11:55	03:31	(unrelated sample)
ZZZZZZ	I225865.D	05/01/19	12:24	04:00	(unrelated sample)
ZZZZZZ	I225866.D	05/01/19	12:53	04:29	(unrelated sample)
ZZZZZZ	I225867.D	05/01/19	13:22	04:58	(unrelated sample)
ZZZZZZ	I225868.D	05/01/19	13:52	05:28	(unrelated sample)
ZZZZZZ	I225868R.D	05/01/19	13:52	05:28	(unrelated sample)
JC87030-1MS	I225869.D	05/01/19	14:21	05:57	Matrix Spike
JC87030-1MSD	I225870.D	05/01/19	14:50	06:26	Matrix Spike Duplicate
ZZZZZZ	I225872.D	05/01/19	15:49	07:25	(unrelated sample)
ZZZZZZ	I225873.D	05/01/19	16:19	07:55	(unrelated sample)
ZZZZZZ	I225875.D	05/01/19	17:17	08:53	(unrelated sample)
JC86837-3	I225876.D	05/01/19	17:47	09:23	TP-44R(3-5)
JC86837-4	I225877.D	05/01/19	18:16	09:52	TP-44R(5-7)
JC86837-6	I225878.D	05/01/19	18:45	10:21	S-135(4-6)

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-BFB
Lab File ID: Y184712.D
Instrument ID: GCMSY
Injection Date: 04/24/19
Injection Time: 14:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12333	18.5		Pass
75	30.0 - 60.0% of mass 95	32341	48.6		Pass
95	Base peak, 100% relative abundance	66517	100.0		Pass
96	5.0 - 9.0% of mass 95	4405	6.62		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	61248	92.1		Pass
175	5.0 - 9.0% of mass 174	4917	7.39	(8.03) [a]	Pass
176	95.0 - 101.0% of mass 174	60341	90.7	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	4460	6.71	(7.39) [b]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY8014-IC8014	Y184713.D	04/24/19	15:12	00:40	Initial cal 0.5
VY8014-IC8014	Y184714.D	04/24/19	15:40	01:08	Initial cal 1
VY8014-IC8014	Y184715.D	04/24/19	16:09	01:37	Initial cal 2
VY8014-IC8014	Y184716.D	04/24/19	16:38	02:06	Initial cal 4
VY8014-IC8014	Y184717.D	04/24/19	17:07	02:35	Initial cal 8
VY8014-IC8014	Y184718.D	04/24/19	17:35	03:03	Initial cal 20
VY8014-ICC8014	Y184719.D	04/24/19	18:04	03:32	Initial cal 50
VY8014-IC8014	Y184720.D	04/24/19	18:32	04:00	Initial cal 100
VY8014-IC8014	Y184721.D	04/24/19	19:01	04:29	Initial cal 200
VY8014-ICV8014	Y184724.D	04/24/19	20:27	05:55	Initial cal verification 50
VY8014-ICV8014	Y184725.D	04/24/19	20:55	06:23	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VY8023-BFB	**Injection Date:**	05/02/19
Lab File ID:	Y184879.D	**Injection Time:**	09:07
Instrument ID:	GCMSY		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9732	18.7		Pass
75	30.0 - 60.0% of mass 95	25325	48.7		Pass
95	Base peak, 100% relative abundance	51971	100.0		Pass
96	5.0 - 9.0% of mass 95	3475	6.69		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	50813	97.8		Pass
175	5.0 - 9.0% of mass 174	4066	7.82	(8.00) [a]	Pass
176	95.0 - 101.0% of mass 174	49000	94.3	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	3460	6.66	(7.06) [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
VY8023-CC8014	Y184879.D	05/02/19	09:07	00:00	Continuing cal 50
VY8023-BS	Y184880.D	05/02/19	10:34	01:27	Blank Spike
VY8023-MB	Y184882.D	05/02/19	11:35	02:28	Method Blank
ZZZZZZ	Y184883.D	05/02/19	12:04	02:57	(unrelated sample)
JC87031-3	Y184885.D	05/02/19	13:01	03:54	(used for QC only; not part of job JC86837)
JC87031-4	Y184886.D	05/02/19	13:29	04:22	(used for QC only; not part of job JC86837)
ZZZZZZ	Y184887.D	05/02/19	13:58	04:51	(unrelated sample)
JC86837-8	Y184888.D	05/02/19	14:26	05:19	S-136(4-6)
ZZZZZZ	Y184889.D	05/02/19	14:55	05:48	(unrelated sample)
ZZZZZZ	Y184891.D	05/02/19	15:52	06:45	(unrelated sample)
JC87031-3MS	Y184892.D	05/02/19	16:20	07:13	Matrix Spike
ZZZZZZ	Y184894.D	05/02/19	17:17	08:10	(unrelated sample)
ZZZZZZ	Y184895.D	05/02/19	17:46	08:39	(unrelated sample)
ZZZZZZ	Y184896.D	05/02/19	18:14	09:07	(unrelated sample)
ZZZZZZ	Y184897.D	05/02/19	18:42	09:35	(unrelated sample)
ZZZZZZ	Y184898.D	05/02/19	19:11	10:04	(unrelated sample)
JC86877-1	Y184899.D	05/02/19	19:39	10:32	(used for QC only; not part of job JC86837)
ZZZZZZ	Y184900.D	05/02/19	20:07	11:00	(unrelated sample)
ZZZZZZ	Y184901.D	05/02/19	20:36	11:29	(unrelated sample)
ZZZZZZ	Y184902.D	05/02/19	21:04	11:57	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8026-BFB
Lab File ID: Y184933.D
Instrument ID: GCMSY
Injection Date: 05/04/19
Injection Time: 10:41

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	13028	18.7		Pass
75	30.0 - 60.0% of mass 95	32733	46.9		Pass
95	Base peak, 100% relative abundance	69835	100.0		Pass
96	5.0 - 9.0% of mass 95	5009	7.17		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	66413	95.1		Pass
175	5.0 - 9.0% of mass 174	5326	7.63	(8.02) [a]	Pass
176	95.0 - 101.0% of mass 174	65336	93.6	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	4407	6.31	(6.75) [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
VY8026-CC8014	Y184933.D	05/04/19	10:41	00:00	Continuing cal 50
VY8023-BS2	Y184934A.D	05/04/19	11:23	00:42	Blank Spike
VY8026-BS	Y184934.D	05/04/19	11:23	00:42	Blank Spike
VY8026-MB	Y184936.D	05/04/19	12:32	01:51	Method Blank
VY8023-MB2	Y184936A.D	05/04/19	12:32	01:51	Method Blank
JC86877-1DUP	Y184937.D	05/04/19	13:01	02:20	Duplicate
JC87324-1	Y184938.D	05/04/19	13:37	02:56	(used for QC only; not part of job JC86837)
JC87324-2	Y184939.D	05/04/19	14:05	03:24	(used for QC only; not part of job JC86837)
ZZZZZZ	Y184940.D	05/04/19	14:33	03:52	(unrelated sample)
ZZZZZZ	Y184941.D	05/04/19	15:02	04:21	(unrelated sample)
ZZZZZZ	Y184942.D	05/04/19	15:30	04:49	(unrelated sample)
ZZZZZZ	Y184943.D	05/04/19	15:59	05:18	(unrelated sample)
ZZZZZZ	Y184944.D	05/04/19	16:27	05:46	(unrelated sample)
ZZZZZZ	Y184945.D	05/04/19	16:56	06:15	(unrelated sample)
JC87324-2MS	Y184946.D	05/04/19	17:24	06:43	Matrix Spike
JC87324-1DUP	Y184948.D	05/04/19	18:21	07:40	Duplicate
ZZZZZZ	Y184949.D	05/04/19	18:49	08:08	(unrelated sample)
ZZZZZZ	Y184950.D	05/04/19	19:18	08:37	(unrelated sample)
ZZZZZZ	Y184951.D	05/04/19	19:46	09:05	(unrelated sample)
ZZZZZZ	Y184952.D	05/04/19	20:15	09:34	(unrelated sample)
ZZZZZZ	Y184953.D	05/04/19	20:43	10:02	(unrelated sample)
ZZZZZZ	Y184954.D	05/04/19	21:12	10:31	(unrelated sample)
ZZZZZZ	Y184955.D	05/04/19	21:40	10:59	(unrelated sample)
ZZZZZZ	Y184956.D	05/04/19	22:08	11:27	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	VY8026-BFB	**Injection Date:**	05/04/19
Lab File ID:	Y184933.D	**Injection Time:**	10:41
Instrument ID:	GCMSY		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	Y184957.D	05/04/19	22:36	11:55	(unrelated sample)

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V3C6814-CC6743	**Injection Date:**	05/01/19
Lab File ID:	3C151595.D	**Injection Time:**	08:36
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	38962	2.57	183268	4.03	237663	4.69	212335	7.39	120358	9.32
Upper Limit [a]	77924	3.07	366536	4.53	475326	5.19	424670	7.89	240716	9.82
Lower Limit [b]	19481	2.07	91634	3.53	118832	4.19	106168	6.89	60179	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
V3C6814-BS	39386	2.57	179301	4.03	232404	4.69	206715	7.39	120268	9.32
V3C6814-MB	32957	2.57	178624	4.03	233768	4.69	207856	7.39	118405	9.32
JC86916-5	35677	2.57	176708	4.03	232032	4.69	205827	7.39	114122	9.32
ZZZZZZ	36157	2.57	173934	4.03	229048	4.69	197501	7.39	102919	9.32
ZZZZZZ	34056	2.57	177869	4.03	235056	4.69	209785	7.39	120305	9.32
ZZZZZZ	32914	2.57	123409	4.03	176725	4.69	122917	7.39	50058[c]	9.32
JC86916-5MS	27100	2.57	160252	4.03	204241	4.69	159899	7.39	67118	9.32
JC86916-5MSD	27788	2.57	162957	4.03	205664	4.69	159960	7.39	65910	9.32
ZZZZZZ	30373	2.57	149207	4.03	194224	4.69	175800	7.39	100562	9.32
ZZZZZZ	32909	2.57	165318	4.03	215104	4.69	189872	7.39	102998	9.32
ZZZZZZ	30991	2.57	163042	4.03	213375	4.69	187746	7.39	105707	9.32
ZZZZZZ	31538	2.57	159121	4.03	205353	4.69	177552	7.39	91541	9.32
ZZZZZZ	32139	2.57	148488	4.03	194015	4.69	170252	7.39	91271	9.32
ZZZZZZ	33564	2.57	162478	4.03	212765	4.69	188375	7.39	106104	9.32
JC86837-2	29029	2.57	157669	4.03	206993	4.69	171502	7.39	82775	9.32
JC86837-5	28701	2.57	171876	4.03	223715	4.69	198384	7.39	112431	9.32
JC86837-7	26888	2.57	164691	4.03	210816	4.69	180514	7.39	89097	9.32
JC86837-9	27613	2.57	169486	4.03	217800	4.69	192341	7.39	108728	9.32
JC86837-10	30213	2.57	162143	4.03	206782	4.69	163152	7.39	68738	9.32
JC86837-11	29851	2.57	144656	4.03	184835	4.69	163063	7.39	92562	9.32
JC86837-12	28543	2.57	160854	4.03	202686	4.69	170640	7.39	82556	9.32
ZZZZZZ	30220	2.57	165273	4.03	212716	4.69	190963	7.39	111670	9.32
ZZZZZZ	30991	2.57	168394	4.03	218463	4.69	194072	7.39	112335	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) Outside control limits due to matrix interference.

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VI9098-CC8986	**Injection Date:**	04/30/19
Lab File ID:	I225820.D	**Injection Time:**	08:27
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	58842	7.35	174481	9.70	234208	10.63	191356	13.76	110850	16.11
Upper Limit [a]	117684	7.85	348962	10.20	468416	11.13	382712	14.26	221700	16.61
Lower Limit [b]	29421	6.85	87241	9.20	117104	10.13	95678	13.26	55425	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
VI9098-BS	65867	7.35	177262	9.70	239925	10.63	195541	13.76	111865	16.11
VI9098-MB	50416	7.37	169366	9.69	223936	10.63	181675	13.76	103132	16.11
ZZZZZZ	50416	7.37	169366	9.69	223936	10.63	181675	13.76	103132	16.11
ZZZZZZ	54338	7.36	168753	9.69	219729	10.63	185436	13.76	104348	16.11
ZZZZZZ	49217	7.38	160554	9.70	210323	10.63	174539	13.77	100426	16.11
ZZZZZZ	45230	7.35	160504	9.70	217607	10.63	177938	13.76	106091	16.11
ZZZZZZ	46964	7.35	163470	9.70	221193	10.63	181920	13.76	108315	16.11
ZZZZZZ	46283	7.35	172655	9.70	228146	10.63	187514	13.76	116190	16.11
ZZZZZZ	59141	7.35	189320	9.70	247680	10.63	206302	13.76	112616	16.11
JC86716-2	49494	7.35	181067	9.70	238831	10.63	198518	13.76	111494	16.11
ZZZZZZ	43774	7.35	169926	9.70	219603	10.63	180076	13.76	99756	16.11
ZZZZZZ	50516	7.35	164381	9.70	216062	10.63	177050	13.76	100188	16.11
ZZZZZZ	49139	7.35	164905	9.70	217963	10.63	177929	13.76	101463	16.11
JC86716-2MS	63476	7.35	162016	9.70	218837	10.63	176769	13.76	105844	16.11
JC86716-2MSD	69393	7.35	172315	9.70	233575	10.63	189660	13.76	113645	16.11
JC86837-1 [c]	56976	7.38	168094	9.70	224293	10.63	182772	13.76	108581	16.11
ZZZZZZ	53666	7.36	208950	9.70	290209	10.63	234242	13.76	138475	16.11
ZZZZZZ	61652	7.38	208237	9.70	286575	10.63	243141	13.77	141347	16.11
ZZZZZZ	61025	7.37	210798	9.70	292474	10.63	235473	13.76	143235	16.11
ZZZZZZ	64896	7.37	212556	9.70	289333	10.63	239150	13.76	146590	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) Diluted due to high concentration of target and non-target compound.

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VI9099-CC8986	**Injection Date:**	05/01/19
Lab File ID:	I225857.D	**Injection Time:**	08:24
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	56348	7.35	158824	9.69	213005	10.63	173298	13.76	99990	16.11
Upper Limit [a]	112696	7.85	317648	10.19	426010	11.13	346596	14.26	199980	16.61
Lower Limit [b]	28174	6.85	79412	9.19	106503	10.13	86649	13.26	49995	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
VI9099-BS	58653	7.35	164679	9.70	221838	10.63	180645	13.76	107206	16.11
VI9099-MB	51037	7.35	159071	9.70	206352	10.63	174134	13.76	98534	16.11
JC86837-1	46642	7.35	157336	9.70	207936	10.63	168749	13.76	96439	16.11
JC87030-1	48893	7.37	159719	9.69	215761	10.63	182076	13.76	117281	16.11
ZZZZZZ	53428	7.35	194925	9.70	264796	10.63	209151	13.76	117145	16.11
ZZZZZZ	55127	7.35	189303	9.70	260336	10.63	205811	13.76	115697	16.11
ZZZZZZ	63140	7.35	190123	9.70	258541	10.63	210239	13.76	122081	16.11
ZZZZZZ	52043	7.35	195056	9.70	264541	10.63	213337	13.76	130205	16.11
ZZZZZZ	57273	7.37	193533	9.70	256128	10.63	214446	13.76	124609	16.11
ZZZZZZ	63214	7.37	202136	9.70	277789	10.63	232004	13.76	146912	16.11
ZZZZZZ	63214	7.37	202136	9.70	277789	10.63	232004	13.76	146912	16.11
JC87030-1MS	86409	7.38	200121	9.70	280991	10.63	224153	13.76	139887	16.11
JC87030-1MSD	87696	7.38	204324	9.69	285335	10.63	230247	13.76	141232	16.11
ZZZZZZ	53136	7.37	186667	9.69	255813	10.63	204769	13.76	112960	16.11
ZZZZZZ	66476	7.38	171750	9.70	239852	10.63	195977	13.76	121582	16.11
ZZZZZZ	53636	7.37	185047	9.69	245886	10.63	203554	13.76	114274	16.11
JC86837-3 [c]	55883	7.37	185367	9.69	239792	10.63	203315	13.76	118256	16.11
JC86837-4 [c]	55461	7.37	191132	9.69	252720	10.63	210406	13.76	122577	16.11
JC86837-6 [d]	48935	7.37	195779	9.69	258447	10.63	214457	13.76	122784	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) Diluted due to high concentration of non-target compound.
(d) Diluted due to high concentration of target and non-target compound.

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VY8023-CC8014	**Injection Date:**	05/02/19
Lab File ID:	Y184879.D	**Injection Time:**	09:07
Instrument ID:	GCMSY	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	37930	7.72	142242	9.97	201924	10.91	179029	13.99	110143	16.29
Upper Limit [a]	75860	8.22	284484	10.47	403848	11.41	358058	14.49	220286	16.79
Lower Limit [b]	18965	7.22	71121	9.47	100962	10.41	89515	13.49	55072	15.79
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
VY8023-BS	52531	7.74	168327	9.98	247425	10.91	223401	13.99	134473	16.29
VY8023-MB	47394	7.73	140287	9.97	198341	10.91	186245	13.99	105002	16.29
ZZZZZZ	51930	7.75	149438	9.97	218688	10.91	196229	13.99	108688	16.29
JC87031-3	33644	7.73	157209	9.97	225212	10.91	192213	13.99	100403	16.29
JC87031-4	53985	7.75	150333	9.97	215366	10.91	189507	13.99	108197	16.29
ZZZZZZ	54602	7.74	140128	9.97	210602	10.91	192939	13.99	109719	16.29
JC86837-8	59459	7.74	155105	9.97	227342	10.91	204499	13.99	110120	16.29
ZZZZZZ	62598	7.74	197866	9.97	294728	10.91	258569	13.99	152552	16.29
ZZZZZZ	74864	7.73	240125	9.97	350841	10.91	323960	13.99	185136	16.29
JC87031-3MS	75118	7.73	235311	9.97	352761	10.91	312009	13.99	175987	16.29
ZZZZZZ	84862[c]	7.73	234097	9.97	341658	10.91	284758	13.99	108374	16.29
ZZZZZZ	77385[c]	7.74	217076	9.97	317652	10.91	274841	13.99	112728	16.29
ZZZZZZ	83119[c]	7.73	206577	9.97	308057	10.91	254053	13.99	84227	16.29
ZZZZZZ	70415	7.74	177693	9.97	261049	10.91	222612	13.99	82257	16.29
ZZZZZZ	66796	7.74	182632	9.97	264191	10.91	220368	13.99	83926	16.29
JC86877-1	68182	7.73	195179	9.97	298418	10.91	276888	13.99	154026	16.29
ZZZZZZ	73319	7.73	201485	9.97	302479	10.91	271678	13.99	149139	16.29
ZZZZZZ	69671	7.72	197361	9.97	301018	10.91	269954	13.99	151274	16.29
ZZZZZZ	55920	7.74	169650	9.97	243958	10.91	231944	13.99	138750	16.29

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

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside the QC criteria due to matrix interference, but no associated target compounds reported under this internal standard.

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VY8026-CC8014	**Injection Date:**	05/04/19
Lab File ID:	Y184933.D	**Injection Time:**	10:41
Instrument ID:	GCMSY	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	56933	7.74	203281	9.97	286009	10.90	234405	13.99	141111	16.29
Upper Limit [a]	113866	8.24	406562	10.47	572018	11.40	468810	14.49	282222	16.79
Lower Limit [b]	28467	7.24	101641	9.47	143005	10.40	117203	13.49	70556	15.79

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VY8023-BS2	59133	7.74	191808	9.97	270723	10.91	237062	13.99	133676	16.29
VY8026-BS	59133	7.74	191808	9.97	270723	10.91	237062	13.99	133676	16.29
VY8026-MB	51883	7.72	187785	9.97	265079	10.91	222708	13.99	125379	16.29
VY8023-MB2	51883	7.72	187785	9.97	265079	10.91	222708	13.99	125379	16.29
JC86877-1DUP	56919	7.73	190415	9.97	272294	10.91	230619	13.99	129243	16.29
JC87324-1	53726	7.73	174575	9.97	243924	10.91	217805	13.99	125160	16.29
JC87324-2	57822	7.74	185895	9.97	266212	10.91	216938	13.99	128785	16.29
ZZZZZZ	52566	7.73	179643	9.98	255932	10.91	221302	13.99	121324	16.29
ZZZZZZ	50997	7.73	169546	9.97	244408	10.91	214311	13.99	117543	16.29
ZZZZZZ	54986	7.74	177780	9.97	252727	10.91	212053	13.99	117739	16.29
ZZZZZZ	48465	7.74	161651	9.97	232567	10.91	208875	13.99	119405	16.29
ZZZZZZ	62862	7.74	196307	9.98	289244	10.91	225094	13.99	127491	16.29
ZZZZZZ	62886	7.72	181285	9.97	264359	10.91	213507	13.99	130043	16.29
JC87324-2MS	47601	7.74	191074	9.97	270095	10.91	238344	13.99	136038	16.29
JC87324-1DUP	59128	7.75	188048	9.97	271573	10.91	228437	13.99	131728	16.29
ZZZZZZ	52769	7.73	176413	9.97	252182	10.91	226076	13.99	125568	16.29
ZZZZZZ	46204	7.73	166032	9.97	238037	10.91	211953	13.99	123978	16.29
ZZZZZZ	57546	7.73	181722	9.97	267117	10.91	236138	13.99	132916	16.29
ZZZZZZ	58485	7.74	180266	9.97	263304	10.91	231030	13.99	130282	16.29
ZZZZZZ	59913	7.71	174046	9.97	253577	10.91	218620	13.99	126621	16.29
ZZZZZZ	52297	7.72	166446	9.97	243246	10.91	221017	13.99	123507	16.29
ZZZZZZ	54104	7.72	174270	9.97	245848	10.91	214604	13.99	119928	16.29
ZZZZZZ	55616	7.74	158369	9.97	230792	10.91	209969	13.99	116073	16.29
ZZZZZZ	51611	7.73	176091	9.97	249731	10.91	224194	13.99	117869	16.29

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

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC86837
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
JC86837-1	I225861.D	104	112	103	109
JC86837-1	I225838.D	101	105	103	115
JC86837-2	3C151614.D	100	97	108	114
JC86837-3	I225876.D	104	108	102	113
JC86837-4	I225877.D	104	106	102	116
JC86837-5	3C151615.D	99	95	102	102
JC86837-6	I225878.D	103	100	103	124
JC86837-7	3C151616.D	95	95	105	112
JC86837-8	Y184888.D	110	105	96	96
JC86837-9	3C151617.D	96	95	102	103
JC86837-10	3C151618.D	97	96	112	120
JC86837-11	3C151619.D	95	98	102	101
JC86837-12	3C151620.D	96	99	109	111
JC86716-2MS	I225835.D	105	111	103	105
JC86716-2MSD	I225836.D	104	109	102	105
JC86877-1DUP	Y184937.D	104	103	98	97
JC86916-5MS	3C151605.D	97	96	115	122
JC86916-5MSD	3C151606.D	97	96	116	123
JC87030-1MS	I225869.D	106	105	106	111
JC87030-1MSD	I225870.D	103	105	104	112
JC87031-3MS	Y184892.D	101	86	97	97
V3C6814-BS	3C151597.D	99	100	102	101
V3C6814-MB	3C151599.D	98	95	102	103
VI9098-BS	I225821.D	104	110	102	109
VI9098-MB	I225822.D	105	110	102	106
VI9099-BS	I225858.D	104	114	102	105
VI9099-MB	I225860.D	107	118	102	107
VY8023-BS	Y184880.D	104	97	99	95
VY8023-MB	Y184882.D	109	101	93	94
VY8023-MB2	Y184936A.D	101	99	102	95

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%

Initial Calibration Summary

Job Number: JC86837
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: JC86837 **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

Initial Calibration Summary

Job Number: JC86837 **Sample:** V3C6743-ICC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149632.D
Project: National Grid, Philly Coke, Philadelphia, PA

	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										

Initial Calibration Summary

Job Number: JC86837 **Sample:** V3C6743-ICC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C149632.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
          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: JC86837 **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
```

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6743-ICV6743
Lab FileID: 3C149637.D

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6743-ICV6743
Lab FileID: 3C149637.D

			True	Calc.	% Drift			
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
93		bromoform	50.000	49.962	0.1	102	0.00	8.13

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6743-ICV6743
Lab FileID: 3C149637.D

			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: JC86837
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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

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

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----------					

Initial Calibration Verification

Job Number: JC86837
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

6.9.3

6

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V3C6814-CC6743
Lab FileID: 3C151595.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jonkm\v3c6814\3c151595.d Vial: 1
Acq On : 1 May 2019 8:36 am Operator: PrashanS
Sample : cc6743-20 Inst : MS3C
Misc : MS34176,V3C6814,5.0,,,,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	68	0.00	2.57
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.102	1.089	1.2	66	0.00	2.64
4		1,4-dioxane	0.134	0.139	-3.7	70	0.00	5.29
5	I	pentafluorobenzene	1.000	1.000	0.0	69	0.00	4.03
6		chlorodifluoromethane	0.303	0.264	12.9	57	0.00	1.10
7		dichlorodifluoromethane	0.432	0.386	10.6	57	0.00	1.08
8		chloromethane	0.357	0.298	16.5	54	0.00	1.22
9		1,3-butadiene	0.232	0.198	14.7	54	0.00	1.32
10		vinyl chloride	0.359	0.300	16.4	53	0.00	1.29
11		bromomethane	0.215	0.198	7.9	58	0.00	1.54
12		chloroethane	0.213	0.177	16.9	52	0.00	1.62
13		vinyl Bromide	0.308	0.235	23.7#	48#	0.00	1.75
14		trichlorofluoromethane	0.531	0.424	20.2#	51	0.00	1.77
15		ethyl ether	0.151	0.148	2.0	63	0.00	1.99
16		2-chloropropane	0.121	0.107	11.6	58	0.00	2.07
17		acrolein	0.031	0.035	-12.9	72	0.00	2.14
18		freon 113	0.254	0.247	2.8	61	0.00	2.13
19		1,1-dichloroethene	0.283	0.264	6.7	60	0.00	2.16
20		acetone	0.016	0.016	0.0	70	0.00	2.25
21		acetonitrile	0.024	0.022	8.3	64	0.00	2.51
22		iodomethane	0.232	0.156	32.8#	57	0.00	2.29
23		carbon disulfide	0.793	0.734	7.4	63	0.00	2.31
24		methylene chloride	0.309	0.334	-8.1	73	0.00	2.56
25		methyl acetate	0.149	0.138	7.4	62	0.00	2.47
26		methyl tert butyl ether	0.754	0.730	3.2	65	0.00	2.71
27		trans-1,2-dichloroethene	0.322	0.298	7.5	60	0.00	2.73
28		hexane	0.510	0.448	12.2	56	0.00	2.88
29		di-isopropyl ether	0.916	0.797	13.0	57	0.00	3.08
30		ethyl tert-butyl ether	0.905	0.861	4.9	62	0.00	3.36
31		2-butanone	0.025	0.025	0.0	66	0.00	3.59
32		1,1-dichloroethane	0.523	0.480	8.2	58	0.00	3.09
33		chloroprene	0.465	0.433	6.9	59	0.00	3.13
34		acrylonitrile	0.064	0.063	1.6	67	0.00	2.80
35		vinyl acetate	0.057	0.061	-7.0	74	0.00	3.12
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	20.000	15.346	23.3#	49	0.00	3.61
		----------	AvgRF	CCRF	% Dev	----------		
37		2,2-dichloropropane	0.482	0.432	10.4	59	0.00	3.54

Continuing Calibration Summary

Job Number: JC86837 **Sample:** V3C6814-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151595.D
Project: National Grid, Philly Coke, Philadelphia, PA

38		cis-1,2-dichloroethene	0.348	0.326	6.3	60	0.00	3.57
39		propionitrile	0.028	0.029	-3.6	69	0.00	3.71
40		bromochloromethane	0.195	0.196	-0.5	65	0.00	3.78
41		tetrahydrofuran	0.024	0.031	-29.2#	92	0.00	3.78
42		chloroform	0.566	0.510	9.9	61	0.00	3.84
43		tert-Butyl Formate	0.179	0.156	12.8	60	0.00	3.85
44		isobutyl alcohol	0.044	0.035	20.5#	53	0.00	4.26
45	S	dibromofluoromethane (s)	0.361	0.351	2.8	68	0.00	3.99
46		methacrylonitrile	0.084	0.091	-8.3	71	0.00	3.81
47		1,1,1-trichloroethane	0.511	0.470	8.0	59	0.00	3.96
48		cyclohexane	0.523	0.436	16.6	54	0.00	3.94
49		1,1-dichloropropene	0.168	0.154	8.3	59	0.00	4.10
50		tert-amyl alcohol	0.022	0.019	13.6	60	0.00	4.33
51		carbon tetrachloride	0.404	0.396	2.0	63	0.00	4.07
52	I	1,4-difluorobenzene	1.000	1.000	0.0	66	0.00	4.69
53	S	1,2-dichloroethane-d4 (s)	0.272	0.274	-0.7	67	0.00	4.31
54		2,2,4-trimethylpentane	0.927	0.842	9.2	55	0.00	4.26
55		tert-amyl methyl ether	0.207	0.205	1.0	64	0.00	4.36
56		n-butyl alcohol	0.005	0.005	0.0	75	0.00	4.89
57		benzene	0.920	0.903	1.8	61	0.00	4.28
58		heptane	0.197	0.178	9.6	54	0.00	4.45
59		isopropyl acetate	0.212	0.205	3.3	64	0.00	4.36
60		1,2-dichloroethane	0.292	0.268	8.2	60	0.00	4.38
61		trichloroethene	0.250	0.251	-0.4	61	0.00	4.90
62		ethyl acrylate	0.204	0.207	-1.5	67	0.00	5.04
63		2-nitropropane	0.062	0.059	4.8	63	0.00	5.76
64		2-chloroethyl vinyl ether	0.121	0.125	-3.3	66	0.00	5.76
65		methyl methacrylate	0.052	0.060	-15.4	72	0.00	5.27
66		1,2-dichloropropane	0.219	0.207	5.5	60	0.00	5.17
67		methylcyclohexane	0.466	0.410	12.0	55	0.00	5.00
68		dibromomethane	0.120	0.118	1.7	62	0.00	5.29
69		bromodichloromethane	0.278	0.284	-2.2	67	0.00	5.45
70		epichlorohydrin	0.015	0.017	-13.3	74	0.00	5.84
71		cis-1,3-dichloropropene	0.348	0.361	-3.7	66	0.00	5.89
72		4-methyl-2-pentanone	0.029	0.036	-24.1#	77	0.00	6.03
73		3-methyl-1-butanol		----------NA----------				
74	I	chlorobenzene-d5	1.000	1.000	0.0	68	0.00	7.39
75	S	toluene-d8 (s)	1.238	1.267	-2.3	69	0.00	6.08
76		toluene	0.714	0.677	5.2	62	0.00	6.14
77		trans-1,3-dichloropropene	0.328	0.338	-3.0	68	0.00	6.43
78		ethyl methacrylate	0.273	0.280	-2.6	70	0.00	6.47
79		1,1,2-trichloroethane	0.176	0.169	4.0	62	0.00	6.60
80		2-hexanone	0.067	0.068	-1.5	69	0.00	6.80
81		tetrachloroethene	0.339	0.358	-5.6	66	0.00	6.62
82		1,3-dichloropropane	0.354	0.344	2.8	64	0.00	6.75
83		butyl acetate	0.126	0.125	0.8	66	0.00	6.89
84		dibromochloromethane	0.207	0.239	-15.5	77	0.00	6.92
85		1,2-dibromoethane	0.255	0.233	8.6	60	0.00	7.01
86		n-butyl ether	1.161	0.976	15.9	55	0.00	7.47
87		chlorobenzene	0.786	0.763	2.9	65	0.00	7.42
88		1,1,1,2-tetrachloroethane	0.259	0.270	-4.2	69	0.00	7.50
89		ethylbenzene	1.381	1.297	6.1	62	0.00	7.49
90		m,p-xylene	0.544	0.520	4.4	63	0.00	7.60
91		o-xylene	1.092	1.041	4.7	63	0.00	7.93
92		styrene	0.875	0.854	2.4	64	0.00	7.96
		----------	True	Calc.	% Drift	----------		
93		bromoform	20.000	22.994	-15.0	94	0.00	8.13

Continuing Calibration Summary

Job Number: JC86837 **Sample:** V3C6814-CC6743
Account: BBLNYS Arcadis **Lab FileID:** 3C151595.D
Project: National Grid, Philly Coke, Philadelphia, PA

			AvgRF	CCRF	% Dev			
94		butyl acrylate	0.379	0.370	2.4	66	0.00	7.92
95		isopropylbenzene	1.392	1.352	2.9	62	0.00	8.22
96		cis-1,4-dichloro-2-butene	0.077	0.076	1.3	68	0.00	8.35
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	72	0.00	9.32
98	S	4-bromofluorobenzene (s)	0.822	0.847	-3.0	74	0.00	8.39
99		bromobenzene	0.663	0.643	3.0	68	0.00	8.50
100		1,1,2,2-tetrachloroethane	0.451	0.438	2.9	69	0.00	8.55
			True	Calc.	% Drift			
101		trans-1,4-dichloro-2-bute	20.000	20.599	-3.0	86	0.00	8.60
			AvgRF	CCRF	% Dev			
102		1,2,3-trichloropropane	0.143	0.140	2.1	67	0.00	8.58
103		n-propylbenzene	3.041	2.702	11.1	60	0.00	8.56
104		2-chlorotoluene	0.622	0.581	6.6	64	0.00	8.65
105		4-chlorotoluene	0.620	0.587	5.3	64	0.00	8.75
106		1,3,5-trimethylbenzene	2.212	2.078	6.1	64	0.00	8.71
107		tert-butylbenzene	1.969	1.826	7.3	61	0.00	8.97
108		1,2,4-trimethylbenzene	2.252	2.073	7.9	64	0.00	9.02
109		sec-butylbenzene	2.861	2.614	8.6	60	0.00	9.14
110		1,3-dichlorobenzene	1.302	1.245	4.4	67	0.00	9.26
111		p-isopropyltoluene	2.518	2.408	4.4	63	0.00	9.26
112		1,4-dichlorobenzene	1.331	1.257	5.6	67	0.00	9.34
113		1,2-dichlorobenzene	1.220	1.170	4.1	68	0.00	9.63
114		n-butylbenzene	1.244	1.111	10.7	59	0.00	9.58
			True	Calc.	% Drift			
115		1,2-dibromo-3-chloropropa	20.000	22.616	-13.1	91	0.00	10.27
			AvgRF	CCRF	% Dev			
116		1,3,5-Trichlorobenzene	1.184	1.236	-4.4	71	0.00	10.38
117		1,2,4-trichlorobenzene	1.019	1.065	-4.5	73	0.00	10.88
118		hexachlorobutadiene	0.635	0.720	-13.4	75	0.00	10.97
119		naphthalene	1.785	1.898	-6.3	73	0.00	11.07
120		1,2,3-trichlorobenzene	0.945	1.021	-8.0	74	0.00	11.26
			True	Calc.	% Drift			
121		hexachloroethane	20.000	23.046	-15.2	96	0.00	9.79
			AvgRF	CCRF	% Dev			
122		Benzyl chloride	0.788	0.851	-8.0	81	0.00	9.46
			True	Calc.	% Drift			
123		2-ethylhexyl acrylate	4.000	3.809	4.8	76	0.00	11.02
			AvgRF	CCRF	% Dev			
124		2-methylnaphthalene	1.069	1.289	-20.6#	81	0.00	11.94

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C149631.D M3C6743.M Thu May 02 02:50:06 2019

Initial Calibration Summary

Job Number: JC86837
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: JC86837 **Sample:** VI8986-ICC8986
Account: BBLNYS Arcadis **Lab FileID:** I223181.D
Project: National Grid, Philly Coke, Philadelphia, PA

22) acetonitrile
0.036 0.044 0.037 0.044 0.043 0.046 0.044 0.042 9.18
23) methyl acetate
0.040 0.021 0.042 0.047 0.052 0.052 0.042 27.02
----- Linear regression ----- Coefficient = 0.9990
Response Ratio = -0.00254 + 0.05196 *A

24) methylene chloride
0.365 0.360 0.343 0.331 0.331 0.329 0.349 0.348 0.345 3.98
25) acrylonitrile
0.089 0.096 0.099 0.105 0.107 0.099 7.29
26) methyl tert butyl ether
0.728 0.765 0.820 0.774 0.842 0.846 0.884 0.875 0.817 6.84
27) trans-1,2-dichloroethene
0.379 0.432 0.460 0.446 0.459 0.455 0.466 0.452 0.444 6.35
28) hexane
0.513 0.555 0.513 0.543 0.513 0.546 0.534 0.550 0.548 0.535 3.28
29) 1,1-dichloroethane
0.521 0.550 0.602 0.566 0.578 0.560 0.587 0.568 0.566 4.29
30) vinyl acetate
0.046 0.051 0.054 0.059 0.060 0.054 10.74
31) di-isopropyl ether
0.874 0.926 1.043 0.972 1.028 1.034 1.085 1.070 1.004 7.33
32) chloroprene
0.387 0.419 0.514 0.469 0.510 0.506 0.521 0.498 0.478 10.38
33) ethyl tert-butyl ether
0.866 0.876 0.987 0.920 0.991 1.005 1.063 1.044 0.969 7.65
34) 2-butanone
0.021 0.031 0.026 0.033 0.035 0.038 0.037 0.032 19.75
35) 2,2-dichloropropane
0.429 0.476 0.492 0.525 0.505 0.510 0.495 0.505 0.483 0.491 5.64
36) ethyl acetate
0.034 0.025 0.042 0.044 0.050 0.049 0.041 23.88
----- Linear regression ----- Coefficient = 0.9988
Response Ratio = -0.00230 + 0.04933 *A

37) cis-1,2-dichloroethene
0.343 0.355 0.385 0.363 0.369 0.366 0.372 0.366 0.365 3.41
38) propionitrile
0.037 0.049 0.042 0.048 0.048 0.051 0.050 0.046 11.09
39) methyl acrylate
0.035 0.024 0.041 0.046 0.051 0.050 0.041 25.42
----- Linear regression ----- Coefficient = 0.9991
Response Ratio = -0.00251 + 0.05085 *A

40) methacrylonitrile
0.112 0.091 0.115 0.122 0.131 0.130 0.117 12.59
41) bromochloromethane
0.123 0.155 0.174 0.166 0.173 0.169 0.180 0.173 0.164 11.11
42) tetrahydrofuran
0.037 0.027 0.036 0.036 0.041 0.040 0.036 13.64
43) chloroform
0.556 0.543 0.613 0.588 0.603 0.595 0.608 0.584 0.586 4.26
44) carbon tetrachloride
0.433 0.454 0.509 0.486 0.502 0.493 0.488 0.465 0.479 5.45
45) 1,1-dichloropropene
0.398 0.428 0.455 0.429 0.447 0.457 0.464 0.451 0.441 4.91
46) isobutyl alcohol
0.000 -1.00
47) dibromofluoromethane (s)

Initial Calibration Summary

Job Number: JC86837 **Sample:** VI8986-ICC8986
Account: BBLNYS Arcadis **Lab FileID:** I223181.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
      0.390 0.394 0.393 0.395 0.393 0.396 0.393 0.392 0.389        0.393    0.56
48)  1,1,1-trichloroethane
            0.488 0.467 0.568 0.525 0.541 0.530 0.549 0.516        0.523    6.26
49)  cyclohexane
            0.424 0.430 0.463 0.490 0.474 0.460 0.476 0.468        0.461    4.91
50)  tert-amyl alcohol
                        0.012 0.006 0.012 0.013 0.014 0.013        0.012   23.67
            ----- Linear regression -----  Coefficient =  0.9991
              Response Ratio = -0.00177 + 0.01357 *A


51) I   1,4-difluorobenzene   ----------------ISTD----------------------
52)  1,2-dichloroethane-d4 (s)
      0.312 0.320 0.317 0.319 0.318 0.316 0.312 0.301 0.293        0.312    2.94
53)  isopropyl acetate
                        0.045 0.030 0.045 0.049 0.051 0.051        0.045   17.50
54)  1,2-dichloroethane
      0.278 0.363 0.337 0.342 0.342 0.329 0.326 0.329 0.310        0.328    7.24
55)  benzene
      0.793 0.933 0.958 1.053 0.987 1.017 1.002 1.043 1.006        0.977    8.06
56)  2,2,4-trimethylpentane
      0.789 1.032 0.969 1.094 1.039 1.049 1.009 1.009 1.011        1.000    8.63
57)  tert-amyl methyl ether
            0.123 0.153 0.180 0.163 0.177 0.176 0.184 0.178        0.167   12.29
58)  heptane
            0.177 0.205 0.229 0.207 0.221 0.209 0.212 0.211        0.209    7.27
59)  n-butyl alcohol
                  0.007 0.008 0.007 0.009 0.009 0.009 0.009        0.008   11.40
60)  trichloroethene
            0.231 0.258 0.280 0.261 0.268 0.264 0.275 0.256        0.262    5.67
61)  ethyl acrylate
                  0.249 0.280 0.237 0.277 0.287 0.308 0.298        0.277    9.24
62)  methylcyclohexane
            0.444 0.410 0.453 0.438 0.455 0.445 0.454 0.446        0.443    3.32
63)  1,2-dichloropropane
            0.238 0.245 0.259 0.245 0.251 0.250 0.262 0.251        0.250    3.00
64)  methyl methacrylate
                        0.055 0.048 0.058 0.062 0.066 0.064        0.059   11.63
65)  dibromomethane
            0.122 0.143 0.154 0.142 0.150 0.149 0.156 0.149        0.146    7.41
66)  bromodichloromethane
            0.317 0.332 0.368 0.338 0.354 0.351 0.367 0.345        0.346    4.99
67)  2-nitropropane
                        0.057 0.060 0.059 0.061 0.063 0.059        0.060    3.83
68)  2-chloroethyl vinyl ether
            0.123 0.135 0.152 0.142 0.151 0.152 0.161 0.154        0.146    8.40
69)  epichlorohydrin
                  0.023 0.025 0.024 0.024 0.024 0.026 0.025        0.024    4.87
70)  cis-1,3-dichloropropene
      0.301 0.375 0.369 0.416 0.399 0.414 0.405 0.432 0.409        0.391    9.97
71)  4-methyl-2-pentanone
            0.066 0.068 0.083 0.073 0.081 0.080 0.088 0.084        0.078   10.04
72)  3-methyl-1-butanol
                  0.006 0.007 0.006 0.007 0.007 0.008 0.008        0.007   11.88

73) I   chlorobenzene-d5      ----------------ISTD----------------------
74)  toluene-d8 (s)
      1.298 1.292 1.290 1.276 1.288 1.296 1.284 1.261 1.253        1.282    1.23
75)  toluene
      0.555 0.658 0.686 0.753 0.724 0.722 0.706 0.728 0.698        0.692    8.39
```

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICC8986
Lab FileID: I223181.D

76) trans-1,3-dichloropropene
0.330 0.445 0.385 0.451 0.408 0.438 0.434 0.438 0.418 0.416 9.22
77) ethyl methacrylate
0.284 0.279 0.335 0.299 0.334 0.323 0.332 0.325 0.314 7.42
78) 1,1,2-trichloroethane
0.167 0.183 0.214 0.207 0.209 0.212 0.221 0.211 0.203 8.90
79) 1,3-dichloropropane
0.294 0.342 0.355 0.405 0.370 0.397 0.386 0.395 0.383 0.370 9.44
80) tetrachloroethene
0.268 0.350 0.349 0.375 0.359 0.364 0.359 0.361 0.341 0.347 9.00
81) 2-hexanone
0.073 0.086 0.097 0.084 0.094 0.095 0.101 0.096 0.091 10.11
82) butyl acetate
0.124 0.163 0.149 0.166 0.164 0.172 0.167 0.158 10.53
83) n-butyl ether
0.988 1.088 1.099 1.222 1.156 1.169 1.148 1.213 1.203 1.143 6.53
84) dibromochloromethane
0.284 0.300 0.329 0.306 0.329 0.328 0.340 0.323 0.317 5.95
85) 1,2-dibromoethane
0.235 0.241 0.291 0.270 0.287 0.292 0.306 0.289 0.276 9.31
86) chlorobenzene
0.576 0.718 0.725 0.797 0.745 0.771 0.755 0.781 0.767 0.737 8.90
87) 1,1,1,2-tetrachloroethane
0.252 0.283 0.311 0.288 0.297 0.301 0.308 0.302 0.293 6.47
88) ethylbenzene
1.044 1.264 1.282 1.387 1.324 1.332 1.307 1.345 1.320 1.289 7.63
89) m,p-xylene
0.408 0.503 0.508 0.544 0.511 0.527 0.515 0.529 0.519 0.507 7.71
90) o-xylene
0.474 0.491 0.527 0.493 0.507 0.510 0.521 0.515 0.505 3.50
91) styrene
0.724 0.816 0.895 0.819 0.865 0.868 0.898 0.897 0.848 7.07
92) butyl acrylate
0.402 0.443 0.483 0.461 0.505 0.503 0.531 0.541 0.484 9.66
93) cis-1,4-dichloro-2-butene
0.107 0.108 0.131 0.120 0.131 0.130 0.136 0.133 0.124 9.19
94) bromoform
0.182 0.212 0.224 0.212 0.230 0.237 0.243 0.243 0.223 9.25
95) isopropylbenzene
0.977 1.219 1.236 1.361 1.265 1.342 1.320 1.358 1.356 1.271 9.68

96) I 1,4-dichlorobenzene-d ----------ISTD----------
97) 4-bromofluorobenzene (s)
0.771 0.787 0.778 0.773 0.767 0.757 0.754 0.727 0.748 0.762 2.37
98) 1,1,2,2-tetrachloroethane
0.454 0.493 0.555 0.501 0.523 0.528 0.540 0.543 0.517 6.36
99) trans-1,4-dichloro-2-butene
0.147 0.121 0.132 0.135 0.139 0.134 0.135 6.19
100) 1,2,3-trichloropropane
0.124 0.114 0.148 0.124 0.139 0.137 0.142 0.137 0.133 8.31
101) bromobenzene
0.513 0.610 0.614 0.679 0.638 0.630 0.621 0.631 0.621 0.617 7.16
102) n-propylbenzene
2.090 2.610 2.510 2.813 2.602 2.633 2.588 2.631 2.586 2.563 7.60
103) 2-chlorotoluene
0.416 0.539 0.542 0.594 0.574 0.542 0.539 0.552 0.547 0.538 9.17
104) 4-chlorotoluene
1.273 1.602 1.489 1.653 1.558 1.583 1.513 1.568 1.550 1.532 7.08
105) 1,3,5-trimethylbenzene
1.477 1.869 1.992 2.123 2.006 2.010 1.936 1.986 1.957 1.928 9.45

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICC8986
Lab FileID: I223181.D

106) tert-butylbenzene
0.343 0.288 0.392 0.351 0.372 0.366 0.373 0.373 0.357 8.91
107) 1,2,4-trimethylbenzene
1.638 1.951 2.093 2.099 2.011 2.013 1.978 2.035 1.964 1.976 6.92
108) sec-butylbenzene
2.478 2.397 2.578 2.411 2.514 2.459 2.534 2.512 2.485 2.48
109) p-isopropyltoluene
1.810 2.103 2.212 2.284 2.103 2.239 2.196 2.284 2.183 2.157 6.77
110) benzyl chloride
1.070 1.179 1.204 1.270 1.201 1.244 1.208 1.286 1.230 1.210 5.20
111) 1,3-dichlorobenzene
0.925 1.218 1.196 1.229 1.196 1.219 1.181 1.233 1.203 1.178 8.18
112) 1,4-dichlorobenzene
0.970 1.219 1.234 1.263 1.233 1.237 1.187 1.259 1.225 1.203 7.50
113) 1,2-dichlorobenzene
0.888 1.141 1.118 1.236 1.169 1.204 1.174 1.237 1.209 1.153 9.29
114) n-butylbenzene
0.858 1.105 1.172 1.207 1.118 1.165 1.155 1.184 1.134 1.122 9.27
115) hexachloroethane
0.382 0.394 0.448 0.411 0.438 0.450 0.460 0.458 0.430 7.04
116) 1,2-dibromo-3-chloropropane
0.137 0.169 0.148 0.157 0.168 0.177 0.167 0.160 8.68
117) nitrobenzene
0.051 0.045 0.054 0.057 0.064 0.059 0.055 12.02
118) 1,3,5-trichlorobenzene
1.003 1.217 1.181 1.257 1.153 1.225 1.175 1.206 1.121 1.171 6.39
119) 1,2,4-trichlorobenzene
0.865 1.128 1.035 1.114 1.046 1.129 1.063 1.091 1.010 1.053 7.83
120) 2-ethylhexyl acrylate
0.842 0.891 0.867 0.904 0.878 0.859 0.770 0.859 5.16
121) hexachlorobutadiene
0.743 0.648 0.734 0.704 0.694 0.694 0.691 0.639 0.693 5.25
122) naphthalene
1.682 1.895 2.082 2.151 2.032 2.087 2.115 2.252 2.033 2.037 8.06
123) 1,2,3-trichlorobenzene
0.958 1.041 1.112 1.036 1.071 1.044 1.060 0.969 1.036 4.92
124) 2-methylnaphthalene
0.746 0.753 0.723 0.711 0.764 0.661 0.726 5.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

MI8986.M Wed Nov 28 14:14:26 2018

Initial Calibration Verification

Job Number: JC86837
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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223186.D

34		2-butanone	0.032	0.036	-12.5	109	0.00	9.08
35		2,2-dichloropropane	0.491	0.489	0.4	105	0.00	9.19
			True	Calc.	% Drift			
36		ethyl acetate	50.000	48.197	3.6	110	0.00	9.12
			AvgRF	CCRF	% Dev			
37		cis-1,2-dichloroethene	0.365	0.370	-1.4	107	0.00	9.16
38		propionitrile	0.046	0.050	-8.7	111	0.00	9.14
			True	Calc.	% Drift			
39		methyl acrylate	50.000	49.175	1.7	110	0.00	9.20
			AvgRF	CCRF	% Dev			
40		methacrylonitrile	0.117	0.128	-9.4	111	0.00	9.35
41		bromochloromethane	0.164	0.172	-4.9	108	0.00	9.46
42		tetrahydrofuran	0.036	0.038	-5.6	113	0.00	9.49
43		chloroform	0.586	0.594	-1.4	106	0.00	9.55
44		carbon tetrachloride	0.479	0.469	2.1	101	0.00	10.03
45		1,1-dichloropropene	0.441	0.449	-1.8	104	0.00	9.99
46		isobutyl alcohol		----------NA----------				
47	S	dibromofluoromethane (s)	0.393	0.399	-1.5	108	0.00	9.74
48		1,1,1-trichloroethane	0.523	0.515	1.5	103	0.00	9.82
49		cyclohexane	0.461	0.484	-5.0	112	0.00	9.94
			True	Calc.	% Drift			
50		tert-amyl alcohol	250.000	246.823	1.3	107	0.00	10.10
			AvgRF	CCRF	% Dev			
51	I	1,4-difluorobenzene	1.000	1.000	0.0	108	0.00	10.65
52	S	1,2-dichloroethane-d4 (s)	0.312	0.304	2.6	105	0.00	10.16
53		isopropyl acetate	0.045	0.046	-2.2	102	0.00	10.15
54		1,2-dichloroethane	0.328	0.315	4.0	104	0.00	10.25
55		benzene	0.977	0.993	-1.6	107	0.00	10.23
56		2,2,4-trimethylpentane	1.000	0.980	2.0	105	0.00	10.36
57		tert-amyl methyl ether	0.167	0.164	1.8	101	0.00	10.33
58		heptane	0.209	0.233	-11.5	120	0.00	10.52
59		n-butyl alcohol	0.008	0.009	-12.5	112	0.00	10.68
60		trichloroethene	0.262	0.260	0.8	106	0.00	10.97
61		ethyl acrylate	0.277	0.295	-6.5	111	0.00	10.95
62		methylcyclohexane	0.443	0.426	3.8	103	0.00	11.28
63		1,2-dichloropropane	0.250	0.243	2.8	105	0.00	11.25
64		methyl methacrylate	0.059	0.062	-5.1	108	0.00	11.22
65		dibromomethane	0.146	0.152	-4.1	109	0.00	11.35
66		bromodichloromethane	0.346	0.342	1.2	105	0.00	11.51
67		2-nitropropane	0.060	0.064	-6.7	112	0.00	11.68
68		2-chloroethyl vinyl ether	0.146	0.157	-7.5	112	0.00	11.75
69		epichlorohydrin	0.024	0.025	-4.2	109	0.00	11.82
70		cis-1,3-dichloropropene	0.391	0.407	-4.1	108	0.00	11.97
71		4-methyl-2-pentanone	0.078	0.082	-5.1	111	0.00	12.06
72		3-methyl-1-butanol	0.007	0.007	0.0	113	0.00	12.05
73	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.79
74	S	toluene-d8 (s)	1.282	1.291	-0.7	107	0.00	12.28
75		toluene	0.692	0.718	-3.8	109	0.00	12.36
76		trans-1,3-dichloropropene	0.416	0.410	1.4	101	0.00	12.53
77		ethyl methacrylate	0.314	0.310	1.3	103	0.00	12.53
78		1,1,2-trichloroethane	0.203	0.211	-3.9	106	0.00	12.75
79		1,3-dichloropropane	0.370	0.394	-6.5	109	0.00	12.93

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI8986-ICV8986
Lab FileID: I223186.D

80		tetrachloroethene	0.347	0.397	-14.4	118	0.00	12.92
81		2-hexanone	0.091	0.097	-6.6	108	0.00	12.91
82		butyl acetate	0.158	0.165	-4.4	107	0.00	13.00
83		n-butyl ether	1.143	1.141	0.2	106	0.00	13.79
84		dibromochloromethane	0.317	0.335	-5.7	109	0.00	13.17
85		1,2-dibromoethane	0.276	0.297	-7.6	109	0.00	13.33
86		chlorobenzene	0.737	0.763	-3.5	108	0.00	13.82
87		1,1,1,2-tetrachloroethane	0.293	0.305	-4.1	108	0.00	13.88
88		ethylbenzene	1.289	1.321	-2.5	108	0.00	13.88
89		m,p-xylene	0.507	0.521	-2.8	108	0.00	14.01
90		o-xylene	0.505	0.512	-1.4	107	0.00	14.40
91		styrene	0.848	0.878	-3.5	108	0.00	14.41
92		butyl acrylate	0.484	0.522	-7.9	111	0.00	14.23
93		cis-1,4-dichloro-2-butene	0.124	0.122	1.6	100	0.00	14.77
94		bromoform	0.223	0.244	-9.4	110	0.00	14.63
95		isopropylbenzene	1.271	1.330	-4.6	108	0.00	14.75
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	16.13
97	S	4-bromofluorobenzene (s)	0.762	0.768	-0.8	106	0.00	14.95
98		1,1,2,2-tetrachloroethane	0.517	0.529	-2.3	105	0.00	15.02
99		trans-1,4-dichloro-2-bute	0.135	0.159	-17.8	123	0.00	15.05
100		1,2,3-trichloropropane	0.133	0.141	-6.0	108	0.00	15.10
101		bromobenzene	0.617	0.633	-2.6	107	0.00	15.13
102		n-propylbenzene	2.563	2.623	-2.3	106	0.00	15.17
103		2-chlorotoluene	0.538	0.550	-2.2	107	0.00	15.30
104		4-chlorotoluene	1.532	1.592	-3.9	110	0.00	15.41
105		1,3,5-trimethylbenzene	1.928	1.958	-1.6	106	0.00	15.33
106		tert-butylbenzene	0.357	0.377	-5.6	107	0.00	15.67
107		1,2,4-trimethylbenzene	1.976	2.047	-3.6	108	0.00	15.72
108		sec-butylbenzene	2.485	2.555	-2.8	108	0.00	15.89
109		p-isopropyltoluene	2.157	2.255	-4.5	107	0.00	16.03
110		benzyl chloride	1.210	1.013	16.3	88	0.00	16.24
111		1,3-dichlorobenzene	1.178	1.207	-2.5	107	0.00	16.06
112		1,4-dichlorobenzene	1.203	1.224	-1.7	108	0.00	16.16
113		1,2-dichlorobenzene	1.153	1.197	-3.8	106	0.00	16.54
114		n-butylbenzene	1.122	1.162	-3.6	105	0.00	16.45
115		hexachloroethane	0.430	0.472	-9.8	109	0.00	16.86
116		1,2-dibromo-3-chloropropa	0.160	0.167	-4.4	104	0.00	17.33
117		nitrobenzene	0.055	0.059	-7.3	107	0.00	17.52
118		1,3,5-trichlorobenzene	1.171	1.212	-3.5	108	0.00	17.54
119		1,2,4-trichlorobenzene	1.053	1.053	0.0	103	0.00	18.20
120		2-ethylhexyl acrylate	0.859	0.939	-9.3	112	0.00	18.22
121		hexachlorobutadiene	0.693	0.694	-0.1	104	0.00	18.33
122		naphthalene	2.037	2.153	-5.7	106	0.00	18.49
123		1,2,3-trichlorobenzene	1.036	1.034	0.2	103	0.00	18.71
124		2-methylnaphthalene	0.726	0.700	3.6	103	0.00	19.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0

I223181.D MI8986.M Wed Nov 28 14:09:03 2018

Initial Calibration Verification

Job Number: JC86837
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: JC86837
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: JC86837
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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9098-CC8986
Lab FileID: I225820.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\lo...\5-1\vi9098\i225820.d Vial: 4
Acq On : 30 Apr 2019 8:27 am Operator: thienn
Sample : cc8986-50 Inst : GCMSI
Misc : MS34179,VI9098,5,,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	90	-0.03	7.35
2	tertiary butyl alcohol	1.035	1.154	-11.5	99	-0.04	7.47
3	1,4-dioxane	0.116	0.128	-10.3	99	-0.03	11.28
4 I	pentafluorobenzene	1.000	1.000	0.0	95	-0.02	9.70
5	dichlorodifluoromethane	0.437	0.553	-26.5#	116	0.00	3.89
6	chlorodifluoromethane	0.412	0.416	-1.0	93	0.00	3.92
7	chloromethane	0.404	0.405	-0.2	102	-0.01	4.28
8	vinyl chloride	0.341	0.374	-9.7	101	-0.01	4.52
9	1,3-butadiene	0.238	0.243	-2.1	94	-0.01	4.61
10	bromomethane	0.227	0.239	-5.3	102	0.00	5.18
11	chloroethane	0.206	0.204	1.0	93	-0.01	5.39
12	vinyl bromide	0.263	0.272	-3.4	94	-0.01	5.73
13	trichlorofluoromethane	0.521	0.518	0.6	90	-0.01	5.86
14	ethyl ether	0.148	0.148	0.0	90	-0.02	6.30
15	2-chloropropane	0.120	0.118	1.7	88	-0.02	6.50
16	acrolein	0.048	0.051	-6.2	101	-0.02	6.50
17	freon 113	0.255	0.254	0.4	90	-0.02	6.71
18	1,1-dichloroethene	0.465	0.438	5.8	88	-0.02	6.71
19	acetone	0.084	0.091	-8.3	100	-0.02	6.69
	----------	True	Calc.	% Drift	----------		
20	iodomethane	50.000	44.757	10.5	80	-0.02	6.96
	----------	AvgRF	CCRF	% Dev	----------		
21	carbon disulfide	1.002	0.839	16.3	83	-0.02	7.11
22	acetonitrile	0.042	0.041	2.4	90	-0.03	7.09
	----------	True	Calc.	% Drift	----------		
23	methyl acetate	50.000	44.952	10.1	90	-0.02	7.19
	----------	AvgRF	CCRF	% Dev	----------		
24	methylene chloride	0.345	0.306	11.3	88	-0.02	7.42
25	acrylonitrile	0.099	0.094	5.1	90	-0.03	7.69
26	methyl tert butyl ether	0.817	0.863	-5.6	97	-0.02	7.80
27	trans-1,2-dichloroethene	0.444	0.424	4.5	88	-0.02	7.84
28	hexane	0.535	0.436	18.5	78	-0.02	8.23
29	1,1-dichloroethane	0.566	0.534	5.7	90	-0.02	8.41
30	vinyl acetate	0.054	0.056	-3.7	99	-0.02	8.36
31	di-isopropyl ether	1.004	0.943	6.1	87	-0.02	8.43
32	chloroprene	0.478	0.480	-0.4	90	-0.02	8.52
33	ethyl tert-butyl ether	0.969	0.971	-0.2	92	-0.02	8.89

Continuing Calibration Summary

Job Number: JC86837 **Sample:** VI9098-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I225820.D
Project: National Grid, Philly Coke, Philadelphia, PA

34		2-butanone	0.032	0.034	-6.3	92	-0.03	9.06
35		2,2-dichloropropane	0.491	0.521	-6.1	100	-0.02	9.17
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	50.000	42.150	15.7	85	-0.03	9.09
		----------	AvgRF	CCRF	% Dev	----------		
37		cis-1,2-dichloroethene	0.365	0.339	7.1	88	-0.03	9.13
38		propionitrile	0.046	0.047	-2.2	94	-0.04	9.11
		----------	True	Calc.	% Drift	----------		
39		methyl acrylate	50.000	49.740	0.5	99	-0.02	9.18
		----------	AvgRF	CCRF	% Dev	----------		
40		methacrylonitrile	0.117	0.117	0.0	91	-0.03	9.32
41		bromochloromethane	0.164	0.166	-1.2	94	-0.02	9.43
42		tetrahydrofuran	0.036	0.039	-8.3	101	-0.02	9.47
43		chloroform	0.586	0.581	0.9	93	-0.03	9.52
44		carbon tetrachloride	0.479	0.470	1.9	91	-0.02	10.00
45		1,1-dichloropropene	0.441	0.418	5.2	87	-0.02	9.97
46		isobutyl alcohol		----------NA----------				
47	S	dibromofluoromethane (s)	0.393	0.407	-3.6	98	-0.03	9.71
48		1,1,1-trichloroethane	0.523	0.531	-1.5	95	-0.03	9.79
49		cyclohexane	0.461	0.402	12.8	83	-0.02	9.92
		----------	True	Calc.	% Drift	----------		
50		tert-amyl alcohol	250.000	263.860	-5.5	103	-0.03	10.07
		----------	AvgRF	CCRF	% Dev	----------		
51	I	1,4-difluorobenzene	1.000	1.000	0.0	97	-0.02	10.63
52	S	1,2-dichloroethane-d4 (s)	0.312	0.345	-10.6	107	-0.03	10.14
53		isopropyl acetate	0.045	0.046	-2.2	92	-0.02	10.12
54		1,2-dichloroethane	0.328	0.346	-5.5	103	-0.02	10.23
55		benzene	0.977	0.903	7.6	88	-0.03	10.21
56		2,2,4-trimethylpentane	1.000	0.815	18.5	78	-0.02	10.33
57		tert-amyl methyl ether	0.167	0.167	0.0	93	-0.02	10.31
58		heptane	0.209	0.161	23.0#	75	-0.02	10.50
59		n-butyl alcohol	0.008	0.008	0.0	94	-0.03	10.66
60		trichloroethene	0.262	0.245	6.5	90	-0.02	10.95
61		ethyl acrylate	0.277	0.265	4.3	90	-0.02	10.93
62		methylcyclohexane	0.443	0.367	17.2	80	-0.02	11.26
63		1,2-dichloropropane	0.250	0.220	12.0	86	-0.03	11.22
64		methyl methacrylate	0.059	0.058	1.7	91	-0.02	11.20
65		dibromomethane	0.146	0.142	2.7	93	-0.02	11.33
66		bromodichloromethane	0.346	0.343	0.9	95	-0.03	11.48
67		2-nitropropane	0.060	0.069	-15.0	109	-0.03	11.66
68		2-chloroethyl vinyl ether	0.146	0.143	2.1	92	-0.02	11.73
69		epichlorohydrin	0.024	0.025	-4.2	100	-0.03	11.79
70		cis-1,3-dichloropropene	0.391	0.381	2.6	91	-0.02	11.95
71		4-methyl-2-pentanone	0.078	0.078	0.0	95	-0.03	12.03
72		3-methyl-1-butanol	0.007	0.007	0.0	93	-0.03	12.03
73	I	chlorobenzene-d5	1.000	1.000	0.0	96	-0.03	13.76
74	S	toluene-d8 (s)	1.282	1.297	-1.2	97	-0.02	12.26
75		toluene	0.692	0.687	0.7	93	-0.02	12.34
76		trans-1,3-dichloropropene	0.416	0.433	-4.1	96	-0.02	12.50
77		ethyl methacrylate	0.314	0.303	3.5	90	-0.03	12.50
78		1,1,2-trichloroethane	0.203	0.196	3.4	89	-0.03	12.72
79		1,3-dichloropropane	0.370	0.366	1.1	91	-0.03	12.90

Continuing Calibration Summary

Job Number: JC86837 **Sample:** VI9098-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I225820.D
Project: National Grid, Philly Coke, Philadelphia, PA

80		tetrachloroethene	0.347	0.340	2.0	91	-0.02	12.90
81		2-hexanone	0.091	0.090	1.1	90	-0.03	12.88
82		butyl acetate	0.158	0.151	4.4	88	-0.02	12.98
83		n-butyl ether	1.143	0.905	20.8#	76	-0.02	13.77
84		dibromochloromethane	0.317	0.316	0.3	92	-0.03	13.15
85		1,2-dibromoethane	0.276	0.278	-0.7	92	-0.02	13.31
86		chlorobenzene	0.737	0.718	2.6	91	-0.02	13.80
87		1,1,1,2-tetrachloroethane	0.293	0.295	-0.7	94	-0.02	13.86
88		ethylbenzene	1.289	1.246	3.3	92	-0.02	13.86
89		m,p-xylene	0.507	0.478	5.7	89	-0.02	13.98
90		o-xylene	0.505	0.471	6.7	89	-0.02	14.38
91		styrene	0.848	0.806	5.0	89	-0.02	14.39
92		butyl acrylate	0.484	0.469	3.1	90	-0.02	14.21
93		cis-1,4-dichloro-2-butene	0.124	0.143	-15.3	106	-0.02	14.75
94		bromoform	0.223	0.239	-7.2	97	-0.02	14.61
95		isopropylbenzene	1.271	1.209	4.9	88	-0.02	14.73
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	91	-0.02	16.11
97	S	4-bromofluorobenzene (s)	0.762	0.806	-5.8	97	-0.03	14.93
98		1,1,2,2-tetrachloroethane	0.517	0.528	-2.1	91	-0.03	14.99
99		trans-1,4-dichloro-2-bute	0.135	0.154	-14.1	103	-0.03	15.02
100		1,2,3-trichloropropane	0.133	0.149	-12.0	99	-0.03	15.08
101		bromobenzene	0.617	0.618	-0.2	90	-0.02	15.11
102		n-propylbenzene	2.563	2.455	4.2	86	-0.03	15.15
103		2-chlorotoluene	0.538	0.534	0.7	90	-0.02	15.28
104		4-chlorotoluene	1.532	1.554	-1.4	93	-0.03	15.39
105		1,3,5-trimethylbenzene	1.928	1.881	2.4	88	-0.02	15.31
106		tert-butylbenzene	0.357	0.331	7.3	82	-0.02	15.65
107		1,2,4-trimethylbenzene	1.976	1.921	2.8	88	-0.02	15.70
108		sec-butylbenzene	2.485	2.318	6.7	86	-0.02	15.87
109		p-isopropyltoluene	2.157	2.134	1.1	88	-0.03	16.00
110		benzyl chloride	1.210	1.305	-7.9	98	-0.03	16.22
111		1,3-dichlorobenzene	1.178	1.211	-2.8	93	-0.03	16.04
112		1,4-dichlorobenzene	1.203	1.220	-1.4	93	-0.02	16.13
113		1,2-dichlorobenzene	1.153	1.190	-3.2	92	-0.03	16.51
114		n-butylbenzene	1.122	1.113	0.8	88	-0.02	16.43
115		hexachloroethane	0.430	0.448	-4.2	90	-0.02	16.84
116		1,2-dibromo-3-chloropropa	0.160	0.167	-4.4	91	-0.03	17.30
117		nitrobenzene	0.055	0.061	-10.9	96	-0.03	17.49
118		1,3,5-trichlorobenzene	1.171	1.226	-4.7	95	-0.02	17.52
119		1,2,4-trichlorobenzene	1.053	1.115	-5.9	95	-0.03	18.17
120		2-ethylhexyl acrylate	0.859	0.882	-2.7	91	-0.02	18.20
121		hexachlorobutadiene	0.693	0.691	0.3	90	-0.02	18.31
122		naphthalene	2.037	2.322	-14.0	100	-0.03	18.46
123		1,2,3-trichlorobenzene	1.036	1.036	0.0	90	-0.03	18.68
124		2-methylnaphthalene	0.726	1.190	-63.9#	152	-0.03	19.56

(#) = Out of Range SPCC's out = 0 CCC's out = 0
I223181.D MI8986.M Wed May 01 07:36:02 2019

6.9.8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9099-CC8986
Lab FileID: I225857.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...2-19\vi9099\i225857.d Vial: 4
Acq On : 1 May 2019 8:24 am Operator: thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34328,VI9099,5,,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	93	-0.03	7.35
2	tertiary butyl alcohol	1.035	1.081	-4.4	97	-0.03	7.47
3	1,4-dioxane	0.116	0.116	0.0	89	-0.02	11.28
4 I	pentafluorobenzene	1.000	1.000	0.0	89	-0.03	9.69
5	dichlorodifluoromethane	0.437	0.618	-41.4#	122	0.00	3.89
6	chlorodifluoromethane	0.412	0.471	-14.3	100	0.00	3.92
7	chloromethane	0.404	0.491	-21.5#	117	-0.01	4.28
8	vinyl chloride	0.341	0.423	-24.0#	108	-0.01	4.52
9	1,3-butadiene	0.238	0.260	-9.2	95	-0.01	4.61
10	bromomethane	0.227	0.269	-18.5	107	0.00	5.18
11	chloroethane	0.206	0.221	-7.3	90	-0.01	5.39
12	vinyl bromide	0.263	0.290	-10.3	94	-0.01	5.73
13	trichlorofluoromethane	0.521	0.563	-8.1	94	-0.01	5.86
14	ethyl ether	0.148	0.149	-0.7	86	-0.02	6.30
15	2-chloropropane	0.120	0.125	-4.2	85	-0.02	6.50
16	acrolein	0.048	0.038	20.8#	76	-0.01	6.50
17	freon 113	0.255	0.271	-6.3	90	-0.02	6.71
18	1,1-dichloroethene	0.465	0.480	-3.2	89	-0.02	6.71
19	acetone	0.084	0.097	-15.5	99	-0.02	6.69
	----------	True	Calc.	% Drift	----------		
20	iodomethane	20.000	16.915	15.4	85	-0.02	6.96
	----------	AvgRF	CCRF	% Dev	----------		
21	carbon disulfide	1.002	0.927	7.5	85	-0.02	7.11
22	acetonitrile	0.042	0.041	2.4	83	-0.02	7.10
	----------	True	Calc.	% Drift	----------		
23	methyl acetate	20.000	18.733	6.3	89	-0.02	7.19
	----------	AvgRF	CCRF	% Dev	----------		
24	methylene chloride	0.345	0.343	0.6	92	-0.02	7.42
25	acrylonitrile	0.099	0.086	13.1	79	-0.02	7.70
26	methyl tert butyl ether	0.817	0.847	-3.7	89	-0.02	7.80
27	trans-1,2-dichloroethene	0.444	0.458	-3.2	89	-0.02	7.84
28	hexane	0.535	0.436	18.5	71	-0.02	8.23
29	1,1-dichloroethane	0.566	0.573	-1.2	88	-0.02	8.41
30	vinyl acetate	0.054	0.049	9.3	85	-0.02	8.36
31	di-isopropyl ether	1.004	0.938	6.6	81	-0.02	8.43
32	chloroprene	0.478	0.519	-8.6	91	-0.02	8.53
33	ethyl tert-butyl ether	0.969	0.952	1.8	85	-0.02	8.89

Continuing Calibration Summary

Job Number: JC86837 **Sample:** VI9099-CC8986
Account: BBLNYS Arcadis **Lab FileID:** I225857.D
Project: National Grid, Philly Coke, Philadelphia, PA

34		2-butanone	0.032	0.031	3.1	85	-0.03	9.06
35		2,2-dichloropropane	0.491	0.572	-16.5	100	-0.03	9.16
		----------	True	Calc.	% Drift	----------		
36		ethyl acetate	20.000	18.593	7.0	84	-0.03	9.09
		----------	AvgRF	CCRF	% Dev	----------		
37		cis-1,2-dichloroethene	0.365	0.359	1.6	87	-0.02	9.14
38		propionitrile	0.046	0.047	-2.2	88	-0.03	9.11
		----------	True	Calc.	% Drift	----------		
39		methyl acrylate	20.000	18.011	9.9	85	-0.02	9.18
		----------	AvgRF	CCRF	% Dev	----------		
40		methacrylonitrile	0.117	0.115	1.7	89	-0.03	9.32
41		bromochloromethane	0.164	0.168	-2.4	86	-0.03	9.43
42		tetrahydrofuran	0.036	0.037	-2.8	92	-0.02	9.47
43		chloroform	0.586	0.622	-6.1	92	-0.03	9.52
44		carbon tetrachloride	0.479	0.522	-9.0	93	-0.02	10.00
45		1,1-dichloropropene	0.441	0.444	-0.7	88	-0.02	9.97
46		isobutyl alcohol		----------NA----------				
47	S	dibromofluoromethane (s)	0.393	0.420	-6.9	94	-0.03	9.71
48		1,1,1-trichloroethane	0.523	0.580	-10.9	95	-0.02	9.80
49		cyclohexane	0.461	0.427	7.4	80	-0.02	9.92
		----------	True	Calc.	% Drift	----------		
50		tert-amyl alcohol	100.000	107.870	-7.9	102	-0.03	10.08
		----------	AvgRF	CCRF	% Dev	----------		
51	I	1,4-difluorobenzene	1.000	1.000	0.0	92	-0.02	10.63
52	S	1,2-dichloroethane-d4 (s)	0.312	0.361	-15.7	105	-0.03	10.14
53		isopropyl acetate	0.045	0.045	0.0	90	-0.02	10.13
54		1,2-dichloroethane	0.328	0.362	-10.4	101	-0.02	10.23
55		benzene	0.977	0.949	2.9	86	-0.03	10.21
56		2,2,4-trimethylpentane	1.000	0.838	16.2	73	-0.02	10.33
57		tert-amyl methyl ether	0.167	0.164	1.8	85	-0.02	10.31
58		heptane	0.209	0.163	22.0#	68	-0.02	10.50
59		n-butyl alcohol	0.008	0.009	-12.5	92	-0.03	10.66
60		trichloroethene	0.262	0.258	1.5	88	-0.02	10.95
61		ethyl acrylate	0.277	0.251	9.4	83	-0.02	10.93
62		methylcyclohexane	0.443	0.376	15.1	76	-0.02	11.27
63		1,2-dichloropropane	0.250	0.223	10.8	82	-0.03	11.22
64		methyl methacrylate	0.059	0.055	6.8	87	-0.02	11.20
65		dibromomethane	0.146	0.144	1.4	88	-0.02	11.33
66		bromodichloromethane	0.346	0.356	-2.9	93	-0.03	11.48
67		2-nitropropane	0.060	0.073	-21.7#	114	-0.03	11.66
68		2-chloroethyl vinyl ether	0.146	0.139	4.8	85	-0.03	11.72
69		epichlorohydrin	0.024	0.024	0.0	93	-0.03	11.79
70		cis-1,3-dichloropropene	0.391	0.371	5.1	82	-0.02	11.95
71		4-methyl-2-pentanone	0.078	0.075	3.8	85	-0.03	12.03
72		3-methyl-1-butanol	0.007	0.006	14.3	89	-0.03	12.03
73	I	chlorobenzene-d5	1.000	1.000	0.0	90	-0.03	13.76
74	S	toluene-d8 (s)	1.282	1.310	-2.2	91	-0.02	12.26
75		toluene	0.692	0.701	-1.3	87	-0.03	12.33
76		trans-1,3-dichloropropene	0.416	0.431	-3.6	89	-0.02	12.50
77		ethyl methacrylate	0.314	0.288	8.3	78	-0.03	12.50
78		1,1,2-trichloroethane	0.203	0.196	3.4	85	-0.03	12.72
79		1,3-dichloropropane	0.370	0.375	-1.4	85	-0.03	12.90

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VI9099-CC8986
Lab FileID: I225857.D

80		tetrachloroethene	0.347	0.364	-4.9	90	-0.02	12.90
81		2-hexanone	0.091	0.087	4.4	83	-0.02	12.89
82		butyl acetate	0.158	0.143	9.5	78	-0.02	12.98
83		n-butyl ether	1.143	0.903	21.0#	70	-0.02	13.77
84		dibromochloromethane	0.317	0.323	-1.9	88	-0.03	13.15
85		1,2-dibromoethane	0.276	0.276	0.0	87	-0.03	13.31
86		chlorobenzene	0.737	0.764	-3.7	89	-0.03	13.79
87		1,1,1,2-tetrachloroethane	0.293	0.300	-2.4	91	-0.02	13.86
88		ethylbenzene	1.289	1.291	-0.2	87	-0.02	13.86
89		m,p-xylene	0.507	0.501	1.2	86	-0.02	13.98
90		o-xylene	0.505	0.468	7.3	83	-0.02	14.38
91		styrene	0.848	0.808	4.7	84	-0.02	14.39
92		butyl acrylate	0.484	0.428	11.6	76	-0.02	14.21
93		cis-1,4-dichloro-2-butene	0.124	0.143	-15.3	99	-0.02	14.75
94		bromoform	0.223	0.230	-3.1	90	-0.02	14.61
95		isopropylbenzene	1.271	1.246	2.0	84	-0.02	14.73
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	86	-0.02	16.11
97	S	4-bromofluorobenzene (s)	0.762	0.814	-6.8	93	-0.03	14.93
98		1,1,2,2-tetrachloroethane	0.517	0.529	-2.3	87	-0.02	14.99
99		trans-1,4-dichloro-2-bute	0.135	0.152	-12.6	99	-0.02	15.03
100		1,2,3-trichloropropane	0.133	0.145	-9.0	90	-0.03	15.07
101		bromobenzene	0.617	0.645	-4.5	89	-0.02	15.11
102		n-propylbenzene	2.563	2.590	-1.1	85	-0.03	15.15
103		2-chlorotoluene	0.538	0.550	-2.2	88	-0.02	15.28
104		4-chlorotoluene	1.532	1.594	-4.0	87	-0.03	15.39
105		1,3,5-trimethylbenzene	1.928	1.914	0.7	82	-0.02	15.31
106		tert-butylbenzene	0.357	0.336	5.9	78	-0.02	15.65
107		1,2,4-trimethylbenzene	1.976	1.944	1.6	83	-0.02	15.70
108		sec-butylbenzene	2.485	2.382	4.1	82	-0.02	15.87
109		p-isopropyltoluene	2.157	2.157	0.0	83	-0.02	16.01
110		benzyl chloride	1.210	1.236	-2.1	86	-0.03	16.22
111		1,3-dichlorobenzene	1.178	1.235	-4.8	88	-0.03	16.04
112		1,4-dichlorobenzene	1.203	1.266	-5.2	88	-0.02	16.13
113		1,2-dichlorobenzene	1.153	1.206	-4.6	87	-0.03	16.51
114		n-butylbenzene	1.122	1.116	0.5	83	-0.02	16.43
115		hexachloroethane	0.430	0.464	-7.9	92	-0.02	16.84
116		1,2-dibromo-3-chloropropa	0.160	0.155	3.1	85	-0.03	17.30
117		nitrobenzene	0.055	0.053	3.6	84	-0.03	17.49
118		1,3,5-trichlorobenzene	1.171	1.220	-4.2	86	-0.02	17.52
119		1,2,4-trichlorobenzene	1.053	1.074	-2.0	82	-0.03	18.17
120		2-ethylhexyl acrylate	0.859	0.765	10.9	73	-0.02	18.20
121		hexachlorobutadiene	0.693	0.702	-1.3	87	-0.02	18.31
122		naphthalene	2.037	2.160	-6.0	89	-0.03	18.46
123		1,2,3-trichlorobenzene	1.036	1.002	3.3	81	-0.03	18.68
124		2-methylnaphthalene	0.726	1.067	-47.0#	128	-0.03	19.56

(#) = Out of Range SPCC's out = 0 CCC's out = 0

I223180.D MI8986.M Thu May 02 03:18:08 2019

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICC8014
Lab FileID: Y184719.D

Response Factor Report MSY

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Apr 25 07:35:51 2019
Response via : Initial Calibration

Calibration Files
4 =Y184716.D 8 =Y184717.D 0.5 =Y184713.D 50 =Y184719.D
100 =Y184720.D 1 =Y184714.D 200 =Y184721.D 20 =Y184718.D
2 =Y184715.D =

Compound	4	8	0.5	50	100	1	200	20	2	Avg	%RSD
1) I tert butyl alcohol-d9	----------ISTD----------										
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol	1.642	1.613		1.613	1.561		1.620	1.603	1.256	1.558	8.70
4) 1,4-dioxane	0.173	0.149		0.164	0.147		0.152	0.152	0.145	0.154	6.46
5) I pentafluorobenzene	----------ISTD----------										
6) chlorodifluoromethane	0.830	0.779		0.761	0.797	0.738	0.780	0.842	0.781	0.788	4.33
7) dichlorodifluoromethane	0.973	0.960		0.978	1.007	0.955	0.992	1.155	0.900	0.990	7.46
8) chloromethane	1.056	1.017		0.946	0.996	1.226	0.994	1.108	0.996	1.042	8.48
9) vinyl chloride	0.853	0.862	0.772	0.816	0.883	0.946	0.877	0.940	0.766	0.857	7.51
10) 1,3-butadiene	0.544	0.518		0.509	0.538		0.545	0.545	0.517	0.531	2.94
11) bromomethane	0.743	0.700		0.663	0.681	0.889	0.666	0.762	0.705	0.726	10.28
12) chloroethane	0.458	0.470		0.448	0.461	0.462	0.461	0.499	0.449	0.464	3.43
13) vinyl bromide	0.429	0.398		0.407	0.412	0.352	0.422	0.447	0.350	0.402	8.65
14) trichlorofluoromethane	1.026	0.953		0.925	0.948	1.129	0.943	1.050	0.927	0.988	7.43
15) ethyl ether	0.238	0.241		0.260	0.249	0.212	0.270	0.255	0.212	0.242	8.72
16) 2-chloropropane	0.220	0.212		0.216	0.221	0.219	0.215	0.211	0.198	0.214	3.47
17) acrolein		0.060		0.067	0.069		0.072	0.069		0.067	7.05
18) freon 113	0.486	0.451		0.478	0.485	0.395	0.463	0.484	0.463	0.463	6.60
19) 1,1-dichloroethene	0.762	0.753	0.706	0.811	0.809	0.709	0.781	0.790	0.789	0.768	5.08
20) acetone	0.137	0.120		0.114	0.117	0.133	0.115	0.118	0.126	0.122	6.94
21) acetonitrile	0.061	0.064		0.057	0.058		0.058	0.063		0.060	5.23
22) iodomethane	0.981	0.943	0.936	0.983	0.994	0.884	0.978	1.050	0.976	0.969	4.72
23) carbon disulfide											

Initial Calibration Summary

Job Number: JC86837 **Sample:** VY8014-ICC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184719.D
Project: National Grid, Philly Coke, Philadelphia, PA

	1.650	1.673	1.723	1.625	1.637	1.669	1.580	1.750	1.817	1.681	4.28
24)	methylene chloride										
	0.663	0.661		0.627	0.638		0.622	0.674	0.787	0.667	8.41
25)	methyl acetate										
	0.278	0.300		0.272	0.272		0.276	0.302		0.283	4.91
26)	methyl tert butyl ether										
	1.493	1.578	1.590	1.514	1.571	1.449	1.612	1.615	1.446	1.541	4.33
27)	trans-1,2-dichloroethene										
	0.770	0.730	0.834	0.749	0.739	0.749	0.717	0.787	0.775	0.761	4.65
28)	hexane										
	0.706	0.660	0.625	0.680	0.679	0.673	0.670	0.702	0.651	0.672	3.71
29)	di-isopropyl ether										
	1.887	1.914	1.952	1.953	1.996	1.708	1.986	2.025	1.843	1.918	5.06
30)	ethyl tert-butyl ether										
	1.706	1.749	1.590	1.787	1.863	1.648	1.942	1.840	1.577	1.745	7.21
31)	2-butanone										
	0.044	0.040		0.039	0.040		0.042	0.043	0.033	0.040	9.10
32)	1,1-dichloroethane										
	0.965	0.950	0.921	0.948	0.944	0.965	0.914	0.989	0.995	0.955	2.86
33)	chloroprene										
	0.703	0.657	0.697	0.689	0.694	0.659	0.682	0.710	0.665	0.684	2.86
34)	acrylonitrile										
	0.140	0.167		0.150	0.148		0.152	0.162		0.153	6.52
35)	vinyl acetate										
	0.069	0.073		0.075	0.077		0.082	0.081		0.076	6.21
36)	ethyl acetate										
	0.048	0.058		0.054	0.051		0.055	0.059		0.054	7.75
37)	2,2-dichloropropane										
	0.840	0.822	0.801	0.801	0.819	0.854	0.814	0.853	0.818	0.825	2.44
38)	cis-1,2-dichloroethene										
	0.627	0.639	0.616	0.604	0.604	0.659	0.613	0.654	0.634	0.628	3.27
39)	propionitrile										
	0.057	0.058	0.056	0.052	0.052	0.050	0.056	0.057	0.049	0.054	6.63
40)	bromochloromethane										
	0.389	0.397	0.368	0.390	0.393	0.395	0.399	0.414	0.396	0.393	3.04
41)	tetrahydrofuran										
	0.045	0.045		0.046	0.049		0.054	0.050		0.048	7.21
42)	chloroform										
	1.028	0.995		0.955	0.963	1.191	0.959	1.013	1.014	1.015	7.55
43)	tert-butyl formate										
	0.380	0.372		0.379	0.403		0.427	0.400	0.320	0.383	8.77
44)	isobutyl alcohol										
										0.000	-1.00
45)	dibromofluoromethane (s)										
	0.460	0.454	0.455	0.450	0.454	0.442	0.460	0.453	0.454	0.454	1.16
46)	methacrylonitrile										
	0.137	0.150		0.142	0.141		0.151	0.150		0.145	4.19
47)	1,1,1-trichloroethane										
	0.865	0.850	0.902	0.847	0.870	0.917	0.866	0.892	0.864	0.875	2.73
48)	cyclohexane										
	0.908	0.855	0.840	0.851	0.863	0.872	0.861	0.991	0.786	0.870	6.38
49)	1,1-dichloropropene										
	0.623	0.606	0.658	0.617	0.611	0.573	0.606	0.639	0.635	0.619	3.93
50)	tert-amyl alcohol										
	0.016	0.019		0.017	0.017		0.019	0.018		0.018	5.84
51)	carbon tetrachloride										
	0.754	0.743	0.746	0.737	0.759	0.792	0.751	0.791	0.779	0.761	2.75
52)	I 1,4-difluorobenzene	----------	ISTD	----------							
53)	1,2-dichloroethane-d4 (s)										

Initial Calibration Summary

Job Number: JC86837 **Sample:** VY8014-ICC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184719.D
Project: National Grid, Philly Coke, Philadelphia, PA

		0.290	0.291	0.282	0.272	0.274	0.276	0.269	0.283	0.277	0.279	2.75
54)	2,2,4-trimethylpentane											
		1.365	1.364	1.092	1.456	1.491	1.305	1.528	1.475	1.264	1.371	10.01
55)	tert-amyl methyl ether											
		1.111	1.107	1.203	1.131	1.145	0.974	1.222	1.170	1.039	1.122	6.96
56)	n-butyl alcohol											
		0.006	0.006		0.006	0.006	0.006	0.007	0.007	0.005	0.006	7.95
57)	benzene											
		1.469	1.441	1.566	1.391	1.368	1.466	1.373	1.457	1.462	1.444	4.25
58)	heptane											
		0.236	0.244		0.247	0.240	0.247	0.241	0.267	0.249	0.246	3.77
59)	isopropyl acetate											
		0.055	0.060		0.059	0.057		0.060	0.060		0.059	3.52
60)	1,2-dichloroethane											
		0.488	0.475		0.447	0.433	0.489	0.439	0.478	0.461	0.464	4.79
61)	trichloroethene											
		0.388	0.382	0.391	0.369	0.367	0.357	0.367	0.389	0.368	0.375	3.26
62)	ethyl acrylate											
		0.307	0.310		0.299	0.297		0.320	0.338	0.289	0.309	5.32
63)	2-nitropropane											
		0.102	0.105		0.096	0.095		0.101	0.104		0.100	4.13
64)	2-chloroethyl vinyl ether											
		0.161	0.179	0.181	0.168	0.167	0.151	0.179	0.190	0.164	0.171	7.06
65)	methyl methacrylate											
		0.062	0.067		0.065	0.066		0.073	0.074		0.068	6.46
66)	1,2-dichloropropane											
		0.390	0.372	0.386	0.368	0.363	0.321	0.369	0.383	0.357	0.368	5.61
67)	methylcyclohexane											
		0.590	0.568		0.600	0.603	0.589	0.612	0.617	0.590	0.596	2.58
68)	dibromomethane											
		0.222	0.224	0.222	0.210	0.209	0.196	0.216	0.226	0.205	0.215	4.73
69)	bromodichloromethane											
		0.523	0.504	0.534	0.508	0.508	0.498	0.522	0.526	0.505	0.514	2.38
70)	epichlorohydrin											
		0.026	0.027		0.025	0.024		0.026	0.027		0.026	5.48
71)	cis-1,3-dichloropropene											
		0.572	0.571	0.505	0.570	0.565	0.527	0.587	0.596	0.543	0.559	5.21
72)	4-methyl-2-pentanone											
		0.099	0.107	0.107	0.099	0.097	0.096	0.104	0.110	0.089	0.101	6.67
73)	3-methyl-1-butanol											
		0.007	0.007		0.008	0.008		0.009	0.008	0.006	0.008	11.52
74)	I chlorobenzene-d5	----------				ISTD						
75)	toluene-d8 (s)											
		1.256	1.252	1.238	1.310	1.292	1.261	1.296	1.222	1.262	1.265	2.28
76)	toluene											
		0.958	0.924	1.069	0.966	0.951	0.958	0.941	0.935	0.964	0.963	4.38
77)	trans-1,3-dichloropropene											
		0.541	0.557	0.582	0.576	0.560	0.542	0.569	0.561	0.511	0.556	3.90
78)	ethyl methacrylate											
		0.387	0.389	0.400	0.399	0.397	0.354	0.414	0.399	0.364	0.389	4.87
79)	1,1,2-trichloroethane											
		0.270	0.277	0.312	0.270	0.267	0.266	0.270	0.271	0.269	0.275	5.25
80)	2-hexanone											
		0.106	0.111	0.104	0.104	0.102	0.092	0.106	0.108	0.092	0.103	6.28
81)	tetrachloroethene											
		0.430	0.430	0.451	0.437	0.433	0.443	0.424	0.422	0.460	0.437	2.88
82)	1,3-dichloropropane											
		0.523	0.524	0.568	0.510	0.494	0.473	0.505	0.521	0.489	0.512	5.28
83)	butyl acetate											

Initial Calibration Summary

Job Number: JC86837 **Sample:** VY8014-ICC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184719.D
Project: National Grid, Philly Coke, Philadelphia, PA

	0.188	0.208	0.202	0.200	0.203	0.208	0.183	0.199	4.81
84)	dibromochloromethane										
	0.408	0.423	0.372	0.436	0.436	0.357	0.450	0.429	0.398	0.412	7.60
85)	1,2-dibromoethane										
	0.427	0.444	0.455	0.429	0.434	0.396	0.446	0.449	0.416	0.433	4.26
86)	n-butyl ether										
	1.514	1.514	1.772	1.637	1.636	1.519	1.611	1.583	1.520	1.590	5.41
87)	chlorobenzene										
	1.156	1.121	1.373	1.123	1.104	1.155	1.088	1.146	1.157	1.158	7.27
88)	1,1,1,2-tetrachloroethane										
	0.461	0.444	0.494	0.470	0.474	0.428	0.475	0.457	0.408	0.457	5.74
89)	ethylbenzene										
	1.815	1.765	1.939	1.814	1.770	1.797	1.748	1.792	1.841	1.809	3.12
90)	m,p-xylene										
	0.686	0.678	0.770	0.701	0.691	0.736	0.699	0.700	0.680	0.705	4.24
91)	o-xylene										
	1.464	1.478	1.597	1.564	1.553	1.416	1.560	1.533	1.477	1.516	3.92
92)	styrene										
	1.172	1.194	1.229	1.249	1.208	1.180	1.230	1.238	1.093	1.199	3.99
93)	bromoform										
	0.264	0.281	0.288	0.284	0.283	0.275	0.300	0.283	0.263	0.280	4.12
94)	butyl acrylate										
	0.624	0.668	0.686	0.665	0.679	0.623	0.709	0.660	0.589	0.656	5.68
95)	isopropylbenzene										
	1.738	1.734	1.970	1.867	1.856	1.846	1.893	1.789	1.706	1.822	4.76
96)	cis-1,4-dichloro-2-butene										
	0.135	0.154	0.150	0.149	0.159	0.144	0.130	0.146	7.04		
97)	I 1,4-dichlorobenzene-d ----------ISTD----------										
98)	4-bromofluorobenzene (s)										
	0.832	0.824	0.835	0.845	0.809	0.822	0.821	0.845	0.828	0.829	1.39
99)	bromobenzene										
	1.018	1.012	1.148	0.970	0.920	1.024	0.921	1.021	0.949	0.998	7.04
100)	1,1,2,2-tetrachloroethane										
	0.784	0.798	0.855	0.731	0.709	0.746	0.736	0.808	0.721	0.765	6.33
101)	trans-1,4-dichloro-2-butene										
	0.170	0.183	0.171	0.169	0.176	0.181	0.142	0.170	7.89		
102)	1,2,3-trichloropropane										
	0.191	0.209	0.191	0.181	0.184	0.196	0.208	0.194	5.61		
103)	n-propylbenzene										
	3.760	3.772	4.438	3.776	3.642	3.905	3.610	3.938	3.887	3.859	6.33
104)	2-chlorotoluene										
	0.850	0.863	1.050	0.868	0.836	0.856	0.830	0.903	0.851	0.879	7.70
105)	4-chlorotoluene										
	2.360	2.375	2.835	2.404	2.329	2.513	2.335	2.526	2.370	2.450	6.59
106)	1,3,5-trimethylbenzene										
	2.763	2.807	3.113	2.852	2.794	2.762	2.805	2.920	2.747	2.840	4.05
107)	tert-butylbenzene										
	0.488	0.466	0.536	0.531	0.460	0.527	0.502	0.506	0.502	5.76	
108)	1,2,4-trimethylbenzene										
	2.829	2.889	3.293	2.962	2.896	2.739	2.883	2.995	2.836	2.925	5.37
109)	sec-butylbenzene										
	3.413	3.382	3.678	3.585	3.589	3.591	3.553	3.584	3.512	3.543	2.64
110)	1,3-dichlorobenzene										
	1.830	1.810	2.083	1.806	1.783	1.769	1.758	1.892	1.885	1.846	5.44
111)	p-isopropyltoluene										
	3.014	3.049	3.254	3.179	3.128	3.140	3.114	3.211	2.995	3.120	2.83
112)	1,4-dichlorobenzene										
	1.905	1.862	2.244	1.805	1.780	1.902	1.789	1.873	1.950	1.901	7.40
113)	1,2-dichlorobenzene										

Initial Calibration Summary

Job Number: JC86837 **Sample:** VY8014-ICC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184719.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
            1.841 1.831 2.240 1.817 1.782 2.010 1.775 1.886 1.835   1.891    7.85
114)  n-butylbenzene
            1.590 1.543 1.724 1.651 1.657 1.601 1.639 1.659 1.578   1.627    3.33
115)  1,2-dibromo-3-chloropropane
            0.168 0.174       0.173 0.184       0.191 0.187 0.169   0.178    5.28
116)  1,3,5-trichlorobenzene
            1.762 1.713 2.061 1.802 1.802 1.659 1.733 1.846 1.702   1.787    6.61
117)  1,2,4-trichlorobenzene
            1.429 1.473 1.713 1.539 1.560 1.391 1.512 1.603 1.349   1.508    7.46
118)  hexachlorobutadiene
            0.927 0.887 1.069 0.901 0.886 0.926 0.842 0.951 0.942   0.926    6.83
119)  naphthalene
            2.168 2.283       2.520 2.599 2.011 2.605 2.580 1.941   2.338   11.75
120)  1,2,3-trichlorobenzene
            1.231 1.322 1.295 1.370 1.402 1.138 1.350 1.458 1.189   1.306    7.95
121)  hexachloroethane
            0.486 0.514 0.644 0.584 0.591 0.485 0.601 0.533 0.560   0.555    9.87
122)  benzyl chloride
            1.341 1.375 1.591 1.360 1.396 1.276 1.450 1.406 1.312   1.390    6.59
123)  2-ethylhexyl acrylate
                  0.610       0.821 0.955       1.054 0.691         0.826   22.11
             ----- Linear regression -----  Coefficient =  0.9942
               Response Ratio = -0.01976 + 1.03359 *A

124)  2-methylnaphthalene
                  0.973       1.135 1.302       1.371 1.089         1.174   13.75
125)  bis(chloromethyl)ether
                                                                    0.000   -1.00
126)  ethylenimine
                                                                    0.000   -1.00
 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MYS8014.M         Thu Apr 25 12:25:25 2019   RPT1
```

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184724.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\VY8014\Y184724.D Vial: 14
Acq On : 24 Apr 2019 8:27 pm Operator: ROBERTS
Sample : ICV8014-50 Inst : MSY
Misc : MS34134,VY8014,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Apr 25 07:35:51 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	7.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.558	1.696	-8.9	106	0.01	7.85
4		1,4-dioxane	0.154	0.162	-5.2	100	0.00	11.54
5	I	pentafluorobenzene	1.000	1.000	0.0	92	0.00	9.97
6		chlorodifluoromethane	0.782	0.892	-14.1	107	0.00	4.38
7		dichlorodifluoromethane	0.990	0.981	0.9	92	0.00	4.36
8		chloromethane	1.042	1.127	-8.2	109	0.00	4.74
9		vinyl chloride	0.857	0.874	-2.0	98	0.00	4.99
10		1,3-butadiene	0.531	0.671	-26.4	121	0.01	5.04
11		bromomethane	0.726	0.690	5.0	95	0.00	5.63
12		chloroethane	0.464	0.439	5.4	90	0.00	5.81
13		vinyl bromide	0.402	0.464	-15.4	105	0.00	6.15
14		trichlorofluoromethane	0.988	0.983	0.5	97	0.00	6.27
15		ethyl ether	0.242	0.277	-14.5	98	0.00	6.63
16		2-chloropropane	0.214	0.241	-12.6	102	0.00	6.86
17		acrolein	0.067	0.077	-14.9	105	-0.02	6.86
18		freon 113	0.463	0.554	-19.7	106	0.00	7.10
19		1,1-dichloroethene	0.768	0.796	-3.6	90	0.00	7.07
20		acetone	0.122	0.123	-0.8	99	0.00	7.08
21		acetonitrile		----------NA----------				
22		iodomethane	0.969	1.203	-24.1	112	0.00	7.33
23		carbon disulfide	1.681	1.922	-14.3	108	0.01	7.48
24		methylene chloride	0.667	0.693	-3.9	101	0.00	7.78
25		methyl acetate	0.279	0.283	-1.4	95	0.00	7.52
26		methyl tert butyl ether	1.541	1.670	-8.4	101	0.00	8.15
27		trans-1,2-dichloroethene	0.761	0.787	-3.4	96	0.00	8.16
28		hexane	0.672	0.776	-15.5	105	0.00	8.51
29		di-isopropyl ether	1.918	1.958	-2.1	92	0.00	8.72
30		ethyl tert-butyl ether	1.745	1.852	-6.1	95	0.00	9.18
31		2-butanone	0.040	0.043	-7.5	102	0.00	9.38
32		1,1-dichloroethane	0.955	1.009	-5.7	97	0.00	8.73
33		chloroprene	0.684	0.740	-8.2	98	0.00	8.83
34		acrylonitrile		----------NA----------				
35		vinyl acetate	0.076	0.074	2.6	91	0.00	8.67
36		ethyl acetate	0.054	0.052	3.7	88	0.01	9.39
37		2,2-dichloropropane	0.825	0.835	-1.2	95	0.00	9.49
38		cis-1,2-dichloroethene	0.628	0.636	-1.3	97	0.00	9.45
39		propionitrile	0.054	0.057	-5.6	100	0.00	9.46
40		bromochloromethane	0.393	0.424	-7.9	100	0.00	9.74
41		tetrahydrofuran	0.048	0.055	-14.6	110	0.00	9.77

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184724.D

42		chloroform	1.015	1.015	0.0	97	0.00	9.83
43		tert-butyl formate	0.383	0.371	3.1	90	0.00	9.86
44		isobutyl alcohol		----------NA----------				
45	S	dibromofluoromethane (s)	0.454	0.464	-2.2	94	0.00	10.02
46		methacrylonitrile	0.145	0.152	-4.8	98	0.00	9.66
47		1,1,1-trichloroethane	0.875	0.893	-2.1	97	0.00	10.10
48		cyclohexane	0.870	0.856	1.6	92	0.00	10.20
49		1,1-dichloropropene	0.619	0.661	-6.8	98	0.00	10.26
50		tert-amyl alcohol	0.018	0.019	-5.6	103	0.00	10.38
51		carbon tetrachloride	0.761	0.805	-5.8	100	0.00	10.28
52	I	1,4-difluorobenzene	1.000	1.000	0.0	93	0.00	10.91
53	S	1,2-dichloroethane-d4 (s)	0.279	0.278	0.4	94	0.00	10.43
54		2,2,4-trimethylpentane	1.371	1.508	-10.0	96	0.00	10.60
55		tert-amyl methyl ether	1.122	1.162	-3.6	95	0.00	10.59
56		n-butyl alcohol	0.006	0.007	-16.7	103	0.00	10.95
57		benzene	1.444	1.474	-2.1	98	0.00	10.50
58		heptane	0.243	0.311	-28.0	117	0.00	10.75
59		isopropyl acetate	0.059	0.059	0.0	92	0.00	10.40
60		1,2-dichloroethane	0.464	0.456	1.7	94	0.00	10.53
61		trichloroethene	0.375	0.401	-6.9	101	0.00	11.22
62		ethyl acrylate	0.309	0.327	-5.8	101	0.00	11.19
63		2-nitropropane	0.100	0.109	-9.0	105	0.00	11.96
64		2-chloroethyl vinyl ether	0.171	0.192	-12.3	106	0.00	11.98
65		methyl methacrylate	0.068	0.073	-7.4	104	0.00	11.45
66		1,2-dichloropropane	0.368	0.385	-4.6	97	0.00	11.50
67		methylcyclohexane	0.596	0.641	-7.6	99	0.00	11.51
68		dibromomethane	0.215	0.227	-5.6	100	0.00	11.61
69		bromodichloromethane	0.514	0.530	-3.1	96	0.00	11.75
70		epichlorohydrin	0.026	0.027	-3.8	102	0.00	12.07
71		cis-1,3-dichloropropene	0.559	0.612	-9.5	99	0.00	12.20
72		4-methyl-2-pentanone	0.101	0.110	-8.9	103	0.00	12.30
73		3-methyl-1-butanol	0.008	0.009	-12.5	107	0.00	12.30
74	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	13.99
75	S	toluene-d8 (s)	1.265	1.237	2.2	95	0.00	12.51
76		toluene	0.963	0.947	1.7	99	0.00	12.58
77		trans-1,3-dichloropropene	0.556	0.583	-4.9	102	0.00	12.76
78		ethyl methacrylate	0.389	0.415	-6.7	104	0.00	12.74
79		1,1,2-trichloroethane	0.275	0.274	0.4	102	0.00	12.98
80		2-hexanone	0.103	0.112	-8.7	107	0.00	13.13
81		tetrachloroethene		----------NA----------				
82		1,3-dichloropropane	0.512	0.518	-1.2	102	0.00	13.15
83		butyl acetate	0.199	0.215	-8.0	107	0.00	13.20
84		dibromochloromethane	0.412	0.464	-12.6	107	0.00	13.40
85		1,2-dibromoethane	0.433	0.446	-3.0	104	0.00	13.55
86		n-butyl ether	1.590	1.747	-9.9	107	0.00	13.97
87		chlorobenzene	1.158	1.163	-0.4	104	0.00	14.02
88		1,1,1,2-tetrachloroethane	0.457	0.481	-5.3	103	0.00	14.08
89		ethylbenzene	1.809	1.827	-1.0	101	0.00	14.07
90		m,p-xylene	0.705	0.710	-0.7	102	0.00	14.20
91		o-xylene	1.516	1.570	-3.6	101	0.00	14.59
92		styrene	1.199	1.265	-5.5	102	0.00	14.60
93		bromoform	0.280	0.309	-10.4	109	0.00	14.83
94		butyl acrylate	0.656	0.698	-6.4	106	0.00	14.41
95		isopropylbenzene	1.822	1.891	-3.8	102	0.00	14.93
96		cis-1,4-dichloro-2-butene	0.146	0.154	-5.5	103	0.00	14.97
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	16.29
98	S	4-bromofluorobenzene (s)	0.829	0.787	5.1	97	0.00	15.13

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184724.D

99	bromobenzene	0.998	0.948	5.0	102	0.00	15.31
100	1,1,2,2-tetrachloroethane	0.765	0.739	3.4	105	0.00	15.21
101	trans-1,4-dichloro-2-bute	0.170	0.194	-14.1	118	0.00	15.24
102	1,2,3-trichloropropane	0.194	0.192	1.0	105	0.00	15.29
103	n-propylbenzene	3.859	3.758	2.6	104	0.00	15.35
104	2-chlorotoluene	0.879	0.835	5.0	100	0.00	15.48
105	4-chlorotoluene	2.450	2.397	2.2	104	0.00	15.59
106	1,3,5-trimethylbenzene	2.840	2.761	2.8	101	0.00	15.50
107	tert-butylbenzene	0.502	0.517	-3.0	101	0.00	15.84
108	1,2,4-trimethylbenzene	2.925	2.983	-2.0	105	0.00	15.88
109	sec-butylbenzene	3.543	3.572	-0.8	104	0.00	16.05
110	1,3-dichlorobenzene	1.846	1.857	-0.6	107	0.00	16.22
111	p-isopropyltoluene	3.120	3.207	-2.8	105	0.00	16.18
112	1,4-dichlorobenzene	1.901	1.868	1.7	108	0.00	16.31
113	1,2-dichlorobenzene	1.891	1.851	2.1	106	0.00	16.68
114	n-butylbenzene	1.627	1.658	-1.9	105	0.00	16.59
115	1,2-dibromo-3-chloropropa	0.178	0.183	-2.8	111	0.00	17.45
116	1,3,5-trichlorobenzene	1.787	1.871	-4.7	108	0.00	17.64
117	1,2,4-trichlorobenzene	1.508	1.590	-5.4	108	0.00	18.29
118	hexachlorobutadiene	0.926	0.902	2.6	104	0.00	18.41
119	naphthalene	2.338	2.710	-15.9	112	0.00	18.59
120	1,2,3-trichlorobenzene	1.306	1.443	-10.5	110	0.00	18.83
121	hexachloroethane	0.555	0.582	-4.9	104	0.00	16.98
122	benzyl chloride	1.390	1.768	-27.2	136	0.00	16.41
		True	Calc.	% Drift			
123	2-ethylhexyl acrylate	10.000	9.866	1.3	117	0.00	18.30
		AvgRF	CCRF	% Dev			
124	2-methylnaphthalene	1.174	1.293	-10.1	119	0.00	19.84
125	bis(chloromethyl)ether		NA				
126	ethylenimine		NA				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Thu Apr 25 12:25:26 2019 RPT1

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184725.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\VY8014\Y184725.D Vial: 15
Acq On : 24 Apr 2019 8:55 pm Operator: ROBERTS
Sample : ICV8014-50 Inst : MSY
Misc : MS34134,VY8014,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Apr 25 07:35:51 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	7.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	9.97
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		vinyl bromide		----------NA----------				
14		trichlorofluoromethane		----------NA----------				
15		ethyl ether		----------NA----------				
16		2-chloropropane		----------NA----------				
17		acrolein		----------NA----------				
18		freon 113		----------NA----------				
19		1,1-dichloroethene		----------NA----------				
20		acetone		----------NA----------				
21		acetonitrile	0.060	0.054	10.0	98	0.00	7.50
22		iodomethane		----------NA----------				
23		carbon disulfide		----------NA----------				
24		methylene chloride		----------NA----------				
25		methyl acetate		----------NA----------				
26		methyl tert butyl ether		----------NA----------				
27		trans-1,2-dichloroethene		----------NA----------				
28		hexane		----------NA----------				
29		di-isopropyl ether		----------NA----------				
30		ethyl tert-butyl ether		----------NA----------				
31		2-butanone		----------NA----------				
32		1,1-dichloroethane		----------NA----------				
33		chloroprene		----------NA----------				
34		acrylonitrile	0.153	0.127	17.0	87	0.00	8.07
35		vinyl acetate		----------NA----------				
36		ethyl acetate		----------NA----------				
37		2,2-dichloropropane		----------NA----------				
38		cis-1,2-dichloroethene		----------NA----------				
39		propionitrile		----------NA----------				
40		bromochloromethane		----------NA----------				
41		tetrahydrofuran		----------NA----------				

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8014-ICV8014
Lab FileID: Y184725.D

42		chloroform		----------NA----------					
43		tert-butyl formate		----------NA----------					
44		isobutyl alcohol		----------NA----------					
45	S	dibromofluoromethane (s)	0.454	0.458	-0.9	104	0.00	10.01	
46		methacrylonitrile		----------NA----------					
47		1,1,1-trichloroethane		----------NA----------					
48		cyclohexane		----------NA----------					
49		1,1-dichloropropene		----------NA----------					
50		tert-amyl alcohol		----------NA----------					
51		carbon tetrachloride		----------NA----------					
52	I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	10.91	
53	S	1,2-dichloroethane-d4 (s)	0.279	0.283	-1.4	106	0.00	10.43	
54		2,2,4-trimethylpentane		----------NA----------					
55		tert-amyl methyl ether		----------NA----------					
56		n-butyl alcohol		----------NA----------					
57		benzene		----------NA----------					
58		heptane		----------NA----------					
59		isopropyl acetate		----------NA----------					
60		1,2-dichloroethane		----------NA----------					
61		trichloroethene		----------NA----------					
62		ethyl acrylate		----------NA----------					
63		2-nitropropane		----------NA----------					
64		2-chloroethyl vinyl ether		----------NA----------					
65		methyl methacrylate		----------NA----------					
66		1,2-dichloropropane		----------NA----------					
67		methylcyclohexane		----------NA----------					
68		dibromomethane		----------NA----------					
69		bromodichloromethane		----------NA----------					
70		epichlorohydrin		----------NA----------					
71		cis-1,3-dichloropropene		----------NA----------					
72		4-methyl-2-pentanone		----------NA----------					
73		3-methyl-1-butanol		----------NA----------					
74	I	chlorobenzene-d5	1.000	1.000	0.0	112	0.00	13.99	
75	S	toluene-d8 (s)	1.265	1.242	1.8	106	0.00	12.51	
76		toluene		----------NA----------					
77		trans-1,3-dichloropropene		----------NA----------					
78		ethyl methacrylate		----------NA----------					
79		1,1,2-trichloroethane		----------NA----------					
80		2-hexanone		----------NA----------					
81		tetrachloroethene	0.437	0.402	8.0	103	0.00	13.12	
82		1,3-dichloropropane		----------NA----------					
83		butyl acetate		----------NA----------					
84		dibromochloromethane		----------NA----------					
85		1,2-dibromoethane		----------NA----------					
86		n-butyl ether		----------NA----------					
87		chlorobenzene		----------NA----------					
88		1,1,1,2-tetrachloroethane		----------NA----------					
89		ethylbenzene		----------NA----------					
90		m,p-xylene		----------NA----------					
91		o-xylene		----------NA----------					
92		styrene		----------NA----------					
93		bromoform		----------NA----------					
94		butyl acrylate		----------NA----------					
95		isopropylbenzene		----------NA----------					
96		cis-1,4-dichloro-2-butene		----------NA----------					
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	16.29	
98	S	4-bromofluorobenzene (s)	0.829	0.826	0.4	107	0.00	15.13	

Initial Calibration Verification

Job Number: JC86837 **Sample:** VY8014-ICV8014
Account: BBLNYS Arcadis **Lab FileID:** Y184725.D
Project: National Grid, Philly Coke, Philadelphia, PA

99	bromobenzene	----------NA----------	
100	1,1,2,2-tetrachloroethane	----------NA----------	
101	trans-1,4-dichloro-2-bute	----------NA----------	
102	1,2,3-trichloropropane	----------NA----------	
103	n-propylbenzene	----------NA----------	
104	2-chlorotoluene	----------NA----------	
105	4-chlorotoluene	----------NA----------	
106	1,3,5-trimethylbenzene	----------NA----------	
107	tert-butylbenzene	----------NA----------	
108	1,2,4-trimethylbenzene	----------NA----------	
109	sec-butylbenzene	----------NA----------	
110	1,3-dichlorobenzene	----------NA----------	
111	p-isopropyltoluene	----------NA----------	
112	1,4-dichlorobenzene	----------NA----------	
113	1,2-dichlorobenzene	----------NA----------	
114	n-butylbenzene	----------NA----------	
115	1,2-dibromo-3-chloropropa	----------NA----------	
116	1,3,5-trichlorobenzene	----------NA----------	
117	1,2,4-trichlorobenzene	----------NA----------	
118	hexachlorobutadiene	----------NA----------	
119	naphthalene	----------NA----------	
120	1,2,3-trichlorobenzene	----------NA----------	
121	hexachloroethane	----------NA----------	
122	benzyl chloride	----------NA----------	
	---------- True	Calc.	% Drift ----------
123	2-ethylhexyl acrylate	----------NA----------	
	---------- AvgRF	CCRF	% Dev ----------
124	2-methylnaphthalene	----------NA----------	
125	bis(chloromethyl)ether	----------NA----------	
126	ethylenimine	----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Thu Apr 25 12:25:26 2019 RPT1

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8023-CC8014
Lab FileID: Y184879.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...3-19\vy8023\y184879.d Vial: 1
Acq On : 2 May 2019 9:07 am Operator: PrashanS
Sample : cc8014-50 Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	72	-0.02	7.72
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.558	1.737	-11.5	77	0.01	7.85
4		1,4-dioxane	0.154	0.179	-16.2	79	0.00	11.54
5	I	pentafluorobenzene	1.000	1.000	0.0	79	0.00	9.97
6		chlorodifluoromethane	0.788	0.860	-9.1	89	0.00	4.37
7		dichlorodifluoromethane	0.990	0.990	0.0	80	0.00	4.35
8		chloromethane	1.042	0.995	4.5	83	0.00	4.74
9		vinyl chloride	0.857	0.919	-7.2	89	0.00	4.98
10		1,3-butadiene	0.531	0.611	-15.1	94	-0.01	5.02
11		bromomethane	0.726	0.689	5.1	82	-0.01	5.62
12		chloroethane	0.464	0.480	-3.4	84	-0.02	5.80
13		vinyl bromide	0.402	0.626	-55.7#	121	0.00	6.15
14		trichlorofluoromethane	0.988	1.133	-14.7	96	0.00	6.27
15		ethyl ether	0.242	0.244	-0.8	74	0.00	6.63
16		2-chloropropane	0.214	0.238	-11.2	87	0.00	6.85
17		acrolein	0.067	0.078	-16.4	91	-0.02	6.86
18		freon 113	0.463	0.566	-22.2#	93	0.00	7.09
19		1,1-dichloroethene	0.768	0.861	-12.1	83	0.00	7.07
20		acetone	0.122	0.106	13.1	72	0.00	7.07
21		acetonitrile	0.060	0.055	8.3	76	0.00	7.50
22		iodomethane	0.969	1.045	-7.8	84	0.00	7.32
23		carbon disulfide	1.681	1.761	-4.8	85	0.00	7.47
24		methylene chloride	0.667	0.646	3.1	81	0.00	7.78
25		methyl acetate	0.283	0.253	10.6	73	0.00	7.52
26		methyl tert butyl ether	1.541	1.524	1.1	79	0.00	8.14
27		trans-1,2-dichloroethene	0.761	0.769	-1.1	81	0.00	8.15
28		hexane	0.672	0.713	-6.1	82	0.00	8.50
29		di-isopropyl ether	1.918	1.923	-0.3	77	0.00	8.72
30		ethyl tert-butyl ether	1.745	1.783	-2.2	78	0.00	9.18
31		2-butanone	0.040	0.039	2.5	79	0.00	9.38
32		1,1-dichloroethane	0.955	1.005	-5.2	83	0.00	8.73
33		chloroprene	0.684	0.754	-10.2	86	0.00	8.83
34		acrylonitrile	0.153	0.144	5.9	76	0.00	8.06
35		vinyl acetate	0.076	0.083	-9.2	87	0.00	8.66
36		ethyl acetate	0.054	0.051	5.6	74	0.00	9.38
37		2,2-dichloropropane	0.825	0.928	-12.5	91	0.00	9.49
38		cis-1,2-dichloroethene	0.628	0.641	-2.1	83	0.00	9.45
39		propionitrile	0.054	0.053	1.9	79	0.00	9.46
40		bromochloromethane	0.393	0.413	-5.1	83	0.00	9.74
41		tetrahydrofuran	0.048	0.049	-2.1	84	0.00	9.76

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8023-CC8014
Lab FileID: Y184879.D

42		chloroform	1.015	1.028	-1.3	85	0.00	9.82
43		tert-butyl formate	0.383	0.384	-0.3	80	0.00	9.86
44		isobutyl alcohol		----------NA----------				
45	S	dibromofluoromethane (s)	0.454	0.465	-2.4	81	0.00	10.01
46		methacrylonitrile	0.145	0.141	2.8	78	0.00	9.66
47		1,1,1-trichloroethane	0.875	1.010	-15.4	94	0.00	10.09
48		cyclohexane	0.870	0.926	-6.4	86	0.00	10.20
49		1,1-dichloropropene	0.619	0.702	-13.4	89	0.00	10.25
50		tert-amyl alcohol	0.018	0.017	5.6	78	0.00	10.37
51		carbon tetrachloride	0.761	0.895	-17.6	95	0.00	10.28
52	I	1,4-difluorobenzene	1.000	1.000	0.0	78	0.00	10.91
53	S	1,2-dichloroethane-d4 (s)	0.279	0.264	5.4	76	0.00	10.43
54		2,2,4-trimethylpentane	1.371	1.533	-11.8	82	0.00	10.59
55		tert-amyl methyl ether	1.122	1.127	-0.4	78	0.00	10.58
56		n-butyl alcohol	0.006	0.006	0.0	78	0.00	10.95
57		benzene	1.444	1.479	-2.4	83	0.00	10.50
58		heptane	0.246	0.266	-8.1	84	0.00	10.74
59		isopropyl acetate	0.059	0.060	-1.7	80	0.00	10.40
60		1,2-dichloroethane	0.464	0.460	0.9	80	0.00	10.52
61		trichloroethene	0.375	0.423	-12.8	90	0.00	11.21
62		ethyl acrylate	0.309	0.287	7.1	75	0.00	11.19
63		2-nitropropane	0.100	0.096	4.0	78	0.00	11.96
64		2-chloroethyl vinyl ether	0.171	0.167	2.3	78	0.00	11.98
65		methyl methacrylate	0.068	0.066	2.9	79	0.00	11.45
66		1,2-dichloropropane	0.368	0.367	0.3	78	0.00	11.50
67		methylcyclohexane	0.596	0.659	-10.6	86	0.00	11.51
68		dibromomethane	0.215	0.219	-1.9	82	0.00	11.61
69		bromodichloromethane	0.514	0.523	-1.8	80	0.00	11.75
70		epichlorohydrin	0.026	0.023	11.5	75	0.00	12.07
71		cis-1,3-dichloropropene	0.559	0.561	-0.4	77	0.00	12.20
72		4-methyl-2-pentanone	0.101	0.095	5.9	75	0.00	12.30
73		3-methyl-1-butanol	0.008	0.008	0.0	78	0.00	12.29
74	I	chlorobenzene-d5	1.000	1.000	0.0	83	0.00	13.99
75	S	toluene-d8 (s)	1.265	1.219	3.6	77	0.00	12.51
76		toluene	0.963	0.961	0.2	82	0.00	12.57
77		trans-1,3-dichloropropene	0.556	0.556	0.0	80	0.00	12.75
78		ethyl methacrylate	0.389	0.366	5.9	76	0.00	12.74
79		1,1,2-trichloroethane	0.275	0.260	5.5	79	0.00	12.97
80		2-hexanone	0.103	0.093	9.7	74	0.00	13.13
81		tetrachloroethene	0.437	0.464	-6.2	88	0.00	13.12
82		1,3-dichloropropane	0.512	0.492	3.9	80	0.00	13.15
83		butyl acetate	0.199	0.184	7.5	75	0.00	13.20
84		dibromochloromethane	0.412	0.447	-8.5	85	0.00	13.40
85		1,2-dibromoethane	0.433	0.358	17.3	69	0.00	13.55
86		n-butyl ether	1.590	1.552	2.4	78	0.00	13.97
87		chlorobenzene	1.158	1.128	2.6	83	0.00	14.02
88		1,1,1,2-tetrachloroethane	0.457	0.475	-3.9	84	0.00	14.08
89		ethylbenzene	1.809	1.851	-2.3	84	0.00	14.07
90		m,p-xylene	0.705	0.723	-2.6	85	0.00	14.20
91		o-xylene	1.516	1.568	-3.4	83	0.00	14.59
92		styrene	1.199	1.238	-3.3	82	0.00	14.60
93		bromoform	0.280	0.289	-3.2	84	0.00	14.83
94		butyl acrylate	0.656	0.634	3.4	79	0.00	14.41
95		isopropylbenzene	1.822	1.981	-8.7	88	0.00	14.93
96		cis-1,4-dichloro-2-butene	0.146	0.158	-8.2	87	0.00	14.97
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	88	0.00	16.29
98	S	4-bromofluorobenzene (s)	0.829	0.741	10.6	77	0.00	15.13

Continuing Calibration Summary

Job Number: JC86837 **Sample:** VY8023-CC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184879.D
Project: National Grid, Philly Coke, Philadelphia, PA

99	bromobenzene	0.998	0.915	8.3	83	0.00	15.31
100	1,1,2,2-tetrachloroethane	0.765	0.670	12.4	80	0.00	15.20
101	trans-1,4-dichloro-2-bute	0.170	0.167	1.8	85	0.00	15.24
102	1,2,3-trichloropropane	0.194	0.182	6.2	84	0.00	15.29
103	n-propylbenzene	3.859	3.770	2.3	88	0.00	15.34
104	2-chlorotoluene	0.879	0.846	3.8	86	0.00	15.48
105	4-chlorotoluene	2.450	2.277	7.1	83	0.00	15.59
106	1,3,5-trimethylbenzene	2.840	2.765	2.6	85	0.00	15.50
107	tert-butylbenzene	0.502	0.524	-4.4	86	0.00	15.83
108	1,2,4-trimethylbenzene	2.925	2.853	2.5	85	0.00	15.88
109	sec-butylbenzene	3.543	3.626	-2.3	89	0.00	16.05
110	1,3-dichlorobenzene	1.846	1.809	2.0	88	0.00	16.22
111	p-isopropyltoluene	3.120	3.234	-3.7	89	0.00	16.18
112	1,4-dichlorobenzene	1.901	1.810	4.8	88	0.00	16.31
113	1,2-dichlorobenzene	1.891	1.783	5.7	86	0.00	16.68
114	n-butylbenzene	1.627	1.690	-3.9	90	0.00	16.59
115	1,2-dibromo-3-chloropropa	0.178	0.177	0.6	90	0.00	17.45
116	1,3,5-trichlorobenzene	1.787	1.884	-5.4	92	0.00	17.64
117	1,2,4-trichlorobenzene	1.508	1.579	-4.7	90	0.00	18.29
118	hexachlorobutadiene	0.926	0.933	-0.8	91	0.00	18.41
119	naphthalene	2.338	2.558	-9.4	89	0.00	18.59
120	1,2,3-trichlorobenzene	1.306	1.410	-8.0	90	0.00	18.82
121	hexachloroethane	0.555	0.607	-9.4	91	0.00	16.98
122	benzyl chloride	1.390	1.378	0.9	89	0.00	16.40
	----------	True	Calc.	% Drift	----------		
123	2-ethylhexyl acrylate	10.000	8.933	10.7	88	0.00	18.30
	----------	AvgRF	CCRF	% Dev	----------		
124	2-methylnaphthalene	1.174	1.176	-0.2	91	0.00	19.83
125	bis(chloromethyl)ether		----------NA----------				
126	ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Fri May 03 04:41:00 2019

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VY8026-CC8014
Lab FileID: Y184933.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...7-19\vy8026\y184933.d Vial: 1
Acq On : 4 May 2019 10:41 am Operator: PrashanS
Sample : CC8014-50 Inst : MSY
Misc : MS34370,VY8026,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	7.74
2		ethanol		----------NA----------				
3		tertiary butyl alcohol	1.558	1.514	2.8	101	0.00	7.83
4		1,4-dioxane	0.154	0.156	-1.3	103	0.00	11.54
5	I	pentafluorobenzene	1.000	1.000	0.0	112	0.00	9.97
6		chlorodifluoromethane	0.788	0.770	2.3	114	0.00	4.38
7		dichlorodifluoromethane	0.990	0.821	17.1	94	0.00	4.35
8		chloromethane	1.042	0.836	19.8	99	0.00	4.74
9		vinyl chloride	0.857	0.746	13.0	103	0.00	4.99
10		1,3-butadiene	0.531	0.528	0.6	117	0.00	5.03
11		bromomethane	0.726	0.601	17.2	102	0.00	5.63
12		chloroethane	0.464	0.425	8.4	107	-0.02	5.79
13		vinyl bromide	0.402	0.569	-41.5#	157	0.00	6.15
14		trichlorofluoromethane	0.988	0.974	1.4	118	0.00	6.27
15		ethyl ether	0.242	0.235	2.9	102	0.00	6.63
16		2-chloropropane	0.214	0.214	0.0	111	0.00	6.86
17		acrolein	0.067	0.072	-7.5	119	0.00	6.87
18		freon 113	0.463	0.516	-11.4	121	0.00	7.10
19		1,1-dichloroethene	0.768	0.784	-2.1	109	0.00	7.07
20		acetone	0.122	0.110	9.8	108	-0.01	7.07
21		acetonitrile	0.060	0.050	16.7	98	-0.01	7.49
22		iodomethane	0.969	0.953	1.7	109	0.00	7.32
23		carbon disulfide	1.681	1.624	3.4	112	0.00	7.47
24		methylene chloride	0.667	0.591	11.4	106	0.00	7.78
25		methyl acetate	0.283	0.250	11.7	103	0.00	7.52
26		methyl tert butyl ether	1.541	1.364	11.5	101	0.00	8.14
27		trans-1,2-dichloroethene	0.761	0.691	9.2	104	0.00	8.16
28		hexane	0.672	0.672	0.0	111	0.00	8.50
29		di-isopropyl ether	1.918	1.697	11.5	98	0.00	8.72
30		ethyl tert-butyl ether	1.745	1.585	9.2	100	0.00	9.18
31		2-butanone	0.040	0.037	7.5	108	0.00	9.38
32		1,1-dichloroethane	0.955	0.882	7.6	104	0.00	8.73
33		chloroprene	0.684	0.647	5.4	105	0.00	8.83
34		acrylonitrile	0.153	0.131	14.4	99	0.00	8.06
35		vinyl acetate	0.076	0.070	7.9	105	0.00	8.67
36		ethyl acetate	0.054	0.044	18.5	92	0.00	9.39
37		2,2-dichloropropane	0.825	0.802	2.8	112	0.00	9.49
38		cis-1,2-dichloroethene	0.628	0.573	8.8	107	0.00	9.45
39		propionitrile	0.054	0.046	14.8	99	0.00	9.46
40		bromochloromethane	0.393	0.373	5.1	108	0.00	9.74
41		tetrahydrofuran	0.048	0.046	4.2	111	0.00	9.76

Continuing Calibration Summary

Job Number: JC86837 **Sample:** VY8026-CC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184933.D
Project: National Grid, Philly Coke, Philadelphia, PA

42		chloroform	1.015	0.892	12.1	105	0.00	9.82
43		tert-butyl formate	0.383	0.343	10.4	102	0.00	9.87
44		isobutyl alcohol		----------NA----------				
45	S	dibromofluoromethane (s)	0.454	0.450	0.9	112	0.00	10.02
46		methacrylonitrile	0.145	0.123	15.2	98	0.00	9.65
47		1,1,1-trichloroethane	0.875	0.851	2.7	113	0.00	10.09
48		cyclohexane	0.870	0.786	9.7	104	0.00	10.20
49		1,1-dichloropropene	0.619	0.621	-0.3	113	0.00	10.26
50		tert-amyl alcohol	0.018	0.015	16.7	99	-0.01	10.37
51		carbon tetrachloride	0.761	0.773	-1.6	118	0.00	10.29
52	I	1,4-difluorobenzene	1.000	1.000	0.0	111	0.00	10.90
53	S	1,2-dichloroethane-d4 (s)	0.279	0.274	1.8	112	0.00	10.43
54		2,2,4-trimethylpentane	1.371	1.428	-4.2	109	0.00	10.60
55		tert-amyl methyl ether	1.122	1.038	7.5	102	0.00	10.58
56		n-butyl alcohol	0.006	0.006	0.0	99	0.00	10.95
57		benzene	1.444	1.336	7.5	106	0.00	10.50
58		heptane	0.246	0.242	1.6	109	0.00	10.74
59		isopropyl acetate	0.059	0.054	8.5	102	0.00	10.40
60		1,2-dichloroethane	0.464	0.410	11.6	102	0.00	10.53
61		trichloroethene	0.375	0.385	-2.7	116	0.00	11.21
62		ethyl acrylate	0.309	0.271	12.3	100	0.00	11.19
63		2-nitropropane	0.100	0.084	16.0	98	0.00	11.95
64		2-chloroethyl vinyl ether	0.171	0.154	9.9	102	0.00	11.98
65		methyl methacrylate	0.068	0.063	7.4	107	0.00	11.46
66		1,2-dichloropropane	0.368	0.340	7.6	103	0.00	11.50
67		methylcyclohexane	0.596	0.625	-4.9	115	0.00	11.51
68		dibromomethane	0.215	0.197	8.4	104	0.00	11.61
69		bromodichloromethane	0.514	0.478	7.0	104	0.00	11.76
70		epichlorohydrin	0.026	0.021	19.2	97	0.00	12.07
71		cis-1,3-dichloropropene	0.559	0.525	6.1	102	0.00	12.20
72		4-methyl-2-pentanone	0.101	0.089	11.9	99	0.00	12.30
73		3-methyl-1-butanol	0.008	0.007	12.5	103	0.00	12.29
74	I	chlorobenzene-d5	1.000	1.000	0.0	108	0.00	13.99
75	S	toluene-d8 (s)	1.265	1.318	-4.2	109	0.00	12.51
76		toluene	0.963	0.933	3.1	105	0.00	12.58
77		trans-1,3-dichloropropene	0.556	0.545	2.0	102	0.00	12.76
78		ethyl methacrylate	0.389	0.366	5.9	99	0.00	12.74
79		1,1,2-trichloroethane	0.275	0.256	6.9	103	0.00	12.97
80		2-hexanone	0.103	0.099	3.9	102	0.00	13.13
81		tetrachloroethene	0.437	0.467	-6.9	116	0.00	13.12
82		1,3-dichloropropane	0.512	0.478	6.6	101	0.00	13.15
83		butyl acetate	0.199	0.188	5.5	101	0.00	13.20
84		dibromochloromethane	0.412	0.428	-3.9	106	0.00	13.39
85		1,2-dibromoethane	0.433	0.350	19.2	88	0.00	13.55
86		n-butyl ether	1.590	1.514	4.8	100	0.00	13.96
87		chlorobenzene	1.158	1.085	6.3	105	0.00	14.02
88		1,1,1,2-tetrachloroethane	0.457	0.455	0.4	105	0.00	14.08
89		ethylbenzene	1.809	1.765	2.4	105	0.00	14.07
90		m,p-xylene	0.705	0.686	2.7	106	0.00	14.19
91		o-xylene	1.516	1.501	1.0	104	0.00	14.59
92		styrene	1.199	1.199	0.0	104	0.00	14.60
93		bromoform	0.280	0.286	-2.1	109	0.00	14.83
94		butyl acrylate	0.656	0.618	5.8	101	0.00	14.41
95		isopropylbenzene	1.822	1.886	-3.5	109	0.00	14.93
96		cis-1,4-dichloro-2-butene	0.146	0.146	0.0	106	0.00	14.97
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	16.29
98	S	4-bromofluorobenzene (s)	0.829	0.792	4.5	105	0.00	15.13

Continuing Calibration Summary

Job Number: JC86837 **Sample:** VY8026-CC8014
Account: BBLNYS Arcadis **Lab FileID:** Y184933.D
Project: National Grid, Philly Coke, Philadelphia, PA

99	bromobenzene	0.998	0.933	6.5	108	0.00	15.31
100	1,1,2,2-tetrachloroethane	0.765	0.679	11.2	105	0.00	15.20
101	trans-1,4-dichloro-2-bute	0.170	0.159	6.5	104	0.00	15.24
102	1,2,3-trichloropropane	0.194	0.177	8.8	104	0.00	15.29
103	n-propylbenzene	3.859	3.707	3.9	110	0.00	15.35
104	2-chlorotoluene	0.879	0.838	4.7	109	0.00	15.48
105	4-chlorotoluene	2.450	2.275	7.1	106	0.00	15.59
106	1,3,5-trimethylbenzene	2.840	2.756	3.0	109	0.00	15.50
107	tert-butylbenzene	0.502	0.532	-6.0	112	0.00	15.83
108	1,2,4-trimethylbenzene	2.925	2.794	4.5	106	0.00	15.88
109	sec-butylbenzene	3.543	3.581	-1.1	112	0.00	16.05
110	1,3-dichlorobenzene	1.846	1.783	3.4	111	0.00	16.22
111	p-isopropyltoluene	3.120	3.153	-1.1	112	0.00	16.18
112	1,4-dichlorobenzene	1.901	1.773	6.7	110	0.00	16.31
113	1,2-dichlorobenzene	1.891	1.753	7.3	108	0.00	16.68
114	n-butylbenzene	1.627	1.651	-1.5	112	0.00	16.58
115	1,2-dibromo-3-chloropropa	0.178	0.173	2.8	113	0.00	17.45
116	1,3,5-trichlorobenzene	1.787	1.817	-1.7	113	0.00	17.64
117	1,2,4-trichlorobenzene	1.508	1.550	-2.8	113	0.00	18.28
118	hexachlorobutadiene	0.926	0.899	2.9	112	0.00	18.41
119	naphthalene	2.338	2.531	-8.3	113	0.00	18.59
120	1,2,3-trichlorobenzene	1.306	1.390	-6.4	114	0.00	18.82
121	hexachloroethane	0.555	0.584	-5.2	112	0.00	16.98
122	benzyl chloride	1.390	1.396	-0.4	115	0.00	16.41
	----------	True	Calc.	% Drift	----------		
123	2-ethylhexyl acrylate	10.000	8.716	12.8	110	0.00	18.30
	----------	AvgRF	CCRF	% Dev	----------		
124	2-methylnaphthalene	1.174	1.126	4.1	112	0.00	19.84
125	bis(chloromethyl)ether		----------NA----------				
126	ethylenimine		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Y184719.D MYS8014.M Mon May 06 13:14:59 2019

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225838.d
Acq On : 30 Apr 2019 5:18 pm
Operator : thienn
Sample : jc86837-1 Inst : GCMSI
Misc : MS34232,VI9098,4.8,,100,10,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 09:13:37 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

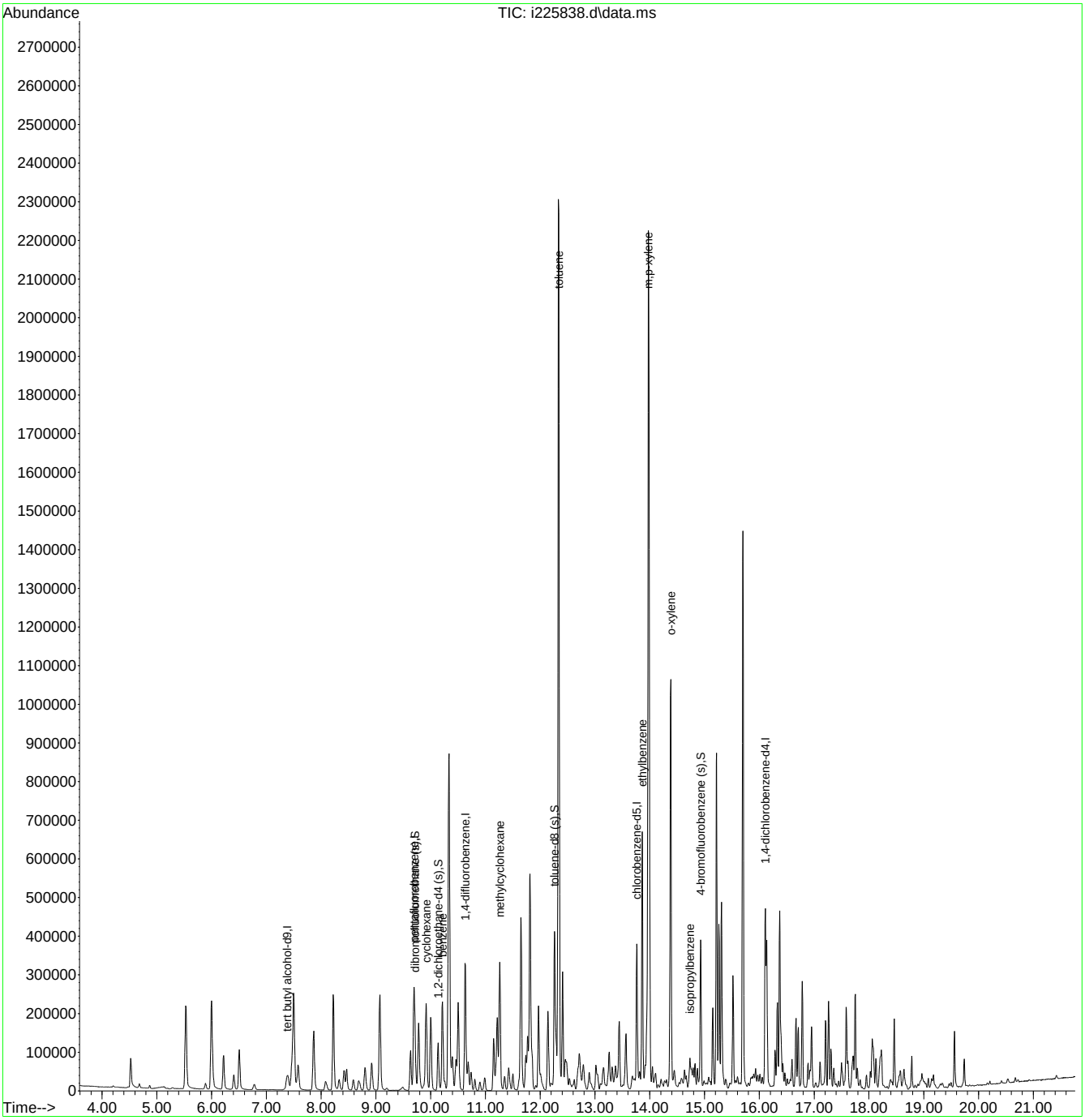
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.379	65	56976	500.00	ug/L	0.00
4) pentafluorobenzene	9.696	168	168094	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.633	114	224293	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	182772	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.109	152	108581	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	66527	50.37	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.74%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	73166	52.26	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 104.52%			
74) toluene-d8 (s)	12.259	98	242460	51.75	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.50%			
97) 4-bromofluorobenzene (s)	14.927	95	95128	57.45	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 114.90%			
Target Compounds						Qvalue
49) cyclohexane	9.921	84	53893	34.81	ug/L	89
55) benzene	10.214	78	196969	44.95	ug/L	98
62) methylcyclohexane	11.260	83	124241	62.50	ug/L	99
75) toluene	12.338	92	895453	353.96	ug/L	99
88) ethylbenzene	13.860	91	411906	87.40	ug/L	100
89) m,p-xylene	13.975	106	684485	369.33	ug/L	95
90) o-xylene	14.383	106	250573	135.79	ug/L	94
95) isopropylbenzene	14.733	105	31158	6.71	ug/L	96

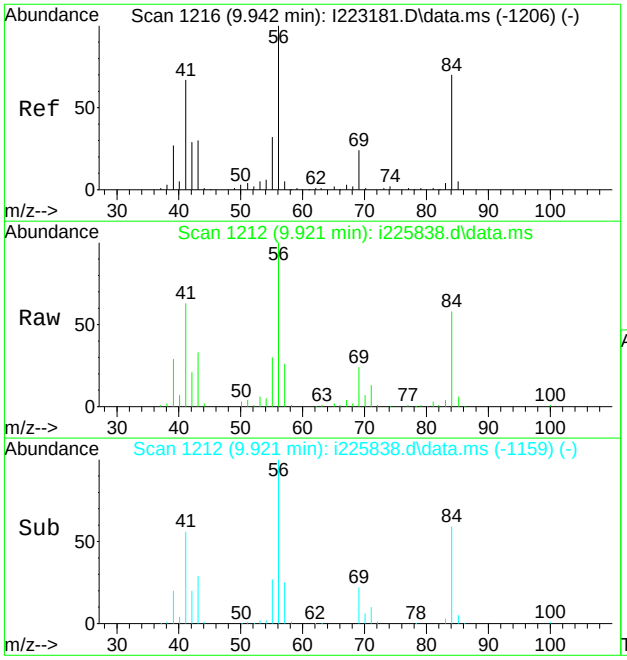
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225838.d
Acq On : 30 Apr 2019 5:18 pm
Operator : thienn
Sample : jc86837-1 Inst : GCMSI
Misc : MS34232,VI9098,4.8,,100,10,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 09:13:37 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

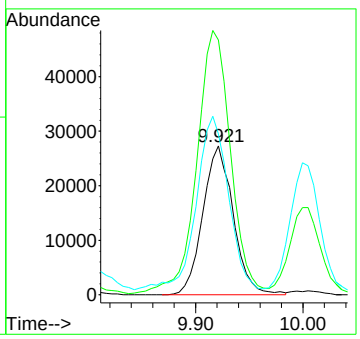


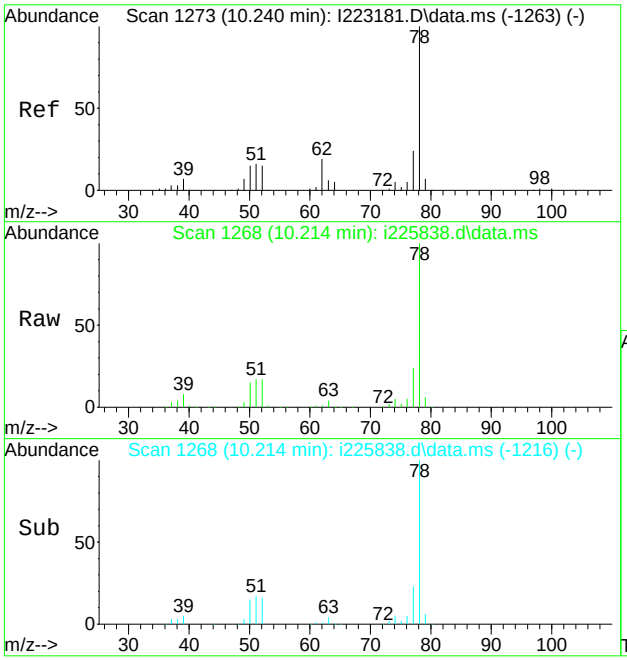


#49
cyclohexane
Concen: 34.81 ug/L
RT: 9.921 min Scan# 1212
Delta R.T. -0.021 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion: 84 Resp: 53893

Ion	Ratio	Lower	Upper
84	100		
56	163.8	113.6	173.6
41	99.6	66.1	126.1

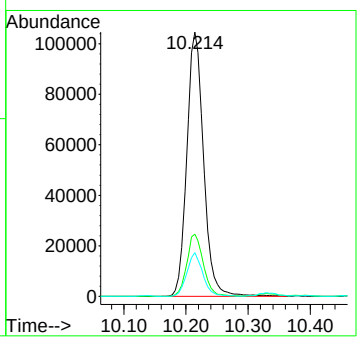


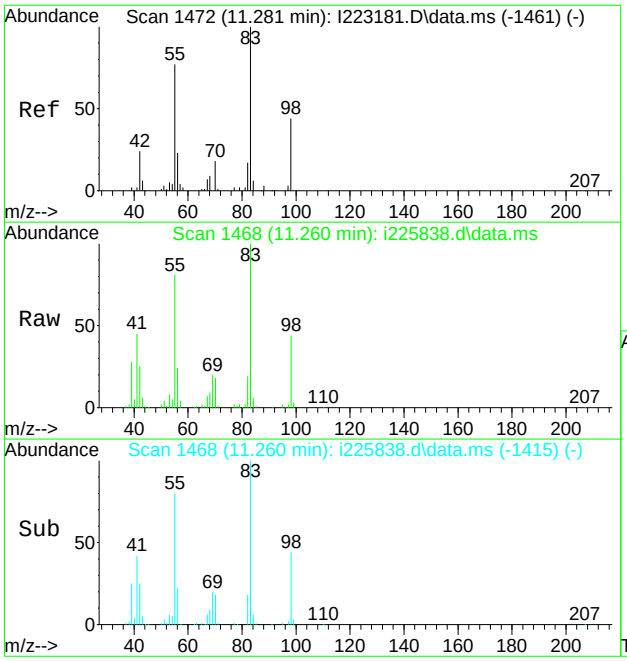


#55
benzene
Concen: 44.95 ug/L
RT: 10.214 min Scan# 1268
Delta R.T. -0.026 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion: 78 Resp: 196969

Ion	Ratio	Lower	Upper
78	100		
77	23.5	0.0	54.0
52	16.6	0.0	45.4

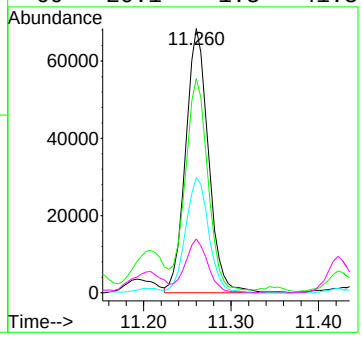


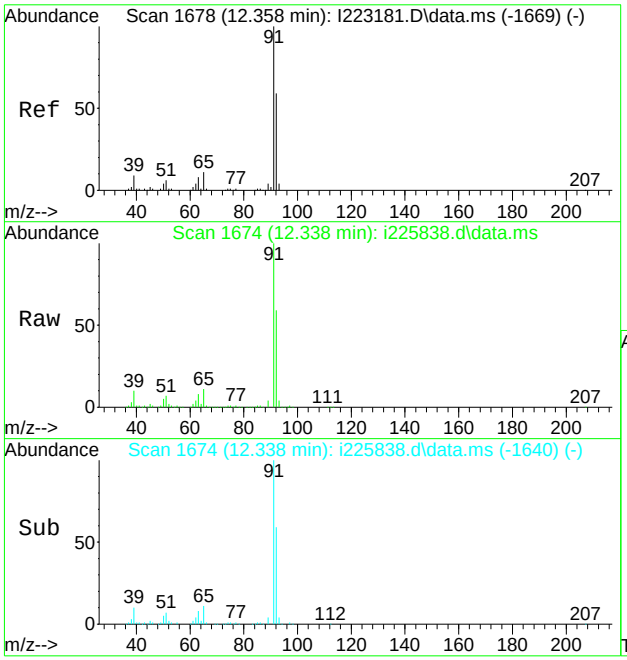


#62
methylcyclohexane
Concen: 62.50 ug/L
RT: 11.260 min Scan# 1468
Delta R.T. -0.021 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion: 83 Resp: 124241

Ion	Ratio	Lower	Upper
83	100		
55	80.0	59.8	99.8
98	43.6	24.4	64.4
69	20.1	1.3	41.3

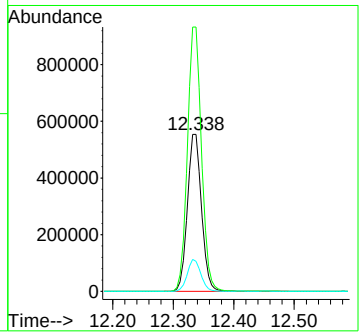


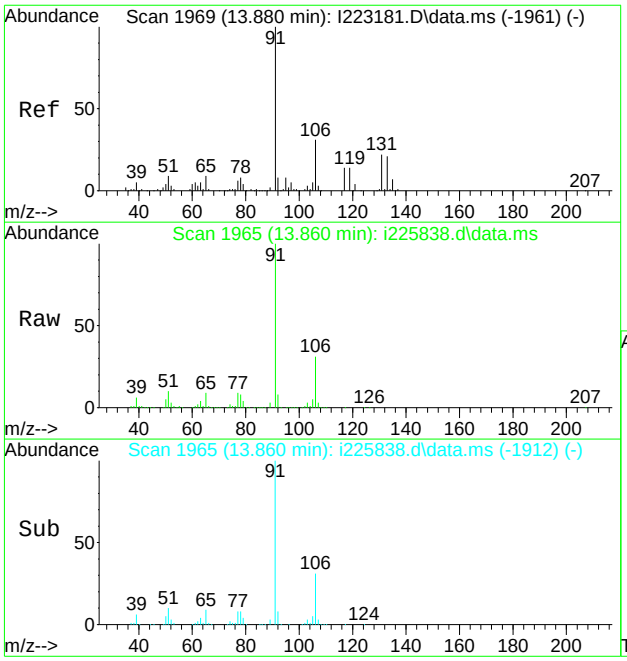


#75
toluene
Concen: 353.96 ug/L
RT: 12.338 min Scan# 1674
Delta R.T. -0.021 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion: 92 Resp: 895453

Ion	Ratio	Lower	Upper
92	100		
91	168.5	149.6	189.6
65	19.2	0.0	38.7

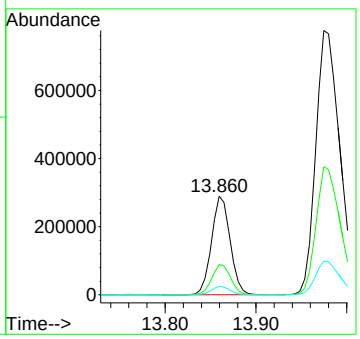


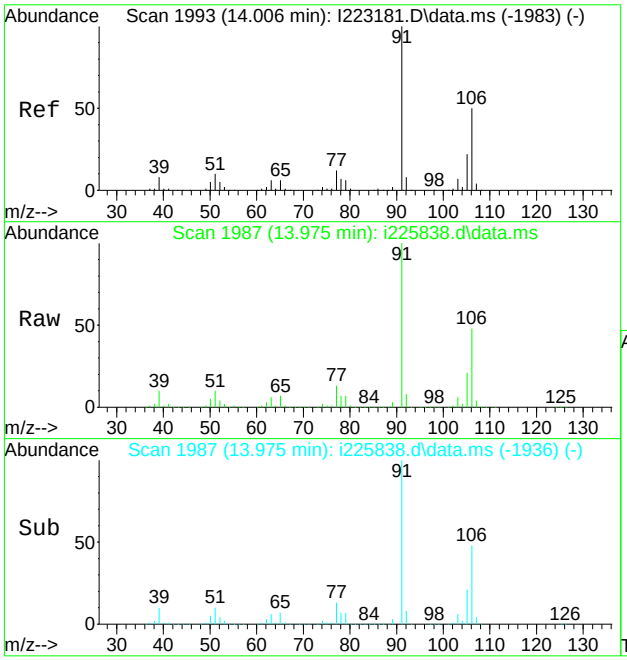


#88
ethylbenzene
Concen: 87.40 ug/L
RT: 13.860 min Scan# 1965
Delta R.T. -0.021 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion: 91 Resp: 411906

Ion	Ratio	Lower	Upper
91	100		
106	30.8	0.7	60.7
77	8.4	0.0	38.1

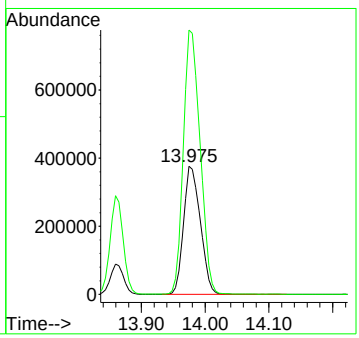


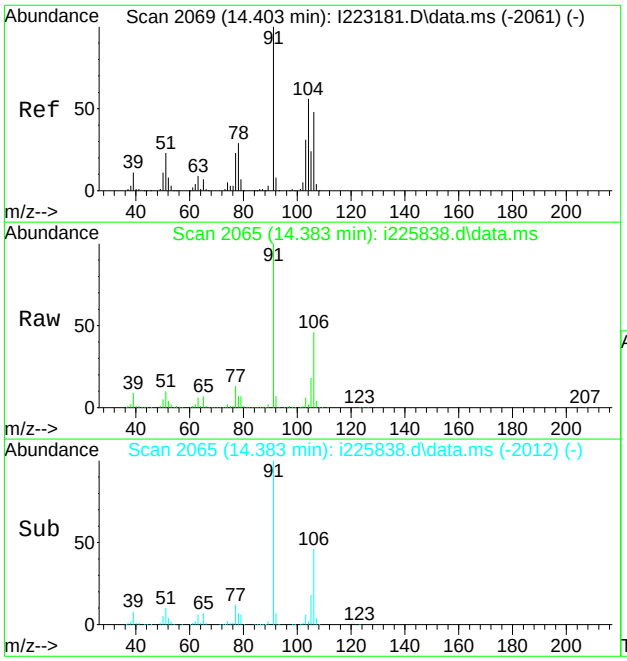


#89
m,p-xylene
Concen: 369.33 ug/L
RT: 13.975 min Scan# 1987
Delta R.T. -0.031 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion:106 Resp: 684485

Ion	Ratio	Lower	Upper
106	100		
91	206.4	169.5	229.5

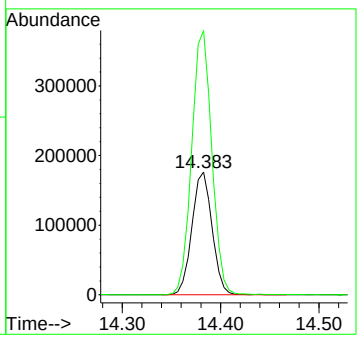


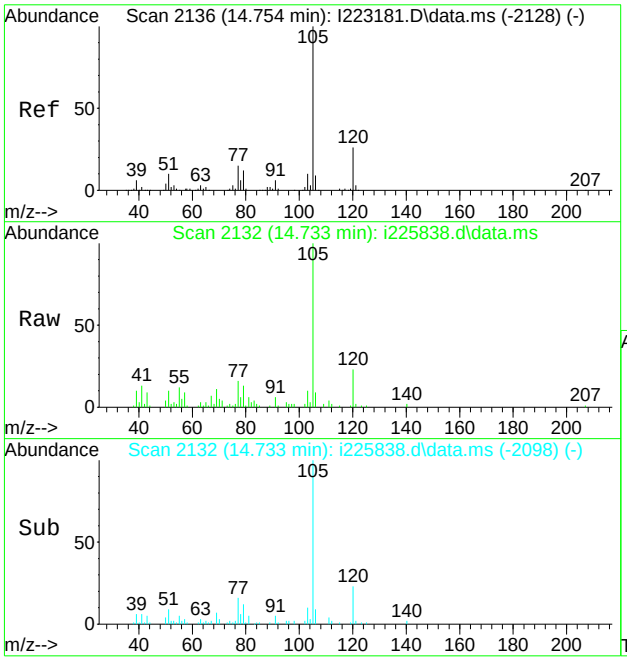


#90
o-xylene
Concen: 135.79 ug/L
RT: 14.383 min Scan# 2065
Delta R.T. -0.021 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion:106 Resp: 250573

Ion	Ratio	Lower	Upper
106	100		
91	215.4	176.2	236.2

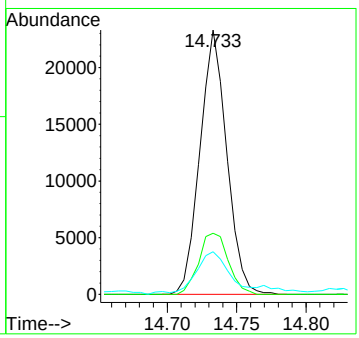




#95
isopropylbenzene
Concen: 6.71 ug/L
RT: 14.733 min Scan# 2132
Delta R.T. -0.021 min
Lab File: i225838.d
Acq: 30 Apr 2019 5:18 pm

Tgt Ion:105 Resp: 31158

Ion	Ratio	Lower	Upper
105	100		
120	23.1	6.2	46.2
77	15.0	0.0	35.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225861.d
Acq On : 1 May 2019 10:27 am
Operator : thienn
Sample : jc86837-1 Inst : GCMSI
Misc : MS34232,VI9099,4.8,,10,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 04:39:07 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

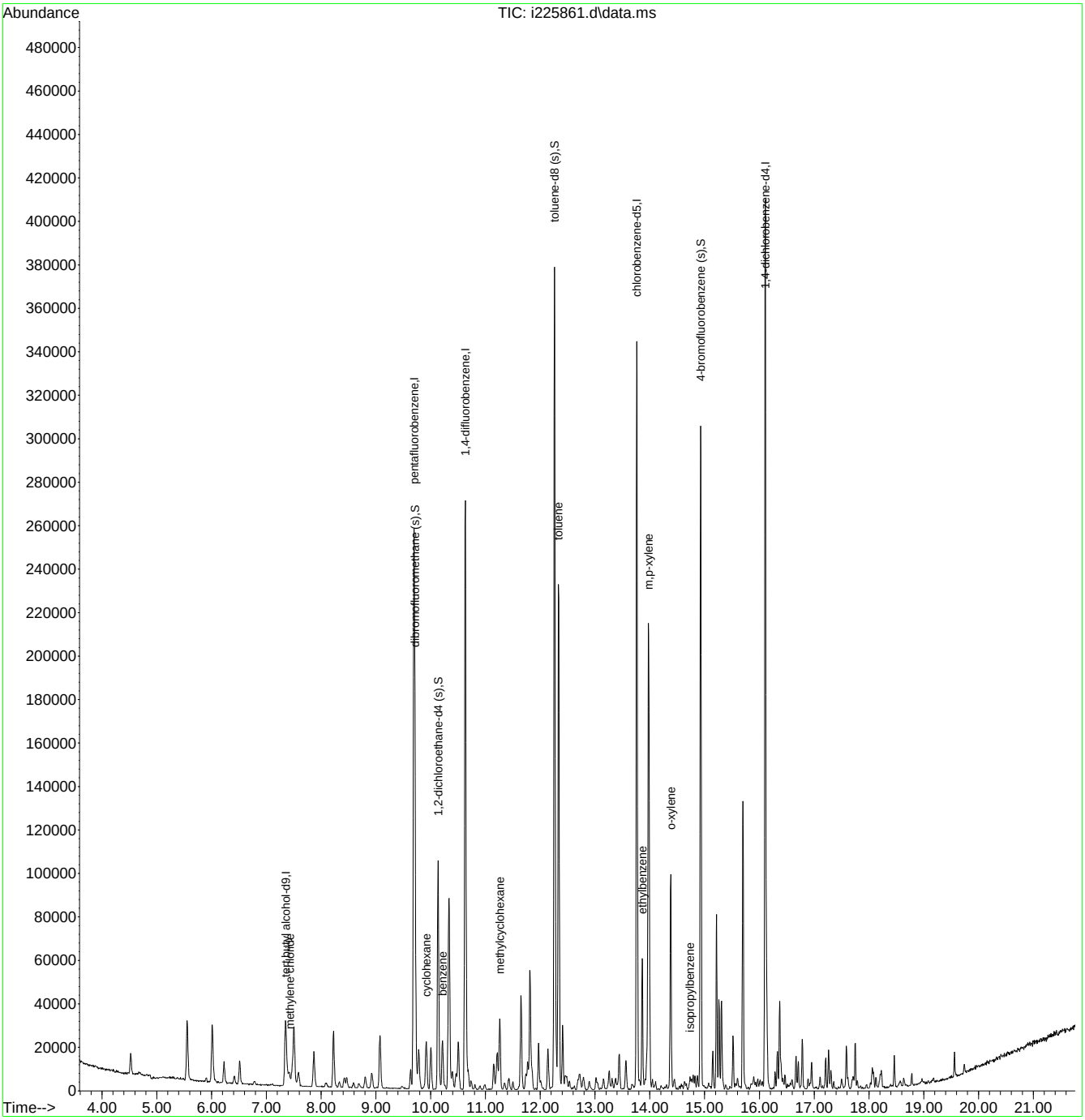
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	46642	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	157336	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	207936	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	168749	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	96439	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	64277	51.99	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.98%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	72812	56.10	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 112.20%			
74) toluene-d8 (s)	12.259	98	221949	51.30	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.60%			
97) 4-bromofluorobenzene (s)	14.926	95	80158	54.50	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 109.00%			
Target Compounds						Qvalue
24) methylene chloride	7.426	84	1947	1.80	ug/L	97
49) cyclohexane	9.921	84	5225	3.61	ug/L #	68
55) benzene	10.214	78	19040	4.69	ug/L	96
62) methylcyclohexane	11.260	83	11919	6.47	ug/L	94
75) toluene	12.332	92	88675	37.97	ug/L	97
88) ethylbenzene	13.859	91	37884	8.71	ug/L	96
89) m,p-xylene	13.980	106	66548	38.89	ug/L	94
90) o-xylene	14.382	106	22779	13.37	ug/L	89
95) isopropylbenzene	14.733	105	2636	0.61	ug/L	96

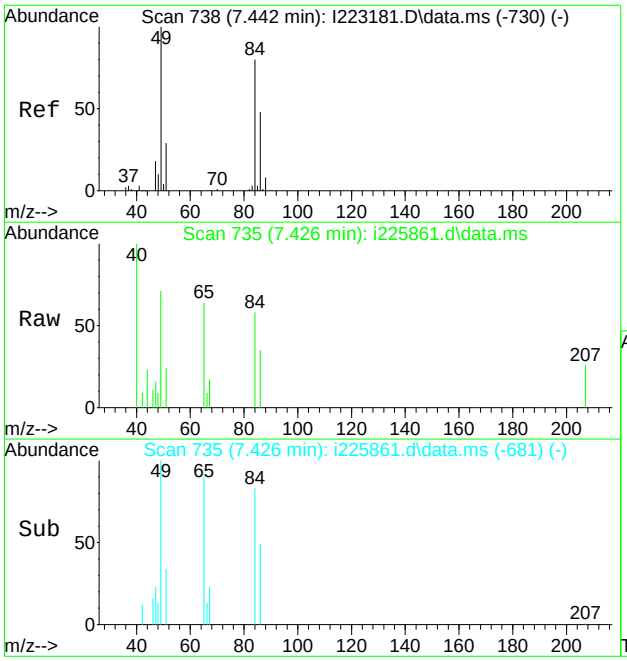
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225861.d
Acq On : 1 May 2019 10:27 am
Operator : thienn
Sample : jc86837-1 Inst : GCMSI
Misc : MS34232,VI9099,4.8,,10,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 04:39:07 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

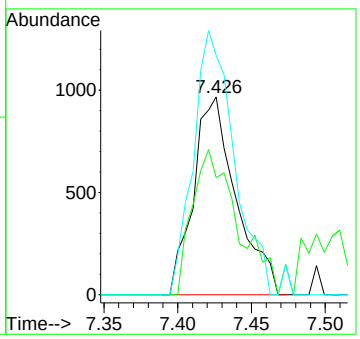


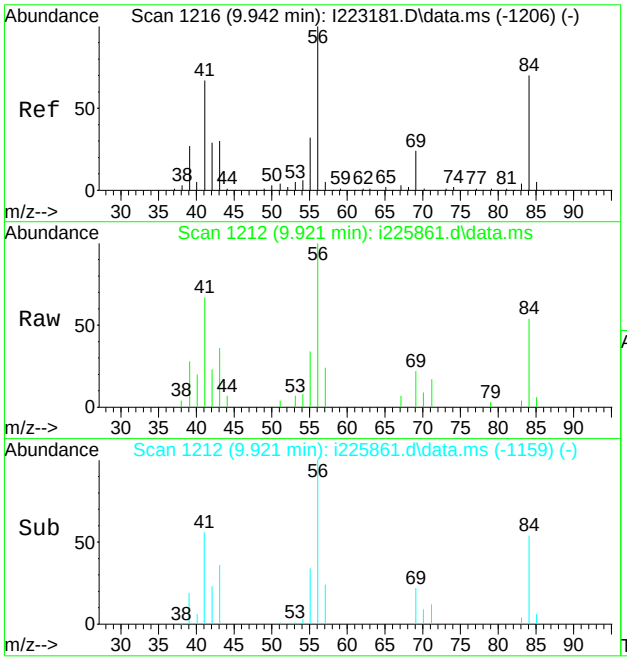


#24
methylene chloride
Concen: 1.80 ug/L
RT: 7.426 min Scan# 735
Delta R.T. -0.016 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion: 84 Resp: 1947

Ion	Ratio	Lower	Upper
84	100		
86	59.3	30.4	90.4
49	120.9	95.7	155.7

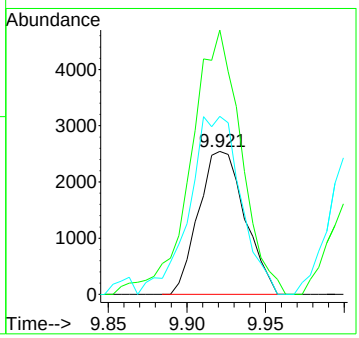


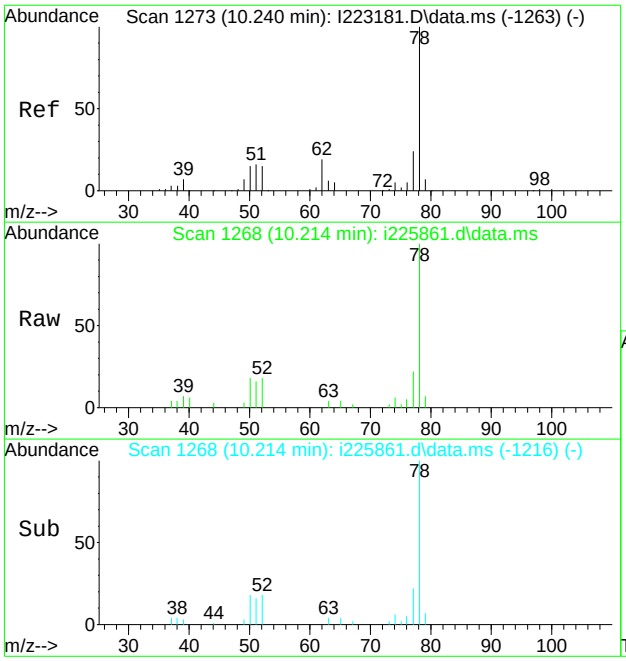


#49
cyclohexane
Concen: 3.61 ug/L
RT: 9.921 min Scan# 1212
Delta R.T. -0.021 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion: 84 Resp: 5225

Ion	Ratio	Lower	Upper
84	100		
56	185.1	113.6	173.6#
41	124.5	66.1	126.1

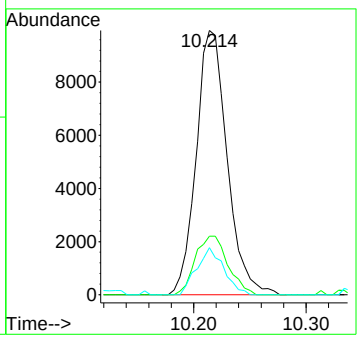


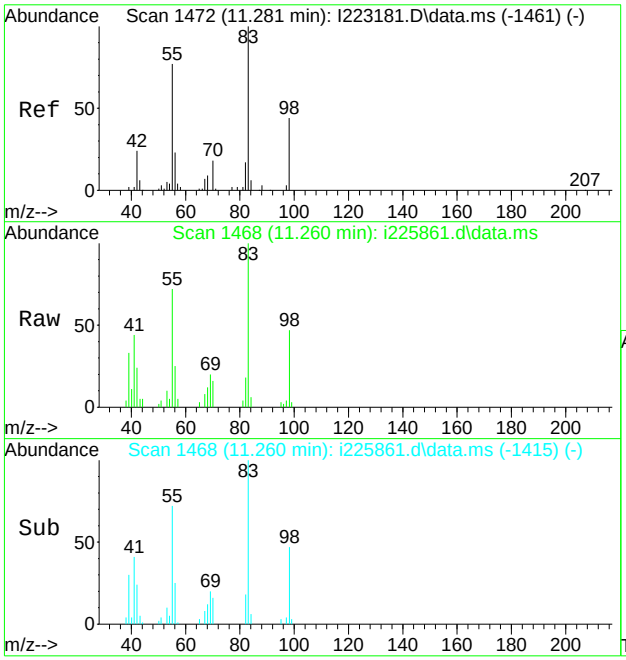


#55
benzene
Concen: 4.69 ug/L
RT: 10.214 min Scan# 1268
Delta R.T. -0.026 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion: 78 Resp: 19040

Ion	Ratio	Lower	Upper
78	100		
77	22.2	0.0	54.0
52	17.8	0.0	45.4

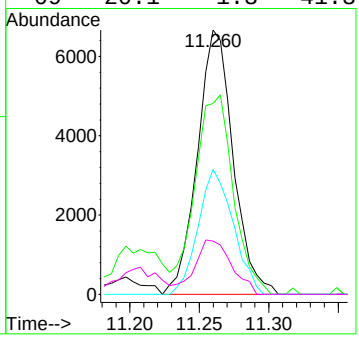


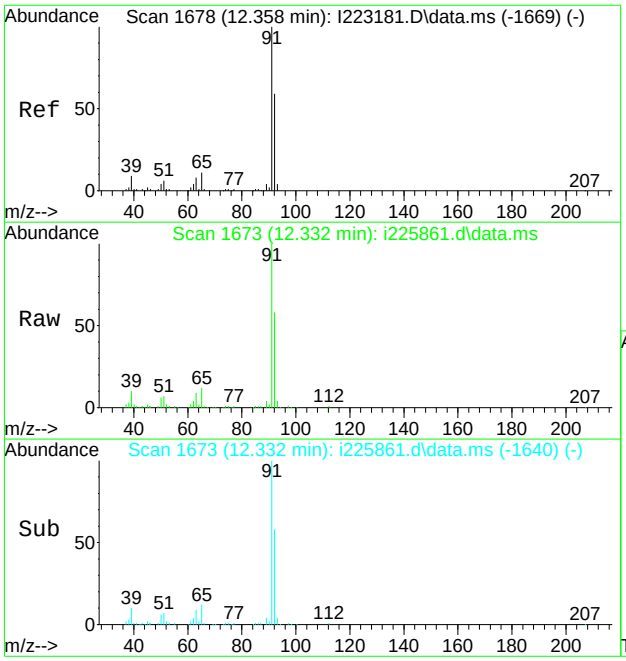


#62
methylcyclohexane
Concen: 6.47 ug/L
RT: 11.260 min Scan# 1468
Delta R.T. -0.021 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion: 83 Resp: 11919

Ion	Ratio	Lower	Upper
83	100		
55	72.2	59.8	99.8
98	47.3	24.4	64.4
69	20.1	1.3	41.3

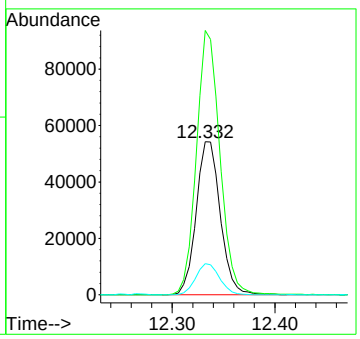


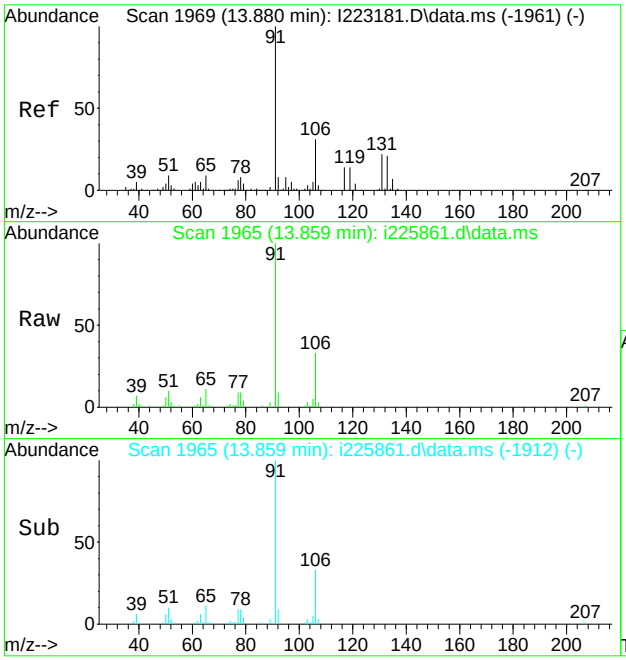


#75
toluene
Concen: 37.97 ug/L
RT: 12.332 min Scan# 1673
Delta R.T. -0.026 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion: 92 Resp: 88675

Ion	Ratio	Lower	Upper
92	100		
91	172.9	149.6	189.6
65	20.4	0.0	38.7

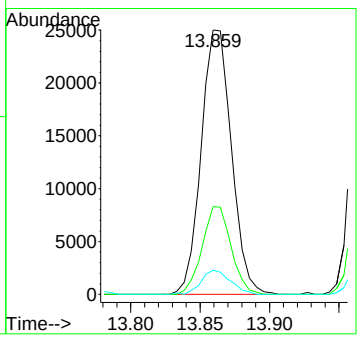


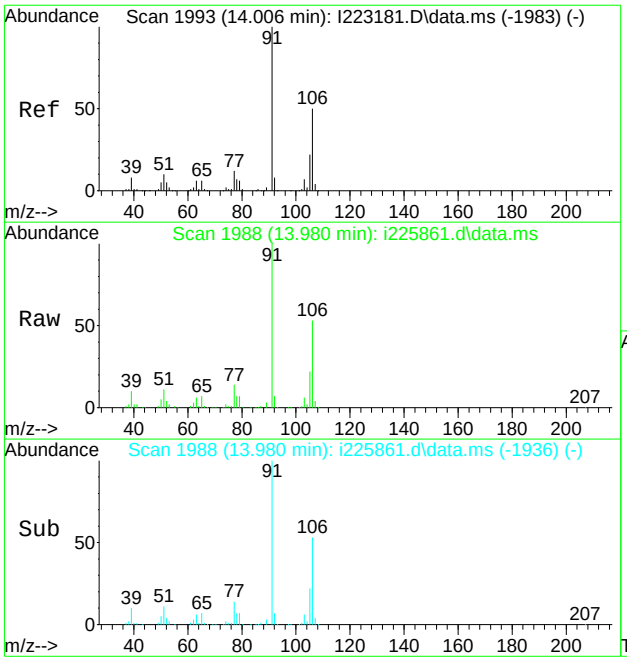


#88
ethylbenzene
Concen: 8.71 ug/L
RT: 13.859 min Scan# 1965
Delta R.T. -0.021 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion: 91 Resp: 37884

Ion	Ratio	Lower	Upper
91	100		
106	33.2	0.7	60.7
77	9.2	0.0	38.1

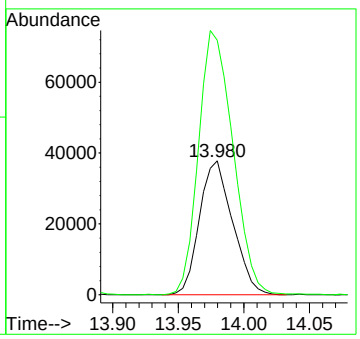


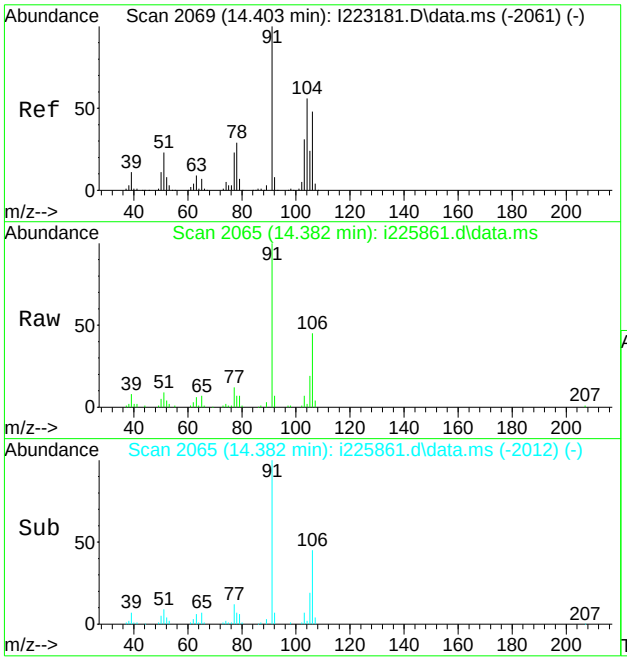


#89
m,p-xylene
Concen: 38.89 ug/L
RT: 13.980 min Scan# 1988
Delta R.T. -0.026 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion:106 Resp: 66548

Ion	Ratio	Lower	Upper
106	100		
91	190.1	169.5	229.5

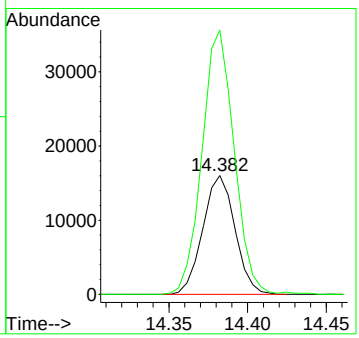


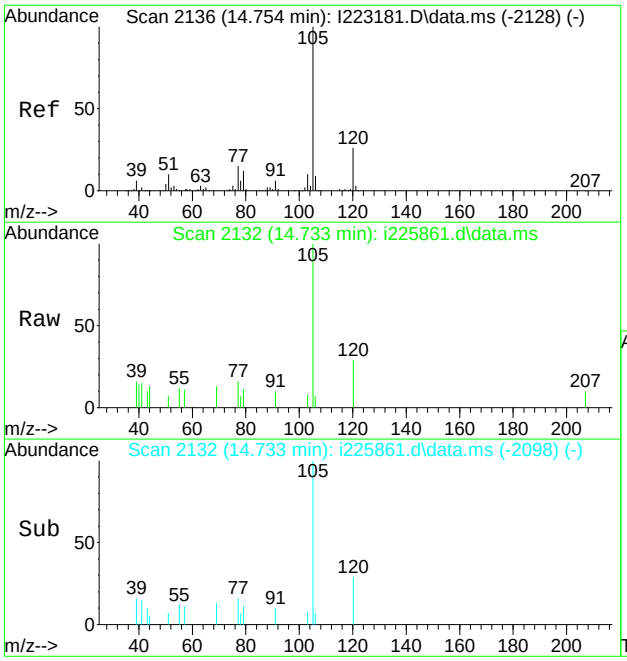


#90
o-xylene
Concen: 13.37 ug/L
RT: 14.382 min Scan# 2065
Delta R.T. -0.021 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion:106 Resp: 22779

Ion	Ratio	Lower	Upper
106	100		
91	222.5	176.2	236.2

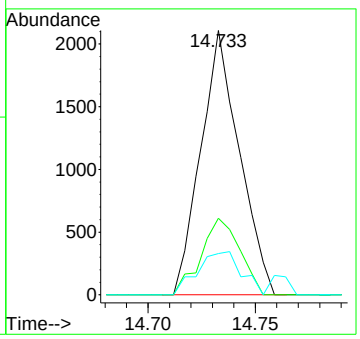




#95
isopropylbenzene
Concen: 0.61 ug/L
RT: 14.733 min Scan# 2132
Delta R.T. -0.021 min
Lab File: i225861.d
Acq: 1 May 2019 10:27 am

Tgt Ion:105 Resp: 2636

Ion	Ratio	Lower	Upper
105	100		
120	28.9	6.2	46.2
77	15.6	0.0	35.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151614.d
Acq On : 1 May 2019 4:35 pm
Operator : PrashanS
Sample : JC86837-2 Inst : MS3C
Misc : MS34232,V3C6814,5.4,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:43:55 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

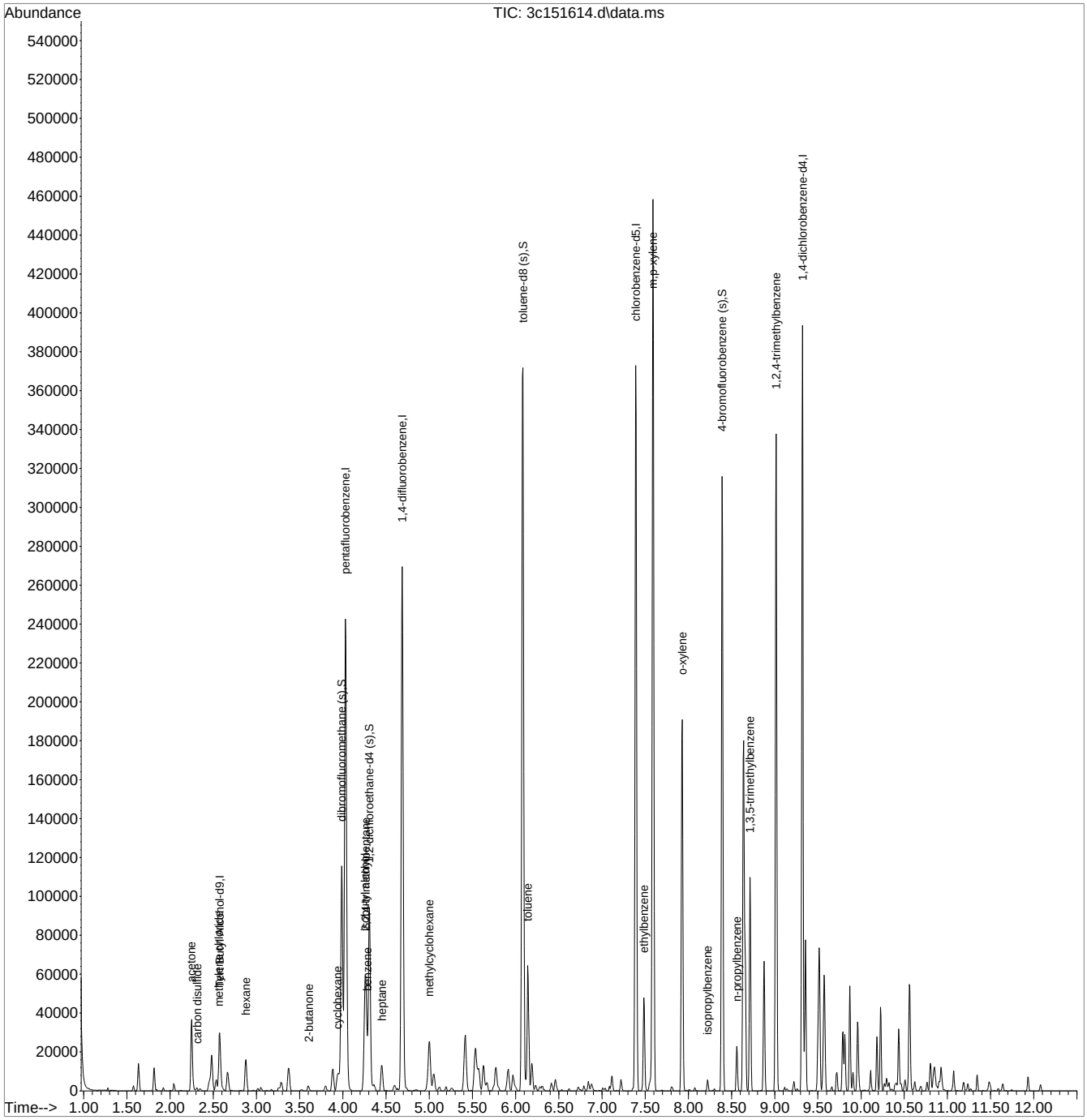
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Tert Butyl Alcohol-d9	2.574	65	29029	500.00	ug/L		0.00
5) pentafluorobenzene	4.028	168	157669	50.00	ug/L		0.00
52) 1,4-difluorobenzene	4.687	114	206993	50.00	ug/L		0.00
74) chlorobenzene-d5	7.391	117	171502	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	9.321	152	82775	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	3.986	113	56732	49.80	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.60%				
53) 1,2-dichloroethane-d4 (s)	4.305	65	54438	48.40	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.80%				
75) toluene-d8 (s)	6.083	98	228356	53.79	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.58%				
98) 4-bromofluorobenzene (s)	8.390	95	77422	56.89	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 113.78%				
Target Compounds							Qvalue
20) acetone	2.244	58	6929	141.05	ug/L		89
23) carbon disulfide	2.312	76	1533	0.61	ug/L		69
24) methylene chloride	2.563	84	1015	1.04	ug/L		93
28) hexane	2.877	57	6719	4.18	ug/L		95
31) 2-butanone	3.604	72	668	8.63	ug/L	#	56
44) isobutyl alcohol	4.258	41	16038	115.76	ug/L		79
48) cyclohexane	3.939	84	2887	1.75	ug/L		75
54) 2,2,4-trimethylpentane	4.263	57	55956	14.57	ug/L		93
57) benzene	4.284	78	4490	1.18	ug/L		93
58) heptane	4.452	57	2760	3.39	ug/L		93
67) methylcyclohexane	5.001	83	7986	4.14	ug/L		90
76) toluene	6.141	92	23253	9.50	ug/L		96
89) ethylbenzene	7.485	91	28004	5.91	ug/L		100
90) m,p-xylene	7.590	106	105108	56.31	ug/L		96
91) o-xylene	7.930	91	90763	24.23	ug/L		99
95) isopropylbenzene	8.223	105	3935	0.82	ug/L		96
103) n-propylbenzene	8.563	91	15124	3.00	ug/L		100
106) 1,3,5-trimethylbenzene	8.714	105	46571	12.72	ug/L		98
108) 1,2,4-trimethylbenzene	9.018	105	144731	38.83	ug/L		98

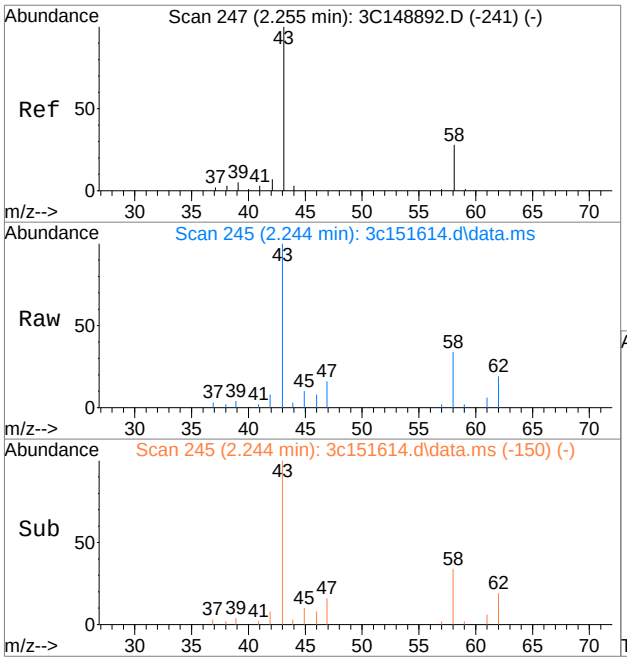
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151614.d
Acq On : 1 May 2019 4:35 pm
Operator : PrashanS
Sample : JC86837-2 Inst : MS3C
Misc : MS34232,V3C6814,5.4,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:43:55 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

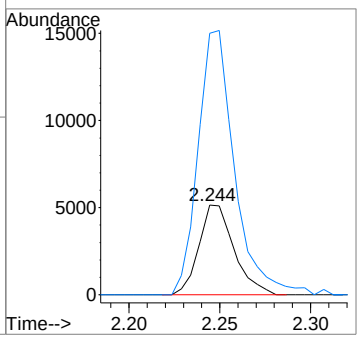


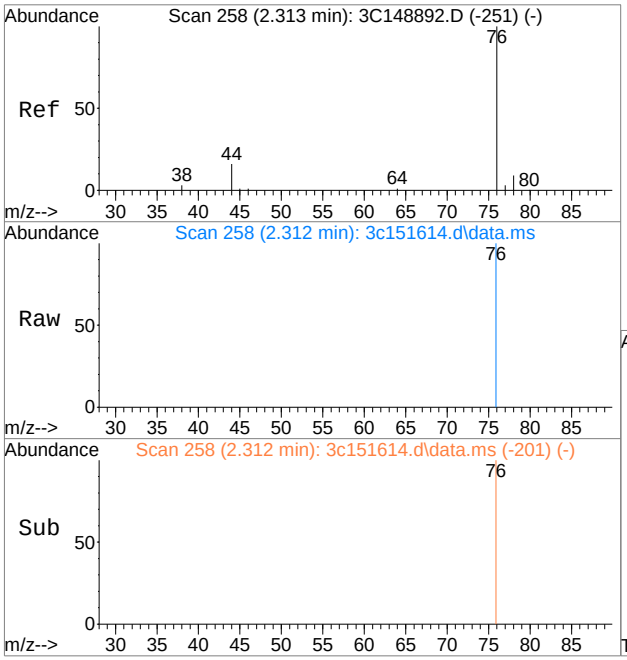


#20
acetone
Concen: 141.05 ug/L
RT: 2.244 min Scan# 245
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 58 Resp: 6929

Ion	Ratio	Lower	Upper
58	100		
43	291.3	284.5	344.5

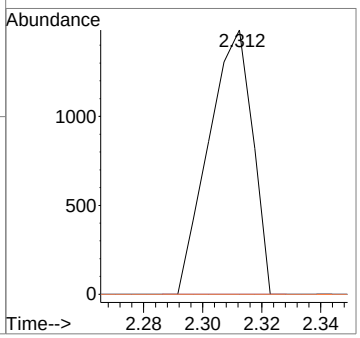


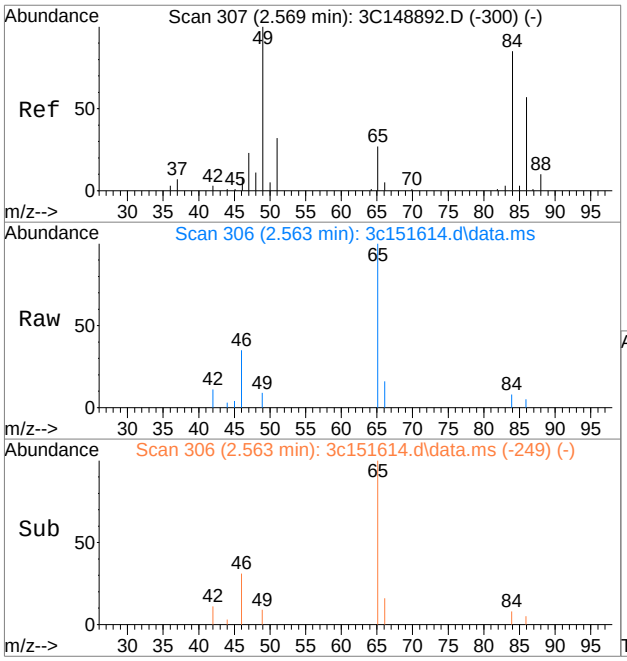


#23
carbon disulfide
Concen: 0.61 ug/L
RT: 2.312 min Scan# 258
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 76 Resp: 1533

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

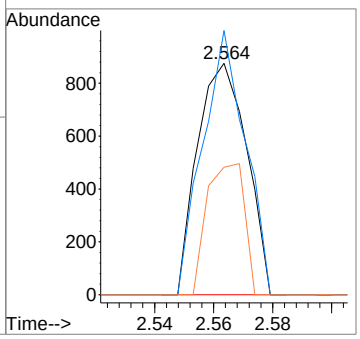


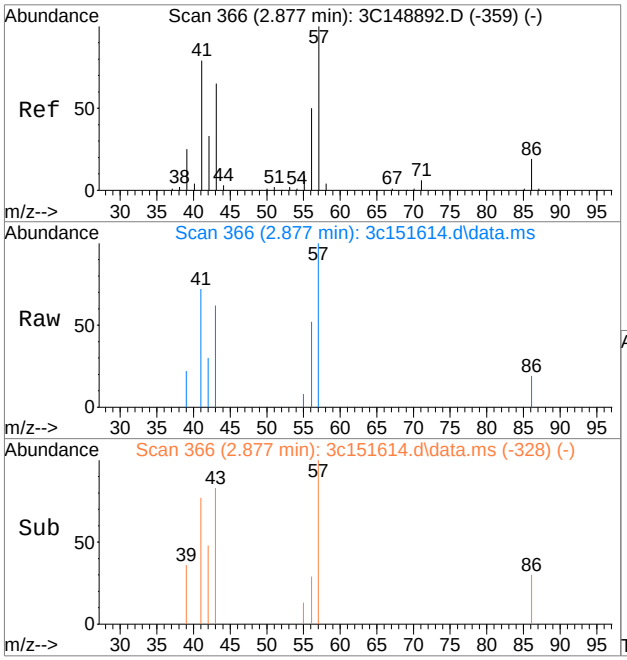


#24
methylene chloride
Concen: 1.04 ug/L
RT: 2.563 min Scan# 306
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 84 Resp: 1015

Ion	Ratio	Lower	Upper
84	100		
49	114.3	87.1	147.1
86	55.1	37.5	97.5

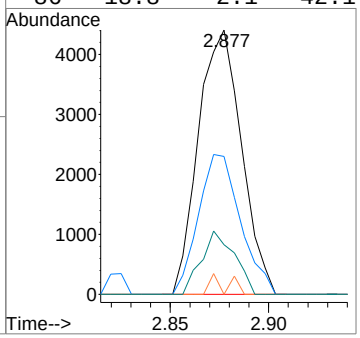


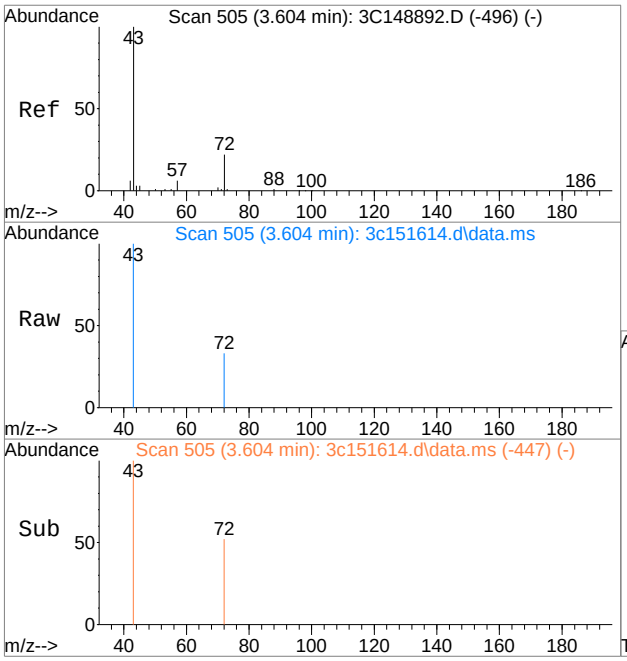


#28
hexane
Concen: 4.18 ug/L
RT: 2.877 min Scan# 366
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 57 Resp: 6719

Ion	Ratio	Lower	Upper
57	100		
56	52.2	30.7	70.7
71	0.0	0.0	26.4
86	18.8	2.1	42.1

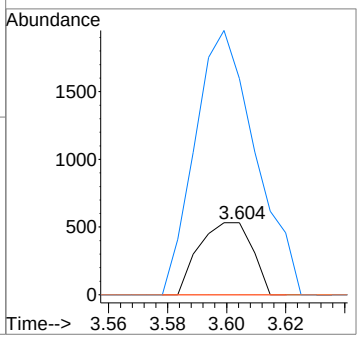


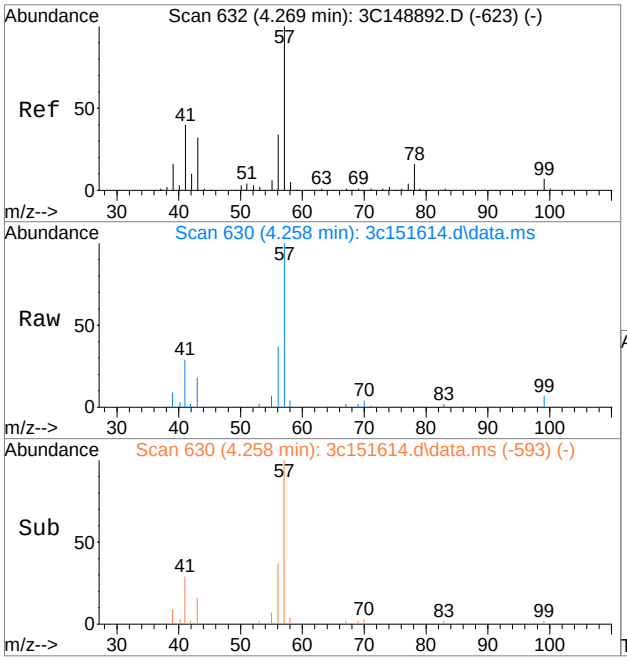


#31
2-butanone
Concen: 8.63 ug/L
RT: 3.604 min Scan# 505
Delta R.T. 0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 72 Resp: 668

Ion	Ratio	Lower	Upper
72	100		
43	299.4	372.9	432.9#
57	0.0	0.0	59.6

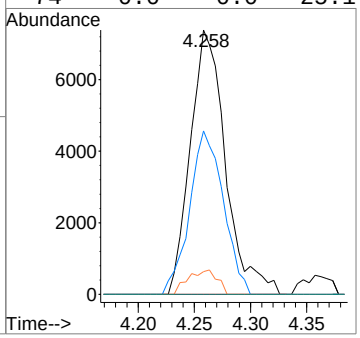


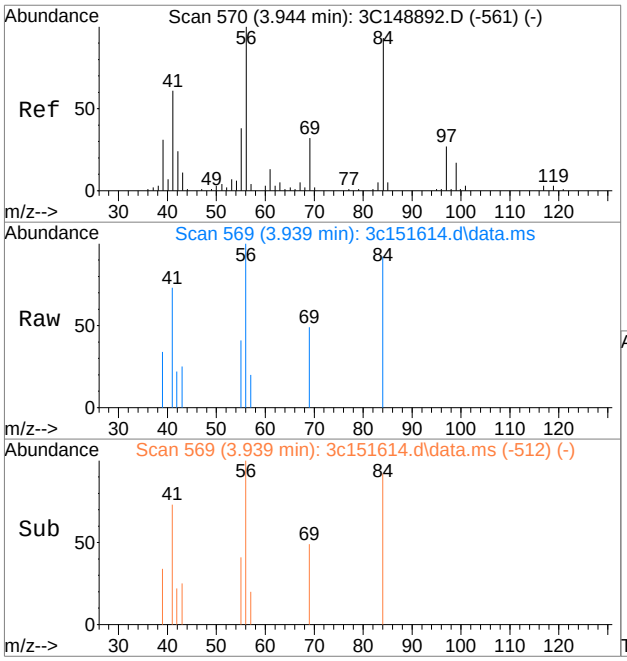


#44
isobutyl alcohol
Concen: 115.76 ug/L
RT: 4.258 min Scan# 630
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 41 Resp: 16038

Ion	Ratio	Lower	Upper
41	100		
43	61.8	59.0	99.0
42	8.6	2.1	42.1
74	0.0	0.0	25.1

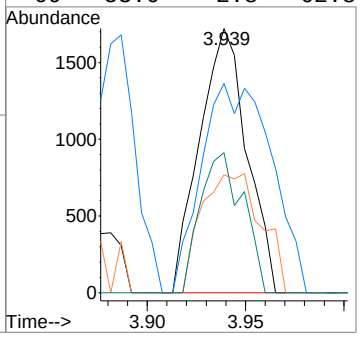


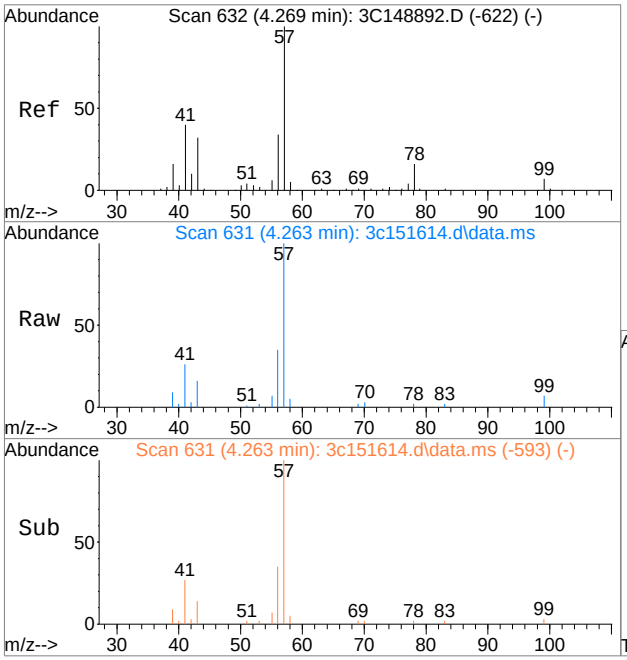


#48
cyclohexane
Concen: 1.75 ug/L
RT: 3.939 min Scan# 569
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 84 Resp: 2887

Ion	Ratio	Lower	Upper
84	100		
41	79.2	29.0	89.0
55	44.6	7.6	67.6
69	53.0	2.8	62.8

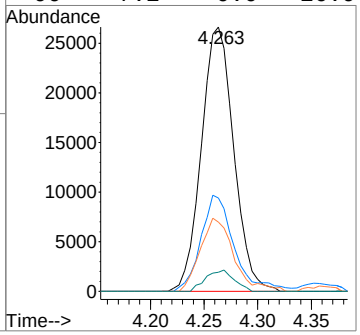


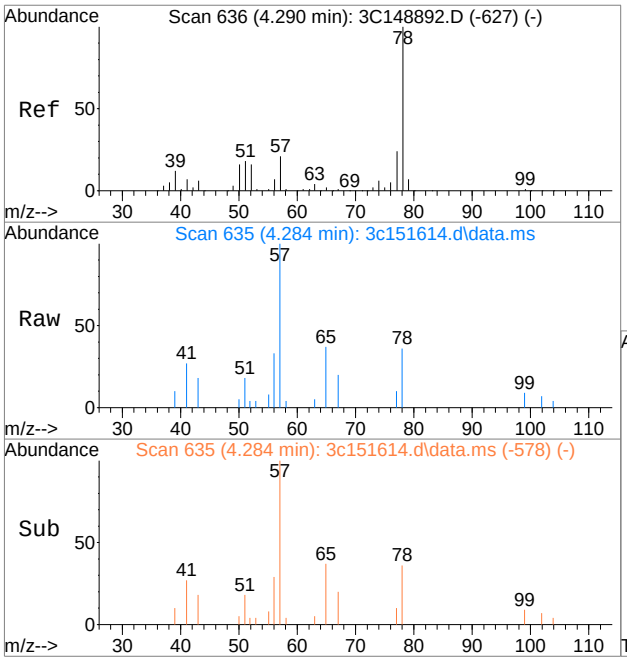


#54
2,2,4-trimethylpentane
Concen: 14.57 ug/L
RT: 4.263 min Scan# 631
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 57 Resp: 55956

Ion	Ratio	Lower	Upper
57	100		
56	35.3	13.5	53.5
41	26.2	13.2	53.2
99	7.2	0.0	26.9

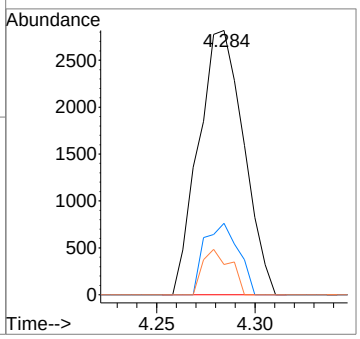


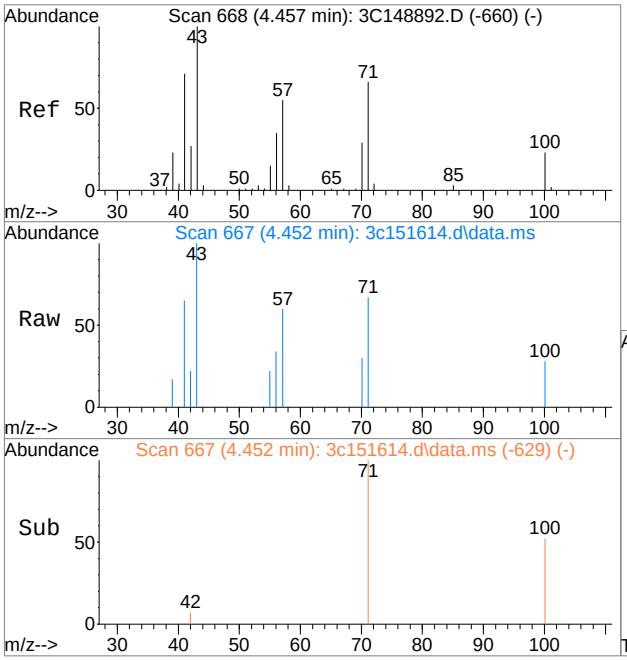


#57
benzene
Concen: 1.18 ug/L
RT: 4.284 min Scan# 635
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 78 Resp: 4490

Ion	Ratio	Lower	Upper
78	100		
77	27.1	0.0	54.0
52	11.4	0.0	44.9

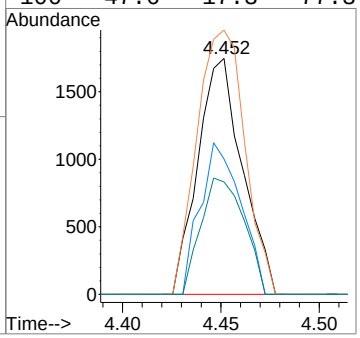


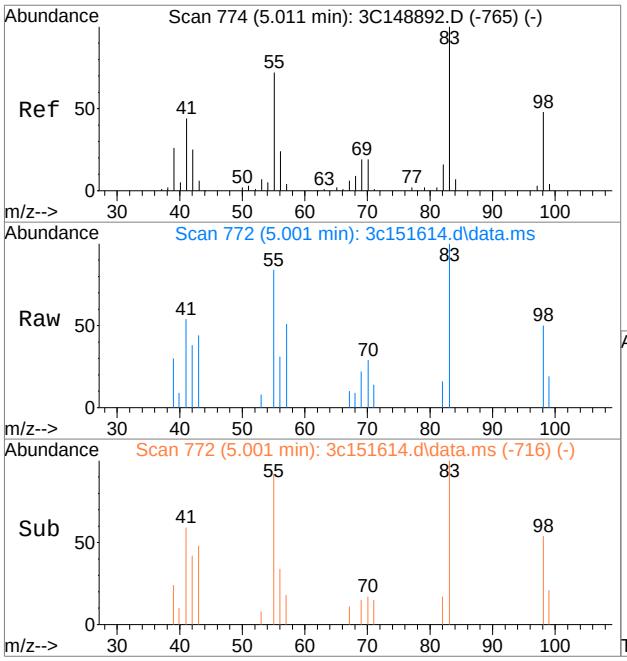


#58
heptane
Concen: 3.39 ug/L
RT: 4.452 min Scan# 667
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 57 Resp: 2760

Ion	Ratio	Lower	Upper
57	100		
56	57.4	34.1	94.1
71	112.1	91.0	151.0
100	47.6	17.3	77.3

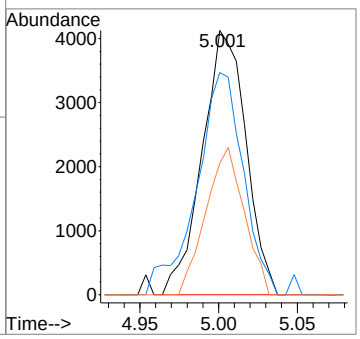


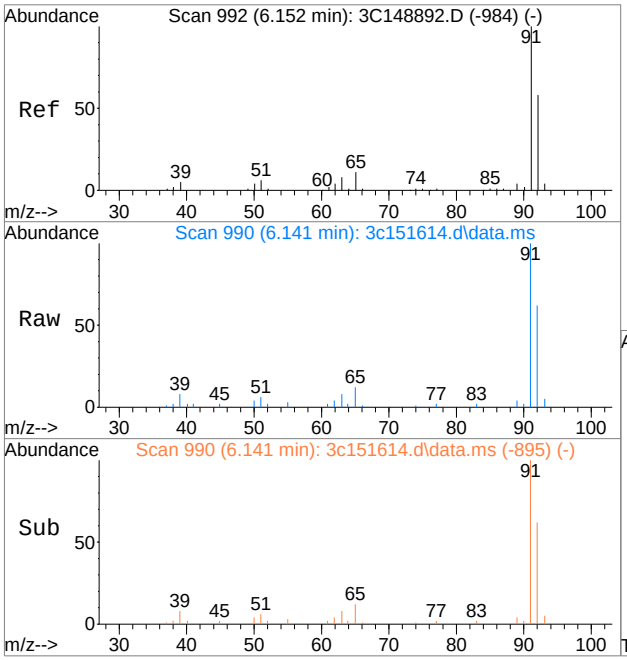


#67
methylcyclohexane
Concen: 4.14 ug/L
RT: 5.001 min Scan# 772
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 83 Resp: 7986

Ion	Ratio	Lower	Upper
83	100		
55	84.1	42.2	102.2
98	49.7	22.5	82.5

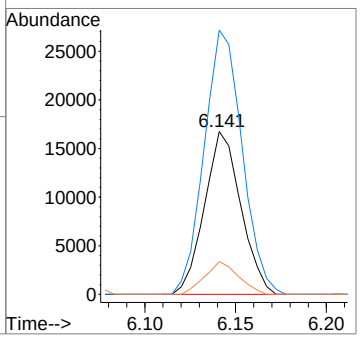


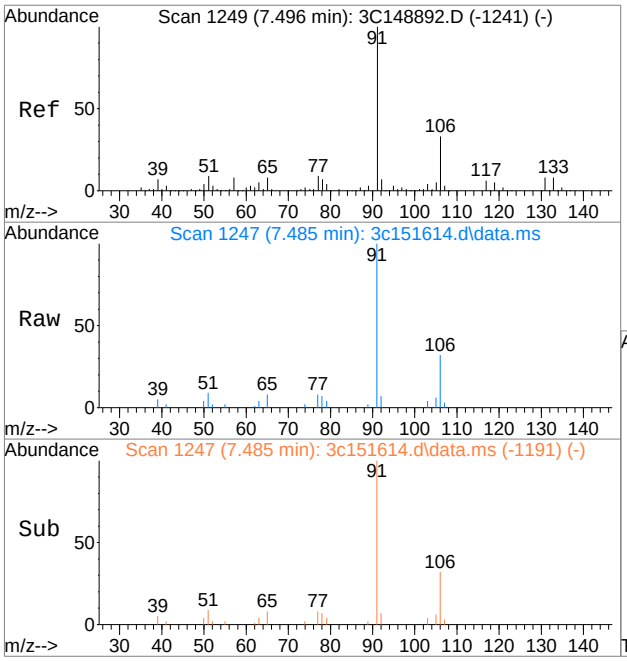


#76
toluene
Concen: 9.50 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 92 Resp: 23253

Ion	Ratio	Lower	Upper
92	100		
91	162.4	147.5	187.5
65	20.2	0.0	38.2

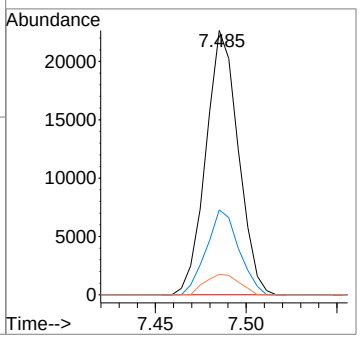


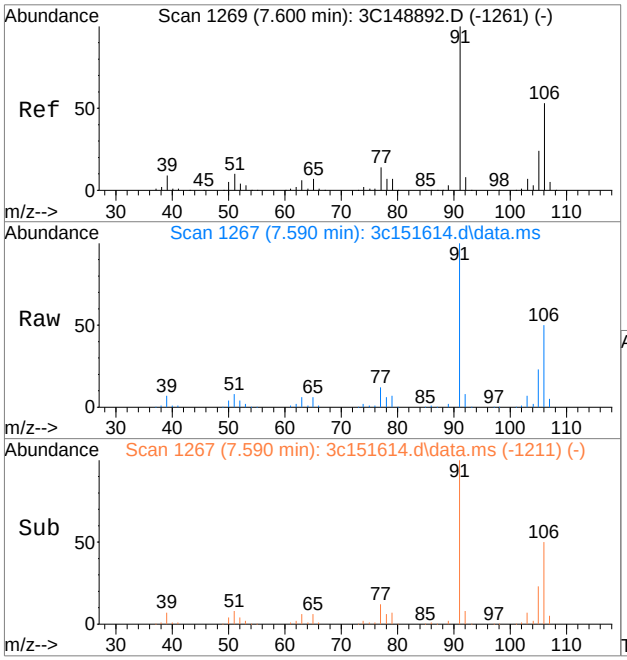


#89
ethylbenzene
Concen: 5.91 ug/L
RT: 7.485 min Scan# 1247
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 91 Resp: 28004

Ion	Ratio	Lower	Upper
91	100		
106	32.1	2.2	62.2
77	7.8	0.0	38.4

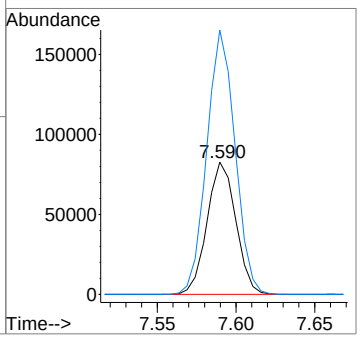


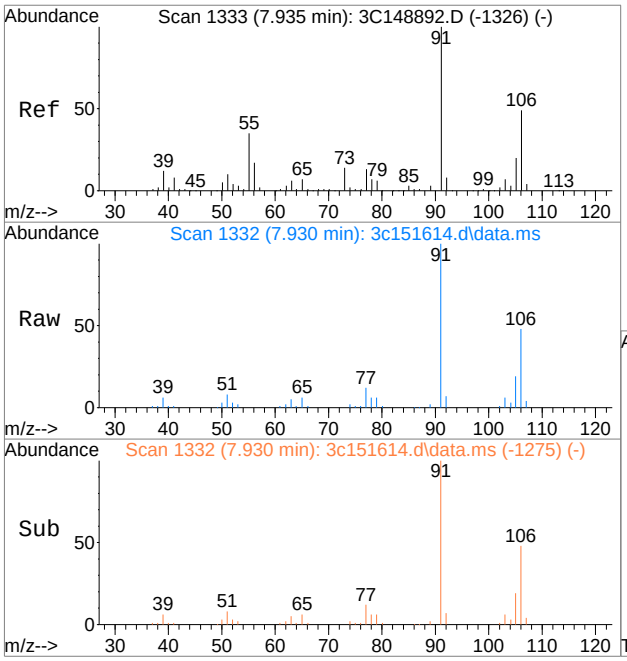


#90
m,p-xylene
Concen: 56.31 ug/L
RT: 7.590 min Scan# 1267
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:106 Resp: 105108

Ion	Ratio	Lower	Upper
106	100		
91	200.0	164.8	224.8

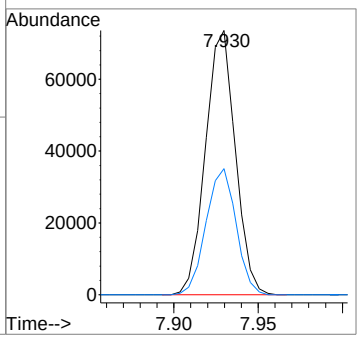


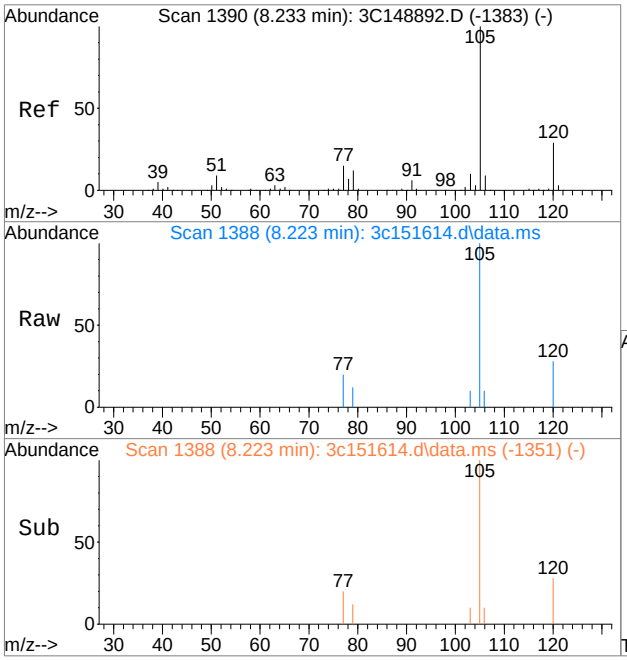


#91
o-xylene
Concen: 24.23 ug/L
RT: 7.930 min Scan# 1332
Delta R.T. -0.000 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 91 Resp: 90763

Ion	Ratio	Lower	Upper
91	100		
106	47.7	18.3	78.3

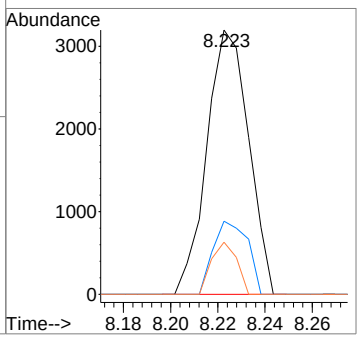


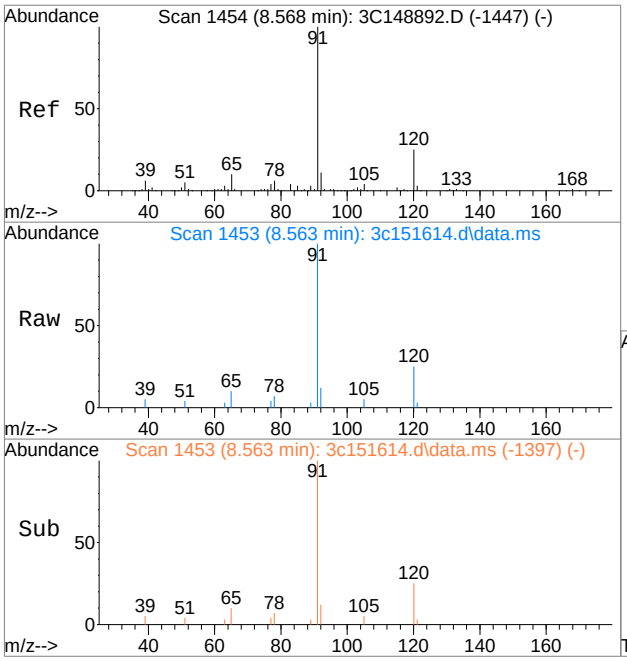


#95
isopropylbenzene
Concen: 0.82 ug/L
RT: 8.223 min Scan# 1388
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:105 Resp: 3935

Ion	Ratio	Lower	Upper
105	100		
120	27.7	7.6	47.6
77	19.7	0.0	35.1

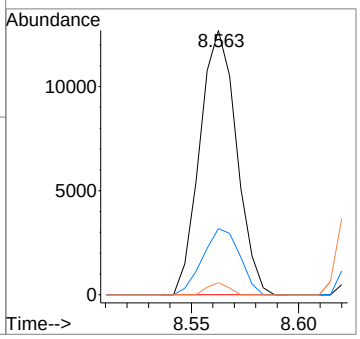


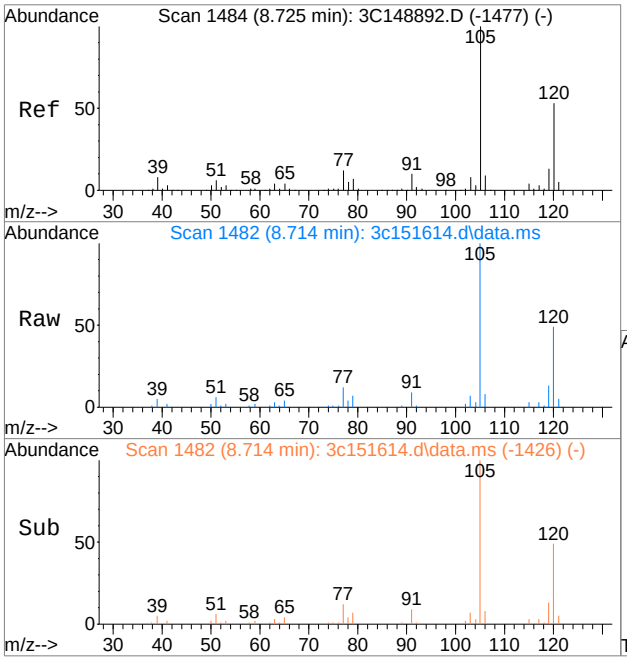


#103
n-propylbenzene
Concen: 3.00 ug/L
RT: 8.563 min Scan# 1453
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion: 91 Resp: 15124

Ion	Ratio	Lower	Upper
91	100		
120	25.1	0.0	55.1
105	4.6	0.0	33.8

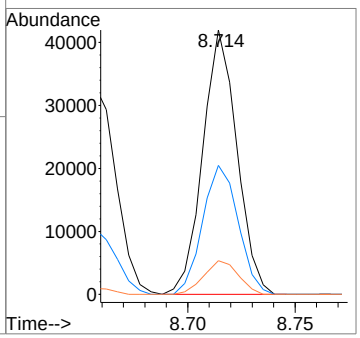


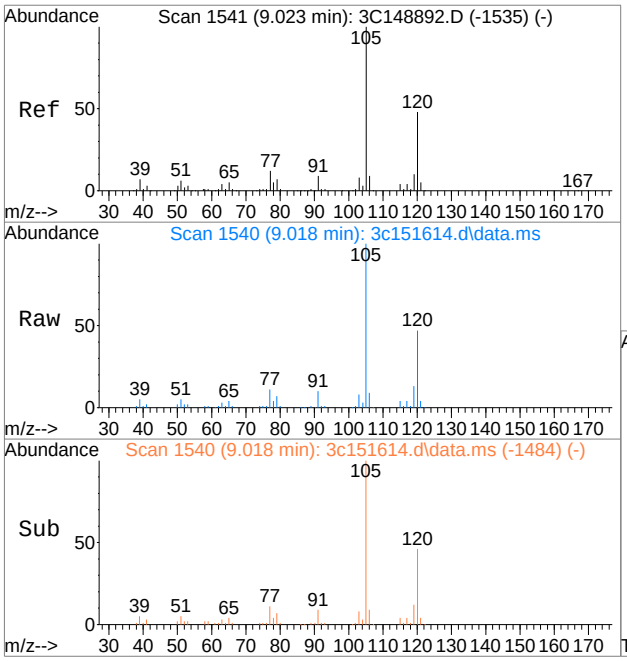


#106
1,3,5-trimethylbenzene
Concen: 12.72 ug/L
RT: 8.714 min Scan# 1482
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:105 Resp: 46571

Ion	Ratio	Lower	Upper
105	100		
120	48.8	20.9	80.9
119	12.7	0.0	42.6

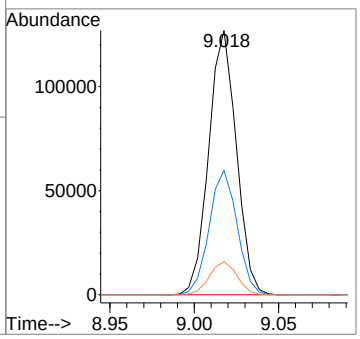




#108
1,2,4-trimethylbenzene
Concen: 38.83 ug/L
RT: 9.018 min Scan# 1540
Delta R.T. -0.005 min
Lab File: 3c151614.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:105 Resp: 144731

Ion	Ratio	Lower	Upper
105	100		
120	47.1	18.5	78.5
119	12.5	0.0	43.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225876.d
Acq On : 1 May 2019 5:47 pm
Operator : thienn
Sample : jc86837-3 Inst : GCMSI
Misc : MS34232,VI9099,3.4,,100,10,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 04:14:50 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

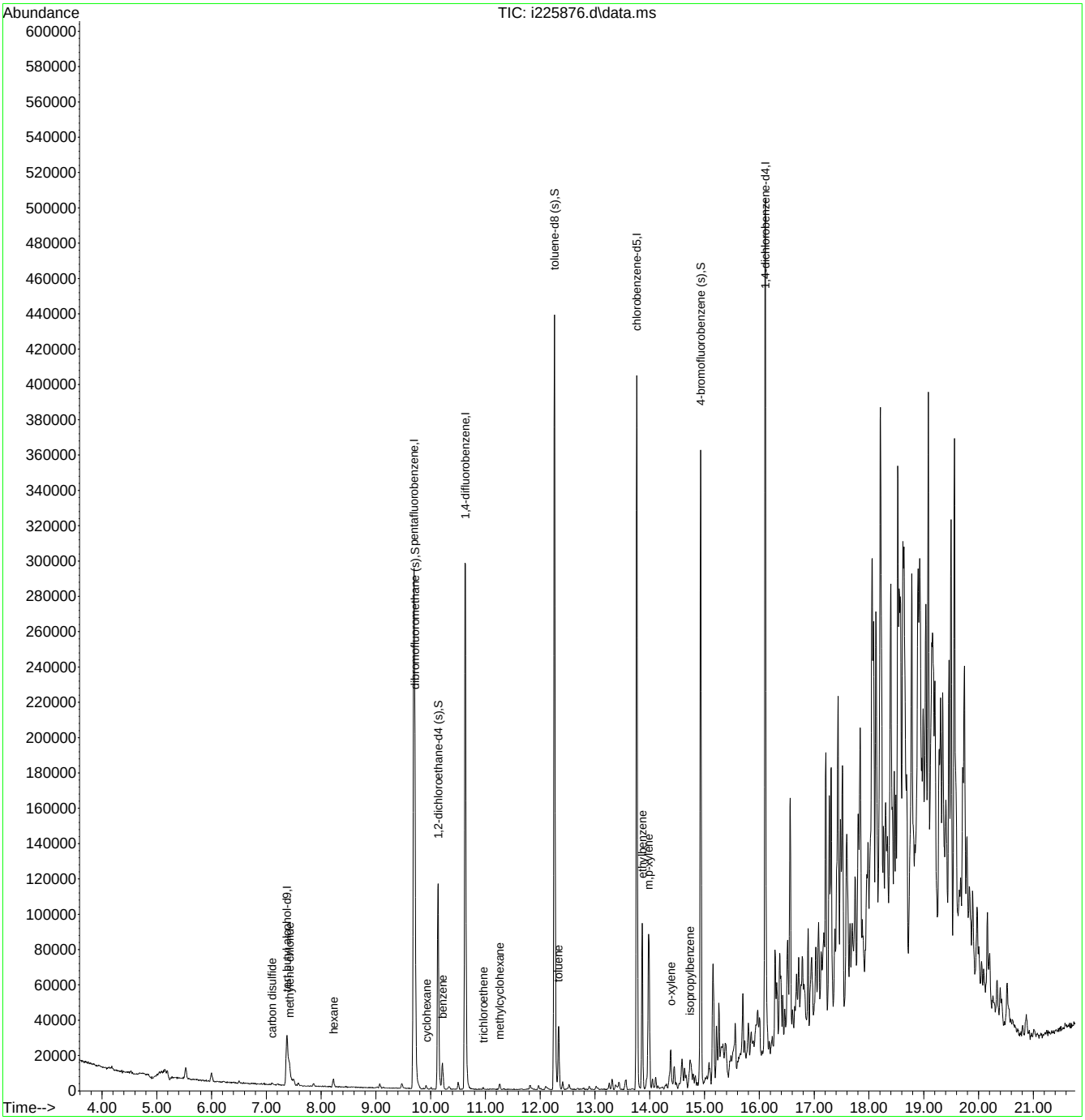
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.374	65	55883	500.00	ug/L	0.00
4) pentafluorobenzene	9.691	168	185367	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.632	114	239792	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	203315	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	118256	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	75554	51.87	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.74%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	80761	53.96	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 107.92%			
74) toluene-d8 (s)	12.259	98	264852	50.81	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.62%			
97) 4-bromofluorobenzene (s)	14.926	95	101490	56.28	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 112.56%			
Target Compounds						Qvalue
21) carbon disulfide	7.102	76	1566	0.42	ug/L	75
24) methylene chloride	7.421	84	2375	1.86	ug/L	83
28) hexane	8.226	57	2198	1.11	ug/L	91
49) cyclohexane	9.926	84	520	0.30	ug/L #	73
55) benzene	10.214	78	11557	2.47	ug/L	97
60) trichloroethene	10.962	95	246	0.20	ug/L #	77
62) methylcyclohexane	11.255	83	1310	0.62	ug/L	88
75) toluene	12.332	92	14611	5.19	ug/L #	87
88) ethylbenzene	13.859	91	59896	11.42	ug/L	97
89) m,p-xylene	13.980	106	30349	14.72	ug/L	96
90) o-xylene	14.382	106	3625	1.77	ug/L	95
95) isopropylbenzene	14.733	105	2983	0.58	ug/L	95

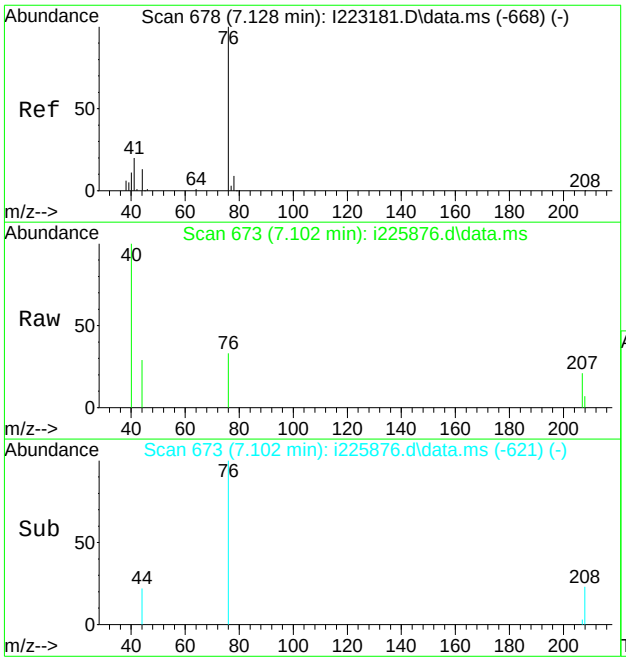
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225876.d
Acq On : 1 May 2019 5:47 pm
Operator : thienn
Sample : jc86837-3 Inst : GCMSI
Misc : MS34232,VI9099,3.4,,100,10,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 04:14:50 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

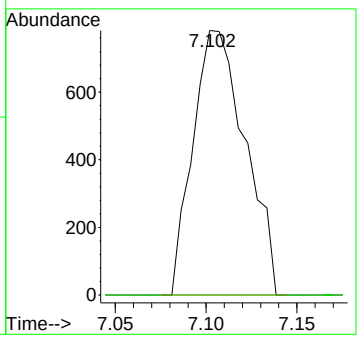


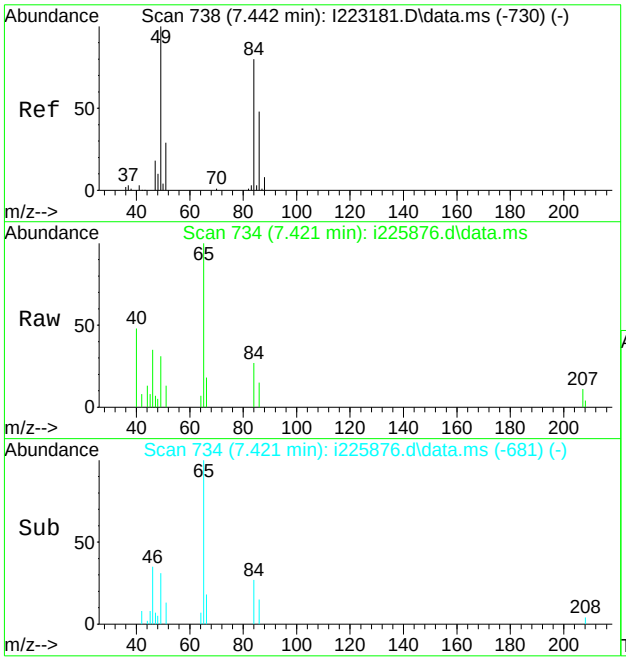


#21
carbon disulfide
Concen: 0.42 ug/L
RT: 7.102 min Scan# 673
Delta R.T. -0.026 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 76 Resp: 1566

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	29.0

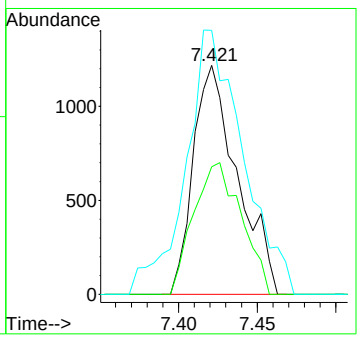


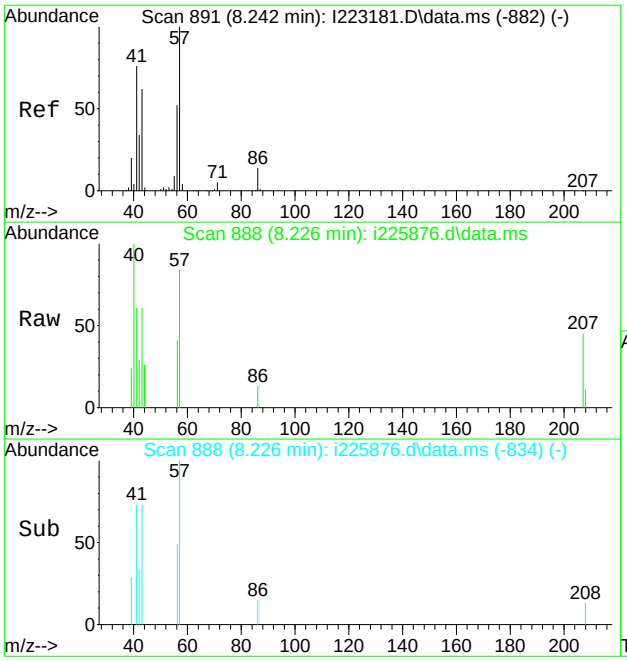


#24
methylene chloride
Concen: 1.86 ug/L
RT: 7.421 min Scan# 734
Delta R.T. -0.021 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 84 Resp: 2375

Ion	Ratio	Lower	Upper
84	100		
86	55.7	30.4	90.4
49	101.2	95.7	155.7

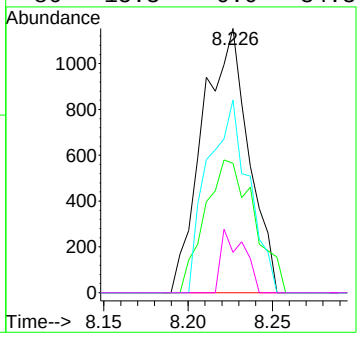


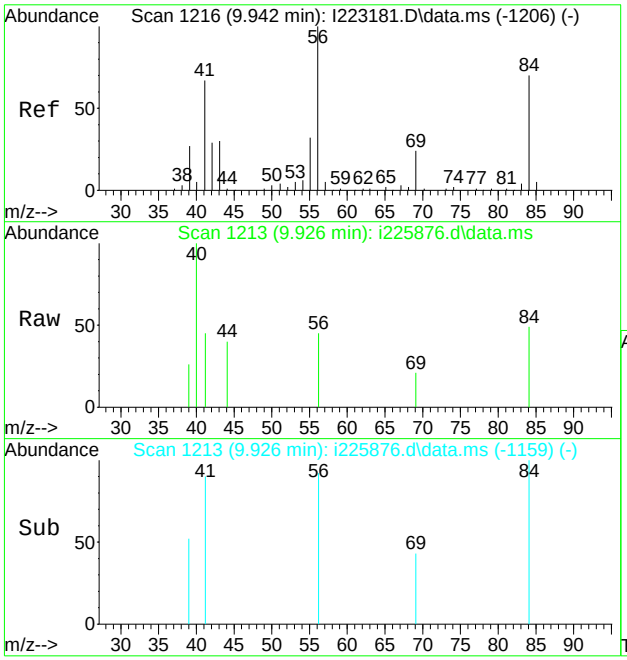


#28
hexane
Concen: 1.11 ug/L
RT: 8.226 min Scan# 888
Delta R.T. -0.016 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 57 Resp: 2198

Ion	Ratio	Lower	Upper
57	100		
56	49.0	32.4	72.4
43	73.0	42.4	82.4
86	15.3	0.0	34.3

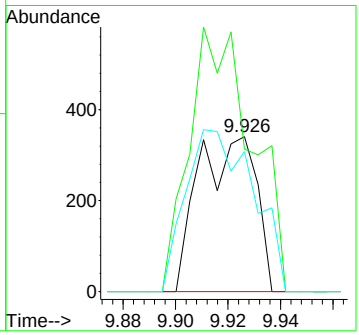


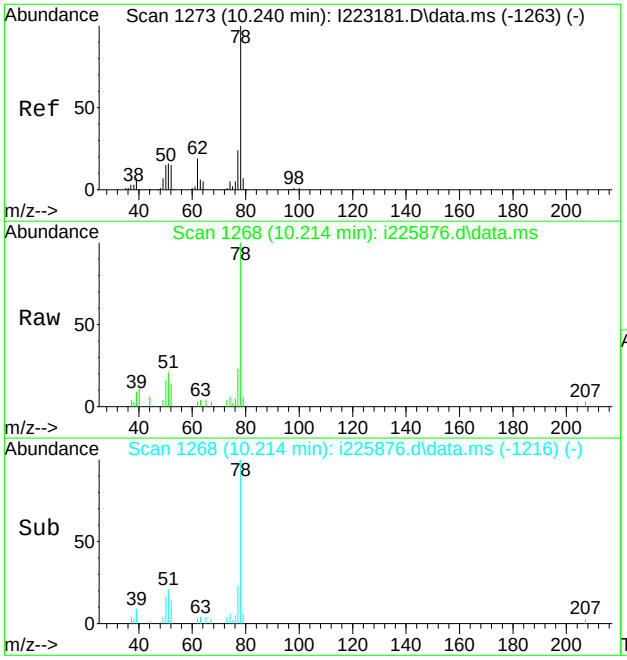


#49
cyclohexane
Concen: 0.30 ug/L
RT: 9.926 min Scan# 1213
Delta R.T. -0.016 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 84 Resp: 520

Ion	Ratio	Lower	Upper
84	100		
56	91.8	113.6	173.6#
41	90.3	66.1	126.1

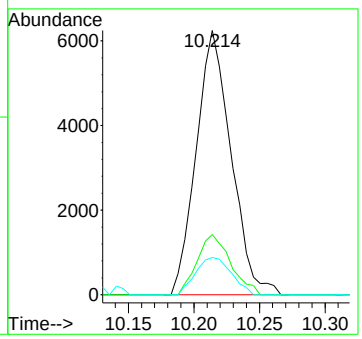


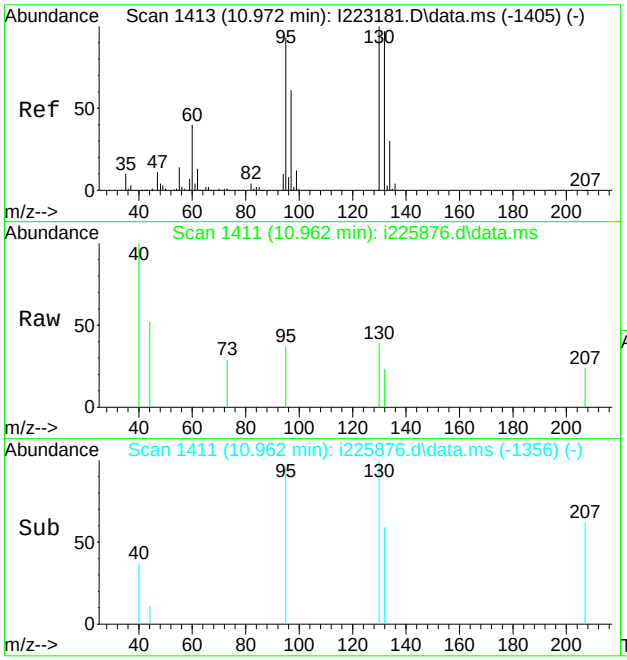


#55
benzene
Concen: 2.47 ug/L
RT: 10.214 min Scan# 1268
Delta R.T. -0.026 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 78 Resp: 11557

Ion	Ratio	Lower	Upper
78	100		
77	22.8	0.0	54.0
52	14.1	0.0	45.4

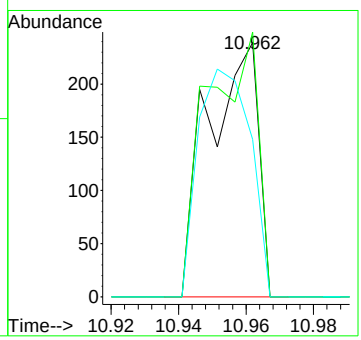


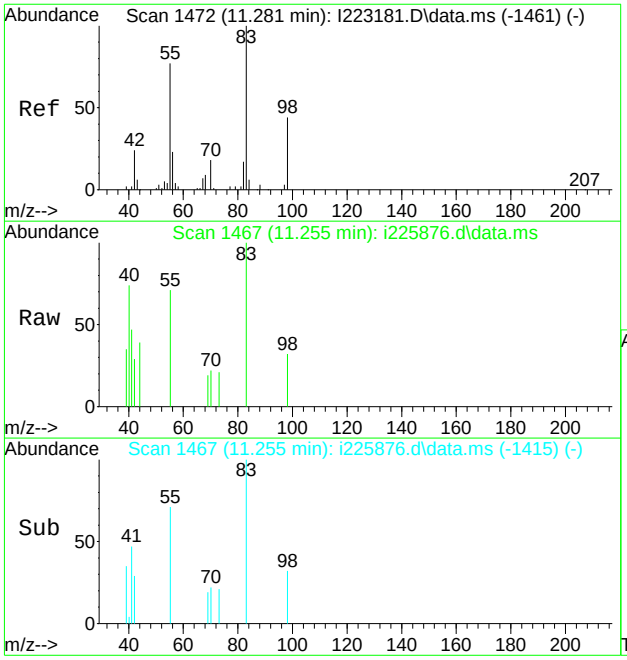


#60
trichloroethene
Concen: 0.20 ug/L
RT: 10.962 min Scan# 1411
Delta R.T. -0.011 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 95 Resp: 246

Ion	Ratio	Lower	Upper
95	100		
130	104.2	78.0	138.0
132	61.9	75.1	135.1#

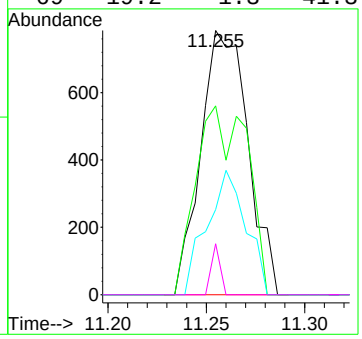


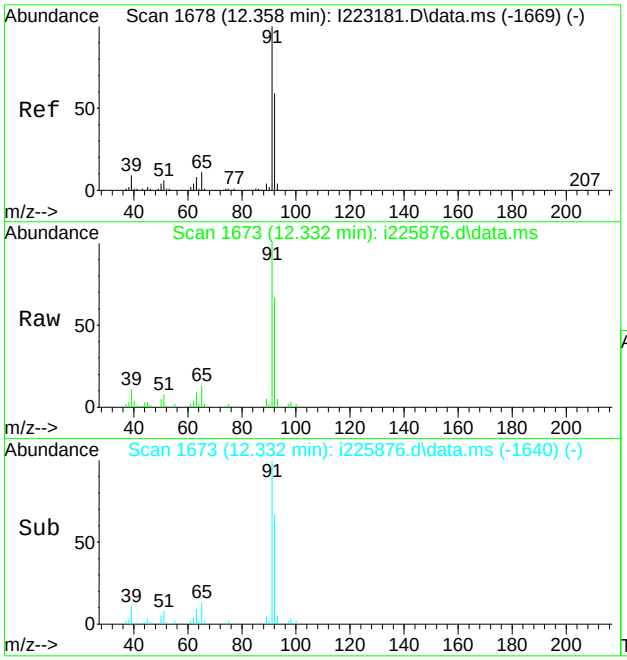


#62
methylcyclohexane
Concen: 0.62 ug/L
RT: 11.255 min Scan# 1467
Delta R.T. -0.026 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 83 Resp: 1310

Ion	Ratio	Lower	Upper
83	100		
55	71.5	59.8	99.8
98	32.2	24.4	64.4
69	19.2	1.3	41.3

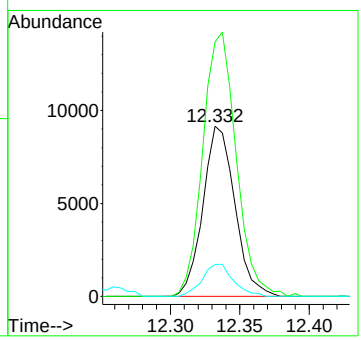


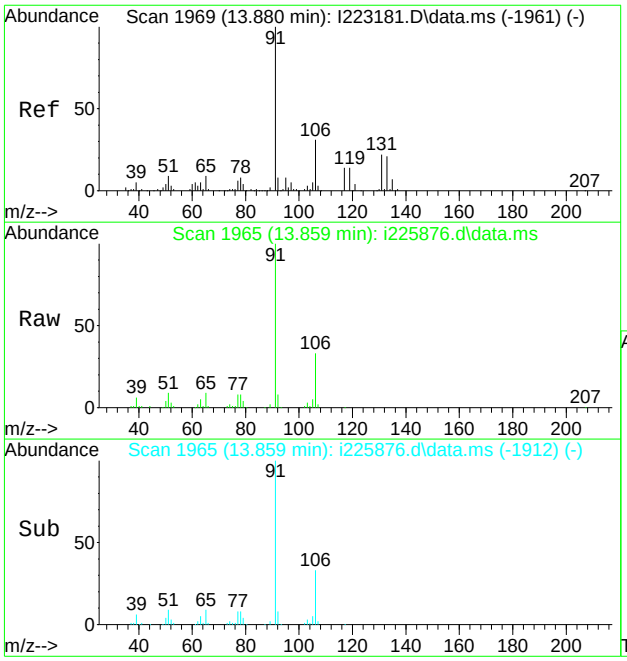


#75
toluene
Concen: 5.19 ug/L
RT: 12.332 min Scan# 1673
Delta R.T. -0.026 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 92 Resp: 14611

Ion	Ratio	Lower	Upper
92	100		
91	149.5	149.6	189.6#
65	18.8	0.0	38.7

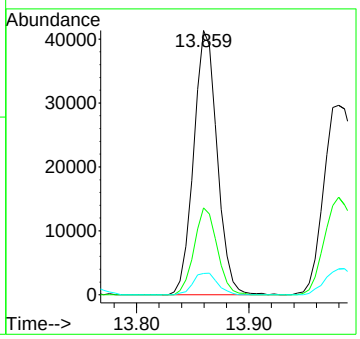


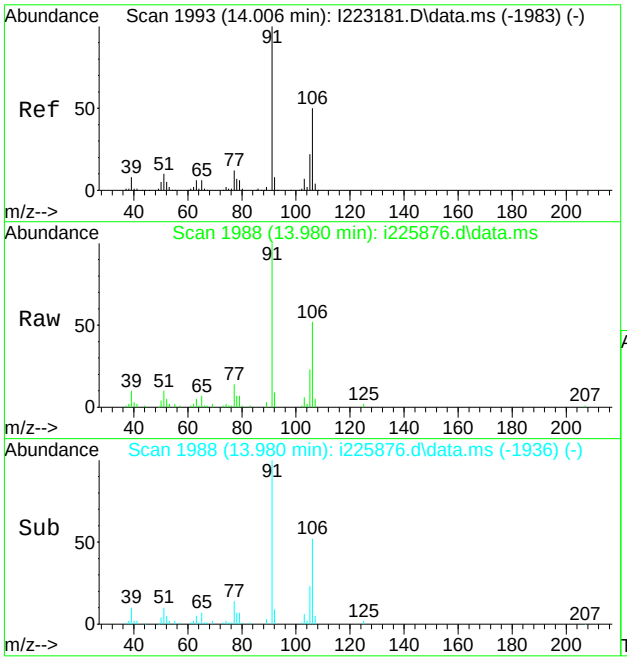


#88
ethylbenzene
Concen: 11.42 ug/L
RT: 13.859 min Scan# 1965
Delta R.T. -0.021 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion: 91 Resp: 59896

Ion	Ratio	Lower	Upper
91	100		
106	32.9	0.7	60.7
77	8.1	0.0	38.1

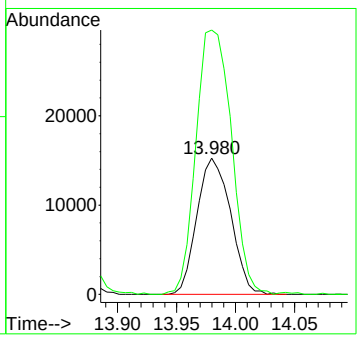


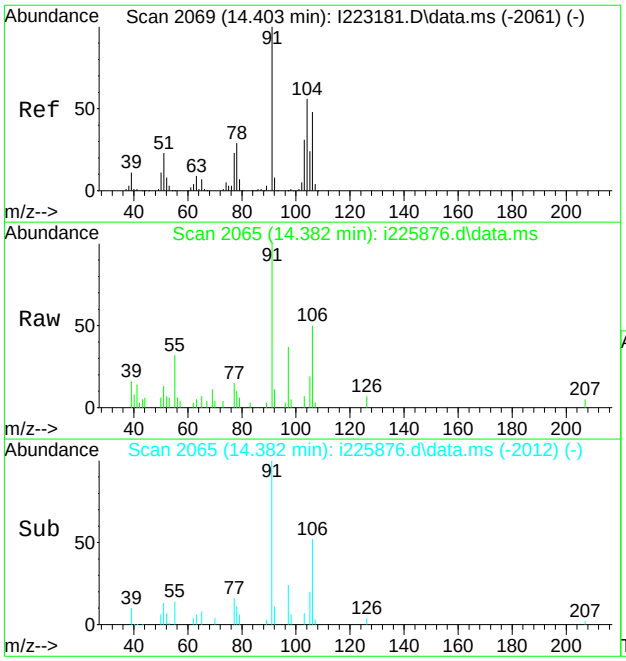


#89
m,p-xylene
Concen: 14.72 ug/L
RT: 13.980 min Scan# 1988
Delta R.T. -0.026 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion:106 Resp: 30349

Ion	Ratio	Lower	Upper
106	100		
91	194.2	169.5	229.5

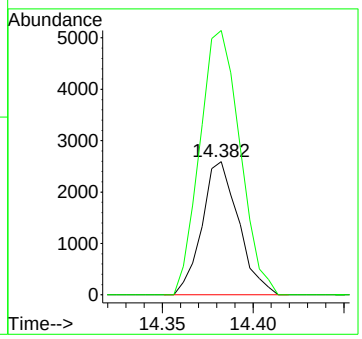


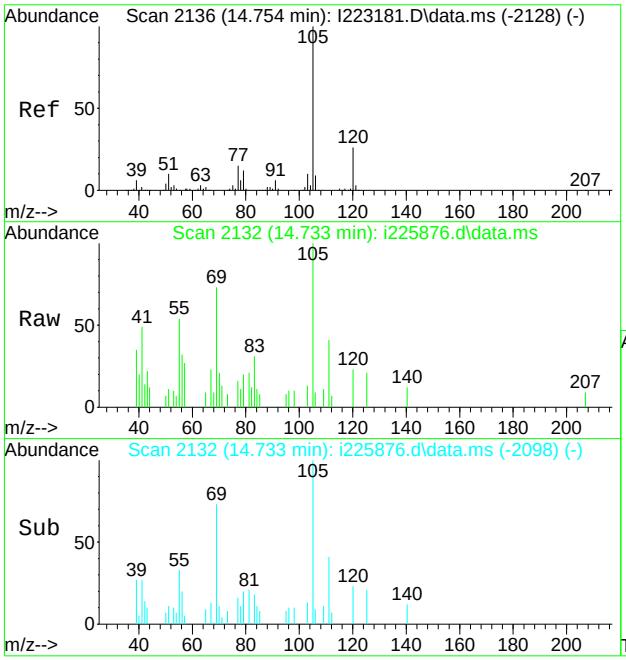


#90
o-xylene
Concen: 1.77 ug/L
RT: 14.382 min Scan# 2065
Delta R.T. -0.021 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion:106 Resp: 3625

Ion	Ratio	Lower	Upper
106	100		
91	198.7	176.2	236.2

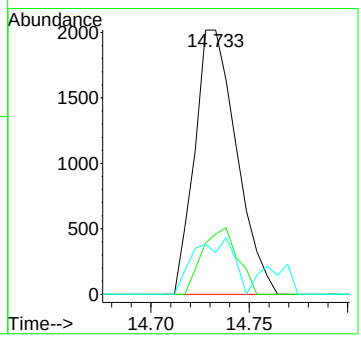




#95
isopropylbenzene
Concen: 0.58 ug/L
RT: 14.733 min Scan# 2132
Delta R.T. -0.021 min
Lab File: i225876.d
Acq: 1 May 2019 5:47 pm

Tgt Ion:105 Resp: 2983

Ion	Ratio	Lower	Upper
105	100		
120	22.8	6.2	46.2
77	15.8	0.0	35.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225877.d
Acq On : 1 May 2019 6:16 pm
Operator : thienn
Sample : jc86837-4 Inst : GCMSI
Misc : MS34232,VI9099,5.7,,100,10,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 05:02:41 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

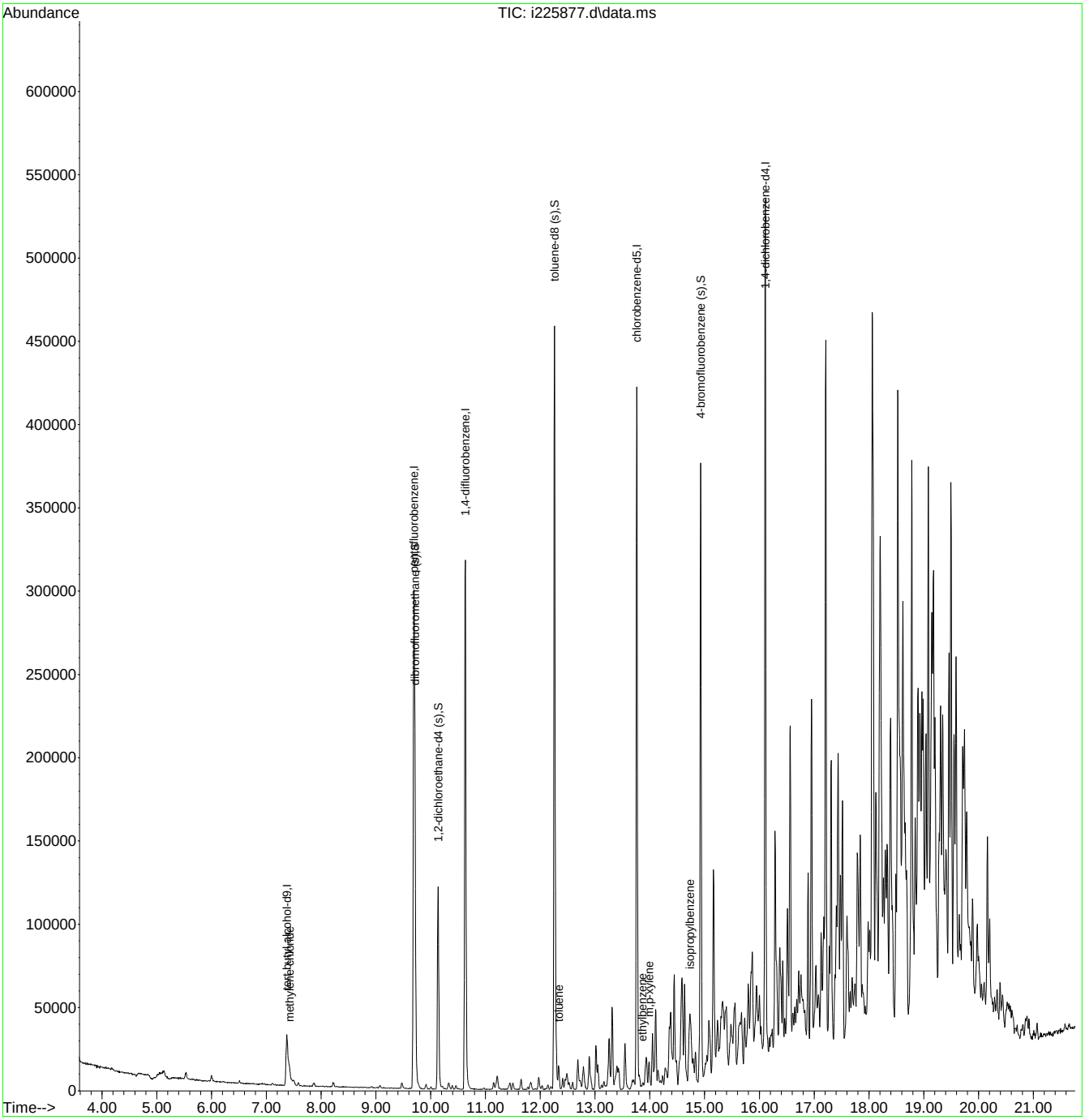
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.374	65	55461	500.00	ug/L	0.00
4) pentafluorobenzene	9.691	168	191132	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.632	114	252720	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	210406	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	122577	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	77835	51.83	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.66%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	83737	53.08	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.16%			
74) toluene-d8 (s)	12.259	98	275278	51.03	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.06%			
97) 4-bromofluorobenzene (s)	14.926	95	108865	58.24	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 116.48%			
Target Compounds						Qvalue
24) methylene chloride	7.421	84	2153	1.63	ug/L	86
75) toluene	12.337	92	1521	0.52	ug/L	96
88) ethylbenzene	13.859	91	1146	0.21	ug/L	89
89) m,p-xylene	13.985	106	910	0.43	ug/L	90
95) isopropylbenzene	14.733	105	3470	0.65	ug/L	85

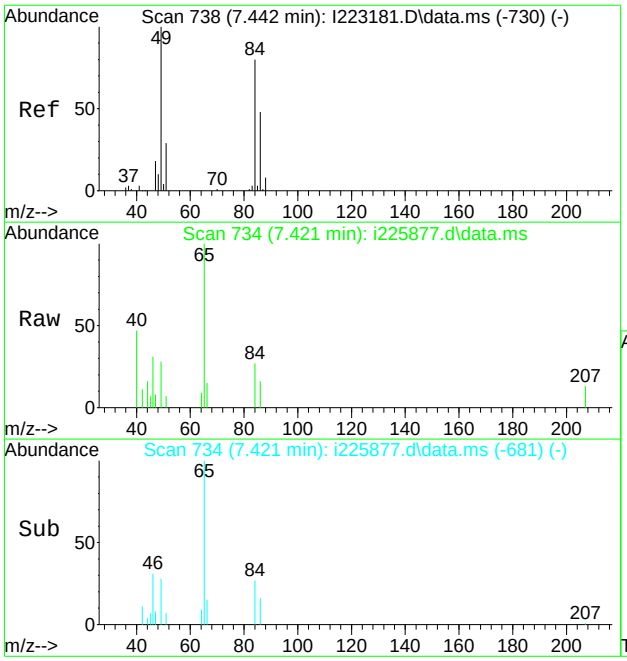
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225877.d
Acq On : 1 May 2019 6:16 pm
Operator : thienn
Sample : jc86837-4 Inst : GCMSI
Misc : MS34232,VI9099,5.7,,100,10,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 05:02:41 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

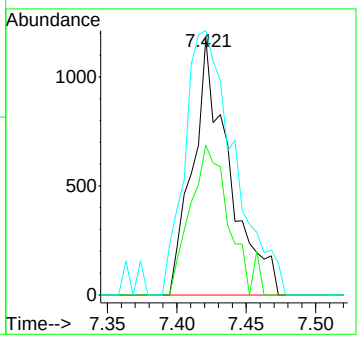


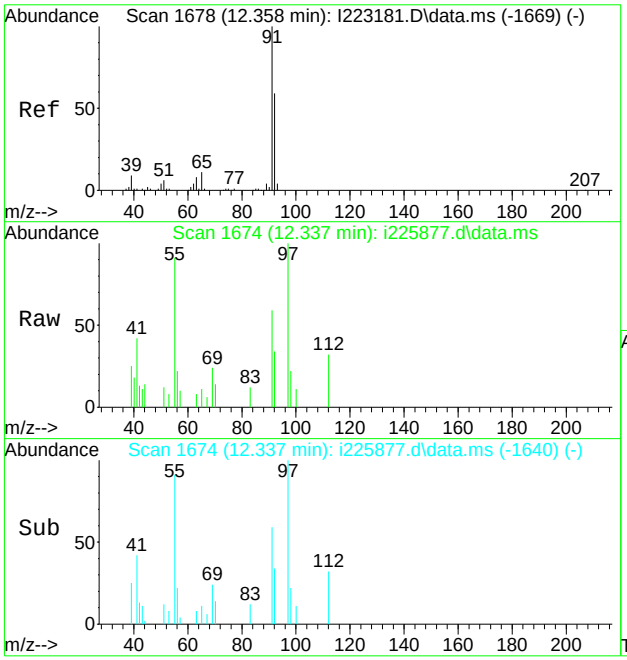


#24
methylene chloride
Concen: 1.63 ug/L
RT: 7.421 min Scan# 734
Delta R.T. -0.021 min
Lab File: i225877.d
Acq: 1 May 2019 6:16 pm

Tgt Ion: 84 Resp: 2153

Ion	Ratio	Lower	Upper
84	100		
86	58.5	30.4	90.4
49	103.1	95.7	155.7

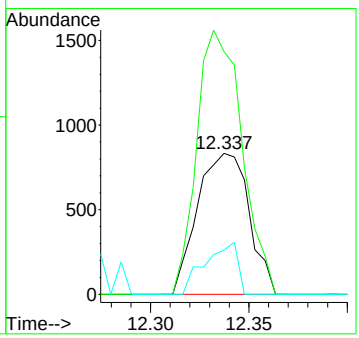


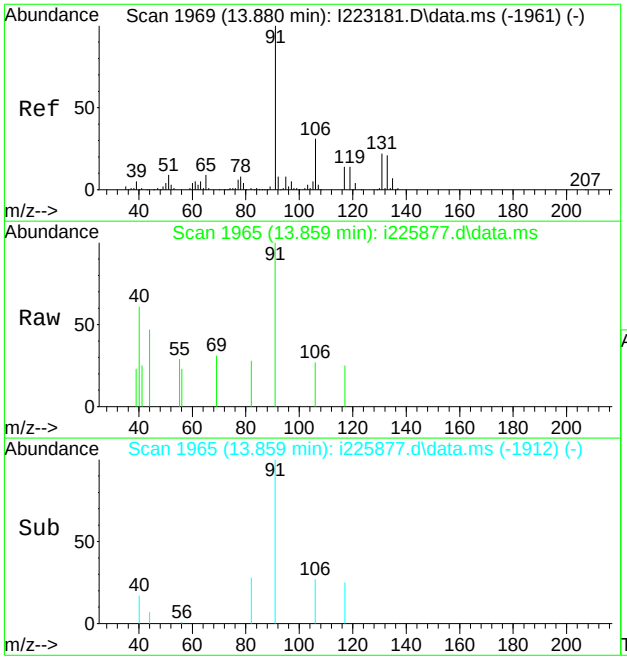


#75
toluene
Concen: 0.52 ug/L
RT: 12.337 min Scan# 1674
Delta R.T. -0.021 min
Lab File: i225877.d
Acq: 1 May 2019 6:16 pm

Tgt Ion: 92 Resp: 1521

Ion	Ratio	Lower	Upper
92	100		
91	172.0	149.6	189.6
65	31.5	0.0	38.7

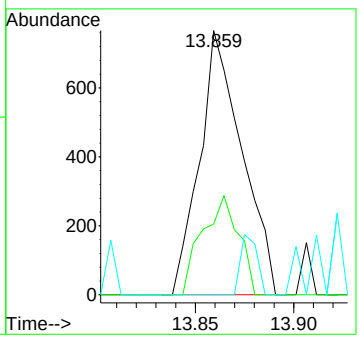


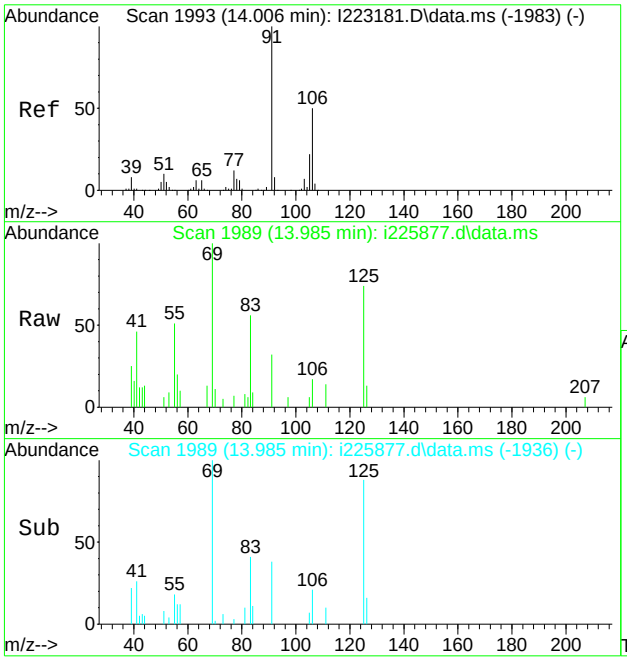


#88
ethylbenzene
Concen: 0.21 ug/L
RT: 13.859 min Scan# 1965
Delta R.T. -0.021 min
Lab File: i225877.d
Acq: 1 May 2019 6:16 pm

Tgt Ion: 91 Resp: 1146

Ion	Ratio	Lower	Upper
91	100		
106	26.7	0.7	60.7
77	0.0	0.0	38.1

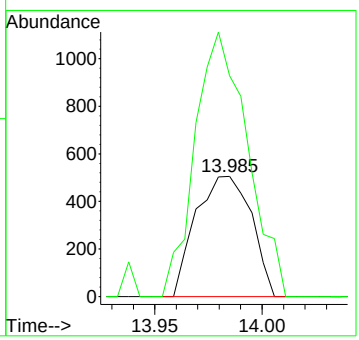


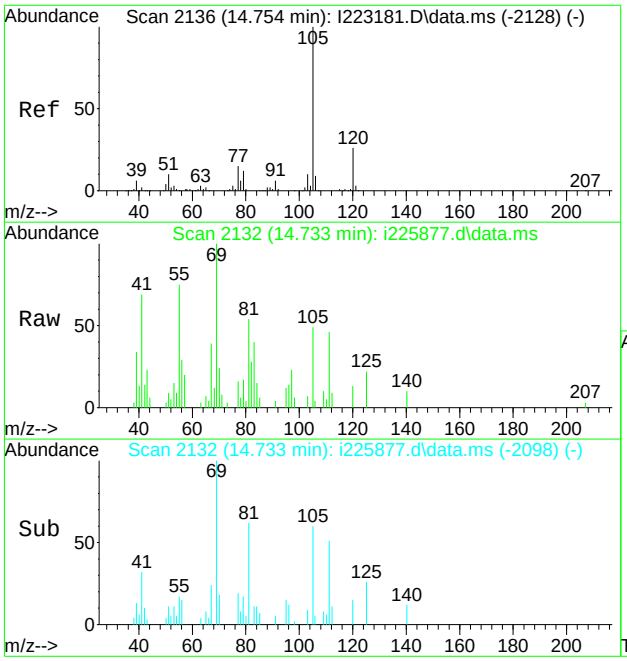


#89
m,p-xylene
Concen: 0.43 ug/L
RT: 13.985 min Scan# 1989
Delta R.T. -0.021 min
Lab File: i225877.d
Acq: 1 May 2019 6:16 pm

Tgt Ion:106 Resp: 910

Ion	Ratio	Lower	Upper
106	100		
91	184.0	169.5	229.5

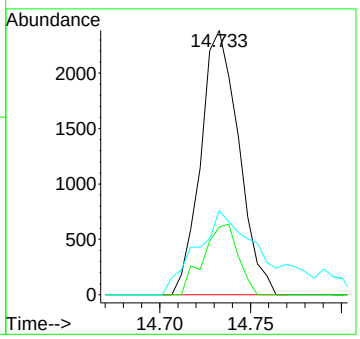




#95
isopropylbenzene
Concen: 0.65 ug/L
RT: 14.733 min Scan# 2132
Delta R.T. -0.021 min
Lab File: i225877.d
Acq: 1 May 2019 6:16 pm

Tgt Ion:105 Resp: 3470

Ion	Ratio	Lower	Upper
105	100		
120	25.7	6.2	46.2
77	31.8	0.0	35.3



7.1.5

7

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-2-2019\jonkm\v3c6814\
Data File : 3c151615.d
Acq On : 1 May 2019 4:58 pm
Operator : PrashanS
Sample : JC86837-5 Inst : MS3C
Misc : MS34232,V3C6814,5.3,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:13:51 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

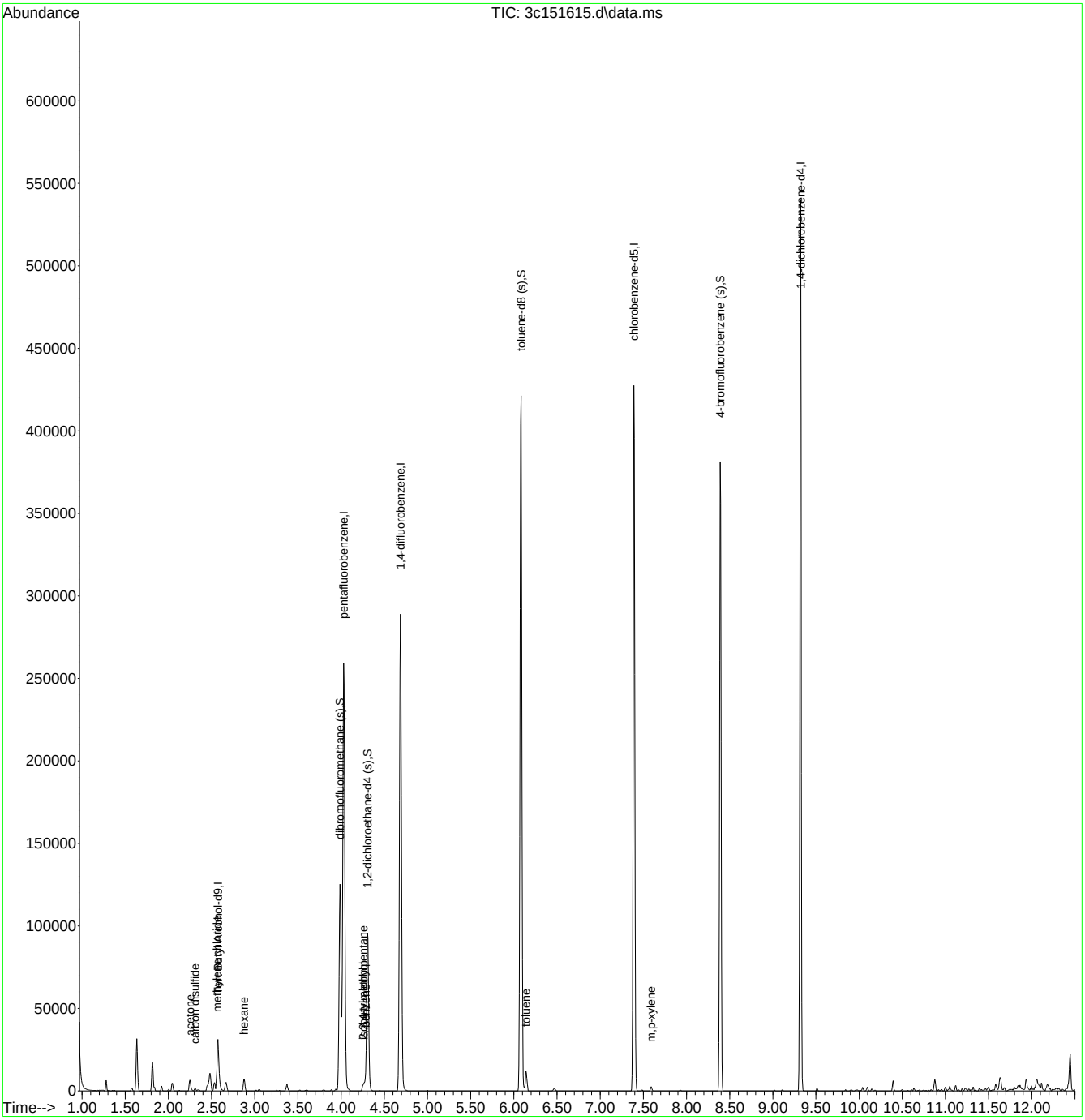
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	28701	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	171876	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	223715	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	198384	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	112431	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	61181	49.26	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.52%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	57864	47.60	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.20%			
75) toluene-d8 (s)	6.083	98	249744	50.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.72%			
98) 4-bromofluorobenzene (s)	8.390	95	93934	50.82	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.64%			
Target Compounds						Qvalue
20) acetone	2.250	58	1987	37.11	ug/L	95
23) carbon disulfide	2.307	76	1691	0.62	ug/L	69
24) methylene chloride	2.564	84	1370	1.29	ug/L	87
28) hexane	2.872	57	3046	1.74	ug/L	95
44) isobutyl alcohol	4.258	41	1134	7.51	ug/L #	64
54) 2,2,4-trimethylpentane	4.258	57	4536	1.09	ug/L	93
57) benzene	4.284	78	4080	0.99	ug/L	97
76) toluene	6.141	92	5278	1.86	ug/L	97
90) m,p-xylene	7.590	106	791	0.37	ug/L	90

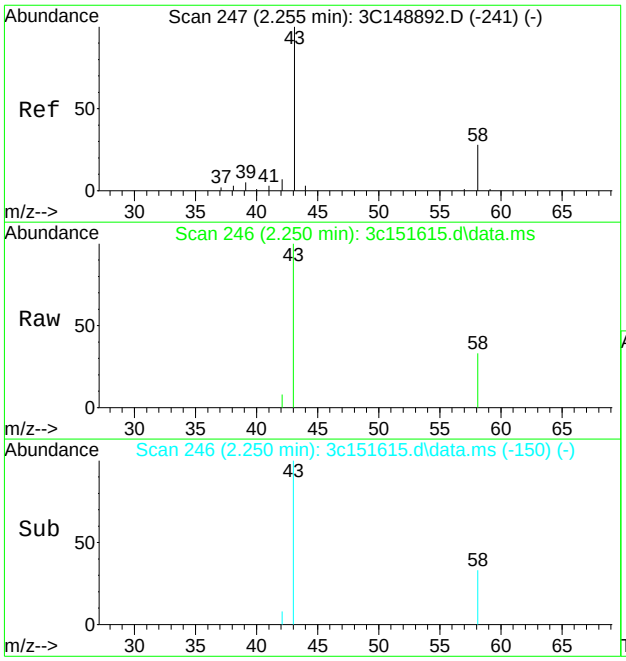
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : X:\voa-gcms\complete\2019\dayton201905\5-2-2019\jonkm\v3c6814\
Data File : 3c151615.d
Acq On : 1 May 2019 4:58 pm
Operator : PrashanS
Sample : JC86837-5 Inst : MS3C
Misc : MS34232,V3C6814,5.3,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 06 19:13:51 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

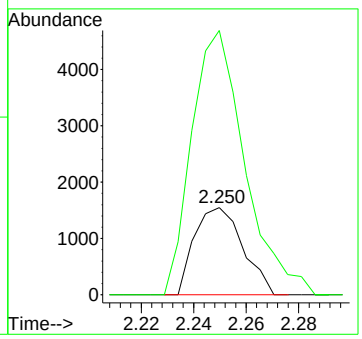


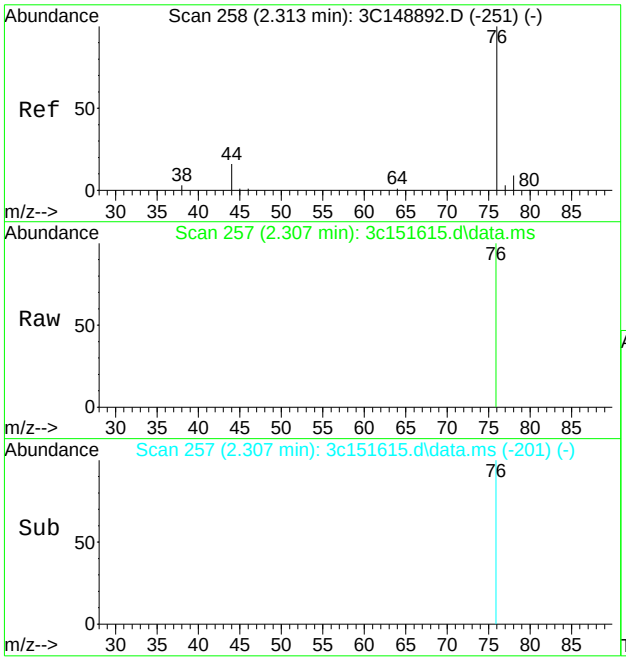


#20
acetone
Concen: 37.11 ug/L
RT: 2.250 min Scan# 246
Delta R.T. -0.000 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 58 Resp: 1987

Ion	Ratio	Lower	Upper
58	100		
43	303.5	284.5	344.5

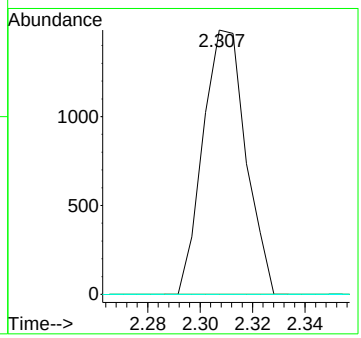


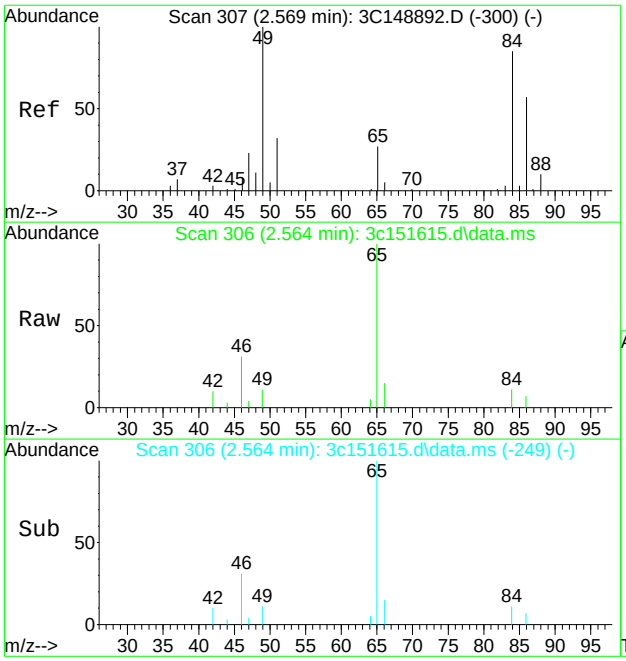


#23
carbon disulfide
Concen: 0.62 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 76 Resp: 1691

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

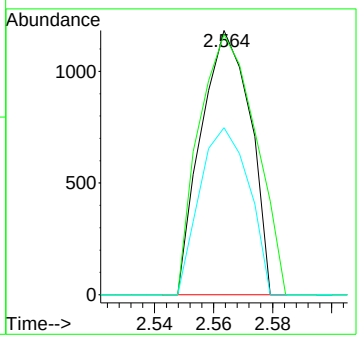


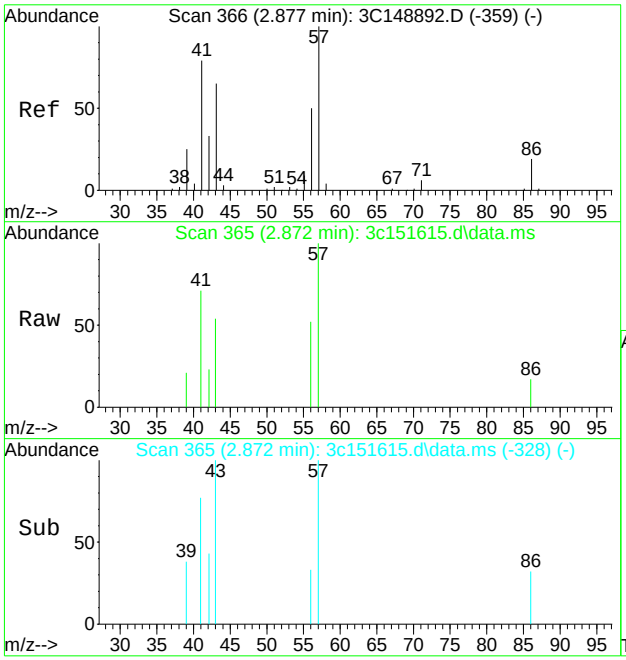


#24
methylene chloride
Concen: 1.29 ug/L
RT: 2.564 min Scan# 306
Delta R.T. -0.000 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 84 Resp: 1370

Ion	Ratio	Lower	Upper
84	100		
49	98.5	87.1	147.1
86	63.2	37.5	97.5

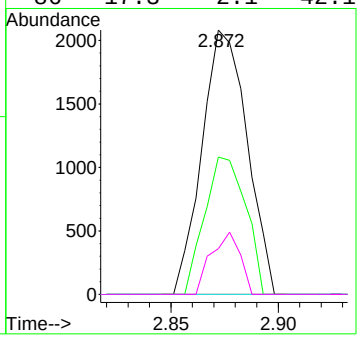


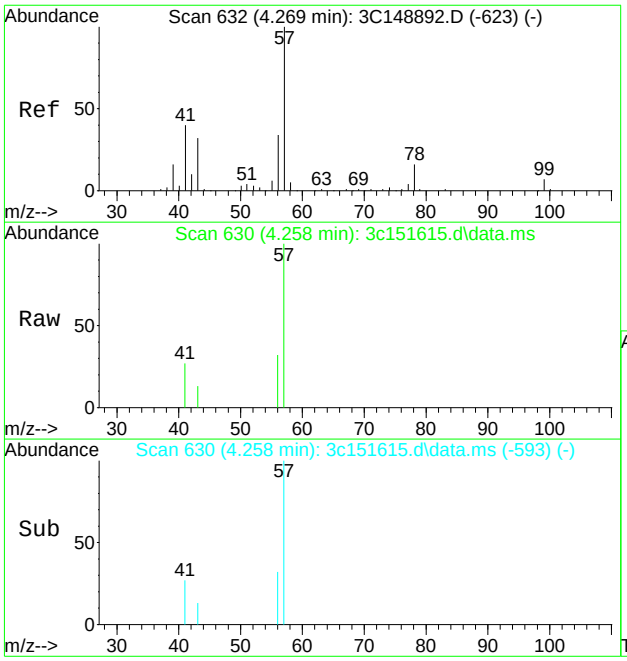


#28
hexane
Concen: 1.74 ug/L
RT: 2.872 min Scan# 365
Delta R.T. -0.005 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 57 Resp: 3046

Ion	Ratio	Lower	Upper
57	100		
56	51.9	30.7	70.7
71	0.0	0.0	26.4
86	17.3	2.1	42.1

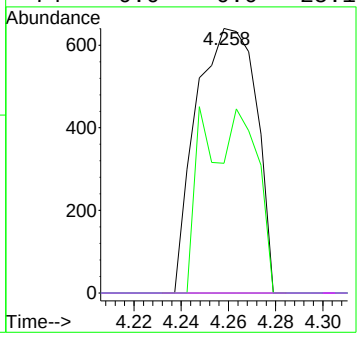


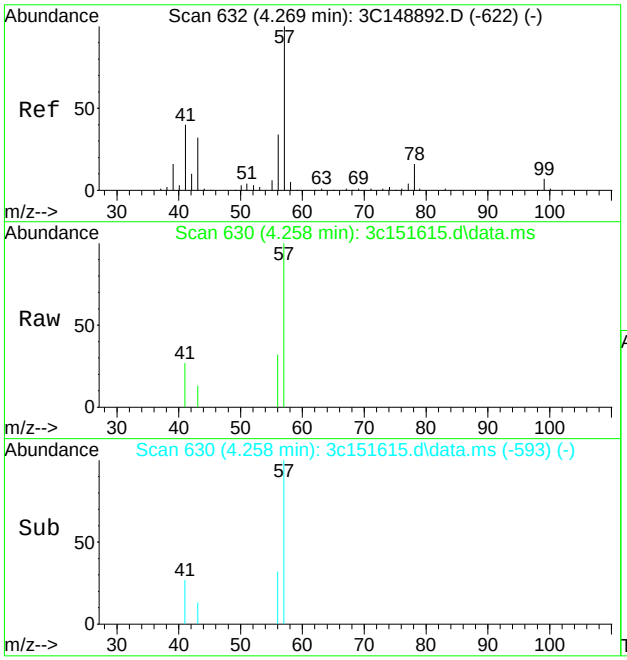


#44
isobutyl alcohol
Concen: 7.51 ug/L
RT: 4.258 min Scan# 630
Delta R.T. -0.005 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 41 Resp: 1134

Ion	Ratio	Lower	Upper
41	100		
43	49.0	59.0	99.0#
42	0.0	2.1	42.1#
74	0.0	0.0	25.1

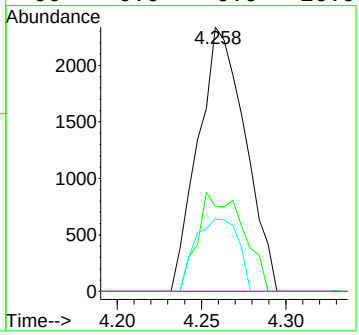


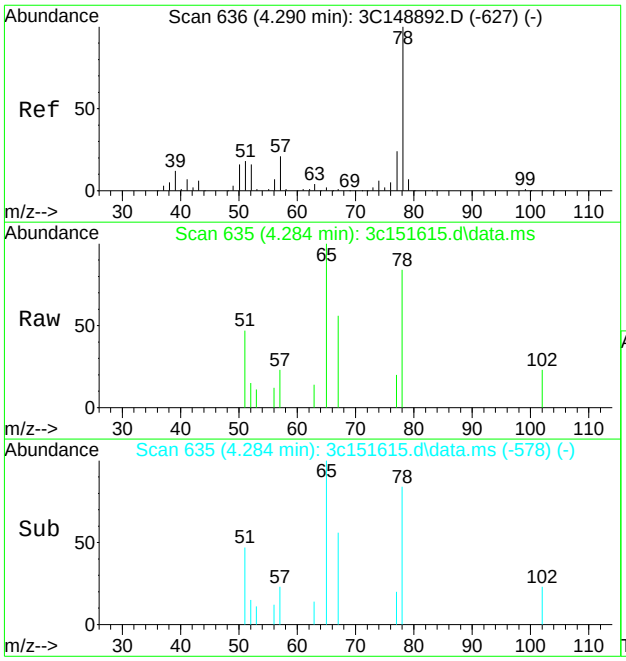


#54
2,2,4-trimethylpentane
Concen: 1.09 ug/L
RT: 4.258 min Scan# 630
Delta R.T. -0.005 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 57 Resp: 4536

Ion	Ratio	Lower	Upper
57	100		
56	32.3	13.5	53.5
41	27.4	13.2	53.2
99	0.0	0.0	26.9

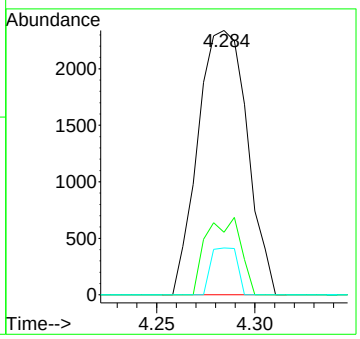


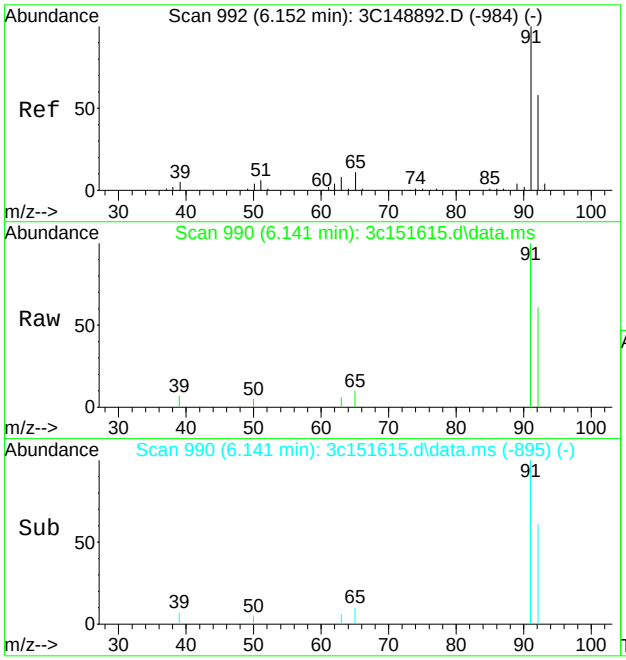


#57
benzene
Concen: 0.99 ug/L
RT: 4.284 min Scan# 635
Delta R.T. -0.000 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 78 Resp: 4080

Ion	Ratio	Lower	Upper
78	100		
77	23.7	0.0	54.0
52	17.8	0.0	44.9

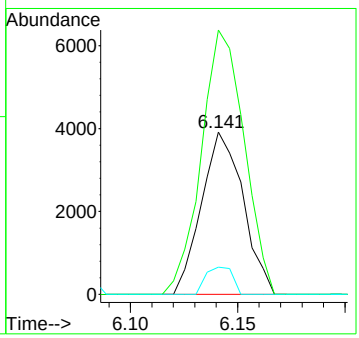


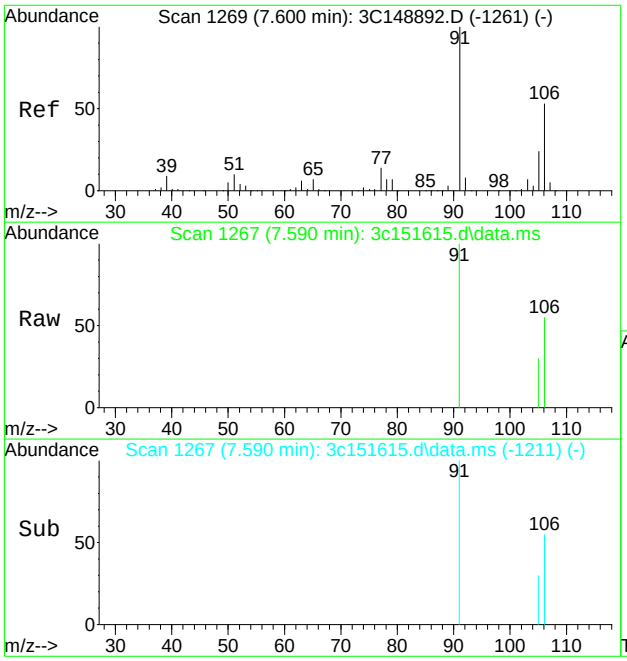


#76
toluene
Concen: 1.86 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion: 92 Resp: 5278

Ion	Ratio	Lower	Upper
92	100		
91	162.8	147.5	187.5
65	16.7	0.0	38.2

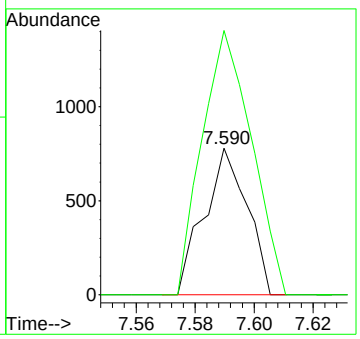




#90
m,p-xylene
Concen: 0.37 ug/L
RT: 7.590 min Scan# 1267
Delta R.T. -0.005 min
Lab File: 3c151615.d
Acq: 1 May 2019 4:58 pm

Tgt Ion:106 Resp: 791

Ion	Ratio	Lower	Upper
106	100		
91	180.3	164.8	224.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225878.d
Acq On : 1 May 2019 6:45 pm
Operator : thienn
Sample : jc86837-6 Inst : GCMSI
Misc : MS34232,VI9099,4.8,,100,10,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 04:18:59 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

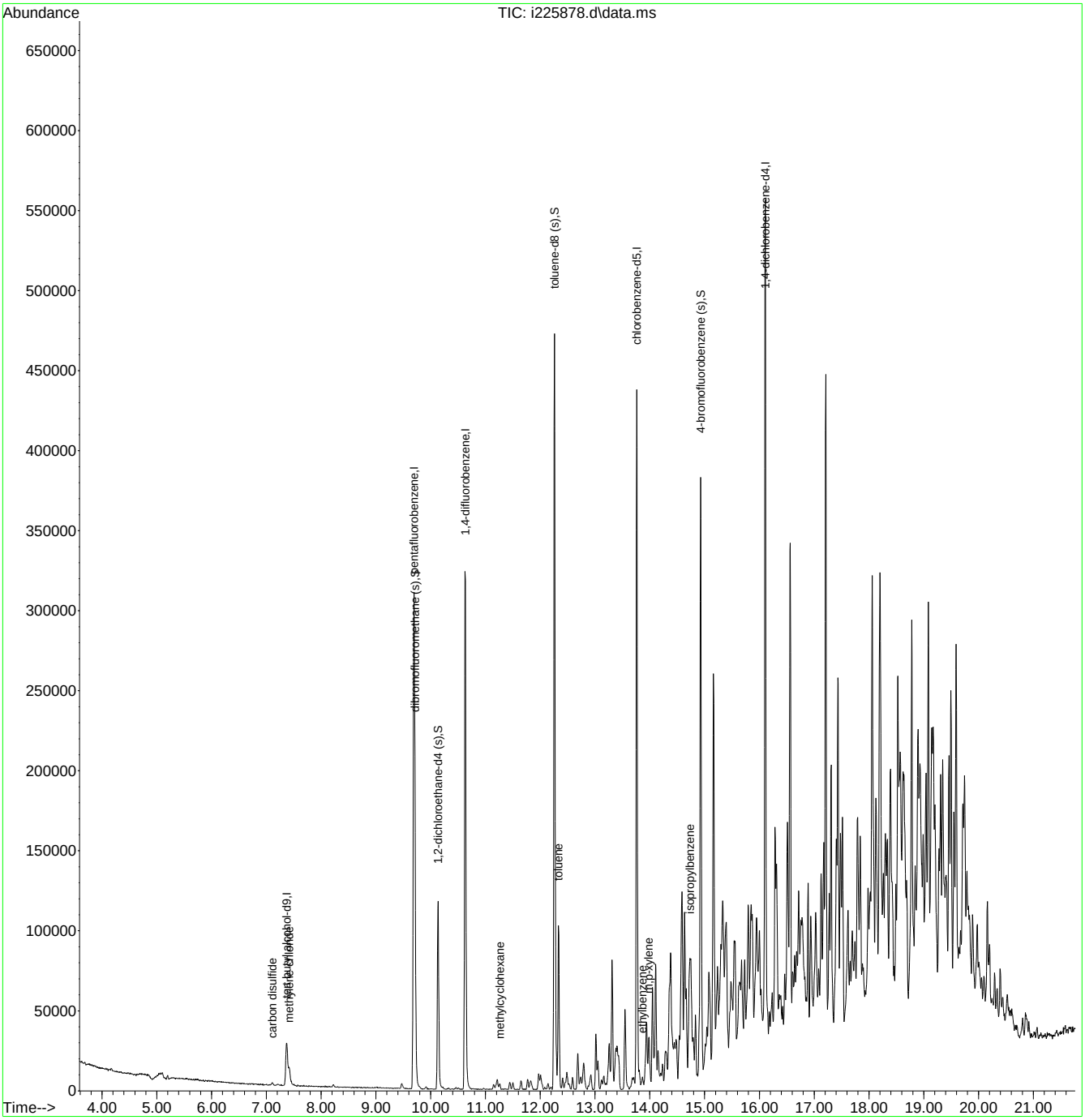
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.369	65	48935	500.00	ug/L	-0.01
4) pentafluorobenzene	9.691	168	195779	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.632	114	258447	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	214457	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	122784	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	79334	51.57	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.14%			
52) 1,2-dichloroethane-d4 (s)	10.130	65	80947	50.18	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.36%			
74) toluene-d8 (s)	12.259	98	284334	51.72	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.44%			
97) 4-bromofluorobenzene (s)	14.926	95	116138	62.03	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 124.06%			
Target Compounds						Qvalue
21) carbon disulfide	7.107	76	2553	0.65	ug/L	75
24) methylene chloride	7.416	84	3265	2.42	ug/L	82
62) methylcyclohexane	11.260	83	1332	0.58	ug/L	97
75) toluene	12.332	92	36926	12.44	ug/L	95
88) ethylbenzene	13.859	91	3959	0.72	ug/L	92
89) m,p-xylene	13.980	106	2779	1.28	ug/L	94
95) isopropylbenzene	14.733	105	2274	0.42	ug/L #	78

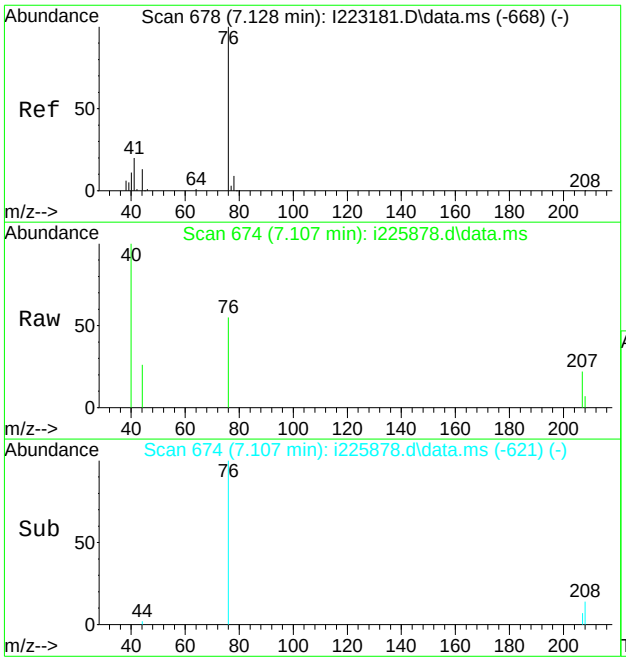
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225878.d
Acq On : 1 May 2019 6:45 pm
Operator : thienn
Sample : jc86837-6 Inst : GCMSI
Misc : MS34232,VI9099,4.8,,100,10,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 04:18:59 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

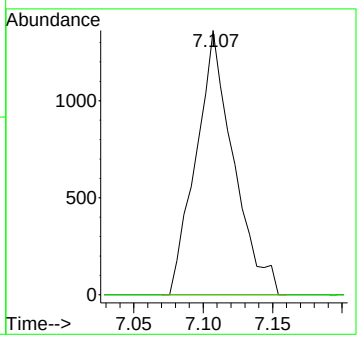


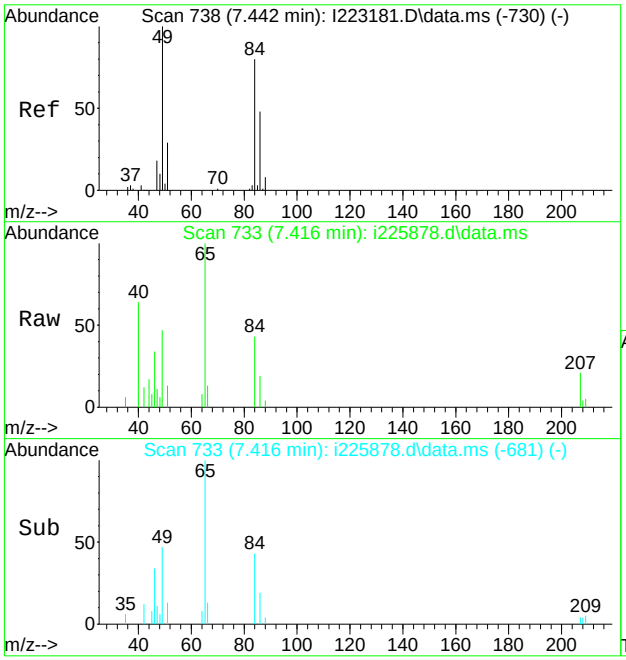


#21
carbon disulfide
Concen: 0.65 ug/L
RT: 7.107 min Scan# 674
Delta R.T. -0.021 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion: 76 Resp: 2553

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	29.0

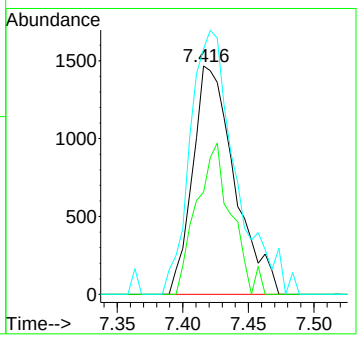


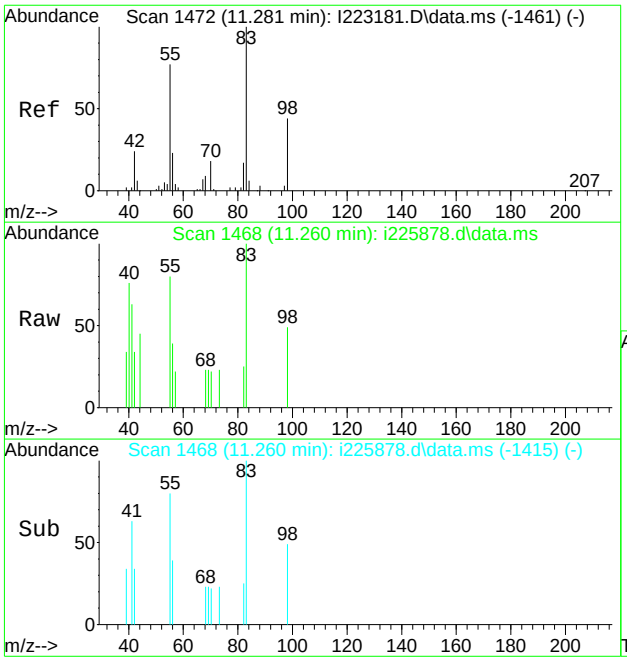


#24
methylene chloride
Concen: 2.42 ug/L
RT: 7.416 min Scan# 733
Delta R.T. -0.026 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion: 84 Resp: 3265

Ion	Ratio	Lower	Upper
84	100		
86	44.7	30.4	90.4
49	107.4	95.7	155.7

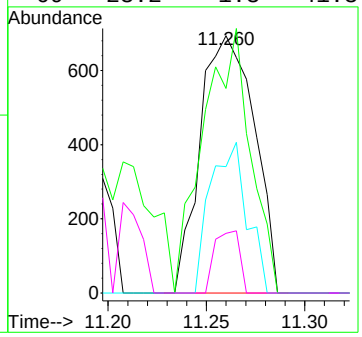


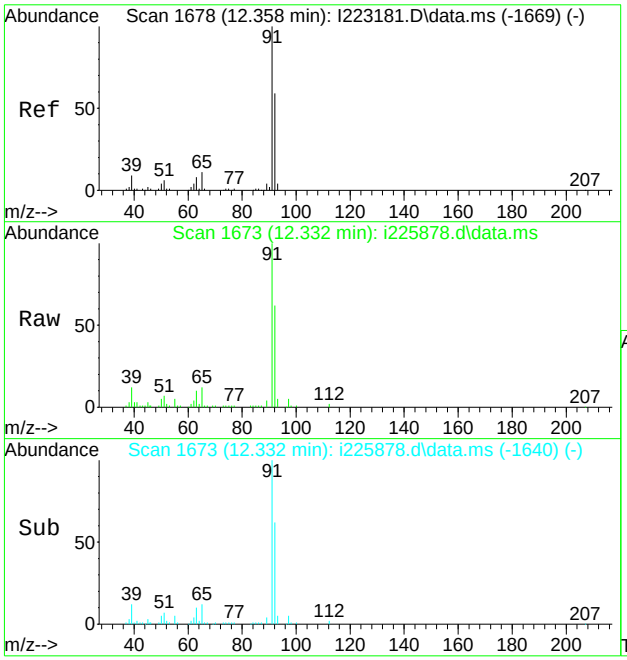


#62
methylcyclohexane
Concen: 0.58 ug/L
RT: 11.260 min Scan# 1468
Delta R.T. -0.021 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion: 83 Resp: 1332

Ion	Ratio	Lower	Upper
83	100		
55	79.5	59.8	99.8
98	49.1	24.4	64.4
69	23.2	1.3	41.3

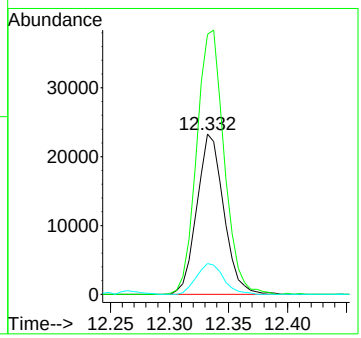


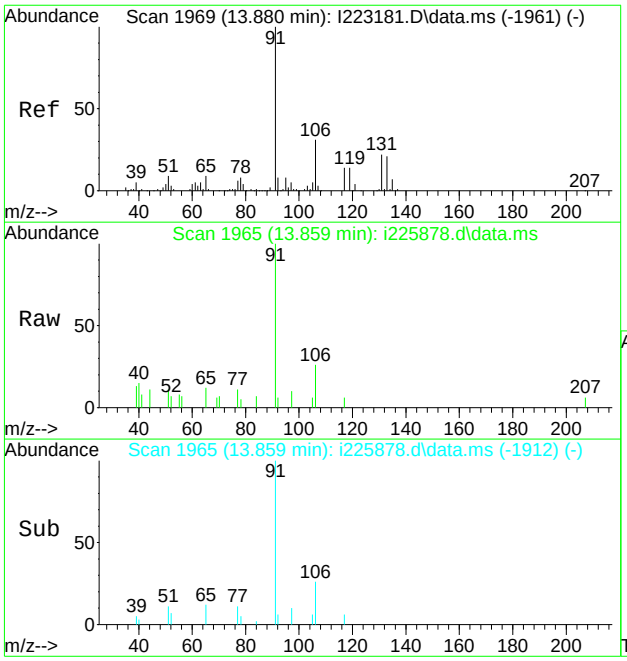


#75
toluene
Concen: 12.44 ug/L
RT: 12.332 min Scan# 1673
Delta R.T. -0.026 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion: 92 Resp: 36926

Ion	Ratio	Lower	Upper
92	100		
91	162.3	149.6	189.6
65	19.3	0.0	38.7

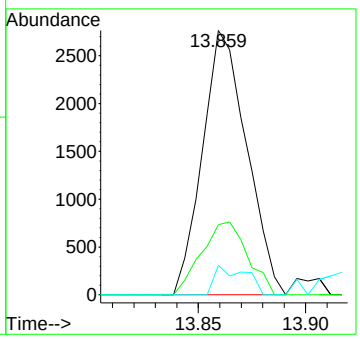


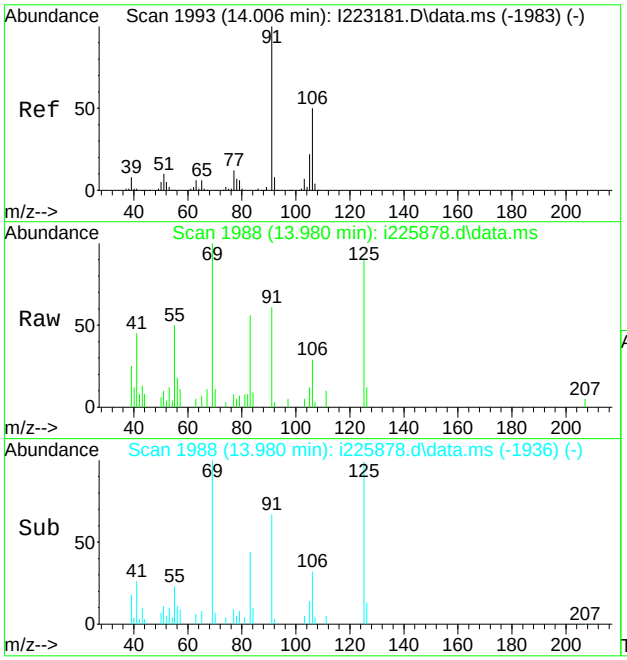


#88
ethylbenzene
Concen: 0.72 ug/L
RT: 13.859 min Scan# 1965
Delta R.T. -0.021 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion: 91 Resp: 3959

Ion	Ratio	Lower	Upper
91	100		
106	26.5	0.7	60.7
77	11.1	0.0	38.1

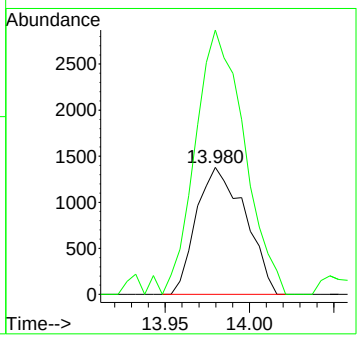


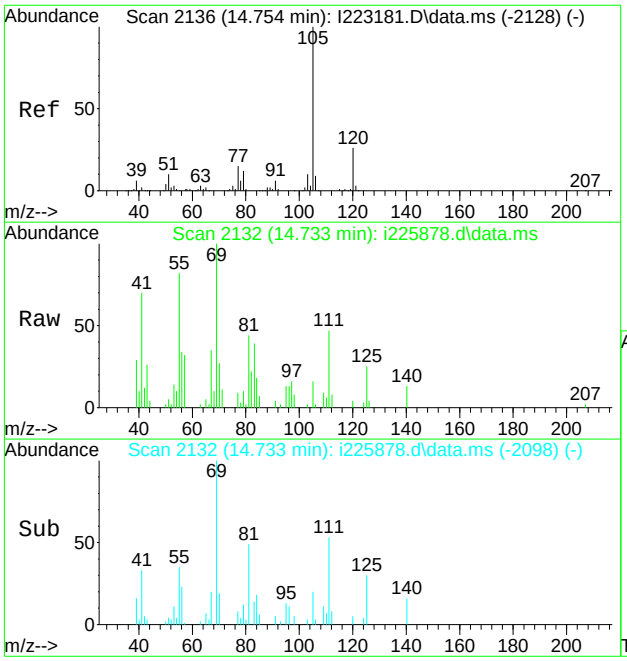


#89
m,p-xylene
Concen: 1.28 ug/L
RT: 13.980 min Scan# 1988
Delta R.T. -0.026 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion:106 Resp: 2779

Ion	Ratio	Lower	Upper
106	100		
91	208.0	169.5	229.5

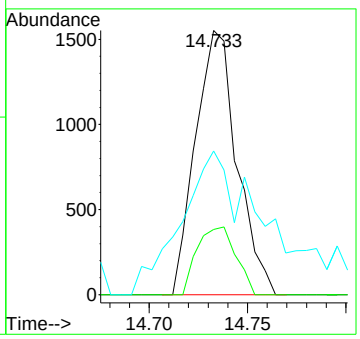




#95
isopropylbenzene
Concen: 0.42 ug/L
RT: 14.733 min Scan# 2132
Delta R.T. -0.021 min
Lab File: i225878.d
Acq: 1 May 2019 6:45 pm

Tgt Ion:105 Resp: 2274

Ion	Ratio	Lower	Upper
105	100		
120	24.7	6.2	46.2
77	38.6	0.0	35.3#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151616.d
Acq On : 1 May 2019 5:21 pm
Operator : PrashanS
Sample : JC86837-7 Inst : MS3C
Misc : MS34232,V3C6814,5.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:47:04 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

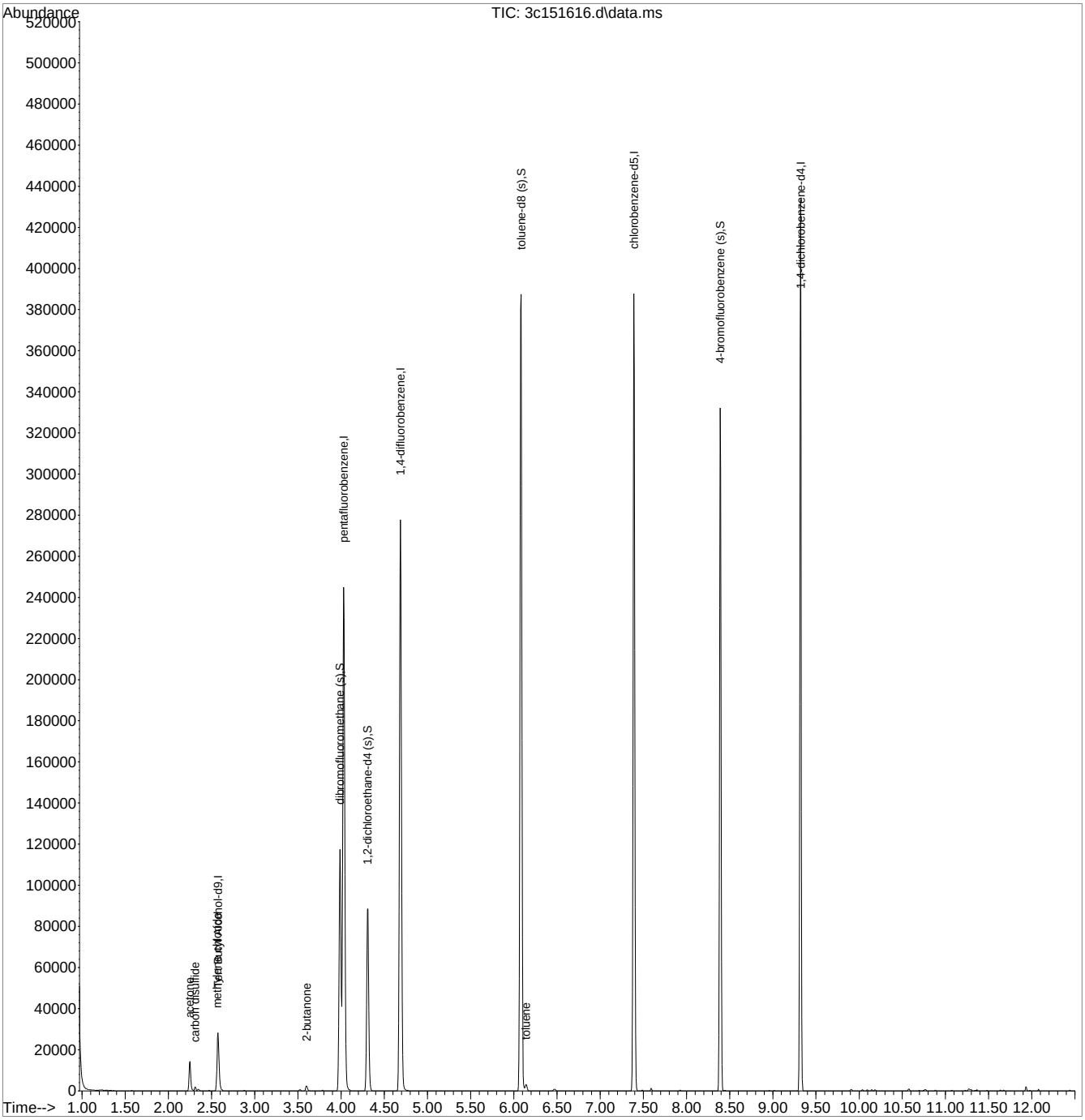
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	26888	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	164691	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	210816	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	180514	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	89097	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	56646	47.60	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 95.20%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	54589	47.66	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.32%			
75) toluene-d8 (s)	6.084	98	234614	52.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.02%			
98) 4-bromofluorobenzene (s)	8.390	95	82025	55.99	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 111.98%			
Target Compounds						Qvalue
20) acetone	2.245	58	4202	81.89	ug/L	96
23) carbon disulfide	2.307	76	2224	0.85	ug/L	69
24) methylene chloride	2.564	84	977	0.96	ug/L	89
31) 2-butanone	3.599	72	608	7.52	ug/L #	26
76) toluene	6.141	92	1606	0.62	ug/L #	82

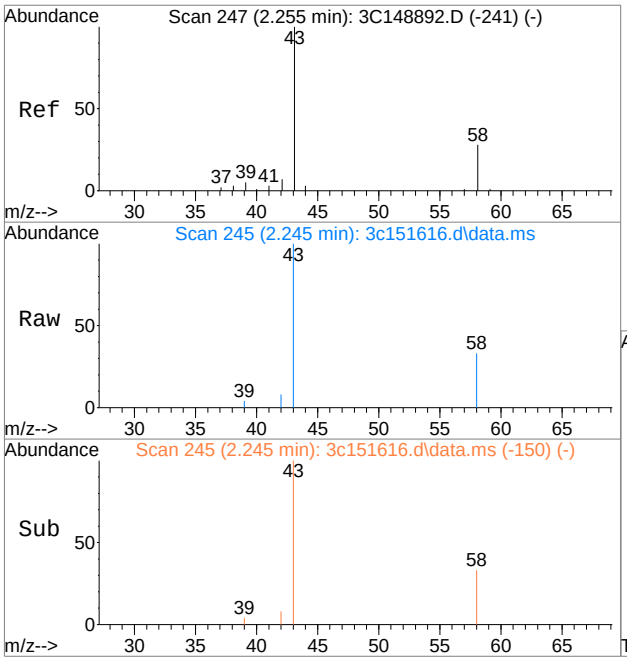
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151616.d
Acq On : 1 May 2019 5:21 pm
Operator : PrashanS
Sample : JC86837-7 Inst : MS3C
Misc : MS34232,V3C6814,5.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:47:04 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

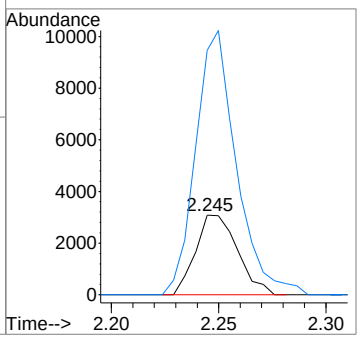


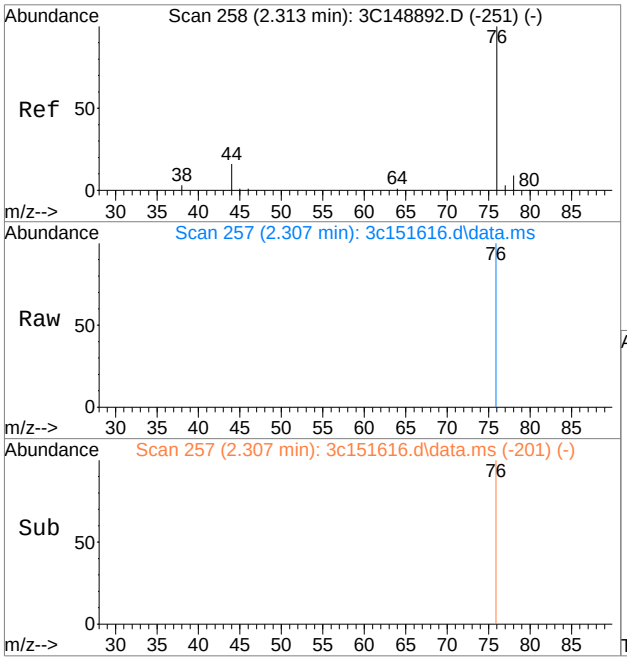


#20
acetone
Concen: 81.89 ug/L
RT: 2.245 min Scan# 245
Delta R.T. -0.005 min
Lab File: 3c151616.d
Acq: 1 May 2019 5:21 pm

Tgt Ion: 58 Resp: 4202

Ion	Ratio	Lower	Upper
58	100		
43	306.5	284.5	344.5

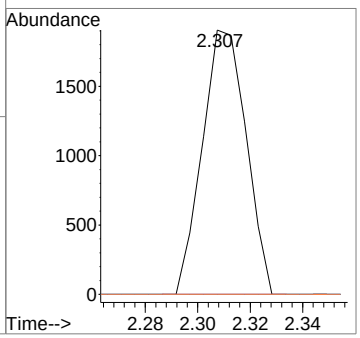


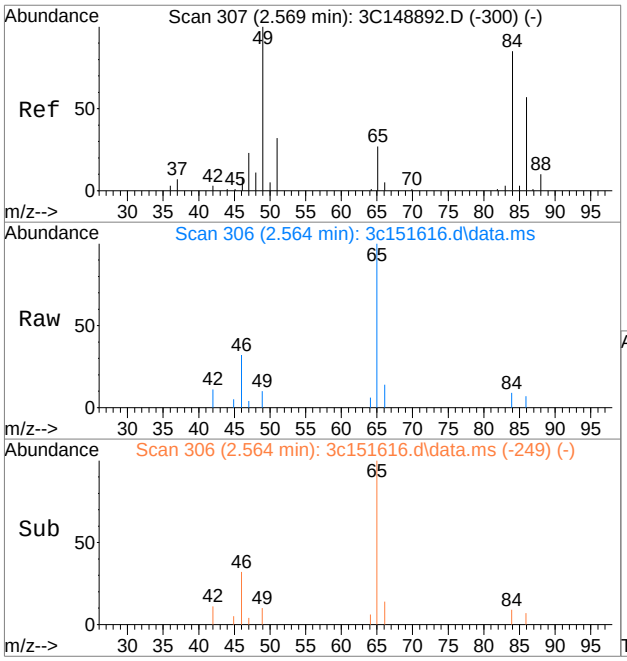


#23
carbon disulfide
Concen: 0.85 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151616.d
Acq: 1 May 2019 5:21 pm

Tgt Ion: 76 Resp: 2224

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

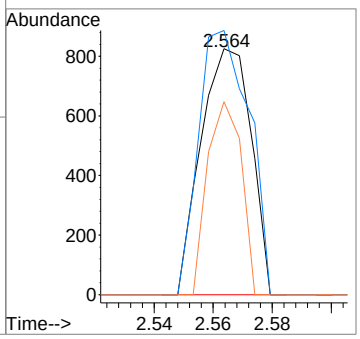


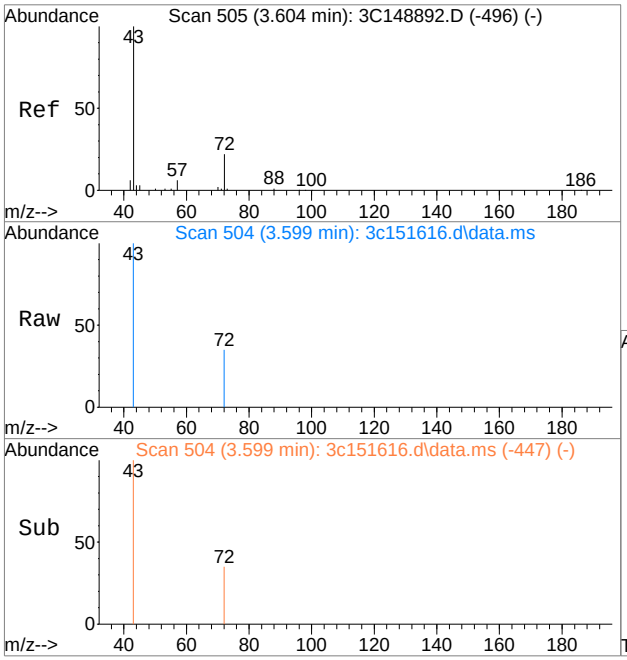


#24
methylene chloride
Concen: 0.96 ug/L
RT: 2.564 min Scan# 306
Delta R.T. 0.000 min
Lab File: 3c151616.d
Acq: 1 May 2019 5:21 pm

Tgt Ion: 84 Resp: 977

Ion	Ratio	Lower	Upper
84	100		
49	107.5	87.1	147.1
86	78.5	37.5	97.5

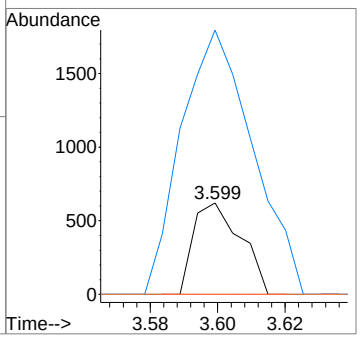


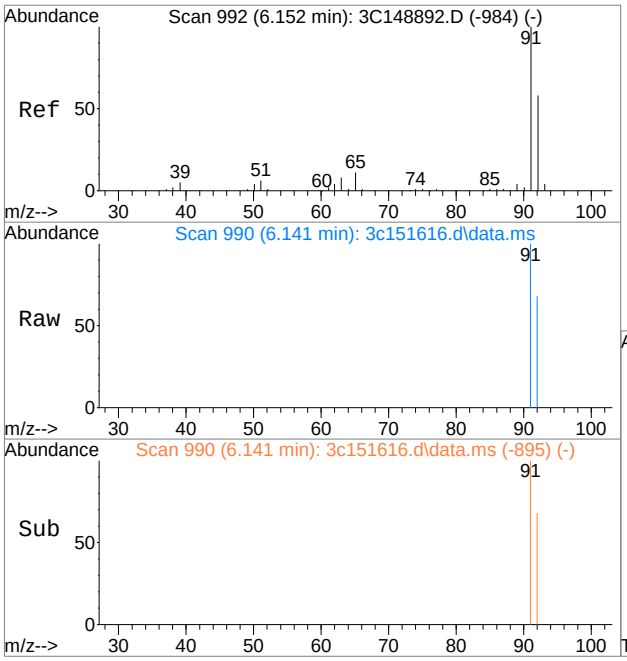


#31
2-butanone
Concen: 7.52 ug/L
RT: 3.599 min Scan# 504
Delta R.T. 0.000 min
Lab File: 3c151616.d
Acq: 1 May 2019 5:21 pm

Tgt Ion: 72 Resp: 608

Ion	Ratio	Lower	Upper
72	100		
43	222.9	372.9	432.9#
57	0.0	0.0	59.6

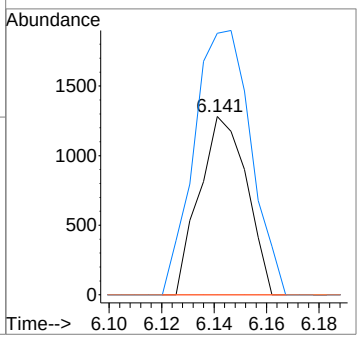




#76
toluene
Concen: 0.62 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151616.d
Acq: 1 May 2019 5:21 pm

Tgt Ion: 92 Resp: 1606

Ion	Ratio	Lower	Upper
92	100		
91	146.7	147.5	187.5#
65	0.0	0.0	38.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184888.d
Acq On : 2 May 2019 2:26 pm
Operator : PrashanS
Sample : JC86837-8 Inst : MSY
Misc : MS34232,VY8023,4.7,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:33:45 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

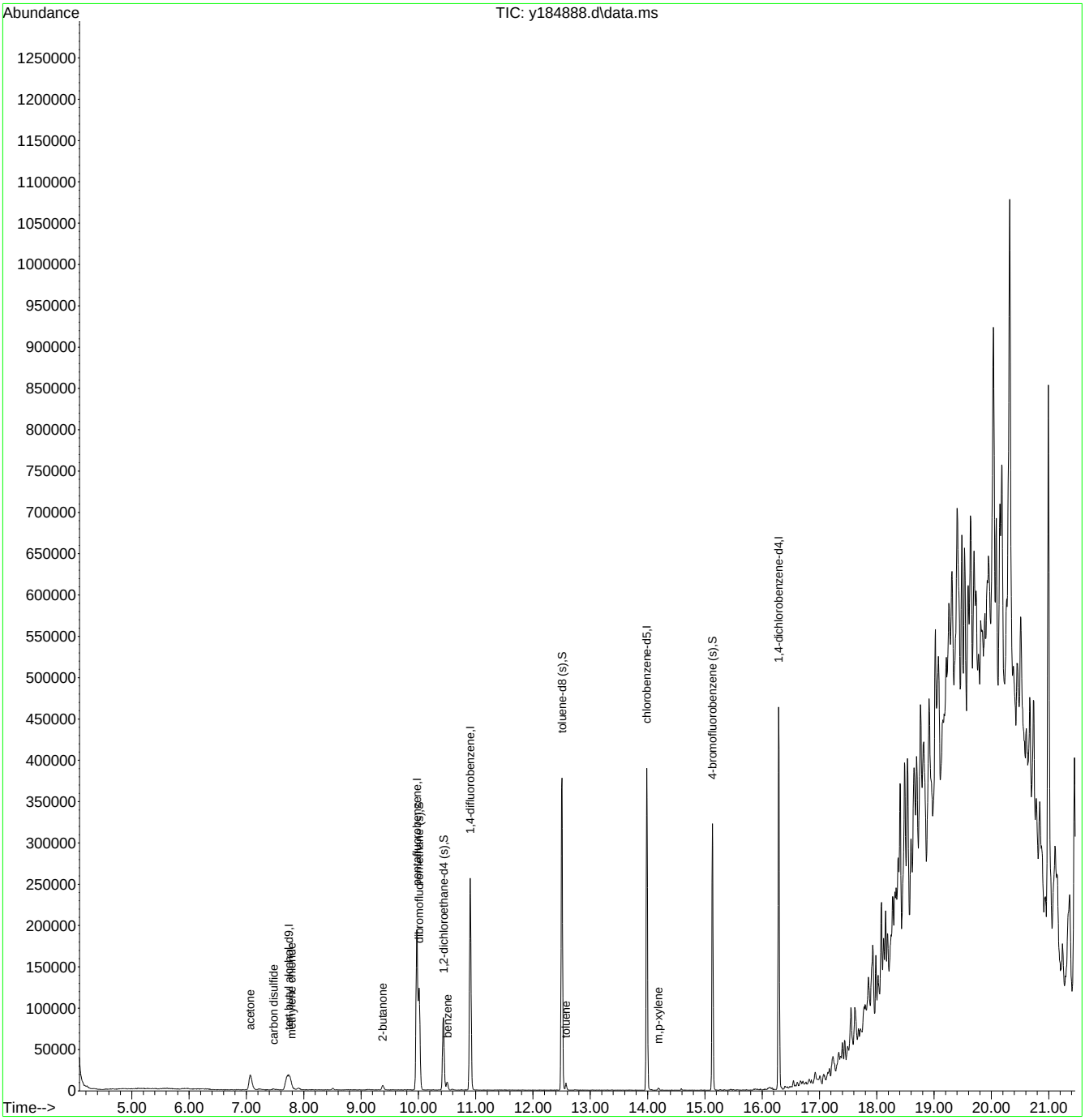
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.741	65	59459	500.00	ug/L		0.00
5) pentafluorobenzene	9.974	168	155105	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.905	114	227342	50.00	ug/L		0.00
74) chlorobenzene-d5	13.986	117	204499	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.287	152	110120	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.011	113	77735	55.25	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 110.50%				
53) 1,2-dichloroethane-d4 (s)	10.440	65	66883	52.66	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 105.32%				
75) toluene-d8 (s)	12.506	98	247841	47.89	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.78%				
98) 4-bromofluorobenzene (s)	15.131	95	87758	48.06	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 96.12%				
Target Compounds							Qvalue
20) acetone	7.066	43	45659	120.16	ug/L		99
23) carbon disulfide	7.474	76	2524	0.48	ug/L		71
24) methylene chloride	7.788	84	2393	1.16	ug/L	#	58
31) 2-butanone	9.373	72	1952	15.63	ug/L	#	29
57) benzene	10.508	78	9697	1.48	ug/L		99
76) toluene	12.574	92	3594	0.91	ug/L		95
90) m,p-xylene	14.190	106	956	0.33	ug/L		88

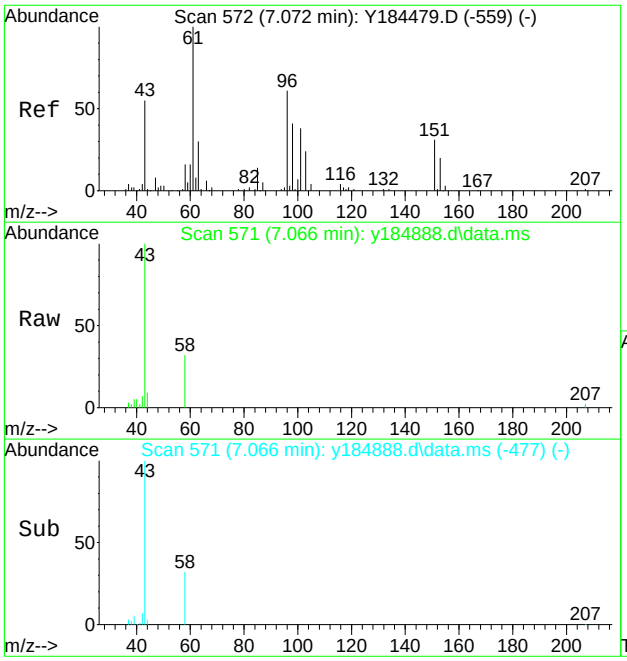
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184888.d
Acq On : 2 May 2019 2:26 pm
Operator : PrashanS
Sample : JC86837-8 Inst : MSY
Misc : MS34232,VY8023,4.7,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:33:45 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

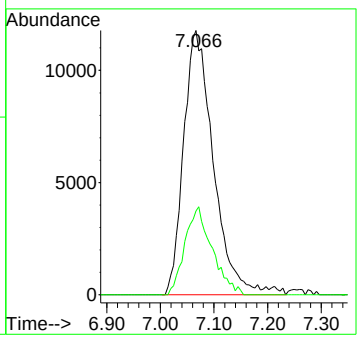


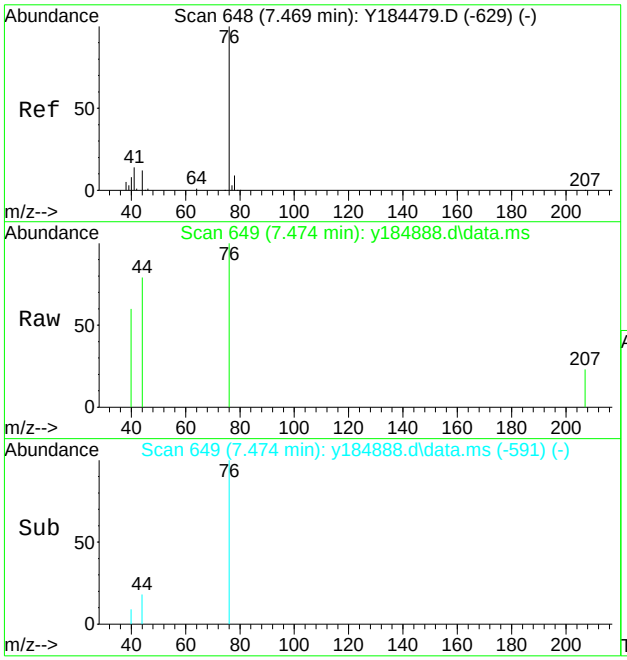


#20
acetone
Concen: 120.16 ug/L
RT: 7.066 min Scan# 571
Delta R.T. -0.011 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion: 43 Resp: 45659

Ion	Ratio	Lower	Upper
43	100		
58	31.7	1.4	61.4

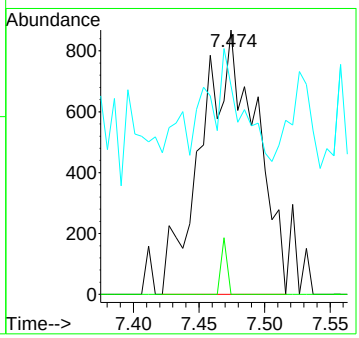


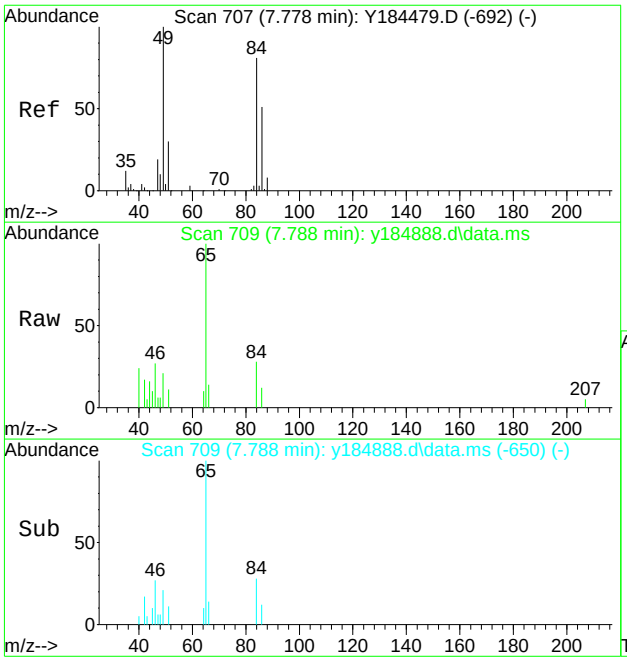


#23
carbon disulfide
Concen: 0.48 ug/L
RT: 7.474 min Scan# 649
Delta R.T. 0.005 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion: 76 Resp: 2524

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	38.7
44	25.3	0.0	42.6

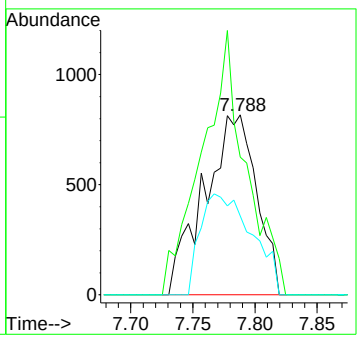


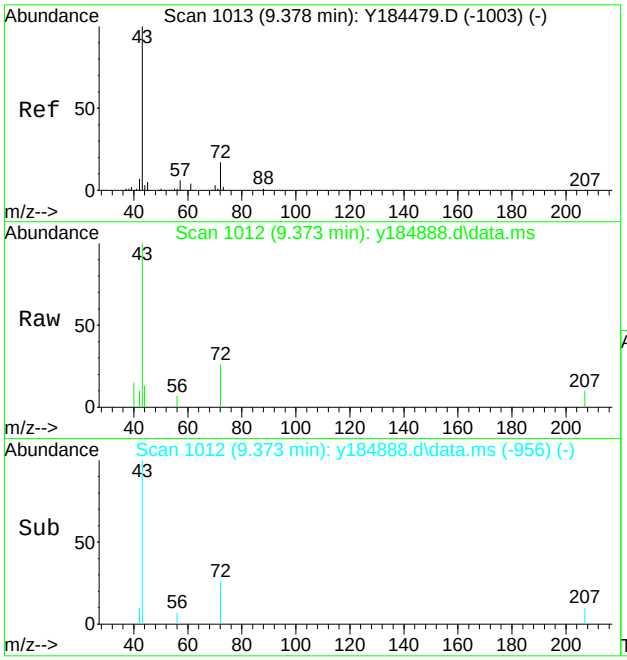


#24
methylene chloride
Concen: 1.16 ug/L
RT: 7.788 min Scan# 709
Delta R.T. 0.010 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion: 84 Resp: 2393

Ion	Ratio	Lower	Upper
84	100		
49	76.5	104.2	164.2#
86	43.8	35.3	95.3

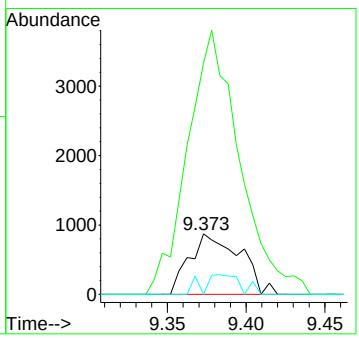


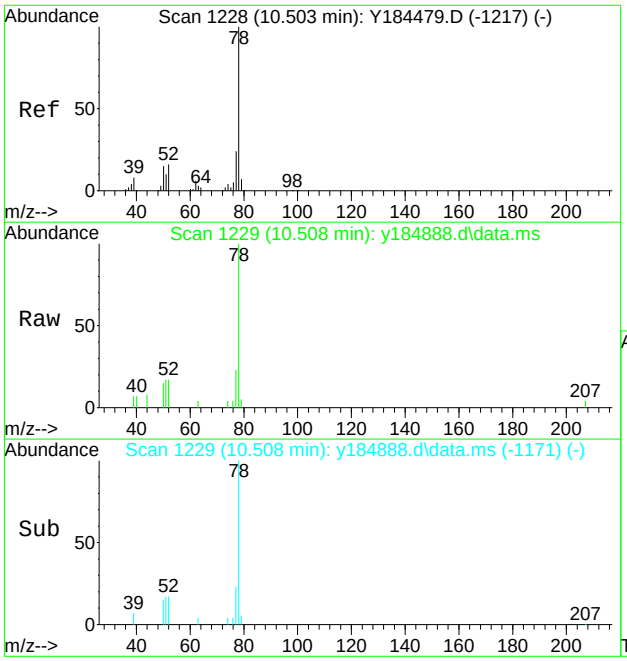


#31
2-butanone
Concen: 15.63 ug/L
RT: 9.373 min Scan# 1012
Delta R.T. -0.005 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion: 72 Resp: 1952

Ion	Ratio	Lower	Upper
72	100		
43	352.1	537.8	597.8#
57	0.0	1.1	61.1#

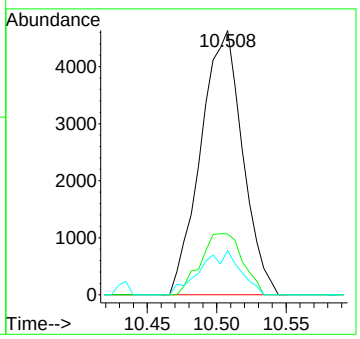


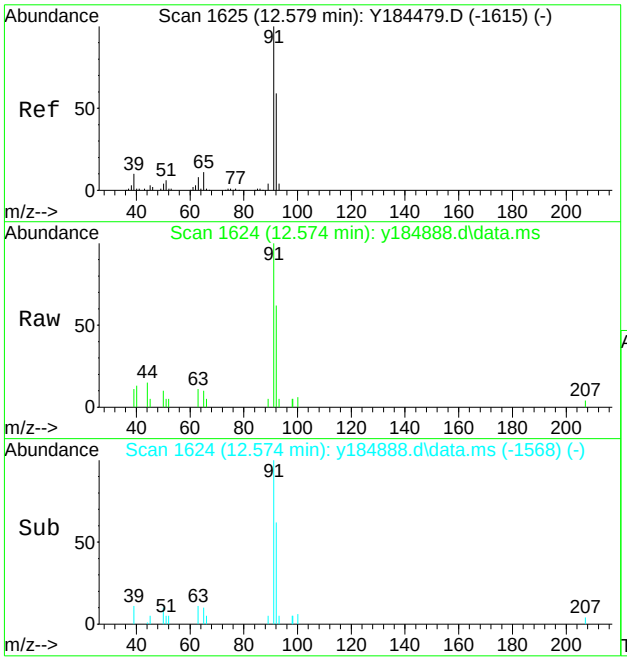


#57
benzene
Concen: 1.48 ug/L
RT: 10.508 min Scan# 1229
Delta R.T. 0.005 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion: 78 Resp: 9697

Ion	Ratio	Lower	Upper
78	100		
77	23.1	0.0	53.1
52	16.8	0.0	45.8

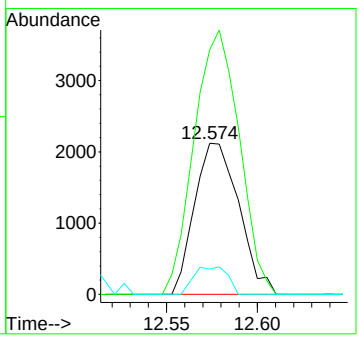


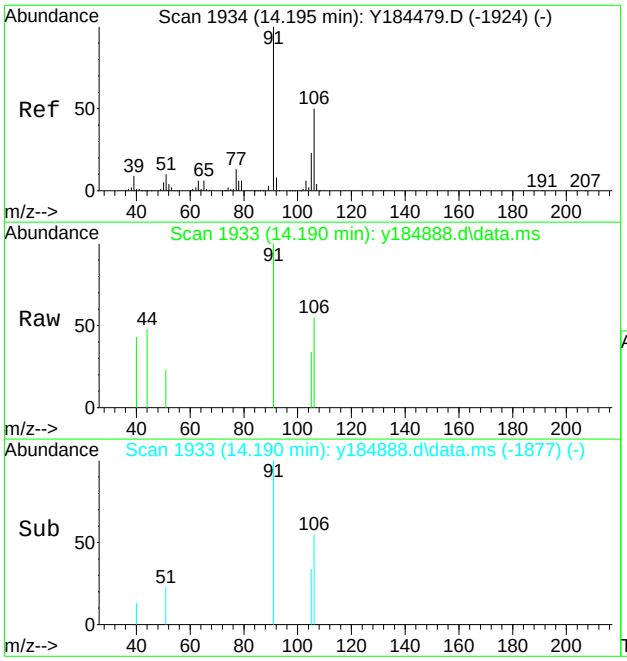


#76
toluene
Concen: 0.91 ug/L
RT: 12.574 min Scan# 1624
Delta R.T. -0.005 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion: 92 Resp: 3594

Ion	Ratio	Lower	Upper
92	100		
91	162.0	148.7	188.7
65	16.8	0.0	38.2

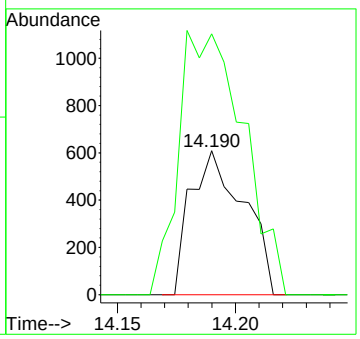




#90
m,p-xylene
Concen: 0.33 ug/L
RT: 14.190 min Scan# 1933
Delta R.T. -0.005 min
Lab File: y184888.d
Acq: 2 May 2019 2:26 pm

Tgt Ion:106 Resp: 956

Ion	Ratio	Lower	Upper
106	100		
91	181.1	168.8	228.8



7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151617.d
Acq On : 1 May 2019 5:44 pm
Operator : PrashanS
Sample : JC86837-9 Inst : MS3C
Misc : MS34232,V3C6814,5.4,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:49:03 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

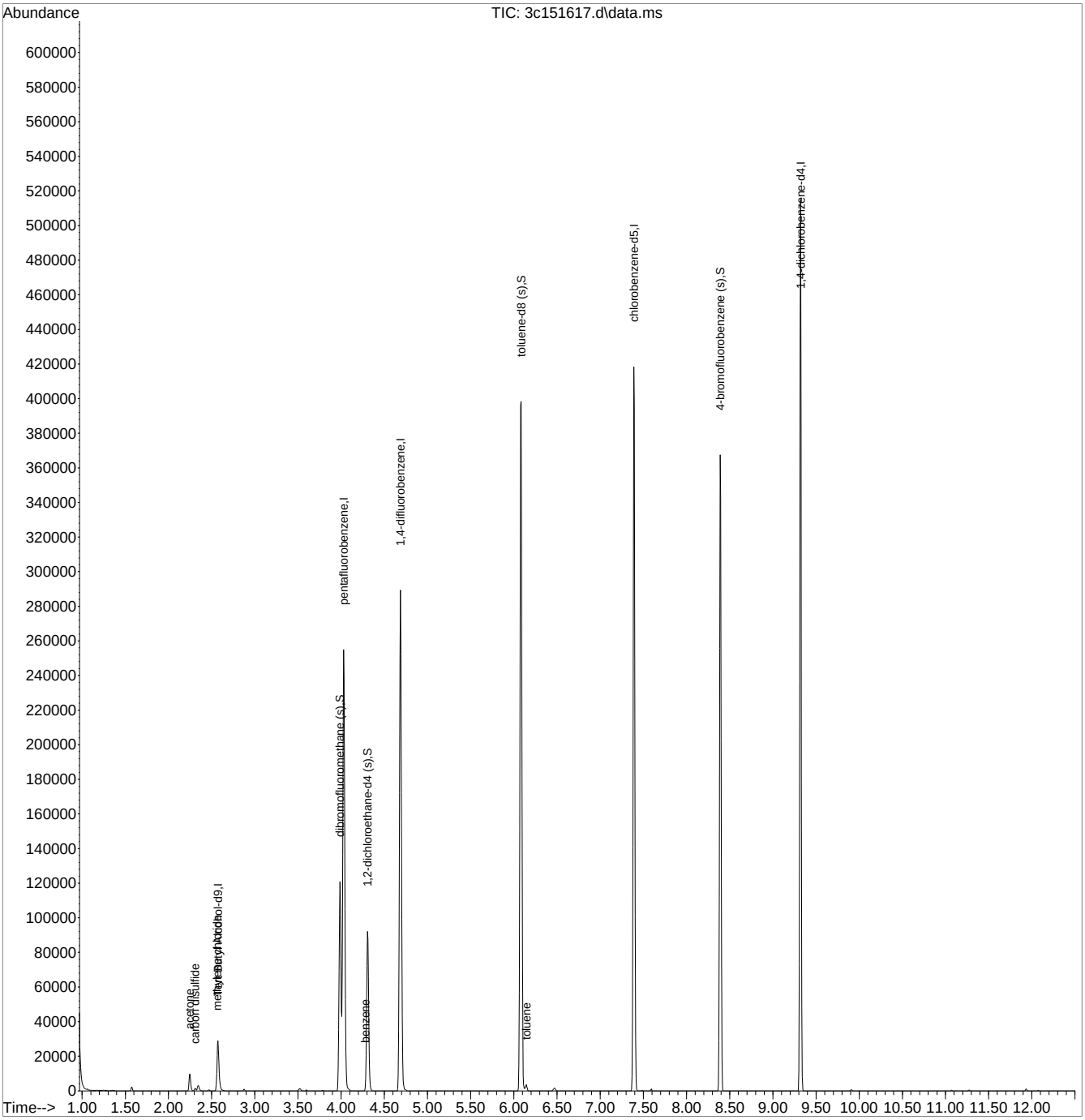
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	27613	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	169486	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	217800	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	192341	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	108728	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	58918	48.11	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.22%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	55949	47.28	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 94.56%			
75) toluene-d8 (s)	6.083	98	243667	51.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.36%			
98) 4-bromofluorobenzene (s)	8.390	95	91998	51.46	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.92%			
Target Compounds						Qvalue
20) acetone	2.244	58	3084	58.40	ug/L #	80
23) carbon disulfide	2.307	76	1734	0.65	ug/L	69
24) methylene chloride	2.563	84	892	0.85	ug/L	95
57) benzene	4.279	78	911	0.23	ug/L	56
76) toluene	6.146	92	1638	0.60	ug/L	90

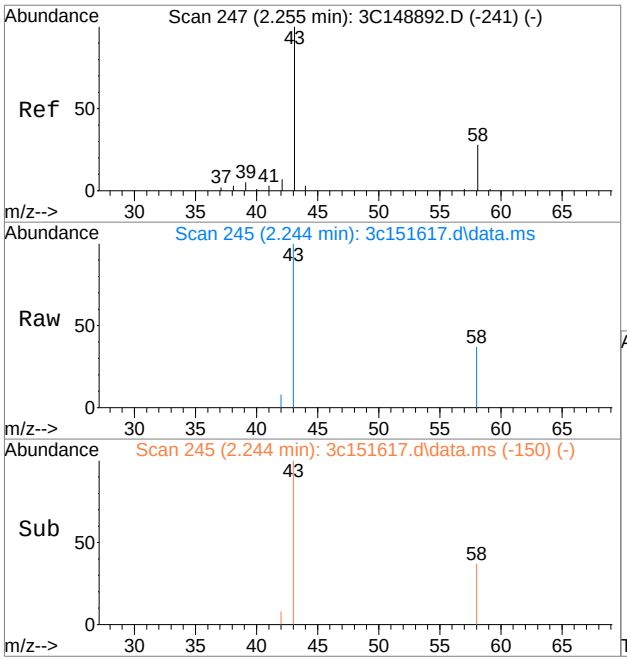
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151617.d
Acq On : 1 May 2019 5:44 pm
Operator : PrashanS
Sample : JC86837-9 Inst : MS3C
Misc : MS34232,V3C6814,5.4,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:49:03 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

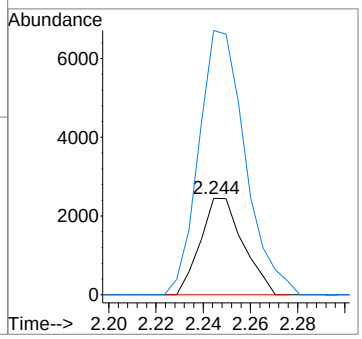


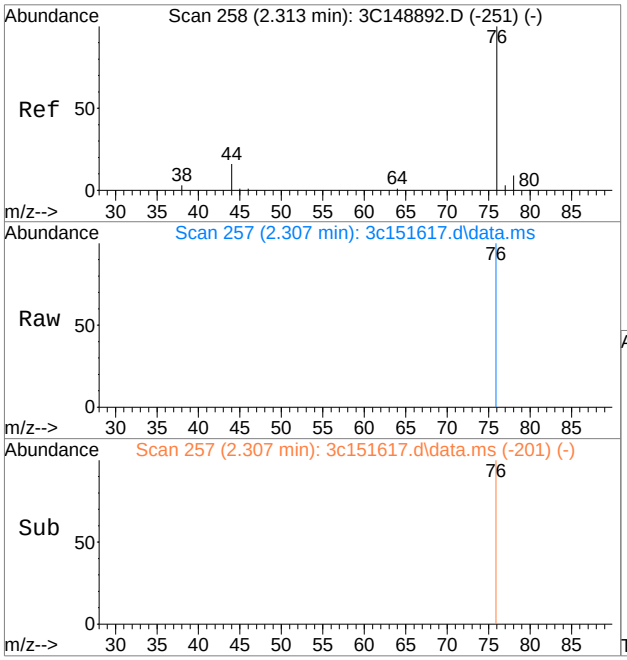


#20
acetone
Concen: 58.40 ug/L
RT: 2.244 min Scan# 245
Delta R.T. -0.005 min
Lab File: 3c151617.d
Acq: 1 May 2019 5:44 pm

Tgt Ion: 58 Resp: 3084

Ion	Ratio	Lower	Upper
58	100		
43	274.0	284.5	344.5#

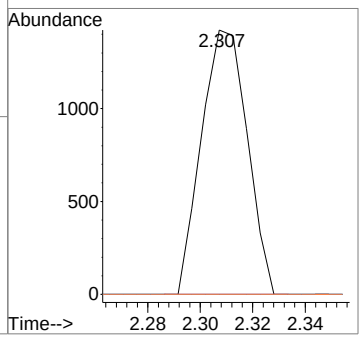


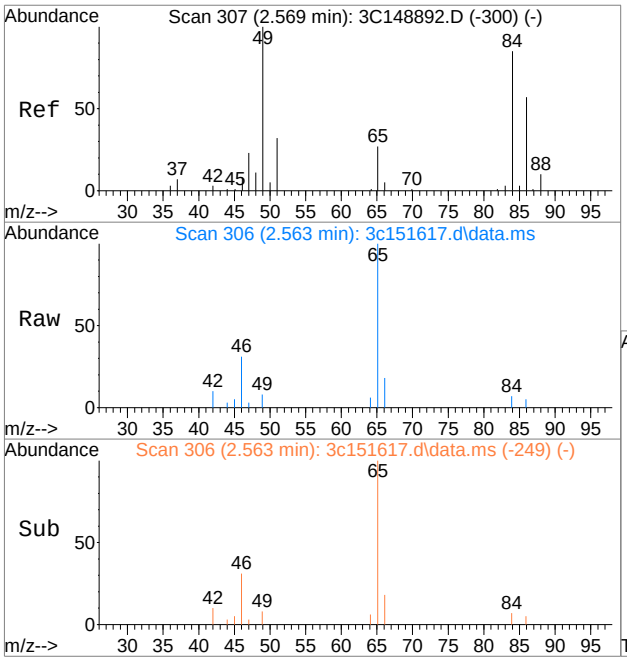


#23
carbon disulfide
Concen: 0.65 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151617.d
Acq: 1 May 2019 5:44 pm

Tgt Ion: 76 Resp: 1734

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

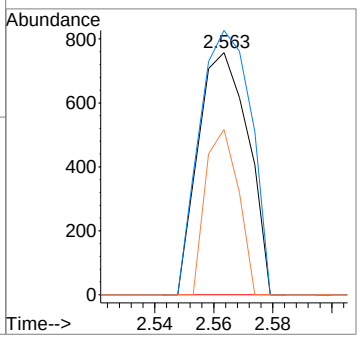


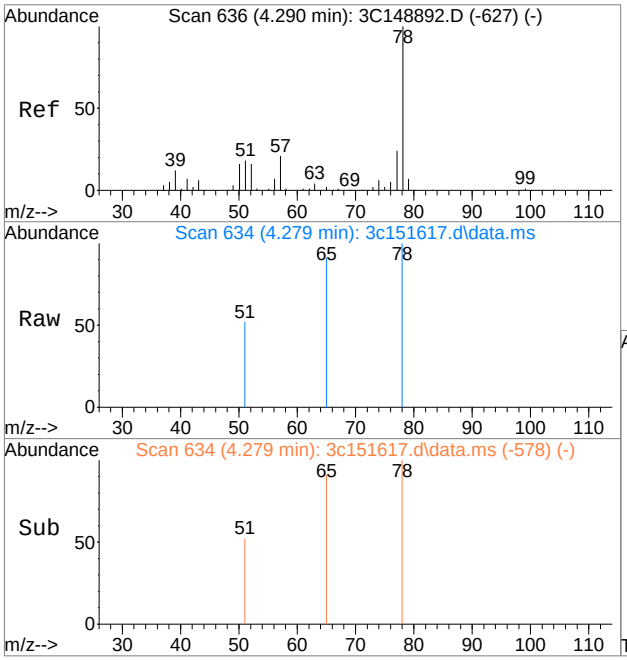


#24
methylene chloride
Concen: 0.85 ug/L
RT: 2.563 min Scan# 306
Delta R.T. -0.000 min
Lab File: 3c151617.d
Acq: 1 May 2019 5:44 pm

Tgt Ion: 84 Resp: 892

Ion	Ratio	Lower	Upper
84	100		
49	109.2	87.1	147.1
86	68.3	37.5	97.5

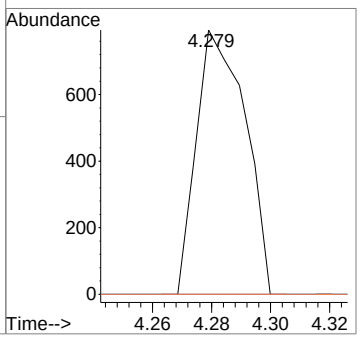


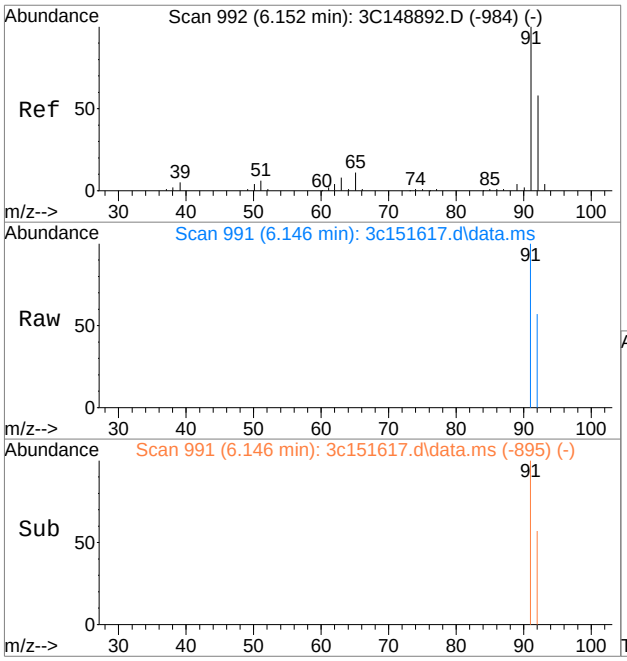


#57
benzene
Concen: 0.23 ug/L
RT: 4.279 min Scan# 634
Delta R.T. -0.005 min
Lab File: 3c151617.d
Acq: 1 May 2019 5:44 pm

Tgt Ion: 78 Resp: 911

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

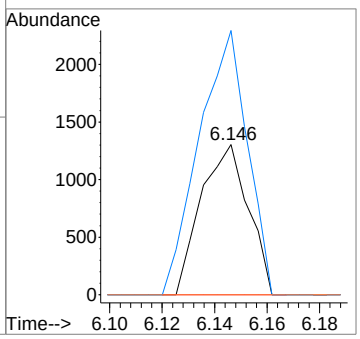




#76
toluene
Concen: 0.60 ug/L
RT: 6.146 min Scan# 991
Delta R.T. -0.000 min
Lab File: 3c151617.d
Acq: 1 May 2019 5:44 pm

Tgt Ion: 92 Resp: 1638

Ion	Ratio	Lower	Upper
92	100		
91	176.1	147.5	187.5
65	0.0	0.0	38.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151618.d
Acq On : 1 May 2019 6:07 pm
Operator : PrashanS
Sample : JC86837-10 Inst : MS3C
Misc : MS34232,V3C6814,4.5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:49:45 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

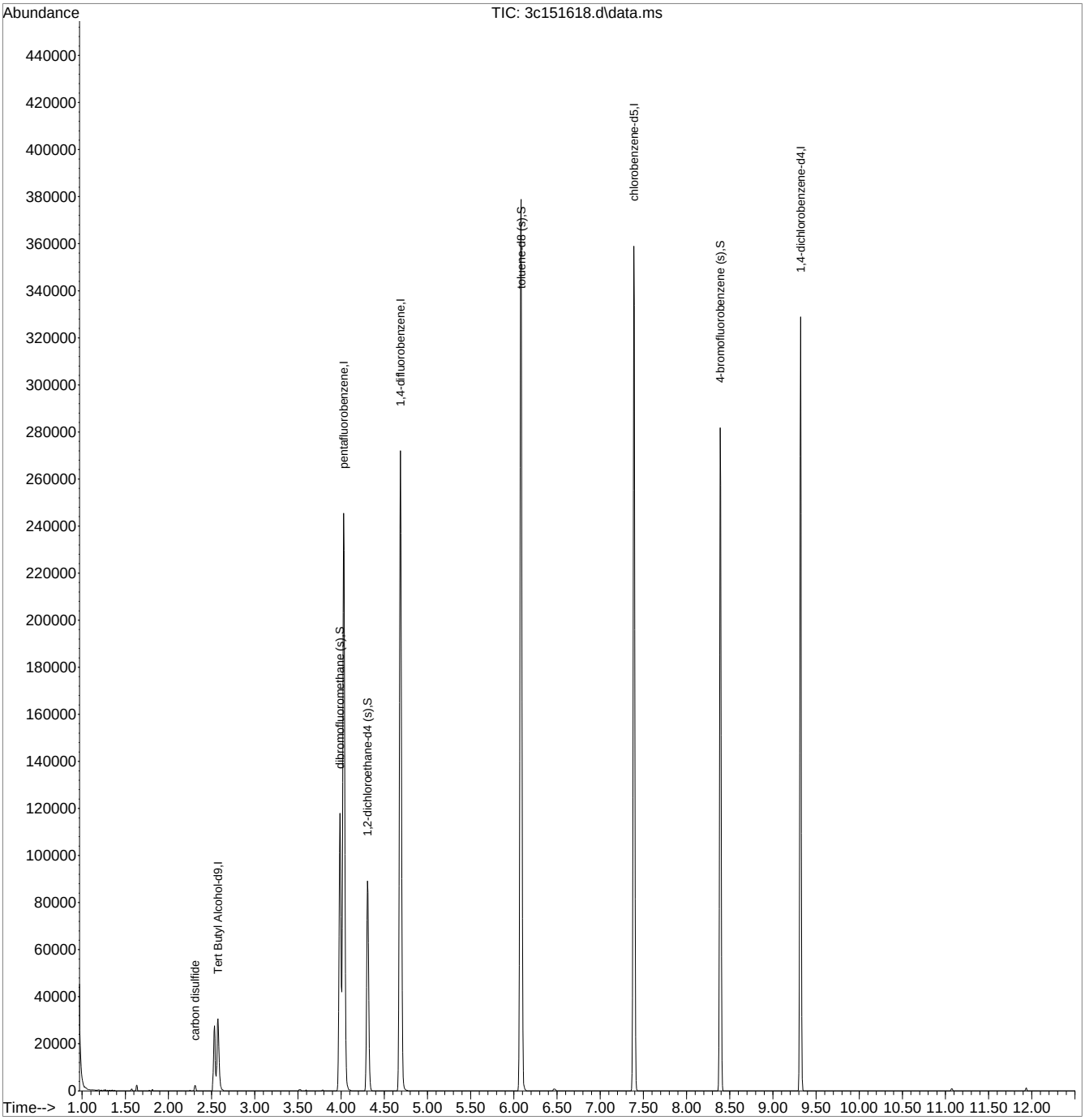
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	30213	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	162143	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	206782	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	163152	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	68738	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	56745	48.43	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.86%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	53960	48.03	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.06%			
75) toluene-d8 (s)	6.083	98	226136	56.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.00%			
98) 4-bromofluorobenzene (s)	8.390	95	67826	60.02	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 120.04%			
Target Compounds						Qvalue
23) carbon disulfide	2.307	76	2588	1.01	ug/L	69

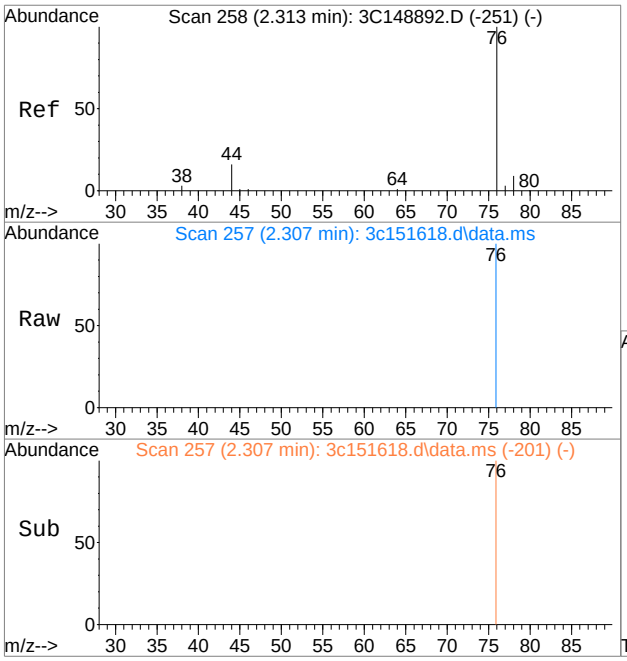
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151618.d
Acq On : 1 May 2019 6:07 pm
Operator : PrashanS
Sample : JC86837-10 Inst : MS3C
Misc : MS34232,V3C6814,4.5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:49:45 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

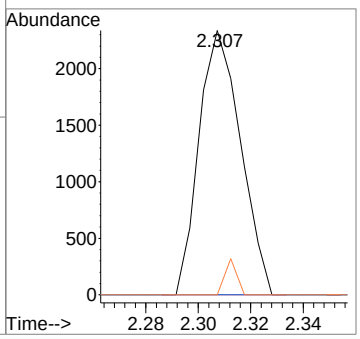




#23
carbon disulfide
Concen: 1.01 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151618.d
Acq: 1 May 2019 6:07 pm

Tgt Ion: 76 Resp: 2588

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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151619.d
Acq On : 1 May 2019 6:30 pm
Operator : PrashanS
Sample : JC86837-11 Inst : MS3C
Misc : MS34232,V3C6814,5.2,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:54:04 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

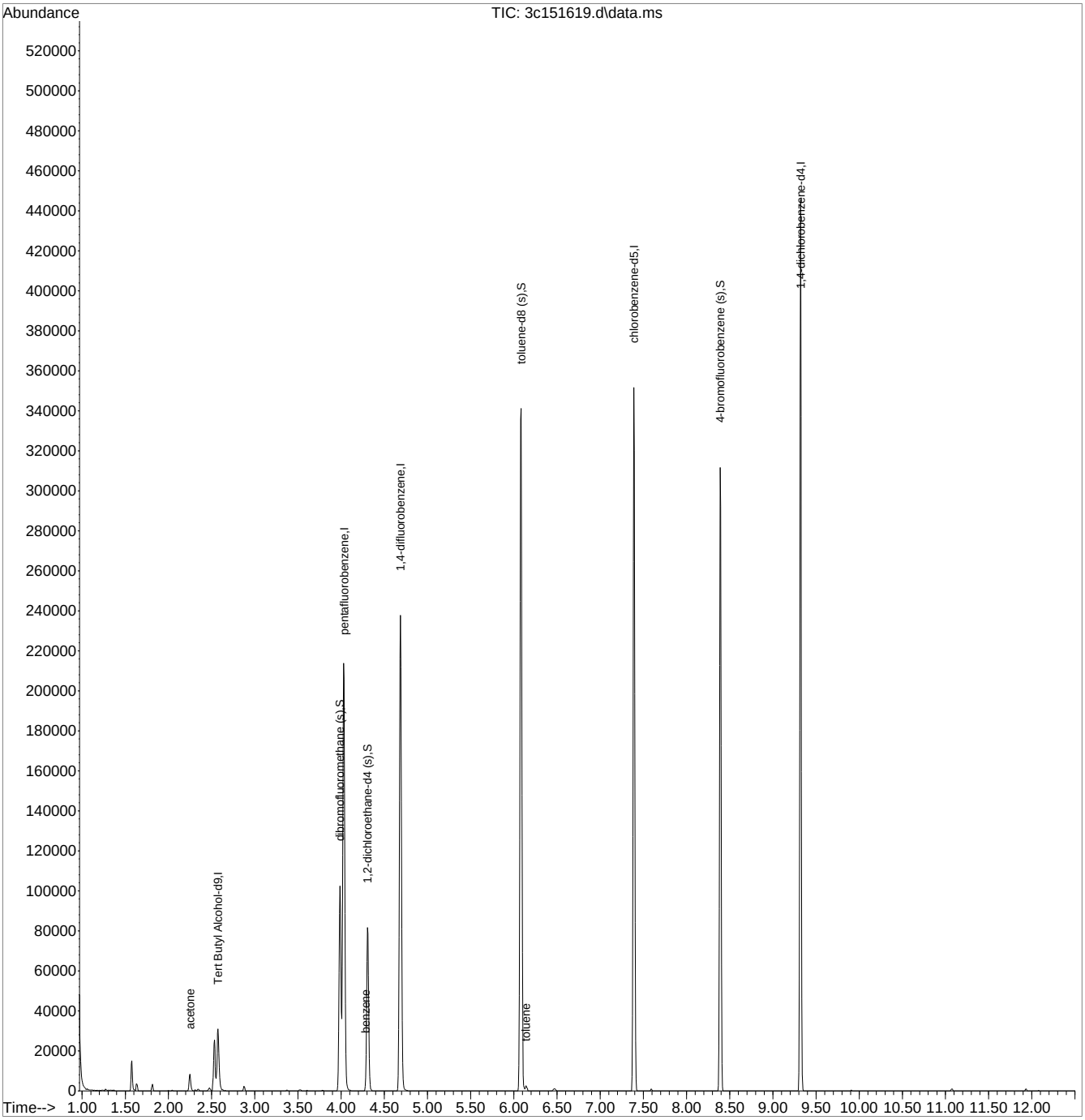
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	29851	500.00	ug/L	0.00
5) pentafluorobenzene	4.033	168	144656	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	184835	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	163063	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	92562	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	49755	47.60	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 95.20%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	49064	48.86	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 97.72%			
75) toluene-d8 (s)	6.083	98	205855	51.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.00%			
98) 4-bromofluorobenzene (s)	8.390	95	77000	50.60	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 101.20%			
Target Compounds						Qvalue
20) acetone	2.250	58	2633	58.42	ug/L #	80
57) benzene	4.284	78	1035	0.30	ug/L	56
76) toluene	6.141	92	1271	0.55	ug/L	84

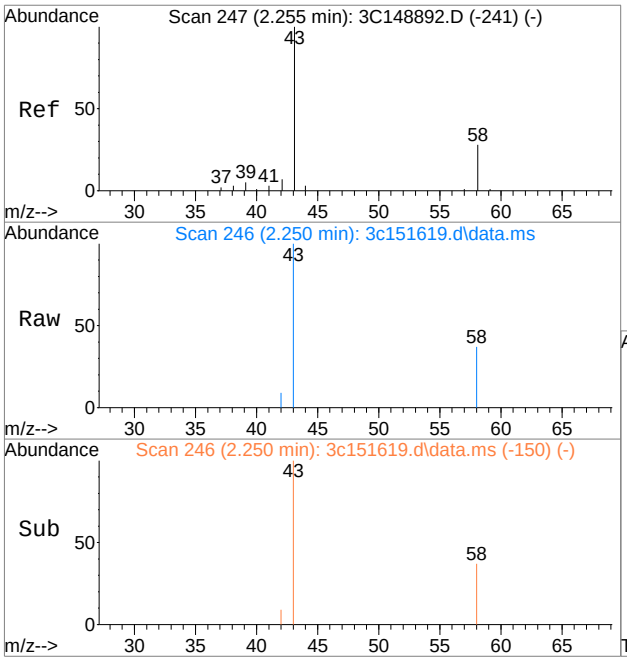
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151619.d
Acq On : 1 May 2019 6:30 pm
Operator : PrashanS
Sample : JC86837-11 Inst : MS3C
Misc : MS34232,V3C6814,5.2,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:54:04 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

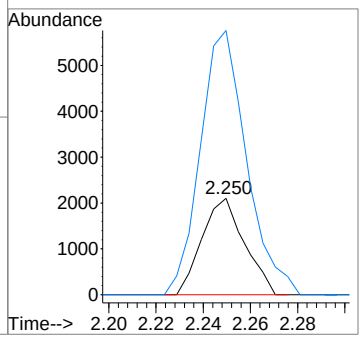


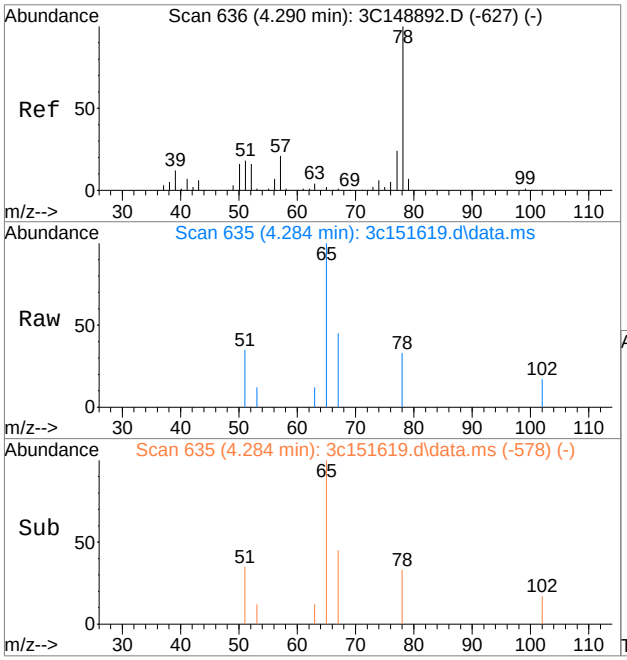


#20
acetone
Concen: 58.42 ug/L
RT: 2.250 min Scan# 246
Delta R.T. -0.000 min
Lab File: 3c151619.d
Acq: 1 May 2019 6:30 pm

Tgt Ion: 58 Resp: 2633

Ion	Ratio	Lower	Upper
58	100		
43	273.8	284.5	344.5#

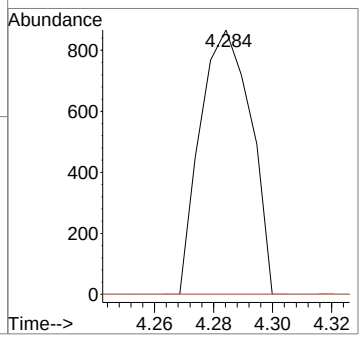


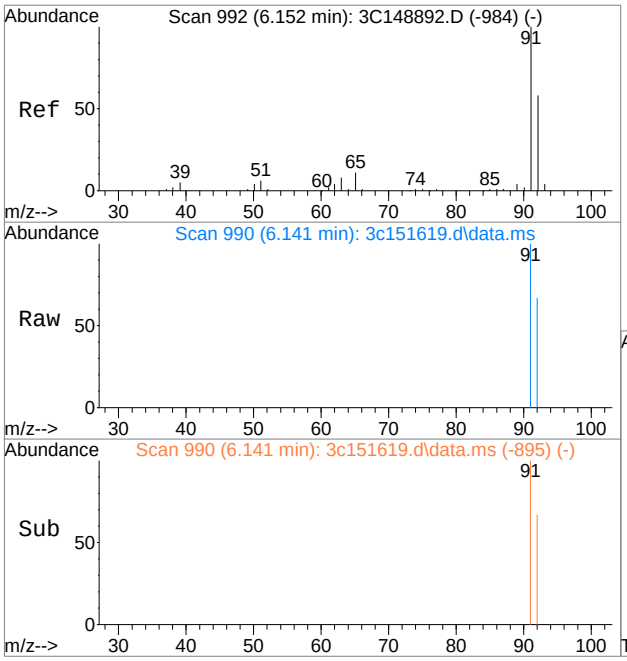


#57
benzene
Concen: 0.30 ug/L
RT: 4.284 min Scan# 635
Delta R.T. -0.000 min
Lab File: 3c151619.d
Acq: 1 May 2019 6:30 pm

Tgt Ion: 78 Resp: 1035

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

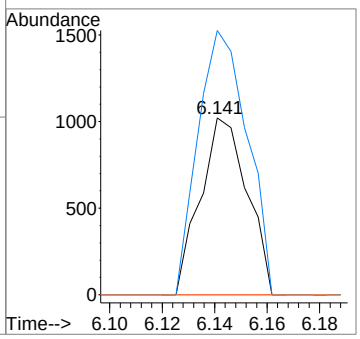




#76
toluene
Concen: 0.55 ug/L
RT: 6.141 min Scan# 990
Delta R.T. -0.005 min
Lab File: 3c151619.d
Acq: 1 May 2019 6:30 pm

Tgt Ion: 92 Resp: 1271

Ion	Ratio	Lower	Upper
92	100		
91	149.6	147.5	187.5
65	0.0	0.0	38.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151620.d
Acq On : 1 May 2019 6:54 pm
Operator : PrashanS
Sample : JC86837-12 Inst : MS3C
Misc : MS34232,V3C6814,3.5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:55:21 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

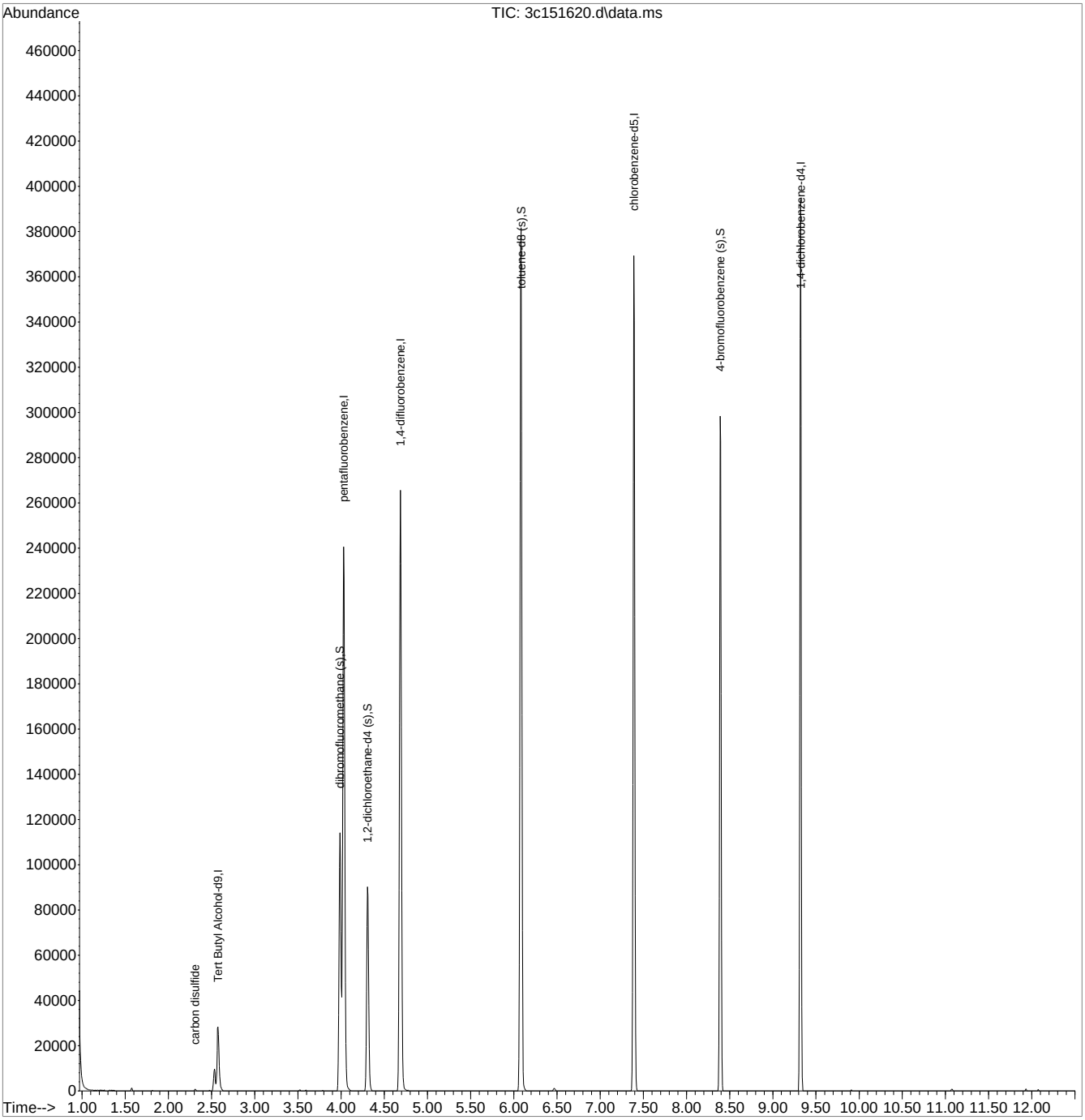
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	28543	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	160854	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	202686	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	170640	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	82556	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	55541	47.78	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 95.56%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	54648	49.62	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.24%			
75) toluene-d8 (s)	6.084	98	229186	54.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.52%			
98) 4-bromofluorobenzene (s)	8.390	95	75591	55.69	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 111.38%			
Target Compounds						Qvalue
23) carbon disulfide	2.307	76	692	0.27	ug/L	69

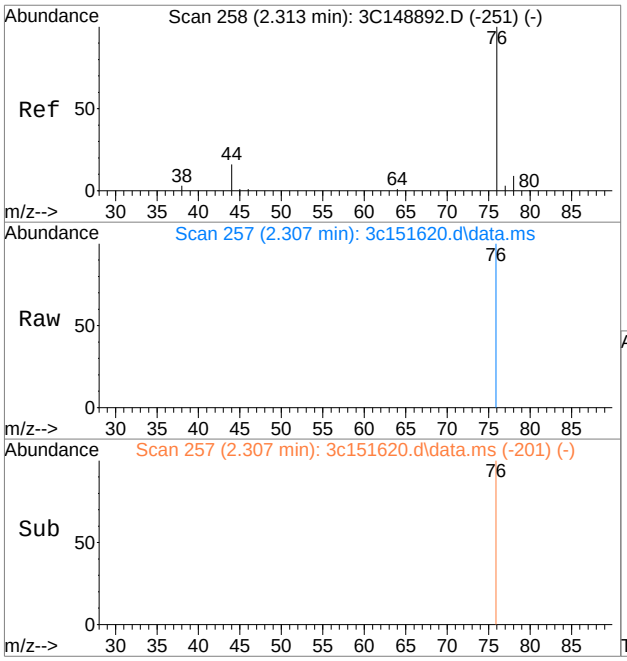
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151620.d
Acq On : 1 May 2019 6:54 pm
Operator : PrashanS
Sample : JC86837-12 Inst : MS3C
Misc : MS34232,V3C6814,3.5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:55:21 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

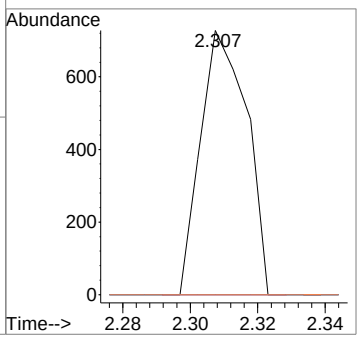




#23
carbon disulfide
Concen: 0.27 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151620.d
Acq: 1 May 2019 6:54 pm

Tgt Ion: 76 Resp: 692

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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225822.d
Acq On : 30 Apr 2019 9:30 am
Operator : thienn
Sample : mb Inst : GCMSI
Misc : MS34328,VI9098,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:52:56 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

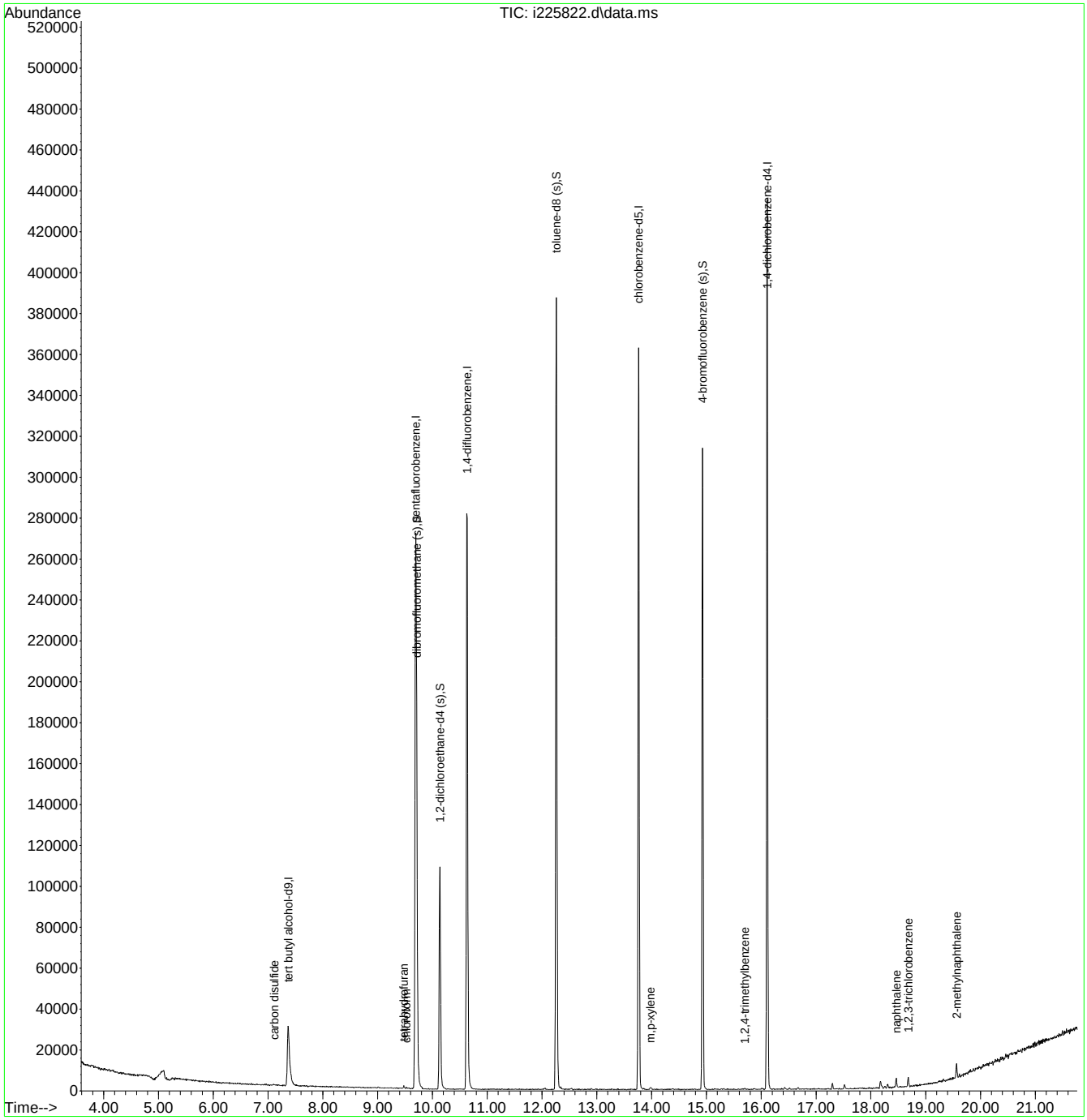
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.369	65	50416	500.00	ug/L	-0.01
4) pentafluorobenzene	9.691	168	169366	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.633	114	223936	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	181675	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.109	152	103132	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	69926	52.54	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 105.08%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	76756	54.91	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 109.82%			
74) toluene-d8 (s)	12.259	98	237083	50.90	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.80%			
97) 4-bromofluorobenzene (s)	14.927	95	83010	52.78	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.56%			
Target Compounds						Qvalue
21) carbon disulfide	7.113	76	911	0.27	ug/L	75
42) tetrahydrofuran	9.477	71	172	1.40	ug/L #	66
43) chloroform	9.524	83	329	0.17	ug/L	80
89) m,p-xylene	13.980	106	546	0.30	ug/L	96
107) 1,2,4-trimethylbenzene	15.701	105	479	0.12	ug/L	83
122) naphthalene	18.467	128	4069	0.97	ug/L	94
123) 1,2,3-trichlorobenzene	18.682	180	1621	0.76	ug/L	93
124) 2-methylnaphthalene	19.566	142	3176	2.12	ug/L	93

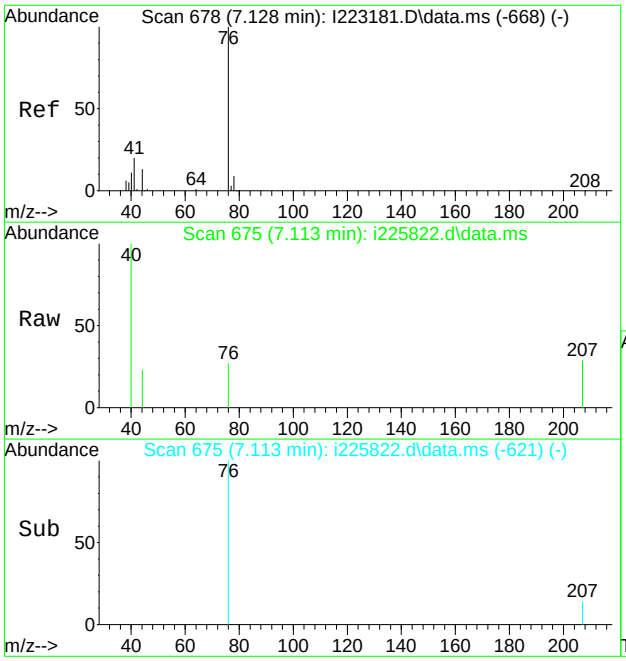
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225822.d
Acq On : 30 Apr 2019 9:30 am
Operator : thienn
Sample : mb Inst : GCMSI
Misc : MS34328,VI9098,5,,100,5,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:52:56 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

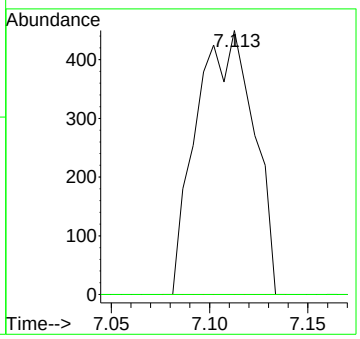


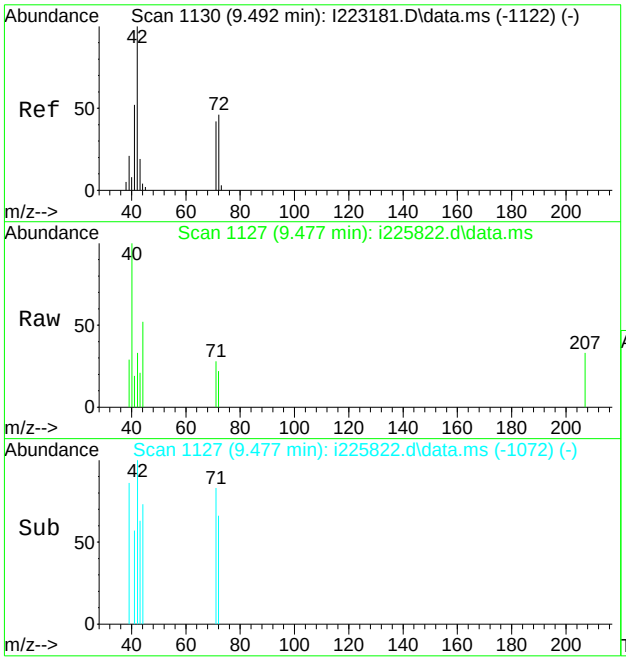


#21
carbon disulfide
Concen: 0.27 ug/L
RT: 7.113 min Scan# 675
Delta R.T. -0.016 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion: 76 Resp: 911

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	29.0

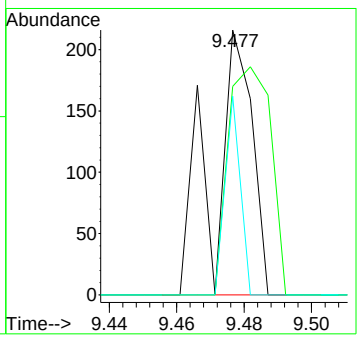


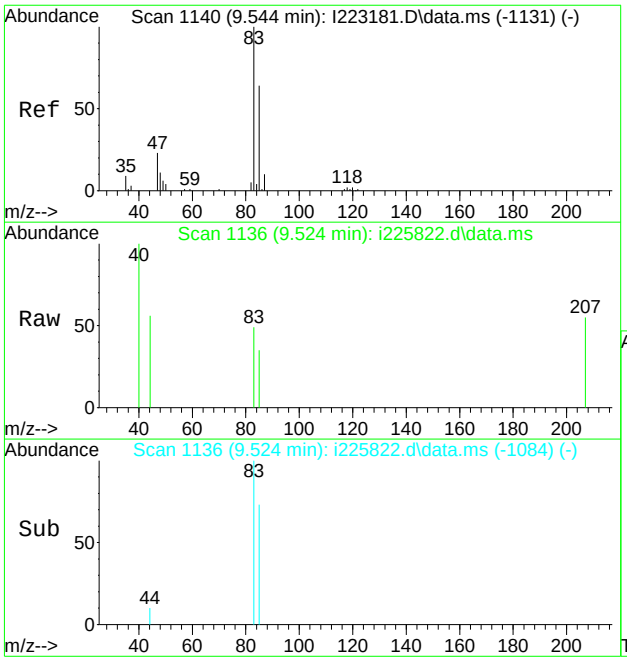


#42
tetrahydrofuran
Concen: 1.40 ug/L
RT: 9.477 min Scan# 1127
Delta R.T. -0.010 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion: 71 Resp: 172

Ion	Ratio	Lower	Upper
71	100		
72	78.7	79.7	139.7#
43	75.0	16.1	76.1

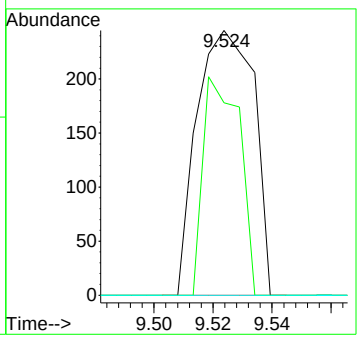


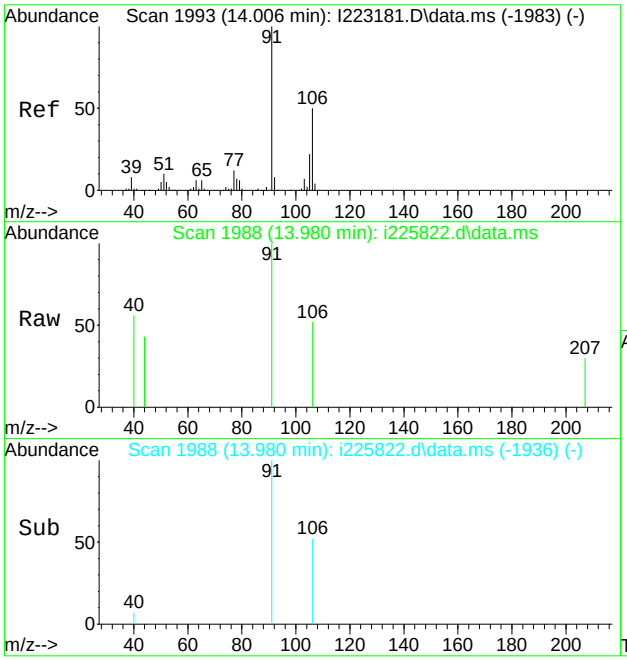


#43
chloroform
Concen: 0.17 ug/L
RT: 9.524 min Scan# 1136
Delta R.T. -0.026 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion: 83 Resp: 329

Ion	Ratio	Lower	Upper
83	100		
85	72.7	34.3	94.3
47	0.0	0.0	52.5

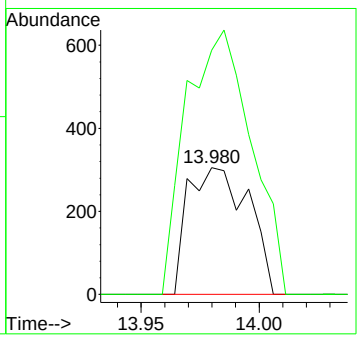


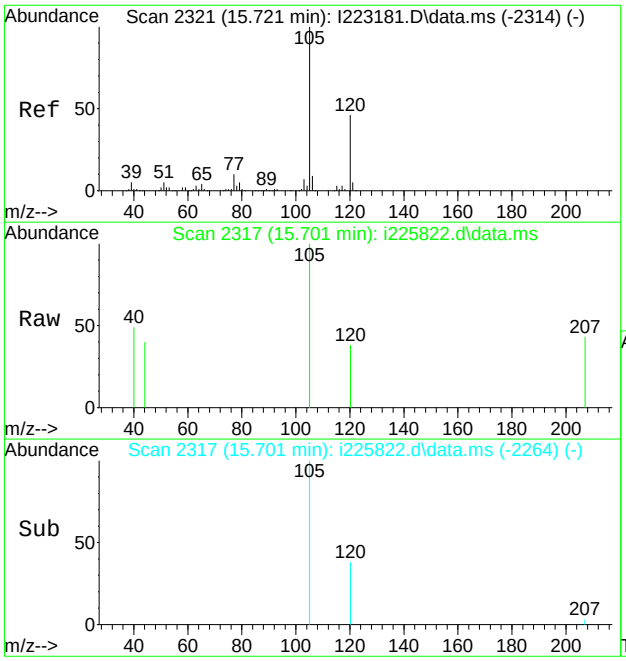


#89
m,p-xylene
Concen: 0.30 ug/L
RT: 13.980 min Scan# 1988
Delta R.T. -0.026 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion:106 Resp: 546

Ion	Ratio	Lower	Upper
106	100		
91	192.8	169.5	229.5

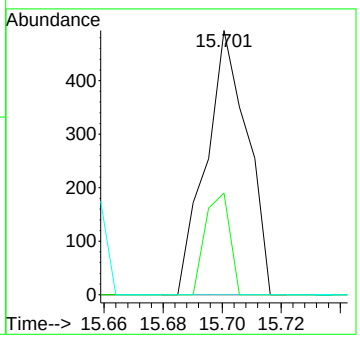


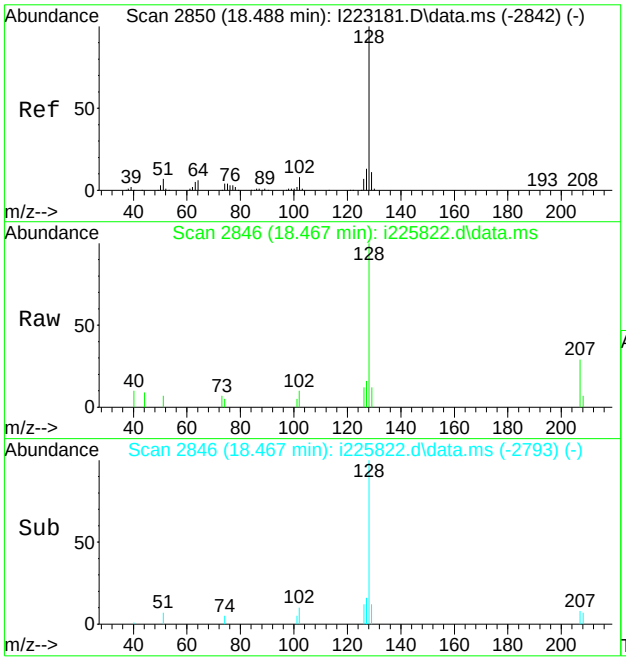


#107
1,2,4-trimethylbenzene
Concen: 0.12 ug/L
RT: 15.701 min Scan# 2317
Delta R.T. -0.021 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion:105 Resp: 479

Ion	Ratio	Lower	Upper
105	100		
120	38.5	17.8	77.8
119	0.0	0.0	42.2

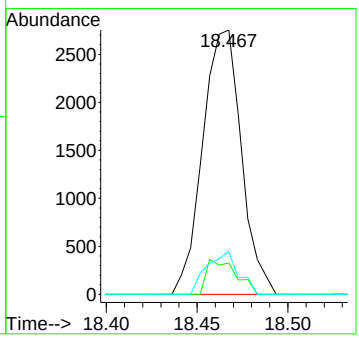


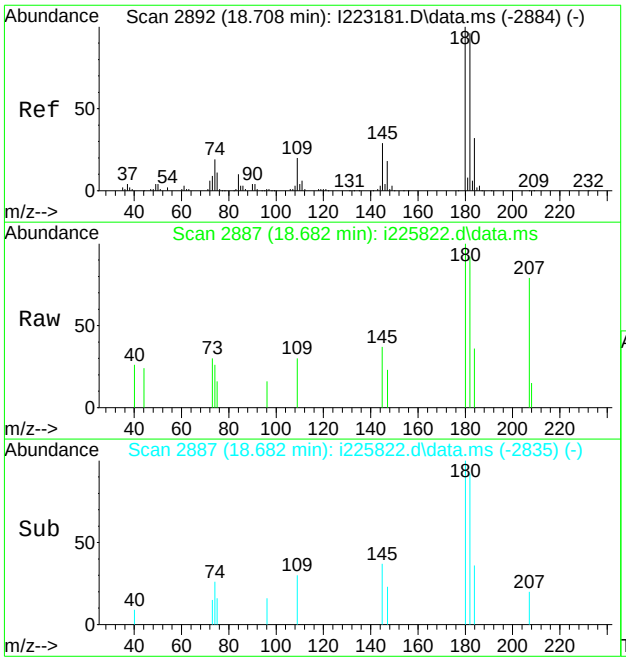


#122
naphthalene
Concen: 0.97 ug/L
RT: 18.467 min Scan# 2846
Delta R.T. -0.021 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion:128 Resp: 4069

Ion	Ratio	Lower	Upper
128	100		
129	11.9	0.0	41.0
127	16.2	0.0	42.7

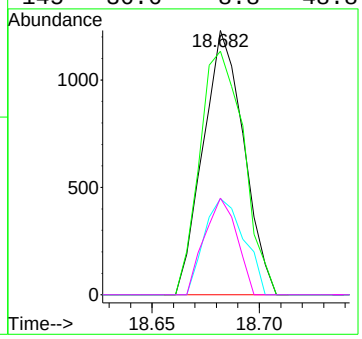


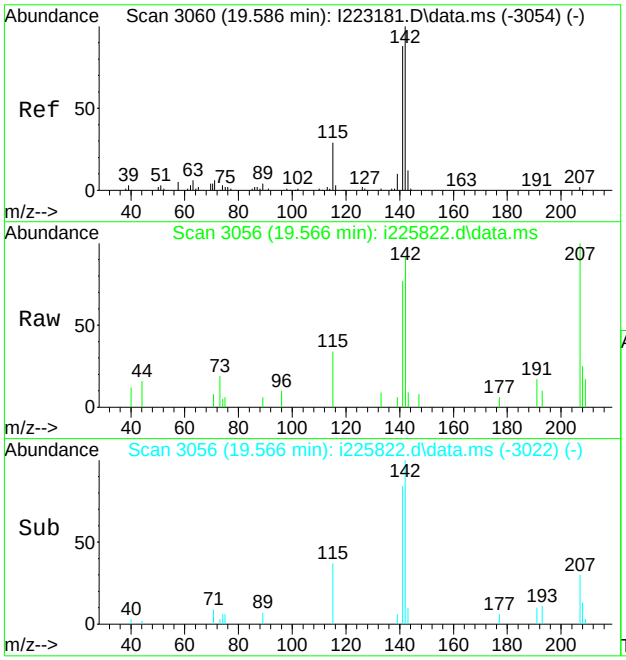


#123
1,2,3-trichlorobenzene
Concen: 0.76 ug/L
RT: 18.682 min Scan# 2887
Delta R.T. -0.026 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion:180 Resp: 1621

Ion	Ratio	Lower	Upper
180	100		
182	92.1	65.9	125.9
184	36.4	2.0	62.0
145	36.6	8.8	48.8

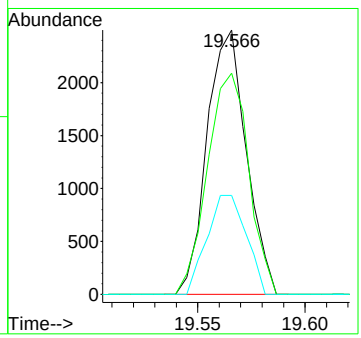




#124
2-methylnaphthalene
Concen: 2.12 ug/L
RT: 19.566 min Scan# 3056
Delta R.T. -0.021 min
Lab File: i225822.d
Acq: 30 Apr 2019 9:30 am

Tgt Ion:142 Resp: 3176

Ion	Ratio	Lower	Upper
142	100		
141	83.7	68.2	108.2
115	37.4	9.2	49.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225860.d
Acq On : 1 May 2019 9:58 am
Operator : thienn
Sample : mb Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:33:21 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

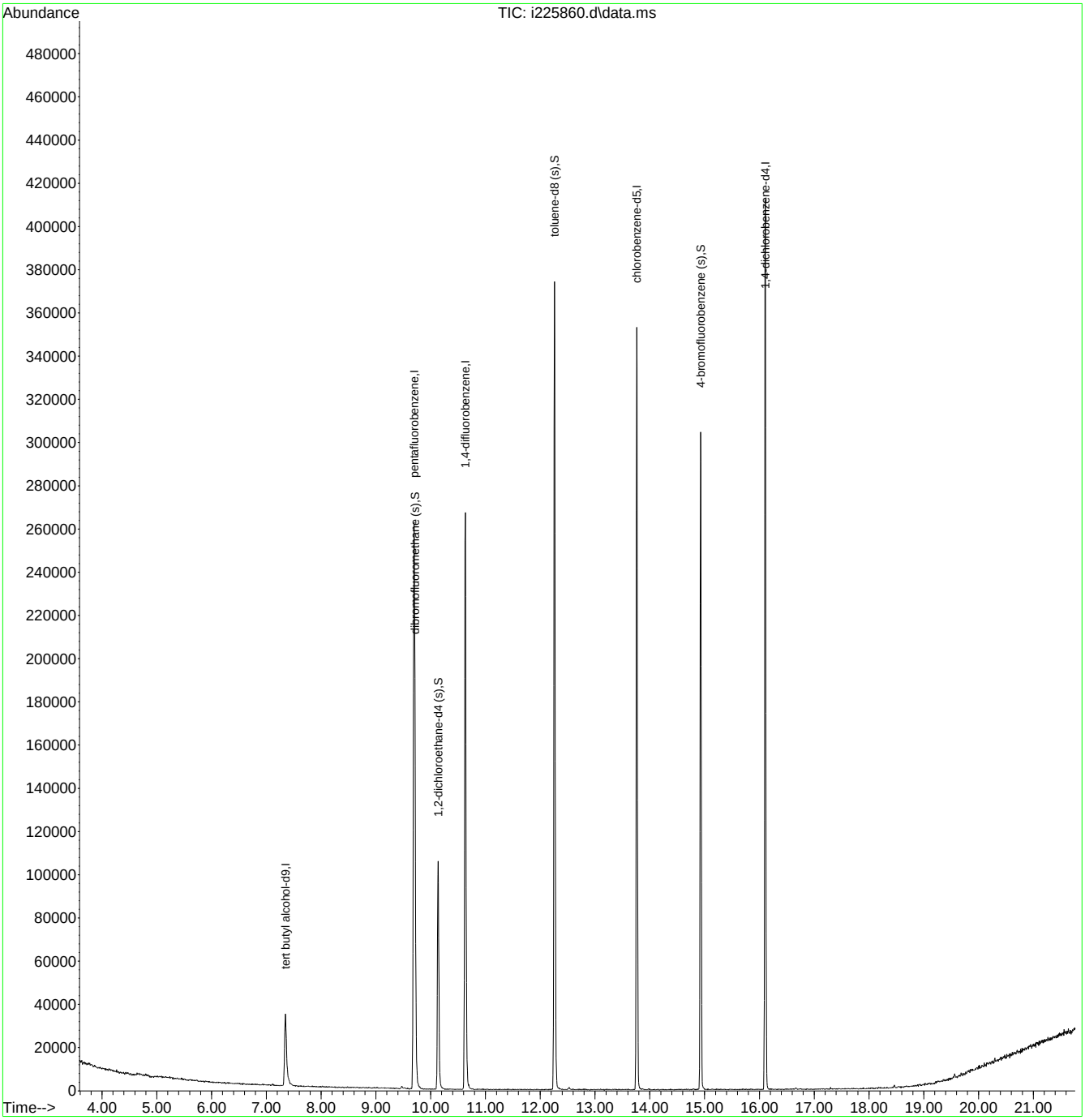
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.348	65	51037	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	159071	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	206352	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	174134	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	98534	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	66763	53.41	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 106.82%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	75887	58.92	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 117.84%			
74) toluene-d8 (s)	12.259	98	227132	50.88	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.76%			
97) 4-bromofluorobenzene (s)	14.926	95	80126	53.32	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 106.64%			
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\5-2-19\vi9099\
Data File : i225860.d
Acq On : 1 May 2019 9:58 am
Operator : thienn
Sample : mb Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:33:21 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151599.d
Acq On : 1 May 2019 10:48 am
Operator : PrashanS
Sample : MB Inst : MS3C
Misc : MS34364,V3C6814,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:01:52 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

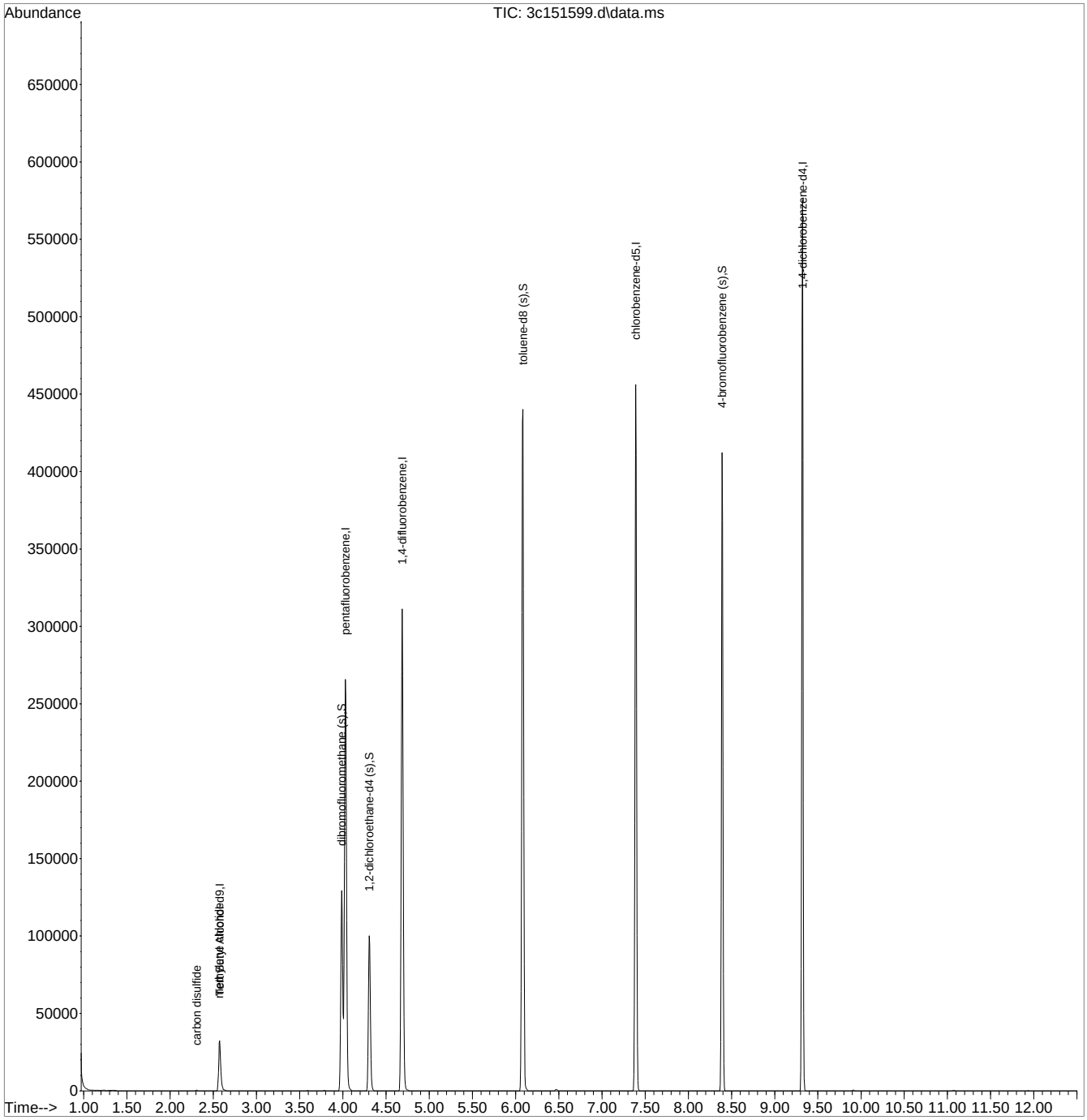
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.574	65	32957	500.00	ug/L	0.00
5) pentafluorobenzene	4.028	168	178624	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.687	114	233768	50.00	ug/L	0.00
74) chlorobenzene-d5	7.391	117	207856	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	9.321	152	118405	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	3.986	113	63080	48.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.74%			
53) 1,2-dichloroethane-d4 (s)	4.305	65	60490	47.62	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.24%			
75) toluene-d8 (s)	6.083	98	263603	51.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
98) 4-bromofluorobenzene (s)	8.390	95	100021	51.38	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.76%			
Target Compounds						Qvalue
23) carbon disulfide	2.307	76	425	0.15	ug/L	69
24) methylene chloride	2.569	84	439	0.40	ug/L #	69

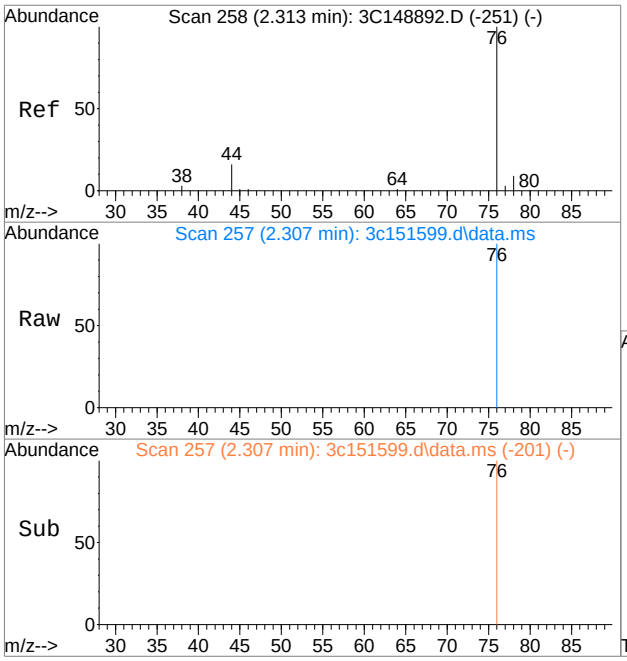
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151599.d
Acq On : 1 May 2019 10:48 am
Operator : PrashanS
Sample : MB Inst : MS3C
Misc : MS34364,V3C6814,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:01:52 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

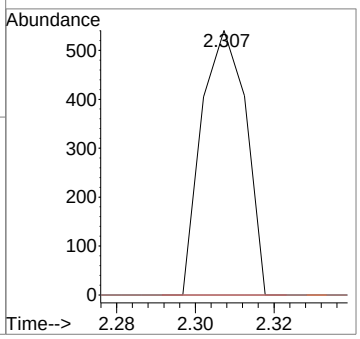


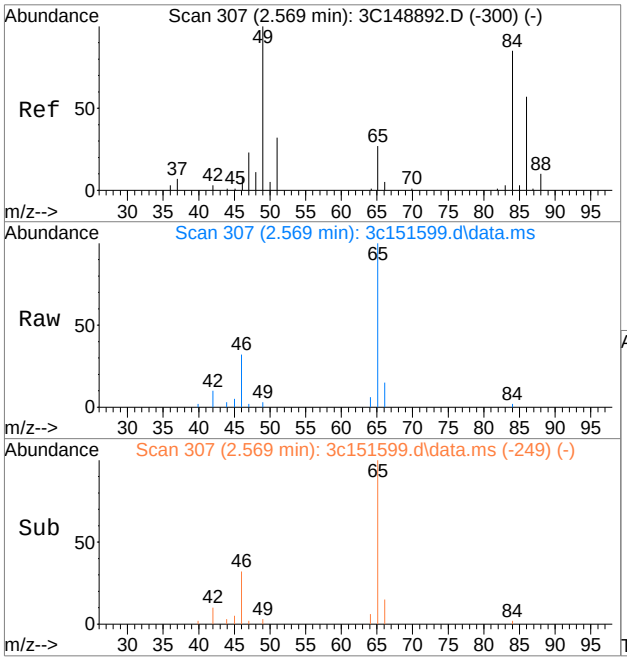


#23
carbon disulfide
Concen: 0.15 ug/L
RT: 2.307 min Scan# 257
Delta R.T. -0.005 min
Lab File: 3c151599.d
Acq: 1 May 2019 10:48 am

Tgt Ion: 76 Resp: 425

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

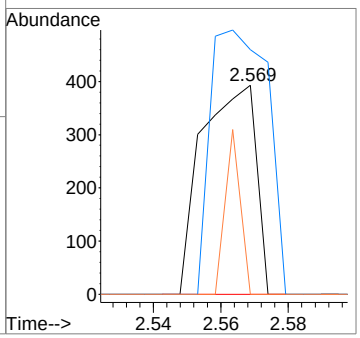




#24
methylene chloride
Concen: 0.40 ug/L
RT: 2.569 min Scan# 307
Delta R.T. 0.005 min
Lab File: 3c151599.d
Acq: 1 May 2019 10:48 am

Tgt Ion: 84 Resp: 439

Ion	Ratio	Lower	Upper
84	100		
49	117.0	87.1	147.1
86	0.0	37.5	97.5#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184882.d
Acq On : 2 May 2019 11:35 am
Operator : PrashanS
Sample : mb Inst : MSY
Misc : MS34268,VY8023,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:21:48 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

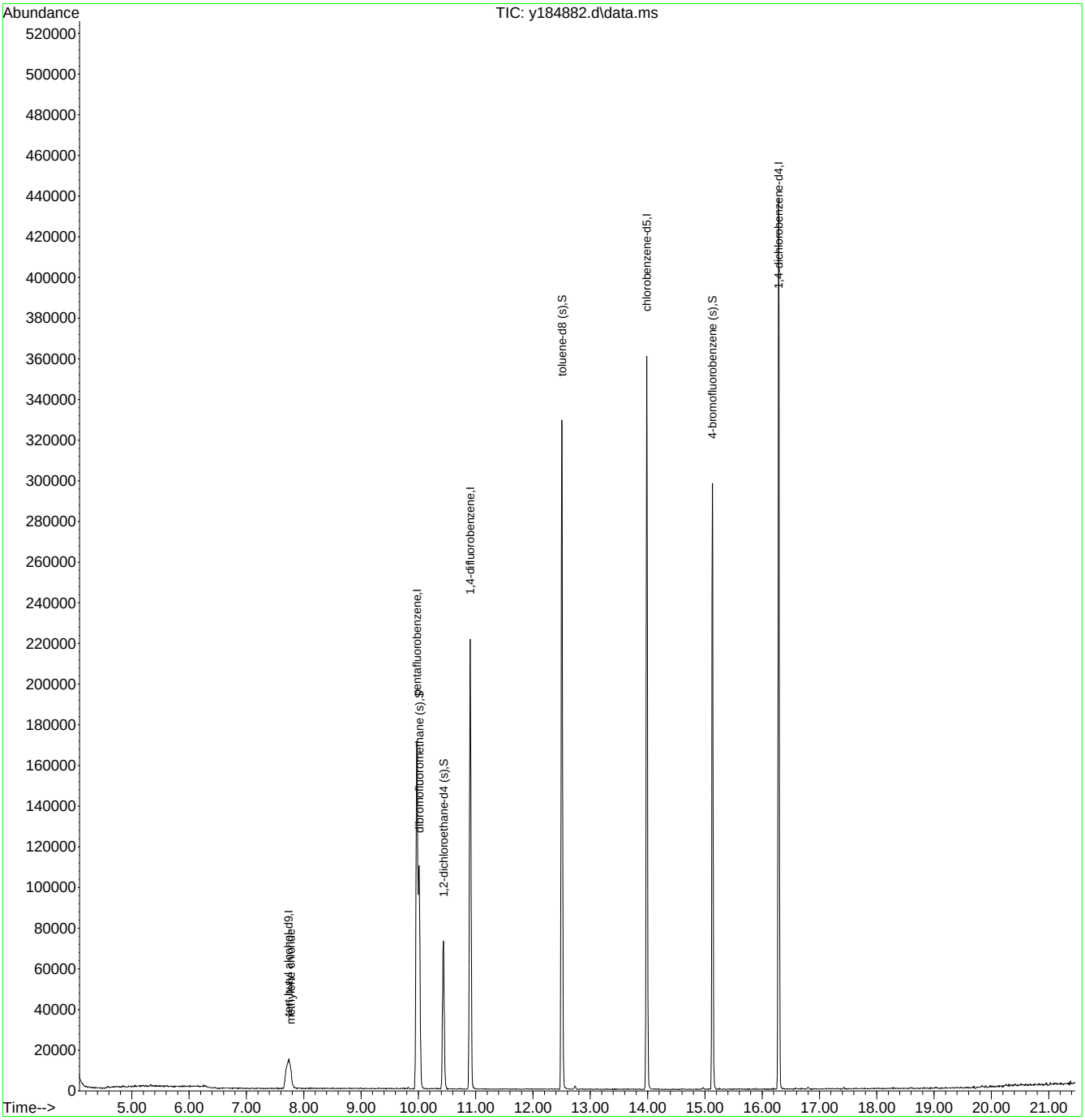
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.731	65	47394	500.00	ug/L	-0.01
5) pentafluorobenzene	9.974	168	140287	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	198341	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	186245	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	105002	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	69455	54.58	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 109.16%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	55860	50.42	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.84%			
75) toluene-d8 (s)	12.506	98	219898	46.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.30%			
98) 4-bromofluorobenzene (s)	15.131	95	82198	47.21	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.42%			
Target Compounds						Qvalue
24) methylene chloride	7.773	84	602	0.32	ug/L	# 74

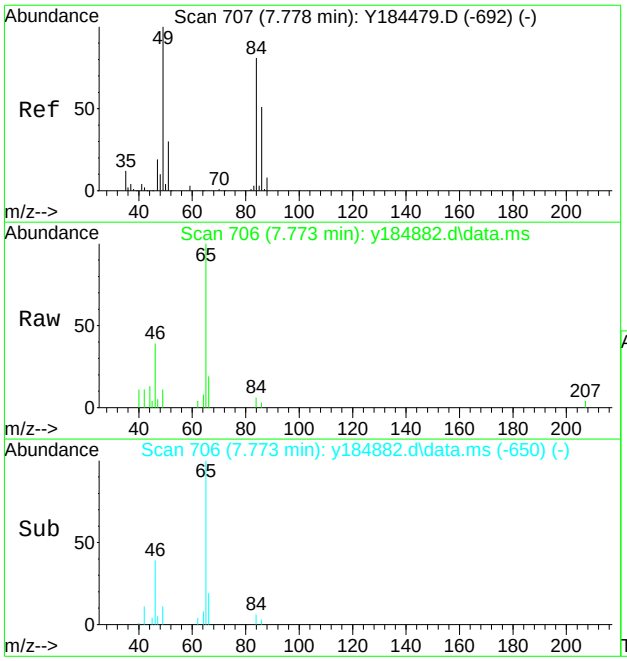
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184882.d
Acq On : 2 May 2019 11:35 am
Operator : PrashanS
Sample : mb Inst : MSY
Misc : MS34268,VY8023,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:21:48 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

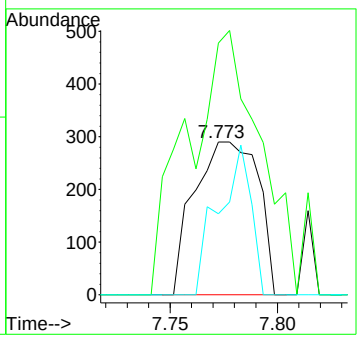




#24
methylene chloride
Concen: 0.32 ug/L
RT: 7.773 min Scan# 706
Delta R.T. -0.005 min
Lab File: y184882.d
Acq: 2 May 2019 11:35 am

Tgt Ion: 84 Resp: 602

Ion	Ratio	Lower	Upper
84	100		
49	97.9	104.2	164.2#
86	53.1	35.3	95.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184936a.d
Acq On : 4 May 2019 12:32 pm
Operator : PrashanS
Sample : MB2 Inst : MSY
Misc : MS34442,VY8023,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:10:33 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

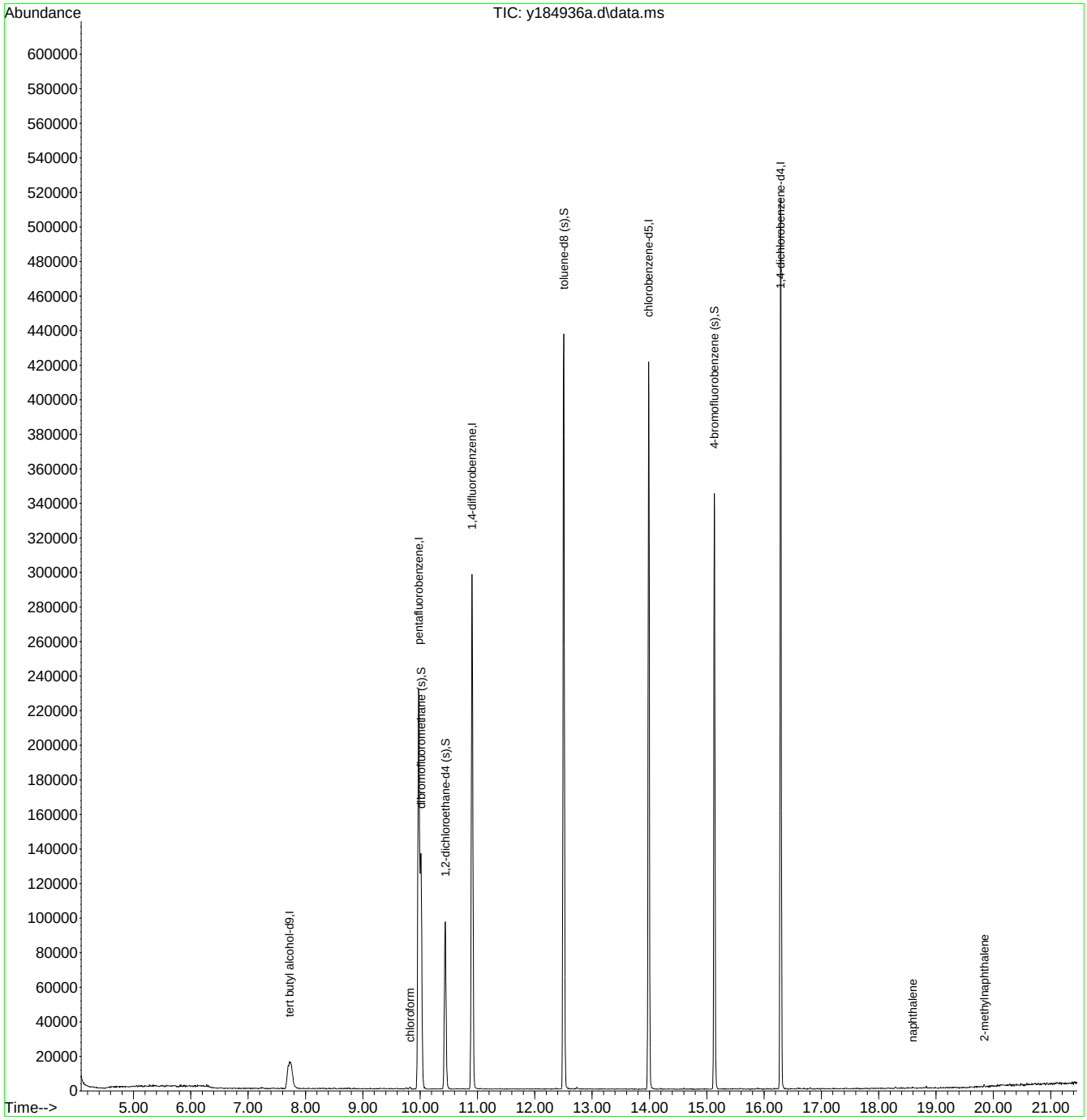
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.720	65	51883	500.00	ug/L	-0.02
5) pentafluorobenzene	9.974	168	187785	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	265079	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	222708	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	125379	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	85807	50.37	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.74%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	73359	49.54	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.08%			
75) toluene-d8 (s)	12.506	98	288187	51.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.26%			
98) 4-bromofluorobenzene (s)	15.131	95	98731	47.49	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.98%			
Target Compounds						Qvalue
42) chloroform	9.823	83	852	0.22	ug/L	87
119) naphthalene	18.594	128	767	0.13	ug/L	70
124) 2-methylnaphthalene	19.844	142	410	0.14	ug/L #	84

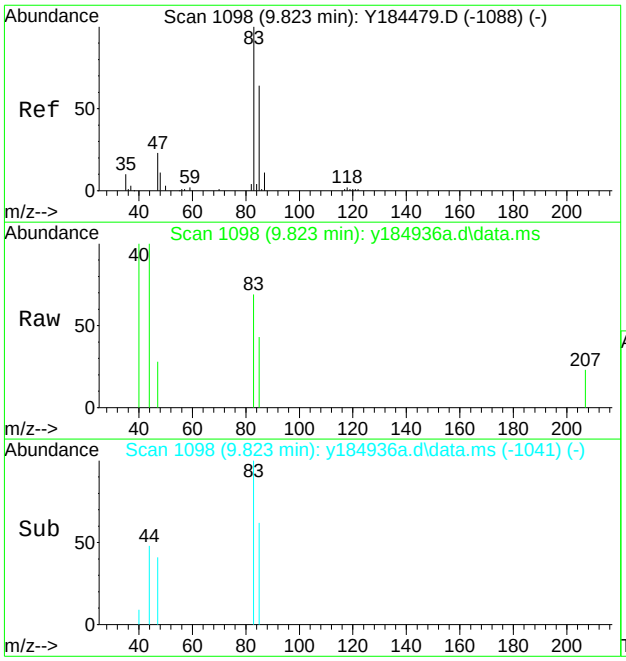
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184936a.d
Acq On : 4 May 2019 12:32 pm
Operator : PrashanS
Sample : MB2 Inst : MSY
Misc : MS34442,VY8023,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:10:33 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

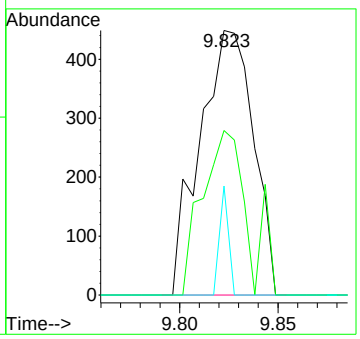


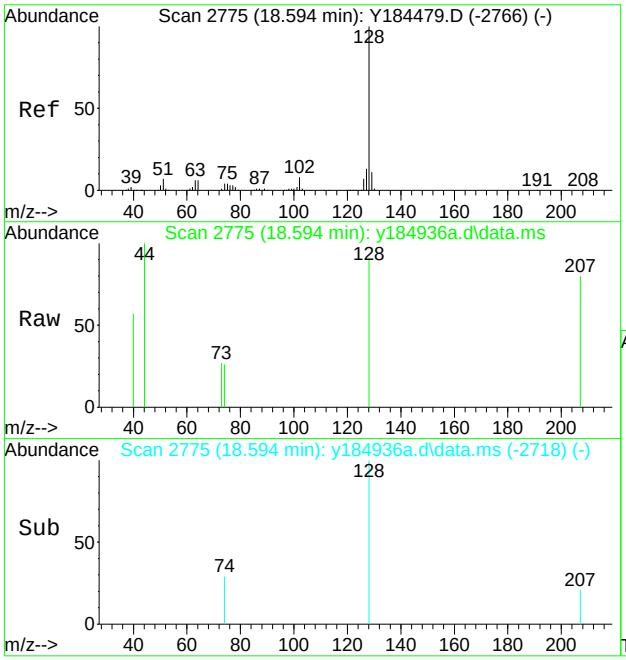


#42
chloroform
Concen: 0.22 ug/L
RT: 9.823 min Scan# 1098
Delta R.T. -0.000 min
Lab File: y184936a.d
Acq: 4 May 2019 12:32 pm

Tgt Ion: 83 Resp: 852

Ion	Ratio	Lower	Upper
83	100		
85	62.1	35.9	95.9
47	41.2	0.0	54.0

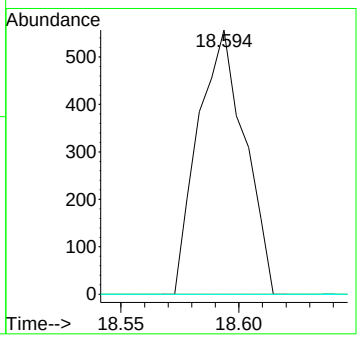


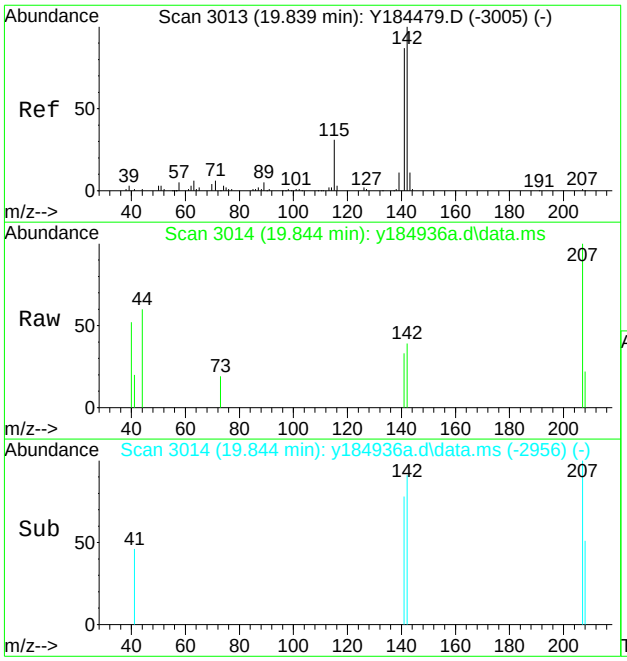


#119
naphthalene
Concen: 0.13 ug/L
RT: 18.594 min Scan# 2775
Delta R.T. -0.000 min
Lab File: y184936a.d
Acq: 4 May 2019 12:32 pm

Tgt Ion:128 Resp: 767

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	40.6
127	0.0	0.0	42.8

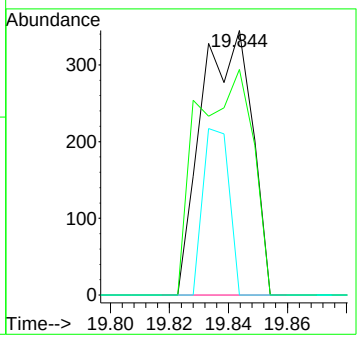




#124
2-methylnaphthalene
Concen: 0.14 ug/L
RT: 19.844 min Scan# 3014
Delta R.T. 0.005 min
Lab File: y184936a.d
Acq: 4 May 2019 12:32 pm

Tgt Ion:142 Resp: 410

Ion	Ratio	Lower	Upper
142	100		
141	85.2	67.8	107.8
115	0.0	10.1	50.1#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225821.d
Acq On : 30 Apr 2019 9:01 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9098,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:47:08 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.353	65	65867	500.00	ug/L		-0.03
4) pentafluorobenzene	9.696	168	177262	50.00	ug/L		-0.02
51) 1,4-difluorobenzene	10.632	114	239925	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.760	117	195541	50.00	ug/L		-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	111865	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.712	113	72129	51.78	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.56%				
52) 1,2-dichloroethane-d4 (s)	10.135	65	82571	55.14	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 110.28%				
74) toluene-d8 (s)	12.259	98	255018	50.87	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.74%				
97) 4-bromofluorobenzene (s)	14.926	95	93059	54.55	ug/L		-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 109.10%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.473	59	36553	268.13	ug/L		97
3) 1,4-dioxane	11.281	88	18812	1231.25	ug/L		97
5) dichlorodifluoromethane	3.885	85	94566	61.07	ug/L		98
6) chlorodifluoromethane	3.917	51	74312	50.82	ug/L		98
7) chloromethane	4.283	50	72266	50.40	ug/L		98
8) vinyl chloride	4.518	62	66527	55.09	ug/L		99
9) 1,3-butadiene	4.607	54	41974	49.76	ug/L		93
10) bromomethane	5.182	94	41450	51.52	ug/L		96
11) chloroethane	5.381	64	35402	48.47	ug/L		97
12) vinyl bromide	5.732	106	47781	51.19	ug/L		96
13) trichlorofluoromethane	5.857	101	91371	49.44	ug/L		97
14) ethyl ether	6.302	74	26604	50.82	ug/L		80
15) 2-chloropropane	6.500	63	20091	47.08	ug/L	#	87
16) acrolein	6.495	56	8420	49.36	ug/L		99
17) freon 113	6.715	151	43249	47.77	ug/L		97
18) 1,1-dichloroethene	6.710	61	76491	46.37	ug/L		99
19) acetone	6.694	43	65749	220.14	ug/L		94
20) iodomethane	6.955	142	53659	44.15	ug/L		97
21) carbon disulfide	7.112	76	148914	41.91	ug/L		99
22) acetonitrile	7.091	41	74496	499.46	ug/L		98
23) methyl acetate	7.186	74	7800	44.78	ug/L		94
24) methylene chloride	7.421	84	53301	43.63	ug/L		96
25) acrylonitrile	7.693	53	17061	48.56	ug/L		97
26) methyl tert butyl ether	7.803	73	152296	52.59	ug/L		96
27) trans-1,2-dichloroethene	7.839	61	74188	47.17	ug/L		98
28) hexane	8.226	57	74442	39.25	ug/L		99
29) 1,1-dichloroethane	8.410	63	92672	46.15	ug/L		98
30) vinyl acetate	8.357	86	9744	50.96	ug/L	#	95
31) di-isopropyl ether	8.425	45	164094	46.10	ug/L		97
32) chloroprene	8.525	53	83778	49.45	ug/L		97
33) ethyl tert-butyl ether	8.891	59	171768	50.00	ug/L		98
34) 2-butanone	9.053	72	23812	212.70	ug/L	#	89
35) 2,2-dichloropropane	9.163	77	90517	51.99	ug/L		99
36) ethyl acetate	9.100	45	7721	46.48	ug/L	#	82
37) cis-1,2-dichloroethene	9.131	96	59007	45.61	ug/L		97
38) propionitrile	9.105	54	85784	522.46	ug/L		95
39) methyl acrylate	9.178	85	8438	49.28	ug/L		98
40) methacrylonitrile	9.320	67	20779	50.13	ug/L		96
41) bromochloromethane	9.435	128	29289	50.34	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225821.d
Acq On : 30 Apr 2019 9:01 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9098,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:47:08 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	9.461	71	7241	56.13	ug/L		81
43) chloroform	9.524	83	101014	48.62	ug/L		98
44) carbon tetrachloride	10.005	117	81741	48.17	ug/L		99
45) 1,1-dichloropropene	9.973	75	74322	47.52	ug/L		97
48) 1,1,1-trichloroethane	9.790	97	91581	49.39	ug/L		96
49) cyclohexane	9.921	84	70395	43.11	ug/L		95
50) tert-amyl alcohol	10.073	55	13076	278.26	ug/L		86
53) isopropyl acetate	10.125	87	11231	51.66	ug/L	#	89
54) 1,2-dichloroethane	10.230	62	81315	51.59	ug/L		98
55) benzene	10.214	78	211750	45.17	ug/L		98
56) 2,2,4-trimethylpentane	10.334	57	188388	39.26	ug/L		94
57) tert-amyl methyl ether	10.308	87	39958	49.95	ug/L	#	90
58) heptane	10.502	57	38159	38.09	ug/L		99
59) n-butyl alcohol	10.664	56	101860	2601.22	ug/L		94
60) trichloroethene	10.951	95	56757	45.20	ug/L		94
61) ethyl acrylate	10.930	55	64692	48.74	ug/L		97
62) methylcyclohexane	11.260	83	83681	39.35	ug/L		98
63) 1,2-dichloropropane	11.223	63	51101	42.58	ug/L		94
64) methyl methacrylate	11.197	100	14365	50.87	ug/L		91
65) dibromomethane	11.333	93	33522	47.95	ug/L		94
66) bromodichloromethane	11.485	83	79856	48.04	ug/L		98
67) 2-nitropropane	11.657	41	17267	59.99	ug/L		94
68) 2-chloroethyl vinyl ether	11.725	63	171150	243.77	ug/L		99
69) epichlorohydrin	11.793	57	30436	259.55	ug/L		99
70) cis-1,3-dichloropropene	11.945	75	88888	47.36	ug/L		97
71) 4-methyl-2-pentanone	12.034	58	75357	201.84	ug/L		97
72) 3-methyl-1-butanol	12.034	70	33527	1033.81	ug/L		94
75) toluene	12.332	92	129415	47.82	ug/L		100
76) trans-1,3-dichloropropene	12.505	75	84113	51.65	ug/L		97
77) ethyl methacrylate	12.510	69	59696	48.63	ug/L		99
78) 1,1,2-trichloroethane	12.724	83	38337	48.28	ug/L		98
79) 1,3-dichloropropane	12.902	76	71350	49.37	ug/L		99
80) tetrachloroethene	12.897	166	65061	47.88	ug/L		97
81) 2-hexanone	12.881	58	71665	201.98	ug/L		94
82) butyl acetate	12.976	56	29809	48.29	ug/L		91
83) n-butyl ether	13.771	57	174766	39.10	ug/L		93
84) dibromochloromethane	13.153	129	61472	49.54	ug/L		99
85) 1,2-dibromoethane	13.310	107	53790	49.80	ug/L		96
86) chlorobenzene	13.797	112	140791	48.83	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.859	131	56184	49.08	ug/L		99
88) ethylbenzene	13.859	91	237381	47.08	ug/L		99
89) m,p-xylene	13.985	106	185491	93.55	ug/L		97
90) o-xylene	14.382	106	89273	45.22	ug/L		97
91) styrene	14.393	104	155629	46.94	ug/L		99
92) butyl acrylate	14.210	55	91352	48.30	ug/L		99
93) cis-1,4-dichloro-2-butene	14.749	88	27333	56.25	ug/L		94
94) bromoform	14.613	173	45890	52.66	ug/L		99
95) isopropylbenzene	14.733	105	232578	46.81	ug/L		99
98) 1,1,2,2-tetrachloroethane	14.989	83	59323	51.28	ug/L		99
99) trans-1,4-dichloro-2-b...	15.021	53	17972	59.61	ug/L		92
100) 1,2,3-trichloropropane	15.078	110	16767	56.26	ug/L		94
101) bromobenzene	15.109	156	70017	50.70	ug/L		99
102) n-propylbenzene	15.151	91	273672	47.73	ug/L		98
103) 2-chlorotoluene	15.277	126	58711	48.75	ug/L		99
104) 4-chlorotoluene	15.387	91	172510	50.33	ug/L		98
105) 1,3,5-trimethylbenzene	15.308	105	207120	48.00	ug/L		97
106) tert-butylbenzene	15.648	134	36545	45.72	ug/L	#	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225821.d
Acq On : 30 Apr 2019 9:01 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9098,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:47:08 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

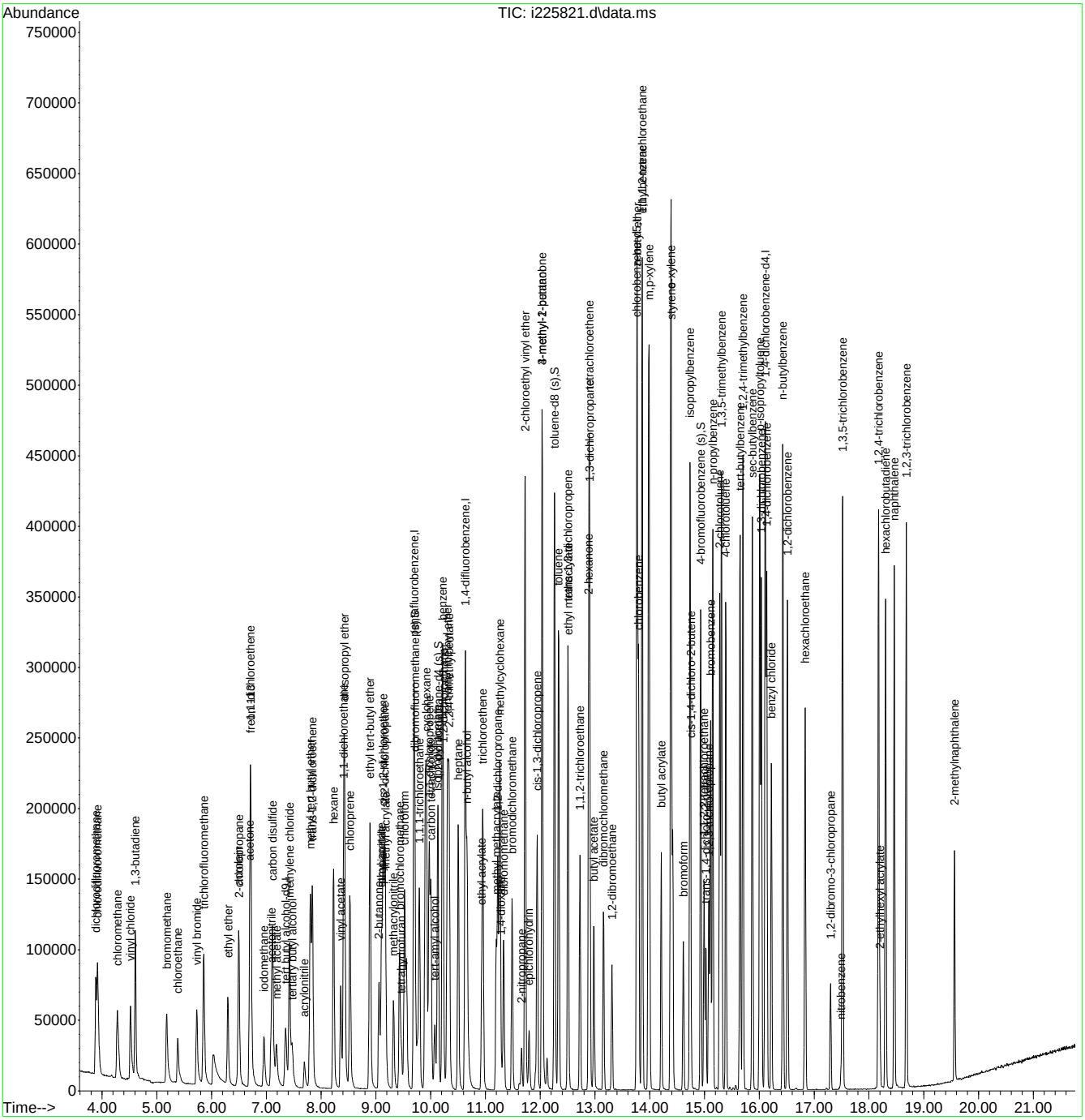
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	212833	48.15	ug/L	100
108) sec-butylbenzene	15.868	105	258470	46.48	ug/L	97
109) p-isopropyltoluene	16.009	119	231457	47.96	ug/l	98
110) benzyl chloride	16.218	91	143521	53.01	ug/L	97
111) 1,3-dichlorobenzene	16.035	146	132567	50.31	ug/L	98
112) 1,4-dichlorobenzene	16.135	146	135368	50.30	ug/L	99
113) 1,2-dichlorobenzene	16.511	146	133217	51.65	ug/L	97
114) n-butylbenzene	16.427	92	122468	48.79	ug/L	99
115) hexachloroethane	16.835	201	50606	52.59	ug/L	92
116) 1,2-dibromo-3-chloropr...	17.301	157	18883	52.63	ug/L	93
117) nitrobenzene	17.489	77	7352	59.64	ug/L	85
118) 1,3,5-trichlorobenzene	17.521	180	134340	51.28	ug/L	99
119) 1,2,4-trichlorobenzene	18.174	180	122274	51.88	ug/L	97
120) 2-ethylhexyl acrylate	18.201	55	19844	10.33	ug/L	93
121) hexachlorobutadiene	18.305	225	76039	49.01	ug/L	97
122) naphthalene	18.462	128	257862	56.59	ug/L	100
123) 1,2,3-trichlorobenzene	18.682	180	117207	50.55	ug/L	98
124) 2-methylnaphthalene	19.560	142	68039	41.88	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\5-1\vi9098\
Data File : i225821.d
Acq On : 30 Apr 2019 9:01 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9098,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:47:08 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225858.d
Acq On : 1 May 2019 8:59 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:21:18 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	58653	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	164679	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	221838	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	180645	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	107206	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	67266	51.98	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.96%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	78772	56.89	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 113.78%			
74) toluene-d8 (s)	12.259	98	237192	51.22	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.44%			
97) 4-bromofluorobenzene (s)	14.926	95	86197	52.72	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.44%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.468	59	29496	242.97	ug/L	97
3) 1,4-dioxane	11.281	88	15287	1123.60	ug/L	93
5) dichlorodifluoromethane	3.885	85	104631	72.73	ug/L	97
6) chlorodifluoromethane	3.917	51	68664	50.55	ug/L	95
7) chloromethane	4.278	50	73690	55.32	ug/L	99
8) vinyl chloride	4.518	62	68582	61.13	ug/L	99
9) 1,3-butadiene	4.607	54	39825	50.82	ug/L	94
10) bromomethane	5.182	94	41220	55.14	ug/L	99
11) chloroethane	5.386	64	36813	54.25	ug/L	99
12) vinyl bromide	5.726	106	48793	56.27	ug/L	95
13) trichlorofluoromethane	5.852	101	95173	55.43	ug/L	99
14) ethyl ether	6.297	74	22309	45.87	ug/L	91
15) 2-chloropropane	6.495	63	18226	45.97	ug/L	98
16) acrolein	6.490	56	6409	40.44	ug/L	92
17) freon 113	6.710	151	40443	48.08	ug/L	99
18) 1,1-dichloroethene	6.710	61	72492	47.30	ug/L	98
19) acetone	6.689	43	57765	208.18	ug/L	95
20) iodomethane	6.955	142	53573	47.49	ug/L	93
21) carbon disulfide	7.112	76	136502	41.35	ug/L	99
22) acetonitrile	7.086	41	60545	436.94	ug/L	89
23) methyl acetate	7.180	74	6589	40.94	ug/L	95
24) methylene chloride	7.421	84	49308	43.44	ug/L	97
25) acrylonitrile	7.693	53	14091	43.17	ug/L	97
26) methyl tert butyl ether	7.803	73	128554	47.79	ug/L	94
27) trans-1,2-dichloroethene	7.839	61	67791	46.39	ug/L	98
28) hexane	8.226	57	67431	38.27	ug/L	99
29) 1,1-dichloroethane	8.410	63	84766	45.43	ug/L	98
30) vinyl acetate	8.357	86	7838	44.13	ug/L #	82
31) di-isopropyl ether	8.425	45	145502	44.00	ug/L	97
32) chloroprene	8.525	53	79253	50.35	ug/L	96
33) ethyl tert-butyl ether	8.891	59	147404	46.18	ug/L	99
34) 2-butanone	9.058	72	19841	190.77	ug/L #	85
35) 2,2-dichloropropane	9.163	77	82699	51.13	ug/L	96
36) ethyl acetate	9.095	45	5836	38.25	ug/L	97
37) cis-1,2-dichloroethene	9.137	96	53101	44.18	ug/L	98
38) propionitrile	9.105	54	69446	455.28	ug/L	96
39) methyl acrylate	9.178	85	6780	42.95	ug/L	89
40) methacrylonitrile	9.320	67	17569	45.63	ug/L	91
41) bromochloromethane	9.435	128	25499	47.18	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225858.d
Acq On : 1 May 2019 8:59 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:21:18 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	9.461	71	5652	47.16	ug/L		82
43)	chloroform	9.524	83	92406	47.88	ug/L		99
44)	carbon tetrachloride	9.999	117	78776	49.97	ug/L		99
45)	1,1-dichloropropene	9.973	75	68556	47.18	ug/L		97
48)	1,1,1-trichloroethane	9.790	97	86505	50.21	ug/L		98
49)	cyclohexane	9.921	84	71475	47.12	ug/L		95
50)	tert-amyl alcohol	10.073	55	11014	252.89	ug/L		89
53)	isopropyl acetate	10.120	87	9425	46.89	ug/L		96
54)	1,2-dichloroethane	10.224	62	71896	49.33	ug/L		99
55)	benzene	10.214	78	190727	44.00	ug/L		98
56)	2,2,4-trimethylpentane	10.334	57	172514	38.88	ug/L		93
57)	tert-amyl methyl ether	10.308	87	34040	46.02	ug/L	#	91
58)	heptane	10.502	57	34285	37.02	ug/L		95
59)	n-butyl alcohol	10.659	56	83152	2296.60	ug/L		95
60)	trichloroethene	10.951	95	52345	45.09	ug/L		99
61)	ethyl acrylate	10.930	55	52249	42.58	ug/L		98
62)	methylcyclohexane	11.260	83	79141	40.25	ug/L		97
63)	1,2-dichloropropane	11.223	63	45736	41.22	ug/L		89
64)	methyl methacrylate	11.197	100	11562	44.29	ug/L	#	86
65)	dibromomethane	11.333	93	29516	45.66	ug/L		91
66)	bromodichloromethane	11.485	83	71393	46.45	ug/L		98
67)	2-nitropropane	11.657	41	13983	52.54	ug/L		99
68)	2-chloroethyl vinyl ether	11.725	63	143143	220.50	ug/L		98
69)	epichlorohydrin	11.793	57	25012	230.69	ug/L		94
70)	cis-1,3-dichloropropene	11.945	75	78607	45.30	ug/L		93
71)	4-methyl-2-pentanone	12.034	58	61661	178.62	ug/L		98
72)	3-methyl-1-butanol	12.034	70	26394	880.22	ug/L		97
75)	toluene	12.332	92	115886	46.35	ug/L		99
76)	trans-1,3-dichloropropene	12.505	75	72986	48.51	ug/L		97
77)	ethyl methacrylate	12.505	69	49769	43.89	ug/L		96
78)	1,1,2-trichloroethane	12.724	83	32843	44.77	ug/L		97
79)	1,3-dichloropropane	12.902	76	60901	45.62	ug/L		98
80)	tetrachloroethene	12.897	166	59493	47.39	ug/L		97
81)	2-hexanone	12.881	58	57653	175.89	ug/L		97
82)	butyl acetate	12.981	56	24209	42.45	ug/L		91
83)	n-butyl ether	13.771	57	151322	36.65	ug/L		93
84)	dibromochloromethane	13.153	129	54499	47.55	ug/L		97
85)	1,2-dibromoethane	13.310	107	45861	45.96	ug/L		94
86)	chlorobenzene	13.797	112	125755	47.21	ug/L		99
87)	1,1,1,2-tetrachloroethane	13.859	131	49240	46.56	ug/L		99
88)	ethylbenzene	13.859	91	214335	46.01	ug/L		100
89)	m,p-xylene	13.980	106	166369	90.82	ug/L		99
90)	o-xylene	14.382	106	80143	43.94	ug/L		95
91)	styrene	14.388	104	138446	45.20	ug/L		96
92)	butyl acrylate	14.210	55	76170	43.60	ug/L		99
93)	cis-1,4-dichloro-2-butene	14.749	88	24072	53.63	ug/L		90
94)	bromoform	14.613	173	39886	49.54	ug/L		99
95)	isopropylbenzene	14.733	105	209841	45.71	ug/L		99
98)	1,1,2,2-tetrachloroethane	14.989	83	51199	46.18	ug/L		98
99)	trans-1,4-dichloro-2-b...	15.021	53	14692	50.85	ug/L		89
100)	1,2,3-trichloropropane	15.078	110	14294	50.05	ug/L		96
101)	bromobenzene	15.109	156	61738	46.65	ug/L		99
102)	n-propylbenzene	15.151	91	248087	45.15	ug/L		97
103)	2-chlorotoluene	15.277	126	53054	45.97	ug/L		95
104)	4-chlorotoluene	15.387	91	154668	47.08	ug/L		99
105)	1,3,5-trimethylbenzene	15.308	105	186499	45.10	ug/L		99
106)	tert-butylbenzene	15.648	134	33992	44.37	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225858.d
Acq On : 1 May 2019 8:59 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:21:18 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

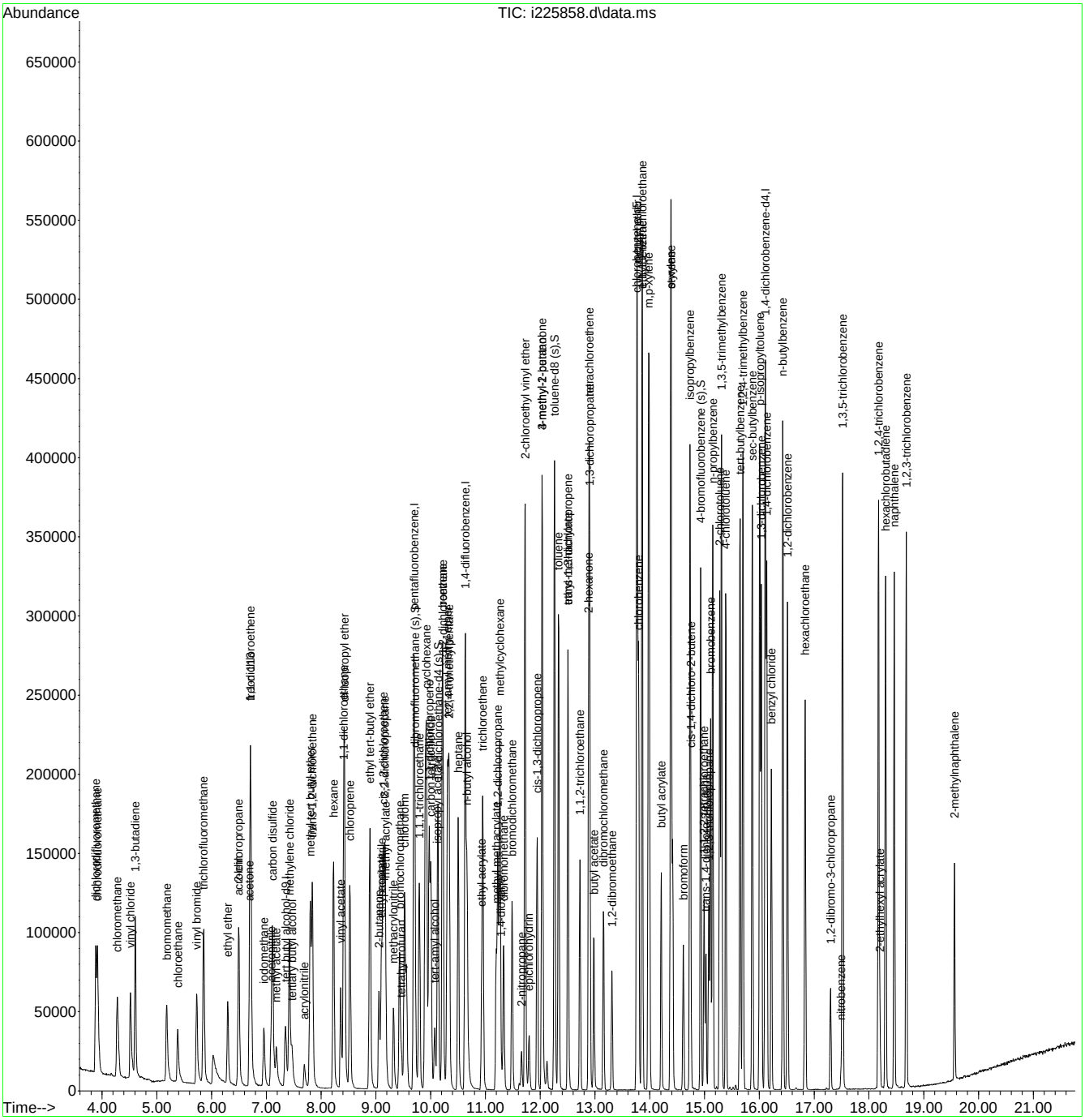
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	193754	45.74	ug/L	96
108) sec-butylbenzene	15.873	105	235594	44.21	ug/L	99
109) p-isopropyltoluene	16.009	119	214845	46.45	ug/l	99
110) benzyl chloride	16.218	91	121940	47.00	ug/L	97
111) 1,3-dichlorobenzene	16.035	146	119406	47.28	ug/L	98
112) 1,4-dichlorobenzene	16.135	146	122083	47.33	ug/L	98
113) 1,2-dichlorobenzene	16.511	146	116998	47.33	ug/L	98
114) n-butylbenzene	16.427	92	110065	45.75	ug/L	98
115) hexachloroethane	16.835	201	45508	49.34	ug/L	90
116) 1,2-dibromo-3-chloropr...	17.301	157	15796	45.94	ug/L	93
117) nitrobenzene	17.489	77	5933	50.22	ug/L	87
118) 1,3,5-trichlorobenzene	17.521	180	122834	48.92	ug/L	98
119) 1,2,4-trichlorobenzene	18.174	180	110752	49.03	ug/L	98
120) 2-ethylhexyl acrylate	18.201	55	16966	9.22	ug/L	89
121) hexachlorobutadiene	18.305	225	70598	47.48	ug/L	98
122) naphthalene	18.462	128	222283	50.90	ug/L	100
123) 1,2,3-trichlorobenzene	18.682	180	102350	46.06	ug/L	100
124) 2-methylnaphthalene	19.560	142	55948	35.93	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225858.d
Acq On : 1 May 2019 8:59 am
Operator : thienn
Sample : bs Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:21:18 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151597.d
Acq On : 1 May 2019 9:39 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34364,V3C6814,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:17 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	39386	500.00	ug/L		0.00
5) pentafluorobenzene	4.028	168	179301	50.00	ug/L		0.00
52) 1,4-difluorobenzene	4.687	114	232404	50.00	ug/L		0.00
74) chlorobenzene-d5	7.391	117	206715	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	9.321	152	120268	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	3.986	113	63835	49.27	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.54%				
53) 1,2-dichloroethane-d4 (s)	4.305	65	63204	50.05	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.10%				
75) toluene-d8 (s)	6.084	98	261860	51.18	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.36%				
98) 4-bromofluorobenzene (s)	8.390	95	99724	50.43	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.86%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	2.642	59	19650	226.31	ug/L		95
4) 1,4-dioxane	5.289	88	12804	1209.97	ug/L		96
6) chlorodifluoromethane	1.104	51	45342	41.74	ug/L		95
7) dichlorodifluoromethane	1.078	85	78139	50.45	ug/L		99
8) chloromethane	1.225	50	54511	42.63	ug/L		99
9) 1,3-butadiene	1.319	54	34688	41.67	ug/L		98
10) vinyl chloride	1.298	62	56957	44.28	ug/L		99
11) bromomethane	1.538	94	31613	41.08	ug/L		99
12) chloroethane	1.617	64	32954	43.11	ug/L		97
13) vinyl Bromide	1.748	106	43471	39.38	ug/L		96
14) trichlorofluoromethane	1.774	101	84247	44.25	ug/L		99
15) ethyl ether	1.988	74	25663	47.34	ug/L		95
16) 2-chloropropane	2.072	63	18887	43.64	ug/L	#	82
17) acrolein	2.140	56	5604	50.27	ug/L		96
18) freon 113	2.135	151	44790	49.21	ug/L		95
19) 1,1-dichloroethene	2.161	96	46319	45.65	ug/L		96
20) acetone	2.250	58	10725	191.99	ug/L		97
21) acetonitrile	2.511	41	36610	424.67	ug/L		99
22) iodomethane	2.286	142	44010	52.90	ug/L		98
23) carbon disulfide	2.307	76	125402	44.12	ug/L		96
24) methylene chloride	2.564	84	49312	44.45	ug/L		89
25) methyl acetate	2.469	43	22574	42.19	ug/L		99
26) methyl tert butyl ether	2.710	73	123370	45.62	ug/L		97
27) trans-1,2-dichloroethene	2.731	96	50817	43.99	ug/L		99
28) hexane	2.877	57	77410	42.35	ug/L		99
29) di-isopropyl ether	3.076	45	132136	40.25	ug/L		97
30) ethyl tert-butyl ether	3.364	59	142756	43.99	ug/L		99
31) 2-butanone	3.594	72	16963	192.80	ug/L	#	81
32) 1,1-dichloroethane	3.092	63	80943	43.12	ug/L		99
33) chloroprene	3.134	53	73536	44.10	ug/L		95
34) acrylonitrile	2.804	53	11040	48.40	ug/L		93
35) vinyl acetate	3.118	86	10407	50.89	ug/L	#	64
36) ethyl acetate	3.610	45	4813	41.95	ug/L		85
37) 2,2-dichloropropane	3.542	77	72828	42.17	ug/L		97
38) cis-1,2-dichloroethene	3.573	96	55483	44.44	ug/L		97
39) propionitrile	3.714	54	47654	470.72	ug/L		99
40) bromochloromethane	3.782	130	32786	46.84	ug/L		88
41) tetrahydrofuran	3.777	71	4381	50.06	ug/L		88
42) chloroform	3.840	83	85109	41.93	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151597.d
Acq On : 1 May 2019 9:39 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34364,V3C6814,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:17 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	26982	42.00	ug/L		93
44)	isobutyl alcohol	4.263	41	57345	363.98	ug/L		97
46)	methacrylonitrile	3.808	67	15361	51.12	ug/L		84
47)	1,1,1-trichloroethane	3.955	97	79514	43.40	ug/L		99
48)	cyclohexane	3.939	84	84472	45.08	ug/L		95
49)	1,1-dichloropropene	4.101	110	27050	44.93	ug/L		91
50)	tert-amyl alcohol	4.326	59	15636	196.05	ug/L		83
51)	carbon tetrachloride	4.065	119	68604	47.38	ug/L		99
54)	2,2,4-trimethylpentane	4.263	57	185965	43.14	ug/L		98
55)	tert-amyl methyl ether	4.363	87	45713	47.46	ug/L	#	86
56)	n-butyl alcohol	4.891	56	56180	2612.19	ug/L		100
57)	benzene	4.284	78	196801	46.05	ug/L		99
58)	heptane	4.452	57	39253	42.93	ug/L		99
59)	isopropyl acetate	4.363	87	45713	46.34	ug/L		93
60)	1,2-dichloroethane	4.378	62	57501	42.37	ug/L		98
61)	trichloroethene	4.901	95	54025	46.52	ug/L		96
62)	ethyl acrylate	5.037	55	45774	48.23	ug/L		98
63)	2-nitropropane	5.749	41	13366	46.21	ug/L	#	16
64)	2-chloroethyl vinyl ether	5.764	63	134333	238.96	ug/L		96
65)	methyl methacrylate	5.273	100	12890	53.75	ug/L	#	76
66)	1,2-dichloropropane	5.168	63	45507	44.81	ug/L		99
67)	methylcyclohexane	5.001	83	91830	42.35	ug/L		99
68)	dibromomethane	5.294	93	25568	45.98	ug/L		88
69)	bromodichloromethane	5.445	83	64122	49.65	ug/L		97
70)	epichlorohydrin	5.843	57	18620	264.00	ug/L		95
71)	cis-1,3-dichloropropene	5.890	75	79188	49.01	ug/L		93
72)	4-methyl-2-pentanone	6.031	85	29644	219.16	ug/L	#	79
76)	toluene	6.141	92	131107	44.44	ug/L		99
77)	trans-1,3-dichloropropene	6.434	75	66482	49.03	ug/L		99
78)	ethyl methacrylate	6.465	69	54614	48.44	ug/L		95
79)	1,1,2-trichloroethane	6.596	83	32455	44.71	ug/L		97
80)	2-hexanone	6.800	58	53111	191.23	ug/L		88
81)	tetrachloroethene	6.617	166	69858	49.91	ug/L		94
82)	1,3-dichloropropane	6.748	76	66929	45.71	ug/L		98
83)	butyl acetate	6.889	56	25278	48.41	ug/L		91
84)	dibromochloromethane	6.915	129	48524	56.76	ug/L		98
85)	1,2-dibromoethane	7.015	107	44888	42.63	ug/L		97
86)	n-butyl ether	7.470	57	189519	39.47	ug/L		99
87)	chlorobenzene	7.417	112	146598	45.13	ug/L		100
88)	1,1,1,2-tetrachloroethane	7.501	131	53385	49.79	ug/L		99
89)	ethylbenzene	7.485	91	248118	43.45	ug/L		99
90)	m,p-xylene	7.590	106	197570	87.81	ug/L		96
91)	o-xylene	7.930	91	200775	44.46	ug/L		100
92)	styrene	7.956	104	164386	45.46	ug/L		98
93)	bromoform	8.129	173	33230	53.30	ug/L		97
94)	butyl acrylate	7.919	55	74344	47.40	ug/L		98
95)	isopropylbenzene	8.223	105	257473	44.74	ug/L		99
96)	cis-1,4-dichloro-2-butene	8.359	53	15190	47.79	ug/L	#	90
99)	bromobenzene	8.505	156	70787	44.40	ug/L		91
100)	1,1,2,2-tetrachloroethane	8.547	83	47106	43.45	ug/L		99
101)	trans-1,4-dichloro-2-b...	8.604	88	7107	47.88	ug/L		89
102)	1,2,3-trichloropropane	8.584	110	15649	45.37	ug/L		97
103)	n-propylbenzene	8.563	91	295799	40.45	ug/L		100
104)	2-chlorotoluene	8.652	126	63437	42.41	ug/L		94
105)	4-chlorotoluene	8.751	126	65632	43.97	ug/L		93
106)	1,3,5-trimethylbenzene	8.714	105	228830	43.00	ug/L		99
107)	tert-butylbenzene	8.965	119	202874	42.85	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151597.d
Acq On : 1 May 2019 9:39 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34364,V3C6814,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:17 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

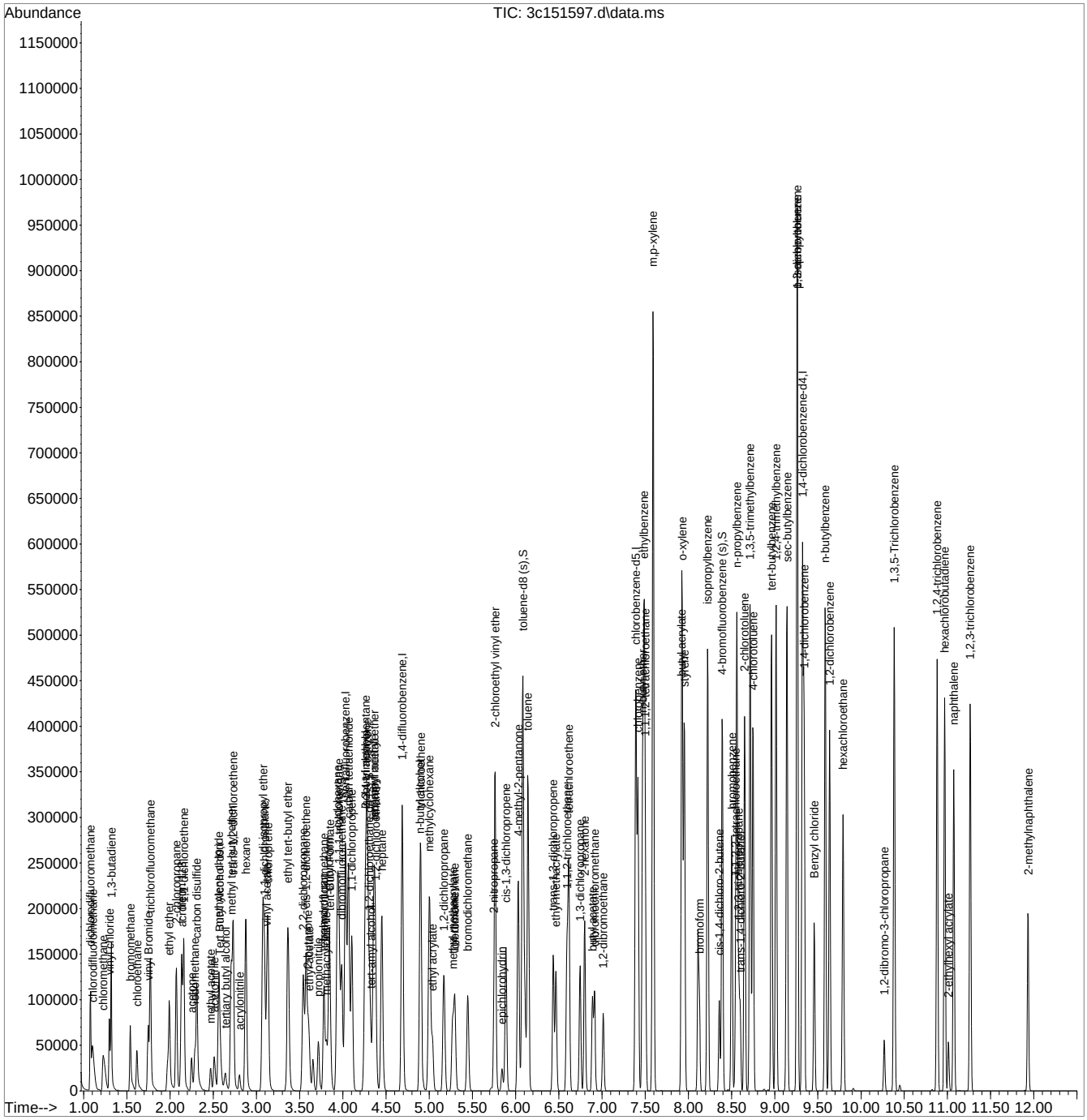
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	230189	42.50	ug/L	99
109) sec-butylbenzene	9.143	105	291477	42.35	ug/L	97
110) 1,3-dichlorobenzene	9.258	146	137416	43.87	ug/L	99
111) p-isopropyltoluene	9.258	119	262148	43.29	ug/L	99
112) 1,4-dichlorobenzene	9.342	146	137445	42.92	ug/L	98
113) 1,2-dichlorobenzene	9.635	146	128244	43.68	ug/L	99
114) n-butylbenzene	9.583	92	124406	41.57	ug/L	99
115) 1,2-dibromo-3-chloropr...	10.268	157	14208	52.69	ug/L	99
116) 1,3,5-Trichlorobenzene	10.383	180	137329	48.23	ug/L	100
117) 1,2,4-trichlorobenzene	10.880	180	119665	48.80	ug/L	99
118) hexachlorobutadiene	10.969	225	80839	52.93	ug/L	96
119) naphthalene	11.073	128	206688	48.13	ug/L	100
120) 1,2,3-trichlorobenzene	11.261	180	110802	48.73	ug/L	99
121) hexachloroethane	9.792	201	47108	51.08	ug/L	91
122) Benzyl chloride	9.457	91	99194	52.36	ug/L	99
123) 2-ethylhexyl acrylate	11.010	70	11024	9.14	ug/L	97
124) 2-methylnaphthalene	11.936	142	74374	28.92	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151597.d
Acq On : 1 May 2019 9:39 am
Operator : PrashanS
Sample : BS Inst : MS3C
Misc : MS34364,V3C6814,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:17 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\nizele\5_may\5-3-19\vy8023\
Data File : y184880.d
Acq On : 2 May 2019 10:34 am
Operator : PrashanS
Sample : bs Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:19:05 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.741	65	52531	500.00	ug/L	0.00
5) pentafluorobenzene	9.979	168	168327	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	247425	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	223401	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	134473	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.021	113	79220	51.88	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.76%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	67196	48.62	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 97.24%			
75) toluene-d8 (s)	12.506	98	279954	49.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.04%			
98) 4-bromofluorobenzene (s)	15.131	95	105932	47.51	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.02%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.851	59	40479	247.24	ug/L	95
4) 1,4-dioxane	11.549	88	20828	1283.19	ug/L	92
6) chlorodifluoromethane	4.388	51	154349	58.15	ug/L	99
7) dichlorodifluoromethane	4.373	85	166684	50.01	ug/L	97
8) chloromethane	4.754	50	200788	57.22	ug/L	99
9) vinyl chloride	5.000	62	142323	49.31	ug/L	96
10) 1,3-butadiene	5.037	54	100795	56.39	ug/L	95
11) bromomethane	5.638	94	112292	45.95	ug/L	100
12) chloroethane	5.801	64	81581	52.26	ug/L	94
13) vinyl bromide	6.156	106	101522	74.99	ug/L	97
14) trichlorofluoromethane	6.282	101	175488	52.78	ug/L	96
15) ethyl ether	6.632	74	45190	55.47	ug/L	96
16) 2-chloropropane	6.867	63	37364	51.83	ug/L	98
17) acrolein	6.873	56	14282	62.95	ug/L	87
18) freon 113	7.103	151	84410	54.14	ug/L	94
19) 1,1-dichloroethene	7.071	61	136697	52.88	ug/L	98
20) acetone	7.077	43	74805	181.40	ug/L	100
21) acetonitrile	7.511	41	91484	452.09	ug/L	99
22) iodomethane	7.333	142	166922	51.15	ug/L	96
23) carbon disulfide	7.479	76	273345	48.31	ug/L	98
24) methylene chloride	7.783	84	102834	45.77	ug/L	92
25) methyl acetate	7.521	43	46507	48.74	ug/L	98
26) methyl tert butyl ether	8.149	73	250665	48.32	ug/L	96
27) trans-1,2-dichloroethene	8.165	61	121301	47.34	ug/L	99
28) hexane	8.510	57	109998	48.64	ug/L	98
29) di-isopropyl ether	8.729	45	310393	48.07	ug/L	95
30) ethyl tert-butyl ether	9.190	59	292022	49.72	ug/L	96
31) 2-butanone	9.378	72	28026	206.73	ug/L #	75
32) 1,1-dichloroethane	8.740	63	153916	47.89	ug/L	98
33) chloroprene	8.839	53	114309	49.64	ug/L	98
34) acrylonitrile	8.070	53	24354	47.26	ug/L	89
35) vinyl acetate	8.672	86	13211	51.59	ug/L	97
36) ethyl acetate	9.388	45	8645	47.45	ug/L	84
37) 2,2-dichloropropane	9.493	77	136836	49.29	ug/L	97
38) cis-1,2-dichloroethene	9.451	96	101110	47.85	ug/L	99
39) propionitrile	9.462	54	87360	480.41	ug/L	92
40) bromochloromethane	9.744	130	66851	50.48	ug/L	96
41) tetrahydrofuran	9.760	72	8470	52.25	ug/L	91
42) chloroform	9.828	83	161548	47.28	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184880.d
Acq On : 2 May 2019 10:34 am
Operator : PrashanS
Sample : bs Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:19:05 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	tert-butyl formate	9.870	59	64196	49.79	ug/L		93
46)	methacrylonitrile	9.660	67	23715	48.53	ug/L		97
47)	1,1,1-trichloroethane	10.095	97	152743	51.87	ug/L		98
48)	cyclohexane	10.204	84	137202	46.86	ug/L		97
49)	1,1-dichloropropene	10.257	75	108113	51.91	ug/L		99
50)	tert-amyl alcohol	10.377	55	14271	238.90	ug/L	#	70
51)	carbon tetrachloride	10.293	117	137291	53.55	ug/L		98
54)	2,2,4-trimethylpentane	10.602	57	335802	49.49	ug/L		99
55)	tert-amyl methyl ether	10.586	73	273262	49.20	ug/L		99
56)	n-butyl alcohol	10.952	41	77510	2525.99	ug/L		96
57)	benzene	10.508	78	332459	46.54	ug/L		99
58)	heptane	10.748	57	57440	47.12	ug/L		96
59)	isopropyl acetate	10.403	87	14567	50.04	ug/L		88
60)	1,2-dichloroethane	10.529	62	107959	47.04	ug/L		99
61)	trichloroethene	11.219	130	96302	51.85	ug/L		100
62)	ethyl acrylate	11.198	55	76177	49.90	ug/L		97
63)	2-nitropropane	11.951	41	24934	50.17	ug/L	#	72
64)	2-chloroethyl vinyl ether	11.983	63	216874	256.28	ug/L		99
65)	methyl methacrylate	11.454	100	16853	50.12	ug/L	#	82
66)	1,2-dichloropropane	11.501	63	88238	48.49	ug/L		99
67)	methylcyclohexane	11.512	83	149833	50.80	ug/L		94
68)	dibromomethane	11.611	93	52466	49.42	ug/L		95
69)	bromodichloromethane	11.758	83	127780	50.21	ug/L		100
70)	epichlorohydrin	12.072	57	31921	248.51	ug/L		98
71)	cis-1,3-dichloropropene	12.202	75	142590	51.50	ug/L		99
72)	4-methyl-2-pentanone	12.302	58	99395	199.14	ug/L		96
73)	3-methyl-1-butanol	12.296	70	41328	1106.93	ug/L		96
76)	toluene	12.579	92	198819	46.22	ug/L		99
77)	trans-1,3-dichloropropene	12.757	75	122067	49.18	ug/L		98
78)	ethyl methacrylate	12.741	69	83985	48.27	ug/L		96
79)	1,1,2-trichloroethane	12.976	83	56856	46.32	ug/L		99
80)	2-hexanone	13.133	58	88975	193.54	ug/L		94
81)	tetrachloroethene	13.123	166	98307	50.37	ug/L		93
82)	1,3-dichloropropane	13.154	76	106972	46.77	ug/L		99
83)	butyl acetate	13.201	56	42438	47.76	ug/L		95
84)	dibromochloromethane	13.395	129	96285	52.29	ug/L		98
85)	1,2-dibromoethane	13.547	107	77744	40.19	ug/L		97
86)	n-butyl ether	13.965	57	328796	46.29	ug/L		99
87)	chlorobenzene	14.017	112	235894	45.59	ug/L		99
88)	1,1,1,2-tetrachloroethane	14.080	131	101791	49.88	ug/L		98
89)	ethylbenzene	14.075	91	378209	46.79	ug/L		100
90)	m,p-xylene	14.195	106	292290	92.86	ug/L		100
91)	o-xylene	14.587	91	327133	48.30	ug/L		100
92)	styrene	14.598	104	258914	48.32	ug/L		99
93)	bromoform	14.828	173	63574	50.82	ug/L		98
94)	butyl acrylate	14.415	55	141329	48.24	ug/L		96
95)	isopropylbenzene	14.933	105	407195	50.02	ug/L		98
96)	cis-1,4-dichloro-2-butene	14.969	88	34261	52.54	ug/L		93
99)	bromobenzene	15.314	156	118440	44.12	ug/L		95
100)	1,1,2,2-tetrachloroethane	15.204	83	92675	45.03	ug/L		96
101)	trans-1,4-dichloro-2-b...	15.236	53	21619	47.18	ug/L		98
102)	1,2,3-trichloropropane	15.293	110	24223	46.33	ug/L		96
103)	n-propylbenzene	15.340	91	470614	45.35	ug/L		99
104)	2-chlorotoluene	15.476	126	105724	44.74	ug/L		98
105)	4-chlorotoluene	15.586	91	288882	43.85	ug/L		98
106)	1,3,5-trimethylbenzene	15.497	105	353906	46.33	ug/L		99
107)	tert-butylbenzene	15.832	134	68415	50.67	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184880.d
Acq On : 2 May 2019 10:34 am
Operator : PrashanS
Sample : bs Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:19:05 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

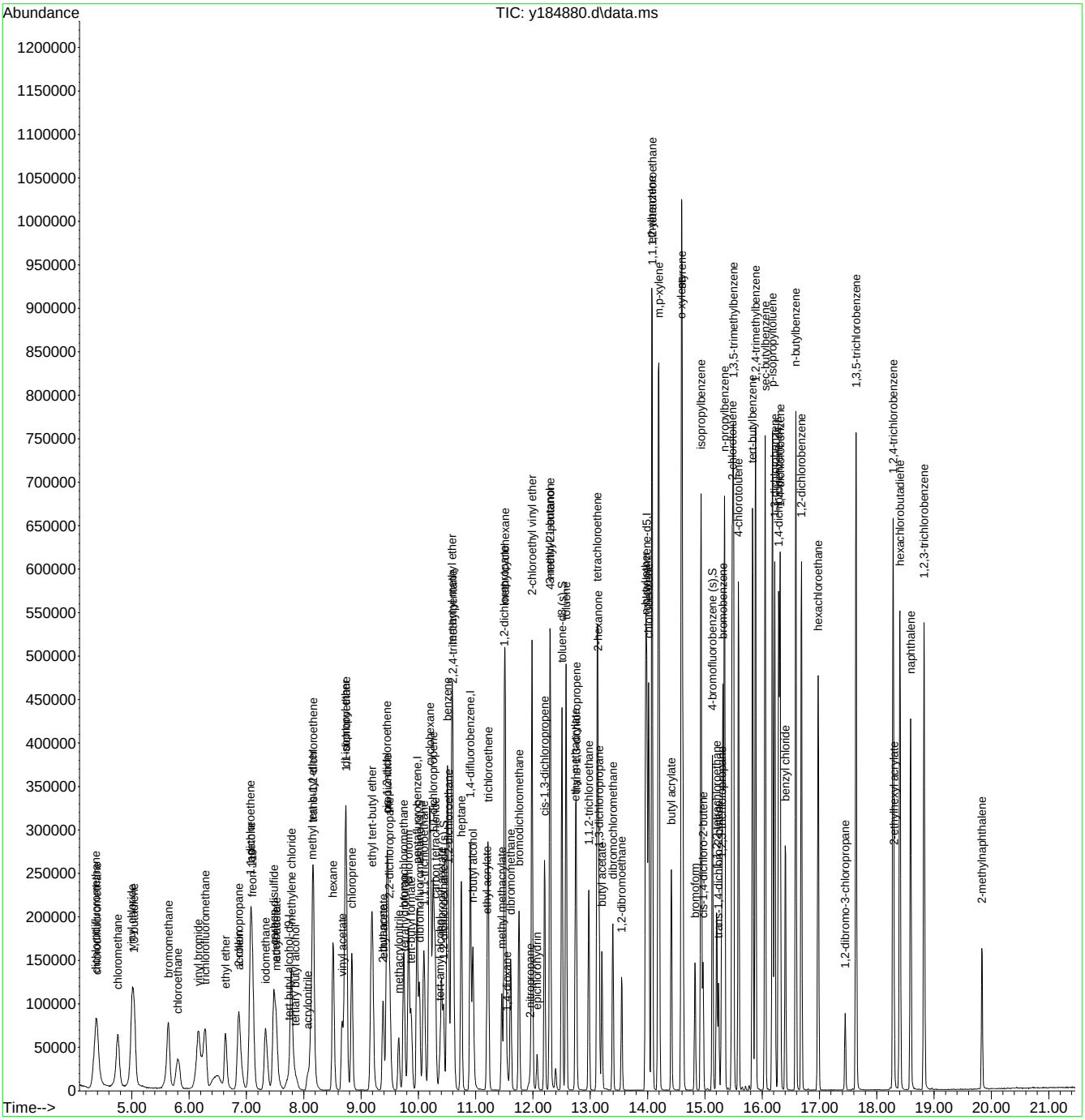
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.884	105	368466	46.84	ug/L	98
109) sec-butylbenzene	16.052	105	467379	49.05	ug/L	99
110) 1,3-dichlorobenzene	16.219	146	227700	45.86	ug/L	98
111) p-isopropyltoluene	16.177	119	405307	48.30	ug/L	99
112) 1,4-dichlorobenzene	16.313	146	226681	44.33	ug/L	99
113) 1,2-dichlorobenzene	16.685	146	226216	44.48	ug/L	100
114) n-butylbenzene	16.585	92	208546	47.66	ug/L	99
115) 1,2-dibromo-3-chloropr...	17.448	157	23470	49.11	ug/L	96
116) 1,3,5-trichlorobenzene	17.637	180	224622	46.74	ug/L	97
117) 1,2,4-trichlorobenzene	18.285	180	195181	48.14	ug/L	98
118) hexachlorobutadiene	18.405	225	114535	46.01	ug/L	96
119) naphthalene	18.588	128	325696	51.79	ug/L	99
120) 1,2,3-trichlorobenzene	18.824	180	172344	49.06	ug/L	100
121) hexachloroethane	16.978	201	77057	51.59	ug/L	97
122) benzyl chloride	16.402	91	182269	48.76	ug/L	99
123) 2-ethylhexyl acrylate	18.301	70	19476	7.96	ug/L	91
124) 2-methylnaphthalene	19.833	142	75290	23.84	ug/L	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184880.d
Acq On : 2 May 2019 10:34 am
Operator : PrashanS
Sample : bs Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:19:05 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225835.d
Acq On : 30 Apr 2019 3:50 pm
Operator : thienn
Sample : jc86716-2ms Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:52:26 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	63476	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	162016	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	218837	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	176769	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.109	152	105844	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	66643	52.35	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.70%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	75770	55.47	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 110.94%			
74) toluene-d8 (s)	12.259	98	232328	51.27	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.54%			
97) 4-bromofluorobenzene (s)	14.927	95	85121	52.74	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.48%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.473	59	33373	254.02	ug/L	95
3) 1,4-dioxane	11.281	88	18060	1226.55	ug/L	94
5) dichlorodifluoromethane	3.885	85	88761	62.71	ug/L	99
6) chlorodifluoromethane	3.917	51	68269	51.09	ug/L	97
7) chloromethane	4.278	50	68648	52.38	ug/L	99
8) vinyl chloride	4.518	62	63519	57.55	ug/L	98
9) 1,3-butadiene	4.607	54	38820	50.35	ug/L	96
10) bromomethane	5.183	94	38234	51.99	ug/L	98
11) chloroethane	5.387	64	33896	50.77	ug/L	99
12) vinyl bromide	5.732	106	45686	53.55	ug/L	96
13) trichlorofluoromethane	5.857	101	86519	51.22	ug/L	97
14) ethyl ether	6.302	74	22525	47.07	ug/L	96
15) 2-chloropropane	6.495	63	18248	46.78	ug/L #	87
16) acrolein	6.495	56	8068	51.74	ug/L	91
17) freon 113	6.710	151	37777	45.65	ug/L	97
18) 1,1-dichloroethene	6.710	61	71388	47.34	ug/L	95
19) acetone	6.694	43	63179	231.44	ug/L	94
20) iodomethane	6.956	142	46289	41.64	ug/L	98
21) carbon disulfide	7.113	76	134362	41.37	ug/L	98
22) acetonitrile	7.092	41	66756	489.69	ug/L	96
23) methyl acetate	7.186	74	6948	43.71	ug/L	99
24) methylene chloride	7.426	84	47383	42.43	ug/L	95
25) acrylonitrile	7.693	53	15254	47.50	ug/L	95
26) methyl tert butyl ether	7.803	73	128793	48.66	ug/L	96
27) trans-1,2-dichloroethene	7.840	61	66430	46.21	ug/L	97
28) hexane	8.227	57	59162	34.13	ug/L	98
29) 1,1-dichloroethane	8.410	63	83964	45.74	ug/L	99
30) vinyl acetate	8.363	86	8445	48.33	ug/L #	78
31) di-isopropyl ether	8.425	45	140480	43.18	ug/L	95
32) chloroprene	8.525	53	75520	48.77	ug/L	94
33) ethyl tert-butyl ether	8.891	59	145075	46.20	ug/L	99
34) 2-butanone	9.058	72	22387	218.79	ug/L #	88
35) 2,2-dichloropropane	9.168	77	71463	44.91	ug/L	96
36) ethyl acetate	9.095	45	6571	43.44	ug/L	94
37) cis-1,2-dichloroethene	9.131	96	52136	44.09	ug/L	94
38) propionitrile	9.105	54	77058	513.48	ug/L	100
39) methyl acrylate	9.178	85	7175	46.02	ug/L	98
40) methacrylonitrile	9.325	67	18294	48.29	ug/L	97
41) bromochloromethane	9.435	128	25187	47.37	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225835.d
Acq On : 30 Apr 2019 3:50 pm
Operator : thienn
Sample : jc86716-2ms Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:52:26 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.471	71	6314	53.55	ug/L		88
43) chloroform	9.524	83	89684	47.23	ug/L		100
44) carbon tetrachloride	10.005	117	74486	48.03	ug/L		96
45) 1,1-dichloropropene	9.973	75	65934	46.12	ug/L		97
48) 1,1,1-trichloroethane	9.790	97	82743	48.82	ug/L		98
49) cyclohexane	9.921	84	65172	43.67	ug/L		95
50) tert-amyl alcohol	10.078	55	11548	269.08	ug/L		85
53) isopropyl acetate	10.125	87	9211	46.45	ug/L	#	88
54) 1,2-dichloroethane	10.230	62	69893	48.62	ug/L		99
55) benzene	10.214	78	200050	46.79	ug/L		98
56) 2,2,4-trimethylpentane	10.334	57	144996	33.13	ug/L		95
57) tert-amyl methyl ether	10.308	87	32264	44.22	ug/L		96
58) heptane	10.502	57	28555	31.25	ug/L		95
59) n-butyl alcohol	10.664	56	91834	2571.17	ug/L		96
60) trichloroethene	10.952	95	49884	43.56	ug/L		98
61) ethyl acrylate	10.931	55	53612	44.29	ug/L		98
62) methylcyclohexane	11.265	83	72344	37.30	ug/L		96
63) 1,2-dichloropropane	11.224	63	44476	40.64	ug/L		86
64) methyl methacrylate	11.197	100	11789	45.78	ug/L	#	93
65) dibromomethane	11.328	93	28735	45.06	ug/L		98
66) bromodichloromethane	11.485	83	68530	45.19	ug/L		99
67) 2-nitropropane	11.658	41	14962	56.99	ug/L		96
68) 2-chloroethyl vinyl ether	11.726	63	143661	224.34	ug/L		98
69) epichlorohydrin	11.794	57	26138	244.38	ug/L		96
70) cis-1,3-dichloropropene	11.945	75	73773	43.09	ug/L		94
71) 4-methyl-2-pentanone	12.034	58	64630	189.79	ug/L		95
72) 3-methyl-1-butanol	12.034	70	28685	969.74	ug/L		85
75) toluene	12.332	92	115994	47.41	ug/L		97
76) trans-1,3-dichloropropene	12.505	75	69021	46.88	ug/L		98
77) ethyl methacrylate	12.505	69	49245	44.38	ug/L		96
78) 1,1,2-trichloroethane	12.725	83	31879	44.41	ug/L		97
79) 1,3-dichloropropane	12.902	76	60852	46.58	ug/L		98
80) tetrachloroethene	12.897	166	55903	45.51	ug/L		99
81) 2-hexanone	12.887	58	61536	191.85	ug/L		97
82) butyl acetate	12.981	56	25351	45.43	ug/L		95
83) n-butyl ether	13.771	57	150084	37.15	ug/L		94
84) dibromochloromethane	13.153	129	52456	46.77	ug/L		97
85) 1,2-dibromoethane	13.310	107	45172	46.26	ug/L		99
86) chlorobenzene	13.797	112	120103	46.08	ug/L		98
87) 1,1,1,2-tetrachloroethane	13.860	131	47451	45.85	ug/L		100
88) ethylbenzene	13.860	91	210654	46.21	ug/L		99
89) m,p-xylene	13.980	106	173096	96.57	ug/L		99
90) o-xylene	14.383	106	82840	46.42	ug/L		98
91) styrene	14.393	104	136676	45.61	ug/L		98
92) butyl acrylate	14.210	55	77203	45.16	ug/L		97
93) cis-1,4-dichloro-2-butene	14.749	88	22909	52.16	ug/L		87
94) bromoform	14.613	173	37982	48.21	ug/L		99
95) isopropylbenzene	14.733	105	205684	45.79	ug/L		99
98) 1,1,2,2-tetrachloroethane	14.989	83	50935	46.53	ug/L		97
99) trans-1,4-dichloro-2-b...	15.021	53	14341	50.27	ug/L		97
100) 1,2,3-trichloropropane	15.078	110	14091	49.97	ug/L		100
101) bromobenzene	15.110	156	60561	46.34	ug/L		99
102) n-propylbenzene	15.146	91	239892	44.22	ug/L		99
103) 2-chlorotoluene	15.277	126	51864	45.51	ug/L		99
104) 4-chlorotoluene	15.387	91	151692	46.77	ug/L		99
105) 1,3,5-trimethylbenzene	15.308	105	195445	47.88	ug/L		99
106) tert-butylbenzene	15.648	134	33600	44.43	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225835.d
Acq On : 30 Apr 2019 3:50 pm
Operator : thienn
Sample : jc86716-2ms Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:52:26 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

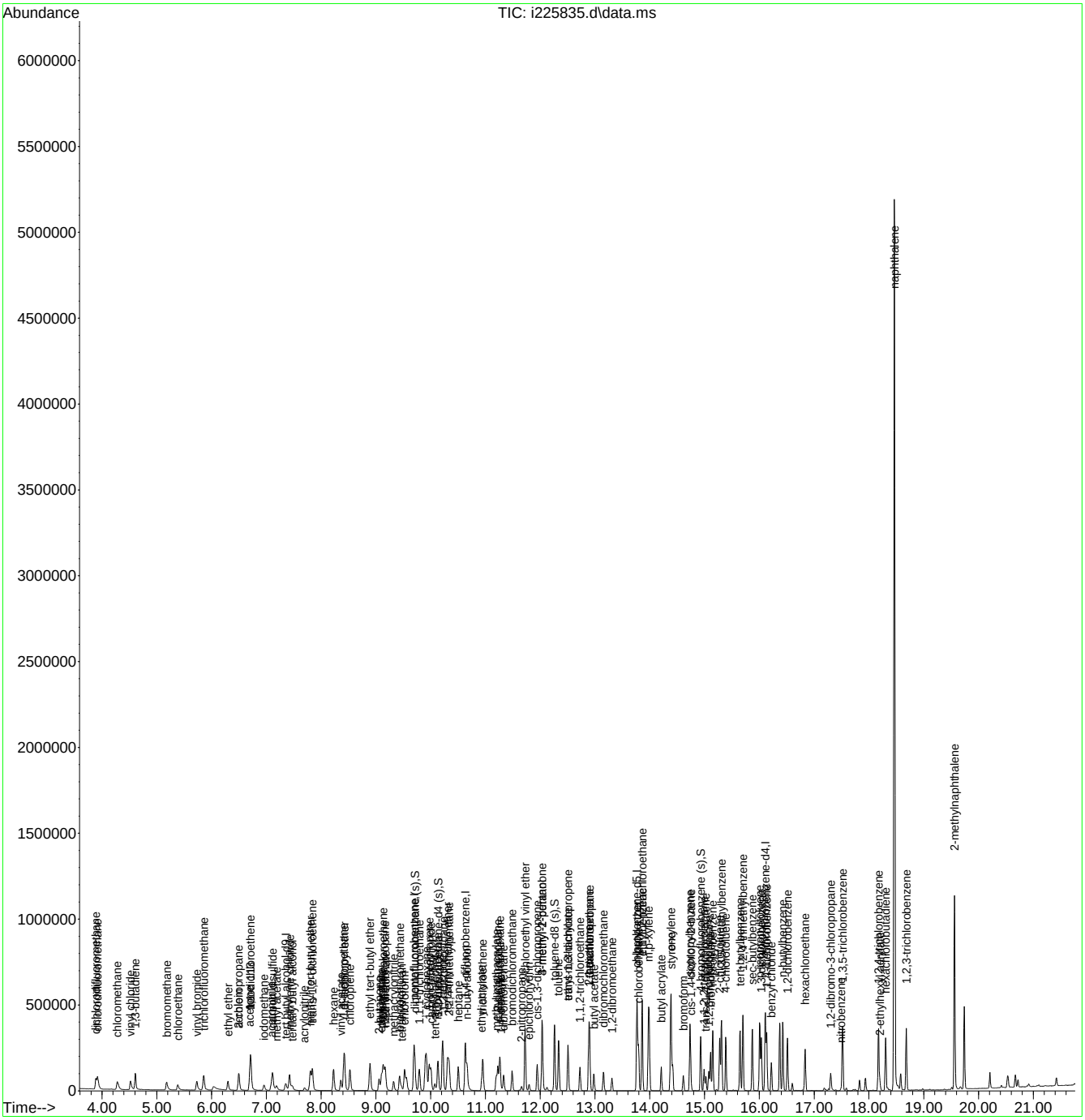
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.701	105	211045	50.46	ug/L	99
108) sec-butylbenzene	15.873	105	226738	43.09	ug/L	98
109) p-isopropyltoluene	16.004	119	204146	44.71	ug/l	97
110) benzyl chloride	16.218	91	102683	40.08	ug/L	96
111) 1,3-dichlorobenzene	16.035	146	116243	46.62	ug/L	98
112) 1,4-dichlorobenzene	16.135	146	117300	46.06	ug/L	99
113) 1,2-dichlorobenzene	16.511	146	116352	47.68	ug/L	99
114) n-butylbenzene	16.428	92	105558	44.44	ug/L	93
115) hexachloroethane	16.836	201	43955	48.27	ug/L	93
116) 1,2-dibromo-3-chloropr...	17.301	157	17568	51.75	ug/L	88
117) nitrobenzene	17.489	77	6874	58.93	ug/L	85
118) 1,3,5-trichlorobenzene	17.521	180	117852	47.54	ug/L	99
119) 1,2,4-trichlorobenzene	18.174	180	107657	48.28	ug/L	98
120) 2-ethylhexyl acrylate	18.201	55	17692	9.73	ug/L	93
121) hexachlorobutadiene	18.305	225	66883	45.56	ug/L	99
122) naphthalene	18.467	128	3755515	871.11	ug/L	99
123) 1,2,3-trichlorobenzene	18.682	180	103294	47.08	ug/L	97
124) 2-methylnaphthalene	19.561	142	475683	309.44	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225835.d
Acq On : 30 Apr 2019 3:50 pm
Operator : thienn
Sample : jc86716-2ms Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:52:26 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225836.d
Acq On : 30 Apr 2019 4:20 pm
Operator : thienn
Sample : jc86716-2msd Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:55:02 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.353	65	69393	500.00	ug/L	-0.03
4) pentafluorobenzene	9.696	168	172315	50.00	ug/L	-0.02
51) 1,4-difluorobenzene	10.632	114	233575	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	189660	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	113645	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	70563	52.11	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 104.22%			
52) 1,2-dichloroethane-d4 (s)	10.136	65	79147	54.29	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 108.58%			
74) toluene-d8 (s)	12.259	98	248684	51.15	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.30%			
97) 4-bromofluorobenzene (s)	14.926	95	91169	52.61	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.22%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.468	59	34435	239.76	ug/L	97
3) 1,4-dioxane	11.276	88	18484	1148.31	ug/L	96
5) dichlorodifluoromethane	3.885	85	93777	62.30	ug/L	96
6) chlorodifluoromethane	3.917	51	73268	51.55	ug/L	98
7) chloromethane	4.278	50	74972	53.78	ug/L	98
8) vinyl chloride	4.523	62	68372	58.24	ug/L	99
9) 1,3-butadiene	4.607	54	42253	51.53	ug/L	96
10) bromomethane	5.182	94	41078	52.52	ug/L	97
11) chloroethane	5.386	64	36661	51.63	ug/L	99
12) vinyl bromide	5.732	106	50013	55.12	ug/L	95
13) trichlorofluoromethane	5.857	101	92345	51.40	ug/L	99
14) ethyl ether	6.302	74	24418	47.98	ug/L	91
15) 2-chloropropane	6.495	63	19794	47.71	ug/L	93
16) acrolein	6.495	56	8922	53.80	ug/L	95
17) freon 113	6.715	151	40722	46.27	ug/L	95
18) 1,1-dichloroethene	6.710	61	76952	47.98	ug/L	97
19) acetone	6.694	43	65721	226.36	ug/L	98
20) iodomethane	6.956	142	52516	44.45	ug/L	97
21) carbon disulfide	7.112	76	146466	42.40	ug/L	98
22) acetonitrile	7.092	41	72254	498.34	ug/L	96
23) methyl acetate	7.186	74	7630	45.05	ug/L	97
24) methylene chloride	7.421	84	51547	43.40	ug/L	97
25) acrylonitrile	7.693	53	16647	48.74	ug/L	96
26) methyl tert butyl ether	7.803	73	138670	49.26	ug/L	97
27) trans-1,2-dichloroethene	7.839	61	72617	47.49	ug/L	99
28) hexane	8.226	57	67498	36.61	ug/L	98
29) 1,1-dichloroethane	8.415	63	89927	46.07	ug/L	96
30) vinyl acetate	8.362	86	9296	50.02	ug/L #	91
31) di-isopropyl ether	8.425	45	153644	44.41	ug/L	97
32) chloroprene	8.525	53	82574	50.14	ug/L	96
33) ethyl tert-butyl ether	8.891	59	157030	47.02	ug/L	98
34) 2-butanone	9.058	72	23903	219.64	ug/L #	82
35) 2,2-dichloropropane	9.163	77	76449	45.17	ug/L	99
36) ethyl acetate	9.095	45	7301	45.28	ug/L #	83
37) cis-1,2-dichloroethene	9.131	96	57322	45.58	ug/L	95
38) propionitrile	9.110	54	82856	519.12	ug/L	98
39) methyl acrylate	9.178	85	7776	46.84	ug/L	91
40) methacrylonitrile	9.320	67	19838	49.24	ug/L	87
41) bromochloromethane	9.429	128	27157	48.02	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225836.d
Acq On : 30 Apr 2019 4:20 pm
Operator : thienn
Sample : jc86716-2msd Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:55:02 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	6481	51.68	ug/L		86
43) chloroform	9.524	83	95177	47.13	ug/L		99
44) carbon tetrachloride	10.005	117	79105	47.96	ug/L		95
45) 1,1-dichloropropene	9.973	75	71994	47.35	ug/L		97
48) 1,1,1-trichloroethane	9.796	97	90092	49.98	ug/L		97
49) cyclohexane	9.921	84	71188	44.85	ug/L		98
50) tert-amyl alcohol	10.073	55	12452	272.72	ug/L	#	76
53) isopropyl acetate	10.125	87	10093	47.69	ug/L	#	93
54) 1,2-dichloroethane	10.224	62	74430	48.50	ug/L		98
55) benzene	10.214	78	219001	47.99	ug/L		98
56) 2,2,4-trimethylpentane	10.334	57	162499	34.78	ug/L		96
57) tert-amyl methyl ether	10.308	87	35456	45.52	ug/L	#	92
58) heptane	10.502	57	31997	32.81	ug/L		94
59) n-butyl alcohol	10.659	56	97403	2555.02	ug/L		93
60) trichloroethene	10.951	95	55433	45.35	ug/L		97
61) ethyl acrylate	10.931	55	58626	45.37	ug/L		98
62) methylcyclohexane	11.260	83	80073	38.68	ug/L		98
63) 1,2-dichloropropane	11.223	63	48549	41.56	ug/L		89
64) methyl methacrylate	11.192	100	13026	47.39	ug/L	#	90
65) dibromomethane	11.328	93	30887	45.38	ug/L		99
66) bromodichloromethane	11.485	83	73936	45.68	ug/L		98
67) 2-nitropropane	11.658	41	15906	56.77	ug/L		96
68) 2-chloroethyl vinyl ether	11.720	63	154385	225.87	ug/L		99
69) epichlorohydrin	11.794	57	27639	242.11	ug/L		97
70) cis-1,3-dichloropropene	11.945	75	81419	44.56	ug/L		95
71) 4-methyl-2-pentanone	12.034	58	68744	189.13	ug/L		95
72) 3-methyl-1-butanol	12.034	70	31222	988.91	ug/L		95
75) toluene	12.332	92	125035	47.63	ug/L		99
76) trans-1,3-dichloropropene	12.505	75	75553	47.83	ug/L		97
77) ethyl methacrylate	12.510	69	53031	44.54	ug/L		98
78) 1,1,2-trichloroethane	12.724	83	34812	45.20	ug/L		99
79) 1,3-dichloropropane	12.902	76	64980	46.36	ug/L		97
80) tetrachloroethene	12.897	166	59820	45.39	ug/L		98
81) 2-hexanone	12.881	58	66394	192.93	ug/L		96
82) butyl acetate	12.981	56	27034	45.15	ug/L		89
83) n-butyl ether	13.771	57	163149	37.63	ug/L		93
84) dibromochloromethane	13.153	129	55926	46.47	ug/L		98
85) 1,2-dibromoethane	13.310	107	48745	46.53	ug/L		96
86) chlorobenzene	13.797	112	129716	46.38	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.859	131	51625	46.50	ug/L		98
88) ethylbenzene	13.859	91	229847	47.00	ug/L		98
89) m,p-xylene	13.985	106	188127	97.82	ug/L		98
90) o-xylene	14.382	106	89328	46.65	ug/L		97
91) styrene	14.388	104	145505	45.25	ug/L		95
92) butyl acrylate	14.210	55	81950	44.68	ug/L		99
93) cis-1,4-dichloro-2-butene	14.749	88	23799	50.50	ug/L		90
94) bromoform	14.613	173	40276	47.65	ug/L		99
95) isopropylbenzene	14.733	105	222891	46.25	ug/L		98
98) 1,1,2,2-tetrachloroethane	14.989	83	53950	45.90	ug/L		98
99) trans-1,4-dichloro-2-b...	15.026	53	15502	50.61	ug/L		94
100) 1,2,3-trichloropropane	15.078	110	15114	49.92	ug/L		96
101) bromobenzene	15.109	156	65325	46.56	ug/L		96
102) n-propylbenzene	15.146	91	259648	44.58	ug/L		99
103) 2-chlorotoluene	15.277	126	55952	45.73	ug/L		98
104) 4-chlorotoluene	15.387	91	163718	47.02	ug/L		98
105) 1,3,5-trimethylbenzene	15.308	105	208368	47.54	ug/L		98
106) tert-butylbenzene	15.648	134	35541	43.77	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225836.d
Acq On : 30 Apr 2019 4:20 pm
Operator : thienn
Sample : jc86716-2msd Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:55:02 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

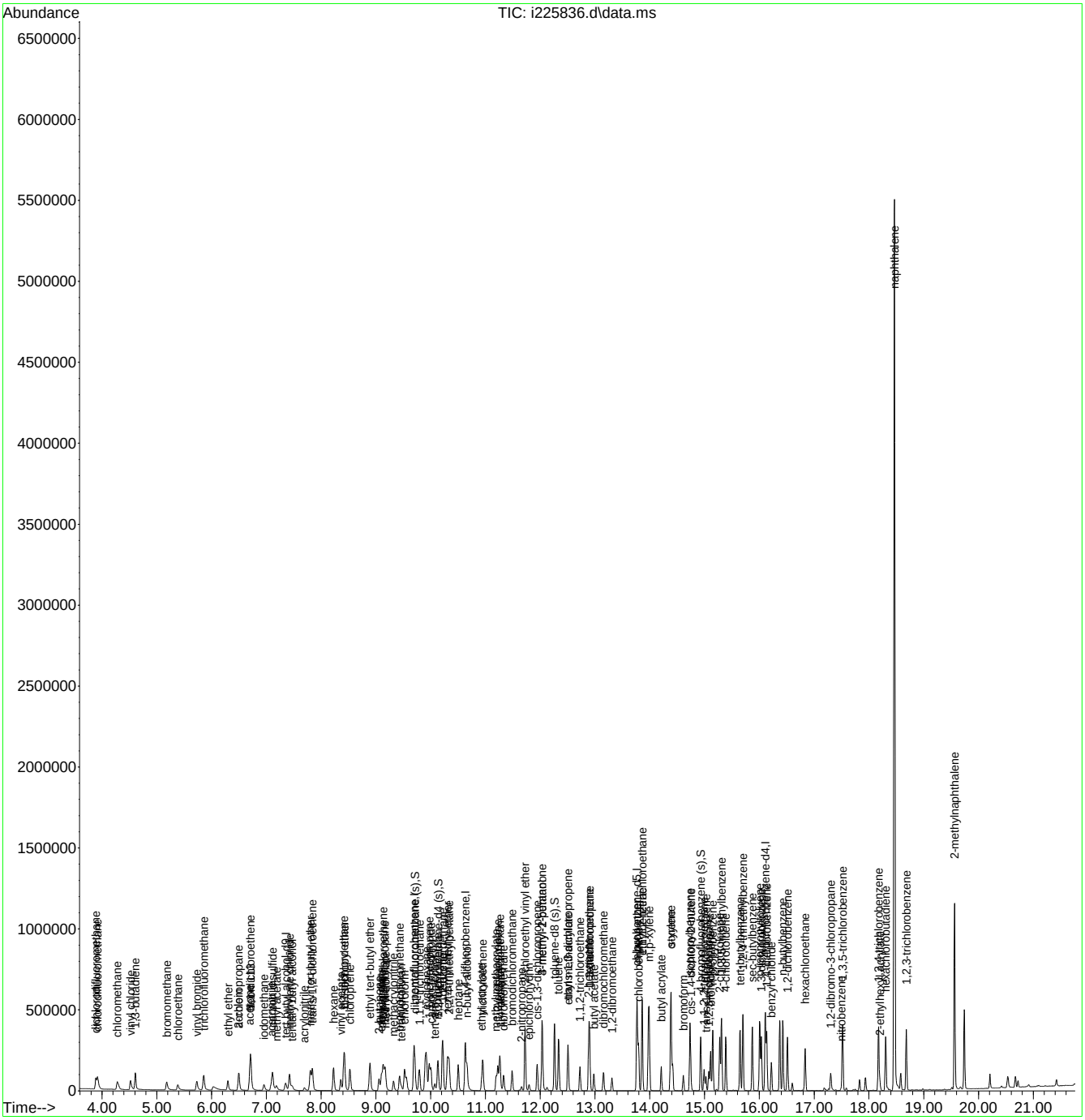
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.701	105	227491	50.66	ug/L	98
108) sec-butylbenzene	15.873	105	247966	43.89	ug/L	98
109) p-isopropyltoluene	16.004	119	221031	45.08	ug/l	97
110) benzyl chloride	16.218	91	109618	39.85	ug/L	98
111) 1,3-dichlorobenzene	16.035	146	126101	47.10	ug/L	99
112) 1,4-dichlorobenzene	16.135	146	128862	47.13	ug/L	99
113) 1,2-dichlorobenzene	16.511	146	123703	47.21	ug/L	99
114) n-butylbenzene	16.427	92	116136	45.54	ug/L	98
115) hexachloroethane	16.835	201	47515	48.60	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.301	157	18257	50.09	ug/L	92
117) nitrobenzene	17.494	77	7159	57.16	ug/L	83
118) 1,3,5-trichlorobenzene	17.521	180	127715	47.98	ug/L	99
119) 1,2,4-trichlorobenzene	18.174	180	117929	49.25	ug/L	96
120) 2-ethylhexyl acrylate	18.201	55	19813	10.15	ug/L	98
121) hexachlorobutadiene	18.305	225	71702	45.49	ug/L	97
122) naphthalene	18.467	128	4038480	872.44	ug/L	100
123) 1,2,3-trichlorobenzene	18.682	180	110907	47.08	ug/L	98
124) 2-methylnaphthalene	19.560	142	498568	302.07	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225836.d
Acq On : 30 Apr 2019 4:20 pm
Operator : thienn
Sample : jc86716-2msd Inst : GCMSI
Misc : MS34172,VI9098,4.8,,1,10,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 08:55:02 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151605.d
Acq On : 1 May 2019 1:07 pm
Operator : PrashanS
Sample : JC86916-5MS Inst : MS3C
Misc : MS34270,V3C6814,3.7,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:17:49 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	27100	500.00	ug/L		0.00
5) pentafluorobenzene	4.028	168	160252	50.00	ug/L		0.00
52) 1,4-difluorobenzene	4.687	114	204241	50.00	ug/L		0.00
74) chlorobenzene-d5	7.391	117	159899	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	9.321	152	67118	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	3.986	113	55880	48.26	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 96.52%				
53) 1,2-dichloroethane-d4 (s)	4.305	65	53484	48.20	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 96.40%				
75) toluene-d8 (s)	6.084	98	227185	57.40	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.80%				
98) 4-bromofluorobenzene (s)	8.390	95	67110	60.81	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 121.62%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	2.637	59	17038	285.19	ug/L		93
4) 1,4-dioxane	5.289	88	10645	1462.00	ug/L		99
6) chlorodifluoromethane	1.099	51	46156	47.55	ug/L		94
7) dichlorodifluoromethane	1.078	85	70579	50.99	ug/L		98
8) chloromethane	1.225	50	45955	40.21	ug/L		98
9) 1,3-butadiene	1.319	54	32658	43.90	ug/L		99
10) vinyl chloride	1.298	62	49493	43.05	ug/L		97
11) bromomethane	1.538	94	29641	43.10	ug/L		96
12) chloroethane	1.617	64	31443	46.02	ug/L		99
13) vinyl Bromide	1.748	106	30212	30.62	ug/L		92
14) trichlorofluoromethane	1.774	101	82898	48.72	ug/L		100
15) ethyl ether	1.988	74	23634	48.78	ug/L		92
16) 2-chloropropane	2.072	63	19519	50.46	ug/L	#	81
17) acrolein	2.140	56	228	2.29	ug/L	#	24
18) freon 113	2.135	151	44834	55.12	ug/L		95
19) 1,1-dichloroethene	2.161	96	46001	50.72	ug/L		95
20) acetone	2.250	58	8538	171.01	ug/L		100
21) acetonitrile	2.506	41	27358	355.07	ug/L		94
22) iodomethane	2.286	142	39101	52.58	ug/L		98
23) carbon disulfide	2.307	76	104605	41.18	ug/L		96
24) methylene chloride	2.564	84	47714	48.12	ug/L		91
25) methyl acetate	2.464	43	35187	73.58	ug/L		99
26) methyl tert butyl ether	2.710	73	114968	47.57	ug/L		97
27) trans-1,2-dichloroethene	2.731	96	45718	44.28	ug/L		99
28) hexane	2.877	57	47349	28.98	ug/L		96
29) di-isopropyl ether	3.076	45	129437	44.11	ug/L		95
30) ethyl tert-butyl ether	3.364	59	138878	47.88	ug/L		99
31) 2-butanone	3.594	72	13351	169.78	ug/L	#	63
32) 1,1-dichloroethane	3.092	63	83869	49.99	ug/L		98
33) chloroprene	3.134	53	71881	48.23	ug/L		97
34) acrylonitrile	2.804	53	7862	38.56	ug/L		95
35) vinyl acetate	3.123	86	690	3.77	ug/L	#	13
36) ethyl acetate	3.604	45	1115	12.26	ug/L	#	61
37) 2,2-dichloropropane	3.542	77	68670	44.49	ug/L		99
38) cis-1,2-dichloroethene	3.573	96	51608	46.25	ug/L		95
39) propionitrile	3.714	54	35129	388.25	ug/L		99
40) bromochloromethane	3.782	130	30124	48.15	ug/L		85
41) tetrahydrofuran	3.782	71	3537	45.22	ug/L	#	71
42) chloroform	3.840	83	85991	47.40	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151605.d
Acq On : 1 May 2019 1:07 pm
Operator : PrashanS
Sample : JC86916-5MS Inst : MS3C
Misc : MS34270,V3C6814,3.7,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:17:49 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	4635	8.07	ug/L	#	39
44)	isobutyl alcohol	4.258	41	32521	230.95	ug/L		97
46)	methacrylonitrile	3.814	67	11015	41.02	ug/L		85
47)	1,1,1-trichloroethane	3.955	97	85906	52.46	ug/L		97
48)	cyclohexane	3.939	84	74585	44.54	ug/L		93
49)	1,1-dichloropropene	4.101	110	25820	47.98	ug/L		98
50)	tert-amyl alcohol	4.326	59	13093	183.68	ug/L	#	70
51)	carbon tetrachloride	4.070	119	72767	56.23	ug/L		99
54)	2,2,4-trimethylpentane	4.263	57	95754	25.28	ug/L		98
55)	tert-amyl methyl ether	4.358	87	37879	44.74	ug/L	#	79
56)	n-butyl alcohol	4.896	56	41560	2198.87	ug/L		99
57)	benzene	4.284	78	193788	51.59	ug/L		98
58)	heptane	4.446	57	15875	19.76	ug/L		97
59)	isopropyl acetate	4.358	87	37879	43.70	ug/L	#	65
60)	1,2-dichloroethane	4.378	62	53245	44.64	ug/L		98
61)	trichloroethene	4.902	95	49259	48.26	ug/L		92
62)	ethyl acrylate	5.001	55	67670	81.14	ug/L		66
63)	2-nitropropane	5.754	41	10538	41.45	ug/L	#	81
64)	2-chloroethyl vinyl ether	5.759	63	106759	216.09	ug/L		98
65)	methyl methacrylate	5.268	100	12937	61.39	ug/L	#	84
66)	1,2-dichloropropane	5.168	63	44746	50.13	ug/L		98
67)	methylcyclohexane	5.001	83	78559	41.23	ug/L		99
68)	dibromomethane	5.294	93	21904	44.82	ug/L		87
69)	bromodichloromethane	5.445	83	60575	53.37	ug/L		99
70)	epichlorohydrin	5.843	57	12959	209.07	ug/L		98
71)	cis-1,3-dichloropropene	5.890	75	65473	46.11	ug/L		92
72)	4-methyl-2-pentanone	6.031	85	24242	203.94	ug/L	#	83
76)	toluene	6.146	92	123300	54.03	ug/L		99
77)	trans-1,3-dichloropropene	6.434	75	50714	48.35	ug/L		97
78)	ethyl methacrylate	6.465	69	18142	20.80	ug/L		93
79)	1,1,2-trichloroethane	6.596	83	28787	51.27	ug/L		97
80)	2-hexanone	6.800	58	39595	184.30	ug/L	#	86
81)	tetrachloroethene	6.617	166	63230	58.40	ug/L		98
82)	1,3-dichloropropane	6.748	76	57737	50.97	ug/L		97
83)	butyl acetate	6.889	56	4721	11.69	ug/L		95
84)	dibromochloromethane	6.915	129	41462	62.70	ug/L		99
85)	1,2-dibromoethane	7.015	107	42910	52.68	ug/L		98
86)	n-butyl ether	7.470	57	176251	47.45	ug/L		99
87)	chlorobenzene	7.417	112	117932	46.94	ug/L		99
88)	1,1,1,2-tetrachloroethane	7.501	131	51614	62.23	ug/L		98
89)	ethylbenzene	7.485	91	224970	50.94	ug/L		99
90)	m,p-xylene	7.595	106	174775	100.42	ug/L		98
91)	o-xylene	7.930	91	180849	51.77	ug/L		100
92)	styrene	7.956	104	118102	42.22	ug/L		97
93)	bromoform	8.129	173	24738	51.38	ug/L		95
94)	butyl acrylate	7.925	55	18111	14.93	ug/L		97
95)	isopropylbenzene	8.223	105	231192	51.94	ug/L		99
96)	cis-1,4-dichloro-2-butene	8.359	53	9303	37.84	ug/L		91
99)	bromobenzene	8.500	156	48545	54.56	ug/L		99
100)	1,1,2,2-tetrachloroethane	8.547	83	36196	59.82	ug/L		98
101)	trans-1,4-dichloro-2-b...	8.605	88	3726	45.14	ug/L		88
102)	1,2,3-trichloropropane	8.584	110	12086	62.79	ug/L		99
103)	n-propylbenzene	8.563	91	232873	57.06	ug/L		99
104)	2-chlorotoluene	8.652	126	48979	58.68	ug/L		96
105)	4-chlorotoluene	8.751	126	44256	53.13	ug/L		95
106)	1,3,5-trimethylbenzene	8.714	105	182635	61.50	ug/L		99
107)	tert-butylbenzene	8.965	119	173282	65.58	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151605.d
Acq On : 1 May 2019 1:07 pm
Operator : PrashanS
Sample : JC86916-5MS Inst : MS3C
Misc : MS34270,V3C6814,3.7,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:17:49 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

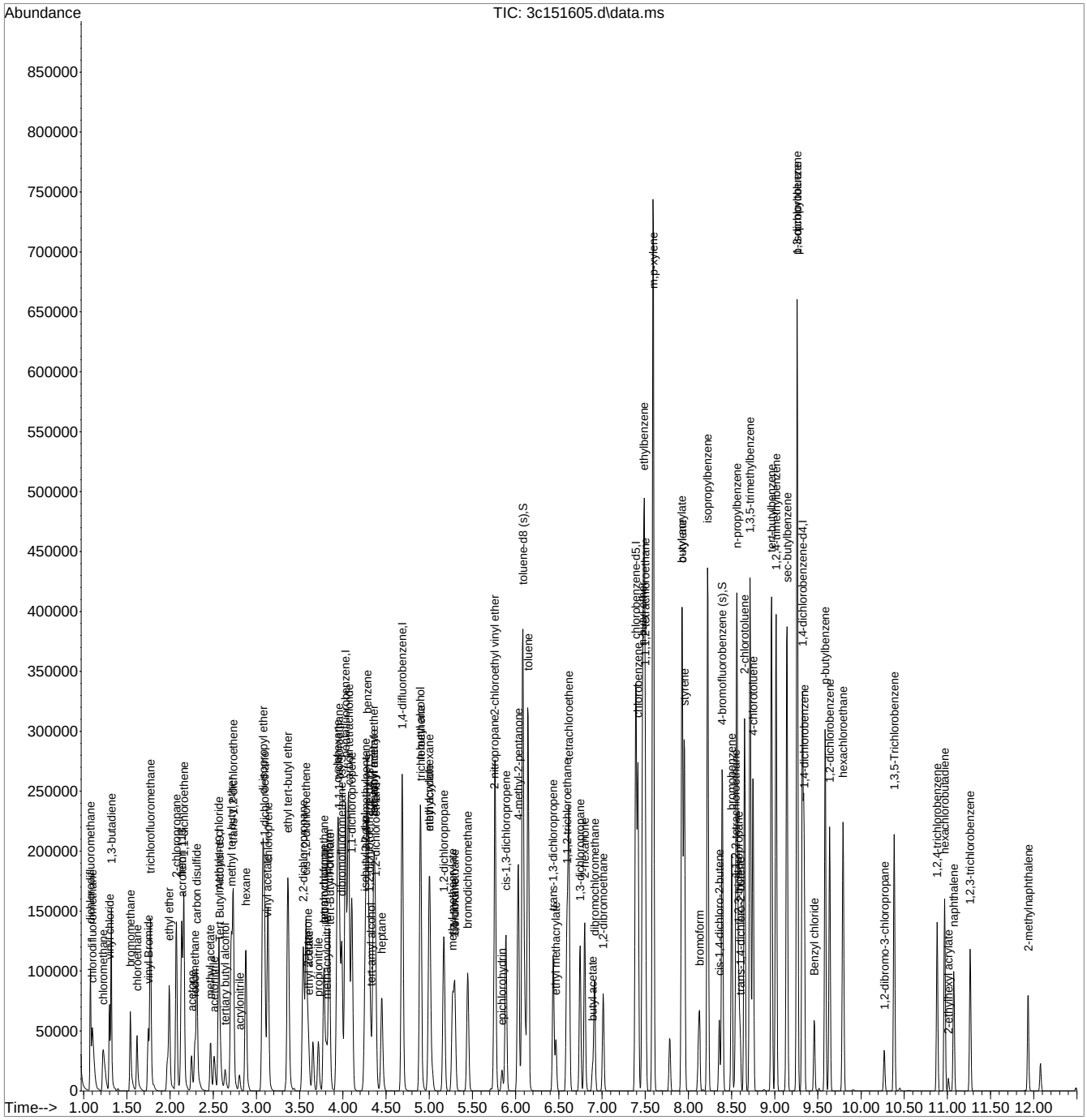
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	173045	57.25	ug/L	99
109) sec-butylbenzene	9.143	105	214238	55.78	ug/L	97
110) 1,3-dichlorobenzene	9.258	146	78559	44.94	ug/L	97
111) p-isopropyltoluene	9.258	119	186351	55.14	ug/L	99
112) 1,4-dichlorobenzene	9.342	146	75939	42.49	ug/L	97
113) 1,2-dichlorobenzene	9.635	146	72068	43.99	ug/L	100
114) n-butylbenzene	9.583	92	67863	40.63	ug/L	99
115) 1,2-dibromo-3-chloropr...	10.273	157	8966	59.39	ug/L	90
116) 1,3,5-Trichlorobenzene	10.383	180	56760	35.72	ug/L	99
117) 1,2,4-trichlorobenzene	10.880	180	36706	26.83	ug/L	98
118) hexachlorobutadiene	10.969	225	30199	35.43	ug/L	94
119) naphthalene	11.073	128	61690	25.74	ug/L	99
120) 1,2,3-trichlorobenzene	11.261	180	31558	24.87	ug/L	98
121) hexachloroethane	9.792	201	35305	67.81	ug/L	89
122) Benzyl chloride	9.457	91	33771	31.94	ug/L	96
123) 2-ethylhexyl acrylate	11.010	70	2406	4.03	ug/L	94
124) 2-methylnaphthalene	11.936	142	31104	21.67	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151605.d
Acq On : 1 May 2019 1:07 pm
Operator : PrashanS
Sample : JC86916-5MS Inst : MS3C
Misc : MS34270,V3C6814,3.7,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:17:49 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\jonkm\v3c6814\
Data File : 3c151606.d
Acq On : 1 May 2019 1:30 pm
Operator : PrashanS
Sample : JC86916-5MSD Inst : MS3C
Misc : MS34270,V3C6814,3.9,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:44 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	27788	500.00	ug/L		0.00
5) pentafluorobenzene	4.028	168	162957	50.00	ug/L		0.00
52) 1,4-difluorobenzene	4.687	114	205664	50.00	ug/L		0.00
74) chlorobenzene-d5	7.391	117	159960	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	9.321	152	65910	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	3.986	113	57350	48.70	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.40%				
53) 1,2-dichloroethane-d4 (s)	4.305	65	53412	47.80	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 95.60%				
75) toluene-d8 (s)	6.083	98	230615	58.25	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 116.50%				
98) 4-bromofluorobenzene (s)	8.390	95	66547	61.41	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 122.82%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	2.637	59	16638	271.60	ug/L		93
4) 1,4-dioxane	5.288	88	10509	1407.59	ug/L		88
6) chlorodifluoromethane	1.099	51	46886	47.50	ug/L		94
7) dichlorodifluoromethane	1.078	85	69980	49.72	ug/L		96
8) chloromethane	1.225	50	48125	41.41	ug/L		98
9) 1,3-butadiene	1.319	54	30703	40.58	ug/L		96
10) vinyl chloride	1.298	62	49264	42.14	ug/L		97
11) bromomethane	1.538	94	28067	40.13	ug/L		97
12) chloroethane	1.617	64	31362	45.14	ug/L		97
13) vinyl Bromide	1.748	106	29156	29.06	ug/L		98
14) trichlorofluoromethane	1.774	101	83567	48.30	ug/L		99
15) ethyl ether	1.988	74	24033	48.78	ug/L		87
16) 2-chloropropane	2.072	63	19582	49.78	ug/L	#	85
17) acrolein	2.140	56	105	1.04	ug/L	#	24
18) freon 113	2.135	151	45134	54.57	ug/L		95
19) 1,1-dichloroethene	2.161	96	44280	48.01	ug/L		94
20) acetone	2.250	58	8451	166.45	ug/L		97
21) acetonitrile	2.511	41	26153	333.80	ug/L		95
22) iodomethane	2.286	142	39199	51.84	ug/L		100
23) carbon disulfide	2.307	76	95161	36.84	ug/L		97
24) methylene chloride	2.563	84	45568	45.19	ug/L		95
25) methyl acetate	2.464	43	32649	67.14	ug/L		98
26) methyl tert butyl ether	2.710	73	116167	47.27	ug/L		97
27) trans-1,2-dichloroethene	2.731	96	42309	40.30	ug/L		99
28) hexane	2.872	57	43717	26.31	ug/L		97
29) di-isopropyl ether	3.076	45	133137	44.62	ug/L		94
30) ethyl tert-butyl ether	3.364	59	140853	47.75	ug/L		97
31) 2-butanone	3.599	72	13298	166.30	ug/L	#	60
32) 1,1-dichloroethane	3.092	63	83967	49.22	ug/L		98
33) chloroprene	3.134	53	66120	43.63	ug/L		97
34) acrylonitrile	2.804	53	7573	36.53	ug/L		95
35) vinyl acetate	3.123	86	244	1.31	ug/L	#	4
36) ethyl acetate	3.610	45	929	10.38	ug/L	#	64
37) 2,2-dichloropropane	3.542	77	68915	43.90	ug/L		98
38) cis-1,2-dichloroethene	3.573	96	49059	43.24	ug/L		96
39) propionitrile	3.714	54	32828	356.79	ug/L		97
40) bromochloromethane	3.782	130	29364	46.16	ug/L		84
41) tetrahydrofuran	3.782	71	3624	45.57	ug/L	#	81
42) chloroform	3.840	83	85344	46.26	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151606.d
Acq On : 1 May 2019 1:30 pm
Operator : PrashanS
Sample : JC86916-5MSD Inst : MS3C
Misc : MS34270,V3C6814,3.9,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:44 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)
43) tert-Butyl Formate	3.850	59	2940	5.04	ug/L	#	22
44) isobutyl alcohol	4.263	41	30054	209.89	ug/L		90
46) methacrylonitrile	3.813	67	9816	35.95	ug/L		96
47) 1,1,1-trichloroethane	3.955	97	85321	51.24	ug/L		98
48) cyclohexane	3.939	84	73816	43.35	ug/L		94
49) 1,1-dichloropropene	4.101	110	24359	44.52	ug/L		99
50) tert-amyl alcohol	4.326	59	12543	173.04	ug/L		77
51) carbon tetrachloride	4.065	119	72545	55.13	ug/L		99
54) 2,2,4-trimethylpentane	4.263	57	87125	22.84	ug/L		98
55) tert-amyl methyl ether	4.357	87	36810	43.18	ug/L	#	79
56) n-butyl alcohol	4.891	56	40073	2105.52	ug/L		99
57) benzene	4.284	78	185993	49.18	ug/L		99
58) heptane	4.446	57	13775	17.02	ug/L		95
59) isopropyl acetate	4.357	87	36810	42.17	ug/L	#	59
60) 1,2-dichloroethane	4.378	62	50701	42.21	ug/L		96
61) trichloroethene	4.901	95	46844	45.58	ug/L		96
62) ethyl acrylate	5.006	55	62969	74.98	ug/L		67
63) 2-nitropropane	5.749	41	10259	40.08	ug/L	#	15
64) 2-chloroethyl vinyl ether	5.759	63	100580	202.18	ug/L		99
65) methyl methacrylate	5.267	100	11774	55.48	ug/L	#	82
66) 1,2-dichloropropane	5.168	63	44087	49.05	ug/L		96
67) methylcyclohexane	5.006	83	74722	38.94	ug/L		99
68) dibromomethane	5.294	93	20592	41.84	ug/L		89
69) bromodichloromethane	5.445	83	59517	52.08	ug/L		98
70) epichlorohydrin	5.843	57	12595	201.79	ug/L		93
71) cis-1,3-dichloropropene	5.885	75	60162	42.08	ug/L		95
72) 4-methyl-2-pentanone	6.031	85	23132	193.26	ug/L	#	84
76) toluene	6.146	92	115485	50.59	ug/L		100
77) trans-1,3-dichloropropene	6.434	75	45337	43.21	ug/L		98
78) ethyl methacrylate	6.465	69	14536	16.66	ug/L		98
79) 1,1,2-trichloroethane	6.591	83	28048	49.93	ug/L		94
80) 2-hexanone	6.800	58	36390	169.32	ug/L	#	85
81) tetrachloroethene	6.617	166	59543	54.97	ug/L		97
82) 1,3-dichloropropane	6.748	76	55515	48.99	ug/L		98
83) butyl acetate	6.889	56	3864	9.56	ug/L		91
84) dibromochloromethane	6.915	129	40041	60.53	ug/L		98
85) 1,2-dibromoethane	7.014	107	39873	48.93	ug/L		97
86) n-butyl ether	7.469	57	165755	44.61	ug/L		98
87) chlorobenzene	7.417	112	104986	41.77	ug/L		100
88) 1,1,1,2-tetrachloroethane	7.501	131	51344	61.88	ug/L		97
89) ethylbenzene	7.485	91	210382	47.61	ug/L		99
90) m,p-xylene	7.590	106	161233	92.61	ug/L		98
91) o-xylene	7.930	91	167833	48.03	ug/L		98
92) styrene	7.956	104	102100	36.49	ug/L		98
93) bromoform	8.128	173	23579	49.07	ug/L		97
94) butyl acrylate	7.924	55	13700	11.29	ug/L		97
95) isopropylbenzene	8.223	105	216169	48.54	ug/L		99
96) cis-1,4-dichloro-2-butene	8.359	53	8082	32.86	ug/L	#	89
99) bromobenzene	8.505	156	42010	48.08	ug/L		91
100) 1,1,2,2-tetrachloroethane	8.547	83	34184	57.53	ug/L		97
101) trans-1,4-dichloro-2-b...	8.599	88	3405	42.19	ug/L		94
102) 1,2,3-trichloropropane	8.583	110	11783	62.34	ug/L		94
103) n-propylbenzene	8.563	91	205791	51.34	ug/L		99
104) 2-chlorotoluene	8.651	126	43247	52.76	ug/L		97
105) 4-chlorotoluene	8.751	126	37047	45.29	ug/L		95
106) 1,3,5-trimethylbenzene	8.714	105	168122	57.65	ug/L		99
107) tert-butylbenzene	8.965	119	162623	62.67	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151606.d
Acq On : 1 May 2019 1:30 pm
Operator : PrashanS
Sample : JC86916-5MSD Inst : MS3C
Misc : MS34270,V3C6814,3.9,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:44 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

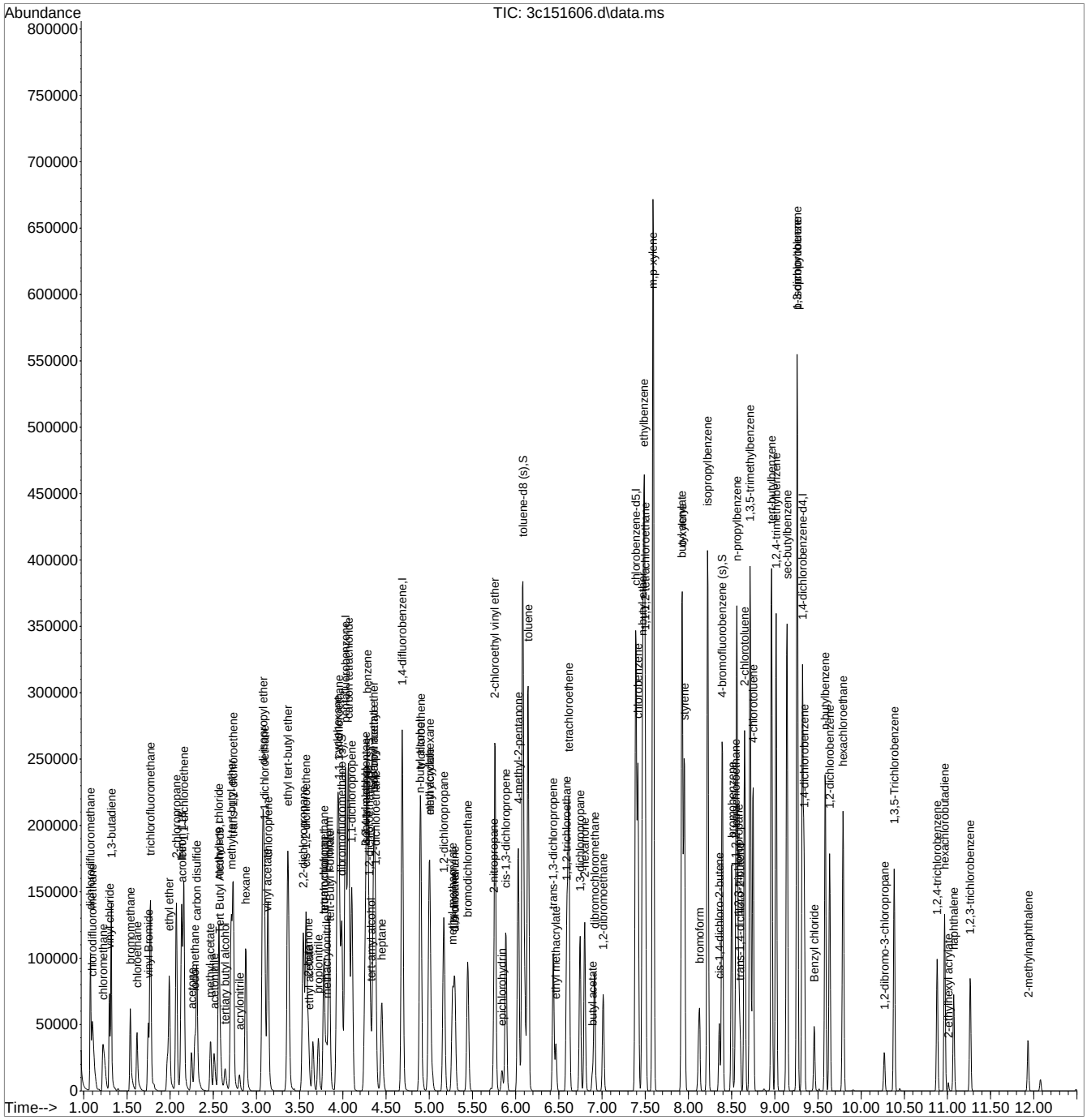
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	153980	51.88	ug/L	99
109) sec-butylbenzene	9.143	105	192772	51.11	ug/L	98
110) 1,3-dichlorobenzene	9.258	146	65185	37.97	ug/L	99
111) p-isopropyltoluene	9.258	119	166085	50.04	ug/L	99
112) 1,4-dichlorobenzene	9.342	146	60977	34.75	ug/L	99
113) 1,2-dichlorobenzene	9.635	146	58889	36.60	ug/L	98
114) n-butylbenzene	9.582	92	55033	33.55	ug/L	98
115) 1,2-dibromo-3-chloropr...	10.273	157	8092	54.70	ug/L	93
116) 1,3,5-Trichlorobenzene	10.383	180	45382	29.09	ug/L	99
117) 1,2,4-trichlorobenzene	10.880	180	27635	20.57	ug/L	99
118) hexachlorobutadiene	10.968	225	24902	29.75	ug/L	94
119) naphthalene	11.073	128	45356	19.27	ug/L	99
120) 1,2,3-trichlorobenzene	11.261	180	24242	19.45	ug/L	98
121) hexachloroethane	9.792	201	33076	64.80	ug/L	93
122) Benzyl chloride	9.457	91	27699	26.68	ug/L	98
123) 2-ethylhexyl acrylate	11.010	70	1365	2.64	ug/L	96
124) 2-methylnaphthalene	11.936	142	16679	11.83	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151606.d
Acq On : 1 May 2019 1:30 pm
Operator : PrashanS
Sample : JC86916-5MSD Inst : MS3C
Misc : MS34270,V3C6814,3.9,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 03:18:44 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



Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 05/03/19 03:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225869.d
Acq On : 1 May 2019 2:21 pm
Operator : thienn
Sample : jc87030-1ms Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:55:54 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	7.384	65	86409	500.00	ug/L		0.00
4) pentafluorobenzene	9.696	168	200121	50.00	ug/L		-0.02
51) 1,4-difluorobenzene	10.632	114	280991	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.760	117	224153	50.00	ug/L		-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	139887	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.712	113	83491	53.09	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 106.18%				
52) 1,2-dichloroethane-d4 (s)	10.136	65	91711	52.29	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 104.58%				
74) toluene-d8 (s)	12.259	98	304244	52.94	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.88%				
97) 4-bromofluorobenzene (s)	14.926	95	118497	55.55	ug/L		-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 111.10%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.499	59	43590	243.73	ug/L	#	1
3) 1,4-dioxane	11.291	88	19650	980.35	ug/L		93
5) dichlorodifluoromethane	3.885	85	90975	52.04	ug/L		100
6) chlorodifluoromethane	3.917	51	73547	44.56	ug/L		96
7) chloromethane	4.283	50	80684	49.84	ug/L		98
8) vinyl chloride	4.523	62	74542	54.68	ug/L		96
9) 1,3-butadiene	4.607	54	43659	45.85	ug/L		96
10) bromomethane	5.146	94	19072	21.00	ug/L		97
11) chloroethane	5.350	64	38337	46.49	ug/L		98
12) vinyl bromide	5.711	106	51129	48.52	ug/L		97
13) trichlorofluoromethane	5.836	101	91731	43.97	ug/L		100
14) ethyl ether	6.307	74	27839	47.10	ug/L		92
15) 2-chloropropane	6.495	63	19600	40.68	ug/L		91
16) acrolein	6.500	56	10938	56.79	ug/L		80
17) freon 113	6.704	151	40014	39.14	ug/L		96
18) 1,1-dichloroethene	6.704	61	78630	42.22	ug/L		98
19) acetone	6.710	43	83646	248.07	ug/L		96
20) iodomethane	6.950	142	46856	34.02	ug/L		99
21) carbon disulfide	7.102	76	152151	37.93	ug/L		99
22) acetonitrile	7.107	41	93539	555.50	ug/L		96
23) methyl acetate	7.196	74	9036	45.89	ug/L		97
24) methylene chloride	7.421	84	60795	44.07	ug/L		98
25) acrylonitrile	7.698	53	20273	51.11	ug/L		91
26) methyl tert butyl ether	7.808	73	157954	48.32	ug/L		95
27) trans-1,2-dichloroethene	7.839	61	75782	42.68	ug/L		97
28) hexane	8.221	57	111085	51.88	ug/L		99
29) 1,1-dichloroethane	8.410	63	96355	42.50	ug/L		98
30) vinyl acetate	8.362	86	10471	48.51	ug/L	#	92
31) di-isopropyl ether	8.430	45	183935	45.77	ug/L		98
32) chloroprene	8.525	53	85028	44.45	ug/L		95
33) ethyl tert-butyl ether	8.896	59	182725	47.11	ug/L		94
34) 2-butanone	9.063	72	28316	224.04	ug/L		97
35) 2,2-dichloropropane	9.163	77	50725	25.81	ug/L		97
36) ethyl acetate	9.100	45	10301	54.51	ug/L	#	74
37) cis-1,2-dichloroethene	9.131	96	59806	40.95	ug/L		91
38) propionitrile	9.116	54	104406	563.25	ug/L		98
39) methyl acrylate	9.178	85	10491	54.02	ug/L		98
40) methacrylonitrile	9.325	67	23643	50.53	ug/L		95
41) bromochloromethane	9.429	128	28691	43.68	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225869.d
Acq On : 1 May 2019 2:21 pm
Operator : thienn
Sample : jc87030-1ms Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:55:54 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.471	71	8078	55.47	ug/L		93
43) chloroform	9.524	83	104936	44.74	ug/L		98
44) carbon tetrachloride	10.000	117	75432	39.38	ug/L		95
45) 1,1-dichloropropene	9.968	75	73096	41.40	ug/L		98
48) 1,1,1-trichloroethane	9.790	97	85762	40.97	ug/L		99
49) cyclohexane	9.921	84	79969	43.38	ug/L	#	1
50) tert-amyl alcohol	10.094	55	22017	411.80	ug/L		87
53) isopropyl acetate	10.130	87	12233	48.05	ug/L	#	91
54) 1,2-dichloroethane	10.224	62	77855	42.18	ug/L		99
55) benzene	10.214	78	224331	40.86	ug/L		100
56) 2,2,4-trimethylpentane	10.334	57	2508519	446.36	ug/L		96
57) tert-amyl methyl ether	10.308	87	39526	42.19	ug/L	#	88
58) heptane	10.502	57	80050	68.23	ug/L		95
59) n-butyl alcohol	10.685	56	104789	2284.92	ug/L		89
60) trichloroethene	10.951	95	57802	39.31	ug/L		93
61) ethyl acrylate	10.930	55	77579	49.91	ug/L		98
62) methylcyclohexane	11.260	83	151198	60.71	ug/L		98
63) 1,2-dichloropropane	11.223	63	55658	39.60	ug/L		94
64) methyl methacrylate	11.197	100	15459	46.75	ug/L	#	38
65) dibromomethane	11.328	93	33264	40.63	ug/L		100
66) bromodichloromethane	11.485	83	80300	41.24	ug/L		97
67) 2-nitropropane	11.647	41	272120m	807.29	ug/L		
68) 2-chloroethyl vinyl ether	11.725	63	188374	229.09	ug/L		99
69) epichlorohydrin	11.809	57	542599	3950.89	ug/L	#	46
70) cis-1,3-dichloropropene	11.945	75	83874	38.16	ug/L		91
71) 4-methyl-2-pentanone	12.034	58	86115	196.95	ug/L		98
72) 3-methyl-1-butanol	12.045	70	33201	874.14	ug/L		86
75) toluene	12.332	92	129634	41.78	ug/L		98
76) trans-1,3-dichloropropene	12.505	75	78346	41.97	ug/L		97
77) ethyl methacrylate	12.505	69	68800	48.89	ug/L		93
78) 1,1,2-trichloroethane	12.724	83	39760	43.68	ug/L	#	56
79) 1,3-dichloropropane	12.902	76	74336	44.87	ug/L		99
80) tetrachloroethene	12.897	166	60524	38.85	ug/L		97
81) 2-hexanone	12.887	58	89232	219.39	ug/L	#	72
82) butyl acetate	12.981	56	33082	46.75	ug/L		95
83) n-butyl ether	13.771	57	279449	54.54	ug/L		93
84) dibromochloromethane	13.153	129	60967	42.86	ug/L		98
85) 1,2-dibromoethane	13.305	107	56845	45.91	ug/L		98
86) chlorobenzene	13.791	112	137440	41.58	ug/L		95
87) 1,1,1,2-tetrachloroethane	13.859	131	55495	42.29	ug/L		99
88) ethylbenzene	13.859	91	402808	69.69	ug/L		100
89) m,p-xylene	13.980	106	333365	146.67	ug/L		95
90) o-xylene	14.382	106	115119	50.87	ug/L		96
91) styrene	14.388	104	159908	42.08	ug/L		95
92) butyl acrylate	14.210	55	112724	52.00	ug/L		93
93) cis-1,4-dichloro-2-butene	14.749	88	23671	42.50	ug/L		96
94) bromoform	14.613	173	47217	47.27	ug/L		99
95) isopropylbenzene	14.733	105	398061	69.88	ug/L		98
98) 1,1,2,2-tetrachloroethane	14.989	83	69204	47.84	ug/L		98
99) trans-1,4-dichloro-2-b...	15.021	53	17472	46.34	ug/L		94
100) 1,2,3-trichloropropane	15.078	110	18707	50.20	ug/L		91
101) bromobenzene	15.109	156	70088	40.58	ug/L		92
102) n-propylbenzene	15.146	91	929622	129.67	ug/L		100
103) 2-chlorotoluene	15.277	126	61288	40.69	ug/L		99
104) 4-chlorotoluene	15.387	91	177271	41.36	ug/L		100
105) 1,3,5-trimethylbenzene	15.308	105	426423	79.03	ug/L		97
106) tert-butylbenzene	15.648	134	42326	42.34	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225869.d
Acq On : 1 May 2019 2:21 pm
Operator : thienn
Sample : jc87030-1ms Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:55:54 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

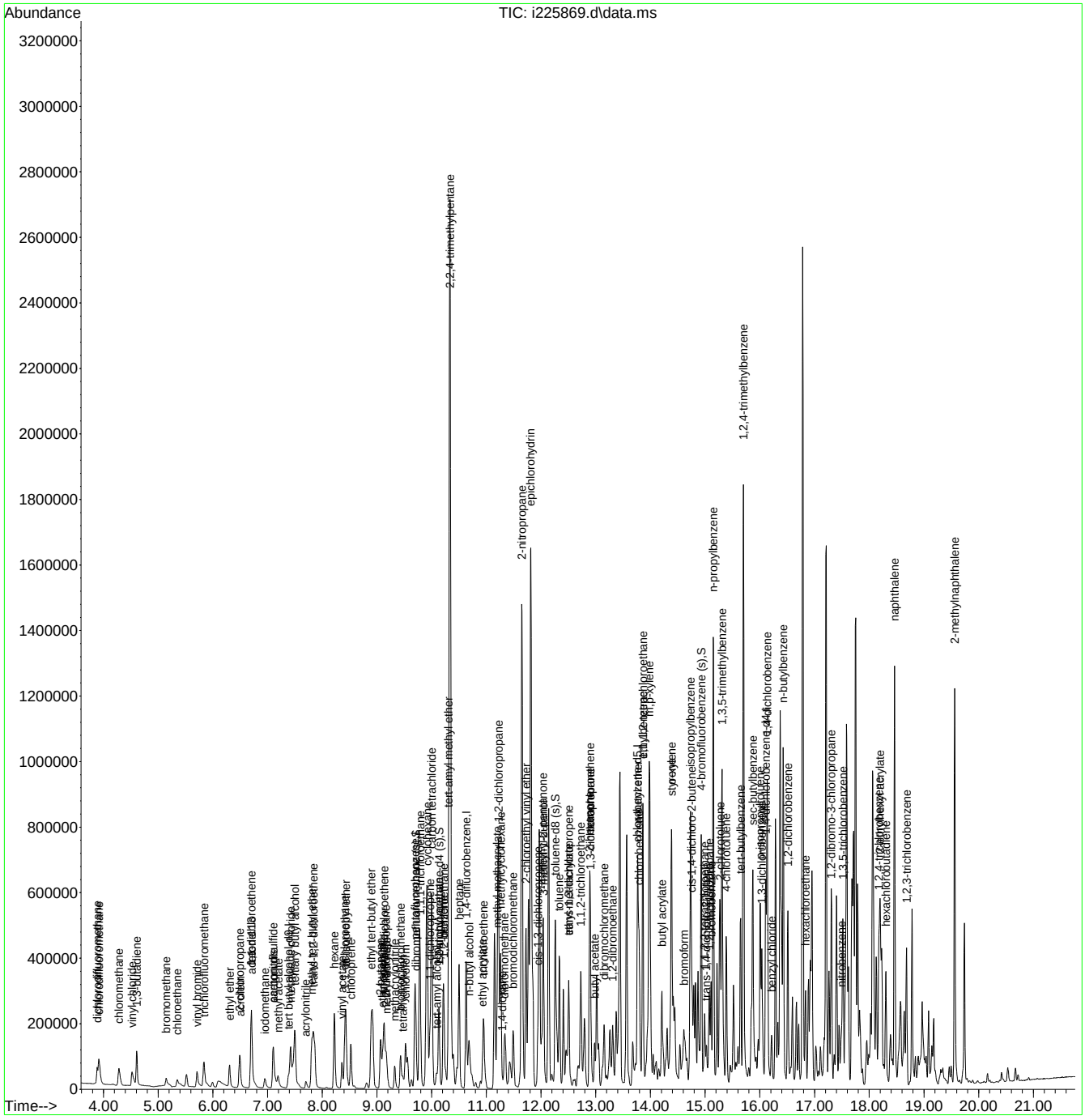
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	875948	158.47	ug/L		97
108) sec-butylbenzene	15.873	105	396882	57.08	ug/L		98
109) p-isopropyltoluene	16.004	119	257468	42.66	ug/l		98
110) benzyl chloride	16.218	91	71755	21.19	ug/L		96
111) 1,3-dichlorobenzene	16.035	146	137818	41.82	ug/L		97
112) 1,4-dichlorobenzene	16.135	146	138568	41.17	ug/L		98
113) 1,2-dichlorobenzene	16.511	146	138413	42.91	ug/L		98
114) n-butylbenzene	16.427	92	274041	87.30	ug/L		99
115) hexachloroethane	16.835	201	51144	42.50	ug/L	#	42
116) 1,2-dibromo-3-chloropr...	17.301	157	19819	44.17	ug/L		92
117) nitrobenzene	17.489	77	17929	116.30	ug/L		84
118) 1,3,5-trichlorobenzene	17.521	180	127674	38.97	ug/L		98
119) 1,2,4-trichlorobenzene	18.174	180	115693	39.26	ug/L		96
120) 2-ethylhexyl acrylate	18.195	55	22295	9.28	ug/L		90
121) hexachlorobutadiene	18.305	225	67155	34.62	ug/L		100
122) naphthalene	18.462	128	883864	155.12	ug/L		99
123) 1,2,3-trichlorobenzene	18.682	180	111054	38.30	ug/L		96
124) 2-methylnaphthalene	19.560	142	505962	249.04	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\5-2-19\vi9099\
Data File : i225869.d
Acq On : 1 May 2019 2:21 pm
Operator : thienn
Sample : jc87030-1ms Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:55:54 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



Manual Integration Approval Summary

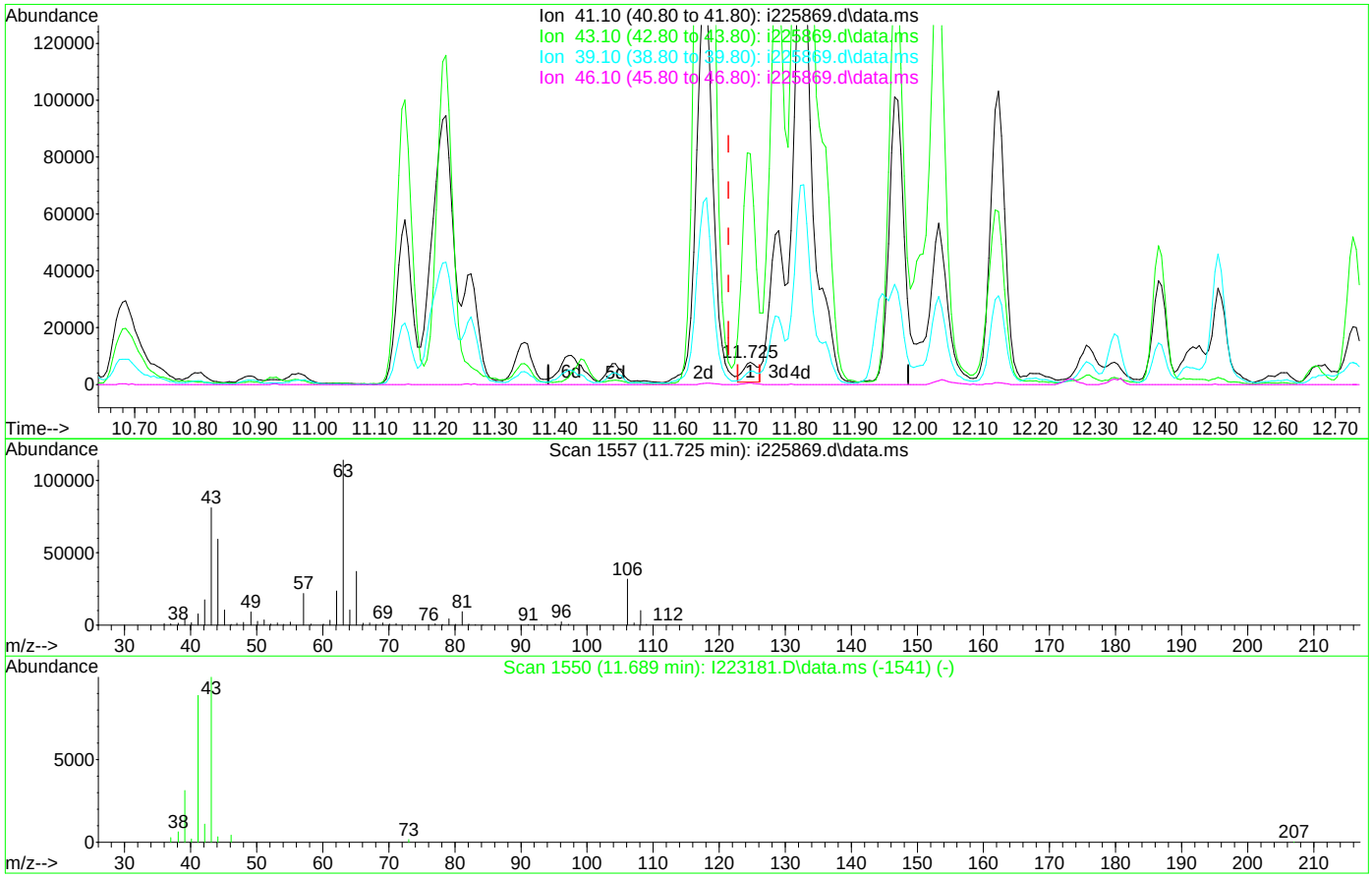
Sample Number: JC87030-1MS
Lab FileID: I225869.D
Injection Time: 05/01/19 14:21
Method: SW846 8260C
Analyst approved: 05/02/19 04:31 Nizel Eugenio
Supervisor approved: 05/03/19 03:53 Kanya Veerawat

Parameter	CAS	Sig#	R.T. (min.)	Reason
2-Nitropropane	79-46-9		11.65	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225869.d
Acq On : 1 May 2019 2:21 pm
Operator : thienn
Sample : jc87030-1ms Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 21:33:51 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



TIC: i225869.d\data.ms

(67) 2-nitropropane

11.725min (+0.037) 35.25ug/L

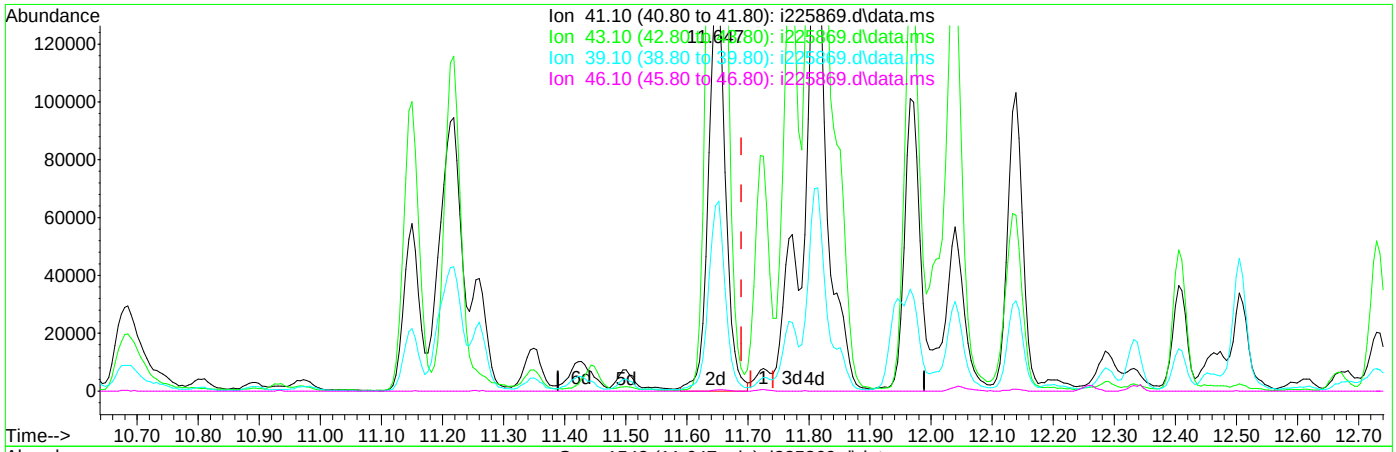
response 11881

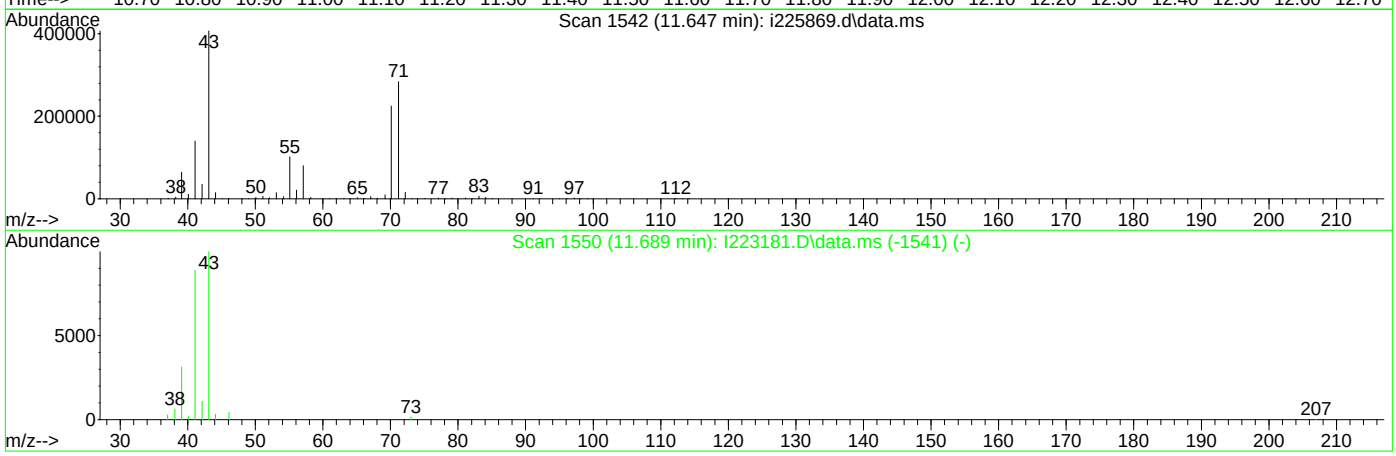
Ion	Exp%	Act%
41.10	100	100
43.10	112.50	1332.29#
39.10	35.20	70.57#
46.10	4.80	10.01

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225869.d
Acq On : 1 May 2019 2:21 pm
Operator : thienn
Sample : jc87030-1ms Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 21:33:51 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





TIC: i225869.d\data.ms

(67) 2-nitropropane

11.647min (-0.042) 807.29ug/L m

response 272120

Ion	Exp%	Act%
41.10	100	100
43.10	112.50	291.08#
39.10	35.20	45.75
46.10	4.80	0.25

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 05/03/19 03:53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225870.d
Acq On : 1 May 2019 2:50 pm
Operator : thienn
Sample : jc87030-1msd Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:58:51 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	7.384	65	87696	500.00	ug/L	0.00
4) pentafluorobenzene	9.691	168	204324	50.00	ug/L	-0.03
51) 1,4-difluorobenzene	10.632	114	285335	50.00	ug/L	-0.02
73) chlorobenzene-d5	13.760	117	230247	50.00	ug/L	-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	141232	50.00	ug/L	-0.02
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.712	113	82992	51.69	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.38%			
52) 1,2-dichloroethane-d4 (s)	10.135	65	93369	52.42	ug/L	-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 104.84%			
74) toluene-d8 (s)	12.259	98	307043	52.02	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.04%			
97) 4-bromofluorobenzene (s)	14.926	95	120383	55.89	ug/L	-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 111.78%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	7.505	59	45571	251.07	ug/L #	1
3) 1,4-dioxane	11.291	88	20428	1004.21	ug/L	84
5) dichlorodifluoromethane	3.885	85	102249	57.28	ug/L	98
6) chlorodifluoromethane	3.917	51	82749	49.10	ug/L	97
7) chloromethane	4.278	50	91286	55.23	ug/L	98
8) vinyl chloride	4.518	62	80873	58.10	ug/L	99
9) 1,3-butadiene	4.607	54	48821	50.21	ug/L	96
10) bromomethane	5.141	94	22227	23.97	ug/L	96
11) chloroethane	5.350	64	42272	50.21	ug/L	98
12) vinyl bromide	5.711	106	56990	52.97	ug/L	98
13) trichlorofluoromethane	5.836	101	100598	47.23	ug/L	99
14) ethyl ether	6.302	74	29659	49.15	ug/L	96
15) 2-chloropropane	6.490	63	21127	42.95	ug/L	95
16) acrolein	6.500	56	11191	56.91	ug/L	70
17) freon 113	6.704	151	43561	41.74	ug/L	97
18) 1,1-dichloroethene	6.699	61	88503	46.54	ug/L	95
19) acetone	6.710	43	86550	251.40	ug/L	98
20) iodomethane	6.950	142	52108	37.11	ug/L	98
21) carbon disulfide	7.102	76	167838	40.98	ug/L	100
22) acetonitrile	7.102	41	96499	561.29	ug/L	93
23) methyl acetate	7.191	74	9518	47.27	ug/L	99
24) methylene chloride	7.421	84	66166	46.98	ug/L	95
25) acrylonitrile	7.698	53	21677	53.53	ug/L	94
26) methyl tert butyl ether	7.808	73	169979	50.93	ug/L	97
27) trans-1,2-dichloroethene	7.834	61	82744	45.64	ug/L	97
28) hexane	8.221	57	120484	55.11	ug/L	96
29) 1,1-dichloroethane	8.409	63	105430	45.55	ug/L	97
30) vinyl acetate	8.357	86	10864	49.30	ug/L #	93
31) di-isopropyl ether	8.430	45	196120	47.80	ug/L	99
32) chloroprene	8.524	53	94795	48.54	ug/L	96
33) ethyl tert-butyl ether	8.896	59	196273	49.56	ug/L	94
34) 2-butanone	9.063	72	29116	225.63	ug/L	97
35) 2,2-dichloropropane	9.163	77	55475	27.64	ug/L	100
36) ethyl acetate	9.100	45	9962	51.75	ug/L #	71
37) cis-1,2-dichloroethene	9.131	96	65355	43.83	ug/L	94
38) propionitrile	9.116	54	108482	573.20	ug/L	99
39) methyl acrylate	9.184	85	11611	58.35	ug/L	98
40) methacrylonitrile	9.325	67	24766	51.84	ug/L #	80
41) bromochloromethane	9.435	128	31139	46.43	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225870.d
Acq On : 1 May 2019 2:50 pm
Operator : thienn
Sample : jc87030-1msd Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:58:51 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	8327	56.00	ug/L		94
43) chloroform	9.523	83	114594	47.85	ug/L		99
44) carbon tetrachloride	9.999	117	82158	42.00	ug/L		98
45) 1,1-dichloropropene	9.968	75	79282	43.98	ug/L		99
48) 1,1,1-trichloroethane	9.790	97	94467	44.20	ug/L		100
49) cyclohexane	9.921	84	86555	45.99	ug/L	#	1
50) tert-amyl alcohol	10.088	55	20628	378.42	ug/L		93
53) isopropyl acetate	10.125	87	12551	48.55	ug/L	#	95
54) 1,2-dichloroethane	10.224	62	86048	45.90	ug/L		99
55) benzene	10.214	78	244777	43.91	ug/L		99
56) 2,2,4-trimethylpentane	10.334	57	2683570	470.24	ug/L		96
57) tert-amyl methyl ether	10.308	87	43203	45.41	ug/L	#	85
58) heptane	10.502	57	85592	71.85	ug/L		96
59) n-butyl alcohol	10.679	56	113697	2441.42	ug/L		89
60) trichloroethene	10.951	95	62508	41.86	ug/L		95
61) ethyl acrylate	10.930	55	83367	52.82	ug/L		98
62) methylcyclohexane	11.260	83	167007	66.04	ug/L		99
63) 1,2-dichloropropane	11.223	63	61011	42.75	ug/L		98
64) methyl methacrylate	11.197	100	16298	48.53	ug/L	#	34
65) dibromomethane	11.328	93	36007	43.31	ug/L		98
66) bromodichloromethane	11.485	83	86144	43.57	ug/L		98
67) 2-nitropropane	11.647	41	292271m	853.87	ug/L		
68) 2-chloroethyl vinyl ether	11.725	63	193476	231.72	ug/L		99
69) epichlorohydrin	11.809	57	578332	4146.96	ug/L	#	46
70) cis-1,3-dichloropropene	11.945	75	90636	40.60	ug/L		92
71) 4-methyl-2-pentanone	12.039	58	91026	205.01	ug/L		99
72) 3-methyl-1-butanol	12.044	70	35369	917.04	ug/L		87
75) toluene	12.332	92	141458	44.39	ug/L		98
76) trans-1,3-dichloropropene	12.505	75	83133	43.35	ug/L		98
77) ethyl methacrylate	12.510	69	73789	51.05	ug/L		98
78) 1,1,2-trichloroethane	12.724	83	46548	49.79	ug/L	#	65
79) 1,3-dichloropropane	12.902	76	79372	46.64	ug/L		99
80) tetrachloroethene	12.897	166	66494	41.56	ug/L		97
81) 2-hexanone	12.887	58	92381	221.12	ug/L	#	72
82) butyl acetate	12.981	56	35588	48.96	ug/L		91
83) n-butyl ether	13.770	57	302414	57.46	ug/L		93
84) dibromochloromethane	13.153	129	65717	44.98	ug/L		96
85) 1,2-dibromoethane	13.305	107	60980	47.94	ug/L		98
86) chlorobenzene	13.791	112	152148	44.81	ug/L		97
87) 1,1,1,2-tetrachloroethane	13.859	131	61791	45.84	ug/L		96
88) ethylbenzene	13.859	91	443268	74.66	ug/L		100
89) m,p-xylene	13.980	106	369859	158.42	ug/L		96
90) o-xylene	14.382	106	125118	53.82	ug/L		94
91) styrene	14.388	104	174411	44.68	ug/L		98
92) butyl acrylate	14.210	55	121753	54.68	ug/L		92
93) cis-1,4-dichloro-2-butene	14.748	88	24502	42.83	ug/L		95
94) bromoform	14.613	173	48775	47.53	ug/L		98
95) isopropylbenzene	14.733	105	438795	74.99	ug/L		98
98) 1,1,2,2-tetrachloroethane	14.989	83	72242	49.46	ug/L		99
99) trans-1,4-dichloro-2-b...	15.020	53	18412	48.37	ug/L		92
100) 1,2,3-trichloropropane	15.078	110	18641	49.55	ug/L		94
101) bromobenzene	15.109	156	74999	43.01	ug/L		94
102) n-propylbenzene	15.151	91	1030427	142.36	ug/L		99
103) 2-chlorotoluene	15.277	126	67990	44.72	ug/L		99
104) 4-chlorotoluene	15.387	91	193601	44.74	ug/L		99
105) 1,3,5-trimethylbenzene	15.308	105	470267	86.33	ug/L		98
106) tert-butylbenzene	15.648	134	45945	45.53	ug/L	#	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225870.d
Acq On : 1 May 2019 2:50 pm
Operator : thienn
Sample : jc87030-1msd Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:58:51 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

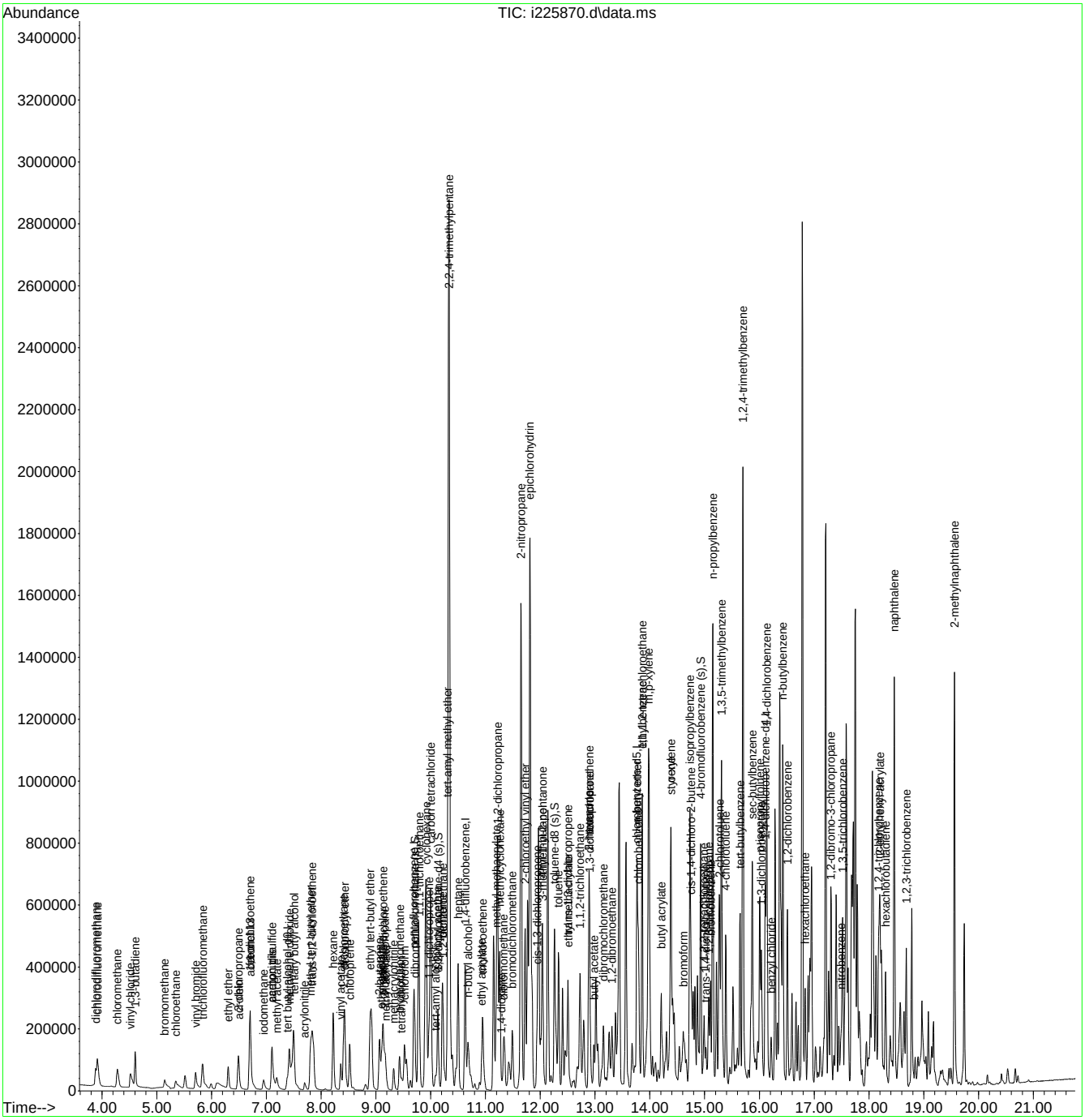
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	963781	172.70	ug/L		97
108) sec-butylbenzene	15.873	105	438736	62.49	ug/L		98
109) p-isopropyltoluene	16.009	119	280547	46.04	ug/l		99
110) benzyl chloride	16.218	91	74491	21.79	ug/L		97
111) 1,3-dichlorobenzene	16.035	146	149408	44.91	ug/L		99
112) 1,4-dichlorobenzene	16.134	146	149836	44.09	ug/L		99
113) 1,2-dichlorobenzene	16.511	146	148401	45.57	ug/L		97
114) n-butylbenzene	16.427	92	296225	93.47	ug/L		97
115) hexachloroethane	16.835	201	56023	46.11	ug/L	#	40
116) 1,2-dibromo-3-chloropr...	17.301	157	21235	46.88	ug/L		92
117) nitrobenzene	17.489	77	18920	121.56	ug/L		83
118) 1,3,5-trichlorobenzene	17.521	180	136632	41.31	ug/L		99
119) 1,2,4-trichlorobenzene	18.174	180	124378	41.80	ug/L		98
120) 2-ethylhexyl acrylate	18.200	55	25402	10.47	ug/L		90
121) hexachlorobutadiene	18.305	225	72474	37.00	ug/L		98
122) naphthalene	18.462	128	925282	160.85	ug/L		100
123) 1,2,3-trichlorobenzene	18.682	180	116621	39.84	ug/L		98
124) 2-methylnaphthalene	19.560	142	552764	269.49	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\5-2-19\vi9099\
Data File : i225870.d
Acq On : 1 May 2019 2:50 pm
Operator : thienn
Sample : jc87030-1msd Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:58:51 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



Manual Integration Approval Summary

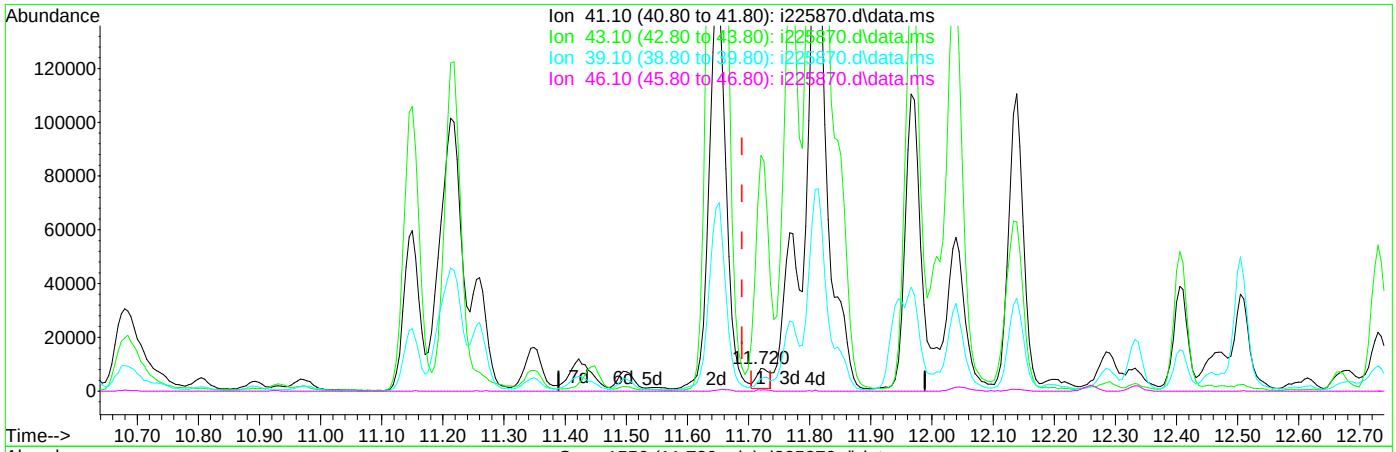
Sample Number:	JC87030-1MSD	**Method:**	SW846 8260C
Lab FileID:	I225870.D	**Analyst approved:**	05/02/19 04:31 Nizel Eugenio
Injection Time:	05/01/19 14:50	**Supervisor approved:**	05/03/19 03:53 Kanya Veerawat

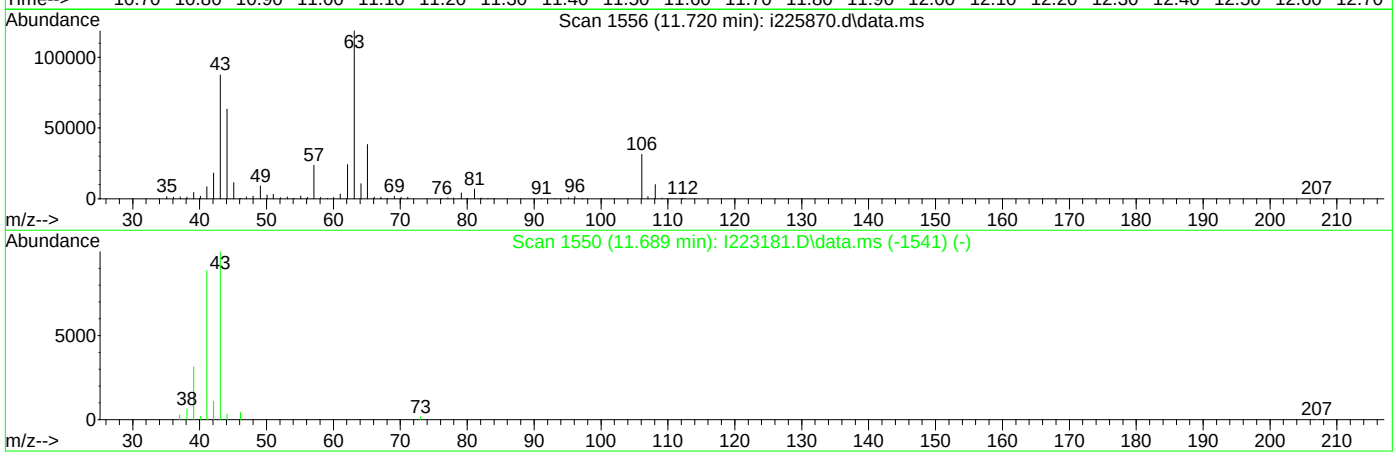
Parameter	CAS	Sig#	R.T. (min.)	Reason
2-Nitropropane	79-46-9		11.65	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225870.d
Acq On : 1 May 2019 2:50 pm
Operator : thienn
Sample : jc87030-1msd Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 21:33:58 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





TIC: i225870.d\data.ms

(67) 2-nitropropane

11.720min (+0.031) 32.14ug/L

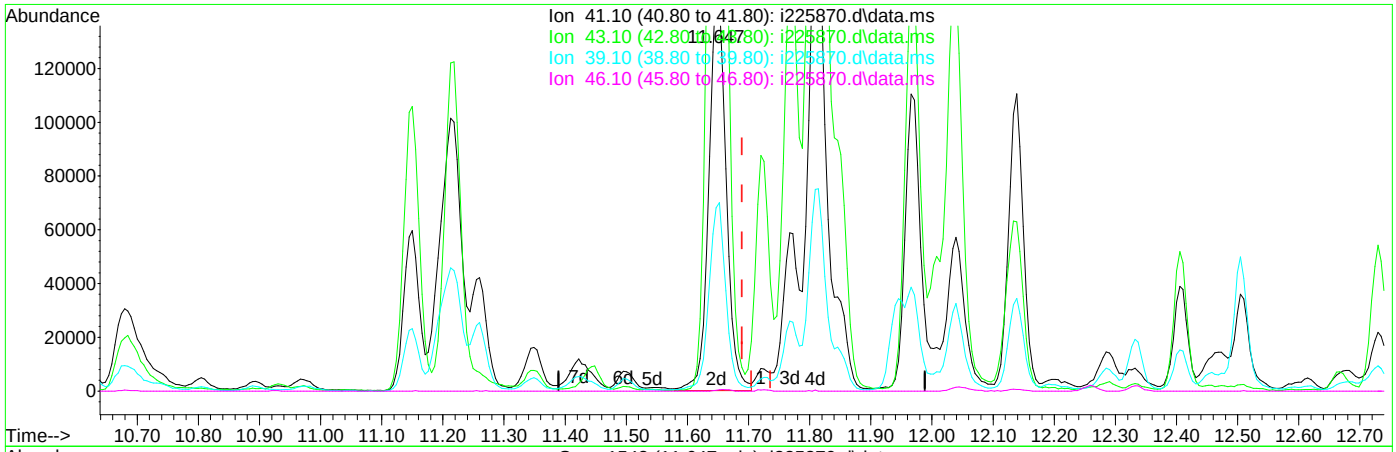
response 11001

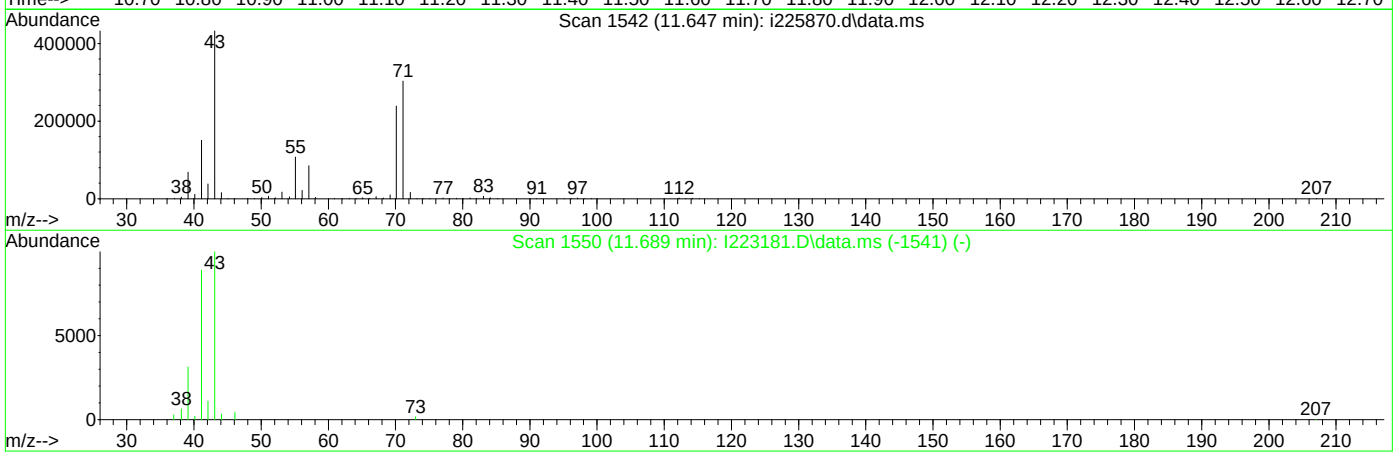
Ion	Exp%	Act%
41.10	100	100
43.10	112.50	1212.56#
39.10	35.20	53.06
46.10	4.80	6.81

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225870.d
Acq On : 1 May 2019 2:50 pm
Operator : thienn
Sample : jc87030-1msd Inst : GCMSI
Misc : MS34328,VI9099,10.5,,100,10,1
ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 21:33:58 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





TIC: i225870.d\data.ms

(67) 2-nitropropane

11.647min (-0.042) 853.87ug/L m

response 292271

Ion	Exp%	Act%
41.10	100	100
43.10	112.50	287.82#
39.10	35.20	45.38
46.10	4.80	0.19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184892.d
Acq On : 2 May 2019 4:20 pm
Operator : PrashanS
Sample : JC87031-3MS Inst : MSY
Misc : MS34329,VY8023,6.5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:48:24 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.730	65	75118	500.00	ug/L	-0.01
5) pentafluorobenzene	9.974	168	235311	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	352761	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	312009	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	175987	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.011	113	107607	50.41	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.82%			
53) 1,2-dichloroethane-d4 (s)	10.435	65	84346	42.80	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 85.60%			
75) toluene-d8 (s)	12.506	98	382022	48.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.76%			
98) 4-bromofluorobenzene (s)	15.131	95	141654	48.54	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.08%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.840	59	54383	232.29	ug/L	92
4) 1,4-dioxane	11.538	88	26103	1124.62	ug/L	91
6) chlorodifluoromethane	4.373	51	166333	44.83	ug/L	98
7) dichlorodifluoromethane	4.346	85	206131	44.24	ug/L	95
8) chloromethane	4.739	50	217887	44.42	ug/L	96
9) vinyl chloride	4.985	62	207971	51.54	ug/L	96
10) 1,3-butadiene	5.021	54	121707	48.71	ug/L	98
11) bromomethane	5.628	94	156012	45.67	ug/L	97
12) chloroethane	5.801	64	111044	50.89	ug/L	95
13) vinyl bromide	6.146	106	103490	54.68	ug/L	93
14) trichlorofluoromethane	6.266	101	219999	47.33	ug/L	97
15) ethyl ether	6.627	74	55976	49.15	ug/L	98
16) 2-chloropropane	6.857	63	51221	50.82	ug/L	98
17) acrolein	6.873	56	13994	44.12	ug/L	99
18) freon 113	7.087	151	111270	51.05	ug/L	95
19) 1,1-dichloroethene	7.066	61	185541	51.35	ug/L	95
20) acetone	7.066	43	94975	164.75	ug/L	96
21) acetonitrile	7.495	41	119013	420.71	ug/L	94
22) iodomethane	7.323	142	220551	48.34	ug/L	98
23) carbon disulfide	7.469	76	372969	47.16	ug/L	99
24) methylene chloride	7.778	84	138281	44.03	ug/L	92
25) methyl acetate	7.521	43	59521	44.63	ug/L	96
26) methyl tert butyl ether	8.138	73	331709	45.74	ug/L	98
27) trans-1,2-dichloroethene	8.154	61	163998	45.78	ug/L	98
28) hexane	8.505	57	131499	41.60	ug/L	98
29) di-isopropyl ether	8.719	45	431328	47.78	ug/L	99
30) ethyl tert-butyl ether	9.179	59	395594	48.18	ug/L	98
31) 2-butanone	9.378	72	34491	181.99	ug/L	95
32) 1,1-dichloroethane	8.735	63	212100	47.21	ug/L	98
33) chloroprene	8.829	53	157194	48.83	ug/L	97
34) acrylonitrile	8.055	53	30571	42.44	ug/L	95
35) vinyl acetate	8.667	86	15017	41.95	ug/L	97
36) ethyl acetate	9.383	45	11067	43.45	ug/L	90
37) 2,2-dichloropropane	9.488	77	164019	42.26	ug/L	93
38) cis-1,2-dichloroethene	9.441	96	136190	46.11	ug/L	96
39) propionitrile	9.456	54	111535	438.76	ug/L	90
40) bromochloromethane	9.739	130	86272	46.60	ug/L	97
41) tetrahydrofuran	9.760	72	10094	44.54	ug/L	81
42) chloroform	9.823	83	210770	44.13	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184892.d
Acq On : 2 May 2019 4:20 pm
Operator : PrashanS
Sample : JC87031-3MS Inst : MSY
Misc : MS34329,VY8023,6.5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:48:24 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	9.870	59	76707	42.56	ug/L		94
46) methacrylonitrile	9.645	67	31009	45.40	ug/L		96
47) 1,1,1-trichloroethane	10.095	97	198429	48.20	ug/L		94
48) cyclohexane	10.204	84	198182	48.42	ug/L		89
49) 1,1-dichloropropene	10.251	75	147796	50.76	ug/L		98
50) tert-amyl alcohol	10.372	55	18784	224.94	ug/L	#	80
51) carbon tetrachloride	10.283	117	174435	48.67	ug/L		98
54) 2,2,4-trimethylpentane	10.591	57	352371	36.43	ug/L		99
55) tert-amyl methyl ether	10.581	73	360979	45.58	ug/L		97
56) n-butyl alcohol	10.947	41	99594	2276.52	ug/L		98
57) benzene	10.503	78	459255	45.09	ug/L		99
58) heptane	10.743	57	61274	35.25	ug/L		99
59) isopropyl acetate	10.403	87	18417	44.37	ug/L		94
60) 1,2-dichloroethane	10.523	62	128608	39.30	ug/L		97
61) trichloroethene	11.214	130	126600	47.81	ug/L		99
62) ethyl acrylate	11.193	55	95226	43.75	ug/L		97
63) 2-nitropropane	11.957	41	28133	39.70	ug/L		88
64) 2-chloroethyl vinyl ether	11.983	63	266273	220.70	ug/L		99
65) methyl methacrylate	11.454	100	21126	44.07	ug/L	#	82
66) 1,2-dichloropropane	11.501	63	115275	44.43	ug/L		93
67) methylcyclohexane	11.512	83	197036	46.86	ug/L		96
68) dibromomethane	11.606	93	62142	41.06	ug/L		99
69) bromodichloromethane	11.753	83	151337	41.71	ug/L		99
70) epichlorohydrin	12.072	57	34246	187.00	ug/L		95
71) cis-1,3-dichloropropene	12.197	75	172674	43.75	ug/L		96
72) 4-methyl-2-pentanone	12.302	58	124967	175.61	ug/L		97
73) 3-methyl-1-butanol	12.291	70	49548	930.82	ug/L		94
76) toluene	12.579	92	267595	44.54	ug/L		99
77) trans-1,3-dichloropropene	12.757	75	141589	40.84	ug/L		98
78) ethyl methacrylate	12.741	69	108147	44.51	ug/L		95
79) 1,1,2-trichloroethane	12.971	83	71974	41.98	ug/L		96
80) 2-hexanone	13.128	58	111620	173.84	ug/L		98
81) tetrachloroethene	13.118	166	121768	44.68	ug/L		97
82) 1,3-dichloropropane	13.149	76	132938	41.62	ug/L		97
83) butyl acetate	13.201	56	54629	44.02	ug/L		97
84) dibromochloromethane	13.390	129	113117	43.99	ug/L		98
85) 1,2-dibromoethane	13.547	107	117727	43.57	ug/L		100
86) n-butyl ether	13.965	57	468927	47.27	ug/L		99
87) chlorobenzene	14.017	112	306349	42.39	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.080	131	122166	42.86	ug/L		95
89) ethylbenzene	14.075	91	502110	44.47	ug/L		99
90) m,p-xylene	14.190	106	388364	88.34	ug/L		95
91) o-xylene	14.587	91	414825	43.86	ug/L		100
92) styrene	14.598	104	329516	44.03	ug/L		97
93) bromoform	14.828	173	71415	40.87	ug/L		98
94) butyl acrylate	14.415	55	179478	43.86	ug/L		98
95) isopropylbenzene	14.933	105	516206	45.40	ug/L		99
96) cis-1,4-dichloro-2-butene	14.969	88	33625	36.92	ug/L		94
99) bromobenzene	15.314	156	146049	41.57	ug/L		94
100) 1,1,2,2-tetrachloroethane	15.204	83	109993	40.84	ug/L		95
101) trans-1,4-dichloro-2-b...	15.236	53	22900	38.18	ug/L		92
102) 1,2,3-trichloropropane	15.293	110	27948	40.85	ug/L		96
103) n-propylbenzene	15.340	91	596050	43.89	ug/L		98
104) 2-chlorotoluene	15.476	126	134776	43.58	ug/L		96
105) 4-chlorotoluene	15.586	91	354423	41.11	ug/L		97
106) 1,3,5-trimethylbenzene	15.497	105	430949	43.11	ug/L		97
107) tert-butylbenzene	15.832	134	83651	47.34	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184892.d
Acq On : 2 May 2019 4:20 pm
Operator : PrashanS
Sample : JC87031-3MS Inst : MSY
Misc : MS34329,VY8023,6.5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:48:24 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

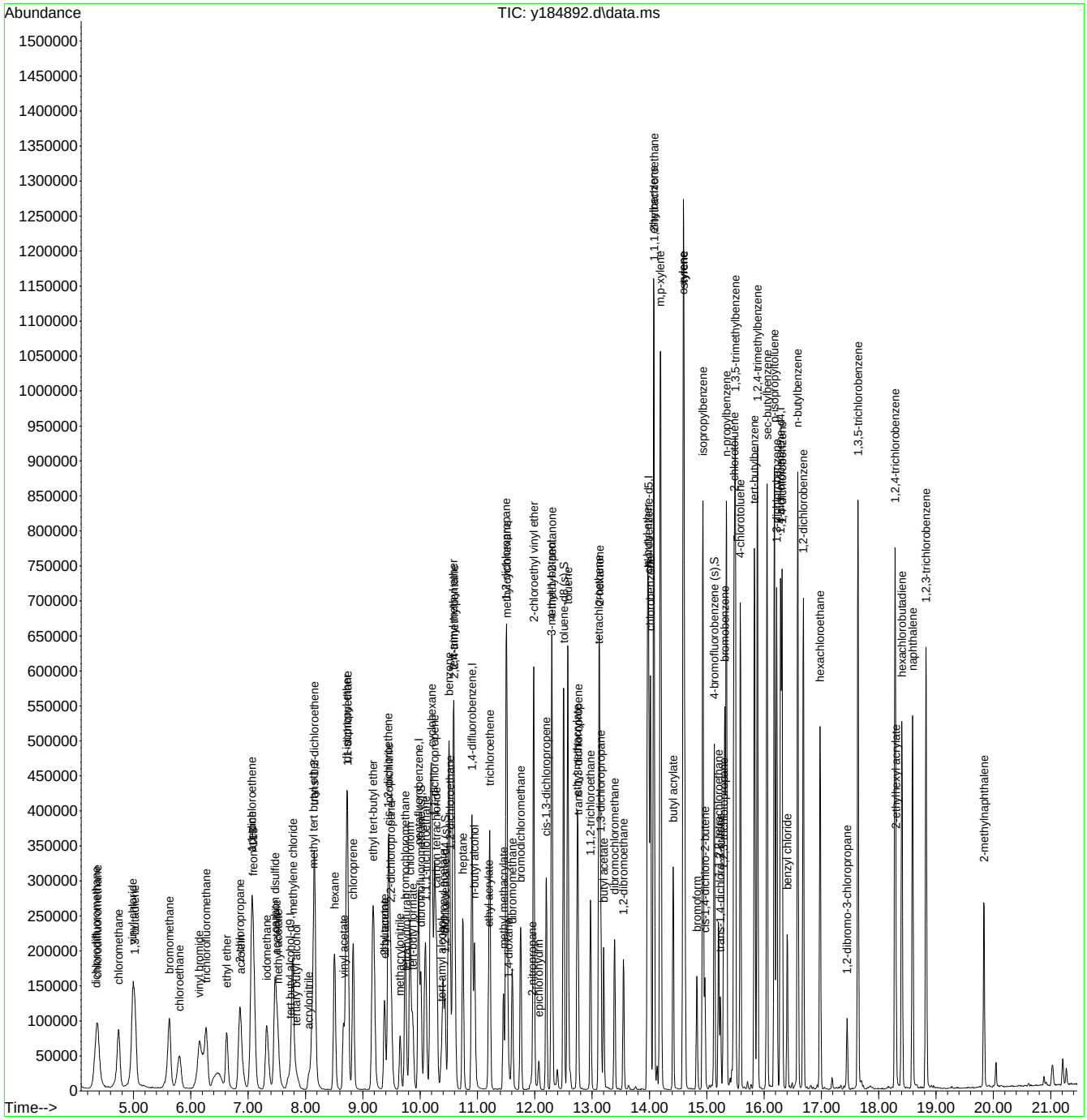
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.884	105	451003	43.81	ug/L	98
109) sec-butylbenzene	16.052	105	558974	44.82	ug/L	99
110) 1,3-dichlorobenzene	16.219	146	274243	42.21	ug/L	97
111) p-isopropyltoluene	16.177	119	480202	43.73	ug/L	99
112) 1,4-dichlorobenzene	16.313	146	271613	40.59	ug/L	99
113) 1,2-dichlorobenzene	16.685	146	269831	40.54	ug/L	99
114) n-butylbenzene	16.585	92	247001	43.14	ug/L	98
115) 1,2-dibromo-3-chloropr...	17.448	157	26542	42.43	ug/L	96
116) 1,3,5-trichlorobenzene	17.637	180	257126	40.89	ug/L	99
117) 1,2,4-trichlorobenzene	18.285	180	231759	43.67	ug/L	99
118) hexachlorobutadiene	18.405	225	114482	35.14	ug/L	98
119) naphthalene	18.588	128	412369	50.10	ug/L	99
120) 1,2,3-trichlorobenzene	18.824	180	208046	45.25	ug/L	97
121) hexachloroethane	16.978	201	84785	43.37	ug/L	98
122) benzyl chloride	16.402	91	143402	29.32	ug/L	97
123) 2-ethylhexyl acrylate	18.301	70	29582	9.09	ug/L	96
124) 2-methylnaphthalene	19.838	142	127713	30.91	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\5-3-19\vy8023\
Data File : y184892.d
Acq On : 2 May 2019 4:20 pm
Operator : PrashanS
Sample : JC87031-3MS Inst : MSY
Misc : MS34329,VY8023,6.5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:48:24 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184937.d
Acq On : 4 May 2019 1:01 pm
Operator : PrashanS
Sample : JC86877-1DUP Inst : MSY
Misc : MS34289,VY8023,6.3,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:11:39 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

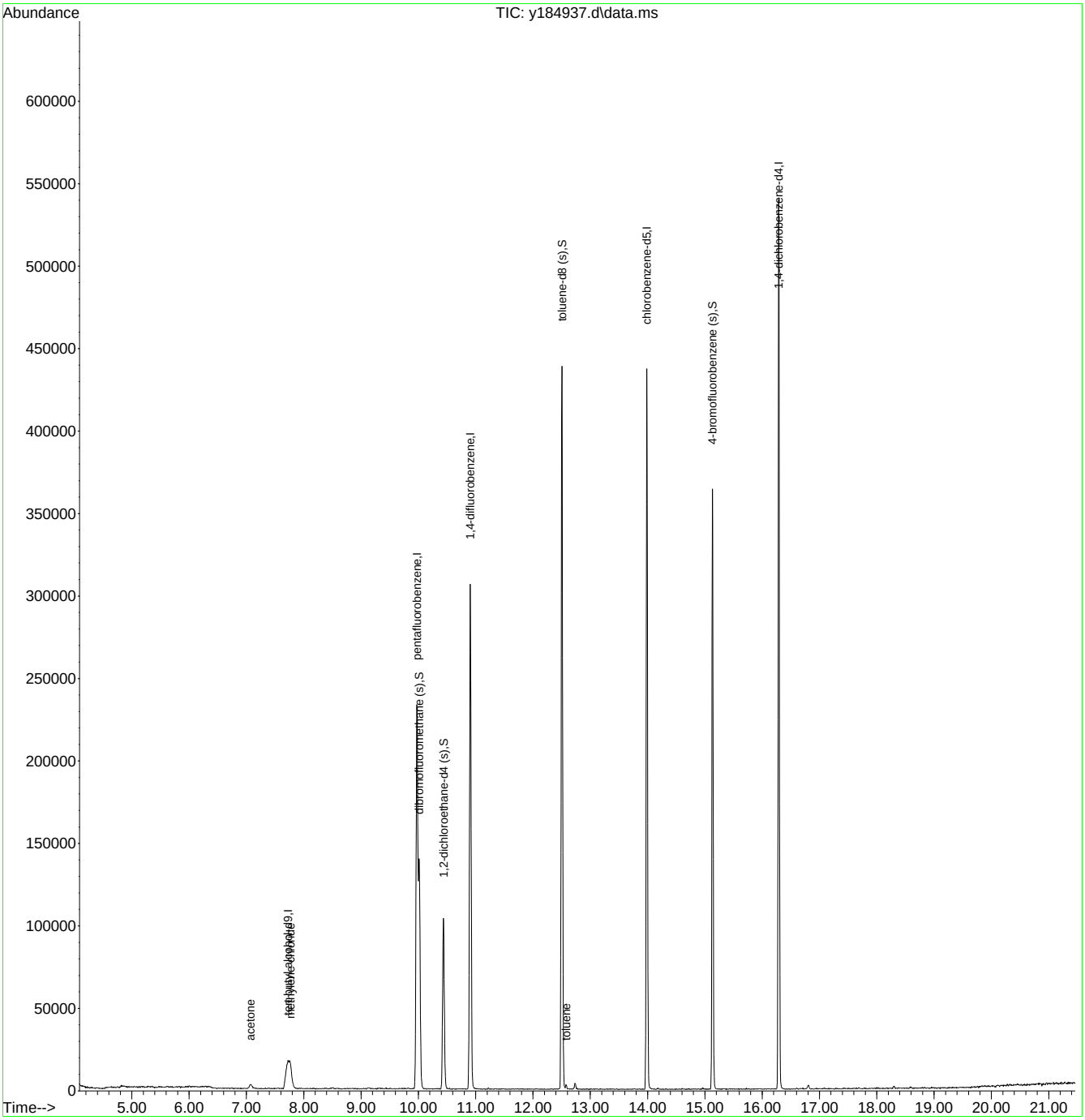
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.725	65	56919	500.00	ug/L	-0.02
5) pentafluorobenzene	9.974	168	190415	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	272294	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	230619	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	129243	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.011	113	89407	51.76	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.52%			
53) 1,2-dichloroethane-d4 (s)	10.440	65	78150	51.38	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.76%			
75) toluene-d8 (s)	12.506	98	286421	49.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.16%			
98) 4-bromofluorobenzene (s)	15.131	95	103999	48.53	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.06%			
Target Compounds						Qvalue
20) acetone	7.071	43	6046	12.96	ug/L	86
24) methylene chloride	7.767	84	2638	1.04	ug/L #	66
76) toluene	12.579	92	1176	0.26	ug/L #	83

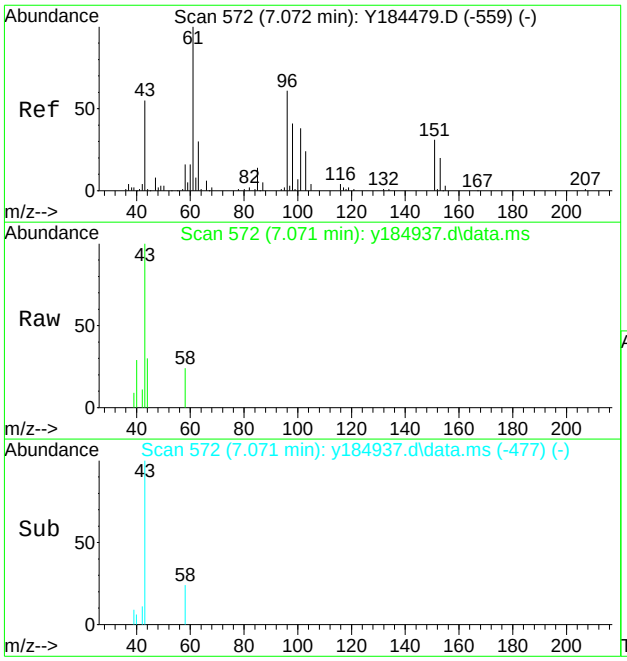
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184937.d
Acq On : 4 May 2019 1:01 pm
Operator : PrashanS
Sample : JC86877-1DUP Inst : MSY
Misc : MS34289,VY8023,6.3,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:11:39 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

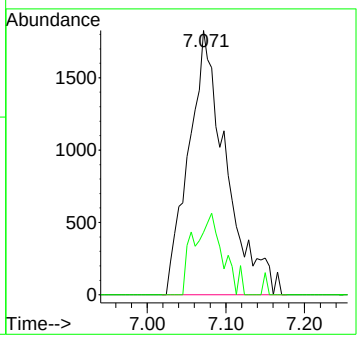


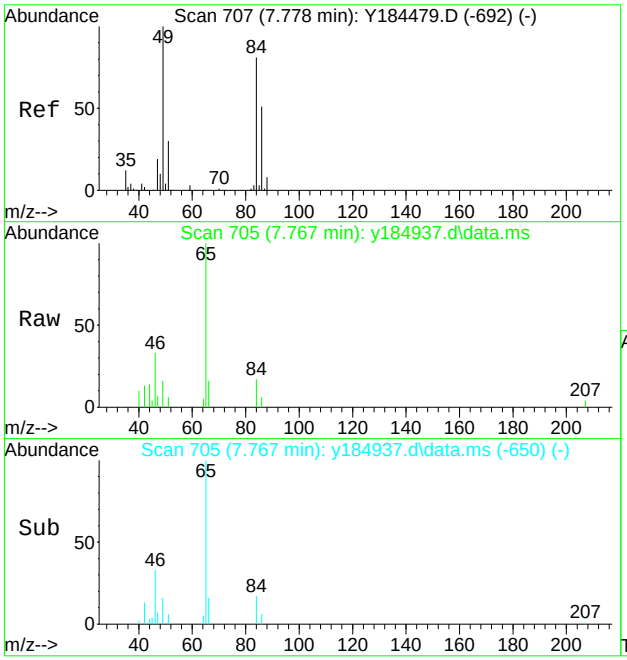


#20
acetone
Concen: 12.96 ug/L
RT: 7.071 min Scan# 572
Delta R.T. -0.005 min
Lab File: y184937.d
Acq: 4 May 2019 1:01 pm

Tgt Ion: 43 Resp: 6046

Ion	Ratio	Lower	Upper
43	100		
58	23.7	1.4	61.4

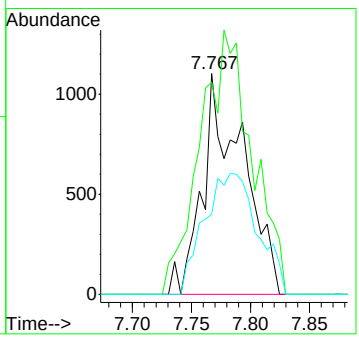


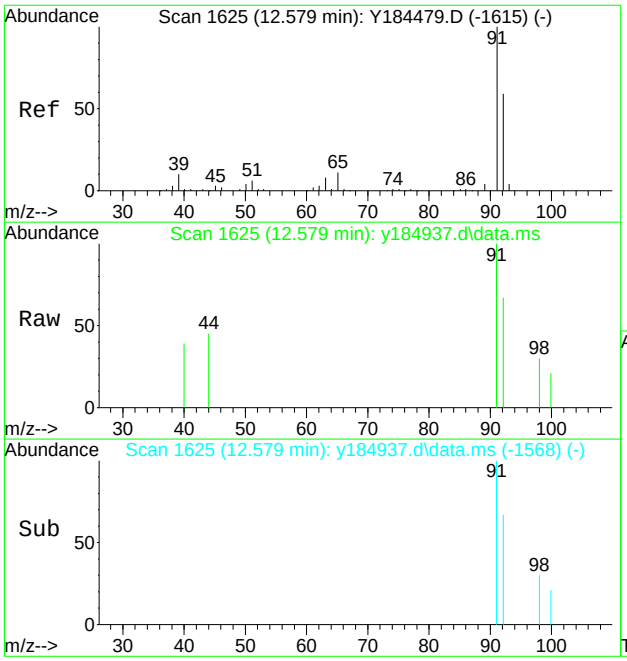


#24
methylene chloride
Concen: 1.04 ug/L
RT: 7.767 min Scan# 705
Delta R.T. -0.011 min
Lab File: y184937.d
Acq: 4 May 2019 1:01 pm

Tgt Ion: 84 Resp: 2638

Ion	Ratio	Lower	Upper
84	100		
49	96.1	104.2	164.2#
86	36.4	35.3	95.3

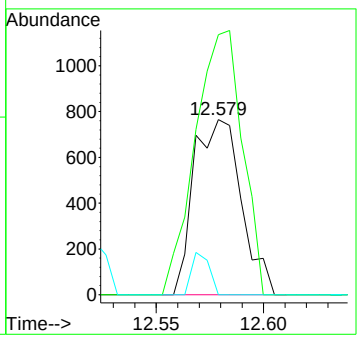




#76
toluene
Concen: 0.26 ug/L
RT: 12.579 min Scan# 1625
Delta R.T. -0.000 min
Lab File: y184937.d
Acq: 4 May 2019 1:01 pm

Tgt Ion: 92 Resp: 1176

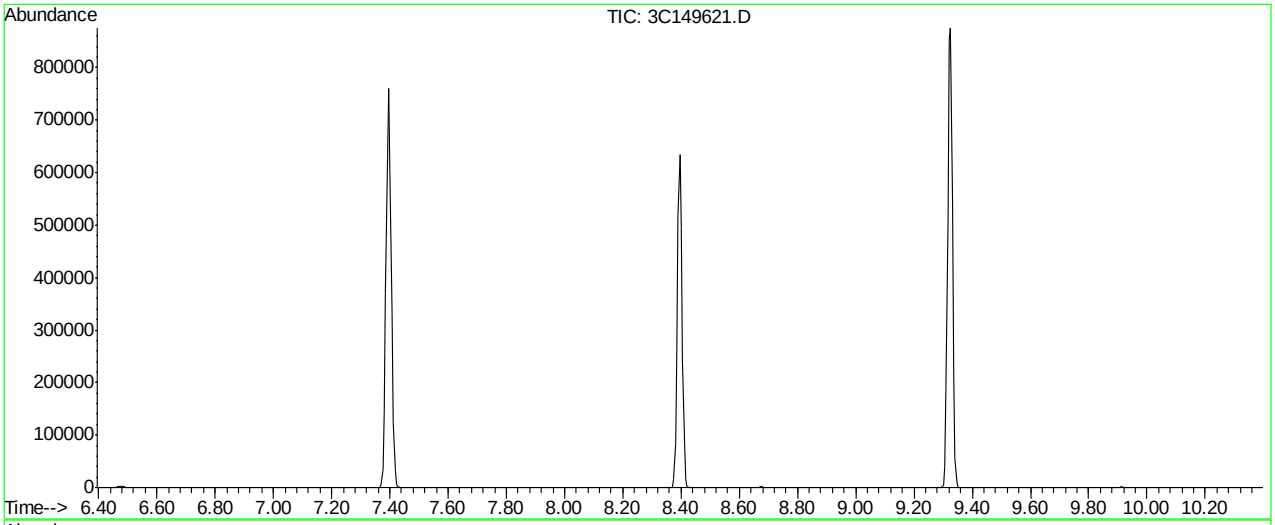
Ion	Ratio	Lower	Upper
92	100		
91	148.5	148.7	188.7#
65	0.0	0.0	38.2

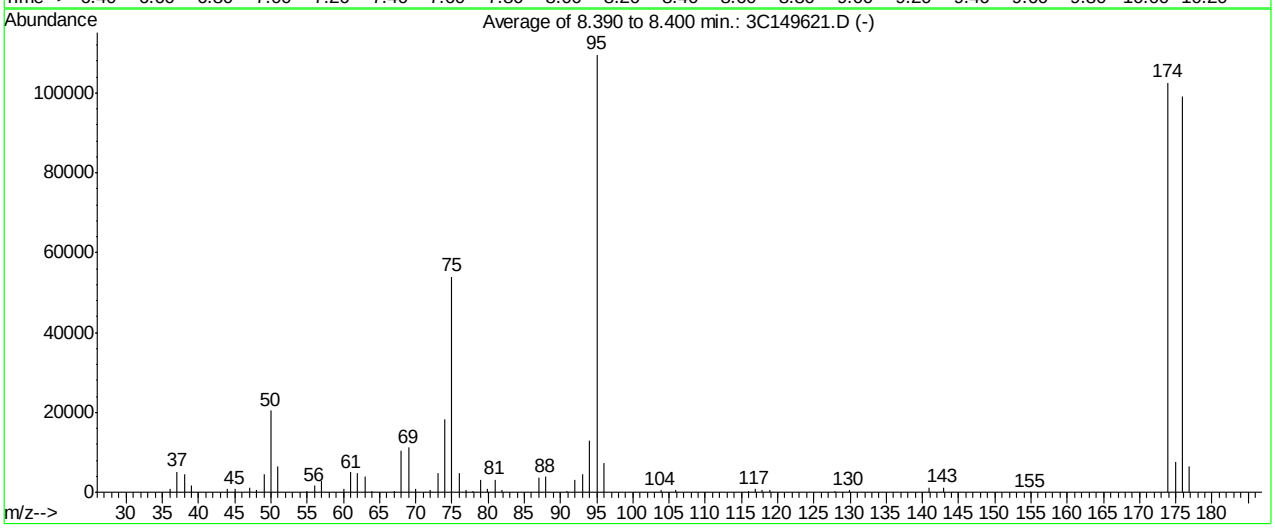


SW-846 Method 8260

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

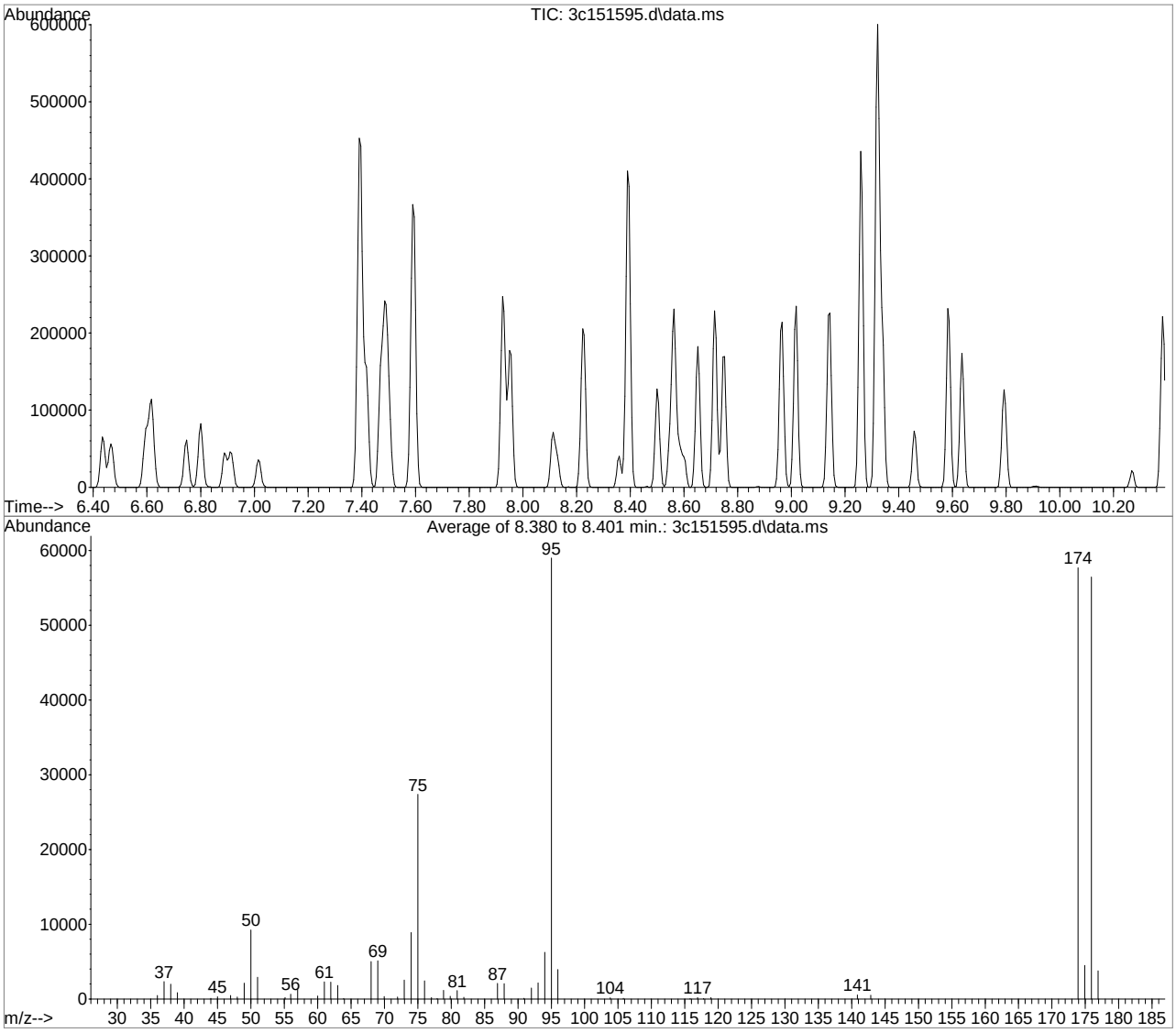
Average of 8.390 to 8.400 min.: 3C149621.D
BFB
Modified:subtracted

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\jonkm\v3c6814\3c151595.d Vial: 1
Acq On : 1 May 2019 8:36 am Operator: PrashanS
Sample : bfb Inst : MS3C
Misc : MS34176,V3C6814,5.0,,,,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	15.6	9216	PASS
75	95	30	60	46.4	27364	PASS
95	95	100	100	100.0	58995	PASS
96	95	5	9	6.6	3921	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	97.8	57686	PASS
175	174	5	9	7.8	4496	PASS
176	174	95	101	97.9	56477	PASS
177	176	5	9	6.7	3758	PASS

3c151595.d M3C6743.M Thu May 02 02:44:15 2019

Average of 8.380 to 8.401 min.: 3c151595.d\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	470.4	55.10	183	71.95	248.8	86.95	2067.4
37.00	2330	55.95	650.6	72.95	2520.6	87.95	2057.2
38.00	1979.4	57.00	1250.6	74.00	8884.6	90.90	78.6
39.00	830.4	60.00	409.8	75.00	27363.6	92.00	1474.2
44.00	77	61.00	2294.2	76.00	2437.6	93.00	2133.8
45.00	282.2	61.95	2264.8	77.05	183.4	94.00	6242.6
46.95	470.2	63.00	1816.8	77.90	65.4	95.00	58995.2
47.95	272.2	63.90	61.2	78.85	1135.6	96.00	3921.4
49.00	2101.4	68.00	5000	79.85	370.8	103.85	140.8
50.00	9215.6	69.00	5117.8	80.90	1115.8	105.80	80
51.00	2923	69.95	332.6	81.90	213.6	115.80	67.2

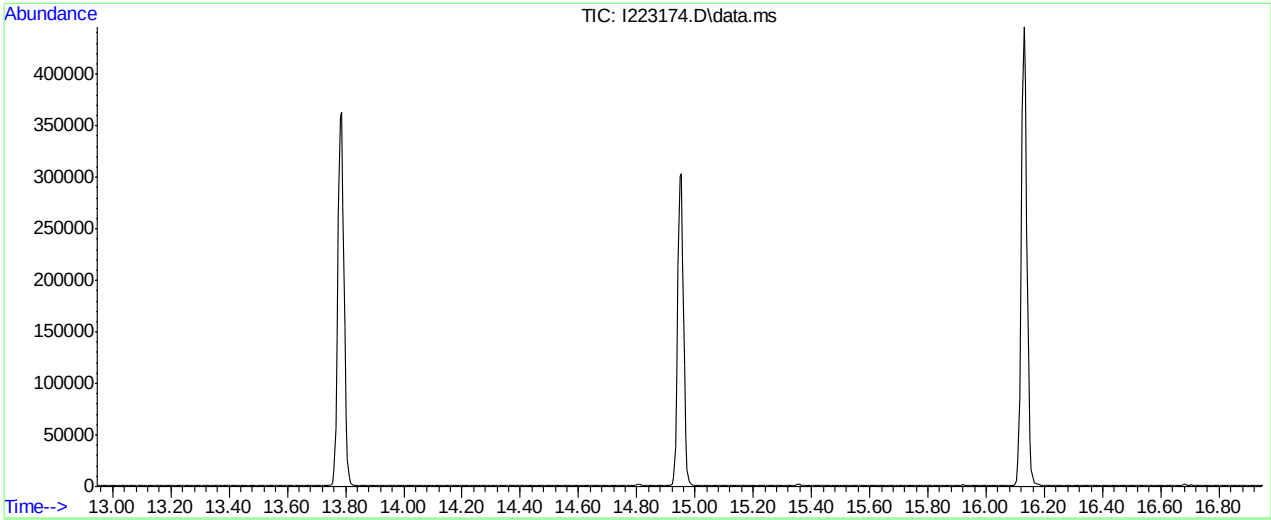
Average of 8.380 to 8.401 min.: 3c151595.d\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
116.90	184						
117.80	67						
118.90	175.2						
140.85	531.2						
142.85	486.2						
173.90	57686.4						
174.90	4496.2						
175.90	56476.8						
176.90	3758.2						

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VI8986\I223174.D Vial: 1
Acq On : 27 Nov 2018 5:41 pm Operator: thienn
Sample : BFB Inst : GCMSI
Misc : MS30885,VI8986,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MI8986.M (RTE Integrator)
Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um



AutoFind: Scans 2172, 2173, 2174; Background Corrected with Scan 2165

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.4	9909	PASS
75	95	30	60	47.3	25472	PASS
95	95	100	100	100.0	53864	PASS
96	95	5	9	6.6	3552	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	97.2	52357	PASS
175	174	5	9	8.2	4272	PASS
176	174	95	101	98.5	51597	PASS
177	176	5	9	6.9	3571	PASS

I223174.D MI8986.M Wed Nov 28 14:05:27 2018

Average of 14.942 to 14.952 min.: I223174.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	461	55.00	51	72.00	308	87.00	2457
37.10	2623	56.05	764	73.10	2349	88.00	2420
38.10	2222	57.10	1362	74.10	8690	90.95	125
39.10	855	60.05	490	75.10	25472	92.00	1448
44.10	291	61.05	2449	76.05	2058	93.05	2005
45.10	447	62.10	2360	77.05	361	94.10	5755
47.10	646	63.10	1727	78.05	222	95.10	53864
48.05	318	64.00	122	79.00	1289	96.05	3552
49.10	2190	68.10	5234	80.00	359	103.95	231
50.10	9909	69.05	5171	80.95	1313	105.95	258
51.10	2973	70.05	377	81.95	278	116.00	185

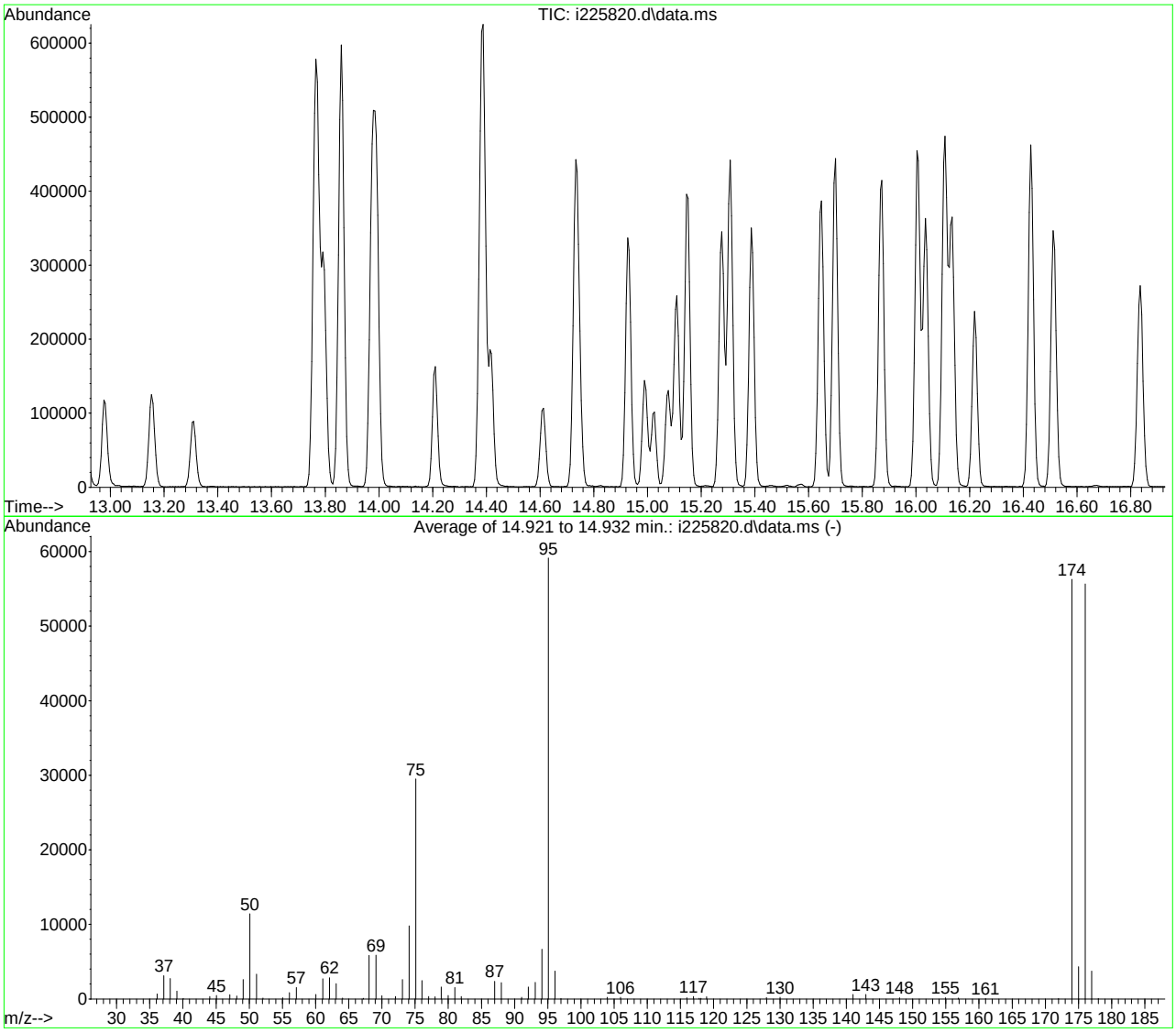
Average of 14.942 to 14.952 min.: I223174.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
116.95	290	175.00	4272				
117.95	191	176.00	51597				
118.95	274	176.95	3571				
127.90	139	207.00	61				
129.90	242						
130.95	102						
137.00	51						
141.00	503						
142.90	521						
154.95	122						
174.00	52357						

SW-846 Method 8260

Data File : C:\msdchem\1\data\lo...\5-1\vi9098\i225820.d Vial: 4
Acq On : 30 Apr 2019 8:27 am Operator: thienn
Sample : bfb Inst : GCMSI
Misc : MS34179,VI9098,5,,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 2161

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.3	11410	PASS
75	95	30	60	49.9	29501	PASS
95	95	100	100	100.0	59128	PASS
96	95	5	9	6.3	3754	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.2	56277	PASS
175	174	5	9	7.7	4314	PASS
176	174	95	101	98.9	55659	PASS
177	176	5	9	6.7	3751	PASS

i225820.d MI8986.M Wed May 01 07:27:59 2019

Average of 14.921 to 14.932 min.: i225820.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	680	51.10	3333	68.05	5846	80.00	452
37.10	3113	52.05	136	69.10	5862	81.00	1543
38.10	2748	55.05	146	70.00	433	81.95	335
39.10	1064	56.05	862	72.05	335	87.00	2348
40.05	48	57.10	1544	73.10	2606	88.00	2206
44.05	319	60.05	620	74.10	9800	91.05	212
45.05	478	61.10	2721	75.10	29501	92.05	1615
47.05	576	62.10	2861	76.05	2456	93.10	2233
48.10	387	63.10	2051	77.05	325	94.10	6658
49.10	2586	64.05	119	78.00	281	95.10	59128
50.10	11410	67.20	92	78.95	1611	96.10	3754

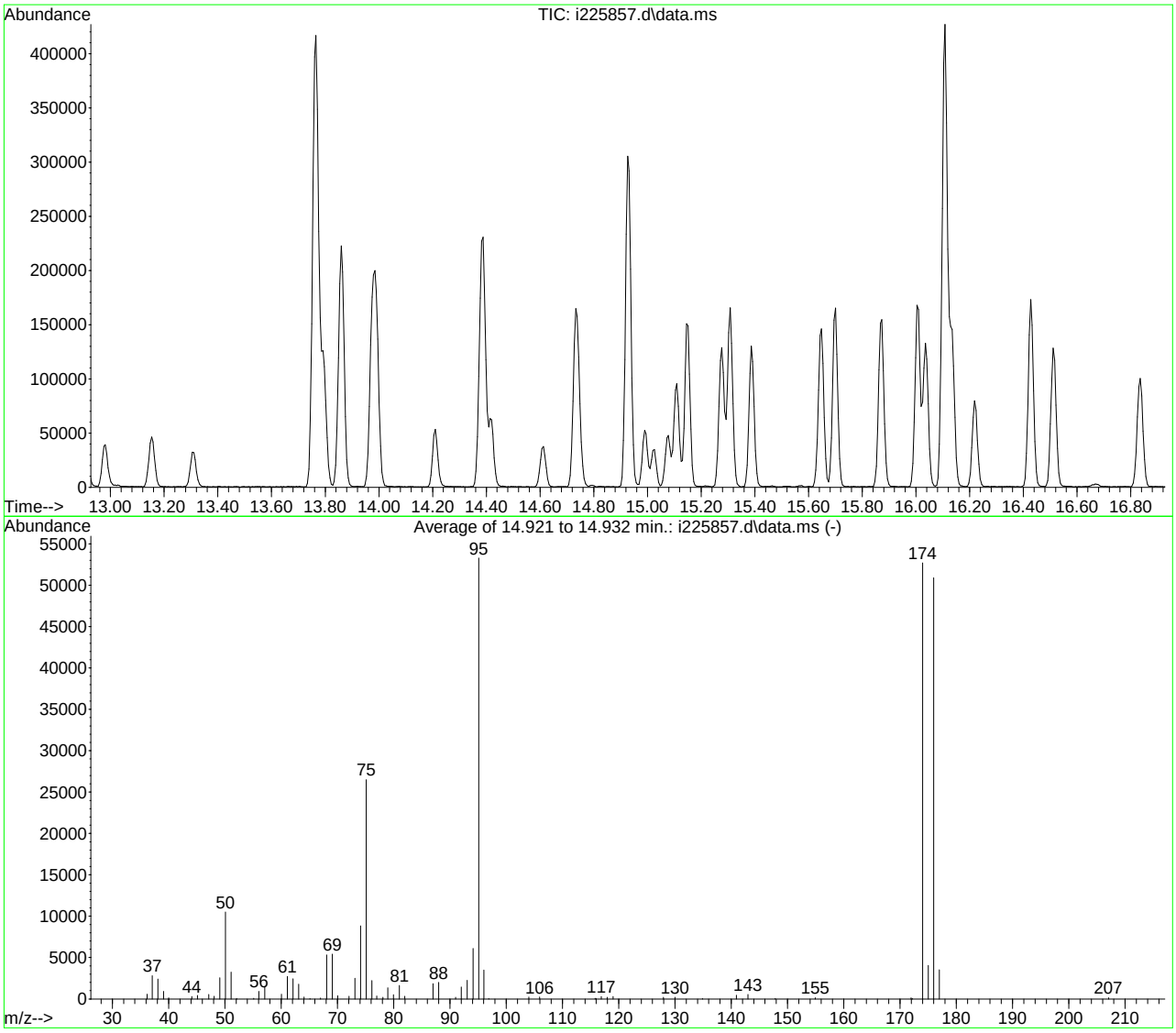
Average of 14.921 to 14.932 min.: i225820.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	54	142.95	621				
103.95	224	148.00	146				
105.95	231	154.95	170				
115.95	141	156.90	130				
116.95	316	161.00	48				
117.80	76	172.00	58				
118.10	76	174.00	56277				
118.95	307	175.00	4314				
127.95	203	176.00	55659				
130.00	209	177.00	3751				
141.00	618	178.00	67				

SW-846 Method 8260

Data File : C:\msdchem\1\data\ni...2-19\vi9099\i225857.d Vial: 4
Acq On : 1 May 2019 8:24 am Operator: thienn
Sample : bfb Inst : GCMSI
Misc : MS34328,VI9099,5,,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 2161

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.7	10504	PASS
75	95	30	60	49.8	26515	PASS
95	95	100	100	100.0	53285	PASS
96	95	5	9	6.6	3509	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	98.9	52712	PASS
175	174	5	9	7.7	4066	PASS
176	174	95	101	96.6	50907	PASS
177	176	5	9	7.0	3539	PASS

i225857.d MI8986.M Thu May 02 03:15:14 2019

Average of 14.921 to 14.932 min.: i225857.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.15	564	51.10	3254	67.00	113	78.95	1367
37.10	2802	52.10	49	68.10	5323	79.95	514
38.10	2395	55.10	76	69.10	5430	81.00	1626
39.10	913	56.05	910	70.05	405	81.95	337
40.00	128	57.10	1504	72.05	331	87.00	1840
44.10	285	60.05	564	73.10	2507	88.00	1994
45.10	417	61.10	2713	74.10	8833	91.00	214
47.15	533	62.10	2439	75.10	26515	92.00	1448
48.10	338	63.10	1788	76.10	2208	93.05	2244
49.10	2556	64.05	238	77.00	346	94.10	6092
50.10	10504	65.10	54	78.10	214	95.10	53285

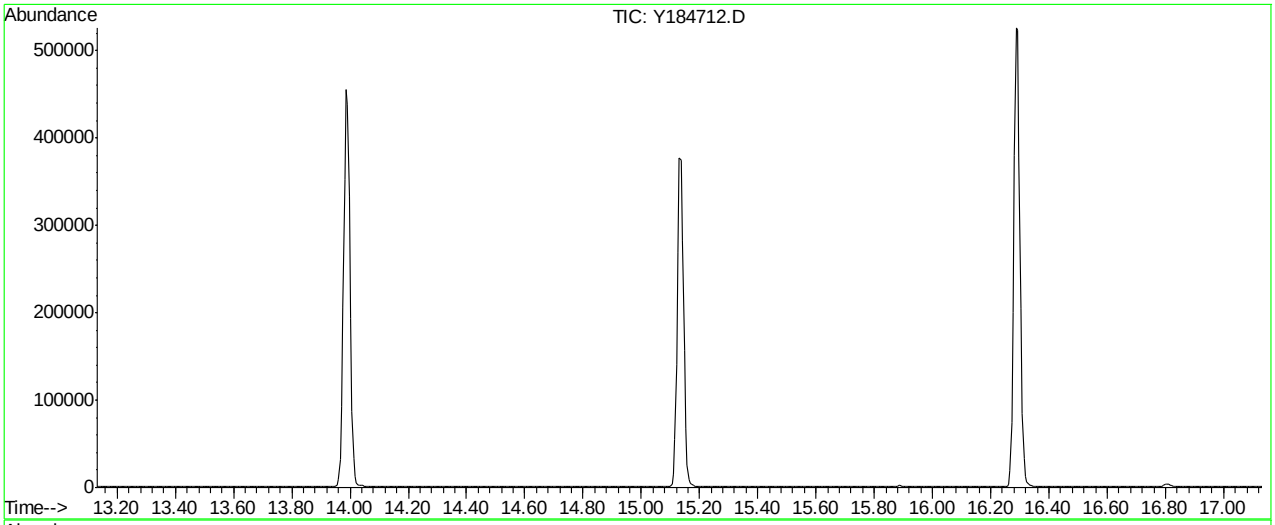
Average of 14.921 to 14.932 min.: i225857.d\data.ms
bfb
Modified:subtracted

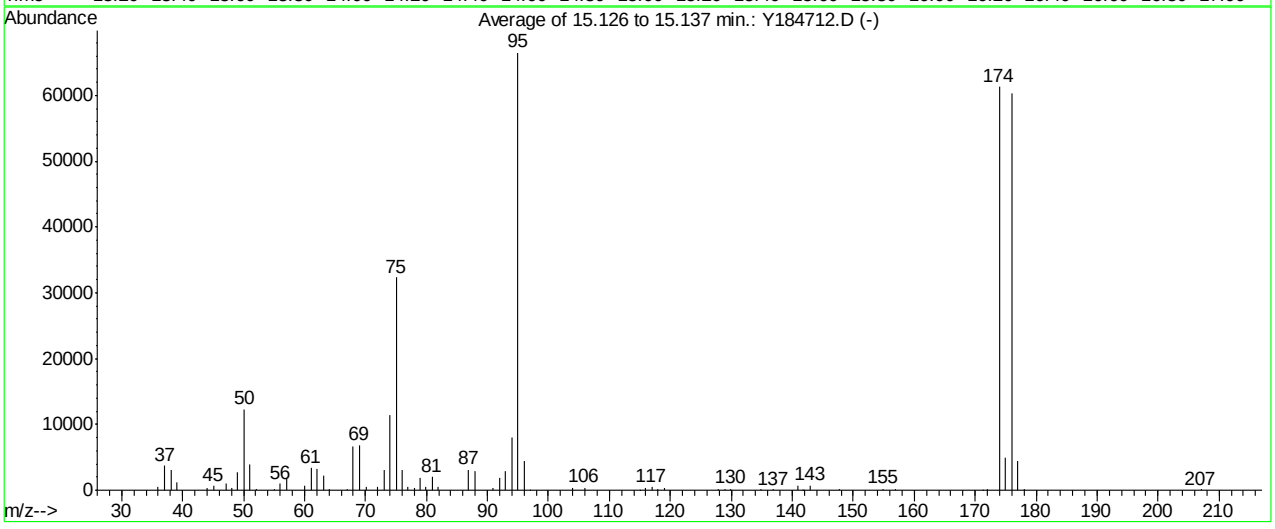
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.05	3509	134.90	50	207.05	156		
96.90	49	140.90	465				
104.00	220	142.95	539				
105.95	222	147.80	55				
115.80	67	154.95	134				
116.00	52	171.95	139				
116.90	300	172.20	52				
117.95	206	174.00	52712				
119.00	282	175.00	4066				
127.95	194	176.00	50907				
130.00	202	177.00	3539				

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\VY8014\Y184712.D Vial: 2
Acq On : 24 Apr 2019 2:32 pm Operator: ROBERTS
Sample : BFB Inst : MSY
Misc : MS34134,VY8014,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um





AutoFind: Scans 2112, 2113, 2114; Background Corrected with Scan 2104

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.5	12333	PASS
75	95	30	60	48.6	32341	PASS
95	95	100	100	100.0	66517	PASS
96	95	5	9	6.6	4405	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	92.1	61248	PASS
175	174	5	9	8.0	4917	PASS
176	174	95	101	98.5	60341	PASS
177	176	5	9	7.4	4460	PASS

Y184712.D MYS8014.M Fri Apr 26 15:43:27 2019 RPT1

Average of 15.126 to 15.137 min.: Y184712.D
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	595	52.05	259	69.00	6865	80.95	2001
37.10	3673	55.00	173	70.05	543	81.95	443
38.10	3024	56.00	973	72.00	487	86.95	3092
39.05	1165	57.00	1710	73.00	3109	88.00	2905
44.00	313	60.05	736	74.00	11382	90.95	322
45.05	624	61.05	3333	75.00	32341	92.00	1868
47.05	1037	62.05	3223	76.05	3010	93.00	2892
48.00	380	63.10	2225	76.95	471	94.00	8059
49.05	2738	64.05	159	77.95	344	95.00	66517
50.10	12333	66.95	122	78.90	1843	96.00	4405
51.05	3937	68.00	6699	79.95	557	97.00	72

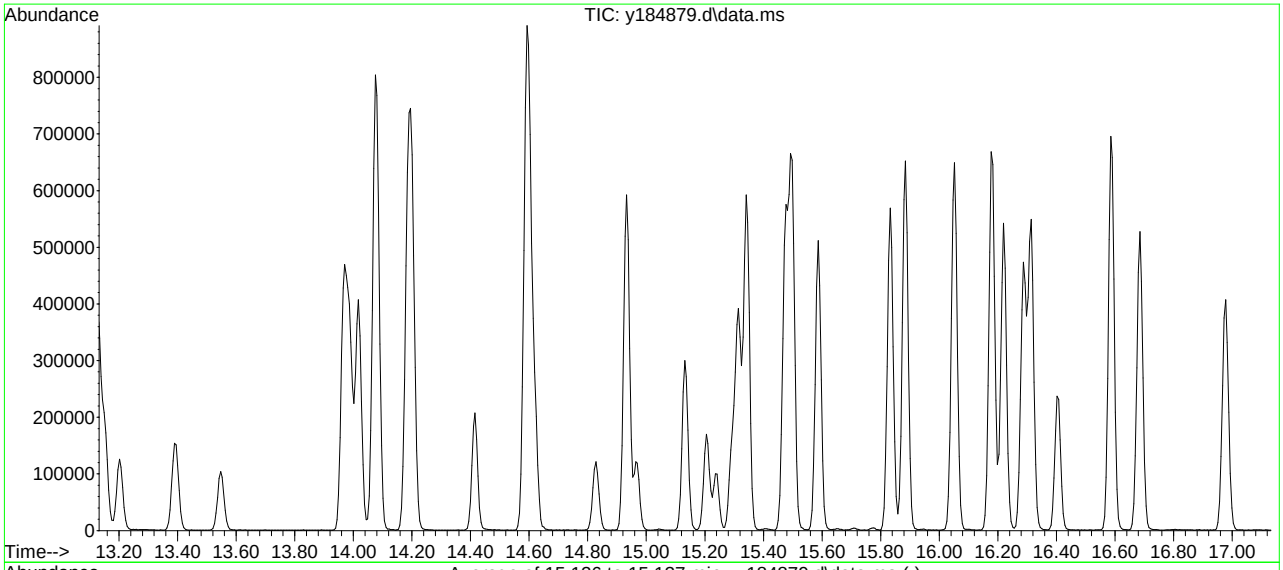
Average of 15.126 to 15.137 min.: Y184712.D
BFB
Modified:subtracted

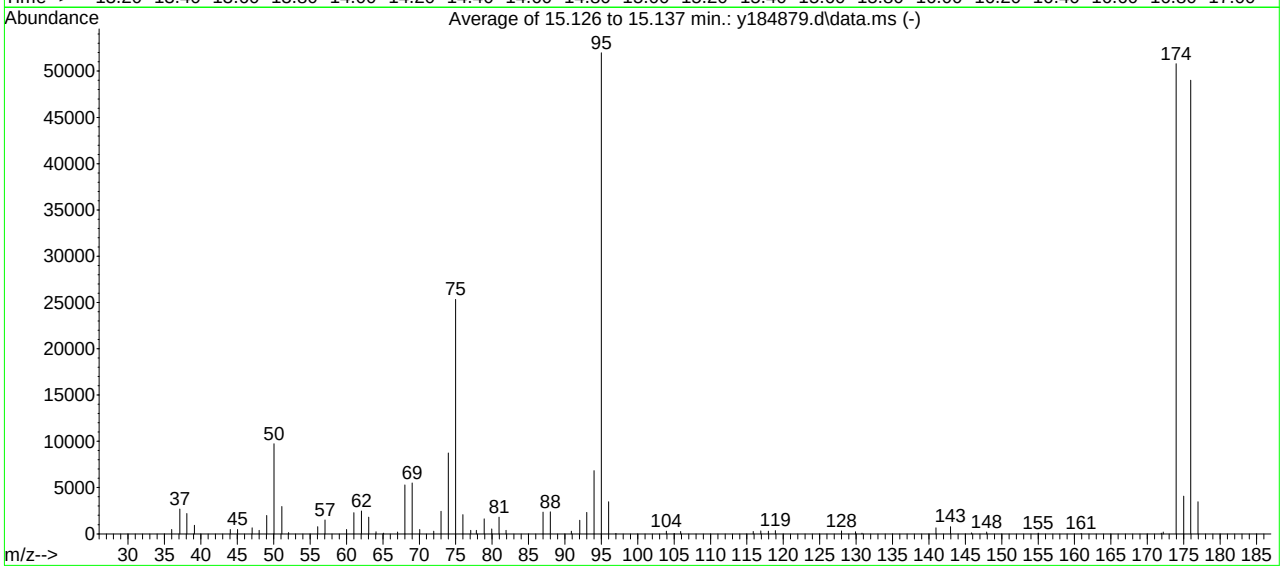
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.90	287	136.90	147	175.00	4917		
105.95	387	140.95	664	175.95	60341		
114.90	54	141.70	59	176.95	4460		
115.95	282	141.90	62	178.00	169		
116.95	449	142.95	716	207.05	141		
117.90	262	147.80	116				
118.95	422	154.95	252				
127.90	180	156.90	142				
128.95	127	171.30	58				
129.95	248	172.05	186				
134.90	125	173.95	61248				

SW-846 Method 8260

Data File : C:\msdchem\1\data\ni...3-19\vy8023\y184879.d Vial: 1
Acq On : 2 May 2019 9:07 am Operator: PrashanS
Sample : bfb Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um





AutoFind: Scans 2112, 2113, 2114; Background Corrected with Scan 2104

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	9732	PASS
75	95	30	60	48.7	25325	PASS
95	95	100	100	100.0	51971	PASS
96	95	5	9	6.7	3475	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	97.8	50813	PASS
175	174	5	9	8.0	4066	PASS
176	174	95	101	96.4	49000	PASS
177	176	5	9	7.1	3460	PASS

y184879.d MYS8014.M Fri May 03 04:15:51 2019

Average of 15.126 to 15.137 min.: y184879.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	480	52.05	133	69.00	5501	80.95	1799
37.10	2697	56.05	789	70.05	476	81.90	395
38.05	2194	57.05	1492	72.00	301	87.00	2355
39.10	929	60.00	459	73.00	2430	88.00	2388
44.05	460	61.00	2281	74.00	8736	90.90	277
45.05	476	62.05	2476	75.00	25325	92.05	1466
47.05	662	63.05	1816	76.00	2077	93.00	2318
48.00	383	64.05	225	77.05	373	94.00	6833
49.05	1993	65.10	66	77.85	390	95.00	51971
50.05	9732	67.00	213	78.90	1613	96.00	3475
51.10	2967	68.00	5293	79.95	527	97.00	51

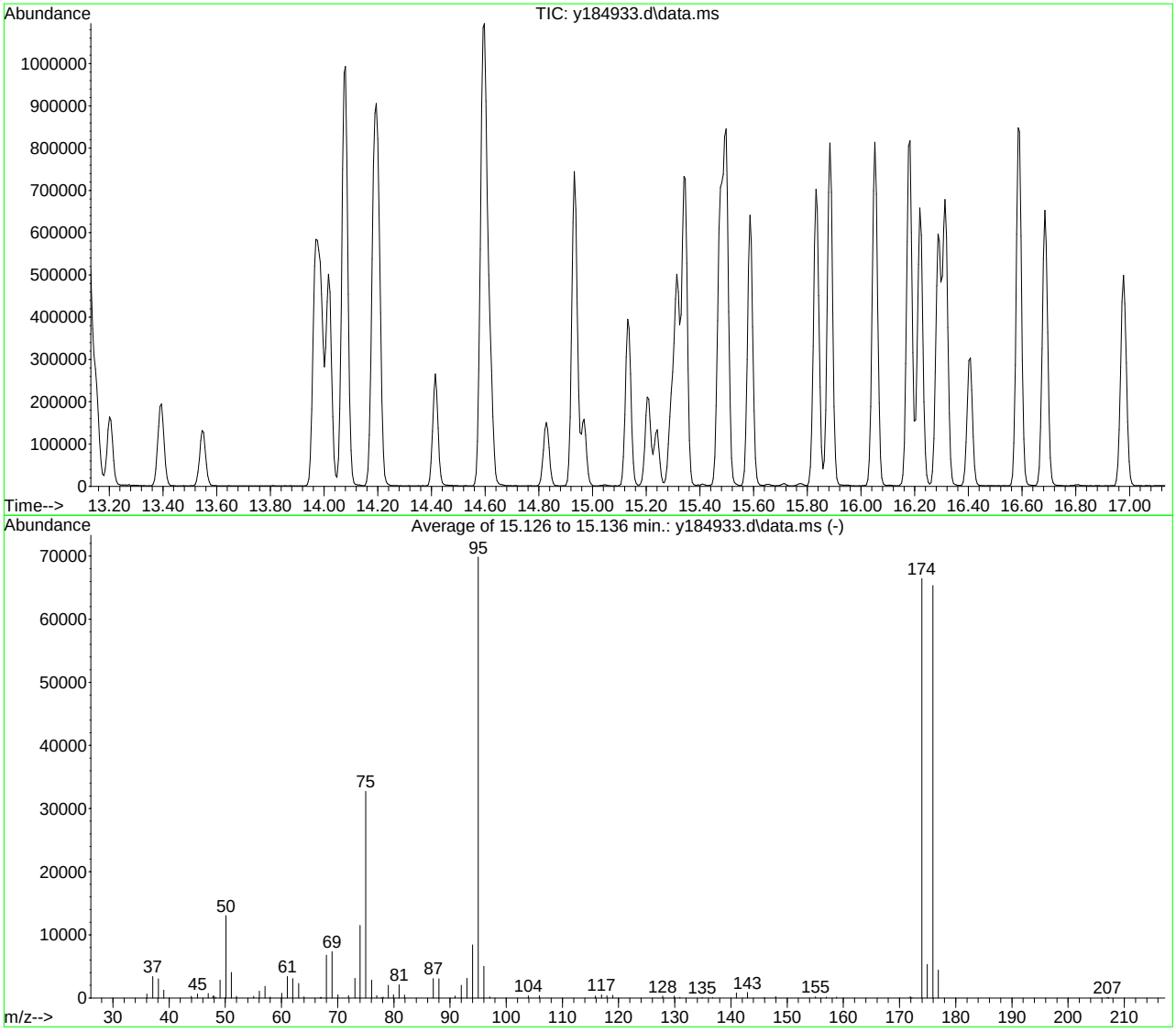
Average of 15.126 to 15.137 min.: y184879.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.95	293	142.95	785				
105.00	55	145.85	111				
105.90	265	147.95	198				
115.85	256	155.00	65				
116.90	318	160.90	50				
117.95	276	171.90	72				
118.90	340	172.20	202				
128.00	333	173.95	50813				
129.90	223	175.00	4066				
130.80	65	175.95	49000				
140.95	655	176.95	3460				

SW-846 Method 8260

Data File : C:\msdchem\1\data\ja...7-19\vy8026\y184933.d Vial: 1
Acq On : 4 May 2019 10:41 am Operator: PrashanS
Sample : BFB Inst : MSY
Misc : MS34370,VY8026,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\MYS8014.M (RTE Integrator)
Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2112, 2113, 2114; Background Corrected with Scan 2104

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	13028	PASS
75	95	30	60	46.9	32733	PASS
95	95	100	100	100.0	69835	PASS
96	95	5	9	7.2	5009	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.1	66413	PASS
175	174	5	9	8.0	5326	PASS
176	174	95	101	98.4	65336	PASS
177	176	5	9	6.7	4407	PASS

y184933.d MYS8014.M Mon May 06 13:08:02 2019

Average of 15.126 to 15.136 min.: y184933.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	651	50.10	13028	64.00	178	76.95	395
37.10	3409	51.10	4063	66.90	58	77.80	55
38.10	3055	52.00	253	67.10	87	78.10	135
39.05	1229	55.05	255	68.00	6783	79.00	2013
43.95	283	56.05	1080	69.00	7336	79.95	524
45.05	630	57.05	1846	70.05	516	80.95	2111
46.95	715	58.00	125	71.95	393	81.90	482
47.80	288	60.05	737	73.05	3129	87.00	3056
48.00	319	61.05	3401	74.00	11477	88.00	3041
48.30	108	62.00	3091	75.00	32733	90.90	309
49.05	2839	63.05	2299	76.05	2831	92.00	2025

Average of 15.126 to 15.136 min.: y184933.d\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	3106	127.85	301	158.80	127		
94.00	8422	129.90	288	171.90	217		
95.00	69835	130.90	111	172.20	80		
96.00	5009	134.90	63	173.95	66413		
97.05	172	136.70	50	174.95	5326		
103.95	360	140.95	784	175.95	65336		
105.90	330	142.95	874	176.90	4407		
115.85	321	145.90	64	207.00	101		
116.95	524	147.95	234	207.20	74		
117.90	367	155.05	206				
118.95	416	156.95	143				

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

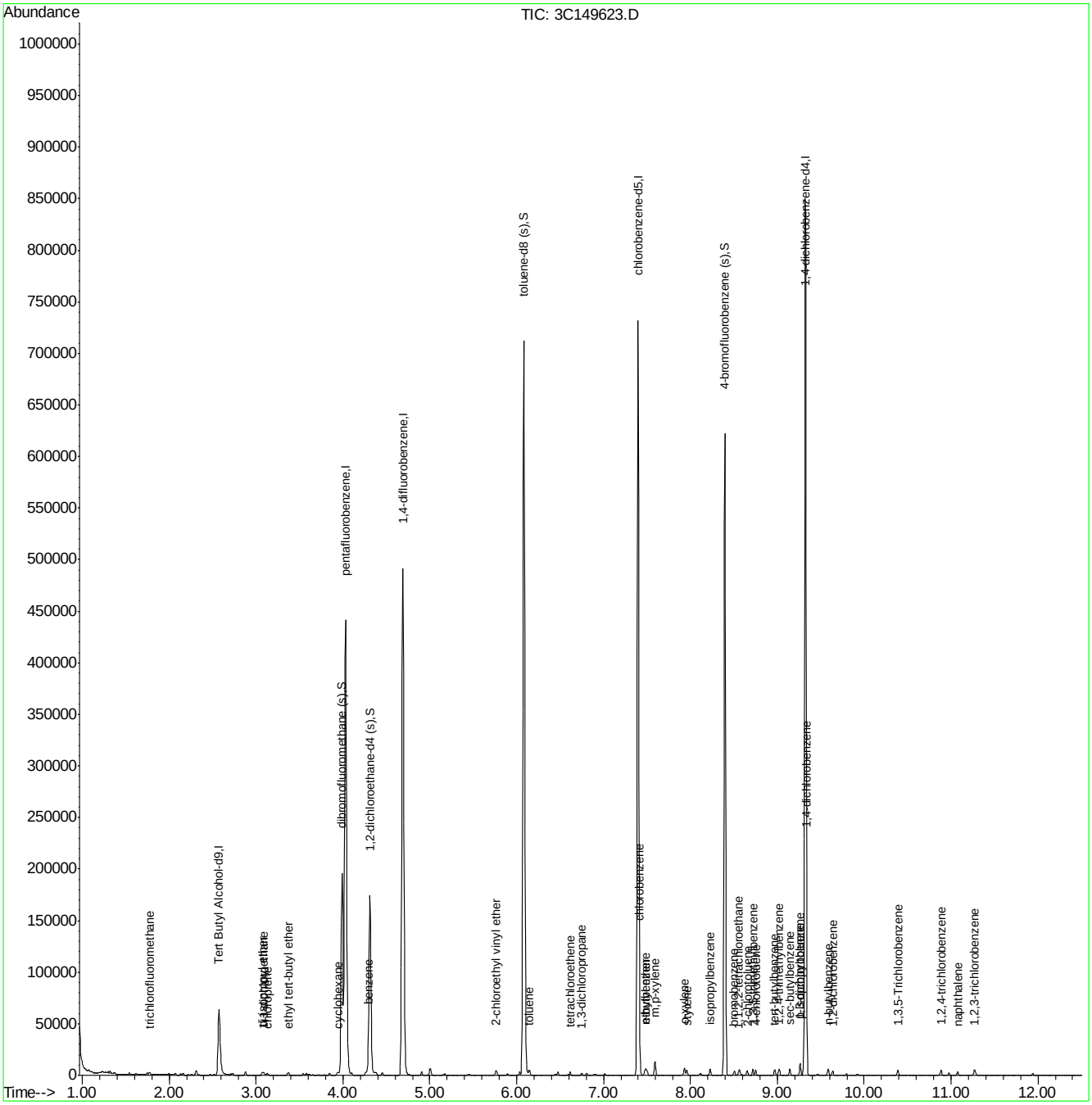
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
119) naphthalene	11.08	128	2974	0.45	ug/L	99
120) 1,2,3-trichlorobenzene	11.27	180	1518	0.44	ug/L	94

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

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

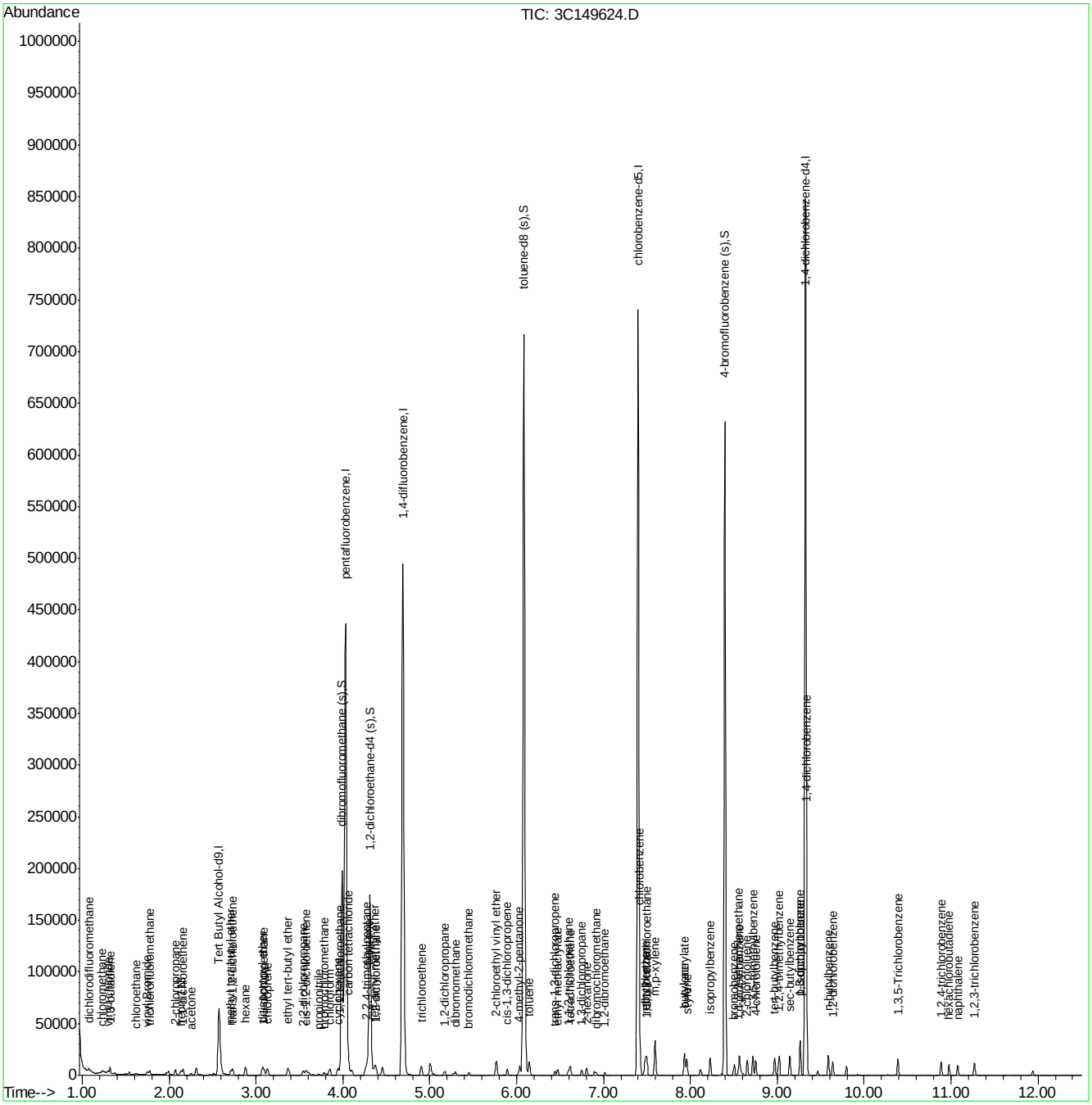
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
68) dibromomethane	5.29	93	856	0.90 ug/L	91
69) bromodichloromethane	5.45	83	2203	0.97 ug/L	87
71) cis-1,3-dichloropropene	5.89	75	2775	0.99 ug/L	92
72) 4-methyl-2-pentanone	6.03	85	918	3.80 ug/L #	59
76) toluene	6.15	92	5193	1.07 ug/L	99
77) 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

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



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

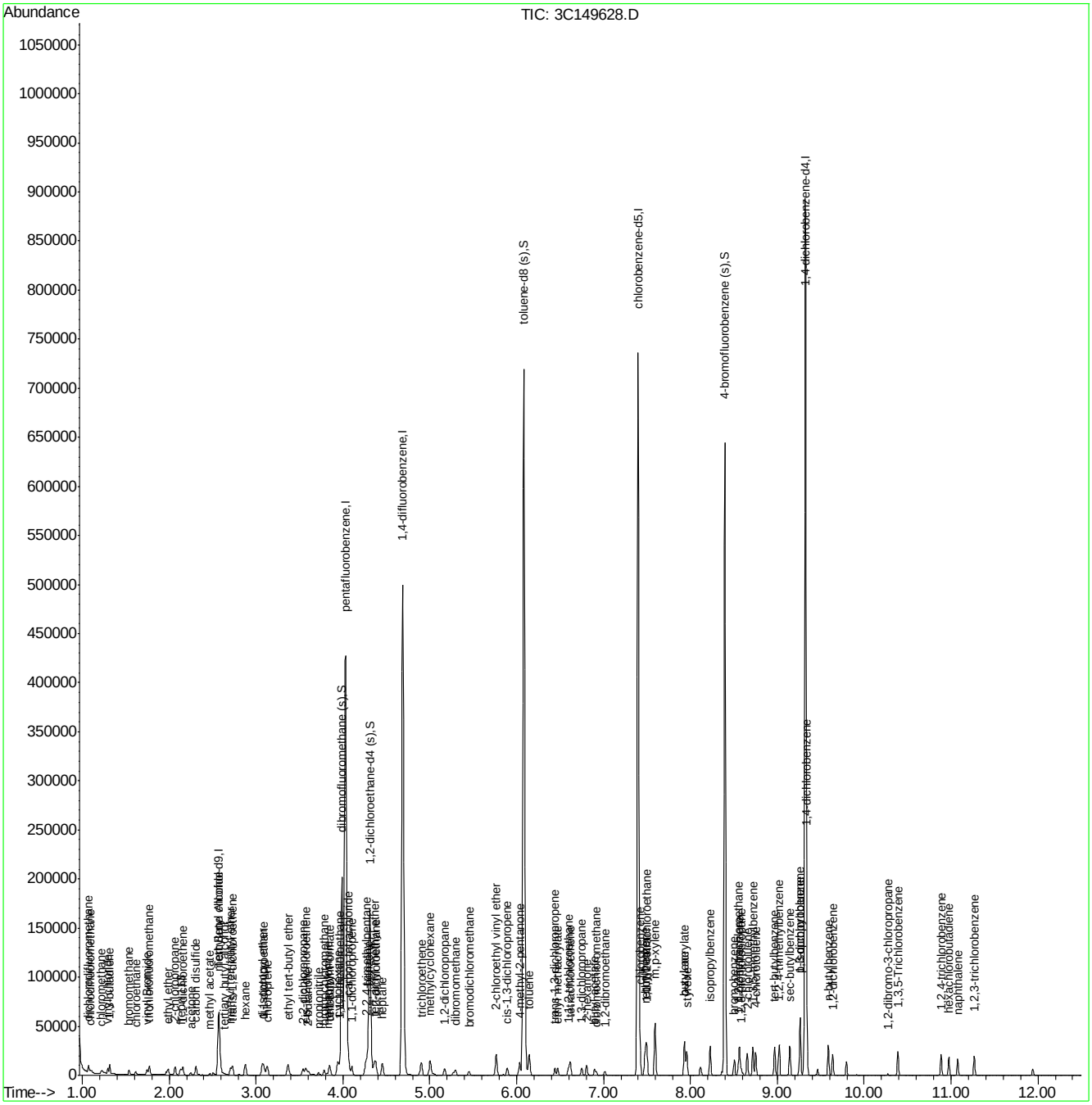
7.7.3

7

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

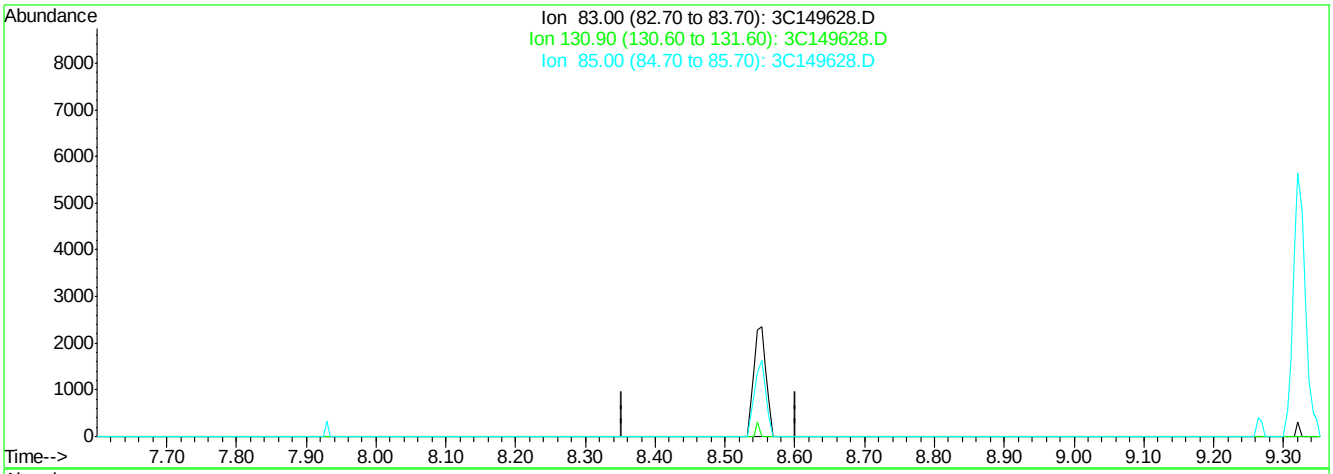
Parameter	CAS	Sig#	R.T. (min.)	Reason
1,1,2,2-Tetrachloroethane	79-34-5		8.55	Missed peak

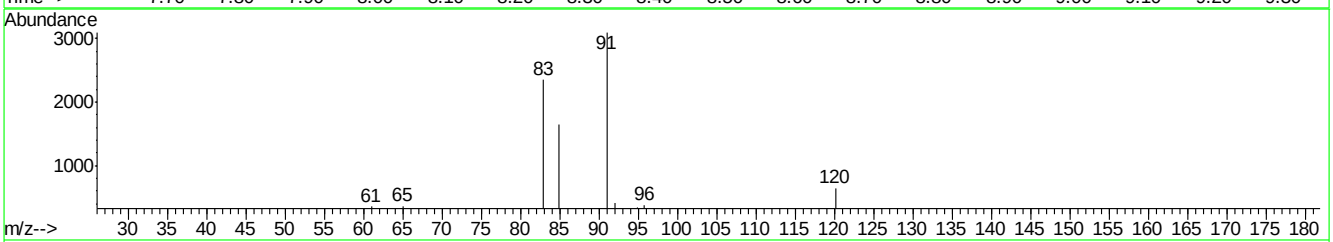
Quantitation Report (Qedit)

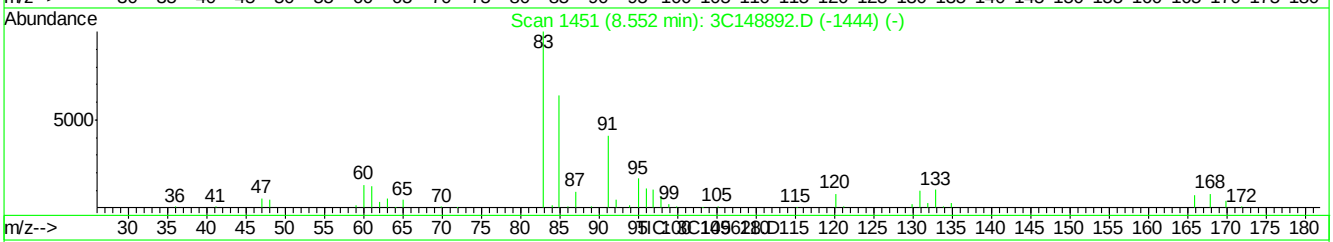
Data File : C:\MSDChem\1\DATA\V3C6743\3C149628.D Vial: 8
Acq On : 13 Feb 2019 8:29 pm Operator: juntaep
Sample : IC6743-2 Inst : MS3C
Misc : MS32156,V3C6743,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

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

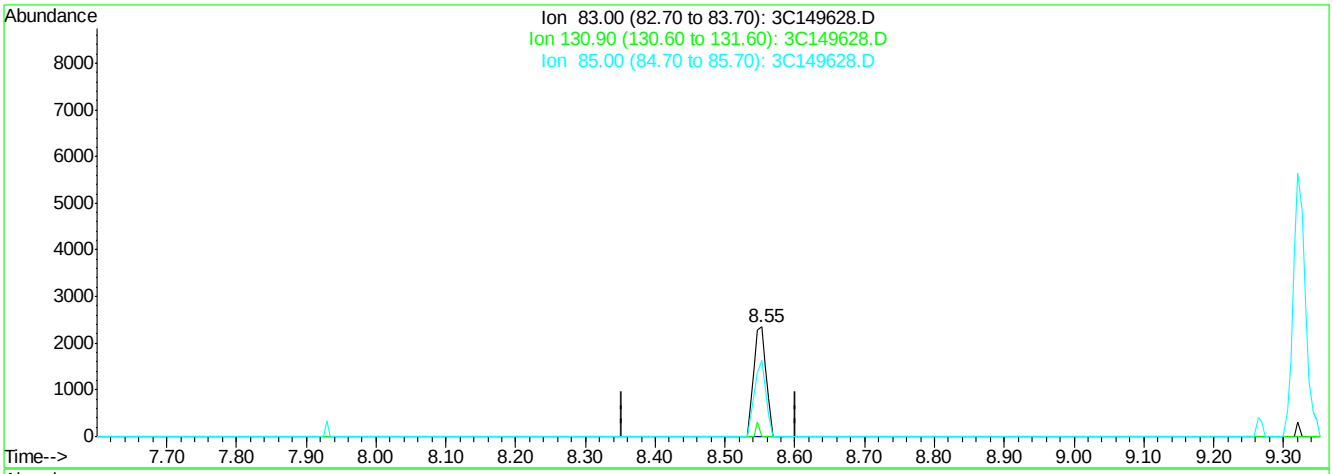
3C149628.D M3C6743.M Fri Feb 15 09:29:28 2019 MS3C

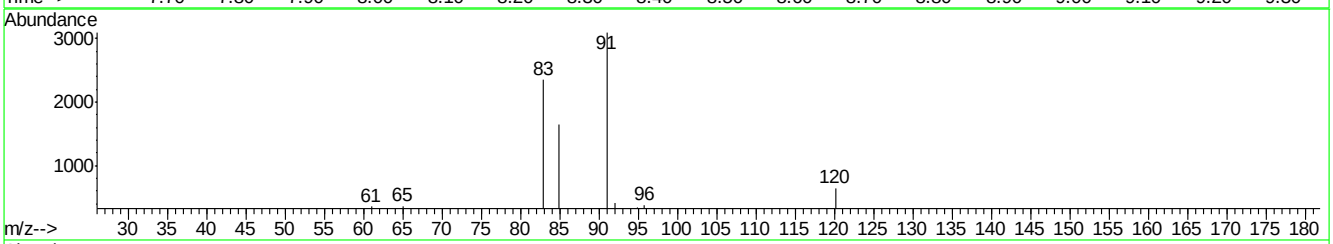
Quantitation Report (Qedit)

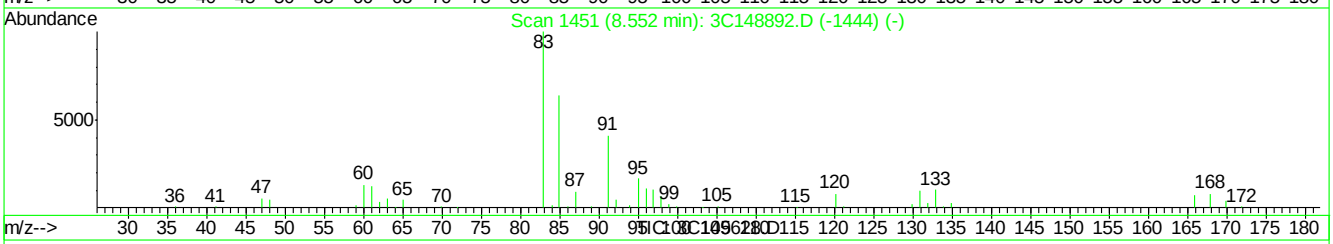
Data File : C:\MSDChem\1\DATA\V3C6743\3C149628.D Vial: 8
Acq On : 13 Feb 2019 8:29 pm Operator: juntaep
Sample : IC6743-2 Inst : MS3C
Misc : MS32156,V3C6743,5.0,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

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

3C149628.D edits: 1,1,2,2-tetrachloroethane

JC86837

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

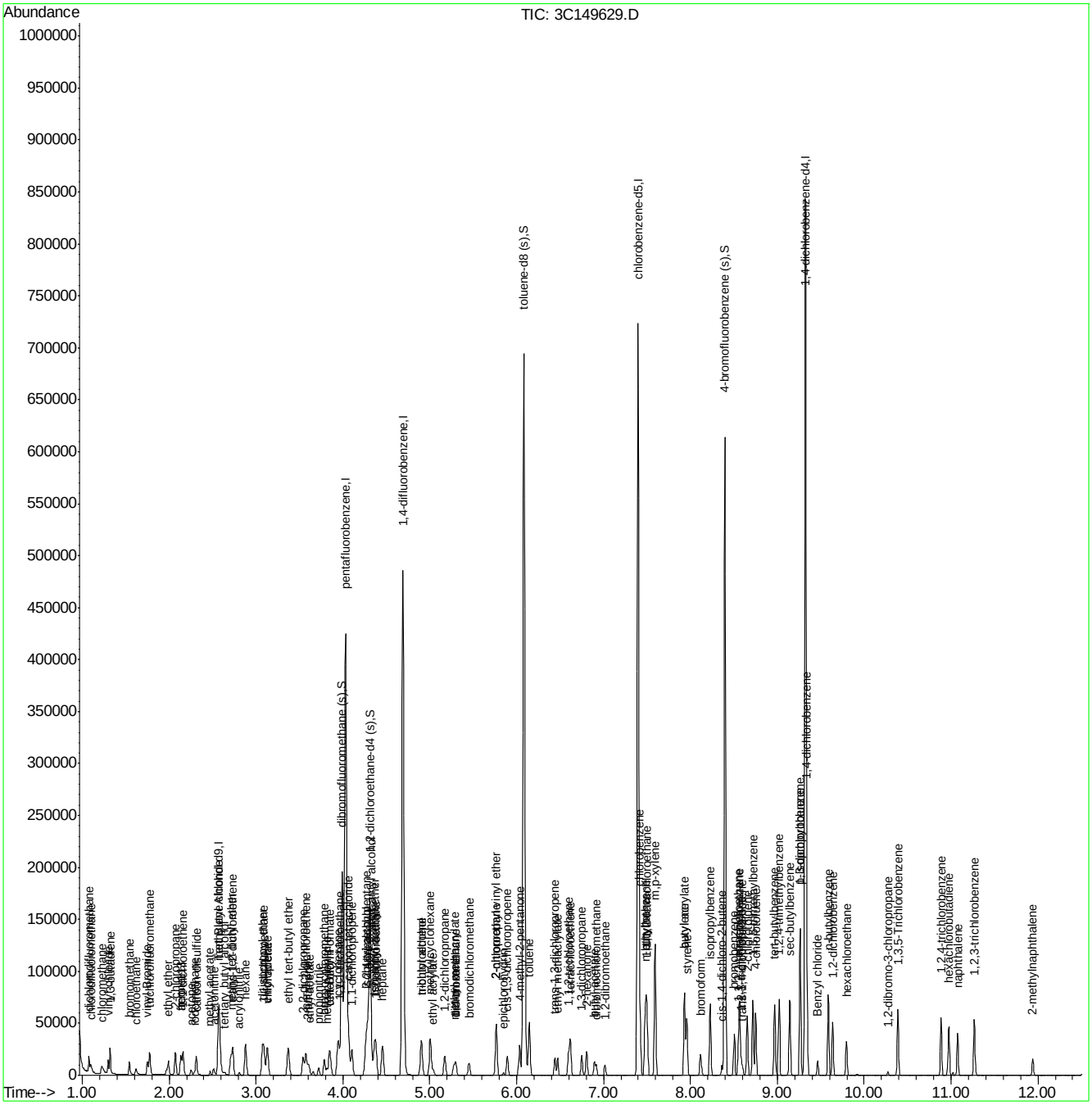
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) butyl acrylate	7.92	55	8704	3.31	ug/L		99
95) isopropylbenzene	8.23	105	36885	3.93	ug/L		99
96) cis-1,4-dichloro-2-butene	8.36	53	1654	3.16	ug/L	#	77
99) bromobenzene	8.51	156	9271	3.92	ug/L		96
100) 1,1,2,2-tetrachloroethane	8.55	83	6229	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

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

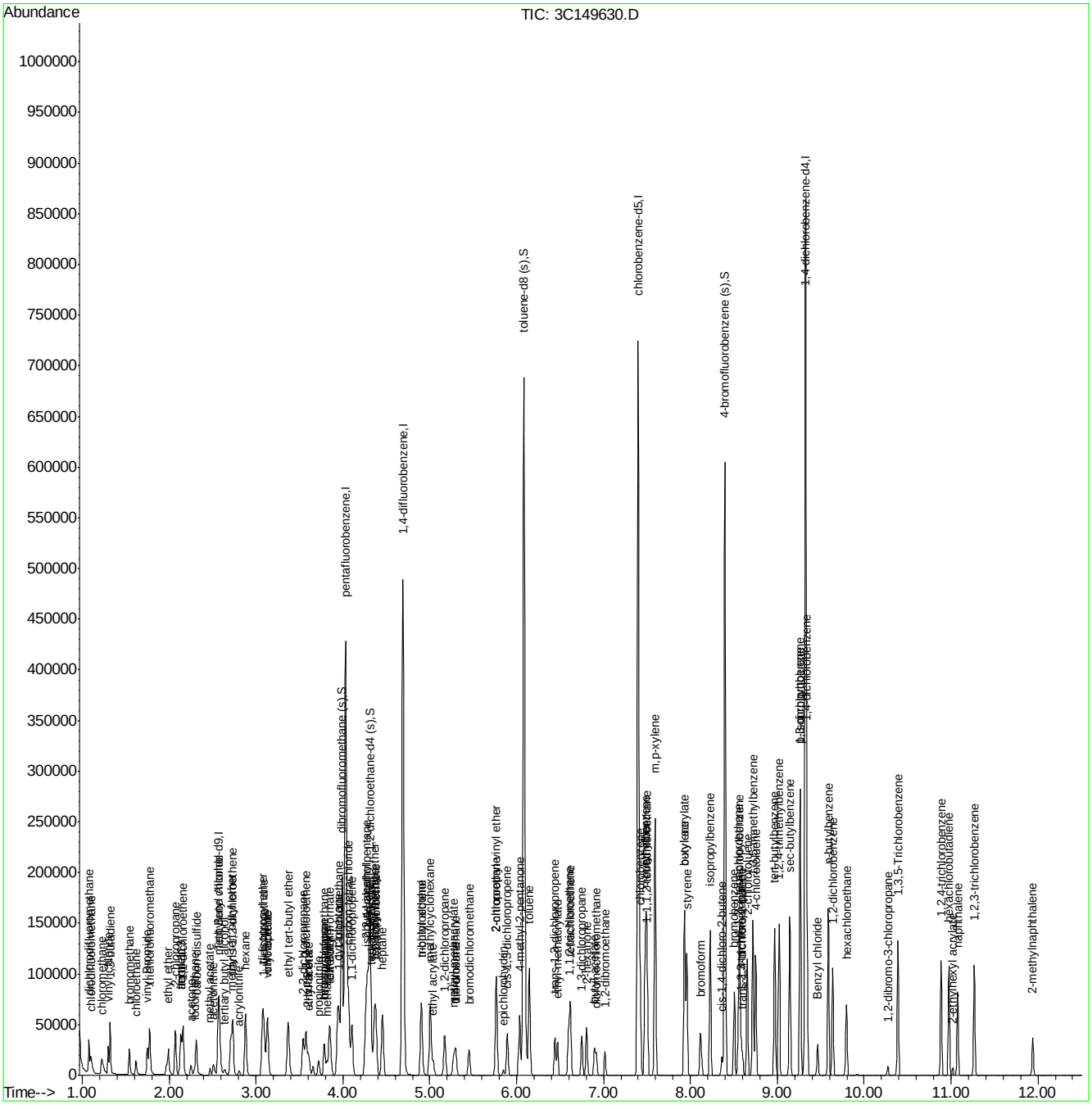
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) bromoform	8.13	173	5194	5.74	ug/L		98
94) butyl acrylate	7.92	55	18121	6.95	ug/L		100
95) isopropylbenzene	8.23	105	72694	7.83	ug/L		99
96) cis-1,4-dichloro-2-butene	8.36	53	3492	6.73	ug/L	#	80
99) bromobenzene	8.51	156	18829	8.07	ug/L		100
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

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

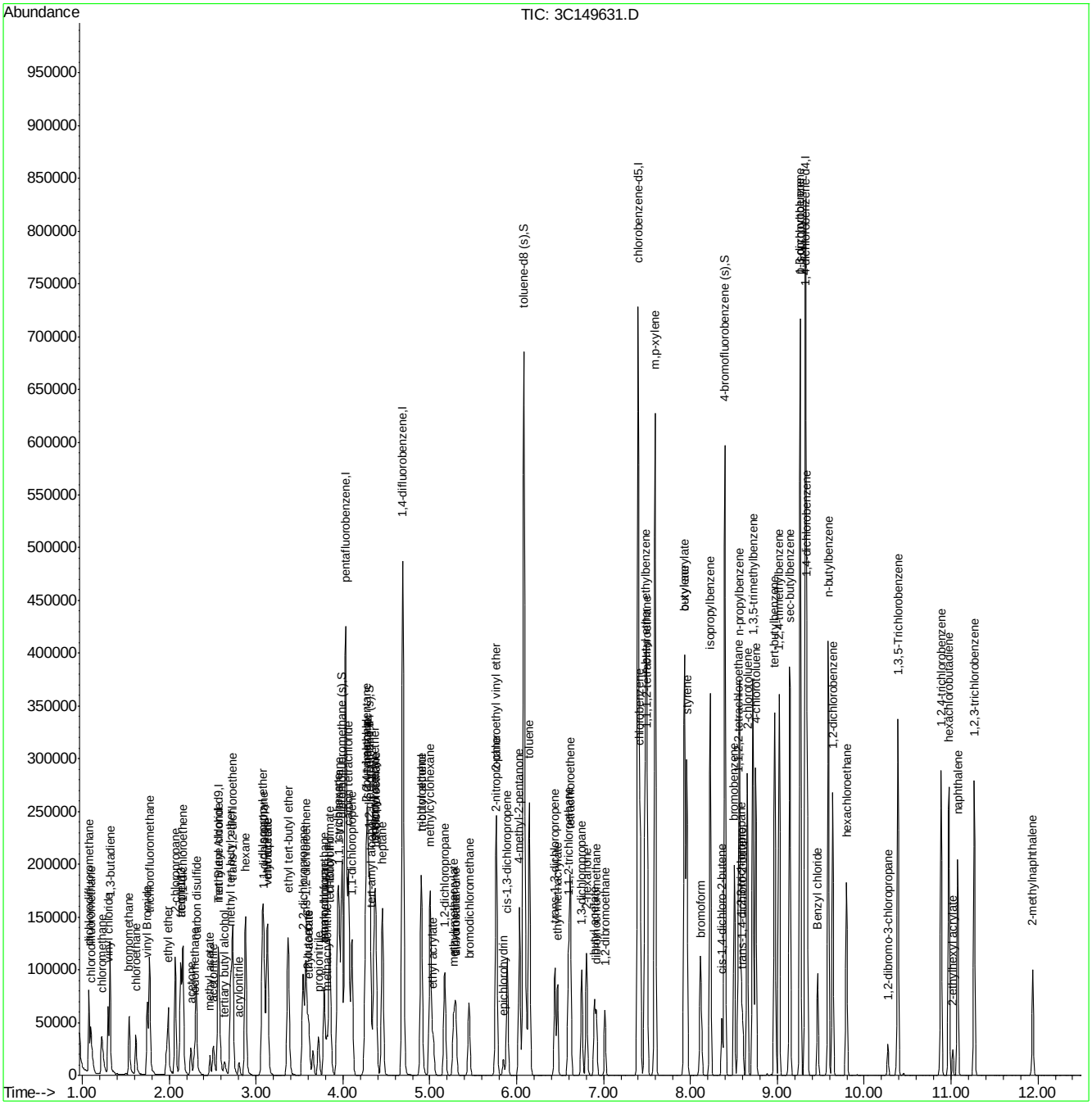
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) bromoform	8.13	173	14740	16.34	ug/L		98
94) butyl acrylate	7.92	55	47744	18.37	ug/L		98
95) isopropylbenzene	8.23	105	183774	19.85	ug/L		100
96) cis-1,4-dichloro-2-butene	8.36	53	9414	18.20	ug/L		87
99) bromobenzene	8.51	156	45663	19.82	ug/L		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

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



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

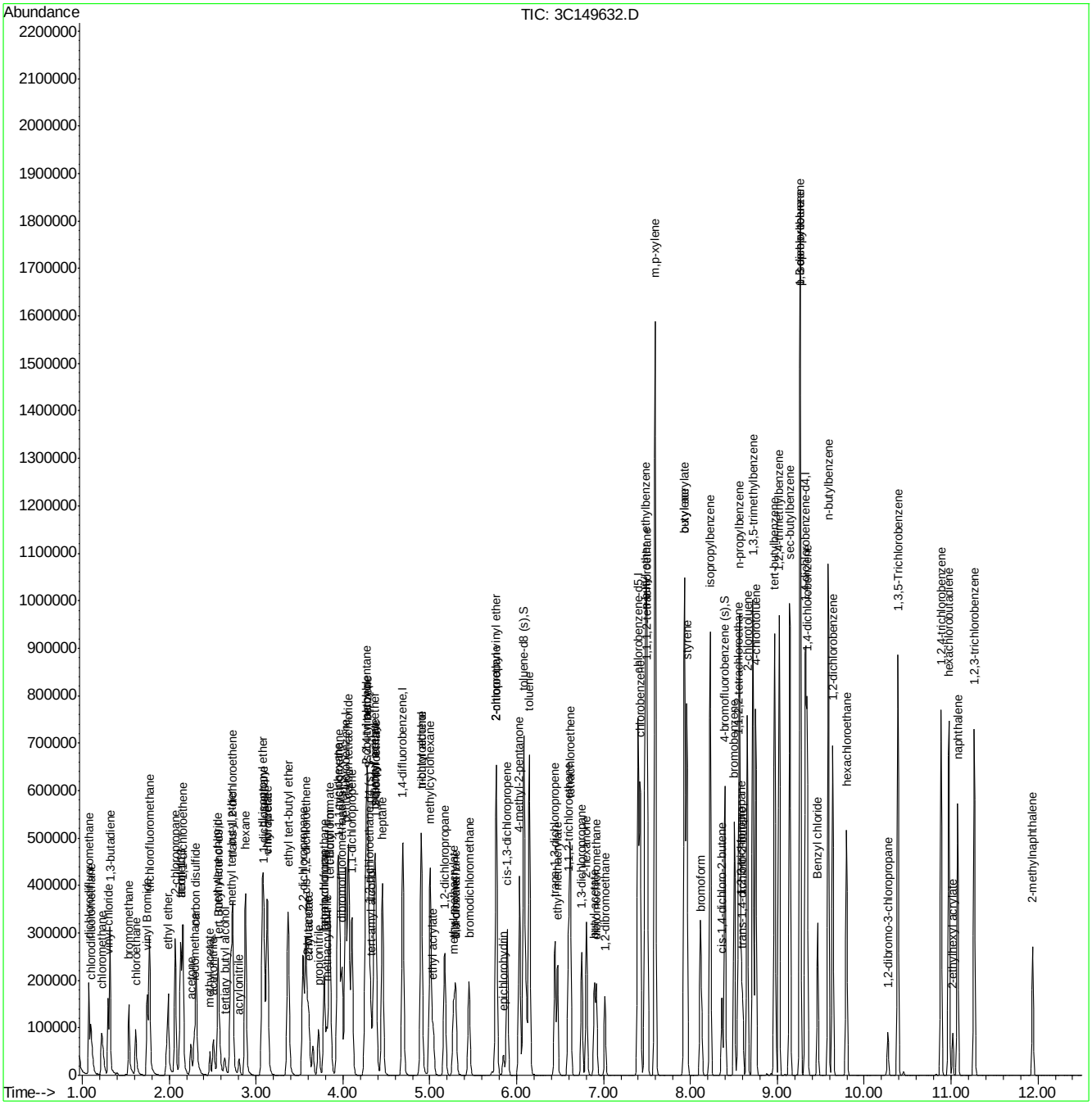
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	8.13	173	45928	50.00	ug/L	100
94) butyl acrylate	7.92	55	132352	50.00	ug/L	100
95) isopropylbenzene	8.23	105	471466	50.00	ug/L	100
96) cis-1,4-dichloro-2-butene	8.36	53	26337	50.00	ug/L	100
99) bromobenzene	8.51	156	120147	50.00	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

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

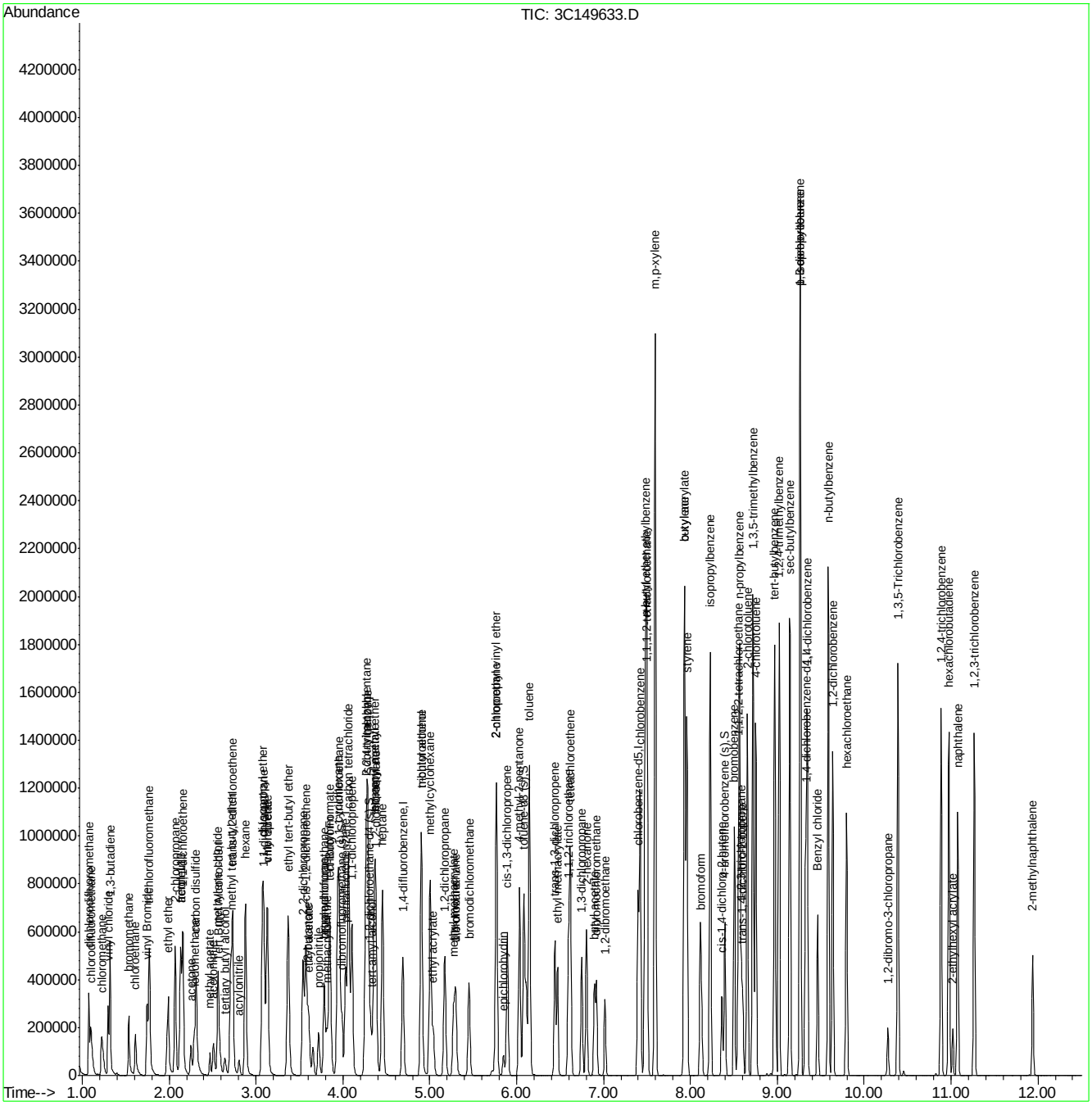
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	99246	105.16 ug/L	98
94) butyl acrylate	7.92	55	258963	95.22 ug/L	99
95) isopropylbenzene	8.23	105	898248	92.72 ug/L	99
96) cis-1,4-dichloro-2-butene	8.36	53	53468	98.80 ug/L	98
99) bromobenzene	8.51	156	232152	92.74 ug/L	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



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

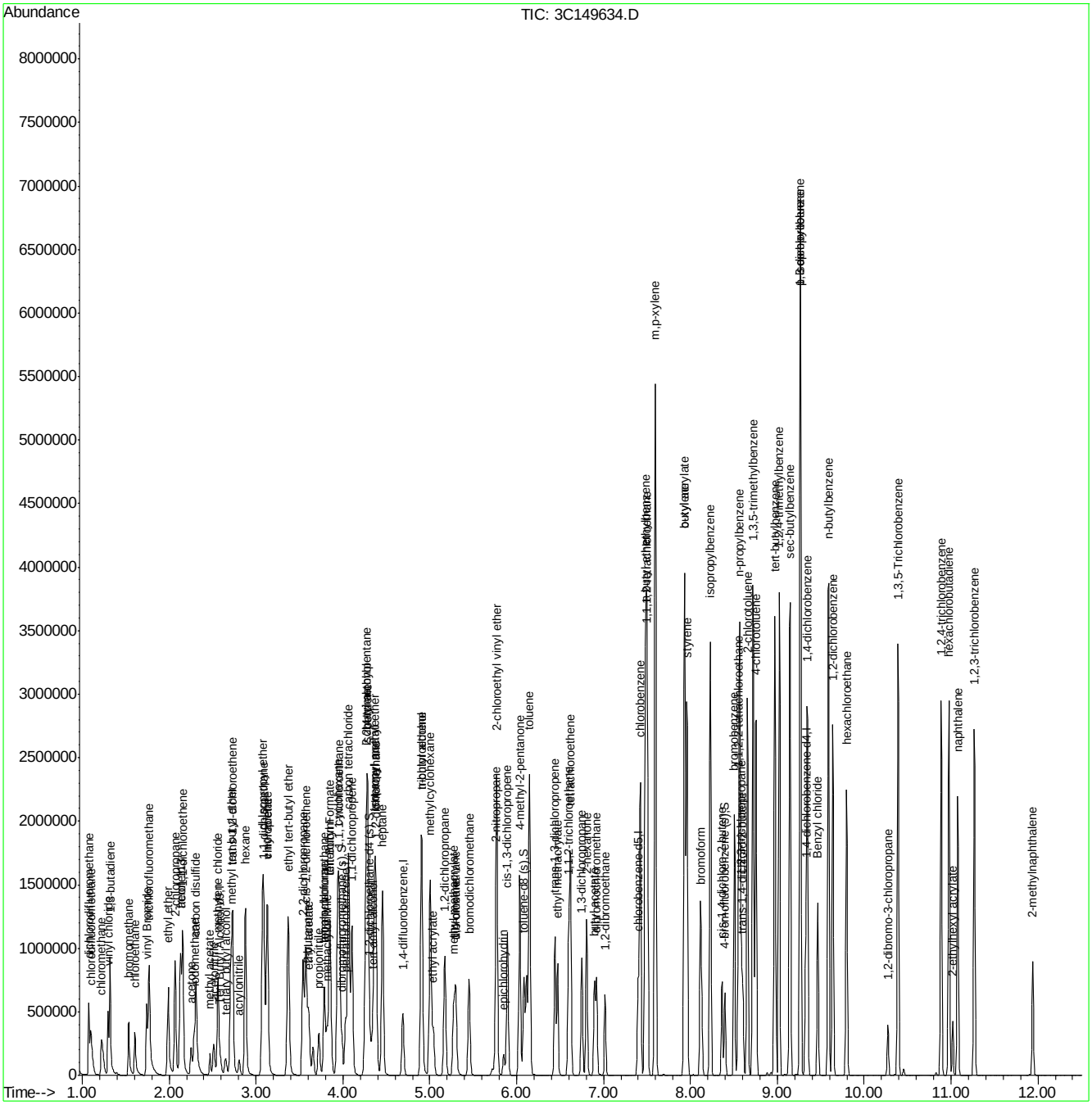
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	8.13	173	208139	221.96 ug/L	99
94) butyl acrylate	7.92	55	531497	196.68 ug/L	100
95) isopropylbenzene	8.23	105	1718834	178.56 ug/L	97
96) cis-1,4-dichloro-2-butene	8.36	53	111998	208.28 ug/L #	88
99) bromobenzene	8.51	156	457771	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

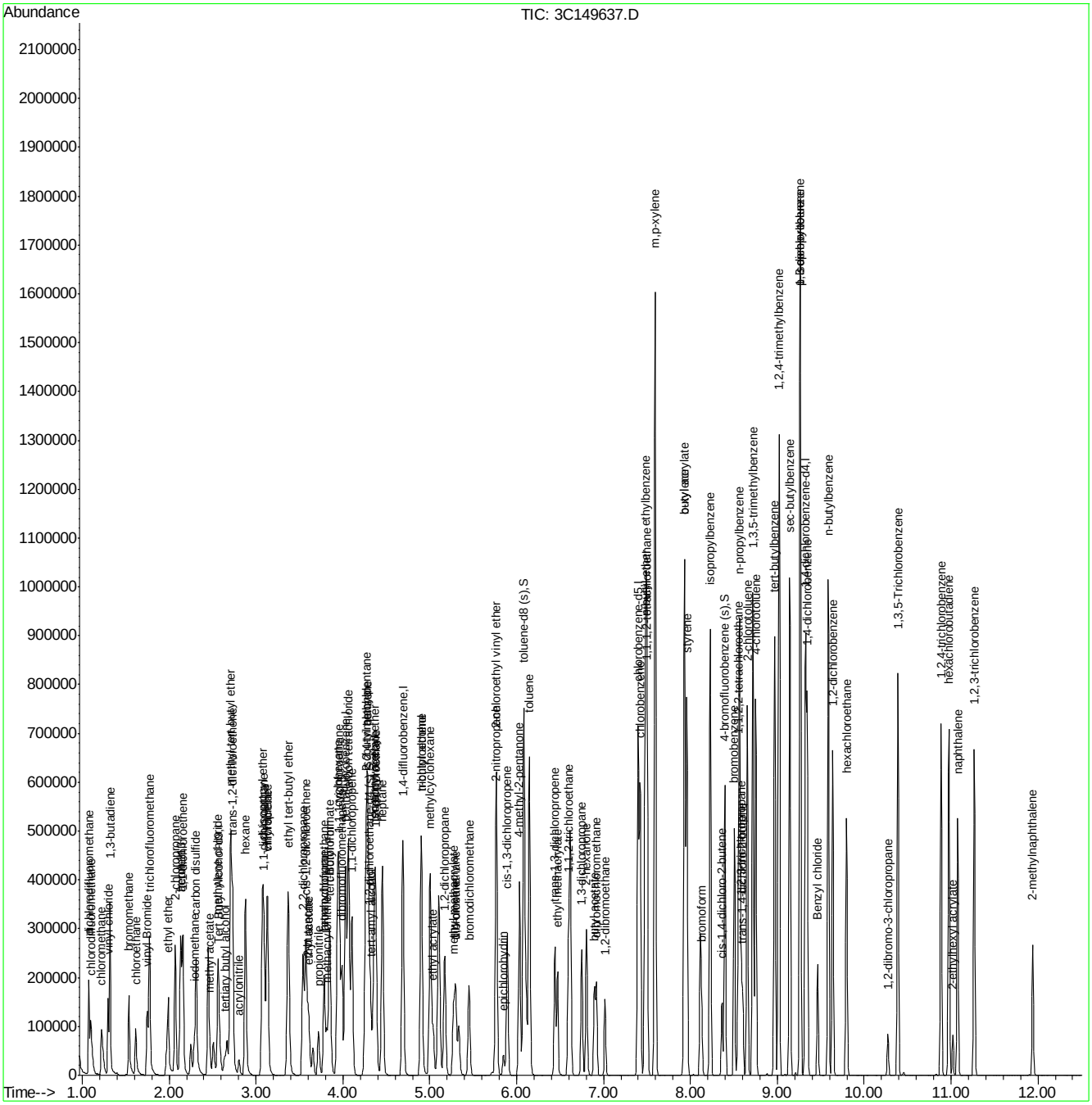
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
96) cis-1,4-dichloro-2-butene	8.36	53	23586	49.13 ug/L	96
99) bromobenzene	8.51	156	114948	50.75 ug/L	96
100) 1,1,2,2-tetrachloroethane	8.55	83	76224	49.49 ug/L	100
101) trans-1,4-dichloro-2-buten	8.60	88	11776	55.41 ug/L	96
102) 1,2,3-trichloropropane	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



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

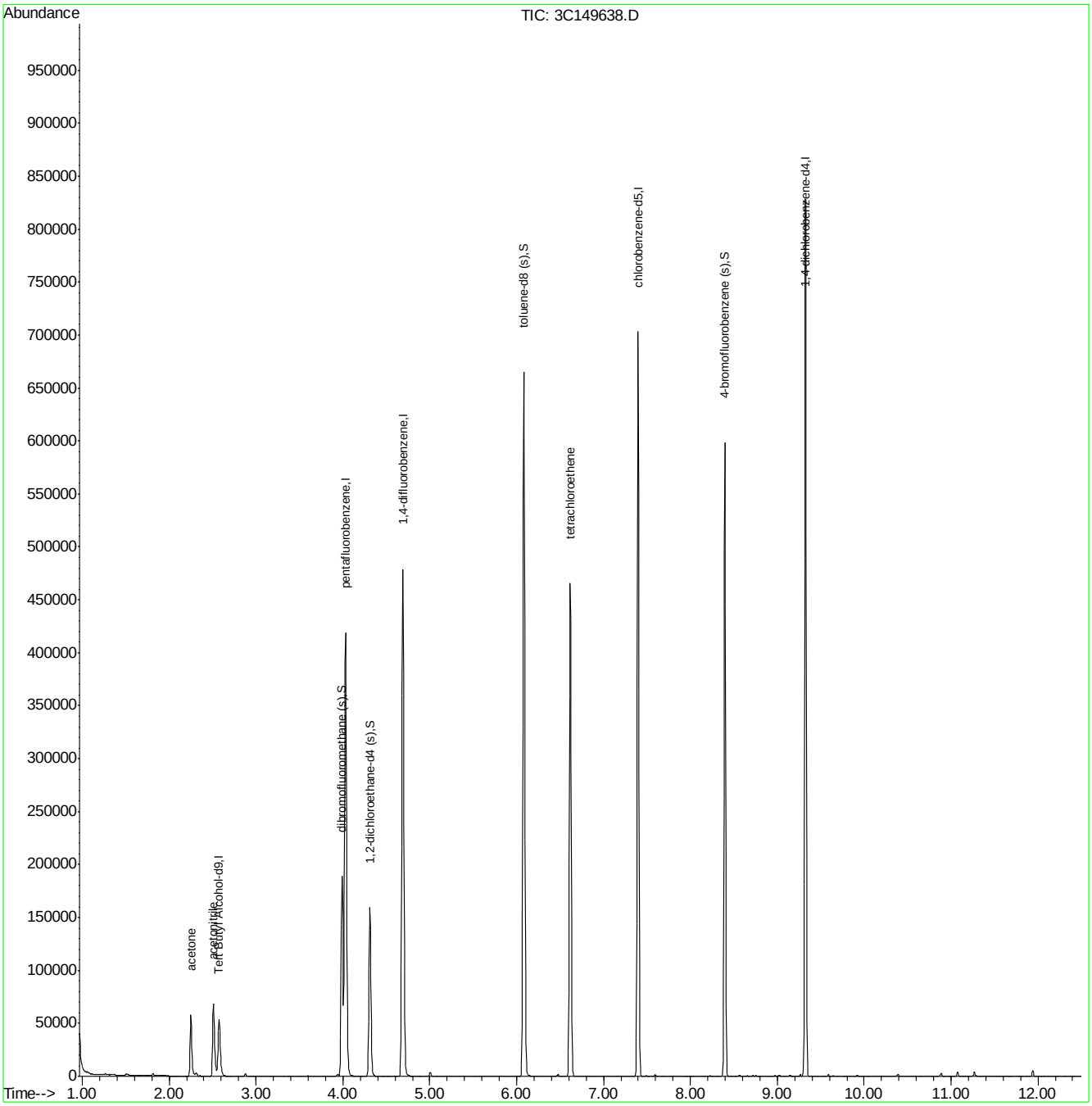
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	2.57	65	53978	500.00	ug/L	0.00
5) pentafluorobenzene	4.03	168	262426	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.69	114	357799	50.00	ug/L	0.00
74) chlorobenzene-d5	7.40	117	307813	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	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\jonkm\v3c6814\
Data File : 3c151595.d
Acq On : 1 May 2019 8:36 am
Operator : PrashanS
Sample : cc6743-20 Inst : MS3C
Misc : MS34176,V3C6814,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 02:46:35 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	38962	500.00	ug/L		0.00
5) pentafluorobenzene	4.033	168	183268	50.00	ug/L		0.00
52) 1,4-difluorobenzene	4.687	114	237663	50.00	ug/L		0.00
74) chlorobenzene-d5	7.391	117	212335	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	9.321	152	120358	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	3.986	113	64404	48.63	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 97.26%				
53) 1,2-dichloroethane-d4 (s)	4.305	65	65034	50.36	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.72%				
75) toluene-d8 (s)	6.084	98	268965	51.18	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.36%				
98) 4-bromofluorobenzene (s)	8.390	95	101887	51.49	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.98%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	2.637	59	8483	98.76	ug/L		93
4) 1,4-dioxane	5.289	88	5435	519.19	ug/L		98
6) chlorodifluoromethane	1.104	51	19358	17.44	ug/L		96
7) dichlorodifluoromethane	1.078	85	28294	17.87	ug/L		97
8) chloromethane	1.225	50	21853	16.72	ug/L		98
9) 1,3-butadiene	1.319	54	14489	17.03	ug/L		98
10) vinyl chloride	1.293	62	21995	16.73	ug/L		100
11) bromomethane	1.538	94	14497	18.43	ug/L		97
12) chloroethane	1.617	64	12994	16.63	ug/L		97
13) vinyl Bromide	1.748	106	17233	15.27	ug/L		94
14) trichlorofluoromethane	1.774	101	31058	15.96	ug/L		98
15) ethyl ether	1.988	74	10849	19.58	ug/L		93
16) 2-chloropropane	2.072	63	7857	17.76	ug/L	#	87
17) acrolein	2.140	56	2534	22.24	ug/L		97
18) freon 113	2.135	151	18074	19.43	ug/L		94
19) 1,1-dichloroethene	2.161	96	19348	18.65	ug/L		96
20) acetone	2.250	58	4762	83.40	ug/L	#	79
21) acetonitrile	2.511	41	16449	186.68	ug/L		100
22) iodomethane	2.286	142	11444	13.46	ug/L		95
23) carbon disulfide	2.307	76	53817	18.52	ug/L		96
24) methylene chloride	2.564	84	24507	21.61	ug/L		89
25) methyl acetate	2.469	43	10086	18.44	ug/L		100
26) methyl tert butyl ether	2.710	73	53550	19.37	ug/L		99
27) trans-1,2-dichloroethene	2.731	96	21845	18.50	ug/L		99
28) hexane	2.877	57	32876	17.59	ug/L		98
29) di-isopropyl ether	3.076	45	58406	17.41	ug/L		94
30) ethyl tert-butyl ether	3.364	59	63083	19.02	ug/L		100
31) 2-butanone	3.594	72	7370	81.95	ug/L	#	87
32) 1,1-dichloroethane	3.092	63	35154	18.32	ug/L		96
33) chloroprene	3.134	53	31729	18.62	ug/L		98
34) acrylonitrile	2.804	53	4595	19.71	ug/L		91
35) vinyl acetate	3.123	86	4476	21.41	ug/L	#	37
36) ethyl acetate	3.615	45	1654	15.35	ug/L		87
37) 2,2-dichloropropane	3.542	77	31660	17.93	ug/L		99
38) cis-1,2-dichloroethene	3.573	96	23923	18.75	ug/L		94
39) propionitrile	3.714	54	20939	202.36	ug/L		99
40) bromochloromethane	3.782	130	14395	20.12	ug/L		86
41) tetrahydrofuran	3.782	71	2257	25.23	ug/L	#	72
42) chloroform	3.840	83	37351	18.00	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151595.d
Acq On : 1 May 2019 8:36 am
Operator : PrashanS
Sample : cc6743-20 Inst : MS3C
Misc : MS34176,V3C6814,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 02:46:35 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	11438	17.42	ug/L		87
44) isobutyl alcohol	4.263	41	25986	161.37	ug/L		99
46) methacrylonitrile	3.808	67	6684	21.76	ug/L		87
47) 1,1,1-trichloroethane	3.960	97	34426	18.38	ug/L		97
48) cyclohexane	3.939	84	31972	16.69	ug/L		94
49) 1,1-dichloropropene	4.101	110	11314	18.38	ug/L		97
50) tert-amyl alcohol	4.326	59	6897	84.60	ug/L		81
51) carbon tetrachloride	4.070	119	29002	19.60	ug/L		98
54) 2,2,4-trimethylpentane	4.263	57	80074	18.16	ug/L		98
55) tert-amyl methyl ether	4.358	87	19504	19.80	ug/L		95
56) n-butyl alcohol	4.891	56	24132	1097.23	ug/L		99
57) benzene	4.284	78	85871	19.65	ug/L		99
58) heptane	4.452	57	16951	18.13	ug/L		98
59) isopropyl acetate	4.358	87	19504	19.33	ug/L		83
60) 1,2-dichloroethane	4.378	62	25445	18.33	ug/L		98
61) trichloroethene	4.896	95	23877	20.10	ug/L		98
62) ethyl acrylate	5.037	55	19668	20.27	ug/L		97
63) 2-nitropropane	5.759	41	5582	18.87	ug/L	#	73
64) 2-chloroethyl vinyl ether	5.765	63	59290	103.13	ug/L		97
65) methyl methacrylate	5.273	100	5662	23.09	ug/L	#	70
66) 1,2-dichloropropane	5.168	63	19693	18.96	ug/L		99
67) methylcyclohexane	5.001	83	38982	17.58	ug/L		97
68) dibromomethane	5.294	93	11231	19.75	ug/L		87
69) bromodichloromethane	5.445	83	27040	20.47	ug/L		98
70) epichlorohydrin	5.843	57	8016	111.14	ug/L		99
71) cis-1,3-dichloropropene	5.890	75	34314	20.77	ug/L		92
72) 4-methyl-2-pentanone	6.031	85	13547	97.94	ug/L	#	73
76) toluene	6.141	92	57466	18.96	ug/L		100
77) trans-1,3-dichloropropene	6.434	75	28669	20.58	ug/L		98
78) ethyl methacrylate	6.465	69	23746	20.50	ug/L		94
79) 1,1,2-trichloroethane	6.596	83	14321	19.21	ug/L		97
80) 2-hexanone	6.800	58	23256	81.52	ug/L		90
81) tetrachloroethene	6.617	166	30403	21.15	ug/L		95
82) 1,3-dichloropropane	6.748	76	29199	19.41	ug/L		96
83) butyl acetate	6.889	56	10646	19.85	ug/L		93
84) dibromochloromethane	6.915	129	20290	23.11	ug/L		96
85) 1,2-dibromoethane	7.015	107	19762	18.27	ug/L		94
86) n-butyl ether	7.470	57	82914	16.81	ug/L		99
87) chlorobenzene	7.417	112	64780	19.42	ug/L		100
88) 1,1,1,2-tetrachloroethane	7.501	131	22938	20.83	ug/L		97
89) ethylbenzene	7.485	91	110158	18.78	ug/L		99
90) m,p-xylene	7.595	106	88402	38.25	ug/L		99
91) o-xylene	7.930	91	88388	19.05	ug/L		99
92) styrene	7.956	104	72499	19.52	ug/L		99
93) bromoform	8.129	173	13827	22.99	ug/L		97
94) butyl acrylate	7.925	55	31415	19.50	ug/L		99
95) isopropylbenzene	8.223	105	114810	19.42	ug/L		98
96) cis-1,4-dichloro-2-butene	8.353	53	6432	19.70	ug/L		87
99) bromobenzene	8.500	156	30955	19.40	ug/L		98
100) 1,1,2,2-tetrachloroethane	8.547	83	21101	19.45	ug/L		96
101) trans-1,4-dichloro-2-b...	8.605	88	2826	20.60	ug/L		89
102) 1,2,3-trichloropropane	8.584	110	6738	19.52	ug/L		93
103) n-propylbenzene	8.563	91	130062	17.77	ug/L		98
104) 2-chlorotoluene	8.652	126	27977	18.69	ug/L		94
105) 4-chlorotoluene	8.751	126	28250	18.91	ug/L		91
106) 1,3,5-trimethylbenzene	8.714	105	100045	18.79	ug/L		99
107) tert-butylbenzene	8.965	119	87898	18.55	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151595.d
Acq On : 1 May 2019 8:36 am
Operator : PrashanS
Sample : cc6743-20 Inst : MS3C
Misc : MS34176,V3C6814,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 02:46:35 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

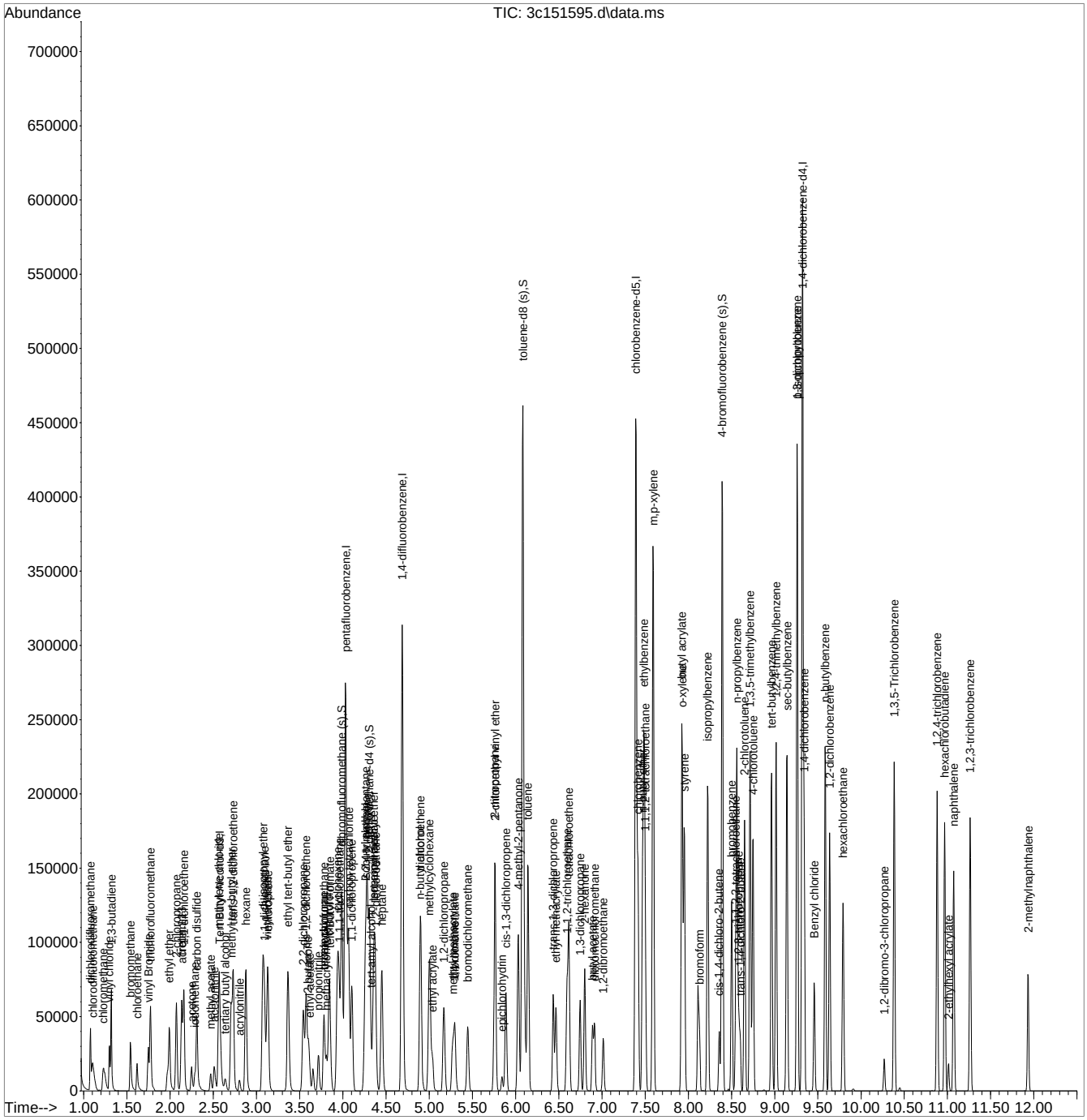
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	9.018	105	99824	18.42	ug/L	98
109) sec-butylbenzene	9.143	105	125850	18.27	ug/L	96
110) 1,3-dichlorobenzene	9.258	146	59962	19.13	ug/L	99
111) p-isopropyltoluene	9.258	119	115946	19.13	ug/L	98
112) 1,4-dichlorobenzene	9.342	146	60529	18.89	ug/L	98
113) 1,2-dichlorobenzene	9.635	146	56316	19.17	ug/L	98
114) n-butylbenzene	9.583	92	53508	17.87	ug/L	99
115) 1,2-dibromo-3-chloropr...	10.268	157	5873	22.62	ug/L	98
116) 1,3,5-Trichlorobenzene	10.383	180	59526	20.89	ug/L	99
117) 1,2,4-trichlorobenzene	10.880	180	51259	20.89	ug/L	97
118) hexachlorobutadiene	10.969	225	34649	22.67	ug/L	97
119) naphthalene	11.073	128	91353	21.26	ug/L	98
120) 1,2,3-trichlorobenzene	11.261	180	49176	21.61	ug/L	99
121) hexachloroethane	9.792	201	20040	23.05	ug/L	91
122) Benzyl chloride	9.457	91	40969	21.61	ug/L	98
123) 2-ethylhexyl acrylate	11.016	70	4026	3.81	ug/L	89
124) 2-methylnaphthalene	11.936	142	31017	12.05	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\v3c6814\
Data File : 3c151595.d
Acq On : 1 May 2019 8:36 am
Operator : PrashanS
Sample : cc6743-20 Inst : MS3C
Misc : MS34176,V3C6814,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C6743.M
Quant Results File: M3C6743.RES
Quant Time: May 02 02:46:35 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\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

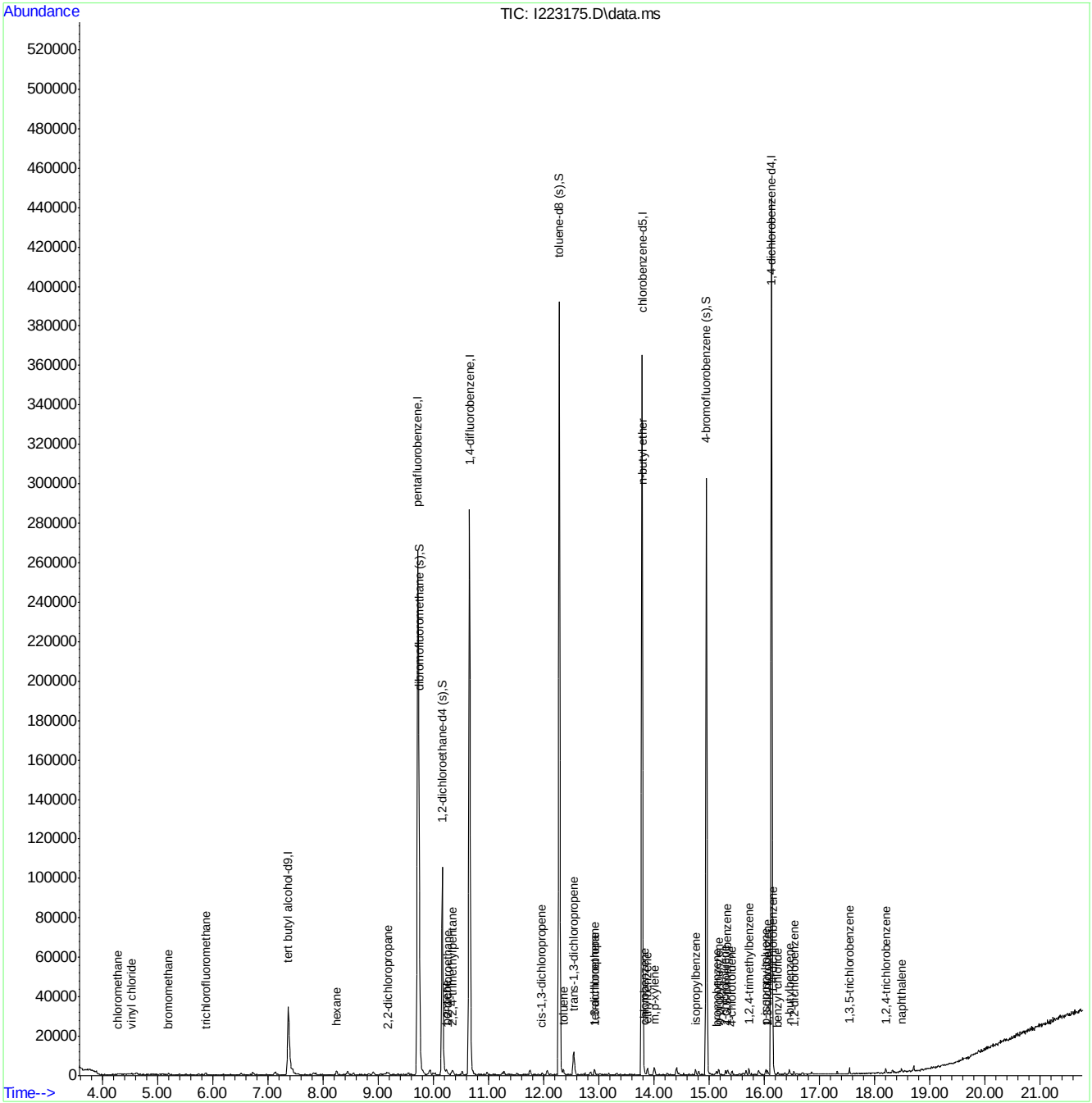
7.7.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223175.D
Acq On : 27 Nov 2018 6:23 pm
Operator : thienn
Sample : IC8986-0.5
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 28 13:28:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.369	65	56032	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	178959	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	224797	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	190466	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	109248	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	70424	50.08	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.16%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	71945	51.29	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 102.58%				
74) toluene-d8 (s)	12.280	98	246014	50.39	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%				
97) 4-bromofluorobenzene (s)	14.947	95	85952	51.61	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.22%				
Target Compounds							Qvalue
5) dichlorodifluoromethane	3.891	85	1456	0.95	ug/L		89
6) chlorodifluoromethane	3.922	51	1313	0.93	ug/L		65
7) chloromethane	4.278	50	1522	1.05	ug/L		89
8) vinyl chloride	4.534	62	1167	0.96	ug/L		80
9) 1,3-butadiene	4.618	54	766	0.95	ug/L		92
10) bromomethane	5.198	94	821	1.01	ug/L		94
11) chloroethane	5.397	64	609	0.86	ug/L	#	44
12) vinyl bromide	5.747	106	766	0.87	ug/L		89
13) trichlorofluoromethane	5.873	101	1854	0.99	ug/L		89
17) freon 113	6.736	151	747	0.82	ug/L	#	89
18) 1,1-dichloroethene	6.731	61	1436	0.90	ug/L		98
24) methylene chloride	7.447	84	1306	1.07	ug/L		76
26) methyl tert butyl ether	7.818	73	2605	0.93	ug/L		93
27) trans-1,2-dichloroethene	7.860	61	1356	0.89	ug/L		92
28) hexane	8.242	57	1988	1.04	ug/L		96
29) 1,1-dichloroethane	8.441	63	1866	0.96	ug/L		84
31) di-isopropyl ether	8.441	45	3129	0.90	ug/L		87
32) chloroprene	8.545	53	1384	0.84	ug/L		88
33) ethyl tert-butyl ether	8.912	59	3099	0.92	ug/L		86
35) 2,2-dichloropropane	9.189	77	1703	0.97	ug/L		90
37) cis-1,2-dichloroethene	9.152	96	1226	0.97	ug/L	#	78
41) bromochloromethane	9.456	128	440	0.81	ug/L	#	66
43) chloroform	9.544	83	1989	0.99	ug/L		90
44) carbon tetrachloride	10.020	117	1548	0.94	ug/L	#	77
45) 1,1-dichloropropene	9.994	75	1424	0.95	ug/L		94
48) 1,1,1-trichloroethane	9.816	97	1746	0.97	ug/L		86
49) cyclohexane	9.942	84	1519	0.92	ug/L		89
54) 1,2-dichloroethane	10.256	62	1633	1.11	ug/L		92
55) benzene	10.240	78	4193	0.95	ug/L		98
56) 2,2,4-trimethylpentane	10.350	57	4640	1.03	ug/L		98
57) tert-amyl methyl ether	10.324	87	552	0.74	ug/L	#	60
58) heptane	10.523	57	794	0.88	ug/L	#	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
60)	trichloroethene	10.978	95	1039	0.92	ug/L		89
62)	methylcyclohexane	11.281	83	1997	1.03	ug/L		94
63)	1,2-dichloropropane	11.250	63	1072	0.99	ug/L		87
65)	dibromomethane	11.354	93	547	0.84	ug/L		92
66)	bromodichloromethane	11.511	83	1425	0.95	ug/L		93
68)	2-chloroethyl vinyl ether	11.752	63	2773	4.39	ug/L		92
70)	cis-1,3-dichloropropene	11.966	75	1687	0.96	ug/L		90
71)	4-methyl-2-pentanone	12.065	58	1182	3.57	ug/L		93
75)	toluene	12.353	92	2505	0.95	ug/L		99
76)	trans-1,3-dichloropropene	12.526	75	1695	1.07	ug/L		85
77)	ethyl methacrylate	12.536	69	1080	0.95	ug/L		90
78)	1,1,2-trichloroethane	12.751	83	638	0.89	ug/L	#	81
79)	1,3-dichloropropane	12.928	76	1301	0.92	ug/L		90
80)	tetrachloroethene	12.913	166	1332	1.01	ug/L		82
81)	2-hexanone	12.913	58	1107	3.35	ug/L		94
83)	n-butyl ether	13.786	57	4146	0.95	ug/L	#	57
84)	dibromochloromethane	13.174	129	1082	0.93	ug/L		93
85)	1,2-dibromoethane	13.336	107	894	0.87	ug/L		82
86)	chlorobenzene	13.818	112	2734	0.97	ug/L		98
87)	1,1,1,2-tetrachloroethane	13.880	131	960	0.91	ug/L		95
88)	ethylbenzene	13.886	91	4814	0.98	ug/L		98
89)	m,p-xylene	14.006	106	3829	1.98	ug/L		93
90)	o-xylene	14.403	106	1805	0.98	ug/L		95
91)	styrene	14.414	104	2757	0.88	ug/L		95
92)	butyl acrylate	14.231	55	1530	0.87	ug/L		96
93)	cis-1,4-dichloro-2-butene	14.769	88	406	0.86	ug/L	#	77
94)	bromoform	14.639	173	692	0.86	ug/L		93
95)	isopropylbenzene	14.754	105	4645	0.96	ug/L		95
98)	1,1,2,2-tetrachloroethane	15.015	83	992	0.90	ug/L		90
100)	1,2,3-trichloropropane	15.099	110	272	0.93	ug/L	#	33
101)	bromobenzene	15.130	156	1333	0.99	ug/L		91
102)	n-propylbenzene	15.172	91	5703	1.02	ug/L		95
103)	2-chlorotoluene	15.303	126	1178	1.00	ug/L	#	59
104)	4-chlorotoluene	15.408	91	3501	1.05	ug/L		97
105)	1,3,5-trimethylbenzene	15.329	105	4084	0.97	ug/L		97
106)	tert-butylbenzene	15.669	134	750	0.98	ug/L	#	70
107)	1,2,4-trimethylbenzene	15.721	105	4262	0.99	ug/L		96
108)	sec-butylbenzene	15.889	105	5415	1.03	ug/L		94
109)	p-isopropyltoluene	16.030	119	4595	0.97	ug/l		99
110)	benzyl chloride	16.244	91	2575	0.97	ug/L		98
111)	1,3-dichlorobenzene	16.061	146	2661	1.03	ug/L		95
112)	1,4-dichlorobenzene	16.161	146	2663	1.01	ug/L		97
113)	1,2-dichlorobenzene	16.537	146	2492	0.99	ug/L		92
114)	n-butylbenzene	16.448	92	2414	0.98	ug/L		96
115)	hexachloroethane	16.856	201	834	0.93	ug/L	#	84
118)	1,3,5-trichlorobenzene	17.547	180	2660	1.04	ug/L		92
119)	1,2,4-trichlorobenzene	18.201	180	2465	1.07	ug/L		93
121)	hexachlorobutadiene	18.326	225	1623	1.11	ug/L	#	68
122)	naphthalene	18.488	128	4141	0.93	ug/L		98
123)	1,2,3-trichlorobenzene	18.708	180	2093	0.95	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

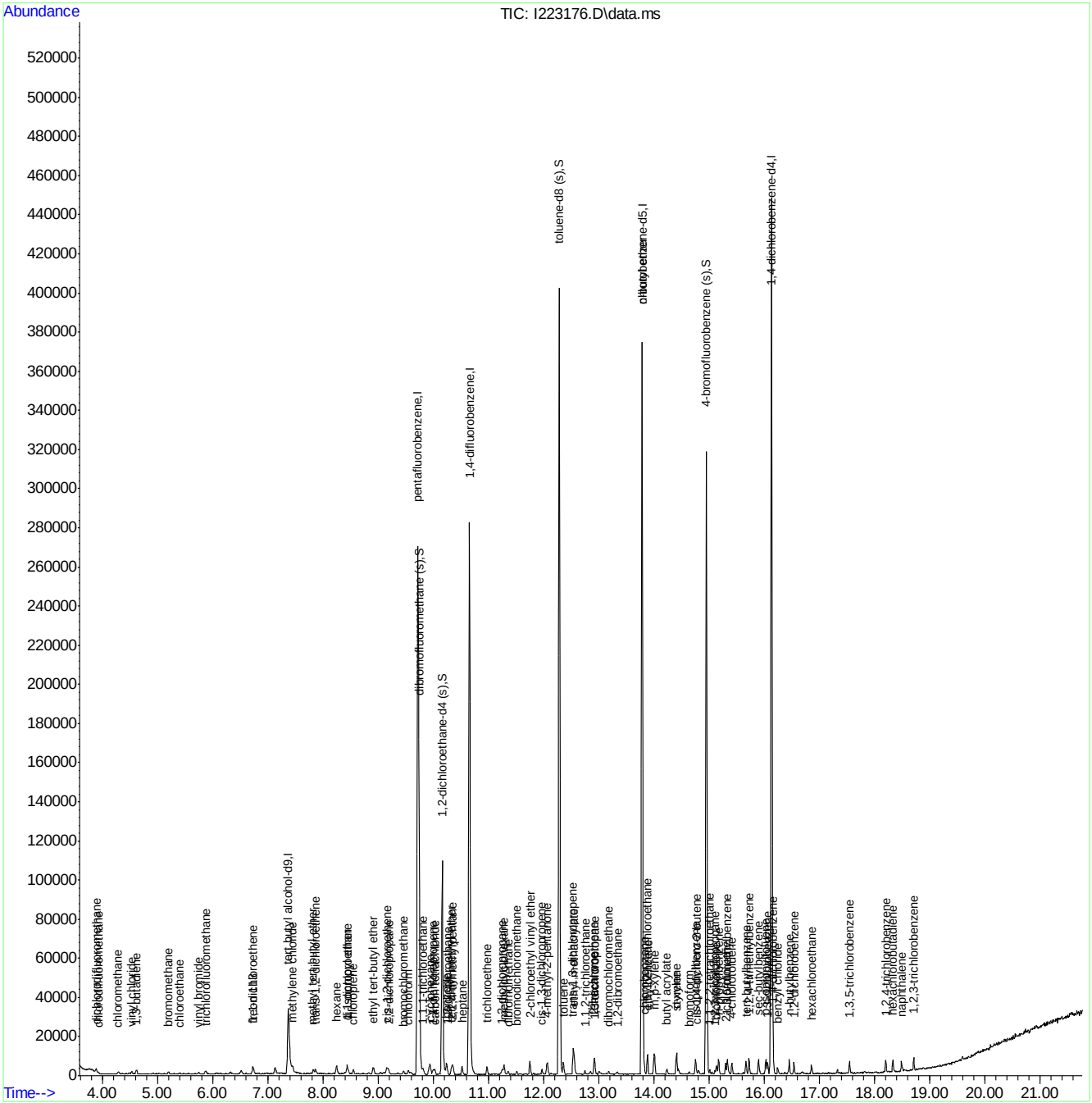
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223176.D
Acq On : 27 Nov 2018 6:52 pm
Operator : thienn
Sample : IC8986-1
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 28 13:29:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	56476	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	176188	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	224153	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	187440	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	109015	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	69313	50.07	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.14%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	71103	50.83	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.66%				
74) toluene-d8 (s)	12.280	98	241740	50.31	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%				
97) 4-bromofluorobenzene (s)	14.947	95	84776	51.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 102.02%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.505	59	1050	8.94	ug/L		76
5) dichlorodifluoromethane	3.891	85	2742	1.82	ug/L		89
6) chlorodifluoromethane	3.927	51	2757	1.98	ug/L		86
7) chloromethane	4.283	50	2832	1.99	ug/L		88
8) vinyl chloride	4.529	62	2087	1.74	ug/L		87
9) 1,3-butadiene	4.618	54	1510	1.91	ug/L		88
10) bromomethane	5.198	94	1470	1.84	ug/L		83
11) chloroethane	5.407	64	1344	1.94	ug/L		93
12) vinyl bromide	5.747	106	1633	1.88	ug/L		86
13) trichlorofluoromethane	5.878	101	3389	1.85	ug/L		98
14) ethyl ether	6.317	74	719	1.44	ug/L		93
15) 2-chloropropane	6.516	63	742	1.85	ug/L	#	81
17) freon 113	6.731	151	1623	1.80	ug/L		95
18) 1,1-dichloroethene	6.731	61	3194	2.03	ug/L		95
19) acetone	6.731	43	2015	6.96	ug/L		94
21) carbon disulfide	7.133	76	7561	2.04	ug/L		98
22) acetonitrile	7.144	41	2525	17.06	ug/L		80
24) methylene chloride	7.447	84	2538	2.11	ug/L		98
26) methyl tert butyl ether	7.824	73	5390	1.95	ug/L		94
27) trans-1,2-dichloroethene	7.866	61	3045	2.04	ug/L		95
28) hexane	8.242	57	3614	1.92	ug/L		90
29) 1,1-dichloroethane	8.436	63	3877	2.02	ug/L		97
31) di-isopropyl ether	8.446	45	6524	1.90	ug/L		93
32) chloroprene	8.556	53	2952	1.83	ug/L		97
33) ethyl tert-butyl ether	8.912	59	6171	1.87	ug/L		97
34) 2-butanone	9.095	72	589	5.29	ug/L	#	28
35) 2,2-dichloropropane	9.189	77	3470	2.01	ug/L		94
37) cis-1,2-dichloroethene	9.163	96	2503	2.01	ug/L		93
38) propionitrile	9.147	54	2576	15.79	ug/L		95
41) bromochloromethane	9.461	128	1091	2.03	ug/L		88
43) chloroform	9.550	83	3825	1.93	ug/L		94
44) carbon tetrachloride	10.026	117	3197	1.96	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) 1,1-dichloropropene	9.994	75	3019	2.04	ug/L		94
48) 1,1,1-trichloroethane	9.816	97	3293	1.85	ug/L		88
49) cyclohexane	9.937	84	3029	1.87	ug/L		88
54) 1,2-dichloroethane	10.256	62	3023	2.05	ug/L		94
55) benzene	10.240	78	8591	1.96	ug/L		99
56) 2,2,4-trimethylpentane	10.350	57	8690	1.94	ug/L		94
57) tert-amyl methyl ether	10.329	87	1372	1.84	ug/L		98
58) heptane	10.523	57	1835	2.05	ug/L	#	88
59) n-butyl alcohol	10.695	56	3163	90.54	ug/L		84
60) trichloroethene	10.972	95	2311	2.06	ug/L		85
61) ethyl acrylate	10.962	55	2236	1.86	ug/L		77
62) methylcyclohexane	11.281	83	3672	1.91	ug/L		95
63) 1,2-dichloropropane	11.250	63	2198	2.04	ug/L		91
65) dibromomethane	11.354	93	1284	1.97	ug/L		94
66) bromodichloromethane	11.511	83	2980	1.99	ug/L		84
68) 2-chloroethyl vinyl ether	11.752	63	6041	9.60	ug/L		93
69) epichlorohydrin	11.830	57	1010	9.24	ug/L		91
70) cis-1,3-dichloropropene	11.966	75	3306	1.89	ug/L		95
71) 4-methyl-2-pentanone	12.060	58	2454	7.43	ug/L		98
72) 3-methyl-1-butanol	12.060	70	1046	35.95	ug/L		92
75) toluene	12.358	92	5141	1.98	ug/L		97
76) trans-1,3-dichloropropene	12.526	75	2889	1.85	ug/L		95
77) ethyl methacrylate	12.531	69	2090	1.87	ug/L		83
78) 1,1,2-trichloroethane	12.751	83	1373	1.96	ug/L		95
79) 1,3-dichloropropane	12.928	76	2659	1.92	ug/L		97
80) tetrachloroethene	12.913	166	2619	2.01	ug/L		95
81) 2-hexanone	12.913	58	2581	7.93	ug/L		97
82) butyl acetate	13.002	56	927	1.63	ug/L	#	73
83) n-butyl ether	13.791	57	8237	1.92	ug/L		85
84) dibromochloromethane	13.174	129	2246	1.96	ug/L		99
85) 1,2-dibromoethane	13.331	107	1805	1.79	ug/L		97
86) chlorobenzene	13.818	112	5437	1.97	ug/L		96
87) 1,1,1,2-tetrachloroethane	13.880	131	2123	2.04	ug/L		97
88) ethylbenzene	13.880	91	9613	1.99	ug/L		95
89) m,p-xylene	14.001	106	7621	4.01	ug/L		98
90) o-xylene	14.403	106	3682	2.03	ug/L		89
91) styrene	14.414	104	6116	1.99	ug/L		95
92) butyl acrylate	14.231	55	3324	1.91	ug/L		94
93) cis-1,4-dichloro-2-butene	14.770	88	809	1.74	ug/L		93
94) bromoform	14.639	173	1591	2.00	ug/L		92
95) isopropylbenzene	14.754	105	9268	1.95	ug/L		97
98) 1,1,2,2-tetrachloroethane	15.015	83	2151	1.96	ug/L		97
100) 1,2,3-trichloropropane	15.099	110	499	1.72	ug/L		93
101) bromobenzene	15.130	156	2679	1.99	ug/L		94
102) n-propylbenzene	15.172	91	10946	1.96	ug/L		99
103) 2-chlorotoluene	15.298	126	2364	2.01	ug/L		89
104) 4-chlorotoluene	15.413	91	6491	1.94	ug/L		96
105) 1,3,5-trimethylbenzene	15.329	105	8685	2.07	ug/L		95
106) tert-butylbenzene	15.669	134	1254	1.65	ug/L	#	56
107) 1,2,4-trimethylbenzene	15.721	105	9128	2.12	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223177.D
Acq On : 27 Nov 2018 7:22 pm
Operator : thienn
Sample : IC8986-2
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 28 13:30:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:53:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
108) sec-butylbenzene	15.894	105	10453	2.00	ug/L		97
109) p-isopropyltoluene	16.030	119	9645	2.05	ug/l		97
110) benzyl chloride	16.244	91	5252	1.99	ug/L		97
111) 1,3-dichlorobenzene	16.056	146	5215	2.03	ug/L		90
112) 1,4-dichlorobenzene	16.156	146	5379	2.05	ug/L		96
113) 1,2-dichlorobenzene	16.537	146	4876	1.94	ug/L		97
114) n-butylbenzene	16.448	92	5110	2.09	ug/L		99
115) hexachloroethane	16.856	201	1719	1.92	ug/L		92
116) 1,2-dibromo-3-chloropr...	17.327	157	597	1.71	ug/L		80
118) 1,3,5-trichlorobenzene	17.542	180	5150	2.02	ug/L		97
119) 1,2,4-trichlorobenzene	18.201	180	4515	1.97	ug/L		94
120) 2-ethylhexyl acrylate	18.227	55	734	0.39	ug/L	#	84
121) hexachlorobutadiene	18.326	225	2825	1.93	ug/L		97
122) naphthalene	18.488	128	9080	2.05	ug/L		95
123) 1,2,3-trichlorobenzene	18.708	180	4541	2.07	ug/L		96

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

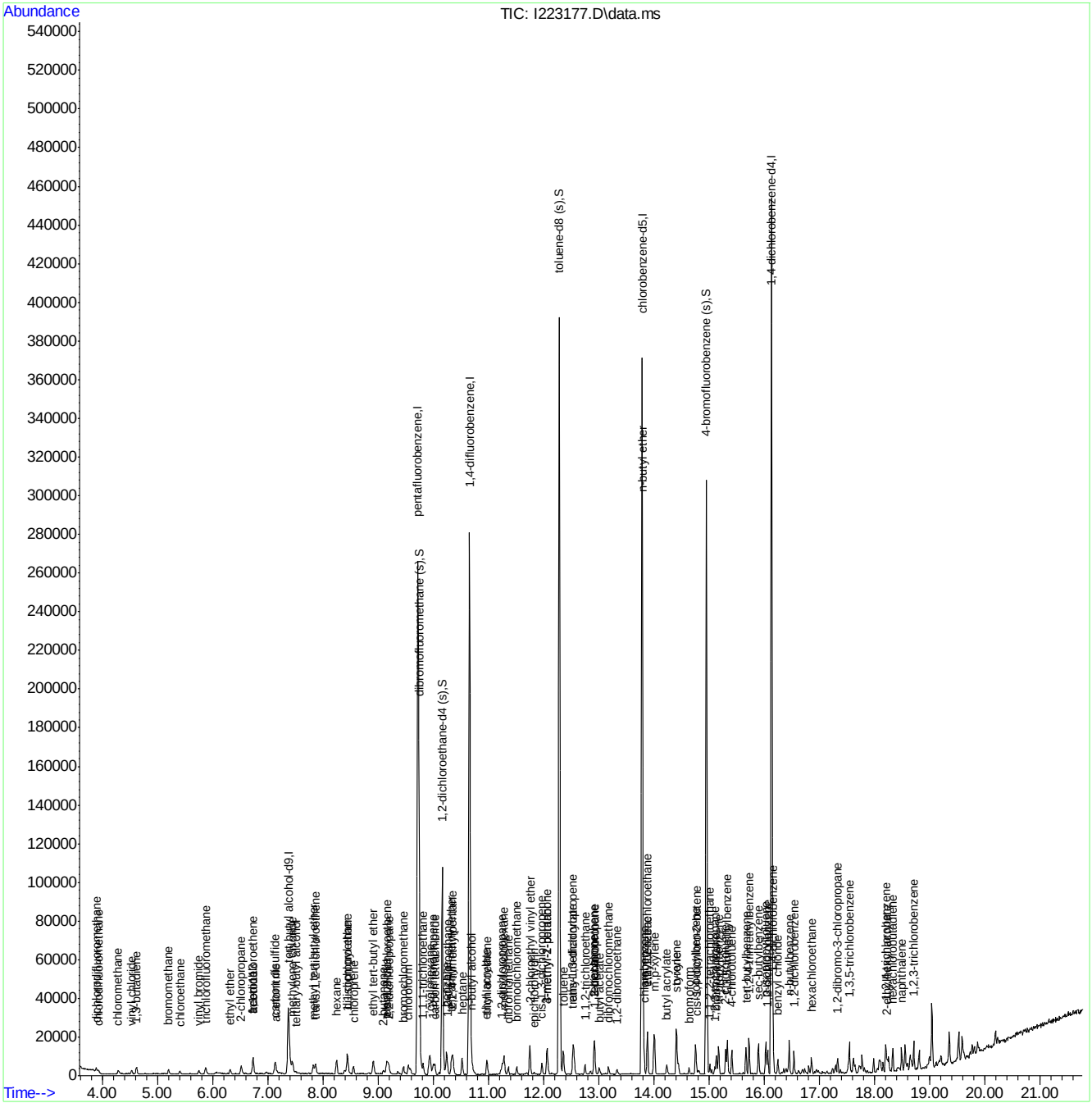
7.7.15

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

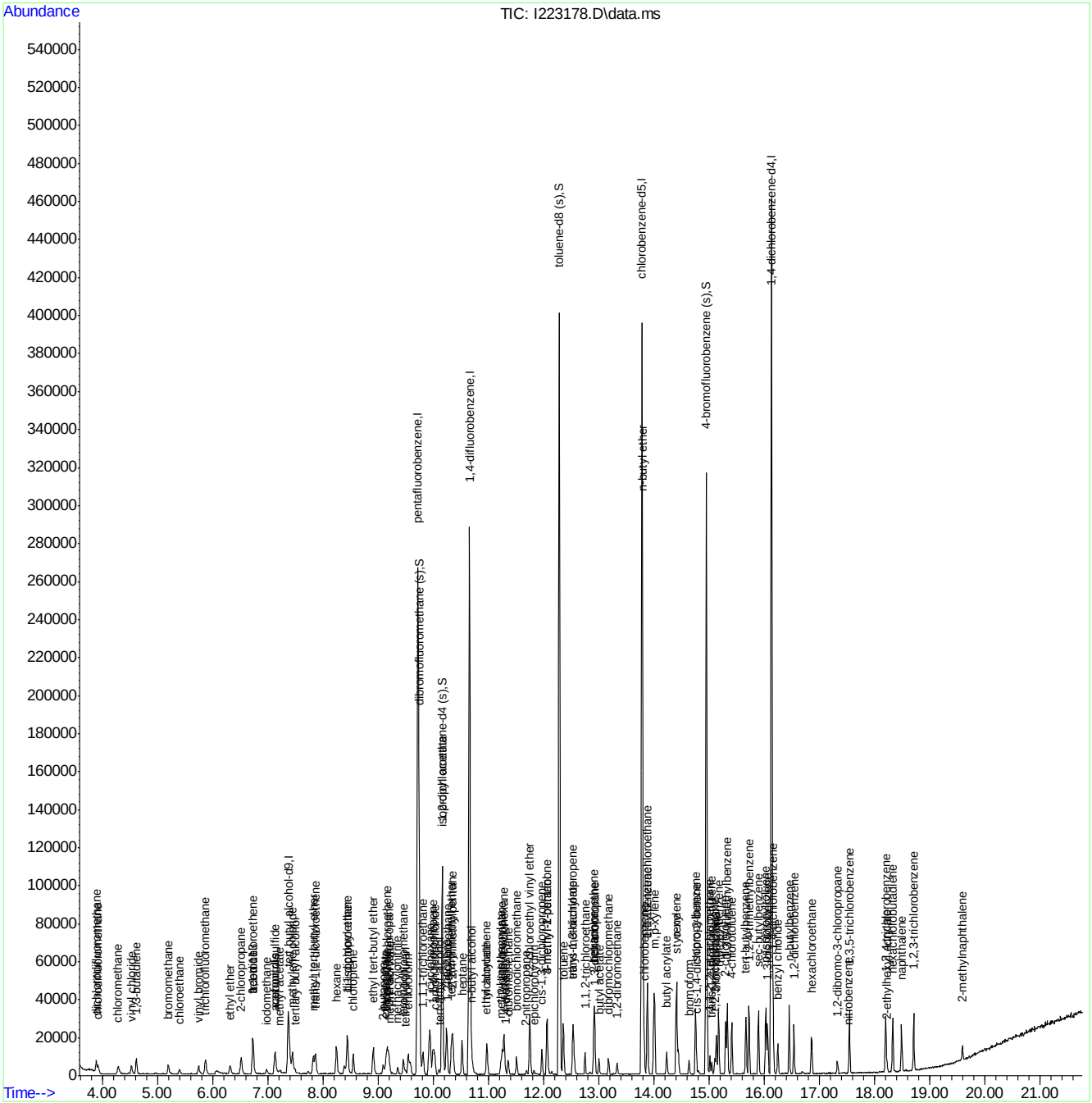
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) bromoform	14.634	173	3228	4.00	ug/L		99
95) isopropylbenzene	14.754	105	19237	3.98	ug/L		98
98) 1,1,2,2-tetrachloroethane	15.015	83	4469	3.98	ug/L		97
99) trans-1,4-dichloro-2-b...	15.047	53	1081	3.85	ug/L		97
100) 1,2,3-trichloropropane	15.099	110	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

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

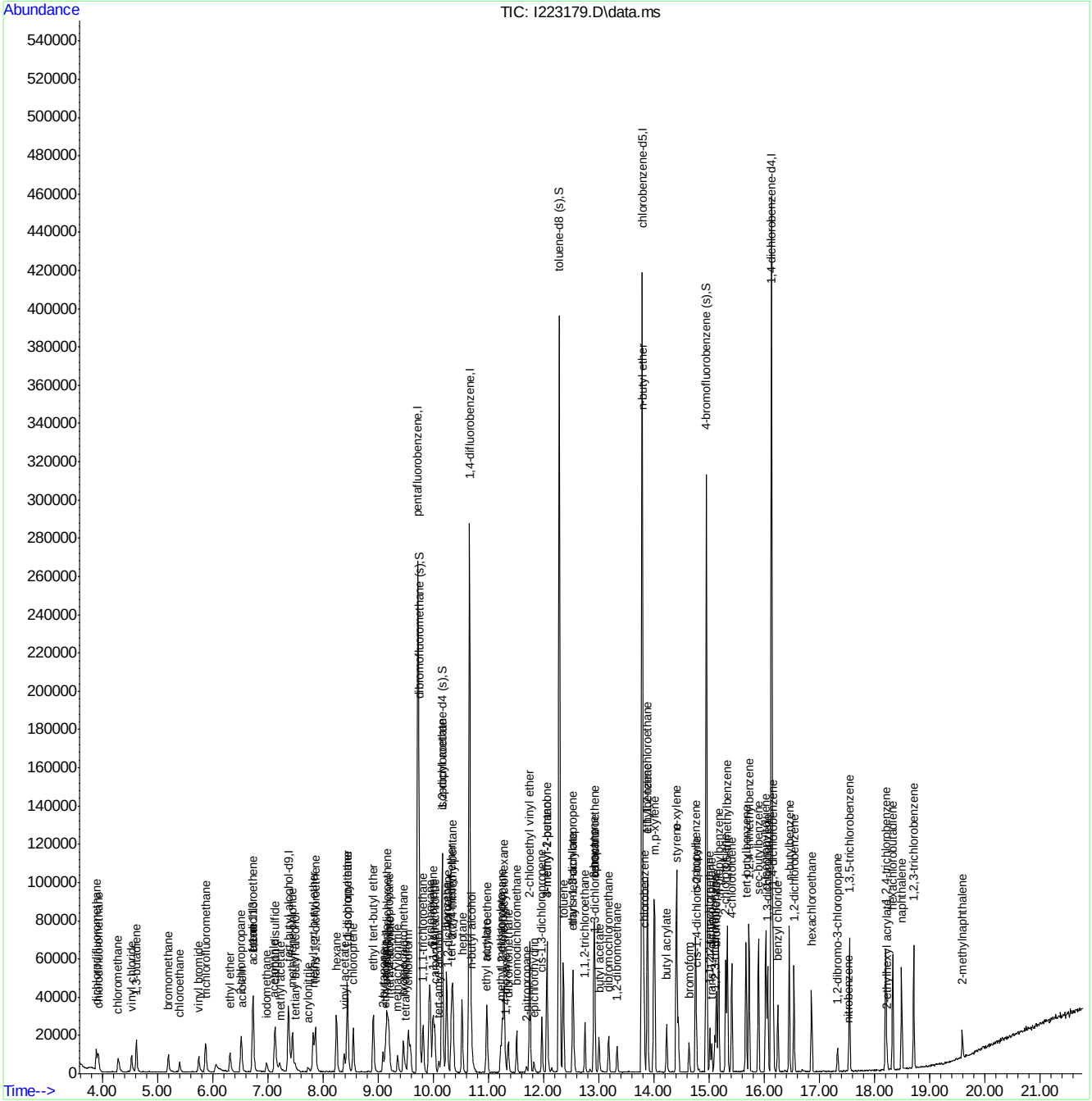
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) styrene	14.414	104	27074	8.72	ug/L	99
92) butyl acrylate	14.231	55	14603	8.33	ug/L	99
93) cis-1,4-dichloro-2-butene	14.770	88	3954	8.42	ug/L	94
94) bromoform	14.634	173	6780	8.45	ug/L	98
95) isopropylbenzene	14.754	105	41159	8.57	ug/L	99
98) 1,1,2,2-tetrachloroethane	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

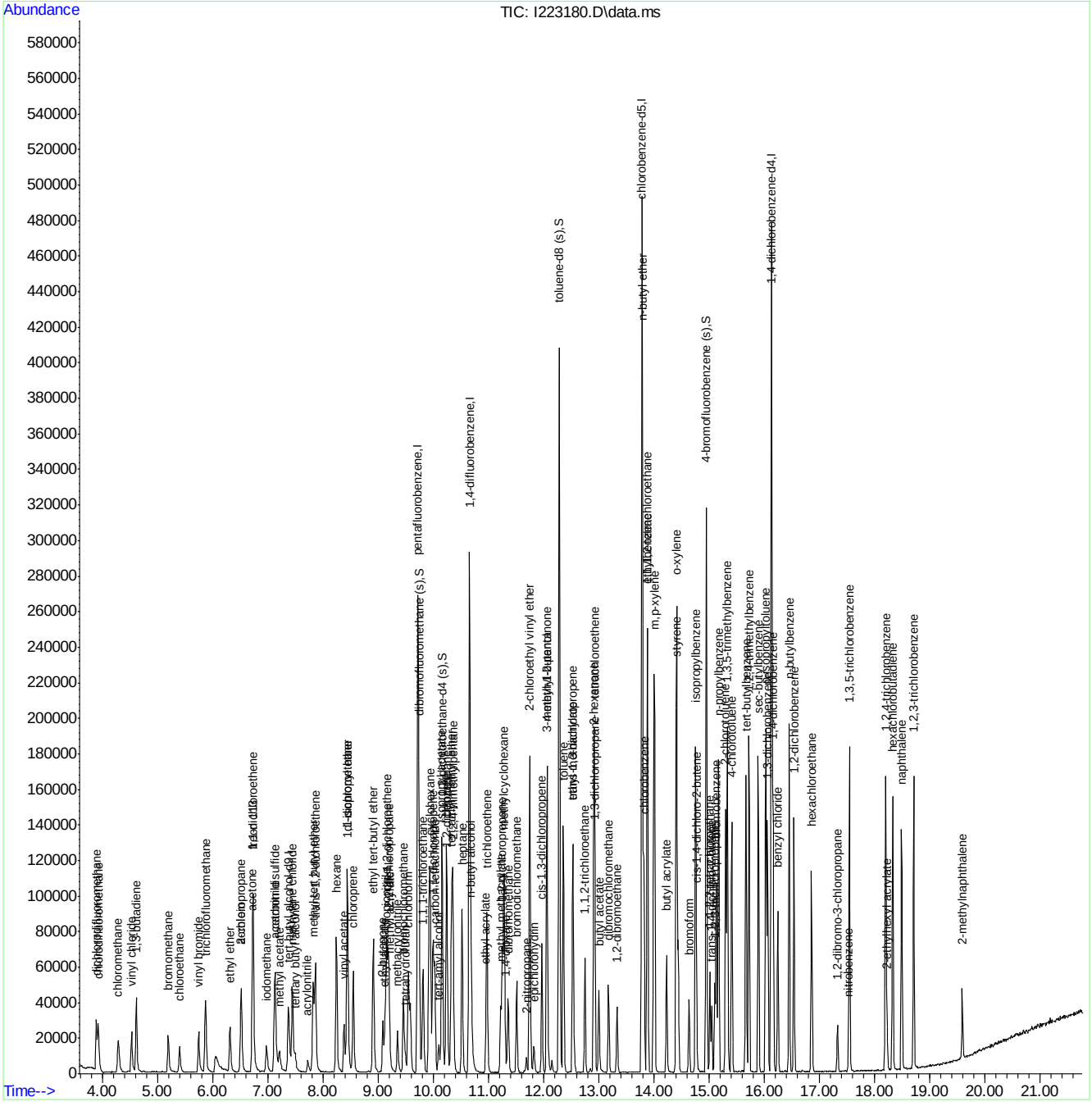
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) styrene	14.414	104	66528	21.04	ug/L	98
92) butyl acrylate	14.231	55	38824	21.75	ug/L	99
93) cis-1,4-dichloro-2-butene	14.769	88	10054	21.03	ug/L	97
94) bromoform	14.633	173	17668	21.64	ug/L	98
95) isopropylbenzene	14.754	105	103238	21.12	ug/L	99
98) 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

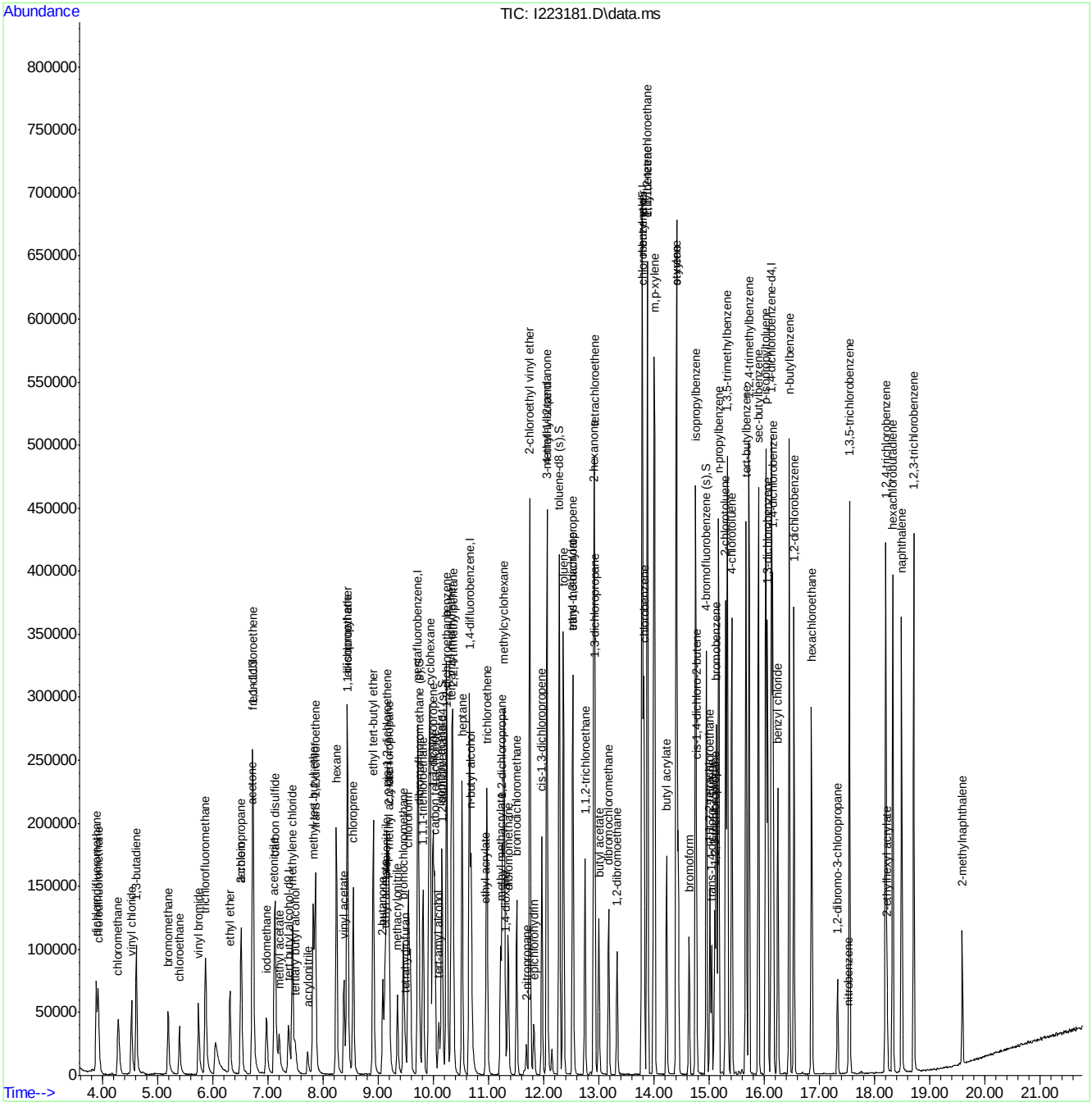
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.408	104	172884	52.80	ug/L	100
92)	butyl acrylate	14.231	55	100199	54.20	ug/L	100
93)	cis-1,4-dichloro-2-butene	14.769	88	25823	52.16	ug/L	100
94)	bromoform	14.633	173	47214	55.83	ug/L	100
95)	isopropylbenzene	14.754	105	263065	51.96	ug/L	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

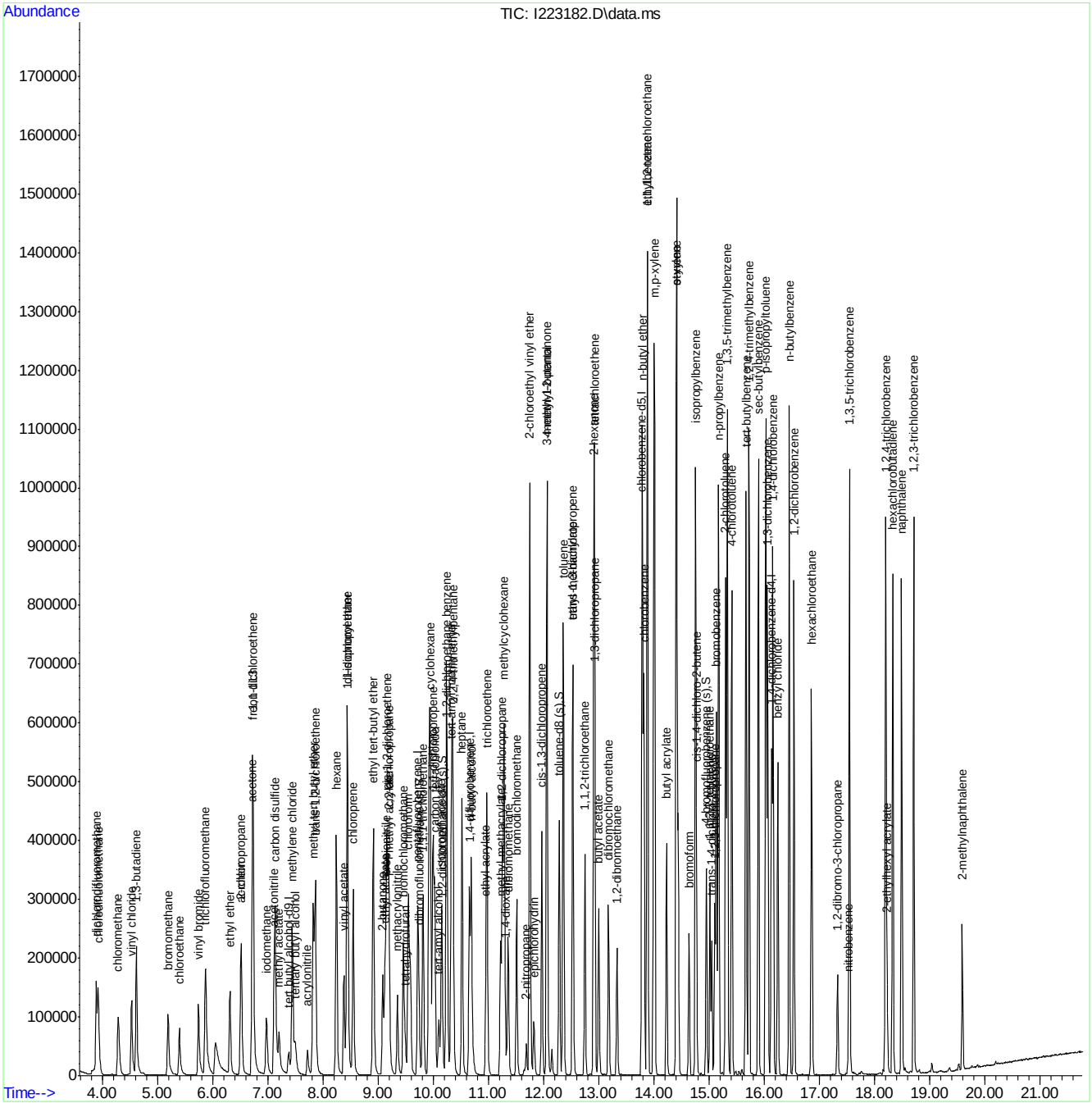
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.409	104	382352	109.31	ug/L	98
92)	butyl acrylate	14.231	55	226172	114.54	ug/L	98
93)	cis-1,4-dichloro-2-butene	14.769	88	57787	109.27	ug/L	96
94)	bromoform	14.633	173	103444	114.50	ug/L	99
95)	isopropylbenzene	14.754	105	578201	106.92	ug/L	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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223182.D
Acq On : 27 Nov 2018 9:50 pm
Operator : thienn
Sample : IC8986-100
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 28 12:50:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.379	65	80301	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	215517	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	290620	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	249804	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	157477	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	83941	49.57	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.14%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	85112	46.93	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 93.86%				
74) toluene-d8 (s)	12.280	98	312894	48.86	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.72%				
97) 4-bromofluorobenzene (s)	14.953	95	117844	49.09	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.18%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.505	59	175497	1050.43	ug/L		98
3) 1,4-dioxane	11.302	88	87551	4678.20	ug/L		95
5) dichlorodifluoromethane	3.891	85	375056	203.55	ug/L		98
6) chlorodifluoromethane	3.922	51	366508	214.71	ug/L		97
7) chloromethane	4.288	50	369957	212.20	ug/L		99
8) vinyl chloride	4.529	62	324334	220.94	ug/L		99
9) 1,3-butadiene	4.618	54	226188	233.83	ug/L		97
10) bromomethane	5.183	94	200309	204.97	ug/L		99
11) chloroethane	5.397	64	191609	225.61	ug/L		97
12) vinyl bromide	5.742	106	243673	229.14	ug/L		98
13) trichlorofluoromethane	5.868	101	477873	212.68	ug/L		100
14) ethyl ether	6.312	74	145655	238.98	ug/L		94
15) 2-chloropropane	6.516	63	94139	191.82	ug/L		99
16) acrolein	6.511	56	49971	260.93	ug/L		99
17) freon 113	6.731	151	227090	206.29	ug/L		99
18) 1,1-dichloroethene	6.726	61	417694	217.24	ug/L		99
19) acetone	6.715	43	306680	865.54	ug/L		98
20) iodomethane	6.977	142	284760	194.36	ug/L		99
21) carbon disulfide	7.128	76	837937	184.52	ug/L		99
22) acetonitrile	7.113	41	383515	2117.82	ug/L		95
23) methyl acetate	7.207	74	44590	199.99	ug/L	#	89
24) methylene chloride	7.442	84	300410	203.94	ug/L		97
25) acrylonitrile	7.719	53	91967	228.81	ug/L		97
26) methyl tert butyl ether	7.824	73	754631	223.07	ug/L		99
27) trans-1,2-dichloroethene	7.860	61	389402	213.15	ug/L		100
28) hexane	8.242	57	472229	204.91	ug/L		99
29) 1,1-dichloroethane	8.436	63	489620	208.58	ug/L		98
30) vinyl acetate	8.378	86	51592	237.02	ug/L	#	81
31) di-isopropyl ether	8.446	45	922197	220.05	ug/L		99
32) chloroprene	8.546	53	429184	217.25	ug/L		99
33) ethyl tert-butyl ether	8.912	59	900394	222.49	ug/L		99
34) 2-butanone	9.084	72	129219	949.37	ug/L	#	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	416394	196.70	ug/L		99
36) ethyl acetate	9.121	45	42114	241.18	ug/L	#	86
37) cis-1,2-dichloroethene	9.158	96	315912	207.71	ug/L		98
38) propionitrile	9.142	54	433186	2170.99	ug/L		99
39) methyl acrylate	9.199	85	43433	244.49	ug/L	#	76
40) methacrylonitrile	9.351	67	111682	235.47	ug/L		93
41) bromochloromethane	9.456	128	148944	227.02	ug/L		95
42) tetrahydrofuran	9.487	71	34806	221.93	ug/L		92
43) chloroform	9.550	83	503070	207.03	ug/L		99
44) carbon tetrachloride	10.026	117	400619	201.30	ug/L		99
45) 1,1-dichloropropene	9.994	75	388889	214.97	ug/L		97
48) 1,1,1-trichloroethane	9.817	97	444595	204.59	ug/L		97
49) cyclohexane	9.942	84	403176	203.08	ug/L		94
50) tert-amyl alcohol	10.104	55	57571	1136.62	ug/L		96
53) isopropyl acetate	10.146	87	58906	223.70	ug/L		99
54) 1,2-dichloroethane	10.251	62	360721	188.93	ug/L		98
55) benzene	10.240	78	1169633	206.01	ug/L		99
56) 2,2,4-trimethylpentane	10.355	57	1175124	202.17	ug/L		100
57) tert-amyl methyl ether	10.329	87	207313	213.93	ug/L		97
58) heptane	10.523	57	244771	210.65	ug/L		98
59) n-butyl alcohol	10.690	56	512441	11313.49	ug/L		98
60) trichloroethene	10.972	95	298082	204.84	ug/L		99
61) ethyl acrylate	10.952	55	346987	222.62	ug/L		98
62) methylcyclohexane	11.281	83	518630	207.91	ug/L		98
63) 1,2-dichloropropane	11.250	63	292151	209.12	ug/L		98
64) methyl methacrylate	11.218	100	74866	228.59	ug/L		97
65) dibromomethane	11.354	93	173143	204.47	ug/L		98
66) bromodichloromethane	11.511	83	401396	207.18	ug/L		97
67) 2-nitropropane	11.689	41	68700	205.45	ug/L		96
68) 2-chloroethyl vinyl ether	11.747	63	896818	1098.66	ug/L		99
69) epichlorohydrin	11.820	57	146825	1035.78	ug/L		98
70) cis-1,3-dichloropropene	11.966	75	475587	209.19	ug/L		96
71) 4-methyl-2-pentanone	12.060	58	389352	908.73	ug/L		99
72) 3-methyl-1-butanol	12.060	70	176133	4668.76	ug/L		98
75) toluene	12.358	92	697159	201.63	ug/L		100
76) trans-1,3-dichloropropene	12.526	75	417558	200.69	ug/L		99
77) ethyl methacrylate	12.531	69	325102	217.84	ug/L		98
78) 1,1,2-trichloroethane	12.751	83	211103	225.77	ug/L		99
79) 1,3-dichloropropane	12.929	76	382489	207.16	ug/L		100
80) tetrachloroethene	12.918	166	340610	196.20	ug/L		99
81) 2-hexanone	12.908	58	382826	882.73	ug/L		96
82) butyl acetate	12.997	56	166560	220.32	ug/L		94
83) n-butyl ether	13.792	57	1202068	210.51	ug/L		99
84) dibromochloromethane	13.180	129	323192	211.44	ug/L		100
85) 1,2-dibromoethane	13.331	107	289004	215.35	ug/L		97
86) chlorobenzene	13.818	112	766299	208.02	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.880	131	301494	217.64	ug/L		99
88) ethylbenzene	13.880	91	1318470	204.67	ug/L		99
89) m,p-xylene	14.006	106	1036588	409.20	ug/L		100
90) o-xylene	14.403	106	514832	212.68	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration

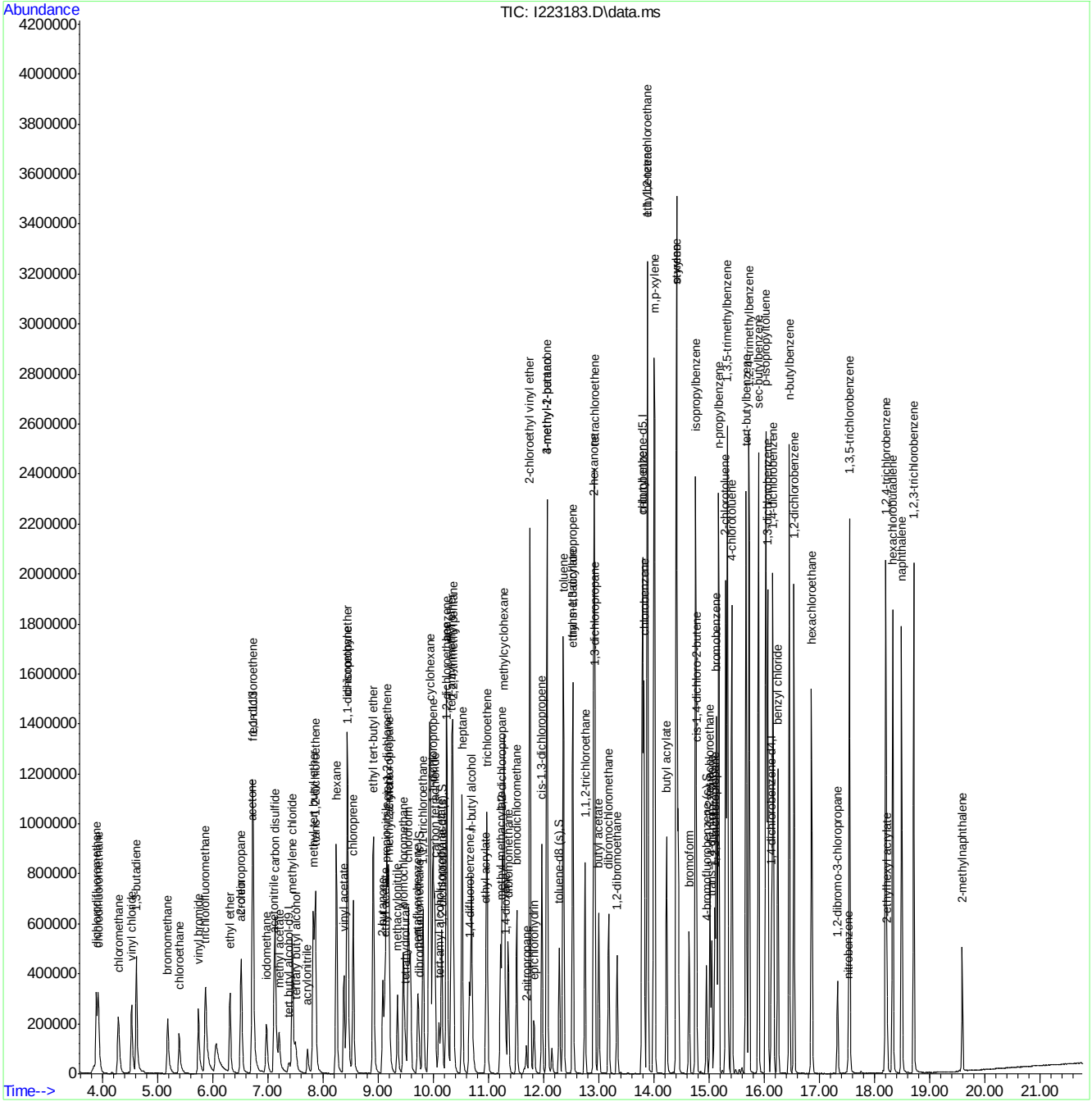
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.414	104	895966	218.22	ug/L	99
92)	butyl acrylate	14.231	55	540635	233.25	ug/L	98
93)	cis-1,4-dichloro-2-butene	14.770	88	132493	213.44	ug/L	95
94)	bromoform	14.634	173	242477	228.66	ug/L	100
95)	isopropylbenzene	14.754	105	1355411	213.53	ug/L	99
98)	1,1,2,2-tetrachloroethane	15.015	83	341793	215.83	ug/L	100
99)	trans-1,4-dichloro-2-b...	15.047	53	84689	213.63	ug/L	90
100)	1,2,3-trichloropropane	15.104	110	86501	206.20	ug/L	98
101)	bromobenzene	15.130	156	391000	201.11	ug/L	95
102)	n-propylbenzene	15.172	91	1628828	201.82	ug/L	98
103)	2-chlorotoluene	15.298	126	344609	203.26	ug/L	97
104)	4-chlorotoluene	15.413	91	976268	202.33	ug/L	98
105)	1,3,5-trimethylbenzene	15.329	105	1232897	202.98	ug/L	100
106)	tert-butylbenzene	15.669	134	235167	213.97	ug/L	98
107)	1,2,4-trimethylbenzene	15.722	105	1236957	198.78	ug/L	99
108)	sec-butylbenzene	15.894	105	1582482	209.52	ug/L	99
109)	p-isopropyltoluene	16.030	119	1375296	202.45	ug/l	99
110)	benzyl chloride	16.245	91	774742	203.28	ug/L	99
111)	1,3-dichlorobenzene	16.061	146	758085	204.35	ug/L	100
112)	1,4-dichlorobenzene	16.156	146	771469	203.61	ug/L	98
113)	1,2-dichlorobenzene	16.537	146	761290	209.67	ug/L	98
114)	n-butylbenzene	16.448	92	714096	202.07	ug/L	99
115)	hexachloroethane	16.856	201	288682	223.41	ug/L	99
116)	1,2-dibromo-3-chloropr...	17.327	157	105085	208.05	ug/L	98
117)	nitrobenzene	17.521	77	37402	215.52	ug/L	87
118)	1,3,5-trichlorobenzene	17.542	180	706301	191.51	ug/L	99
119)	1,2,4-trichlorobenzene	18.201	180	636181	191.81	ug/L	98
120)	2-ethylhexyl acrylate	18.222	55	96958	35.90	ug/L	99
121)	hexachlorobutadiene	18.326	225	402594	190.69	ug/L	100
122)	naphthalene	18.488	128	1280487	199.69	ug/L	100
123)	1,2,3-trichlorobenzene	18.708	180	610534	192.58	ug/L	99
124)	2-methylnaphthalene	19.587	142	208098	81.68	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223183.D
Acq On : 27 Nov 2018 10:20 pm
Operator : thienn
Sample : IC8986-200
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 28 12:51:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 12:50:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.374	65	69539	500.00	ug/L		0.00
4) pentafluorobenzene	9.717	168	194929	50.00	ug/L		0.00
51) 1,4-difluorobenzene	10.653	114	259550	50.00	ug/L		0.00
73) chlorobenzene-d5	13.786	117	212734	50.00	ug/L		0.00
96) 1,4-dichlorobenzene-d4	16.129	152	127433	50.00	ug/L		0.00
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.738	113	77737	50.75	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.50%				
52) 1,2-dichloroethane-d4 (s)	10.162	65	78844	48.67	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 97.34%				
74) toluene-d8 (s)	12.280	98	274637	50.36	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.72%				
97) 4-bromofluorobenzene (s)	14.947	95	97906	50.38	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.76%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.494	59	37883	263.21	ug/L		98
3) 1,4-dioxane	11.302	88	20696	1283.03	ug/L		87
5) dichlorodifluoromethane	3.891	85	93875	55.13	ug/L		97
6) chlorodifluoromethane	3.922	51	84039	52.27	ug/L		97
7) chloromethane	4.283	50	81186	51.49	ug/L		99
8) vinyl chloride	4.529	62	69070	52.01	ug/L		99
9) 1,3-butadiene	4.618	54	55309	59.63	ug/L		98
10) bromomethane	5.193	94	48097	54.36	ug/L		100
11) chloroethane	5.397	64	38659	48.13	ug/L		97
12) vinyl bromide	5.747	106	56399	54.95	ug/L		99
13) trichlorofluoromethane	5.873	101	102637	50.50	ug/L		98
14) ethyl ether	6.312	74	30681	53.29	ug/L		97
15) 2-chloropropane	6.516	63	23652	50.40	ug/L		96
16) acrolein	6.516	56	9584	51.09	ug/L		95
17) freon 113	6.731	151	53795	54.03	ug/L		99
18) 1,1-dichloroethene	6.725	61	84257	46.44	ug/L		98
19) acetone	6.715	43	68872	209.69	ug/L		100
20) iodomethane	6.976	142	73015	54.76	ug/L		98
21) carbon disulfide	7.128	76	199616	51.08	ug/L		99
22) acetonitrile	7.112	41	79045	481.93	ug/L		97
23) methyl acetate	7.212	74	8906	46.41	ug/L		97
24) methylene chloride	7.442	84	64208	47.79	ug/L		96
25) acrylonitrile	7.724	53	19514	50.51	ug/L		98
26) methyl tert butyl ether	7.824	73	335934	105.50	ug/L		100
27) trans-1,2-dichloroethene	7.860	61	85478	49.42	ug/L		99
28) hexane	8.242	57	84532	40.53	ug/L		99
29) 1,1-dichloroethane	8.436	63	109615	49.64	ug/L		99
30) vinyl acetate	8.378	86	10093	48.01	ug/L	#	86
31) di-isopropyl ether	8.446	45	195607	49.97	ug/L		100
32) chloroprene	8.545	53	98669	52.96	ug/L		97
33) ethyl tert-butyl ether	8.912	59	190299	50.37	ug/L		99
34) 2-butanone	9.084	72	27686	224.89	ug/L	#	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
35) 2,2-dichloropropane	9.189	77	95310	49.78	ug/L		99
36) ethyl acetate	9.121	45	8820	48.20	ug/L	#	83
37) cis-1,2-dichloroethene	9.157	96	72033	50.63	ug/L		99
38) propionitrile	9.136	54	96951	536.96	ug/L		99
39) methyl acrylate	9.204	85	9259	49.18	ug/L		99
40) methacrylonitrile	9.351	67	24916	54.67	ug/L		97
41) bromochloromethane	9.455	128	33565	52.46	ug/L		99
42) tetrahydrofuran	9.487	71	7502	52.89	ug/L		98
43) chloroform	9.550	83	115864	50.71	ug/L		99
44) carbon tetrachloride	10.026	117	91482	49.02	ug/L		100
45) 1,1-dichloropropene	9.994	75	87483	50.86	ug/L		98
48) 1,1,1-trichloroethane	9.816	97	100405	49.24	ug/L		98
49) cyclohexane	9.942	84	94392	52.57	ug/L		97
50) tert-amyl alcohol	10.099	55	12716	246.82	ug/L		97
53) isopropyl acetate	10.146	87	12067	51.31	ug/L		95
54) 1,2-dichloroethane	10.250	62	81716	47.92	ug/L		98
55) benzene	10.235	78	257840	50.84	ug/L		99
56) 2,2,4-trimethylpentane	10.355	57	254360	49.00	ug/L		100
57) tert-amyl methyl ether	10.329	87	42548	49.16	ug/L		98
58) heptane	10.522	57	60458	55.79	ug/L		98
59) n-butyl alcohol	10.685	56	114896	2712.27	ug/L		99
60) trichloroethene	10.972	95	67426	49.64	ug/L		98
61) ethyl acrylate	10.951	55	76668	53.40	ug/L		99
62) methylcyclohexane	11.281	83	110450	48.01	ug/L		99
63) 1,2-dichloropropane	11.249	63	63075	48.59	ug/L		99
64) methyl methacrylate	11.218	100	16067	52.60	ug/L	#	68
65) dibromomethane	11.354	93	39380	52.07	ug/L		97
66) bromodichloromethane	11.511	83	88835	49.40	ug/L		95
67) 2-nitropropane	11.684	41	16633	53.42	ug/L		97
68) 2-chloroethyl vinyl ether	11.746	63	204380	269.09	ug/L		99
69) epichlorohydrin	11.820	57	31827	250.89	ug/L		97
70) cis-1,3-dichloropropene	11.966	75	105534	51.98	ug/L		96
71) 4-methyl-2-pentanone	12.060	58	85135	210.79	ug/L		98
72) 3-methyl-1-butanol	12.055	70	37725	1075.30	ug/L		96
75) toluene	12.358	92	152787	51.89	ug/L		100
76) trans-1,3-dichloropropene	12.526	75	87220	49.23	ug/L		99
77) ethyl methacrylate	12.531	69	66038	49.45	ug/L		97
78) 1,1,2-trichloroethane	12.751	83	44888	51.96	ug/L		98
79) 1,3-dichloropropane	12.928	76	83889	53.36	ug/L		99
80) tetrachloroethene	12.918	166	84530	57.18	ug/L		98
81) 2-hexanone	12.907	58	82193	212.93	ug/L		96
82) butyl acetate	12.996	56	35044	52.18	ug/L		93
83) n-butyl ether	13.791	57	242651	49.90	ug/L		99
84) dibromochloromethane	13.174	129	71293	52.81	ug/L		98
85) 1,2-dibromoethane	13.331	107	63243	53.82	ug/L		97
86) chlorobenzene	13.818	112	162297	51.74	ug/L		99
87) 1,1,1,2-tetrachloroethane	13.880	131	64797	52.03	ug/L		99
88) ethylbenzene	13.880	91	281004	51.23	ug/L		98
89) m,p-xylene	14.006	106	221638	102.75	ug/L		99
90) o-xylene	14.403	106	109006	50.75	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

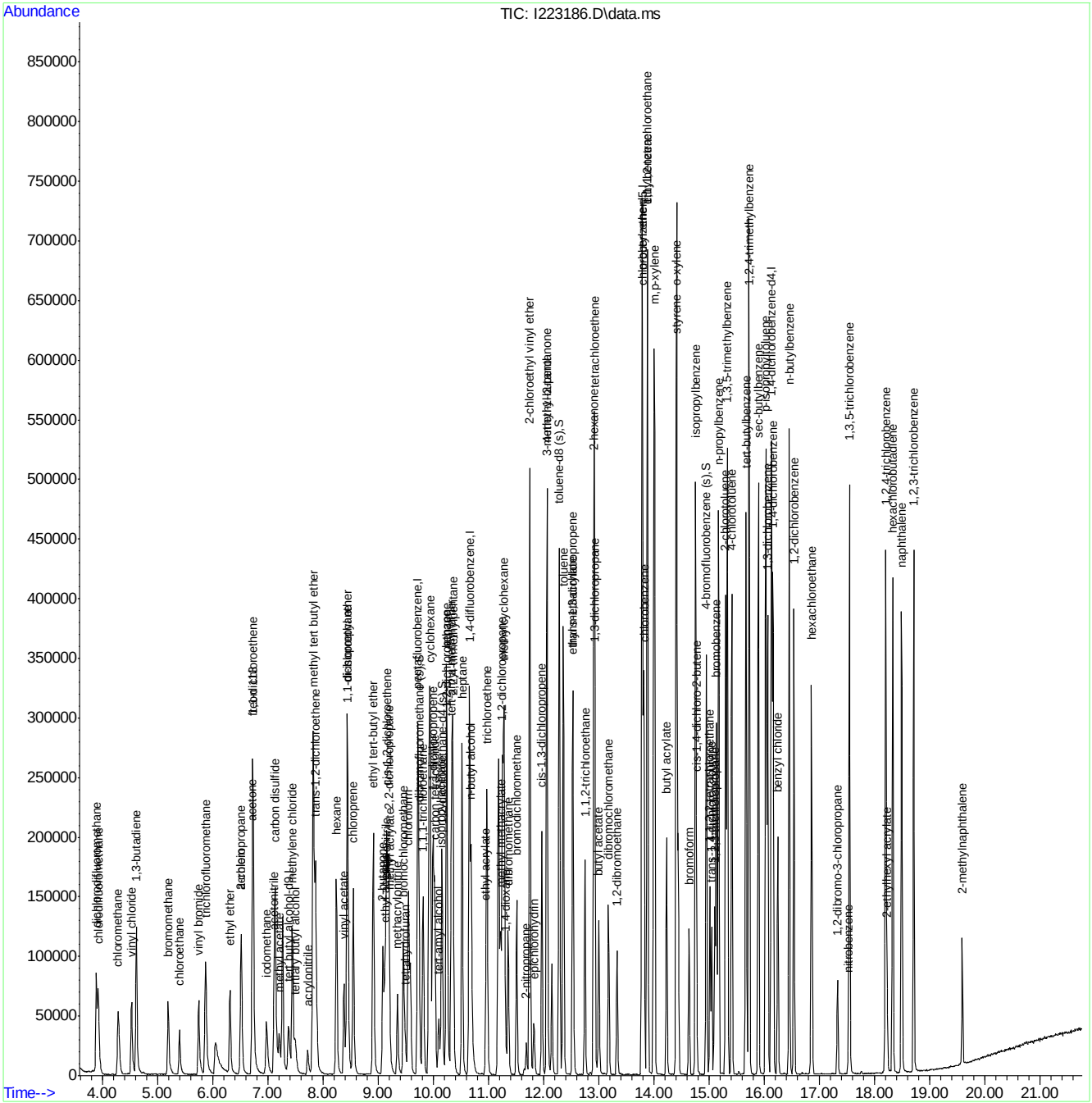
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91)	styrene	14.414	104	186774	51.79	ug/L	99
92)	butyl acrylate	14.231	55	110983	53.94	ug/L	99
93)	cis-1,4-dichloro-2-butene	14.769	88	25935	49.06	ug/L	96
94)	bromoform	14.633	173	51862	54.70	ug/L	99
95)	isopropylbenzene	14.754	105	282968	52.34	ug/L	100
98)	1,1,2,2-tetrachloroethane	15.015	83	67367	51.12	ug/L	99
99)	trans-1,4-dichloro-2-b...	15.047	53	20205	58.83	ug/L	94
100)	1,2,3-trichloropropane	15.099	110	17970	52.93	ug/L	97
101)	bromobenzene	15.130	156	80721	51.31	ug/L	98
102)	n-propylbenzene	15.167	91	334318	51.19	ug/L	100
103)	2-chlorotoluene	15.298	126	70108	51.10	ug/L	96
104)	4-chlorotoluene	15.408	91	202836	51.95	ug/L	100
105)	1,3,5-trimethylbenzene	15.329	105	249455	50.75	ug/L	100
106)	tert-butylbenzene	15.669	134	47992	52.71	ug/L	94
107)	1,2,4-trimethylbenzene	15.721	105	260796	51.79	ug/L	95
108)	sec-butylbenzene	15.894	105	325587	51.40	ug/L	99
109)	p-isopropyltoluene	16.030	119	287328	52.26	ug/l	99
110)	benzyl chloride	16.244	91	129132	41.87	ug/L	99
111)	1,3-dichlorobenzene	16.061	146	153761	51.22	ug/L	100
112)	1,4-dichlorobenzene	16.155	146	155923	50.85	ug/L	98
113)	1,2-dichlorobenzene	16.537	146	152569	51.93	ug/L	99
114)	n-butylbenzene	16.448	92	148138	51.80	ug/L	97
115)	hexachloroethane	16.856	201	60144	54.86	ug/L	95
116)	1,2-dibromo-3-chloropr...	17.327	157	21224	51.93	ug/L	96
117)	nitrobenzene	17.521	77	7476	53.24	ug/L	95
118)	1,3,5-trichlorobenzene	17.541	180	154455	51.75	ug/L	99
119)	1,2,4-trichlorobenzene	18.200	180	134228	50.00	ug/L	99
120)	2-ethylhexyl acrylate	18.221	55	23923	10.93	ug/L	98
121)	hexachlorobutadiene	18.326	225	88466	50.06	ug/L	100
122)	naphthalene	18.488	128	274425	52.87	ug/L	99
123)	1,2,3-trichlorobenzene	18.708	180	131768	49.89	ug/L	99
124)	2-methylnaphthalene	19.586	142	44610	24.10	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223186.D
Acq On : 27 Nov 2018 11:48 pm
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 28 14:07:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223187.D
Acq On : 28 Nov 2018 12:18 am
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 28 14:08:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration

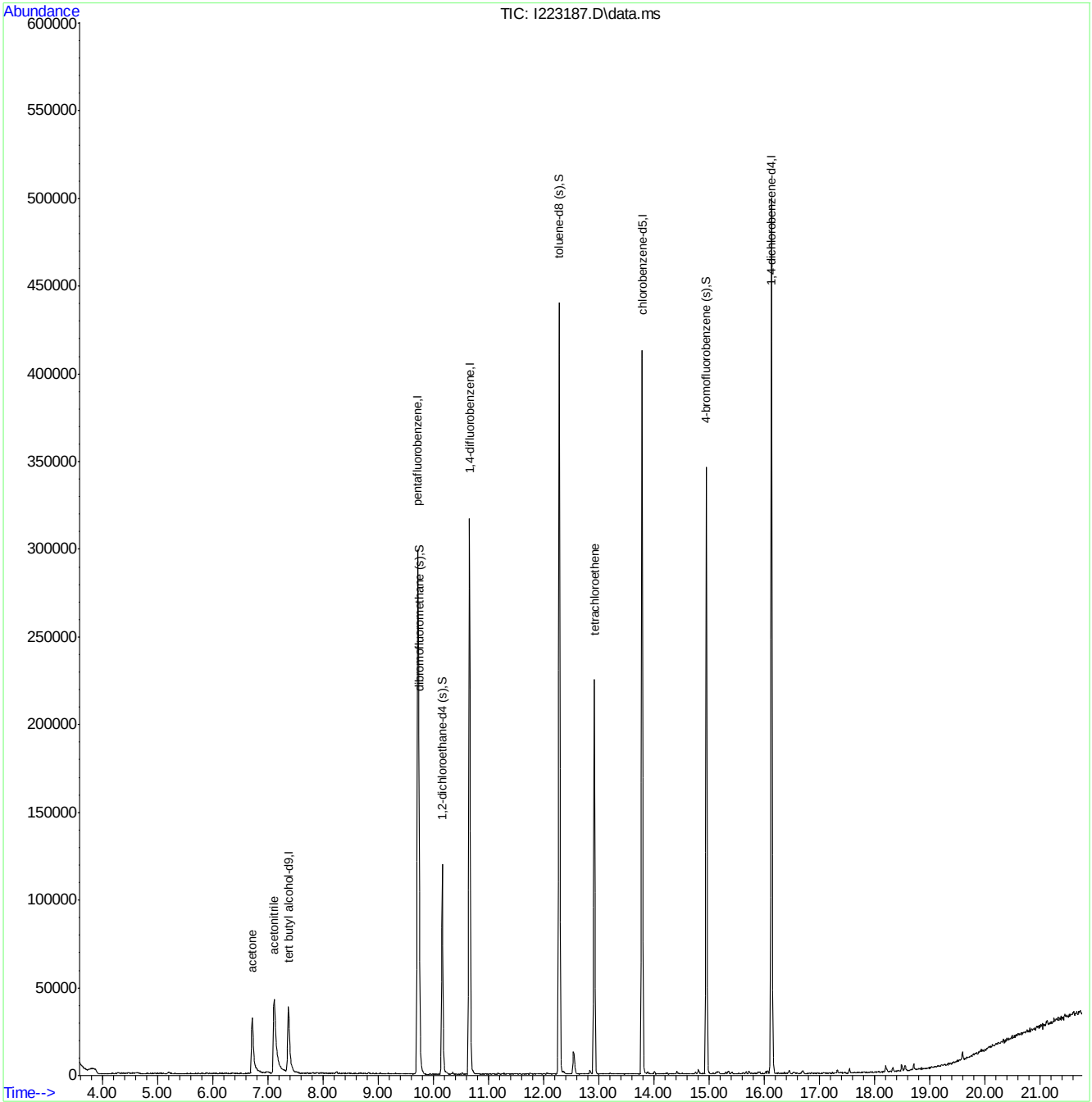
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.374	65	65690	500.00	ug/L	0.00
4) pentafluorobenzene	9.717	168	199145	50.00	ug/L	0.00
51) 1,4-difluorobenzene	10.653	114	255513	50.00	ug/L	0.00
73) chlorobenzene-d5	13.786	117	213159	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	16.129	152	119395	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	9.738	113	78482	50.15	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.30%			
52) 1,2-dichloroethane-d4 (s)	10.162	65	78642	49.31	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.62%			
74) toluene-d8 (s)	12.280	98	275367	50.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.78%			
97) 4-bromofluorobenzene (s)	14.947	95	94502	51.90	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 103.80%			
Target Compounds						Qvalue
19) acetone	6.715	43	63003	187.76	ug/L	99
22) acetonitrile	7.118	41	86699	517.40	ug/L	97
80) tetrachloroethene	12.918	166	66283	44.75	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VI8986\
Data File : I223187.D
Acq On : 28 Nov 2018 12:18 am
Operator : thienn
Sample : ICV8986-50
Misc : MS30885,VI8986,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 28 14:08:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Wed Nov 28 13:32:54 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225820.d
Acq On : 30 Apr 2019 8:27 am
Operator : thienn
Sample : cc8986-50 Inst : GCMSI
Misc : MS34179,VI9098,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:22:45 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	58842	500.00	ug/L		-0.03
4) pentafluorobenzene	9.696	168	174481	50.00	ug/L		-0.02
51) 1,4-difluorobenzene	10.632	114	234208	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.760	117	191356	50.00	ug/L		-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	110850	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.712	113	70992	51.78	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 103.56%				
52) 1,2-dichloroethane-d4 (s)	10.135	65	80777	55.26	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 110.52%				
74) toluene-d8 (s)	12.259	98	248251	50.60	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.20%				
97) 4-bromofluorobenzene (s)	14.926	95	89361	52.86	ug/L		-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 105.72%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.468	59	33942	278.70	ug/L		96
3) 1,4-dioxane	11.276	88	18868	1382.35	ug/L		97
5) dichlorodifluoromethane	3.885	85	96430	63.26	ug/L		99
6) chlorodifluoromethane	3.917	51	72554	50.41	ug/L		95
7) chloromethane	4.278	50	70661	50.06	ug/L		99
8) vinyl chloride	4.518	62	65319	54.95	ug/L		97
9) 1,3-butadiene	4.607	54	42453	51.13	ug/L		97
10) bromomethane	5.182	94	41725	52.68	ug/L		99
11) chloroethane	5.386	64	35642	49.57	ug/L		98
12) vinyl bromide	5.732	106	47451	51.65	ug/L		95
13) trichlorofluoromethane	5.857	101	90301	49.64	ug/L		100
14) ethyl ether	6.296	74	25824	50.11	ug/L		90
15) 2-chloropropane	6.495	63	20569	48.96	ug/L		93
16) acrolein	6.495	56	8950	53.30	ug/L		95
17) freon 113	6.715	151	44272	49.67	ug/L		96
18) 1,1-dichloroethene	6.710	61	76343	47.01	ug/L		97
19) acetone	6.694	43	63574	216.25	ug/L		93
20) iodomethane	6.955	142	53537	44.76	ug/L		98
21) carbon disulfide	7.112	76	146394	41.85	ug/L		99
22) acetonitrile	7.086	41	71015	483.71	ug/L		93
23) methyl acetate	7.186	74	7708	44.95	ug/L	#	84
24) methylene chloride	7.421	84	53415	44.42	ug/L		96
25) acrylonitrile	7.693	53	16316	47.18	ug/L		96
26) methyl tert butyl ether	7.803	73	150503	52.80	ug/L		95
27) trans-1,2-dichloroethene	7.839	61	73931	47.75	ug/L		99
28) hexane	8.226	57	76049	40.73	ug/L		99
29) 1,1-dichloroethane	8.415	63	93091	47.09	ug/L		98
30) vinyl acetate	8.357	86	9781	51.97	ug/L	#	94
31) di-isopropyl ether	8.425	45	164590	46.98	ug/L		96
32) chloroprene	8.525	53	83708	50.19	ug/L		96
33) ethyl tert-butyl ether	8.891	59	169493	50.12	ug/L		99
34) 2-butanone	9.058	72	23411	212.45	ug/L	#	87
35) 2,2-dichloropropane	9.168	77	90865	53.02	ug/L		99
36) ethyl acetate	9.095	45	6854	42.15	ug/L		97
37) cis-1,2-dichloroethene	9.131	96	59114	46.42	ug/L		98
38) propionitrile	9.105	54	82494	510.43	ug/L		97
39) methyl acrylate	9.178	85	8388	49.74	ug/L		92
40) methacrylonitrile	9.325	67	20495	50.24	ug/L		99
41) bromochloromethane	9.435	128	28971	50.59	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225820.d
Acq On : 30 Apr 2019 8:27 am
Operator : thienn
Sample : cc8986-50 Inst : GCMSI
Misc : MS34179,VI9098,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:22:45 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	6732	53.02	ug/L		90
43) chloroform	9.523	83	101326	49.55	ug/L		98
44) carbon tetrachloride	10.005	117	82035	49.11	ug/L		97
45) 1,1-dichloropropene	9.973	75	72994	47.41	ug/L		99
48) 1,1,1-trichloroethane	9.790	97	92703	50.79	ug/L		98
49) cyclohexane	9.921	84	70217	43.69	ug/L		93
50) tert-amyl alcohol	10.073	55	12189	263.86	ug/L		82
53) isopropyl acetate	10.125	87	10860	51.18	ug/L		96
54) 1,2-dichloroethane	10.230	62	81140	52.73	ug/L		99
55) benzene	10.214	78	211573	46.23	ug/L		98
56) 2,2,4-trimethylpentane	10.334	57	190851	40.74	ug/L		94
57) tert-amyl methyl ether	10.308	87	39179	50.17	ug/L		96
58) heptane	10.502	57	37806	38.66	ug/L		98
59) n-butyl alcohol	10.658	56	96359	2520.80	ug/L		92
60) trichloroethene	10.951	95	57287	46.74	ug/L		97
61) ethyl acrylate	10.930	55	62028	47.87	ug/L		98
62) methylcyclohexane	11.260	83	86024	41.44	ug/L		97
63) 1,2-dichloropropane	11.223	63	51564	44.02	ug/L		88
64) methyl methacrylate	11.197	100	13481	48.91	ug/L	#	89
65) dibromomethane	11.333	93	33368	48.90	ug/L		94
66) bromodichloromethane	11.485	83	80425	49.56	ug/L		96
67) 2-nitropropane	11.657	41	16167	57.54	ug/L		98
68) 2-chloroethyl vinyl ether	11.725	63	167582	244.52	ug/L		98
69) epichlorohydrin	11.793	57	29236	255.40	ug/L		99
70) cis-1,3-dichloropropene	11.945	75	89222	48.70	ug/L		94
71) 4-methyl-2-pentanone	12.034	58	73402	201.40	ug/L		95
72) 3-methyl-1-butanol	12.034	70	31063	981.21	ug/L		86
75) toluene	12.337	92	131473	49.64	ug/L		95
76) trans-1,3-dichloropropene	12.505	75	82857	51.99	ug/L		98
77) ethyl methacrylate	12.505	69	57979	48.26	ug/L		97
78) 1,1,2-trichloroethane	12.724	83	37483	48.24	ug/L		96
79) 1,3-dichloropropane	12.902	76	69966	49.47	ug/L		99
80) tetrachloroethene	12.897	166	65027	48.90	ug/L		99
81) 2-hexanone	12.881	58	68588	197.54	ug/L		95
82) butyl acetate	12.975	56	28878	47.80	ug/L		96
83) n-butyl ether	13.770	57	173185	39.60	ug/L		94
84) dibromochloromethane	13.153	129	60432	49.77	ug/L		97
85) 1,2-dibromoethane	13.310	107	53209	50.34	ug/L		99
86) chlorobenzene	13.797	112	137419	48.70	ug/L		98
87) 1,1,1,2-tetrachloroethane	13.859	131	56381	50.33	ug/L		100
88) ethylbenzene	13.859	91	238465	48.33	ug/L		100
89) m,p-xylene	13.985	106	183125	94.38	ug/L		98
90) o-xylene	14.382	106	90109	46.64	ug/L		93
91) styrene	14.393	104	154276	47.55	ug/L		98
92) butyl acrylate	14.210	55	89803	48.52	ug/L		99
93) cis-1,4-dichloro-2-butene	14.749	88	27340	57.50	ug/L		90
94) bromoform	14.613	173	45794	53.70	ug/L		99
95) isopropylbenzene	14.733	105	231385	47.58	ug/L		99
98) 1,1,2,2-tetrachloroethane	14.989	83	58518	51.05	ug/L		99
99) trans-1,4-dichloro-2-b...	15.020	53	17039	57.03	ug/L		90
100) 1,2,3-trichloropropane	15.078	110	16486	55.83	ug/L		99
101) bromobenzene	15.109	156	68517	50.07	ug/L		93
102) n-propylbenzene	15.146	91	272110	47.90	ug/L		99
103) 2-chlorotoluene	15.277	126	59218	49.62	ug/L		99
104) 4-chlorotoluene	15.387	91	172291	50.73	ug/L		97
105) 1,3,5-trimethylbenzene	15.308	105	208514	48.77	ug/L		99
106) tert-butylbenzene	15.648	134	36729	46.37	ug/L	#	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225820.d
Acq On : 30 Apr 2019 8:27 am
Operator : thienn
Sample : cc8986-50 Inst : GCMSI
Misc : MS34179,VI9098,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:22:45 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

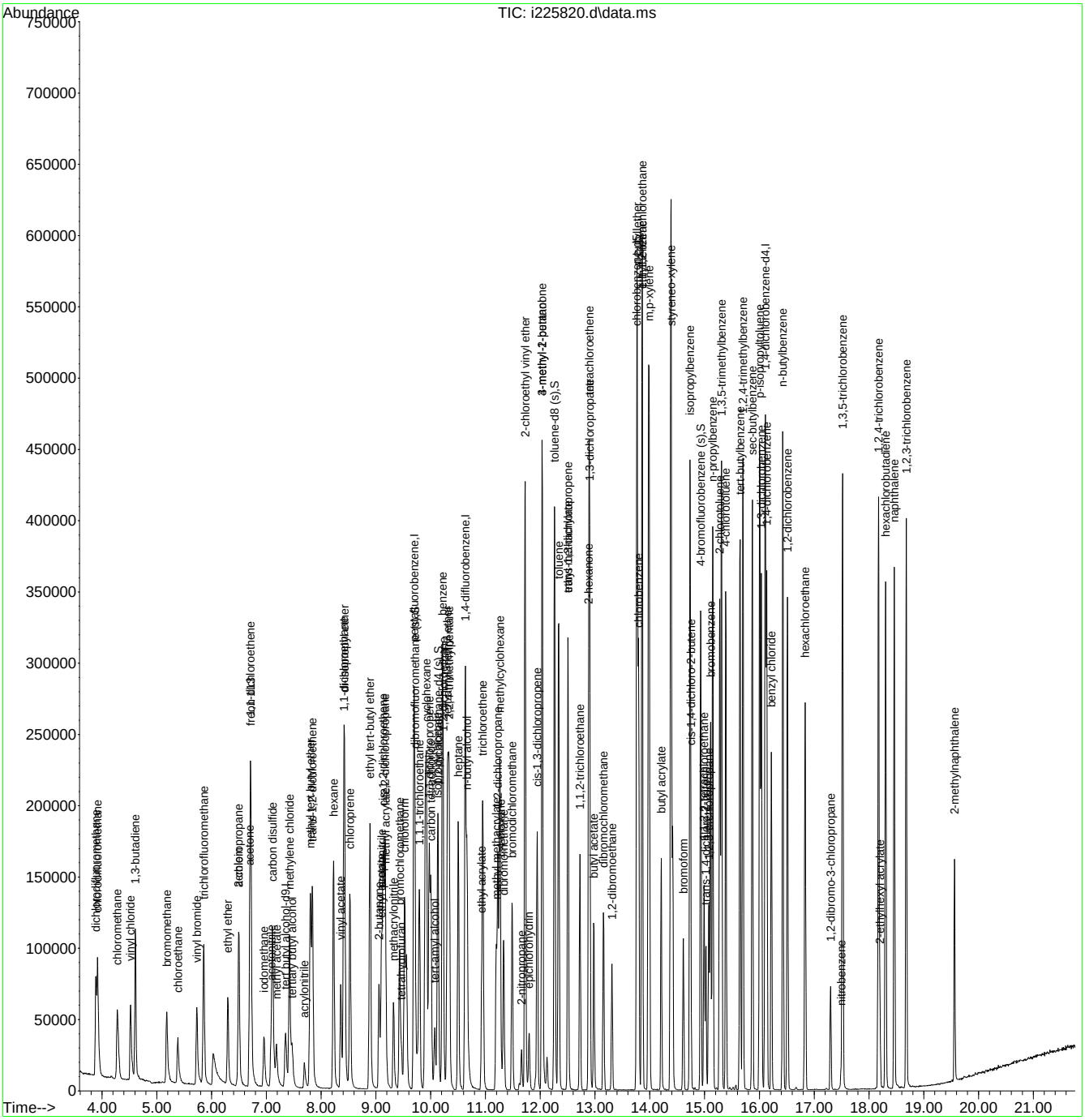
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	212943	48.61	ug/L	98
108) sec-butylbenzene	15.873	105	256905	46.62	ug/L	98
109) p-isopropyltoluene	16.004	119	236585	49.47	ug/l	98
110) benzyl chloride	16.218	91	144669	53.92	ug/L	98
111) 1,3-dichlorobenzene	16.035	146	134262	51.42	ug/L	98
112) 1,4-dichlorobenzene	16.134	146	135190	50.69	ug/L	98
113) 1,2-dichlorobenzene	16.511	146	131896	51.60	ug/L	99
114) n-butylbenzene	16.427	92	123402	49.61	ug/L	99
115) hexachloroethane	16.835	201	49669	52.08	ug/L	92
116) 1,2-dibromo-3-chloropr...	17.301	157	18542	52.15	ug/L	93
117) nitrobenzene	17.494	77	6728	55.08	ug/L	85
118) 1,3,5-trichlorobenzene	17.521	180	135910	52.35	ug/L	99
119) 1,2,4-trichlorobenzene	18.174	180	123643	52.94	ug/L	97
120) 2-ethylhexyl acrylate	18.200	55	19557	10.27	ug/L	96
121) hexachlorobutadiene	18.305	225	76635	49.85	ug/L	99
122) naphthalene	18.462	128	257404	57.01	ug/L	99
123) 1,2,3-trichlorobenzene	18.682	180	114832	49.98	ug/L	99
124) 2-methylnaphthalene	19.560	142	65972	40.98	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\lotusa\VOA\May-2019\5-1\vi9098\
Data File : i225820.d
Acq On : 30 Apr 2019 8:27 am
Operator : thienn
Sample : cc8986-50 Inst : GCMSI
Misc : MS34179,VI9098,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 01 07:22:45 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225857.d
Acq On : 1 May 2019 8:24 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:16:00 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.348	65	56348	500.00	ug/L		-0.03
4) pentafluorobenzene	9.691	168	158824	50.00	ug/L		-0.03
51) 1,4-difluorobenzene	10.632	114	213005	50.00	ug/L		-0.02
73) chlorobenzene-d5	13.760	117	173298	50.00	ug/L		-0.03
96) 1,4-dichlorobenzene-d4	16.108	152	99990	50.00	ug/L		-0.02
System Monitoring Compounds							
47) dibromofluoromethane (s)	9.712	113	66680	53.43	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 127		Recovery = 106.86%				
52) 1,2-dichloroethane-d4 (s)	10.136	65	76925	57.86	ug/L		-0.03
Spiked Amount 50.000	Range 75 - 130		Recovery = 115.72%				
74) toluene-d8 (s)	12.259	98	227006	51.10	ug/L		-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.20%				
97) 4-bromofluorobenzene (s)	14.926	95	81372	53.37	ug/L		-0.03
Spiked Amount 50.000	Range 79 - 127		Recovery = 106.74%				
Target Compounds							Qvalue
2) tertiary butyl alcohol	7.473	59	12178	104.42	ug/L		94
3) 1,4-dioxane	11.281	88	6527	499.36	ug/L		95
5) dichlorodifluoromethane	3.891	85	39289	28.32	ug/L		96
6) chlorodifluoromethane	3.917	51	29920	22.84	ug/L		96
7) chloromethane	4.278	50	31169	24.26	ug/L		99
8) vinyl chloride	4.518	62	26861	24.83	ug/L		94
9) 1,3-butadiene	4.607	54	16504	21.84	ug/L		90
10) bromomethane	5.182	94	17061	23.67	ug/L		99
11) chloroethane	5.386	64	14043	21.46	ug/L		97
12) vinyl bromide	5.732	106	18401	22.00	ug/L		96
13) trichlorofluoromethane	5.857	101	35771	21.60	ug/L		99
14) ethyl ether	6.297	74	9463	20.17	ug/L		91
15) 2-chloropropane	6.495	63	7968	20.84	ug/L		98
16) acrolein	6.500	56	2396	15.68	ug/L		95
17) freon 113	6.715	151	17213	21.22	ug/L		93
18) 1,1-dichloroethene	6.710	61	30483	20.62	ug/L		99
19) acetone	6.694	43	24575	91.83	ug/L		95
20) iodomethane	6.956	142	18788	16.92	ug/L		96
21) carbon disulfide	7.112	76	58900	18.50	ug/L		99
22) acetonitrile	7.097	41	25798	193.04	ug/L		97
23) methyl acetate	7.191	74	2689	18.73	ug/L	#	91
24) methylene chloride	7.421	84	21806	19.92	ug/L		97
25) acrylonitrile	7.698	53	5438	17.28	ug/L		92
26) methyl tert butyl ether	7.803	73	53779	20.73	ug/L		95
27) trans-1,2-dichloroethene	7.839	61	29073	20.63	ug/L		93
28) hexane	8.226	57	27716	16.31	ug/L		98
29) 1,1-dichloroethane	8.415	63	36392	20.23	ug/L		99
30) vinyl acetate	8.362	86	3128	18.26	ug/L	#	81
31) di-isopropyl ether	8.425	45	59567	18.68	ug/L		96
32) chloroprene	8.530	53	32993	21.73	ug/L		92
33) ethyl tert-butyl ether	8.891	59	60478	19.65	ug/L		97
34) 2-butanone	9.058	72	7972	79.48	ug/L	#	85
35) 2,2-dichloropropane	9.163	77	36369	23.31	ug/L		97
36) ethyl acetate	9.095	45	2548	18.59	ug/L	#	89
37) cis-1,2-dichloroethene	9.137	96	22783	19.66	ug/L		96
38) propionitrile	9.110	54	29906	203.29	ug/L		95
39) methyl acrylate	9.178	85	2510	18.01	ug/L		94
40) methacrylonitrile	9.320	67	7327	19.73	ug/L		92
41) bromochloromethane	9.429	128	10675	20.48	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225857.d
Acq On : 1 May 2019 8:24 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:16:00 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) tetrahydrofuran	9.466	71	2358	20.40	ug/L		90
43) chloroform	9.524	83	39514	21.23	ug/L		97
44) carbon tetrachloride	10.005	117	33142	21.80	ug/L		99
45) 1,1-dichloropropene	9.973	75	28180	20.11	ug/L		98
48) 1,1,1-trichloroethane	9.796	97	36857	22.18	ug/L		98
49) cyclohexane	9.921	84	27129	18.54	ug/L		95
50) tert-amyl alcohol	10.078	55	4370	107.87	ug/L	#	73
53) isopropyl acetate	10.130	87	3800	19.69	ug/L	#	72
54) 1,2-dichloroethane	10.230	62	30813	22.02	ug/L		99
55) benzene	10.214	78	80852	19.43	ug/L		99
56) 2,2,4-trimethylpentane	10.334	57	71389	16.76	ug/L		95
57) tert-amyl methyl ether	10.308	87	13941	19.63	ug/L	#	85
58) heptane	10.502	57	13904	15.63	ug/L		97
59) n-butyl alcohol	10.664	56	37177	1069.38	ug/L		86
60) trichloroethene	10.951	95	21953	19.69	ug/L		98
61) ethyl acrylate	10.931	55	21377	18.14	ug/L		97
62) methylcyclohexane	11.265	83	31994	16.95	ug/L		97
63) 1,2-dichloropropane	11.223	63	18974	17.81	ug/L		87
64) methyl methacrylate	11.197	100	4645	18.53	ug/L	#	90
65) dibromomethane	11.333	93	12228	19.70	ug/L		90
66) bromodichloromethane	11.485	83	30365	20.57	ug/L		93
67) 2-nitropropane	11.658	41	6249	24.46	ug/L		96
68) 2-chloroethyl vinyl ether	11.720	63	59391	95.28	ug/L		97
69) epichlorohydrin	11.793	57	10428	100.17	ug/L		93
70) cis-1,3-dichloropropene	11.945	75	31577	18.95	ug/L		91
71) 4-methyl-2-pentanone	12.034	58	25405	76.65	ug/L		92
72) 3-methyl-1-butanol	12.034	70	10849	376.81	ug/L		91
75) toluene	12.332	92	48589	20.26	ug/L		99
76) trans-1,3-dichloropropene	12.505	75	29911	20.72	ug/L		98
77) ethyl methacrylate	12.505	69	19975	18.36	ug/L		98
78) 1,1,2-trichloroethane	12.724	83	13596	19.32	ug/L		97
79) 1,3-dichloropropane	12.902	76	25983	20.29	ug/L		99
80) tetrachloroethene	12.897	166	25251	20.97	ug/L		98
81) 2-hexanone	12.887	58	24074	76.56	ug/L		91
82) butyl acetate	12.981	56	9911	18.12	ug/L	#	79
83) n-butyl ether	13.771	57	62612	15.81	ug/L		94
84) dibromochloromethane	13.153	129	22373	20.35	ug/L		99
85) 1,2-dibromoethane	13.305	107	19142	20.00	ug/L		99
86) chlorobenzene	13.791	112	52939	20.72	ug/L		95
87) 1,1,1,2-tetrachloroethane	13.859	131	20824	20.53	ug/L		96
88) ethylbenzene	13.865	91	89496	20.03	ug/L		99
89) m,p-xylene	13.985	106	69502	39.55	ug/L		98
90) o-xylene	14.382	106	32463	18.55	ug/L		90
91) styrene	14.393	104	56001	19.06	ug/L		98
92) butyl acrylate	14.210	55	29679	17.71	ug/L		97
93) cis-1,4-dichloro-2-butene	14.749	88	9918	23.03	ug/L		90
94) bromoform	14.613	173	15975	20.68	ug/L		96
95) isopropylbenzene	14.733	105	86353	19.61	ug/L		95
98) 1,1,2,2-tetrachloroethane	14.994	83	21169	20.47	ug/L		96
99) trans-1,4-dichloro-2-b...	15.026	53	6092	22.61	ug/L		94
100) 1,2,3-trichloropropane	15.073	110	5810	21.81	ug/L		93
101) bromobenzene	15.109	156	25815	20.91	ug/L		96
102) n-propylbenzene	15.146	91	103592	20.21	ug/L		99
103) 2-chlorotoluene	15.277	126	22010	20.45	ug/L		97
104) 4-chlorotoluene	15.387	91	63743	20.81	ug/L		98
105) 1,3,5-trimethylbenzene	15.308	105	76548	19.85	ug/L		99
106) tert-butylbenzene	15.648	134	13453	18.83	ug/L	#	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-2-19\vi9099\
Data File : i225857.d
Acq On : 1 May 2019 8:24 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:16:00 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration

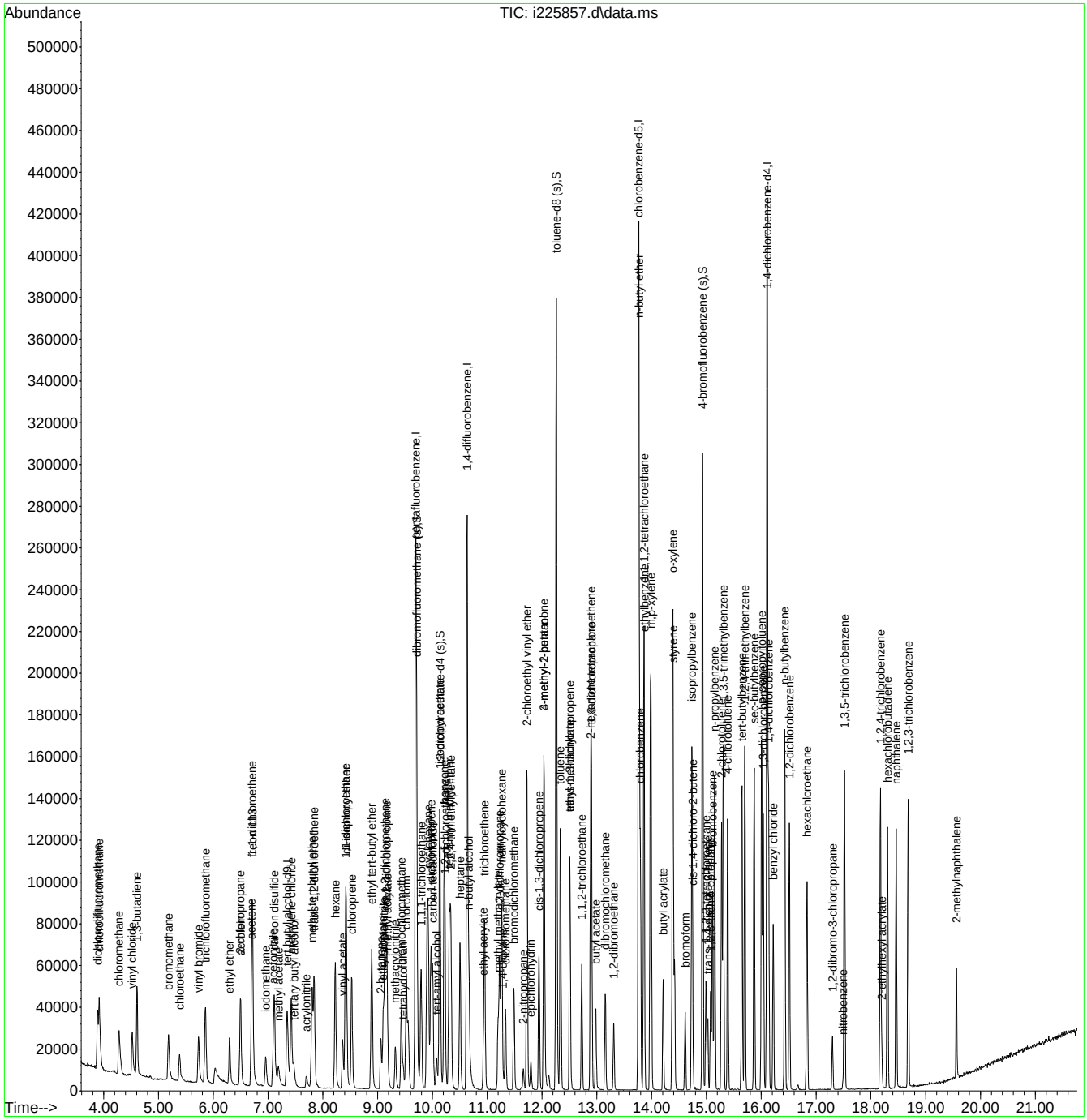
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	15.700	105	77768	19.68	ug/L	99
108) sec-butylbenzene	15.873	105	95274	19.17	ug/L	99
109) p-isopropyltoluene	16.009	119	86260	20.00	ug/l	99
110) benzyl chloride	16.218	91	49431	20.43	ug/L	96
111) 1,3-dichlorobenzene	16.035	146	49415	20.98	ug/L	98
112) 1,4-dichlorobenzene	16.135	146	50635	21.05	ug/L	98
113) 1,2-dichlorobenzene	16.511	146	48221	20.92	ug/L	96
114) n-butylbenzene	16.427	92	44643	19.90	ug/L	94
115) hexachloroethane	16.835	201	18564	21.58	ug/L	92
116) 1,2-dibromo-3-chloropr...	17.301	157	6197	19.32	ug/L	92
117) nitrobenzene	17.489	77	2102	19.08	ug/L	89
118) 1,3,5-trichlorobenzene	17.521	180	48798	20.84	ug/L	99
119) 1,2,4-trichlorobenzene	18.174	180	42943	20.38	ug/L	98
120) 2-ethylhexyl acrylate	18.201	55	6117	3.56	ug/L	94
121) hexachlorobutadiene	18.305	225	28085	20.25	ug/L	95
122) naphthalene	18.462	128	86397	21.21	ug/L	99
123) 1,2,3-trichlorobenzene	18.682	180	40085	19.34	ug/L	97
124) 2-methylnaphthalene	19.560	142	21339	14.69	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\5-2-19\vi9099\
Data File : i225857.d
Acq On : 1 May 2019 8:24 am
Operator : thienn
Sample : cc8986-20 Inst : GCMSI
Misc : MS34328,VI9099,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MI8986.M
Quant Results File: MI8986.RES
Quant Time: May 02 03:16:00 2019
Quant Title : Method SW846 8260C, Rxi-624 60m x 0.25mm x 1.4um
QLast Update : Fri Jan 25 14:07:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184713.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC8014-0.5
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 12:14:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.73	65	56213	500.00	ug/L	-0.01
5) pentafluorobenzene	9.98	168	179067	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	247615	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	222547	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	123910	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	81490	50.54	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.08%			
53) 1,2-dichloroethane-d4 (s)	10.44	65	69798	51.78	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 103.56%			
75) toluene-d8 (s)	12.51	98	275462	47.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.48%			
98) 4-bromofluorobenzene (s)	15.14	95	103409	49.38	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.76%			
Target Compounds						Qvalue
9) vinyl chloride	4.99	62	1383	0.47	ug/L #	49
19) 1,1-dichloroethene	7.07	61	1265	0.44	ug/L	87
22) iodomethane	7.34	142	1676	0.48	ug/L #	43
23) carbon disulfide	7.47	76	3086	0.53	ug/L	85
26) methyl tert butyl ether	8.13	73	2848	0.53	ug/L	54
27) trans-1,2-dichloroethene	8.16	61	1494	0.56	ug/L	79
28) hexane	8.51	57	1119	0.46	ug/L	89
29) di-isopropyl ether	8.71	45	3496	0.50	ug/L	92
30) ethyl tert-butyl ether	9.18	59	2847	0.45	ug/L	87
32) 1,1-dichloroethane	8.73	63	1650	0.49	ug/L	73
33) chloroprene	8.83	53	1248	0.51	ug/L	73
37) 2,2-dichloropropane	9.49	77	1434	0.50	ug/L	82
38) cis-1,2-dichloroethene	9.45	96	1103	0.51	ug/L	88
39) propionitrile	9.46	54	996	5.33	ug/L	85
40) bromochloromethane	9.74	130	659	0.47	ug/L #	76
47) 1,1,1-trichloroethane	10.09	97	1615	0.53	ug/L	87
48) cyclohexane	10.20	84	1504	0.49	ug/L	86
49) 1,1-dichloropropene	10.26	75	1178	0.53	ug/L #	79
51) carbon tetrachloride	10.28	117	1335	0.51	ug/L #	76
54) 2,2,4-trimethylpentane	10.59	57	2704	0.37	ug/L	86
55) tert-amyl methyl ether	10.58	73	2980	0.53	ug/L	92
57) benzene	10.50	78	3878	0.56	ug/L	82
61) trichloroethene	11.22	130	968	0.53	ug/L	95
64) 2-chloroethyl vinyl ether	11.98	63	2246	2.69	ug/L	95
66) 1,2-dichloropropane	11.50	63	956	0.52	ug/L #	39
68) dibromomethane	11.61	93	550	0.53	ug/L	81
69) bromodichloromethane	11.76	83	1322	0.53	ug/L	94
71) cis-1,3-dichloropropene	12.21	75	1250	0.44	ug/L	93
72) 4-methyl-2-pentanone	12.30	58	1064	2.18	ug/L #	77
76) toluene	12.58	92	2379	0.55	ug/L	99
77) trans-1,3-dichloropropene	12.76	75	1296	0.51	ug/L	89
78) ethyl methacrylate	12.74	69	891	0.50	ug/L	72
79) 1,1,2-trichloroethane	12.98	83	695	0.58	ug/L #	69

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184713.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC8014-0.5
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 12:14:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

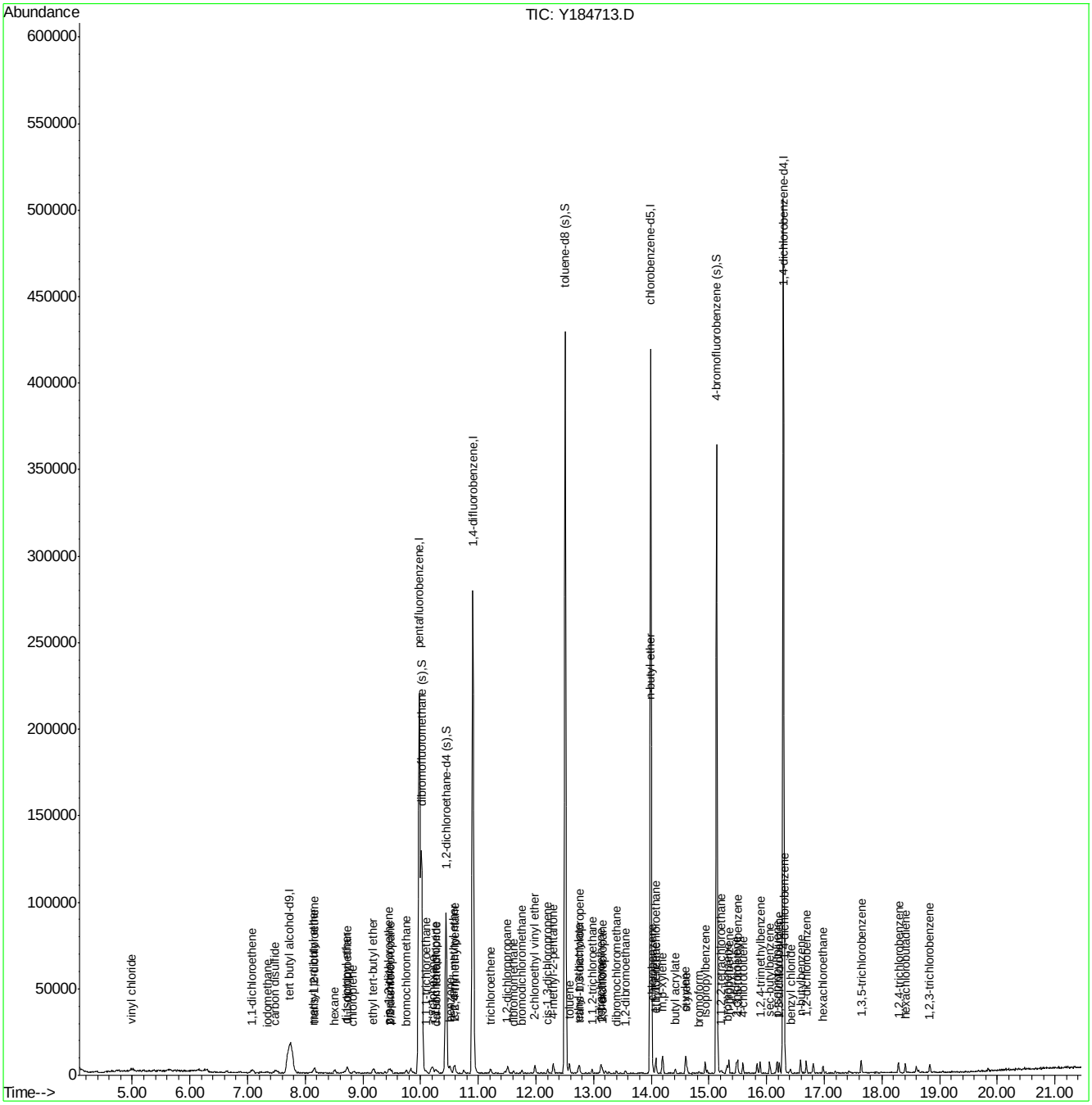
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) 2-hexanone	13.13	58	923	1.99 ug/L #	77
81) tetrachloroethene	13.12	166	1004	0.52 ug/L	92
82) 1,3-dichloropropane	13.15	76	1263	0.56 ug/L	91
84) dibromochloromethane	13.39	129	828	0.43 ug/L	89
85) 1,2-dibromoethane	13.55	107	1013	0.53 ug/L	87
86) n-butyl ether	13.97	57	3943	0.54 ug/L	76
87) chlorobenzene	14.02	112	3055	0.61 ug/L	83
88) 1,1,1,2-tetrachloroethane	14.09	131	1100	0.53 ug/L	83
89) ethylbenzene	14.08	91	4315	0.53 ug/L	95
90) m,p-xylene	14.20	106	3428	1.10 ug/L	96
91) o-xylene	14.59	91	3554	0.51 ug/L	88
92) styrene	14.60	104	2736	0.49 ug/L	93
93) bromoform	14.83	173	641	0.51 ug/L	90
94) butyl acrylate	14.41	55	1526	0.52 ug/L	94
95) isopropylbenzene	14.93	105	4385	0.53 ug/L	96
99) bromobenzene	15.31	156	1423	0.59 ug/L #	80
100) 1,1,2,2-tetrachloroethane	15.21	83	1059	0.58 ug/L	84
103) n-propylbenzene	15.35	91	5499	0.59 ug/L	94
104) 2-chlorotoluene	15.48	126	1301	0.61 ug/L #	54
105) 4-chlorotoluene	15.59	91	3513	0.59 ug/L	90
106) 1,3,5-trimethylbenzene	15.50	105	3857	0.55 ug/L	91
108) 1,2,4-trimethylbenzene	15.89	105	4080	0.56 ug/L	95
109) sec-butylbenzene	16.06	105	4557	0.51 ug/L	97
110) 1,3-dichlorobenzene	16.22	146	2581	0.58 ug/L	90
111) p-isopropyltoluene	16.18	119	4032	0.51 ug/L	94
112) 1,4-dichlorobenzene	16.32	146	2780	0.62 ug/L	100
113) 1,2-dichlorobenzene	16.68	146	2776	0.62 ug/L	98
114) n-butylbenzene	16.59	92	2136	0.52 ug/L	90
116) 1,3,5-trichlorobenzene	17.64	180	2554	0.57 ug/L	87
117) 1,2,4-trichlorobenzene	18.29	180	2123	0.56 ug/L	94
118) hexachlorobutadiene	18.41	225	1324	0.59 ug/L	92
120) 1,2,3-trichlorobenzene	18.83	180	1605	0.47 ug/L	81
121) hexachloroethane	16.98	201	798	0.55 ug/L	88
122) benzyl chloride	16.41	91	1972	0.59 ug/L	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184713.D
Acq On : 24 Apr 2019 3:12 pm
Operator : ROBERTS
Sample : IC8014-0.5
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 12:14:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	50098	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	174738	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	241908	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	216141	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	120094	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	77304	49.13	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 98.26%				
53) 1,2-dichloroethane-d4 (s)	10.43	65	66660	50.62	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.24%				
75) toluene-d8 (s)	12.51	98	272570	48.13	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.26%				
98) 4-bromofluorobenzene (s)	15.13	95	98731	48.65	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.30%				
Target Compounds							Qvalue
6) chlorodifluoromethane	4.39	51	2580	0.97	ug/L		64
7) dichlorodifluoromethane	4.36	85	3338	0.98	ug/L	#	51
8) chloromethane	4.74	50	4283	1.30	ug/L		82
9) vinyl chloride	4.98	62	3306	1.16	ug/L		79
11) bromomethane	5.62	94	3107	1.34	ug/L		92
12) chloroethane	5.77	64	1613	1.03	ug/L		53
13) vinyl bromide	6.15	106	1230	0.87	ug/L	#	65
14) trichlorofluoromethane	6.27	101	3945	1.22	ug/L		88
15) ethyl ether	6.65	74	741	0.82	ug/L	#	7
16) 2-chloropropane	6.86	63	767	1.02	ug/L	#	34
18) freon 113	7.10	151	1379	0.82	ug/L	#	81
19) 1,1-dichloroethene	7.07	61	2477	0.87	ug/L		91
20) acetone	7.07	43	1853	4.63	ug/L		98
22) iodomethane	7.33	142	3089	0.90	ug/L		92
23) carbon disulfide	7.47	76	5832	1.03	ug/L		91
26) methyl tert butyl ether	8.13	73	5064	0.96	ug/L		96
27) trans-1,2-dichloroethene	8.16	61	2619	1.00	ug/L		91
28) hexane	8.52	57	2351	0.99	ug/L		89
29) di-isopropyl ether	8.72	45	5968	0.87	ug/L		98
30) ethyl tert-butyl ether	9.18	59	5761	0.92	ug/L		93
32) 1,1-dichloroethane	8.73	63	3373	1.02	ug/L		92
33) chloroprene	8.83	53	2304	0.96	ug/L		80
37) 2,2-dichloropropane	9.49	77	2986	1.07	ug/L		95
38) cis-1,2-dichloroethene	9.44	96	2304	1.09	ug/L	#	76
39) propionitrile	9.46	54	1739	9.53	ug/L		87
40) bromochloromethane	9.74	130	1379	1.01	ug/L		92
42) chloroform	9.82	83	4164	1.25	ug/L		94
47) 1,1,1-trichloroethane	10.10	97	3205	1.08	ug/L		98
48) cyclohexane	10.21	84	3046	1.02	ug/L	#	71
49) 1,1-dichloropropene	10.26	75	2001	0.93	ug/L		93
51) carbon tetrachloride	10.29	117	2769	1.07	ug/L		97
54) 2,2,4-trimethylpentane	10.59	57	6313	0.90	ug/L		94
55) tert-amyl methyl ether	10.58	73	4710	0.86	ug/L		92

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
56) n-butyl alcohol	10.95	41	1344	44.79	ug/L	#	66
57) benzene	10.51	78	7094	1.05	ug/L		95
58) heptane	10.74	57	1196	1.00	ug/L		78
60) 1,2-dichloroethane	10.53	62	2368	1.09	ug/L		80
61) trichloroethene	11.22	130	1728	0.97	ug/L	#	83
64) 2-chloroethyl vinyl ether	11.98	63	3647	4.48	ug/L		96
66) 1,2-dichloropropane	11.50	63	1554	0.87	ug/L		89
67) methylcyclohexane	11.51	83	2849	0.98	ug/L		91
68) dibromomethane	11.61	93	948	0.93	ug/L		96
69) bromodichloromethane	11.75	83	2408	0.98	ug/L		80
71) cis-1,3-dichloropropene	12.20	75	2550	0.93	ug/L		91
72) 4-methyl-2-pentanone	12.31	58	1849	3.87	ug/L	#	75
76) toluene	12.58	92	4142	0.99	ug/L	#	81
77) trans-1,3-dichloropropene	12.76	75	2343	0.94	ug/L		92
78) ethyl methacrylate	12.74	69	1530	0.89	ug/L		90
79) 1,1,2-trichloroethane	12.98	83	1151	0.99	ug/L	#	83
80) 2-hexanone	13.13	58	1598	3.54	ug/L	#	81
81) tetrachloroethene	13.12	166	1916	1.01	ug/L		97
82) 1,3-dichloropropane	13.15	76	2044	0.93	ug/L		93
84) dibromochloromethane	13.39	129	1543	0.82	ug/L		86
85) 1,2-dibromoethane	13.55	107	1711	0.92	ug/L		91
86) n-butyl ether	13.97	57	6566	0.93	ug/L		88
87) chlorobenzene	14.02	112	4994	1.03	ug/L		87
88) 1,1,1,2-tetrachloroethane	14.09	131	1852	0.91	ug/L	#	78
89) ethylbenzene	14.07	91	7770	0.99	ug/L		97
90) m,p-xylene	14.20	106	6359	2.10	ug/L	#	76
91) o-xylene	14.59	91	6120	0.90	ug/L		94
92) styrene	14.60	104	5101	0.94	ug/L		88
93) bromoform	14.83	173	1187	0.97	ug/L		79
94) butyl acrylate	14.42	55	2692	0.94	ug/L		83
95) isopropylbenzene	14.93	105	7979	0.99	ug/L		96
99) bromobenzene	15.32	156	2460	1.06	ug/L	#	63
100) 1,1,2,2-tetrachloroethane	15.20	83	1791	1.02	ug/L		82
103) n-propylbenzene	15.35	91	9379	1.03	ug/L		94
104) 2-chlorotoluene	15.48	126	2056	0.99	ug/L		94
105) 4-chlorotoluene	15.59	91	6036	1.05	ug/L		94
106) 1,3,5-trimethylbenzene	15.50	105	6635	0.97	ug/L		98
107) tert-butylbenzene	15.84	134	1105	0.86	ug/L	#	87
108) 1,2,4-trimethylbenzene	15.88	105	6579	0.92	ug/L		94
109) sec-butylbenzene	16.06	105	8626	1.00	ug/L		95
110) 1,3-dichlorobenzene	16.22	146	4249	0.98	ug/L		91
111) p-isopropyltoluene	16.18	119	7541	0.99	ug/L		93
112) 1,4-dichlorobenzene	16.31	146	4569	1.05	ug/L		88
113) 1,2-dichlorobenzene	16.68	146	4828	1.11	ug/L		91
114) n-butylbenzene	16.59	92	3846	0.97	ug/L		82
116) 1,3,5-trichlorobenzene	17.64	180	3985	0.92	ug/L		86
117) 1,2,4-trichlorobenzene	18.29	180	3341	0.90	ug/L		94
118) hexachlorobutadiene	18.41	225	2223	1.03	ug/L		90
119) naphthalene	18.59	128	4830	0.80	ug/L		99
120) 1,2,3-trichlorobenzene	18.83	180	2733	0.83	ug/L		84

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

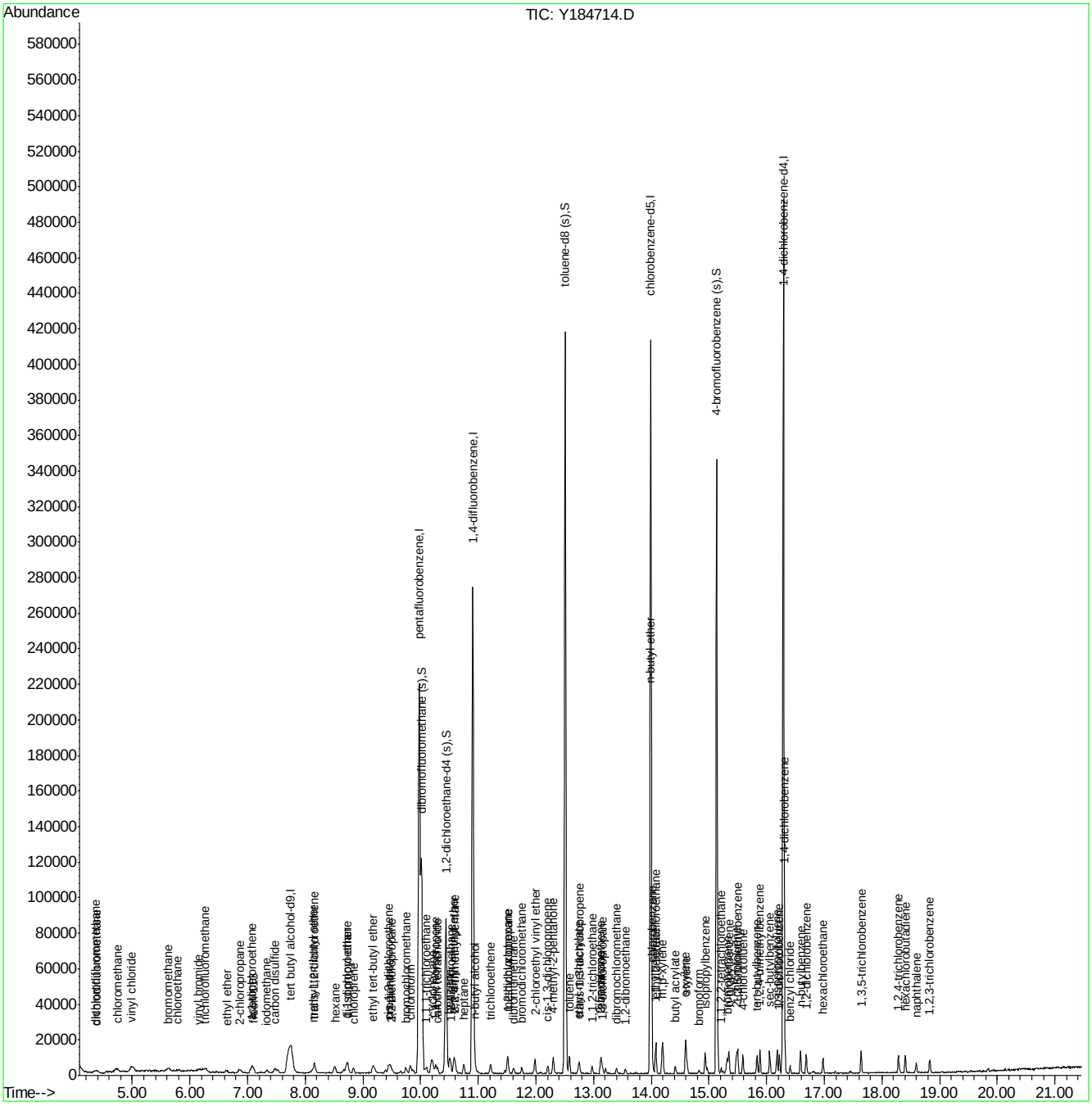
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
121) hexachloroethane	16.98	201	1165	0.83 ug/L	84
122) benzyl chloride	16.41	91	3065	0.94 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184714.D
Acq On : 24 Apr 2019 3:40 pm
Operator : ROBERTS
Sample : IC8014-1
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 12:15:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	52109	500.00	ug/L		0.00
5) pentafluorobenzene	9.98	168	185611	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	260206	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	231217	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	125353	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	84176	50.37	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.74%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	72011	50.83	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.66%				
75) toluene-d8 (s)	12.51	98	291827	48.17	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.34%				
98) 4-bromofluorobenzene (s)	15.14	95	103822	49.01	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.02%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.81	59	1309	7.79	ug/L		54
4) 1,4-dioxane	11.55	88	757	44.42	ug/L		94
6) chlorodifluoromethane	4.38	51	5797	2.05	ug/L		98
7) dichlorodifluoromethane	4.36	85	6680	1.84	ug/L		89
8) chloromethane	4.75	50	7398	2.11	ug/L		96
9) vinyl chloride	5.00	62	5686	1.88	ug/L		92
10) 1,3-butadiene	5.04	54	3841	2.03	ug/L		77
11) bromomethane	5.62	94	5231	2.13	ug/L		99
12) chloroethane	5.81	64	3337	2.00	ug/L		87
13) vinyl bromide	6.15	106	2599	1.72	ug/L		83
14) trichlorofluoromethane	6.26	101	6884	2.01	ug/L		67
15) ethyl ether	6.64	74	1572	1.63	ug/L	#	62
16) 2-chloropropane	6.87	63	1473	1.84	ug/L	#	32
18) freon 113	7.11	151	3436	1.93	ug/L		81
19) 1,1-dichloroethene	7.07	61	5857	1.95	ug/L		79
20) acetone	7.08	43	3749	8.82	ug/L		94
22) iodomethane	7.33	142	7247	1.99	ug/L		88
23) carbon disulfide	7.48	76	13489	2.24	ug/L		87
24) methylene chloride	7.78	84	5840	2.51	ug/L		86
26) methyl tert butyl ether	8.13	73	10739	1.91	ug/L		94
27) trans-1,2-dichloroethene	8.17	61	5755	2.07	ug/L		87
28) hexane	8.51	57	4834	1.92	ug/L		93
29) di-isopropyl ether	8.72	45	13682	1.89	ug/L		93
30) ethyl tert-butyl ether	9.18	59	11708	1.77	ug/L		99
31) 2-butanone	9.38	72	985	6.83	ug/L	#	54
32) 1,1-dichloroethane	8.73	63	7390	2.10	ug/L		94
33) chloroprene	8.84	53	4935	1.93	ug/L		94
37) 2,2-dichloropropane	9.49	77	6075	2.04	ug/L		89
38) cis-1,2-dichloroethene	9.46	96	4704	2.10	ug/L	#	73
39) propionitrile	9.47	54	3601	18.59	ug/L		59
40) bromochloromethane	9.74	130	2939	2.03	ug/L		89
42) chloroform	9.82	83	7529	2.12	ug/L		91
43) tert-butyl formate	9.87	59	2374	1.69	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
47) 1,1,1-trichloroethane	10.09	97	6415	2.04	ug/L		97
48) cyclohexane	10.21	84	5838	1.85	ug/L		91
49) 1,1-dichloropropene	10.26	75	4717	2.06	ug/L		94
51) carbon tetrachloride	10.29	117	5787	2.11	ug/L		94
54) 2,2,4-trimethylpentane	10.60	57	13158	1.74	ug/L		95
55) tert-amyl methyl ether	10.58	73	10818	1.84	ug/L		100
56) n-butyl alcohol	10.95	41	2806	86.93	ug/L		85
57) benzene	10.51	78	15222	2.10	ug/L		93
58) heptane	10.75	57	2588	2.01	ug/L		97
60) 1,2-dichloroethane	10.53	62	4793	2.06	ug/L		97
61) trichloroethene	11.21	130	3831	2.00	ug/L		90
62) ethyl acrylate	11.20	55	3008	1.93	ug/L		80
64) 2-chloroethyl vinyl ether	11.98	63	8535	9.74	ug/L		97
66) 1,2-dichloropropane	11.51	63	3717	1.94	ug/L		96
67) methylcyclohexane	11.51	83	6137	1.97	ug/L		94
68) dibromomethane	11.62	93	2137	1.95	ug/L		80
69) bromodichloromethane	11.75	83	5260	1.99	ug/L		88
71) cis-1,3-dichloropropene	12.20	75	5655	1.91	ug/L		96
72) 4-methyl-2-pentanone	12.30	58	3711	7.22	ug/L		88
73) 3-methyl-1-butanol	12.30	70	1246	31.82	ug/L	#	60
76) toluene	12.58	92	8912	2.00	ug/L		91
77) trans-1,3-dichloropropene	12.76	75	4728	1.78	ug/L		93
78) ethyl methacrylate	12.74	69	3369	1.83	ug/L		90
79) 1,1,2-trichloroethane	12.97	83	2489	1.99	ug/L	#	85
80) 2-hexanone	13.13	58	3422	7.09	ug/L	#	84
81) tetrachloroethene	13.12	166	4256	2.11	ug/L		95
82) 1,3-dichloropropane	13.15	76	4524	1.92	ug/L		97
83) butyl acetate	13.21	56	1693	1.82	ug/L		86
84) dibromochloromethane	13.39	129	3682	1.83	ug/L		94
85) 1,2-dibromoethane	13.55	107	3851	1.94	ug/L		92
86) n-butyl ether	13.97	57	14055	1.86	ug/L		86
87) chlorobenzene	14.02	112	10704	2.06	ug/L		96
88) 1,1,1,2-tetrachloroethane	14.09	131	3778	1.74	ug/L		87
89) ethylbenzene	14.08	91	17031	2.03	ug/L		97
90) m,p-xylene	14.20	106	12583	3.88	ug/L		91
91) o-xylene	14.59	91	13660	1.89	ug/L		95
92) styrene	14.60	104	10110	1.75	ug/L		99
93) bromoform	14.83	173	2431	1.85	ug/L		96
94) butyl acrylate	14.42	55	5449	1.77	ug/L		95
95) isopropylbenzene	14.94	105	15778	1.83	ug/L		95
96) cis-1,4-dichloro-2-butene	14.97	88	1204	1.74	ug/L	#	83
99) bromobenzene	15.32	156	4759	1.96	ug/L	#	81
100) 1,1,2,2-tetrachloroethane	15.21	83	3617	1.97	ug/L		89
101) trans-1,4-dichloro-2-buten	15.24	53	714	1.66	ug/L		87
102) 1,2,3-trichloropropane	15.30	110	1044	2.18	ug/L		83
103) n-propylbenzene	15.35	91	19490	2.06	ug/L		98
104) 2-chlorotoluene	15.48	126	4267	1.96	ug/L		91
105) 4-chlorotoluene	15.59	91	11884	1.97	ug/L		92
106) 1,3,5-trimethylbenzene	15.50	105	13774	1.93	ug/L		93
107) tert-butylbenzene	15.84	134	2535	1.89	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

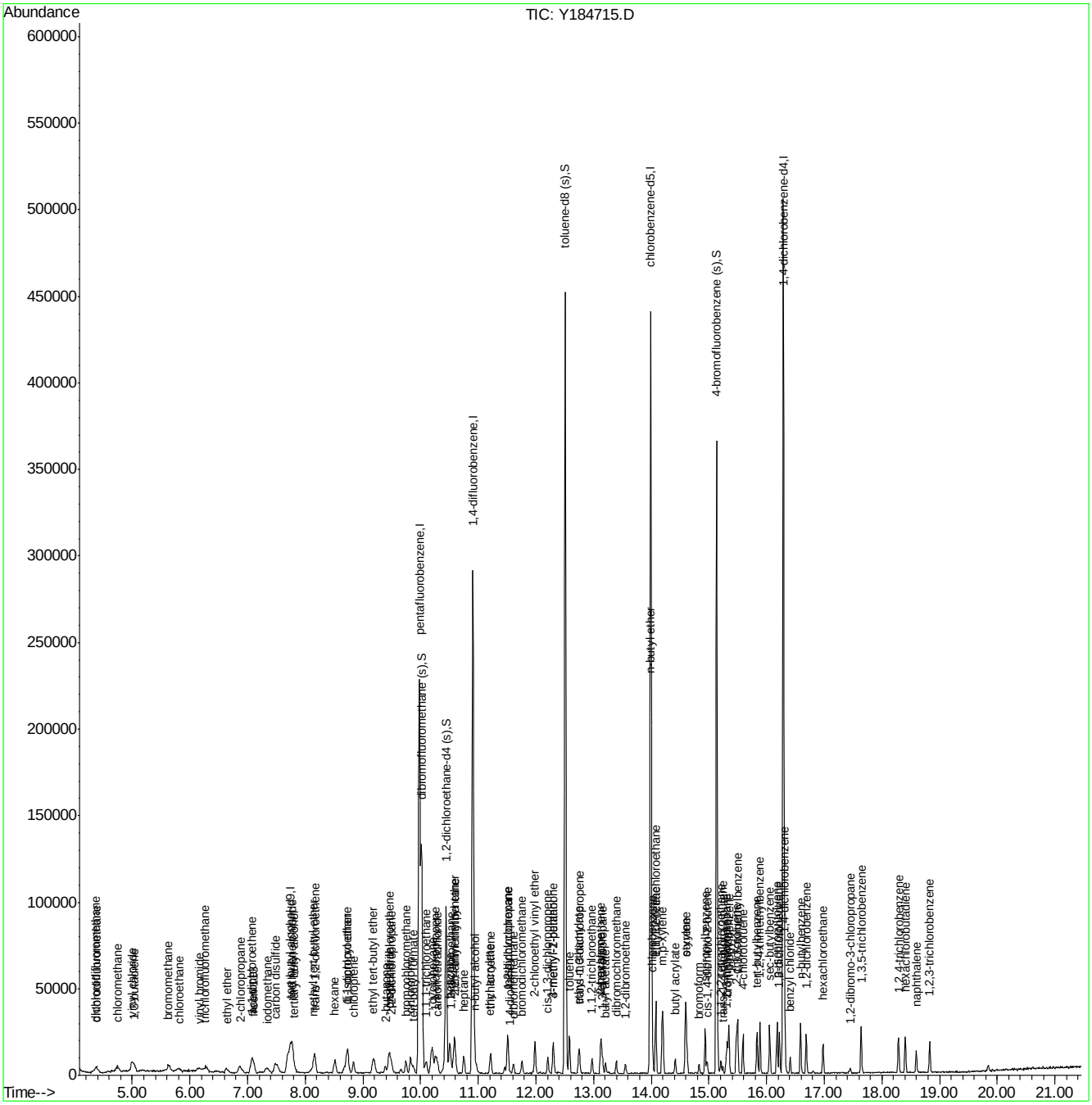
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.88	105	14219	1.91 ug/L	97
109) sec-butylbenzene	16.05	105	17611	1.96 ug/L	98
110) 1,3-dichlorobenzene	16.22	146	9450	2.09 ug/L	98
111) p-isopropyltoluene	16.18	119	15015	1.88 ug/L	98
112) 1,4-dichlorobenzene	16.32	146	9778	2.16 ug/L	94
113) 1,2-dichlorobenzene	16.68	146	9202	2.02 ug/L	92
114) n-butylbenzene	16.59	92	7912	1.91 ug/L	95
115) 1,2-dibromo-3-chloropropan	17.44	157	845	1.95 ug/L #	65
116) 1,3,5-trichlorobenzene	17.64	180	8536	1.89 ug/L	91
117) 1,2,4-trichlorobenzene	18.29	180	6765	1.75 ug/L	91
118) hexachlorobutadiene	18.41	225	4723	2.09 ug/L	93
119) naphthalene	18.59	128	9731	1.54 ug/L	95
120) 1,2,3-trichlorobenzene	18.83	180	5960	1.73 ug/L	92
121) hexachloroethane	16.98	201	2807	1.92 ug/L	85
122) benzyl chloride	16.41	91	6581	1.93 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184715.D
Acq On : 24 Apr 2019 4:09 pm
Operator : ROBERTS
Sample : IC8014-2
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 12:17:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	55416	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	180507	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	252656	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	223014	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	123863	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	83075	51.12	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.24%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	73232	53.24	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.48%				
75) toluene-d8 (s)	12.51	98	280000	47.92	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.84%				
98) 4-bromofluorobenzene (s)	15.13	95	103094	49.25	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 98.50%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.86	59	3640	20.37	ug/L		91
4) 1,4-dioxane	11.54	88	1913	105.56	ug/L		79
6) chlorodifluoromethane	4.37	51	11984	4.36	ug/L		94
7) dichlorodifluoromethane	4.36	85	14056	3.98	ug/L		90
8) chloromethane	4.74	50	15246	4.47	ug/L		93
9) vinyl chloride	5.01	62	12322	4.18	ug/L		99
10) 1,3-butadiene	5.03	54	7855	4.27	ug/L		89
11) bromomethane	5.63	94	10729	4.48	ug/L		88
12) chloroethane	5.81	64	6617	4.09	ug/L		88
13) vinyl bromide	6.15	106	6198	4.22	ug/L		92
14) trichlorofluoromethane	6.28	101	14820	4.44	ug/L		97
15) ethyl ether	6.63	74	3430	3.66	ug/L	#	63
16) 2-chloropropane	6.87	63	3181	4.08	ug/L	#	56
18) freon 113	7.09	151	7012	4.06	ug/L		97
19) 1,1-dichloroethene	7.07	61	11002	3.76	ug/L		96
20) acetone	7.09	43	7915	19.15	ug/L		91
21) acetonitrile	7.52	41	8746	42.65	ug/L		80
22) iodomethane	7.33	142	14173	3.99	ug/L		91
23) carbon disulfide	7.48	76	23834	4.06	ug/L		96
24) methylene chloride	7.78	84	9578	4.23	ug/L		93
25) methyl acetate	7.52	43	4021	4.10	ug/L		93
26) methyl tert butyl ether	8.14	73	21562	3.94	ug/L		96
27) trans-1,2-dichloroethene	8.16	61	11122	4.11	ug/L		93
28) hexane	8.51	57	10195	4.16	ug/L		98
29) di-isopropyl ether	8.72	45	27246	3.86	ug/L		95
30) ethyl tert-butyl ether	9.18	59	24632	3.82	ug/L		100
31) 2-butanone	9.38	72	2541	18.12	ug/L	#	46
32) 1,1-dichloroethane	8.73	63	13928	4.08	ug/L		97
33) chloroprene	8.84	53	10155	4.08	ug/L		94
34) acrylonitrile	8.07	53	2018	3.73	ug/L		85
35) vinyl acetate	8.67	86	999	3.69	ug/L	#	53
36) ethyl acetate	9.39	45	690	3.57	ug/L	#	65
37) 2,2-dichloropropane	9.49	77	12128	4.19	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) cis-1,2-dichloroethene	9.45	96	9052	4.15	ug/L		91
39) propionitrile	9.47	54	8191	43.47	ug/L		75
40) bromochloromethane	9.74	130	5621	3.99	ug/L		90
41) tetrahydrofuran	9.76	72	647	3.90	ug/L		82
42) chloroform	9.83	83	14843	4.31	ug/L		99
43) tert-butyl formate	9.87	59	5490	4.02	ug/L		89
46) methacrylonitrile	9.66	67	1974	3.85	ug/L		82
47) 1,1,1-trichloroethane	10.10	97	12489	4.08	ug/L		82
48) cyclohexane	10.21	84	13112	4.27	ug/L	#	83
49) 1,1-dichloropropene	10.26	75	8997	4.04	ug/L		93
50) tert-amyl alcohol	10.37	55	1179	19.18	ug/L	#	79
51) carbon tetrachloride	10.28	117	10889	4.09	ug/L		94
54) 2,2,4-trimethylpentane	10.60	57	27590	3.75	ug/L		97
55) tert-amyl methyl ether	10.58	73	22446	3.93	ug/L		89
56) n-butyl alcohol	10.96	41	6394	204.01	ug/L		93
57) benzene	10.51	78	29684	4.22	ug/L		100
58) heptane	10.75	57	4773	3.82	ug/L		94
59) isopropyl acetate	10.41	87	1119	3.76	ug/L	#	79
60) 1,2-dichloroethane	10.53	62	9871	4.37	ug/L		92
61) trichloroethene	11.21	130	7842	4.21	ug/L		96
62) ethyl acrylate	11.20	55	6205	4.11	ug/L		94
63) 2-nitropropane	11.96	41	2068	4.29	ug/L		94
64) 2-chloroethyl vinyl ether	11.98	63	16248	19.09	ug/L		96
65) methyl methacrylate	11.46	100	1261	3.81	ug/L	#	84
66) 1,2-dichloropropane	11.51	63	7892	4.24	ug/L		94
67) methylcyclohexane	11.52	83	11924	3.93	ug/L		89
68) dibromomethane	11.61	93	4484	4.22	ug/L		94
69) bromodichloromethane	11.76	83	10579	4.12	ug/L		96
70) epichlorohydrin	12.07	57	2639	21.22	ug/L		90
71) cis-1,3-dichloropropene	12.20	75	11562	4.02	ug/L		95
72) 4-methyl-2-pentanone	12.30	58	8011	16.05	ug/L		94
73) 3-methyl-1-butanol	12.30	70	2912	76.59	ug/L		85
76) toluene	12.58	92	17091	3.97	ug/L		94
77) trans-1,3-dichloropropene	12.76	75	9645	3.75	ug/L		95
78) ethyl methacrylate	12.74	69	6905	3.88	ug/L		93
79) 1,1,2-trichloroethane	12.97	83	4825	4.00	ug/L		94
80) 2-hexanone	13.13	58	7568	16.27	ug/L	#	85
81) tetrachloroethene	13.12	166	7664	3.93	ug/L		96
82) 1,3-dichloropropane	13.15	76	9332	4.10	ug/L		99
83) butyl acetate	13.20	56	3362	3.74	ug/L		99
84) dibromochloromethane	13.39	129	7277	3.74	ug/L		99
85) 1,2-dibromoethane	13.55	107	7622	3.98	ug/L		99
86) n-butyl ether	13.97	57	27016	3.70	ug/L		94
87) chlorobenzene	14.02	112	20618	4.12	ug/L		95
88) 1,1,1,2-tetrachloroethane	14.09	131	8223	3.92	ug/L		93
89) ethylbenzene	14.08	91	32383	4.00	ug/L		94
90) m,p-xylene	14.20	106	24495	7.84	ug/L		98
91) o-xylene	14.59	91	26116	3.74	ug/L		97
92) styrene	14.60	104	20903	3.75	ug/L		97
93) bromoform	14.83	173	4714	3.72	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

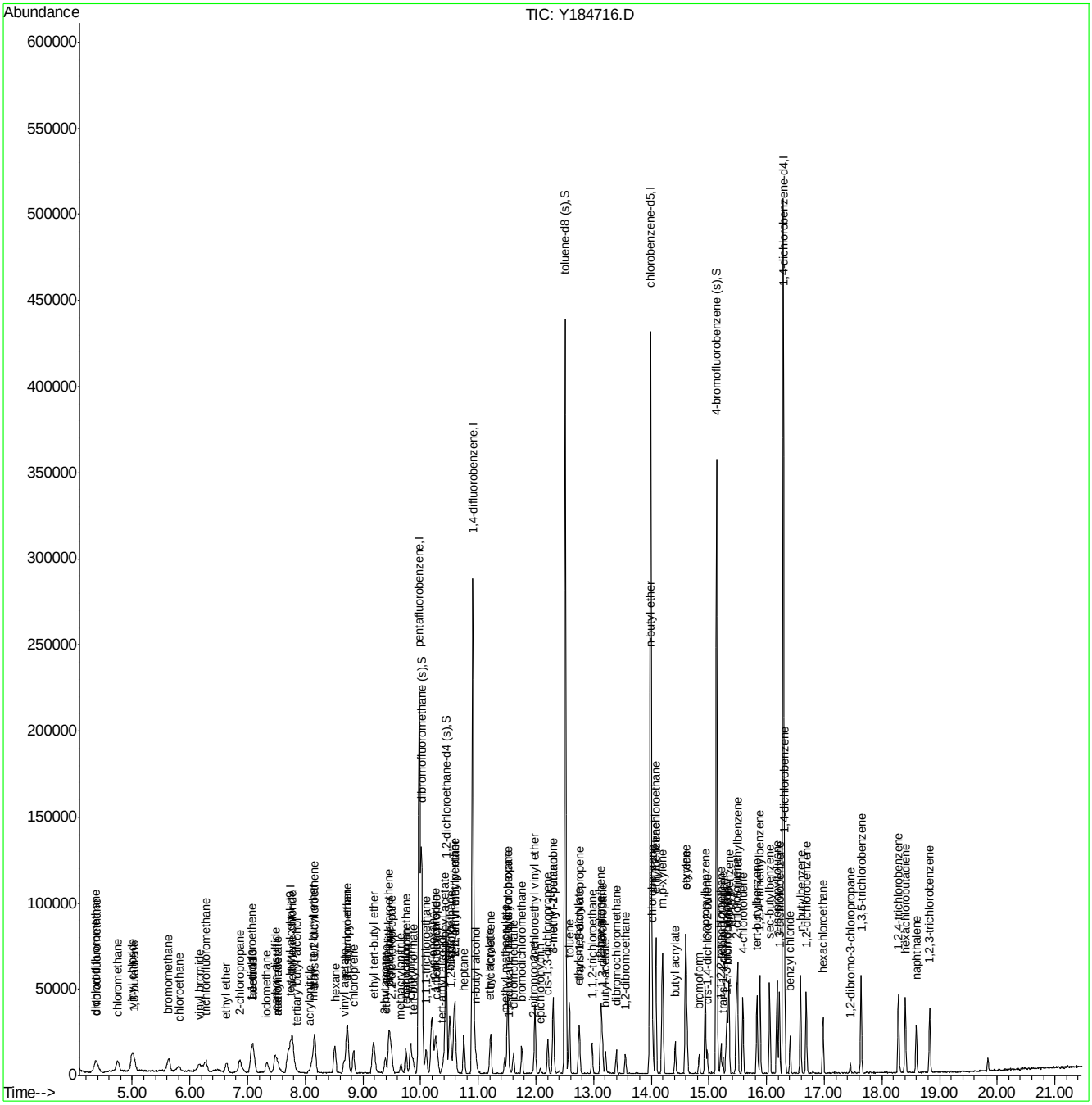
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) butyl acrylate	14.42	55	11124	3.75	ug/L		96
95) isopropylbenzene	14.93	105	31012	3.72	ug/L		96
96) cis-1,4-dichloro-2-butene	14.97	88	2412	3.61	ug/L		94
99) bromobenzene	15.32	156	10088	4.20	ug/L	#	79
100) 1,1,2,2-tetrachloroethane	15.21	83	7764	4.29	ug/L		95
101) trans-1,4-dichloro-2-buten	15.24	53	1683	3.96	ug/L		91
102) 1,2,3-trichloropropane	15.29	110	1895	4.00	ug/L		80
103) n-propylbenzene	15.35	91	37262	3.98	ug/L		98
104) 2-chlorotoluene	15.48	126	8421	3.92	ug/L		89
105) 4-chlorotoluene	15.59	91	23381	3.93	ug/L		100
106) 1,3,5-trimethylbenzene	15.50	105	27380	3.88	ug/L		99
107) tert-butylbenzene	15.84	134	4836	3.65	ug/L	#	91
108) 1,2,4-trimethylbenzene	15.88	105	28036	3.82	ug/L		99
109) sec-butylbenzene	16.05	105	33816	3.81	ug/L		97
110) 1,3-dichlorobenzene	16.22	146	18131	4.05	ug/L		94
111) p-isopropyltoluene	16.18	119	29864	3.79	ug/L		97
112) 1,4-dichlorobenzene	16.31	146	18877	4.22	ug/L		95
113) 1,2-dichlorobenzene	16.69	146	18239	4.05	ug/L		96
114) n-butylbenzene	16.59	92	15757	3.85	ug/L		93
115) 1,2-dibromo-3-chloropropan	17.45	157	1662	3.89	ug/L		97
116) 1,3,5-trichlorobenzene	17.64	180	17457	3.91	ug/L		99
117) 1,2,4-trichlorobenzene	18.29	180	14156	3.71	ug/L		93
118) hexachlorobutadiene	18.41	225	9185	4.12	ug/L		93
119) naphthalene	18.59	128	21485	3.44	ug/L		100
120) 1,2,3-trichlorobenzene	18.83	180	12201	3.59	ug/L		98
121) hexachloroethane	16.98	201	4815	3.33	ug/L		97
122) benzyl chloride	16.41	91	13287	3.94	ug/L		96

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184716.D
Acq On : 24 Apr 2019 4:38 pm
Operator : ROBERTS
Sample : IC8014-4
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 12:19:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.75	65	55075	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	175770	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	247230	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	221702	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	122752	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	79760	50.40	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.80%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	71940	53.45	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 106.90%				
75) toluene-d8 (s)	12.51	98	277475	47.77	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.54%				
98) 4-bromofluorobenzene (s)	15.13	95	101186	48.78	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.56%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.85	59	7108	40.02	ug/L		92
4) 1,4-dioxane	11.54	88	3276	181.89	ug/L		80
6) chlorodifluoromethane	4.39	51	21904	8.19	ug/L		97
7) dichlorodifluoromethane	4.35	85	26990	7.85	ug/L		95
8) chloromethane	4.75	50	28590	8.61	ug/L		96
9) vinyl chloride	4.99	62	24244	8.45	ug/L		90
10) 1,3-butadiene	5.03	54	14563	8.14	ug/L		92
11) bromomethane	5.62	94	19685	8.45	ug/L		94
12) chloroethane	5.81	64	13229	8.39	ug/L		91
13) vinyl bromide	6.16	106	11204	7.84	ug/L		90
14) trichlorofluoromethane	6.27	101	26788	8.24	ug/L		98
15) ethyl ether	6.63	74	6791	7.44	ug/L		88
16) 2-chloropropane	6.86	63	5961	7.85	ug/L	#	74
17) acrolein	6.88	56	1674	7.06	ug/L	#	65
18) freon 113	7.10	151	12671	7.53	ug/L		97
19) 1,1-dichloroethene	7.07	61	21186	7.43	ug/L		95
20) acetone	7.08	43	13466	33.46	ug/L		83
21) acetonitrile	7.50	41	18103	90.67	ug/L		89
22) iodomethane	7.33	142	26511	7.67	ug/L		98
23) carbon disulfide	7.47	76	47059	8.24	ug/L		93
24) methylene chloride	7.78	84	18587	8.44	ug/L		95
25) methyl acetate	7.52	43	8426	8.81	ug/L		87
26) methyl tert butyl ether	8.13	73	44365	8.33	ug/L		98
27) trans-1,2-dichloroethene	8.15	61	20538	7.80	ug/L		88
28) hexane	8.52	57	18563	7.77	ug/L		97
29) di-isopropyl ether	8.72	45	53837	7.84	ug/L		98
30) ethyl tert-butyl ether	9.18	59	49186	7.83	ug/L		96
31) 2-butanone	9.38	72	4536	33.22	ug/L	#	77
32) 1,1-dichloroethane	8.73	63	26723	8.04	ug/L		98
33) chloroprene	8.84	53	18481	7.63	ug/L		95
34) acrylonitrile	8.07	53	4708	8.94	ug/L		98
35) vinyl acetate	8.66	86	2049	7.77	ug/L	#	85
36) ethyl acetate	9.39	45	1645	8.73	ug/L		82

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
37) 2,2-dichloropropane	9.49	77	23113	8.21 ug/L		99
38) cis-1,2-dichloroethene	9.45	96	17967	8.46 ug/L		89
39) propionitrile	9.46	54	16443	89.62 ug/L		95
40) bromochloromethane	9.74	130	11176	8.15 ug/L		90
41) tetrahydrofuran	9.76	72	1269	7.86 ug/L	#	76
42) chloroform	9.82	83	27979	8.34 ug/L		100
43) tert-butyl formate	9.87	59	10470	7.87 ug/L		97
46) methacrylonitrile	9.66	67	4215	8.45 ug/L		95
47) 1,1,1-trichloroethane	10.09	97	23894	8.02 ug/L		98
48) cyclohexane	10.20	84	24050	8.04 ug/L		93
49) 1,1-dichloropropene	10.26	75	17055	7.87 ug/L		97
50) tert-amyl alcohol	10.38	55	2687	44.88 ug/L		98
51) carbon tetrachloride	10.29	117	20900	8.07 ug/L		96
54) 2,2,4-trimethylpentane	10.59	57	53957	7.49 ug/L		95
55) tert-amyl methyl ether	10.59	73	43793	7.83 ug/L		94
56) n-butyl alcohol	10.95	41	12726	414.96 ug/L		88
57) benzene	10.51	78	56988	8.28 ug/L		98
58) heptane	10.75	57	9638	7.89 ug/L		96
59) isopropyl acetate	10.40	87	2388	8.20 ug/L	#	79
60) 1,2-dichloroethane	10.53	62	18793	8.50 ug/L		98
61) trichloroethene	11.22	130	15093	8.27 ug/L		99
62) ethyl acrylate	11.20	55	12278	8.31 ug/L		95
63) 2-nitropropane	11.96	41	4144	8.78 ug/L	#	71
64) 2-chloroethyl vinyl ether	11.98	63	35321	42.41 ug/L		98
65) methyl methacrylate	11.45	100	2653	8.19 ug/L	#	78
66) 1,2-dichloropropane	11.50	63	14704	8.08 ug/L		92
67) methylcyclohexane	11.51	83	22470	7.57 ug/L		99
68) dibromomethane	11.61	93	8861	8.52 ug/L		89
69) bromodichloromethane	11.76	83	19934	7.93 ug/L		97
70) epichlorohydrin	12.07	57	5426	44.60 ug/L		97
71) cis-1,3-dichloropropene	12.20	75	22572	8.01 ug/L		99
72) 4-methyl-2-pentanone	12.31	58	16894	34.59 ug/L		99
73) 3-methyl-1-butanol	12.30	70	5899	158.56 ug/L		89
76) toluene	12.58	92	32768	7.65 ug/L		94
77) trans-1,3-dichloropropene	12.76	75	19766	7.74 ug/L		97
78) ethyl methacrylate	12.75	69	13799	7.80 ug/L		90
79) 1,1,2-trichloroethane	12.98	83	9824	8.20 ug/L		92
80) 2-hexanone	13.13	58	15734	34.02 ug/L		94
81) tetrachloroethene	13.12	166	15254	7.87 ug/L		95
82) 1,3-dichloropropane	13.15	76	18570	8.21 ug/L		92
83) butyl acetate	13.21	56	7362	8.24 ug/L		85
84) dibromochloromethane	13.40	129	14993	7.76 ug/L		97
85) 1,2-dibromoethane	13.55	107	15756	8.28 ug/L		95
86) n-butyl ether	13.97	57	53719	7.40 ug/L		96
87) chlorobenzene	14.02	112	39769	7.99 ug/L		99
88) 1,1,1,2-tetrachloroethane	14.09	131	15733	7.55 ug/L		98
89) ethylbenzene	14.07	91	62625	7.79 ug/L		97
90) m,p-xylene	14.20	106	48089	15.48 ug/L		98
91) o-xylene	14.59	91	52434	7.56 ug/L		97
92) styrene	14.60	104	42347	7.65 ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

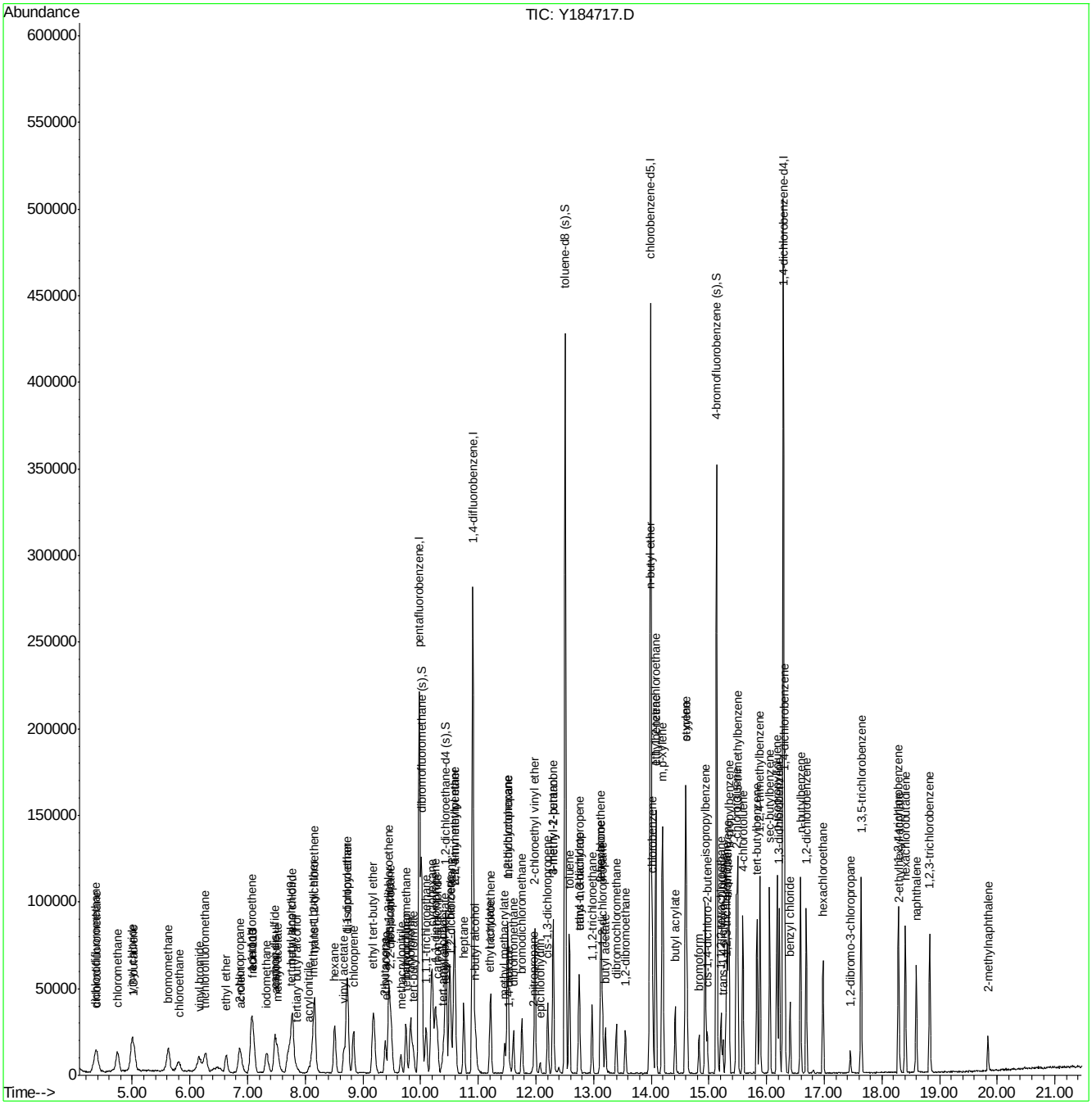
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	14.83	173	9955	7.91 ug/L	92
94) butyl acrylate	14.41	55	23679	8.03 ug/L	98
95) isopropylbenzene	14.93	105	61493	7.43 ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	5454	8.21 ug/L	85
99) bromobenzene	15.31	156	19875	8.35 ug/L	92
100) 1,1,2,2-tetrachloroethane	15.21	83	15670	8.74 ug/L	98
101) trans-1,4-dichloro-2-buten	15.24	53	3586	8.52 ug/L	99
102) 1,2,3-trichloropropane	15.29	110	4109	8.76 ug/L	88
103) n-propylbenzene	15.35	91	74090	7.99 ug/L	98
104) 2-chlorotoluene	15.48	126	16959	7.96 ug/L	99
105) 4-chlorotoluene	15.59	91	46639	7.90 ug/L	97
106) 1,3,5-trimethylbenzene	15.50	105	55132	7.88 ug/L	99
107) tert-butylbenzene	15.84	134	9155	6.96 ug/L	98
108) 1,2,4-trimethylbenzene	15.88	105	56749	7.80 ug/L	98
109) sec-butylbenzene	16.05	105	66433	7.55 ug/L	99
110) 1,3-dichlorobenzene	16.22	146	35547	8.02 ug/L	99
111) p-isopropyltoluene	16.18	119	59874	7.67 ug/L	99
112) 1,4-dichlorobenzene	16.31	146	36564	8.25 ug/L	98
113) 1,2-dichlorobenzene	16.69	146	35957	8.06 ug/L	95
114) n-butylbenzene	16.59	92	30301	7.48 ug/L	100
115) 1,2-dibromo-3-chloropropan	17.45	157	3410	8.05 ug/L	91
116) 1,3,5-trichlorobenzene	17.64	180	33649	7.61 ug/L	98
117) 1,2,4-trichlorobenzene	18.29	180	28928	7.66 ug/L	99
118) hexachlorobutadiene	18.41	225	17428	7.88 ug/L	98
119) naphthalene	18.59	128	44840	7.25 ug/L	99
120) 1,2,3-trichlorobenzene	18.83	180	25974	7.72 ug/L	99
121) hexachloroethane	16.98	201	10096	7.04 ug/L	93
122) benzyl chloride	16.41	91	27006	8.09 ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	2395	1.19 ug/L	93
124) 2-methylnaphthalene	19.84	142	9555	3.43 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184717.D
Acq On : 24 Apr 2019 5:07 pm
Operator : ROBERTS
Sample : IC8014-8
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 12:19:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.73	65	52655	500.00	ug/L	-0.01
5) pentafluorobenzene	9.97	168	163262	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	230362	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	214598	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	117730	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	74031	50.36	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.72%			
53) 1,2-dichloroethane-d4 (s)	10.44	65	65244	52.02	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 104.04%			
75) toluene-d8 (s)	12.51	98	262197	46.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.26%			
98) 4-bromofluorobenzene (s)	15.13	95	99459	49.99	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.98%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.84	59	16886	99.43	ug/L	98
4) 1,4-dioxane	11.55	88	8021	465.80	ug/L	85
6) chlorodifluoromethane	4.37	51	54989	22.13	ug/L	97
7) dichlorodifluoromethane	4.35	85	75413	23.61	ug/L	97
8) chloromethane	4.74	50	72376	23.46	ug/L	89
9) vinyl chloride	4.99	62	61409	23.05	ug/L	98
10) 1,3-butadiene	5.03	54	35592	21.41	ug/L	98
11) bromomethane	5.62	94	49745	22.99	ug/L	97
12) chloroethane	5.81	64	32584	22.25	ug/L	96
13) vinyl bromide	6.15	106	29160	21.96	ug/L	98
14) trichlorofluoromethane	6.27	101	68571	22.71	ug/L	98
15) ethyl ether	6.62	74	16630	19.63	ug/L	87
16) 2-chloropropane	6.87	63	13755	19.51	ug/L	98
17) acrolein	6.88	56	4498	20.42	ug/L	79
18) freon 113	7.10	151	31628	20.25	ug/L	94
19) 1,1-dichloroethene	7.07	61	51594	19.49	ug/L	97
20) acetone	7.07	43	30790	82.37	ug/L	97
21) acetonitrile	7.51	41	41289	222.63	ug/L	89
22) iodomethane	7.33	142	68601	21.38	ug/L	99
23) carbon disulfide	7.47	76	114277	21.54	ug/L	98
24) methylene chloride	7.78	84	44031	21.52	ug/L	96
25) methyl acetate	7.53	43	19753	22.24	ug/L	98
26) methyl tert butyl ether	8.14	73	105474	21.33	ug/L	97
27) trans-1,2-dichloroethene	8.16	61	51380	21.01	ug/L	94
28) hexane	8.51	57	45858	20.67	ug/L	92
29) di-isopropyl ether	8.72	45	132214	20.73	ug/L	98
30) ethyl tert-butyl ether	9.18	59	120134	20.60	ug/L	97
31) 2-butanone	9.38	72	11322	89.28	ug/L	95
32) 1,1-dichloroethane	8.74	63	64581	20.91	ug/L	99
33) chloroprene	8.83	53	46369	20.61	ug/L	95
34) acrylonitrile	8.07	53	10558	21.59	ug/L	91
35) vinyl acetate	8.66	86	5261	21.49	ug/L #	85
36) ethyl acetate	9.39	45	3831	21.89	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
37) 2,2-dichloropropane	9.49	77	55701	21.30 ug/L		98
38) cis-1,2-dichloroethene	9.45	96	42727	21.67 ug/L		99
39) propionitrile	9.46	54	37383	219.37 ug/L		80
40) bromochloromethane	9.74	130	27020	21.22 ug/L		97
41) tetrahydrofuran	9.77	72	3294	21.96 ug/L		88
42) chloroform	9.83	83	66160	21.22 ug/L		94
43) tert-butyl formate	9.87	59	26132	21.14 ug/L		94
46) methacrylonitrile	9.66	67	9808	21.18 ug/L		87
47) 1,1,1-trichloroethane	10.09	97	58284	21.07 ug/L		97
48) cyclohexane	10.20	84	64701	23.28 ug/L		96
49) 1,1-dichloropropene	10.26	75	41723	20.72 ug/L		99
50) tert-amyl alcohol	10.38	55	5867	105.51 ug/L		90
51) carbon tetrachloride	10.29	117	51664	21.47 ug/L		97
54) 2,2,4-trimethylpentane	10.60	57	135949	20.26 ug/L		100
55) tert-amyl methyl ether	10.58	73	107788	20.69 ug/L		97
56) n-butyl alcohol	10.95	41	30273	1059.41 ug/L		96
57) benzene	10.50	78	134219	20.94 ug/L		96
58) heptane	10.75	57	24592	21.61 ug/L		98
59) isopropyl acetate	10.40	87	5569	20.53 ug/L		89
60) 1,2-dichloroethane	10.53	62	44059	21.38 ug/L		96
61) trichloroethene	11.22	130	35865	21.10 ug/L		96
62) ethyl acrylate	11.19	55	31148	22.62 ug/L		97
63) 2-nitropropane	11.96	41	9580	21.77 ug/L	#	74
64) 2-chloroethyl vinyl ether	11.98	63	87395	112.62 ug/L		97
65) methyl methacrylate	11.46	100	6797	22.53 ug/L	#	81
66) 1,2-dichloropropane	11.50	63	35305	20.82 ug/L		98
67) methylcyclohexane	11.51	83	56827	20.55 ug/L		97
68) dibromomethane	11.61	93	20869	21.54 ug/L		94
69) bromodichloromethane	11.76	83	48442	20.68 ug/L		98
70) epichlorohydrin	12.08	57	12575	110.93 ug/L		96
71) cis-1,3-dichloropropene	12.20	75	54873	20.91 ug/L		98
72) 4-methyl-2-pentanone	12.30	58	40596	89.21 ug/L		96
73) 3-methyl-1-butanol	12.30	70	15333	442.31 ug/L		98
76) toluene	12.58	92	80250	19.36 ug/L		99
77) trans-1,3-dichloropropene	12.76	75	48157	19.48 ug/L		97
78) ethyl methacrylate	12.74	69	34272	20.01 ug/L		99
79) 1,1,2-trichloroethane	12.98	83	23290	20.09 ug/L		94
80) 2-hexanone	13.13	58	37213	83.11 ug/L		97
81) tetrachloroethene	13.12	166	36258	19.33 ug/L		96
82) 1,3-dichloropropane	13.15	76	44740	20.43 ug/L		98
83) butyl acetate	13.21	56	17889	20.68 ug/L		95
84) dibromochloromethane	13.39	129	36864	19.70 ug/L		100
85) 1,2-dibromoethane	13.55	107	38505	20.90 ug/L		97
86) n-butyl ether	13.97	57	135920	19.35 ug/L		99
87) chlorobenzene	14.02	112	98397	20.42 ug/L		98
88) 1,1,1,2-tetrachloroethane	14.08	131	39251	19.47 ug/L		97
89) ethylbenzene	14.07	91	153853	19.76 ug/L		99
90) m,p-xylene	14.20	106	120122	39.94 ug/L		97
91) o-xylene	14.59	91	131594	19.60 ug/L		96
92) styrene	14.60	104	106239	19.82 ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

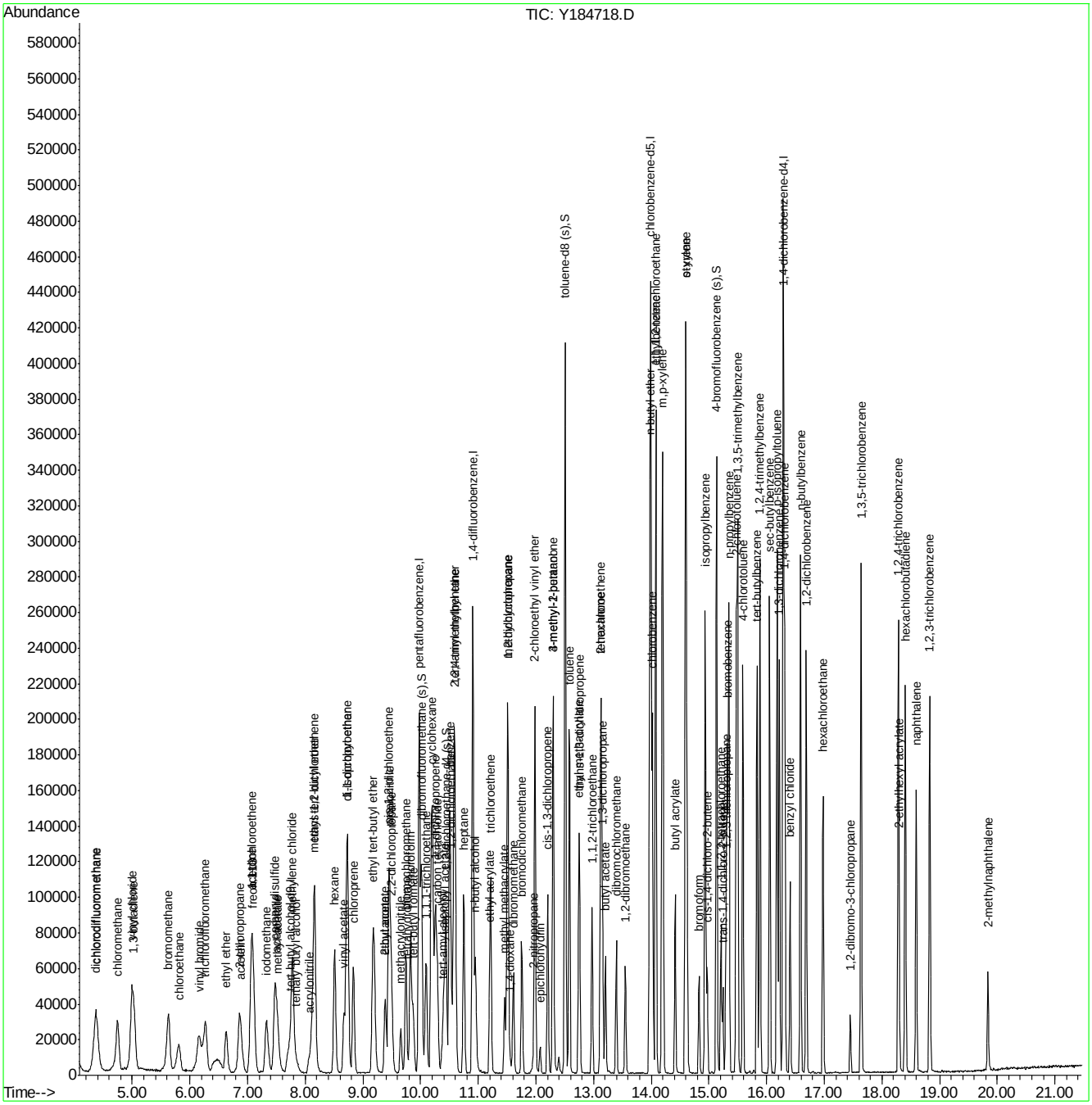
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	14.83	173	24254	19.90 ug/L	95
94) butyl acrylate	14.41	55	56638	19.84 ug/L	99
95) isopropylbenzene	14.93	105	153553	19.16 ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	12383	19.25 ug/L	95
99) bromobenzene	15.31	156	48072	21.05 ug/L	99
100) 1,1,2,2-tetrachloroethane	15.21	83	38049	22.12 ug/L	97
101) trans-1,4-dichloro-2-buten	15.24	53	8525	21.12 ug/L	94
102) 1,2,3-trichloropropane	15.29	110	9216	20.48 ug/L	92
103) n-propylbenzene	15.35	91	185451	20.86 ug/L	99
104) 2-chlorotoluene	15.48	126	42540	20.82 ug/L	98
105) 4-chlorotoluene	15.59	91	118967	21.01 ug/L	99
106) 1,3,5-trimethylbenzene	15.50	105	137494	20.48 ug/L	98
107) tert-butylbenzene	15.84	134	23661	18.76 ug/L	95
108) 1,2,4-trimethylbenzene	15.88	105	141063	20.23 ug/L	99
109) sec-butylbenzene	16.05	105	168761	19.99 ug/L	98
110) 1,3-dichlorobenzene	16.22	146	89108	20.96 ug/L	97
111) p-isopropyltoluene	16.18	119	151199	20.20 ug/L	100
112) 1,4-dichlorobenzene	16.31	146	88196	20.75 ug/L	98
113) 1,2-dichlorobenzene	16.68	146	88802	20.76 ug/L	98
114) n-butylbenzene	16.59	92	78106	20.10 ug/L	99
115) 1,2-dibromo-3-chloropropan	17.45	157	8784	21.62 ug/L	97
116) 1,3,5-trichlorobenzene	17.64	180	86931	20.49 ug/L	99
117) 1,2,4-trichlorobenzene	18.29	180	75488	20.84 ug/L	97
118) hexachlorobutadiene	18.41	225	44795	21.12 ug/L	99
119) naphthalene	18.59	128	121504	20.48 ug/L	98
120) 1,2,3-trichlorobenzene	18.83	180	68644	21.27 ug/L	99
121) hexachloroethane	16.98	201	25114	18.26 ug/L	98
122) benzyl chloride	16.41	91	66231	20.68 ug/L	98
123) 2-ethylhexyl acrylate	18.31	70	6511	3.37 ug/L	96
124) 2-methylnaphthalene	19.84	142	25649	9.60 ug/L	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184718.D
Acq On : 24 Apr 2019 5:35 pm
Operator : ROBERTS
Sample : IC8014-20
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 12:20:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.74	65	52871	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	180942	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	258053	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	216710	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	125526	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	81458	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.00%			
53) 1,2-dichloroethane-d4 (s)	10.44	65	70243	50.00	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.00%			
75) toluene-d8 (s)	12.51	98	283896	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
98) 4-bromofluorobenzene (s)	15.13	95	106065	50.00	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 100.00%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.84	59	42631	250.00	ug/L	100
4) 1,4-dioxane	11.54	88	21613	1250.00	ug/L	100
6) chlorodifluoromethane	4.38	51	137725	50.00	ug/L	100
7) dichlorodifluoromethane	4.35	85	177031	50.00	ug/L	100
8) chloromethane	4.75	50	171123	50.04	ug/L	100
9) vinyl chloride	4.99	62	147642	50.00	ug/L	100
10) 1,3-butadiene	5.03	54	92101	50.00	ug/L	100
11) bromomethane	5.63	94	119917	50.00	ug/L	100
12) chloroethane	5.81	64	81143	50.00	ug/L	100
13) vinyl bromide	6.16	106	73572	50.00	ug/L	100
14) trichlorofluoromethane	6.27	101	167315	50.00	ug/L	100
15) ethyl ether	6.63	74	46957	50.00	ug/L	100
16) 2-chloropropane	6.86	63	39071	50.00	ug/L	100
17) acrolein	6.88	56	12205	50.00	ug/L	100
18) freon 113	7.10	151	86567	50.00	ug/L	100
19) 1,1-dichloroethene	7.07	61	146727	50.00	ug/L	100
20) acetone	7.08	43	82853	200.00	ug/L	100
21) acetonitrile	7.50	41	102771	500.00	ug/L	100
22) iodomethane	7.33	142	177831	50.00	ug/L	100
23) carbon disulfide	7.47	76	294052	50.00	ug/L	100
24) methylene chloride	7.78	84	113393	50.00	ug/L	100
25) methyl acetate	7.52	43	49209	50.00	ug/L	100
26) methyl tert butyl ether	8.14	73	273979	50.00	ug/L	100
27) trans-1,2-dichloroethene	8.16	61	135489	50.00	ug/L	100
28) hexane	8.51	57	122969	50.00	ug/L	100
29) di-isopropyl ether	8.72	45	353434	50.00	ug/L	100
30) ethyl tert-butyl ether	9.18	59	323341	50.03	ug/L	100
31) 2-butanone	9.38	72	28110	200.00	ug/L	100
32) 1,1-dichloroethane	8.74	63	171613	50.13	ug/L	100
33) chloroprene	8.83	53	124696	50.00	ug/L	100
34) acrylonitrile	8.07	53	27097	50.00	ug/L	100
35) vinyl acetate	8.67	86	13567	50.00	ug/L	100
36) ethyl acetate	9.38	45	9700	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.49	77	144940	50.00	ug/L	100
38) cis-1,2-dichloroethene	9.45	96	109256	50.00	ug/L	100
39) propionitrile	9.46	54	94433	500.00	ug/L	100
40) bromochloromethane	9.74	130	70548	50.00	ug/L	100
41) tetrahydrofuran	9.77	72	8313	50.00	ug/L	100
42) chloroform	9.82	83	172755	50.00	ug/L	100
43) tert-butyl formate	9.87	59	68489	50.00	ug/L	100
46) methacrylonitrile	9.65	67	25666	50.00	ug/L	100
47) 1,1,1-trichloroethane	10.09	97	153261	50.00	ug/L	100
48) cyclohexane	10.20	84	153990	50.00	ug/L	100
49) 1,1-dichloropropene	10.26	75	111586	50.00	ug/L	100
50) tert-amyl alcohol	10.38	55	15407	250.00	ug/L	100
51) carbon tetrachloride	10.29	117	133373	50.00	ug/L	100
54) 2,2,4-trimethylpentane	10.60	57	375756	50.00	ug/L	100
55) tert-amyl methyl ether	10.58	73	291851	50.00	ug/L	100
56) n-butyl alcohol	10.95	41	80026	2500.00	ug/L	100
57) benzene	10.50	78	359031	50.00	ug/L	100
58) heptane	10.75	57	63736	50.00	ug/L	100
59) isopropyl acetate	10.40	87	15195	50.00	ug/L	100
60) 1,2-dichloroethane	10.53	62	115405	50.00	ug/L	100
61) trichloroethene	11.22	130	95215	50.00	ug/L	100
62) ethyl acrylate	11.20	55	77142	50.00	ug/L	100
63) 2-nitropropane	11.96	41	24645	50.00	ug/L	100
64) 2-chloroethyl vinyl ether	11.98	63	217323	250.00	ug/L	100
65) methyl methacrylate	11.45	100	16901	50.00	ug/L	100
66) 1,2-dichloropropane	11.50	63	94976	50.00	ug/L	100
67) methylcyclohexane	11.51	83	154848	50.00	ug/L	100
68) dibromomethane	11.61	93	54262	50.00	ug/L	100
69) bromodichloromethane	11.76	83	131203	50.00	ug/L	100
70) epichlorohydrin	12.07	57	31748	250.00	ug/L	100
71) cis-1,3-dichloropropene	12.20	75	146996	50.00	ug/L	100
72) 4-methyl-2-pentanone	12.30	58	101952	200.00	ug/L	100
73) 3-methyl-1-butanol	12.29	70	38833	1000.00	ug/L	100
76) toluene	12.58	92	209244	50.00	ug/L	100
77) trans-1,3-dichloropropene	12.76	75	124814	50.00	ug/L	100
78) ethyl methacrylate	12.74	69	86460	50.00	ug/L	100
79) 1,1,2-trichloroethane	12.97	83	58541	50.00	ug/L	100
80) 2-hexanone	13.13	58	90428	200.00	ug/L	100
81) tetrachloroethene	13.12	166	94695	50.00	ug/L	100
82) 1,3-dichloropropane	13.15	76	110560	50.00	ug/L	100
83) butyl acetate	13.20	56	43683	50.00	ug/L	100
84) dibromochloromethane	13.40	129	94469	50.00	ug/L	100
85) 1,2-dibromoethane	13.55	107	93027	50.00	ug/L	100
86) n-butyl ether	13.97	57	354758	50.00	ug/L	100
87) chlorobenzene	14.02	112	243333	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	14.08	131	101802	50.00	ug/L	100
89) ethylbenzene	14.07	91	393125	50.00	ug/L	100
90) m,p-xylene	14.20	106	303745	100.00	ug/L	100
91) o-xylene	14.59	91	339042	50.00	ug/L	100
92) styrene	14.60	104	270704	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

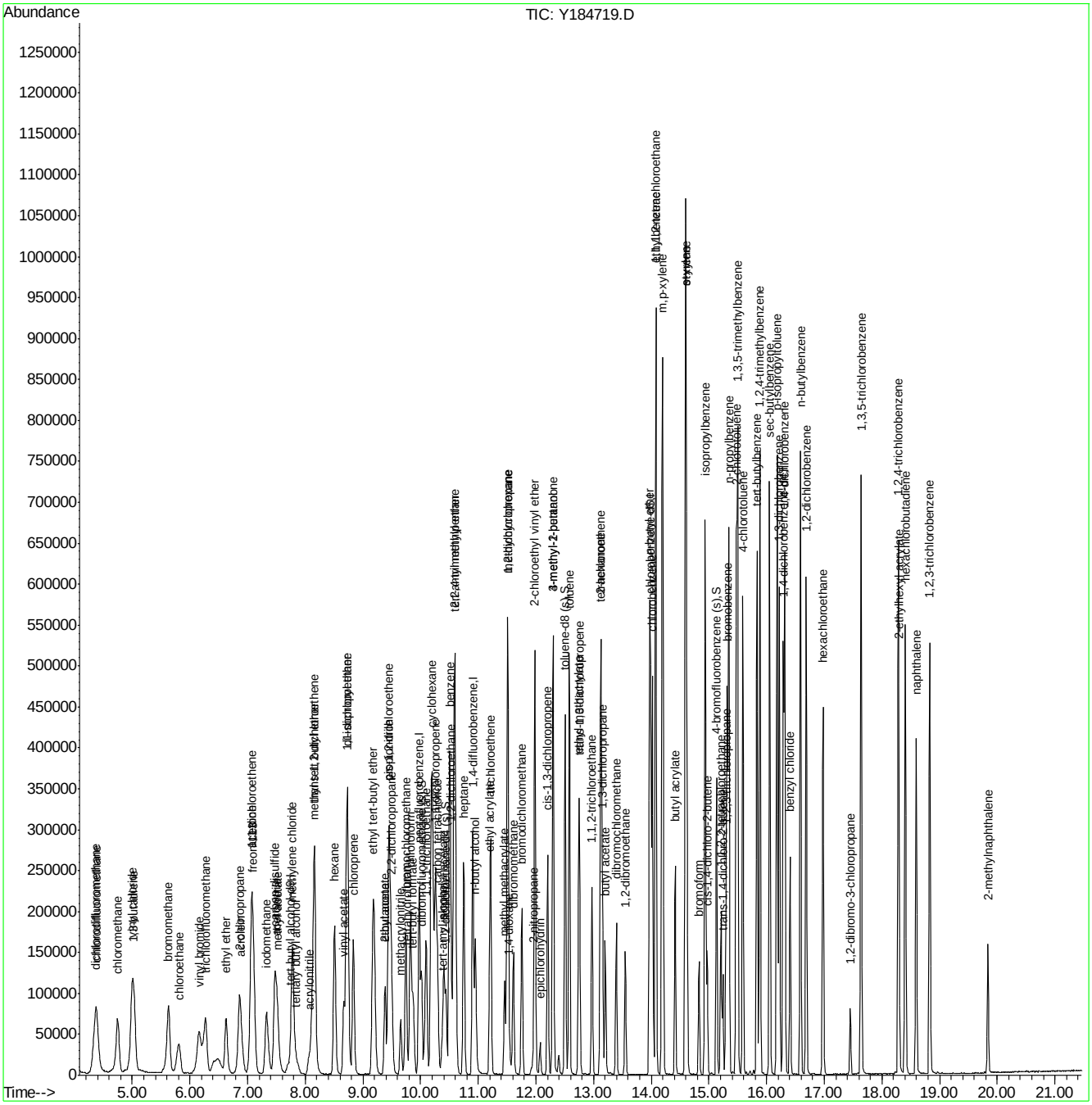
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.83	173	61535	50.00	ug/L	100
94) butyl acrylate	14.41	55	144117	50.00	ug/L	100
95) isopropylbenzene	14.93	105	404616	50.00	ug/L	100
96) cis-1,4-dichloro-2-butene	14.97	88	32479	50.00	ug/L	100
99) bromobenzene	15.31	156	121763	50.00	ug/L	100
100) 1,1,2,2-tetrachloroethane	15.21	83	91718	50.00	ug/L	100
101) trans-1,4-dichloro-2-buten	15.24	53	21514	50.00	ug/L	100
102) 1,2,3-trichloropropane	15.29	110	23992	50.00	ug/L	100
103) n-propylbenzene	15.35	91	474029	50.00	ug/L	100
104) 2-chlorotoluene	15.48	126	108920	50.00	ug/L	100
105) 4-chlorotoluene	15.59	91	301808	50.00	ug/L	100
106) 1,3,5-trimethylbenzene	15.50	105	357951	50.00	ug/L	100
107) tert-butylbenzene	15.84	134	67226	50.00	ug/L	100
108) 1,2,4-trimethylbenzene	15.88	105	371775	50.00	ug/L	100
109) sec-butylbenzene	16.05	105	450005	50.00	ug/L	100
110) 1,3-dichlorobenzene	16.22	146	226641	50.00	ug/L	100
111) p-isopropyltoluene	16.18	119	398990	50.00	ug/L	100
112) 1,4-dichlorobenzene	16.31	146	226626	50.00	ug/L	100
113) 1,2-dichlorobenzene	16.68	146	228091	50.00	ug/L	100
114) n-butylbenzene	16.59	92	207209	50.00	ug/L	100
115) 1,2-dibromo-3-chloropropan	17.45	157	21661	50.00	ug/L	100
116) 1,3,5-trichlorobenzene	17.64	180	226206	50.00	ug/L	100
117) 1,2,4-trichlorobenzene	18.29	180	193151	50.00	ug/L	100
118) hexachlorobutadiene	18.41	225	113051	50.00	ug/L	100
119) naphthalene	18.59	128	316303	50.00	ug/L	100
120) 1,2,3-trichlorobenzene	18.83	180	172023	50.00	ug/L	100
121) hexachloroethane	16.98	201	73304	50.00	ug/L	100
122) benzyl chloride	16.41	91	170703	50.00	ug/L	100
123) 2-ethylhexyl acrylate	18.30	70	20601	10.00	ug/L	100
124) 2-methylnaphthalene	19.84	142	71241	25.00	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184719.D
Acq On : 24 Apr 2019 6:04 pm
Operator : ROBERTS
Sample : ICC8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 25 12:20:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.74	65	57202	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	181641	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	263054	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	222949	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	131498	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.02	113	82403	50.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 100.78%			
53) 1,2-dichloroethane-d4 (s)	10.43	65	72162	50.39	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 100.78%			
75) toluene-d8 (s)	12.51	98	288044	49.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%			
98) 4-bromofluorobenzene (s)	15.13	95	106409	47.88	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.76%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.85	59	89280	483.92	ug/L	98
4) 1,4-dioxane	11.54	88	41969	2243.52	ug/L	99
6) chlorodifluoromethane	4.38	51	289471	104.69	ug/L	99
7) dichlorodifluoromethane	4.35	85	365956	102.96	ug/L	96
8) chloromethane	4.74	50	361821	105.39	ug/L	97
9) vinyl chloride	5.00	62	320921	108.26	ug/L	98
10) 1,3-butadiene	5.03	54	195564	105.76	ug/L	99
11) bromomethane	5.63	94	247249	102.69	ug/L	100
12) chloroethane	5.81	64	167650	102.91	ug/L	96
13) vinyl bromide	6.15	106	149839	101.44	ug/L	96
14) trichlorofluoromethane	6.27	101	344430	102.53	ug/L	97
15) ethyl ether	6.63	74	90599	96.10	ug/L	94
16) 2-chloropropane	6.86	63	80413	102.51	ug/L	96
17) acrolein	6.87	56	24994	102.00	ug/L	96
18) freon 113	7.09	151	176339	101.46	ug/L	98
19) 1,1-dichloroethene	7.08	61	294030	99.81	ug/L	98
20) acetone	7.08	43	170312	409.54	ug/L	96
21) acetonitrile	7.50	41	209482	1015.25	ug/L	98
22) iodomethane	7.33	142	361129	101.15	ug/L	99
23) carbon disulfide	7.47	76	594550	100.71	ug/L	100
24) methylene chloride	7.78	84	231728	101.79	ug/L	95
25) methyl acetate	7.53	43	98822	100.02	ug/L	96
26) methyl tert butyl ether	8.15	73	570878	103.78	ug/L	99
27) trans-1,2-dichloroethene	8.16	61	268306	98.63	ug/L	96
28) hexane	8.51	57	246617	99.89	ug/L	99
29) di-isopropyl ether	8.72	45	725033	102.18	ug/L	97
30) ethyl tert-butyl ether	9.19	59	676922	104.33	ug/L	99
31) 2-butanone	9.38	72	57864	410.11	ug/L	100
32) 1,1-dichloroethane	8.73	63	342885	99.78	ug/L	98
33) chloroprene	8.83	53	252075	100.69	ug/L	98
34) acrylonitrile	8.07	53	53668	98.65	ug/L	97
35) vinyl acetate	8.67	86	28045	102.96	ug/L #	89
36) ethyl acetate	9.39	45	18675	95.89	ug/L	88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	9.49	77	297375	102.19 ug/L	95
38) cis-1,2-dichloroethene	9.45	96	219348	100.00 ug/L	98
39) propionitrile	9.46	54	187168	987.20 ug/L	79
40) bromochloromethane	9.74	130	142612	100.69 ug/L	98
41) tetrahydrofuran	9.76	72	17829	106.82 ug/L #	61
42) chloroform	9.83	83	349944	100.89 ug/L	98
43) tert-butyl formate	9.87	59	146467	106.52 ug/L	98
46) methacrylonitrile	9.66	67	51211	99.38 ug/L	93
47) 1,1,1-trichloroethane	10.09	97	315986	102.69 ug/L	96
48) cyclohexane	10.21	84	313374	101.36 ug/L	90
49) 1,1-dichloropropene	10.26	75	221938	99.06 ug/L	98
50) tert-amyl alcohol	10.38	55	31580	510.46 ug/L #	81
51) carbon tetrachloride	10.29	117	275908	103.04 ug/L	99
54) 2,2,4-trimethylpentane	10.60	57	784625	102.42 ug/L	98
55) tert-amyl methyl ether	10.58	73	602415	101.24 ug/L	99
56) n-butyl alcohol	10.95	41	165163	5061.57 ug/L	99
57) benzene	10.50	78	719818	98.34 ug/L	99
58) heptane	10.75	57	126473	97.33 ug/L	98
59) isopropyl acetate	10.40	87	30250	97.65 ug/L	87
60) 1,2-dichloroethane	10.53	62	227880	96.85 ug/L	99
61) trichloroethene	11.22	130	192834	99.34 ug/L	99
62) ethyl acrylate	11.19	55	156027	99.21 ug/L	97
63) 2-nitropropane	11.96	41	50116	99.74 ug/L	97
64) 2-chloroethyl vinyl ether	11.98	63	438332	494.65 ug/L	99
65) methyl methacrylate	11.45	100	34882	101.23 ug/L	96
66) 1,2-dichloropropane	11.50	63	190979	98.63 ug/L	100
67) methylcyclohexane	11.51	83	317138	100.46 ug/L	97
68) dibromomethane	11.61	93	109990	99.42 ug/L	92
69) bromodichloromethane	11.76	83	267159	99.88 ug/L	99
70) epichlorohydrin	12.07	57	62944	486.23 ug/L	99
71) cis-1,3-dichloropropene	12.20	75	297118	99.14 ug/L	99
72) 4-methyl-2-pentanone	12.30	58	204038	392.65 ug/L	99
73) 3-methyl-1-butanol	12.30	70	80052	2022.25 ug/L	95
76) toluene	12.58	92	423954	98.47 ug/L	98
77) trans-1,3-dichloropropene	12.76	75	249910	97.31 ug/L	99
78) ethyl methacrylate	12.74	69	177179	99.60 ug/L	97
79) 1,1,2-trichloroethane	12.98	83	118863	98.68 ug/L	98
80) 2-hexanone	13.13	58	181869	390.98 ug/L	98
81) tetrachloroethene	13.12	166	193155	99.13 ug/L	96
82) 1,3-dichloropropane	13.15	76	220365	96.87 ug/L	98
83) butyl acetate	13.21	56	89322	99.38 ug/L	98
84) dibromochloromethane	13.39	129	194539	100.08 ug/L	98
85) 1,2-dibromoethane	13.55	107	193721	101.21 ug/L	99
86) n-butyl ether	13.97	57	729331	99.92 ug/L	99
87) chlorobenzene	14.02	112	492313	98.33 ug/L	97
88) 1,1,1,2-tetrachloroethane	14.08	131	211149	100.80 ug/L	97
89) ethylbenzene	14.07	91	789449	97.60 ug/L	99
90) m,p-xylene	14.20	106	616385	197.25 ug/L	100
91) o-xylene	14.59	91	692632	99.29 ug/L	100
92) styrene	14.60	104	538779	96.73 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

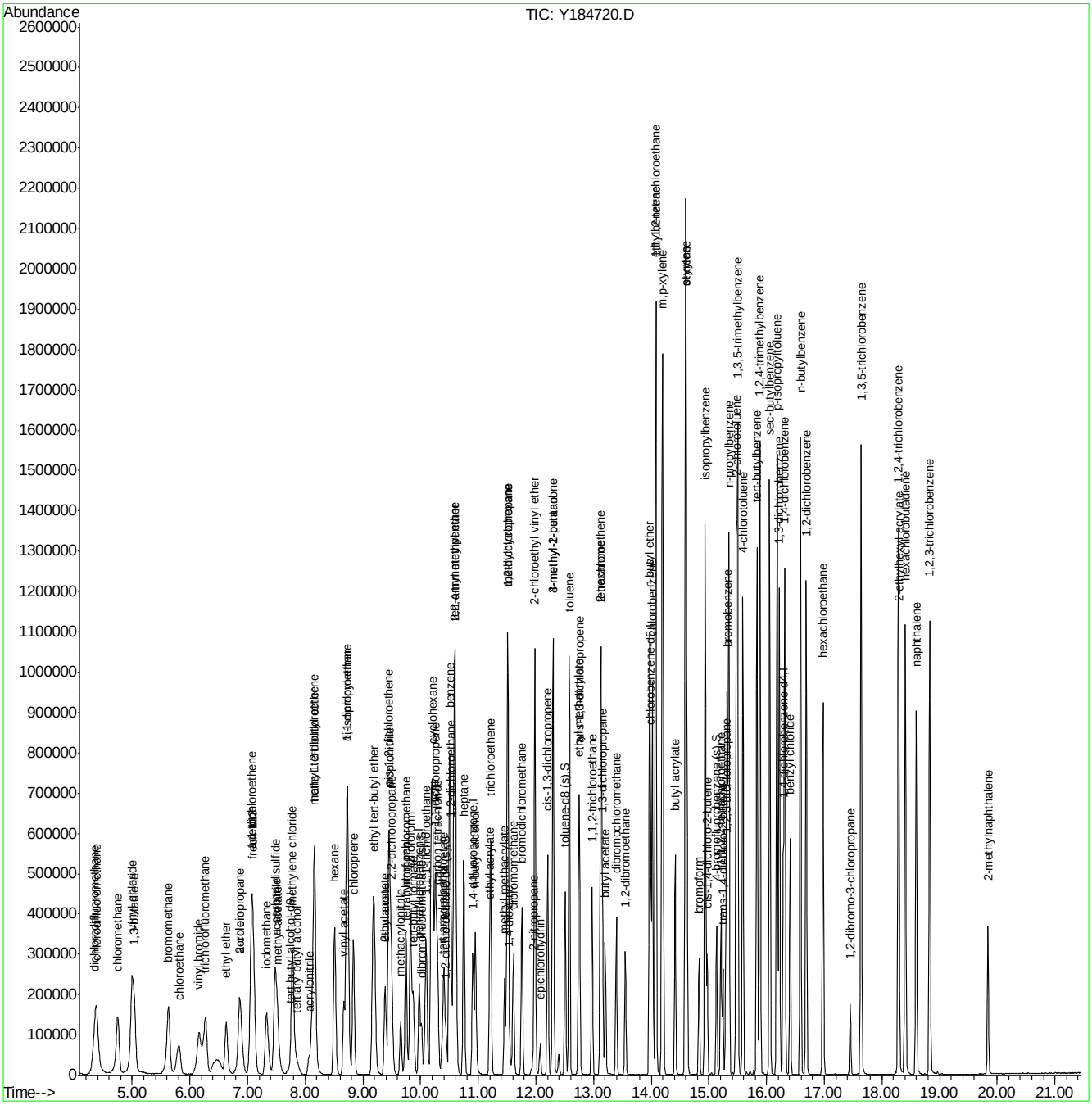
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.83	173	126305	99.76	ug/L	98
94) butyl acrylate	14.41	55	302770	102.10	ug/L	98
95) isopropylbenzene	14.93	105	827383	99.38	ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	66461	99.45	ug/L	97
99) bromobenzene	15.31	156	242017	94.87	ug/L	96
100) 1,1,2,2-tetrachloroethane	15.20	83	186405	97.00	ug/L	95
101) trans-1,4-dichloro-2-buten	15.24	53	44470	98.66	ug/L	98
102) 1,2,3-trichloropropane	15.29	110	47686	94.87	ug/L	98
103) n-propylbenzene	15.35	91	957728	96.43	ug/L	98
104) 2-chlorotoluene	15.48	126	219890	96.36	ug/L	96
105) 4-chlorotoluene	15.59	91	612422	96.85	ug/L	100
106) 1,3,5-trimethylbenzene	15.50	105	734684	97.96	ug/L	99
107) tert-butylbenzene	15.84	134	139577	99.10	ug/L	97
108) 1,2,4-trimethylbenzene	15.88	105	761659	97.78	ug/L	100
109) sec-butylbenzene	16.05	105	943850	100.11	ug/L	99
110) 1,3-dichlorobenzene	16.22	146	468849	98.74	ug/L	98
111) p-isopropyltoluene	16.18	119	822609	98.40	ug/L	99
112) 1,4-dichlorobenzene	16.32	146	468248	98.62	ug/L	99
113) 1,2-dichlorobenzene	16.68	146	468724	98.08	ug/L	99
114) n-butylbenzene	16.59	92	435833	100.39	ug/L	99
115) 1,2-dibromo-3-chloropropan	17.45	157	48277	106.38	ug/L	93
116) 1,3,5-trichlorobenzene	17.64	180	473910	99.99	ug/L	98
117) 1,2,4-trichlorobenzene	18.29	180	410358	101.40	ug/L	98
118) hexachlorobutadiene	18.41	225	232963	98.36	ug/L	96
119) naphthalene	18.59	128	683649	103.16	ug/L	99
120) 1,2,3-trichlorobenzene	18.83	180	368725	102.31	ug/L	99
121) hexachloroethane	16.98	201	155556	101.28	ug/L	99
122) benzyl chloride	16.41	91	367026	102.62	ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	50254	23.29	ug/L	81
124) 2-methylnaphthalene	19.84	142	171253	57.37	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184720.D
Acq On : 24 Apr 2019 6:32 pm
Operator : ROBERTS
Sample : IC8014-100
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 25 12:20:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.75	65	58443	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	180118	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	258308	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	225308	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	134869	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	82810	51.06	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.12%				
53) 1,2-dichloroethane-d4 (s)	10.44	65	69494	49.42	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.84%				
75) toluene-d8 (s)	12.51	98	292060	49.47	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.94%				
98) 4-bromofluorobenzene (s)	15.14	95	110771	48.60	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 97.20%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.86	59	189366	1004.62	ug/L		82
4) 1,4-dioxane	11.54	88	89001	4656.66	ug/L		95
6) chlorodifluoromethane	4.38	51	561846	204.91	ug/L		99
7) dichlorodifluoromethane	4.35	85	714894	202.84	ug/L		98
8) chloromethane	4.74	50	715852	210.28	ug/L		96
9) vinyl chloride	4.99	62	631758	214.93	ug/L		98
10) 1,3-butadiene	5.03	54	392674	214.15	ug/L		98
11) bromomethane	5.62	94	479523	200.85	ug/L		100
12) chloroethane	5.81	64	332015	205.52	ug/L		99
13) vinyl bromide	6.15	106	303987	207.54	ug/L		94
14) trichlorofluoromethane	6.27	101	679655	204.04	ug/L		94
15) ethyl ether	6.63	74	194216	207.75	ug/L		98
16) 2-chloropropane	6.86	63	155049	199.33	ug/L		97
17) acrolein	6.87	56	52091	214.38	ug/L		97
18) freon 113	7.10	151	333673	193.61	ug/L		97
19) 1,1-dichloroethene	7.07	61	562341	192.50	ug/L		98
20) acetone	7.07	43	331032	802.74	ug/L		97
21) acetonitrile	7.50	41	418080	2043.34	ug/L		98
22) iodomethane	7.33	142	704290	198.93	ug/L		99
23) carbon disulfide	7.47	76	1138698	194.51	ug/L		99
24) methylene chloride	7.78	84	448269	198.57	ug/L		96
25) methyl acetate	7.52	43	198788	202.91	ug/L		94
26) methyl tert butyl ether	8.15	73	1161543	212.95	ug/L		99
27) trans-1,2-dichloroethene	8.16	61	516463	191.46	ug/L		98
28) hexane	8.51	57	482880	197.24	ug/L		98
29) di-isopropyl ether	8.72	45	1430710	203.33	ug/L		98
30) ethyl tert-butyl ether	9.19	59	1399174	217.47	ug/L		99
31) 2-butanone	9.38	72	122215	873.53	ug/L		99
32) 1,1-dichloroethane	8.74	63	658550	193.25	ug/L		98
33) chloroprene	8.83	53	491029	197.79	ug/L		98
34) acrylonitrile	8.07	53	109561	203.09	ug/L		97
35) vinyl acetate	8.67	86	58822	217.78	ug/L	#	90
36) ethyl acetate	9.39	45	39440	204.23	ug/L		87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
37) 2,2-dichloropropane	9.49	77	586238	203.16 ug/L	97
38) cis-1,2-dichloroethene	9.45	96	441290	202.88 ug/L	98
39) propionitrile	9.46	54	404235	2150.12 ug/L	79
40) bromochloromethane	9.74	130	287712	204.85 ug/L	98
41) tetrahydrofuran	9.76	72	38563	233.01 ug/L	91
42) chloroform	9.82	83	691084	200.93 ug/L	99
43) tert-butyl formate	9.87	59	307597	225.59 ug/L	96
46) methacrylonitrile	9.66	67	109004	213.32 ug/L	97
47) 1,1,1-trichloroethane	10.09	97	624107	204.54 ug/L	98
48) cyclohexane	10.21	84	620482	202.39 ug/L	90
49) 1,1-dichloropropene	10.26	75	436827	196.63 ug/L	98
50) tert-amyl alcohol	10.38	55	67157	1094.70 ug/L #	72
51) carbon tetrachloride	10.29	117	541137	203.79 ug/L	98
54) 2,2,4-trimethylpentane	10.60	57	1578287	209.81 ug/L	98
55) tert-amyl methyl ether	10.59	73	1262886	216.14 ug/L	99
56) n-butyl alcohol	10.95	41	353695	11038.47 ug/L	97
57) benzene	10.50	78	1418549	197.36 ug/L	99
58) heptane	10.75	57	248877	195.05 ug/L	97
59) isopropyl acetate	10.40	87	62459	205.32 ug/L #	82
60) 1,2-dichloroethane	10.53	62	453105	196.12 ug/L	99
61) trichloroethene	11.21	130	379653	199.17 ug/L	98
62) ethyl acrylate	11.19	55	330333	213.90 ug/L	97
63) 2-nitropropane	11.96	41	104182	211.16 ug/L	98
64) 2-chloroethyl vinyl ether	11.98	63	923772	1061.62 ug/L	98
65) methyl methacrylate	11.45	100	75074	221.88 ug/L	88
66) 1,2-dichloropropane	11.50	63	380939	200.35 ug/L	99
67) methylcyclohexane	11.51	83	632258	203.95 ug/L	99
68) dibromomethane	11.61	93	222944	205.23 ug/L	97
69) bromodichloromethane	11.76	83	539527	205.40 ug/L	99
70) epichlorohydrin	12.07	57	136211	1071.54 ug/L	99
71) cis-1,3-dichloropropene	12.20	75	606954	206.25 ug/L	99
72) 4-methyl-2-pentanone	12.30	58	429598	841.91 ug/L	100
73) 3-methyl-1-butanol	12.30	70	180119	4633.72 ug/L	96
76) toluene	12.58	92	848436	195.00 ug/L	98
77) trans-1,3-dichloropropene	12.76	75	512996	197.66 ug/L	99
78) ethyl methacrylate	12.74	69	373267	207.62 ug/L	99
79) 1,1,2-trichloroethane	12.98	83	242915	199.56 ug/L	97
80) 2-hexanone	13.13	58	381540	811.65 ug/L	99
81) tetrachloroethene	13.12	166	382401	194.21 ug/L	97
82) 1,3-dichloropropane	13.15	76	455375	198.08 ug/L	99
83) butyl acetate	13.21	56	182707	201.15 ug/L	95
84) dibromochloromethane	13.39	129	405278	206.32 ug/L	100
85) 1,2-dibromoethane	13.55	107	401566	207.60 ug/L	97
86) n-butyl ether	13.97	57	1451939	196.83 ug/L	99
87) chlorobenzene	14.02	112	980411	193.77 ug/L	97
88) 1,1,1,2-tetrachloroethane	14.08	131	427673	202.04 ug/L	98
89) ethylbenzene	14.08	91	1575476	192.73 ug/L	99
90) m,p-xylene	14.20	106	1259445	398.82 ug/L	97
91) o-xylene	14.59	91	1405763	199.40 ug/L	100
92) styrene	14.60	104	1108566	196.94 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration

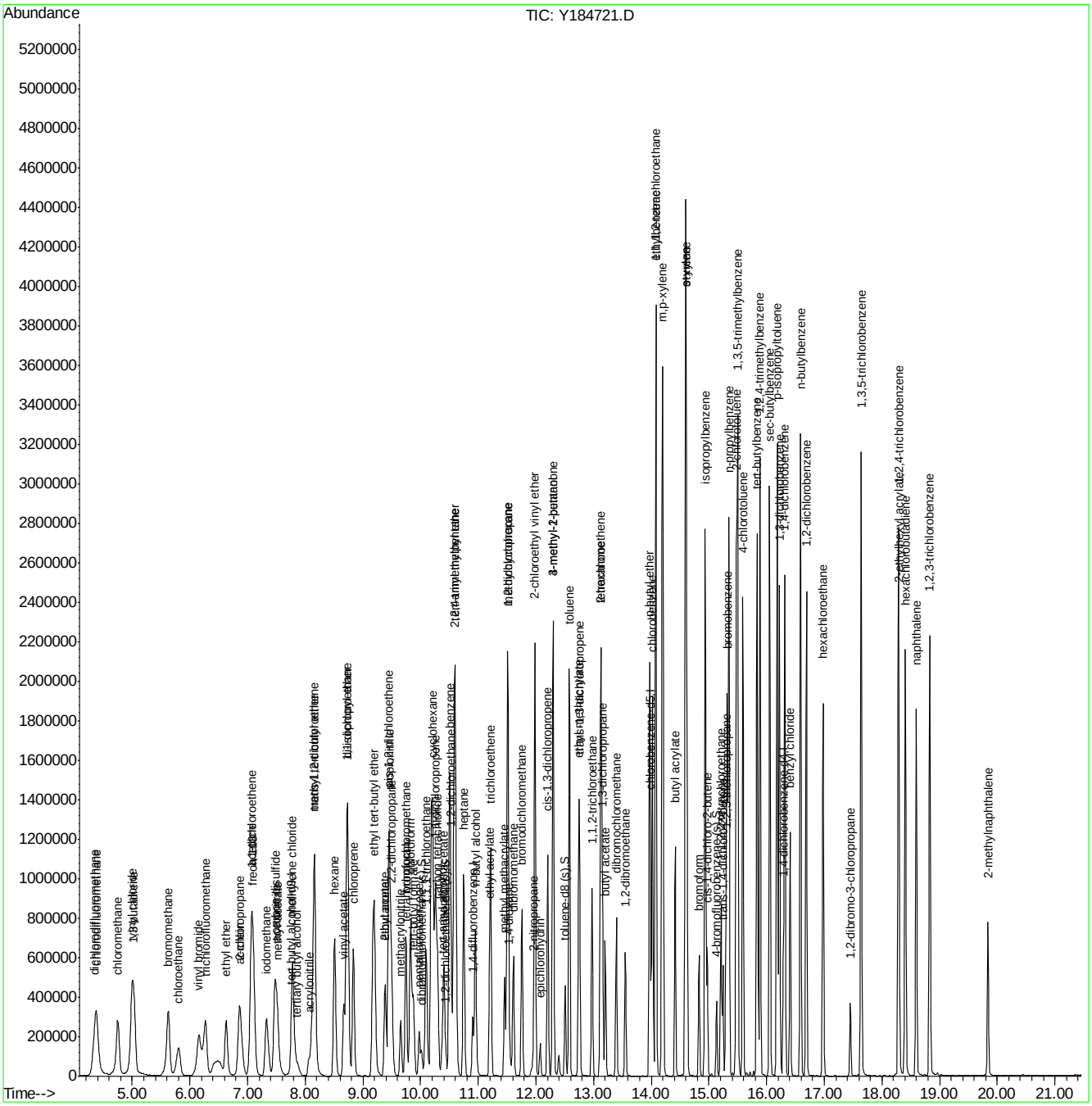
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
93) bromoform	14.83	173	270296	211.25 ug/L	99
94) butyl acrylate	14.41	55	639043	213.25 ug/L	99
95) isopropylbenzene	14.93	105	1706111	202.79 ug/L	98
96) cis-1,4-dichloro-2-butene	14.97	88	143648	212.70 ug/L	98
99) bromobenzene	15.32	156	497056	189.97 ug/L	93
100) 1,1,2,2-tetrachloroethane	15.21	83	397180	201.52 ug/L	96
101) trans-1,4-dichloro-2-buten	15.24	53	95181	205.88 ug/L	99
102) 1,2,3-trichloropropane	15.29	110	99244	192.50 ug/L	100
103) n-propylbenzene	15.35	91	1947374	191.18 ug/L	99
104) 2-chlorotoluene	15.48	126	447642	191.26 ug/L	95
105) 4-chlorotoluene	15.59	91	1259720	194.24 ug/L	99
106) 1,3,5-trimethylbenzene	15.50	105	1513132	196.72 ug/L	98
107) tert-butylbenzene	15.84	134	284512	196.95 ug/L	95
108) 1,2,4-trimethylbenzene	15.88	105	1555480	194.70 ug/L	100
109) sec-butylbenzene	16.05	105	1917024	198.24 ug/L	99
110) 1,3-dichlorobenzene	16.22	146	948365	194.73 ug/L	99
111) p-isopropyltoluene	16.18	119	1679969	195.94 ug/L	100
112) 1,4-dichlorobenzene	16.32	146	965193	198.20 ug/L	99
113) 1,2-dichlorobenzene	16.69	146	957714	195.40 ug/L	99
114) n-butylbenzene	16.59	92	884151	198.57 ug/L	97
115) 1,2-dibromo-3-chloropropan	17.45	157	103271	221.87 ug/L	93
116) 1,3,5-trichlorobenzene	17.64	180	934806	192.31 ug/L	99
117) 1,2,4-trichlorobenzene	18.29	180	815734	196.54 ug/L	98
118) hexachlorobutadiene	18.41	225	454481	187.08 ug/L	97
119) naphthalene	18.59	128	1405580	206.80 ug/L	99
120) 1,2,3-trichlorobenzene	18.83	180	728448	197.06 ug/L	99
121) hexachloroethane	16.98	201	324253	205.85 ug/L	97
122) benzyl chloride	16.41	91	782289	213.26 ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	113681	51.36 ug/L	89
124) 2-methylnaphthalene	19.84	142	369678	120.74 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184721.D
Acq On : 24 Apr 2019 7:01 pm
Operator : ROBERTS
Sample : IC8014-200
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 12:21:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 07:29:29 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) tert butyl alcohol-d9	7.74	65	53382	500.00	ug/L		0.00
5) pentafluorobenzene	9.97	168	165842	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.91	114	238721	50.00	ug/L		0.00
74) chlorobenzene-d5	13.99	117	217783	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.29	152	130925	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.02	113	76959	51.16	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.32%				
53) 1,2-dichloroethane-d4 (s)	10.43	65	66268	49.69	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 99.38%				
75) toluene-d8 (s)	12.51	98	269398	48.88	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.76%				
98) 4-bromofluorobenzene (s)	15.13	95	103054	47.47	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 94.94%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.85	59	45268	272.08	ug/L		94
4) 1,4-dioxane	11.54	88	21576	1308.08	ug/L		95
6) chlorodifluoromethane	4.38	51	147907	56.56	ug/L		96
7) dichlorodifluoromethane	4.36	85	162676	49.54	ug/L		96
8) chloromethane	4.74	50	186907	54.07	ug/L		94
9) vinyl chloride	4.99	62	144897	50.95	ug/L		95
10) 1,3-butadiene	5.04	54	111319	63.21	ug/L		97
11) bromomethane	5.63	94	114482	47.55	ug/L		95
12) chloroethane	5.81	64	72787	47.33	ug/L		96
13) vinyl bromide	6.15	106	76966	57.70	ug/L		93
14) trichlorofluoromethane	6.27	101	162971	49.75	ug/L		98
15) ethyl ether	6.63	74	45881	57.16	ug/L		95
16) 2-chloropropane	6.86	63	39887	56.15	ug/L		92
17) acrolein	6.86	56	12804	57.28	ug/L		93
18) freon 113	7.10	151	91954	59.86	ug/L		95
19) 1,1-dichloroethene	7.07	61	132001	51.83	ug/L		96
20) acetone	7.08	43	81830	201.41	ug/L		98
22) iodomethane	7.33	142	199508	62.05	ug/L		98
23) carbon disulfide	7.48	76	318742	57.18	ug/L		97
24) methylene chloride	7.78	84	114858	51.89	ug/L		92
25) methyl acetate	7.52	43	46859	49.85	ug/L		94
26) methyl tert butyl ether	8.15	73	553691	108.32	ug/L		97
27) trans-1,2-dichloroethene	8.16	61	130549	51.71	ug/L		99
28) hexane	8.51	57	128649	57.74	ug/L		99
29) di-isopropyl ether	8.72	45	324697	51.04	ug/L		97
30) ethyl tert-butyl ether	9.18	59	307154	53.08	ug/L		99
31) 2-butanone	9.38	72	28587	214.02	ug/L		96
32) 1,1-dichloroethane	8.73	63	167319	52.84	ug/L		97
33) chloroprene	8.83	53	122751	54.11	ug/L		99
35) vinyl acetate	8.67	86	12316	48.81	ug/L	#	81
36) ethyl acetate	9.39	45	8573	47.76	ug/L		89
37) 2,2-dichloropropane	9.49	77	138413	50.61	ug/L		99
38) cis-1,2-dichloroethene	9.45	96	105465	50.66	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
39) propionitrile	9.46	54	94889	529.63 ug/L		96
40) bromochloromethane	9.74	130	70335	53.90 ug/L		95
41) tetrahydrofuran	9.77	72	9177	57.46 ug/L		97
42) chloroform	9.83	83	168281	49.99 ug/L		98
43) tert-butyl formate	9.86	59	61596	48.49 ug/L		98
46) methacrylonitrile	9.66	67	25259	52.47 ug/L		97
47) 1,1,1-trichloroethane	10.10	97	148018	51.01 ug/L		96
48) cyclohexane	10.20	84	142012	49.23 ug/L		96
49) 1,1-dichloropropene	10.26	75	109625	53.42 ug/L		98
50) tert-amyl alcohol	10.38	55	15834	269.04 ug/L	#	77
51) carbon tetrachloride	10.28	117	133462	52.84 ug/L		95
54) 2,2,4-trimethylpentane	10.60	57	360022	54.99 ug/L		97
55) tert-amyl methyl ether	10.59	73	277435	51.77 ug/L		99
56) n-butyl alcohol	10.95	41	82508	2786.91 ug/L		98
57) benzene	10.50	78	351881	51.05 ug/L		99
58) heptane	10.75	57	74332	63.20 ug/L		98
59) isopropyl acetate	10.40	87	14046	50.00 ug/L		92
60) 1,2-dichloroethane	10.53	62	108872	49.17 ug/L		98
61) trichloroethene	11.22	130	95813	53.47 ug/L		96
62) ethyl acrylate	11.19	55	78083	53.01 ug/L		96
63) 2-nitropropane	11.96	41	25999	54.22 ug/L		95
64) 2-chloroethyl vinyl ether	11.98	63	229658	281.28 ug/L		99
65) methyl methacrylate	11.45	100	17496	53.93 ug/L	#	50
66) 1,2-dichloropropane	11.50	63	91988	52.40 ug/L		99
67) methylcyclohexane	11.51	83	152955	53.75 ug/L		99
68) dibromomethane	11.61	93	54156	52.87 ug/L		99
69) bromodichloromethane	11.75	83	126413	51.48 ug/L		97
70) epichlorohydrin	12.07	57	32483	262.11 ug/L		96
71) cis-1,3-dichloropropene	12.20	75	145988	54.65 ug/L		98
72) 4-methyl-2-pentanone	12.30	58	105247	218.55 ug/L		95
73) 3-methyl-1-butanol	12.30	70	41531	1152.92 ug/L		97
76) toluene	12.58	92	206183	49.17 ug/L		98
77) trans-1,3-dichloropropene	12.76	75	127059	52.51 ug/L		99
78) ethyl methacrylate	12.74	69	90327	53.26 ug/L		99
79) 1,1,2-trichloroethane	12.98	83	59771	49.95 ug/L		94
80) 2-hexanone	13.13	58	97173	216.82 ug/L		98
82) 1,3-dichloropropane	13.15	76	112733	50.56 ug/L		99
83) butyl acetate	13.20	56	46756	53.98 ug/L		98
84) dibromochloromethane	13.40	129	101147	56.35 ug/L		96
85) 1,2-dibromoethane	13.55	107	97031	51.45 ug/L		96
86) n-butyl ether	13.97	57	380512	54.96 ug/L		99
87) chlorobenzene	14.02	112	253369	50.23 ug/L		97
88) 1,1,1,2-tetrachloroethane	14.08	131	104680	52.62 ug/L		98
89) ethylbenzene	14.07	91	397849	50.49 ug/L		100
90) m,p-xylene	14.20	106	309195	100.76 ug/L		98
91) o-xylene	14.59	91	341933	51.79 ug/L		98
92) styrene	14.60	104	275422	52.73 ug/L		98
93) bromoform	14.83	173	67314	55.19 ug/L		98
94) butyl acrylate	14.41	55	152049	53.24 ug/L		99
95) isopropylbenzene	14.93	105	411749	51.88 ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

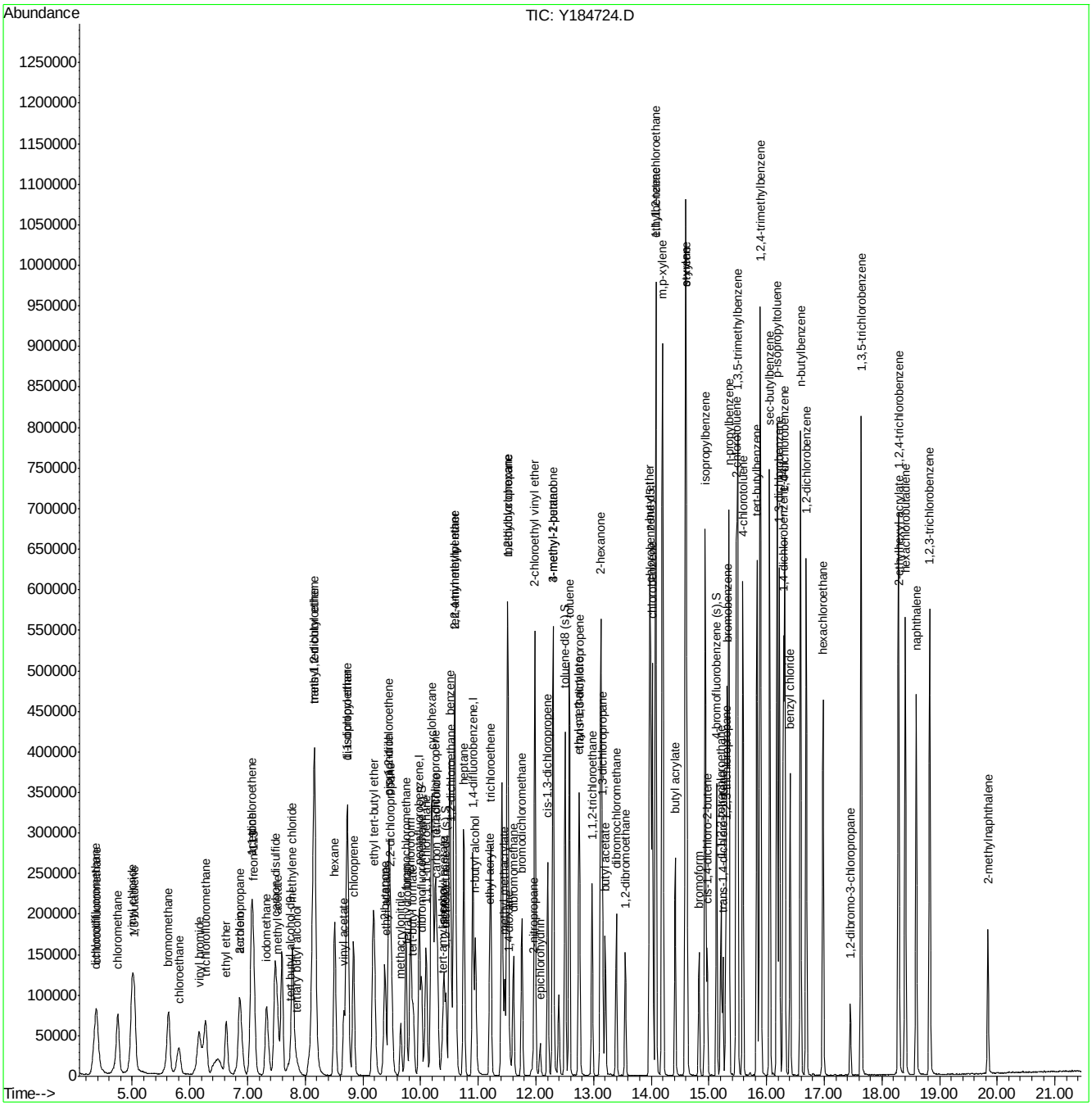
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
96) cis-1,4-dichloro-2-butene	14.97	88	33576	52.81 ug/L	98
99) bromobenzene	15.31	156	124133	47.49 ug/L	95
100) 1,1,2,2-tetrachloroethane	15.21	83	96698	48.26 ug/L	97
101) trans-1,4-dichloro-2-buten	15.24	53	25348	56.81 ug/L	100
102) 1,2,3-trichloropropane	15.29	110	25196	49.50 ug/L	91
103) n-propylbenzene	15.35	91	492050	48.70 ug/L	99
104) 2-chlorotoluene	15.48	126	109340	47.53 ug/L	94
105) 4-chlorotoluene	15.59	91	313806	48.92 ug/L	99
106) 1,3,5-trimethylbenzene	15.50	105	361467	48.60 ug/L	98
107) tert-butylbenzene	15.84	134	67648	51.46 ug/L	96
108) 1,2,4-trimethylbenzene	15.88	105	390603	51.00 ug/L	97
109) sec-butylbenzene	16.05	105	467647	50.41 ug/L	99
110) 1,3-dichlorobenzene	16.22	146	243166	50.30 ug/L	99
111) p-isopropyltoluene	16.18	119	419839	51.39 ug/L	99
112) 1,4-dichlorobenzene	16.31	146	244612	49.14 ug/L	97
113) 1,2-dichlorobenzene	16.68	146	242372	48.95 ug/L	100
114) n-butylbenzene	16.59	92	217087	50.96 ug/L	97
115) 1,2-dibromo-3-chloropropan	17.45	157	23966	51.50 ug/L	94
116) 1,3,5-trichlorobenzene	17.64	180	244964	52.36 ug/L	99
117) 1,2,4-trichlorobenzene	18.29	180	208207	52.74 ug/L	99
118) hexachlorobutadiene	18.41	225	118076	48.72 ug/L	97
119) naphthalene	18.59	128	354866	57.95 ug/L	100
120) 1,2,3-trichlorobenzene	18.83	180	188977	55.25 ug/L	99
121) hexachloroethane	16.98	201	76220	52.41 ug/L	99
122) benzyl chloride	16.41	91	231436	63.60 ug/L	98
123) 2-ethylhexyl acrylate	18.30	70	24114	9.87 ug/L	82
124) 2-methylnaphthalene	19.84	142	84614	27.52 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184724.D
Acq On : 24 Apr 2019 8:27 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 25 12:24:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184725.D
Acq On : 24 Apr 2019 8:55 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 12:24:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

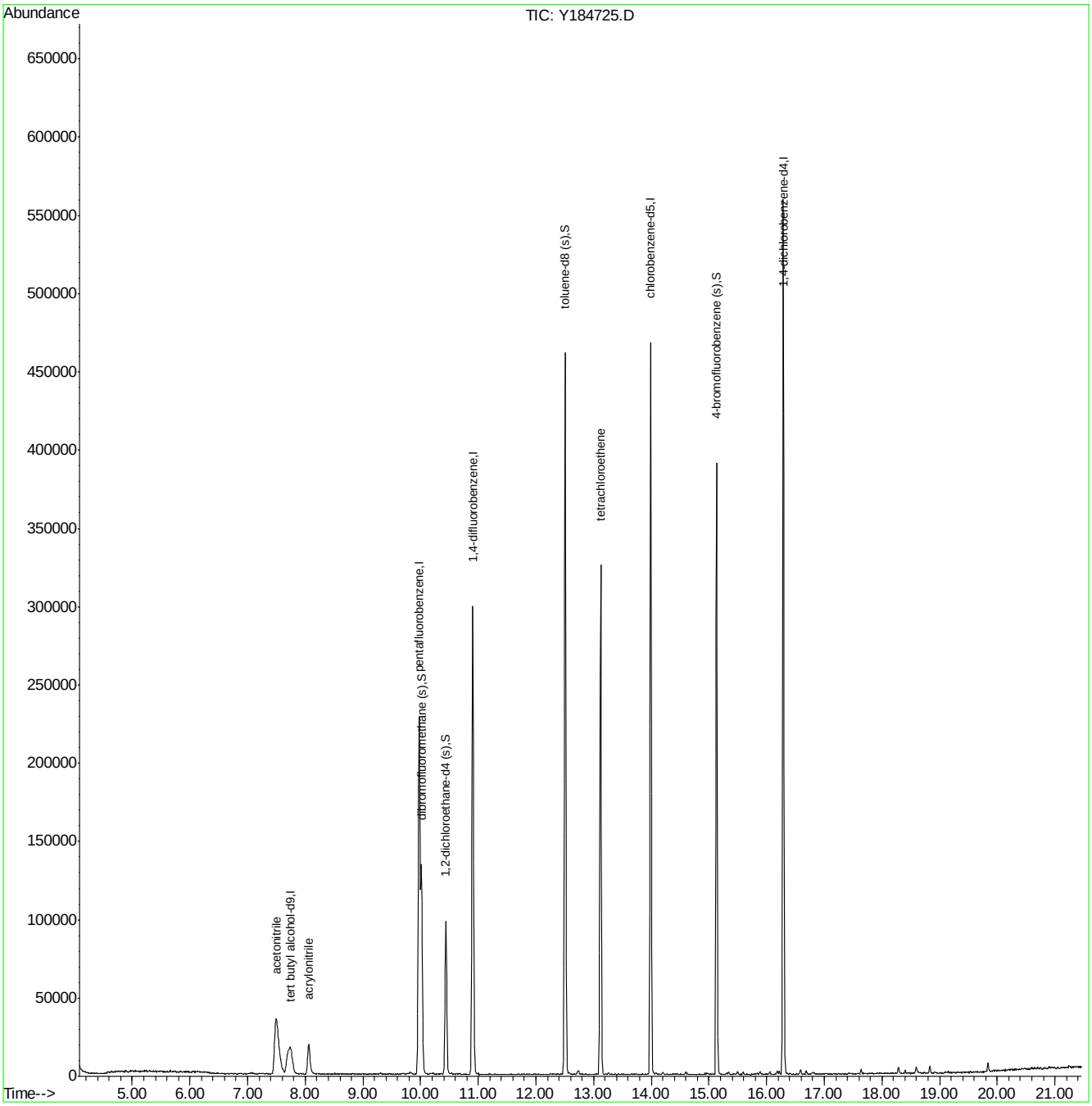
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.74	65	56845	500.00	ug/L	0.00
5) pentafluorobenzene	9.97	168	184928	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.91	114	262362	50.00	ug/L	0.00
74) chlorobenzene-d5	13.99	117	242218	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.29	152	137507	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.01	113	84749	50.52	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 101.04%			
53) 1,2-dichloroethane-d4 (s)	10.43	65	74119	50.57	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 101.14%			
75) toluene-d8 (s)	12.51	98	300820	49.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.14%			
98) 4-bromofluorobenzene (s)	15.13	95	113522	49.79	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 99.58%			
Target Compounds						Qvalue
21) acetonitrile	7.50	41	100744	453.16	ug/L	96
34) acrylonitrile	8.07	53	23499	41.51	ug/L	94
81) tetrachloroethene	13.12	166	97372	46.02	ug/L	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\VY8014\
Data File : Y184725.D
Acq On : 24 Apr 2019 8:55 pm
Operator : ROBERTS
Sample : ICV8014-50
Misc : MS34134,VY8014,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 25 12:24:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184879.d
Acq On : 2 May 2019 9:07 am
Operator : PrashanS
Sample : cc8014-50 Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:17:22 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) tert butyl alcohol-d9	7.720	65	37930	500.00	ug/L		-0.02
5) pentafluorobenzene	9.974	168	142242	50.00	ug/L		0.00
52) 1,4-difluorobenzene	10.905	114	201924	50.00	ug/L		0.00
74) chlorobenzene-d5	13.986	117	179029	50.00	ug/L		0.00
97) 1,4-dichlorobenzene-d4	16.287	152	110143	50.00	ug/L		0.00
System Monitoring Compounds							
45) dibromofluoromethane (s)	10.011	113	66180	51.29	ug/L		0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 102.58%				
53) 1,2-dichloroethane-d4 (s)	10.435	65	53356	47.30	ug/L		0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 94.60%				
75) toluene-d8 (s)	12.506	98	218177	48.16	ug/L		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.32%				
98) 4-bromofluorobenzene (s)	15.131	95	81607	44.68	ug/L		0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 89.36%				
Target Compounds							Qvalue
3) tertiary butyl alcohol	7.851	59	32945	278.69	ug/L		95
4) 1,4-dioxane	11.544	88	16969	1447.88	ug/L		99
6) chlorodifluoromethane	4.373	51	122382	54.56	ug/L		99
7) dichlorodifluoromethane	4.347	85	140754	49.97	ug/L		95
8) chloromethane	4.744	50	141505	47.72	ug/L		98
9) vinyl chloride	4.985	62	130768	53.62	ug/L		99
10) 1,3-butadiene	5.016	54	86968	57.58	ug/L		99
11) bromomethane	5.623	94	97963	47.44	ug/L		99
12) chloroethane	5.795	64	68322	51.80	ug/L		98
13) vinyl bromide	6.151	106	89072	77.86	ug/L		93
14) trichlorofluoromethane	6.271	101	161111	57.34	ug/L		98
15) ethyl ether	6.627	74	34721	50.44	ug/L		92
16) 2-chloropropane	6.852	63	33836	55.54	ug/L	#	83
17) acrolein	6.862	56	11132	58.06	ug/L		99
18) freon 113	7.093	151	80458	61.07	ug/L		97
19) 1,1-dichloroethene	7.066	61	122450	56.06	ug/L		99
20) acetone	7.072	43	60043	172.30	ug/L		95
21) acetonitrile	7.501	41	77846	455.24	ug/L		99
22) iodomethane	7.323	142	148657	53.90	ug/L		99
23) carbon disulfide	7.469	76	250536	52.40	ug/L		97
24) methylene chloride	7.778	84	91887	48.40	ug/L		91
25) methyl acetate	7.521	43	36024	44.68	ug/L		91
26) methyl tert butyl ether	8.139	73	216754	49.44	ug/L		98
27) trans-1,2-dichloroethene	8.154	61	109428	50.54	ug/L		99
28) hexane	8.505	57	101365	53.04	ug/L		98
29) di-isopropyl ether	8.719	45	273492	50.12	ug/L		97
30) ethyl tert-butyl ether	9.185	59	253558	51.09	ug/L		97
31) 2-butanone	9.378	72	22195	193.74	ug/L		98
32) 1,1-dichloroethane	8.735	63	143002	52.65	ug/L		98
33) chloroprene	8.834	53	107257	55.12	ug/L		99
34) acrylonitrile	8.060	53	20527	47.14	ug/L		96
35) vinyl acetate	8.662	86	11836	54.69	ug/L	#	86
36) ethyl acetate	9.383	45	7210	46.83	ug/L		90
37) 2,2-dichloropropane	9.488	77	131931	56.24	ug/L		97
38) cis-1,2-dichloroethene	9.446	96	91149	51.05	ug/L		95
39) propionitrile	9.457	54	74944	487.71	ug/L		92
40) bromochloromethane	9.739	130	58715	52.46	ug/L		94
41) tetrahydrofuran	9.760	72	6951	50.74	ug/L		88
42) chloroform	9.823	83	146201	50.64	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184879.d
Acq On : 2 May 2019 9:07 am
Operator : PrashanS
Sample : cc8014-50 Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:17:22 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	9.865	59	54613	50.12	ug/L		96
46) methacrylonitrile	9.655	67	20038	48.53	ug/L		89
47) 1,1,1-trichloroethane	10.095	97	143663	57.73	ug/L		92
48) cyclohexane	10.205	84	131665	53.22	ug/L		91
49) 1,1-dichloropropene	10.252	75	99811	56.71	ug/L		96
50) tert-amyl alcohol	10.372	55	12051	238.73	ug/L	#	88
51) carbon tetrachloride	10.283	117	127325	58.78	ug/L		98
54) 2,2,4-trimethylpentane	10.592	57	309509	55.89	ug/L		99
55) tert-amyl methyl ether	10.581	73	227523	50.19	ug/L		98
56) n-butyl alcohol	10.947	41	62305	2488.02	ug/L		98
57) benzene	10.503	78	298688	51.23	ug/L		98
58) heptane	10.743	57	53665	53.94	ug/L		97
59) isopropyl acetate	10.398	87	12190	51.31	ug/L		92
60) 1,2-dichloroethane	10.524	62	92811	49.55	ug/L		99
61) trichloroethene	11.214	130	85442	56.37	ug/L		98
62) ethyl acrylate	11.193	55	57931	46.50	ug/L		98
63) 2-nitropropane	11.957	41	19303	47.59	ug/L	#	80
64) 2-chloroethyl vinyl ether	11.983	63	168450	243.91	ug/L		98
65) methyl methacrylate	11.455	100	13426	48.93	ug/L	#	84
66) 1,2-dichloropropane	11.502	63	74127	49.92	ug/L		97
67) methylcyclohexane	11.507	83	132984	55.25	ug/L		94
68) dibromomethane	11.606	93	44233	51.05	ug/L		96
69) bromodichloromethane	11.753	83	105591	50.84	ug/L		99
70) epichlorohydrin	12.067	57	23690	225.99	ug/L		95
71) cis-1,3-dichloropropene	12.197	75	113372	50.18	ug/L		98
72) 4-methyl-2-pentanone	12.302	58	76799	188.54	ug/L		95
73) 3-methyl-1-butanol	12.291	70	30436	998.89	ug/L		91
76) toluene	12.574	92	172007	49.90	ug/L		97
77) trans-1,3-dichloropropene	12.752	75	99623	50.08	ug/L		99
78) ethyl methacrylate	12.741	69	65462	46.95	ug/L		95
79) 1,1,2-trichloroethane	12.971	83	46488	47.26	ug/L		97
80) 2-hexanone	13.128	58	66508	180.52	ug/L		99
81) tetrachloroethene	13.118	166	83025	53.09	ug/L		97
82) 1,3-dichloropropane	13.149	76	88146	48.09	ug/L		97
83) butyl acetate	13.202	56	32886	46.18	ug/L		95
84) dibromochloromethane	13.395	129	79947	54.18	ug/L		96
85) 1,2-dibromoethane	13.547	107	64181	41.40	ug/L		98
86) n-butyl ether	13.965	57	277871	48.82	ug/L		98
87) chlorobenzene	14.017	112	201991	48.71	ug/L		99
88) 1,1,1,2-tetrachloroethane	14.080	131	85126	52.05	ug/L		97
89) ethylbenzene	14.075	91	331360	51.15	ug/L		98
90) m,p-xylene	14.195	106	258986	102.67	ug/L		98
91) o-xylene	14.588	91	280652	51.71	ug/L		99
92) styrene	14.598	104	221725	51.64	ug/L		97
93) bromoform	14.828	173	51652	51.52	ug/L		98
94) butyl acrylate	14.415	55	113503	48.34	ug/L		99
95) isopropylbenzene	14.933	105	354676	54.36	ug/L		98
96) cis-1,4-dichloro-2-butene	14.969	88	28304	54.16	ug/L		92
99) bromobenzene	15.315	156	100830	45.85	ug/L		89
100) 1,1,2,2-tetrachloroethane	15.205	83	73784	43.77	ug/L		97
101) trans-1,4-dichloro-2-b...	15.236	53	18343	48.87	ug/L		97
102) 1,2,3-trichloropropane	15.294	110	20086	46.90	ug/L		94
103) n-propylbenzene	15.341	91	415253	48.85	ug/L		98
104) 2-chlorotoluene	15.477	126	93148	48.13	ug/L		92
105) 4-chlorotoluene	15.587	91	250742	46.47	ug/L		98
106) 1,3,5-trimethylbenzene	15.498	105	304535	48.67	ug/L		99
107) tert-butylbenzene	15.832	134	57714	52.19	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184879.d
Acq On : 2 May 2019 9:07 am
Operator : PrashanS
Sample : cc8014-50 Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:17:22 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

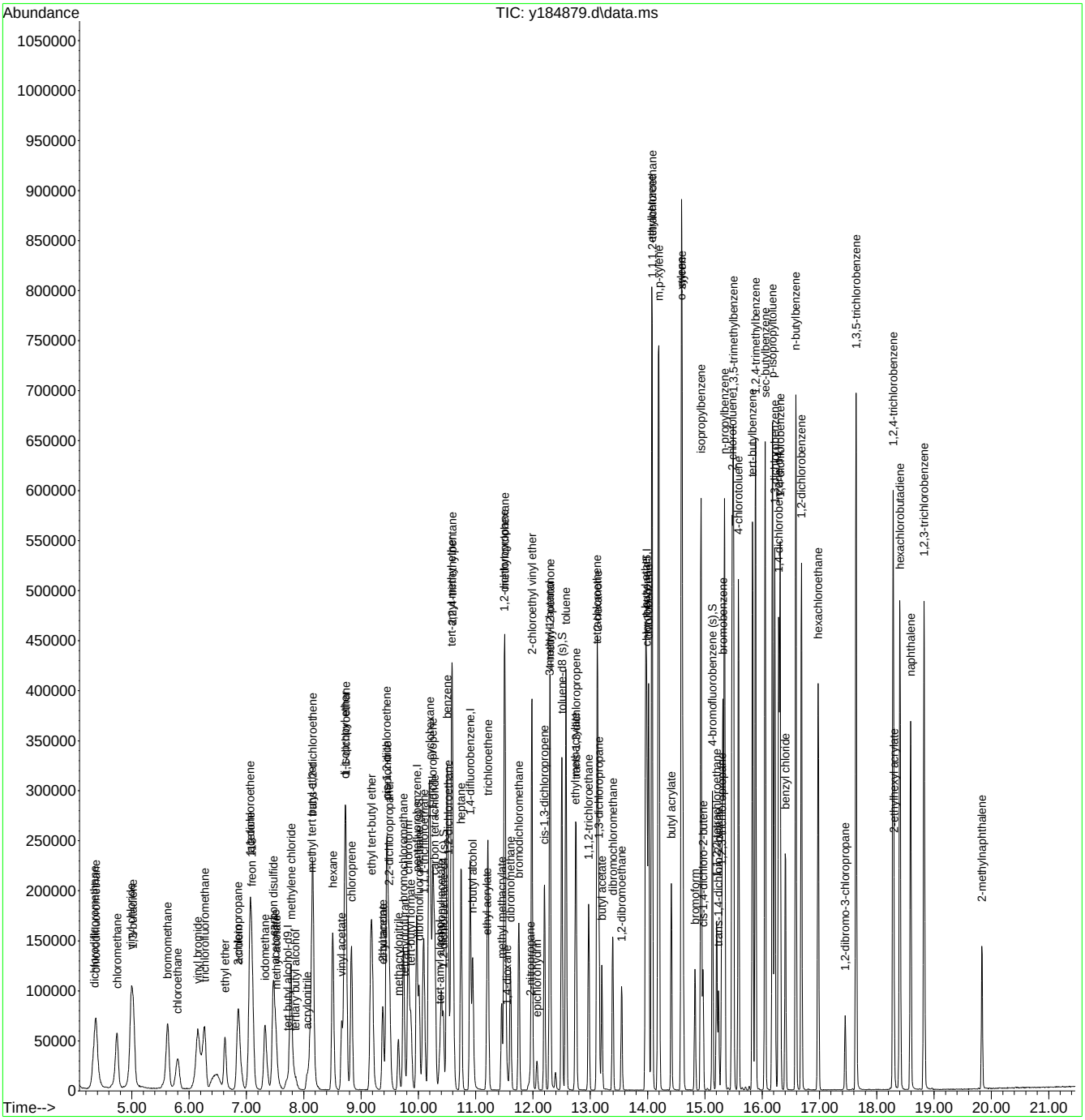
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.885	105	314268	48.78	ug/L	97
109) sec-butylbenzene	16.052	105	399354	51.17	ug/L	99
110) 1,3-dichlorobenzene	16.219	146	199196	48.98	ug/L	99
111) p-isopropyltoluene	16.178	119	356184	51.82	ug/L	100
112) 1,4-dichlorobenzene	16.314	146	199403	47.61	ug/L	98
113) 1,2-dichlorobenzene	16.685	146	196367	47.14	ug/L	99
114) n-butylbenzene	16.586	92	186191	51.96	ug/L	97
115) 1,2-dibromo-3-chloropr...	17.448	157	19492	49.79	ug/L	97
116) 1,3,5-trichlorobenzene	17.637	180	207478	52.71	ug/L	97
117) 1,2,4-trichlorobenzene	18.285	180	173940	52.37	ug/L	98
118) hexachlorobutadiene	18.406	225	102800	50.42	ug/L	98
119) naphthalene	18.589	128	281710	54.69	ug/L	99
120) 1,2,3-trichlorobenzene	18.824	180	155293	53.97	ug/L	97
121) hexachloroethane	16.978	201	66804	54.60	ug/L	98
122) benzyl chloride	16.402	91	151743	49.57	ug/L	97
123) 2-ethylhexyl acrylate	18.301	70	18163	8.93	ug/L	90
124) 2-methylnaphthalene	19.833	142	64772	25.04	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5_may\5-3-19\vy8023\
Data File : y184879.d
Acq On : 2 May 2019 9:07 am
Operator : PrashanS
Sample : cc8014-50 Inst : MSY
Misc : MS34380,VY8023,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 03 04:17:22 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184933.d
Acq On : 4 May 2019 10:41 am
Operator : PrashanS
Sample : CC8014-50 Inst : MSY
Misc : MS34370,VY8026,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:09:03 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.735	65	56933	500.00	ug/L	0.00
5) pentafluorobenzene	9.974	168	203281	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.905	114	286009	50.00	ug/L	0.00
74) chlorobenzene-d5	13.986	117	234405	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	16.287	152	141111	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	10.016	113	91447	49.59	ug/L	0.00
Spiked Amount 50.000	Range 75 - 127		Recovery = 99.18%			
53) 1,2-dichloroethane-d4 (s)	10.434	65	78476	49.12	ug/L	0.00
Spiked Amount 50.000	Range 75 - 130		Recovery = 98.24%			
75) toluene-d8 (s)	12.505	98	308914	52.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.16%			
98) 4-bromofluorobenzene (s)	15.131	95	111699	47.74	ug/L	0.00
Spiked Amount 50.000	Range 79 - 127		Recovery = 95.48%			
Target Compounds						Qvalue
3) tertiary butyl alcohol	7.835	59	43092	242.85	ug/L	93
4) 1,4-dioxane	11.543	88	22239	1264.19	ug/L	96
6) chlorodifluoromethane	4.383	51	156562	48.84	ug/L	96
7) dichlorodifluoromethane	4.351	85	166995	41.49	ug/L	97
8) chloromethane	4.744	50	169963	40.11	ug/L	98
9) vinyl chloride	4.989	62	151621	43.50	ug/L	97
10) 1,3-butadiene	5.026	54	107301	49.71	ug/L	98
11) bromomethane	5.633	94	122079	41.37	ug/L	97
12) chloroethane	5.795	64	86471	45.87	ug/L	96
13) vinyl bromide	6.151	106	115703	70.77	ug/L	92
14) trichlorofluoromethane	6.266	101	197932	49.29	ug/L	95
15) ethyl ether	6.632	74	47683	48.47	ug/L	89
16) 2-chloropropane	6.862	63	43418	49.87	ug/L	99
17) acrolein	6.872	56	14542	53.08	ug/L	97
18) freon 113	7.097	151	104817	55.67	ug/L	98
19) 1,1-dichloroethene	7.071	61	159424	51.07	ug/L	97
20) acetone	7.066	43	89629	179.97	ug/L	98
21) acetonitrile	7.490	41	100806	412.50	ug/L	96
22) iodomethane	7.322	142	193828	49.18	ug/L	99
23) carbon disulfide	7.474	76	330194	48.33	ug/L	98
24) methylene chloride	7.782	84	120071	44.25	ug/L	90
25) methyl acetate	7.521	43	50850	44.13	ug/L	98
26) methyl tert butyl ether	8.138	73	277190	44.24	ug/L	97
27) trans-1,2-dichloroethene	8.159	61	140458	45.39	ug/L	96
28) hexane	8.504	57	136691	50.05	ug/L	99
29) di-isopropyl ether	8.719	45	344909	44.23	ug/L	98
30) ethyl tert-butyl ether	9.184	59	322277	45.44	ug/L	99
31) 2-butanone	9.378	72	30362	185.45	ug/L	93
32) 1,1-dichloroethane	8.734	63	179196	46.17	ug/L	100
33) chloroprene	8.834	53	131522	47.30	ug/L	96
34) acrylonitrile	8.065	53	26719	42.94	ug/L	98
35) vinyl acetate	8.666	86	14239	46.04	ug/L	95
36) ethyl acetate	9.388	45	8878	40.35	ug/L	84
37) 2,2-dichloropropane	9.488	77	162990	48.62	ug/L	97
38) cis-1,2-dichloroethene	9.446	96	116486	45.65	ug/L	95
39) propionitrile	9.456	54	93098	423.93	ug/L	98
40) bromochloromethane	9.744	130	75869	47.43	ug/L	91
41) tetrahydrofuran	9.765	72	9256	47.28	ug/L	96
42) chloroform	9.822	83	181368	43.96	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184933.d
Acq On : 4 May 2019 10:41 am
Operator : PrashanS
Sample : CC8014-50 Inst : MSY
Misc : MS34370,VY8026,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:09:03 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) tert-butyl formate	9.869	59	69722	44.78	ug/L		95
46) methacrylonitrile	9.655	67	25026	42.41	ug/L		98
47) 1,1,1-trichloroethane	10.094	97	173068	48.66	ug/L		96
48) cyclohexane	10.204	84	159798	45.20	ug/L		92
49) 1,1-dichloropropene	10.256	75	126166	50.16	ug/L		99
50) tert-amyl alcohol	10.366	55	15307	212.18	ug/L		89
51) carbon tetrachloride	10.288	117	157078	50.74	ug/L		98
54) 2,2,4-trimethylpentane	10.596	57	408326	52.06	ug/L		98
55) tert-amyl methyl ether	10.581	73	296868	46.24	ug/L		99
56) n-butyl alcohol	10.947	41	79625	2244.85	ug/L		98
57) benzene	10.502	78	382229	46.29	ug/L		99
58) heptane	10.743	57	69180	49.09	ug/L		99
59) isopropyl acetate	10.403	87	15522	46.12	ug/L		97
60) 1,2-dichloroethane	10.528	62	117257	44.20	ug/L		97
61) trichloroethene	11.213	130	110068	51.27	ug/L		97
62) ethyl acrylate	11.193	55	77378	43.85	ug/L		96
63) 2-nitropropane	11.951	41	24067	41.89	ug/L	#	75
64) 2-chloroethyl vinyl ether	11.982	63	220631	225.54	ug/L		99
65) methyl methacrylate	11.459	100	18138	46.67	ug/L	#	76
66) 1,2-dichloropropane	11.501	63	97363	46.29	ug/L		99
67) methylcyclohexane	11.512	83	178613	52.39	ug/L		97
68) dibromomethane	11.606	93	56401	45.96	ug/L		94
69) bromodichloromethane	11.757	83	136781	46.50	ug/L		100
70) epichlorohydrin	12.071	57	30681	206.64	ug/L		99
71) cis-1,3-dichloropropene	12.202	75	150051	46.89	ug/L		100
72) 4-methyl-2-pentanone	12.301	58	101432	175.80	ug/L		96
73) 3-methyl-1-butanol	12.291	70	39953	925.74	ug/L		92
76) toluene	12.579	92	218787	48.47	ug/L		97
77) trans-1,3-dichloropropene	12.756	75	127773	49.06	ug/L		99
78) ethyl methacrylate	12.741	69	85895	47.05	ug/L		99
79) 1,1,2-trichloroethane	12.971	83	60105	46.67	ug/L		97
80) 2-hexanone	13.128	58	92435	191.62	ug/L		99
81) tetrachloroethene	13.117	166	109528	53.49	ug/L		97
82) 1,3-dichloropropane	13.154	76	112085	46.71	ug/L		98
83) butyl acetate	13.201	56	44141	47.35	ug/L		94
84) dibromochloromethane	13.395	129	100441	51.99	ug/L		98
85) 1,2-dibromoethane	13.546	107	82086	40.44	ug/L		97
86) n-butyl ether	13.965	57	354902	47.62	ug/L		100
87) chlorobenzene	14.017	112	254300	46.84	ug/L		98
88) 1,1,1,2-tetrachloroethane	14.080	131	106636	49.80	ug/L		95
89) ethylbenzene	14.074	91	413673	48.77	ug/L		98
90) m,p-xylene	14.195	106	321590	97.37	ug/L		96
91) o-xylene	14.592	91	351809	49.51	ug/L		99
92) styrene	14.597	104	281080	50.00	ug/L		98
93) bromoform	14.828	173	67068	51.09	ug/L		98
94) butyl acrylate	14.414	55	144887	47.13	ug/L		99
95) isopropylbenzene	14.932	105	442151	51.76	ug/L		99
96) cis-1,4-dichloro-2-butene	14.969	88	34301	50.13	ug/L		98
99) bromobenzene	15.314	156	131605	46.71	ug/L		91
100) 1,1,2,2-tetrachloroethane	15.204	83	95883	44.40	ug/L		96
101) trans-1,4-dichloro-2-b...	15.241	53	22419	46.62	ug/L		98
102) 1,2,3-trichloropropane	15.293	110	24911	45.41	ug/L		98
103) n-propylbenzene	15.345	91	523028	48.03	ug/L		98
104) 2-chlorotoluene	15.476	126	118224	47.68	ug/L		96
105) 4-chlorotoluene	15.586	91	320959	46.43	ug/L		98
106) 1,3,5-trimethylbenzene	15.497	105	388903	48.52	ug/L		98
107) tert-butylbenzene	15.832	134	75080	53.00	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184933.d
Acq On : 4 May 2019 10:41 am
Operator : PrashanS
Sample : CC8014-50 Inst : MSY
Misc : MS34370,VY8026,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:09:03 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration

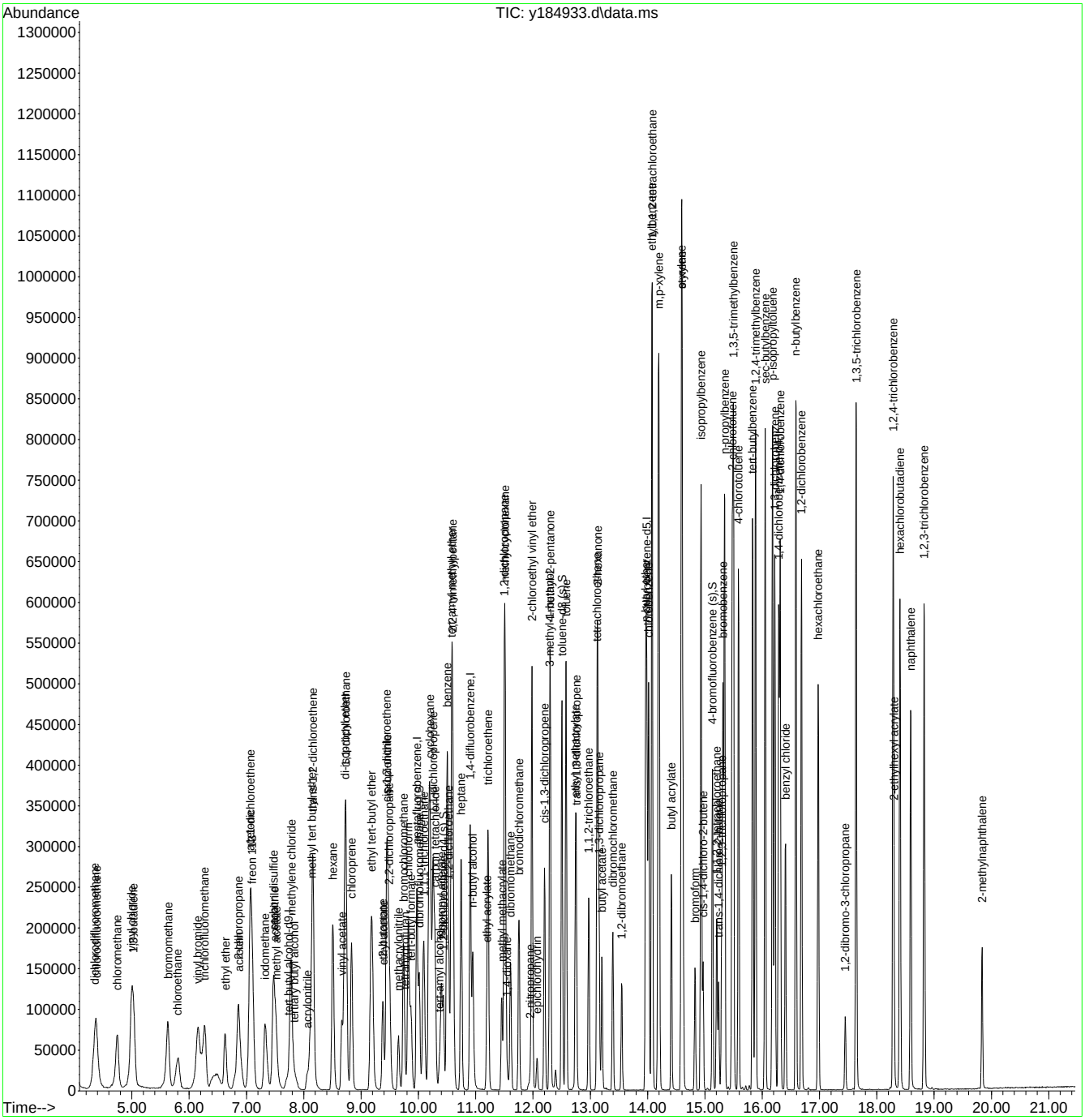
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,2,4-trimethylbenzene	15.884	105	394249	47.76	ug/L	98
109) sec-butylbenzene	16.051	105	505276	50.53	ug/L	99
110) 1,3-dichlorobenzene	16.219	146	251637	48.30	ug/L	98
111) p-isopropyltoluene	16.182	119	444933	50.53	ug/L	99
112) 1,4-dichlorobenzene	16.313	146	250241	46.64	ug/L	99
113) 1,2-dichlorobenzene	16.684	146	247375	46.36	ug/L	98
114) n-butylbenzene	16.585	92	232939	50.74	ug/L	98
115) 1,2-dibromo-3-chloropr...	17.448	157	24462	48.77	ug/L	93
116) 1,3,5-trichlorobenzene	17.641	180	256348	50.84	ug/L	99
117) 1,2,4-trichlorobenzene	18.285	180	218748	51.41	ug/L	99
118) hexachlorobutadiene	18.405	225	126875	48.57	ug/L	96
119) naphthalene	18.593	128	357185	54.12	ug/L	99
120) 1,2,3-trichlorobenzene	18.823	180	196213	53.23	ug/L	99
121) hexachloroethane	16.977	201	82407	52.57	ug/L	96
122) benzyl chloride	16.407	91	196928	50.21	ug/L	98
123) 2-ethylhexyl acrylate	18.300	70	22637	8.72	ug/L	94
124) 2-methylnaphthalene	19.838	142	79435	23.97	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-07-19\vy8026\
Data File : y184933.d
Acq On : 4 May 2019 10:41 am
Operator : PrashanS
Sample : CC8014-50 Inst : MSY
Misc : MS34370,VY8026,5.0,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MYS8014.M
Quant Results File: MYS8014.RES
Quant Time: May 06 13:09:03 2019
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 25 12:22:34 2019
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: 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

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: V019-2648-72.39	EC: V019-2648-84.2	Acrolein: V019-2648-88.1	
Standard Concentrations	100-10,000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-64			
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	5/1/2019	Data processed by	jonkm
Column	Rxi-624(20mx0.18mmx1.0um)	Batch ID	V3C6814
Method	V8260C	Matrix	SO
Init Calib Date	2/13/2019	Approved By:	MOHUI
Init Calib Quant Method	M3C6743	Approved Date:	5/3/2019 8:56:02 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	151595	BFB/CC6743-20		NA			5.0	5		1	OK/ok	10uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, # 14 low, 8:36 AM Ave. of 8.380 to 8.401
3C	151596	CC6743-4		NA			5.0	5		2	OK	2uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, for # 14
3C	151597	BS		NA			5.0	5		3	OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
3C	151598	IB		NA			5.0	5		4	OK	
3C	151599	MB		NA			5.0	5		5	OK	
3C	151600	JC86916-5	11	NA	MS34270	V8260TCL20	2.12	5		6	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
3C	151601	JC86916-1	5	NA	MS34270	V8260TCL20	3.13	5		7	OK	
3C	151602	JC86916-2	5	NA	MS34270	V8260TCL20	4.51	5		8	OK	
3C	151603	JC86916-3	5	NA	MS34270	V8260TCL20	3.96	5		9	RR	Int./Surr. Fail, RR SME
3C	151604	JC86916-4	5	NA	MS34270	V8260TCL20	2.77	5		10	RR	Int./Surr. Fail, C/O, RR LL
3C	151605	JC86916-5MS	10	NA	MS34270	V8260TCL20	3.65	5		11	OK	2.5uL Std.A/B/K,EC,Acrolein in sample
3C	151606	JC86916-5MSD	14	NA	MS34270	V8260TCL20	3.85	5		12	OK	2.5uL Std.A/B/K,EC,Acrolein in sample
3C	151607	IB		NA			5.0	5		13	OK	
3C	151608	JC87091-20	4	NA	MS34364	V8260TCL20+	5.6	5		14	OK	
3C	151609	JC87092-2	4	NA	MS34364	V8260PALGTMB	6.14	5		15	OK	MTBE
3C	151610	JC87092-3	4	NA	MS34364	V8260PALGTMB	5.98	5		16	OK	MTBE
3C	151611	JC87092-5	4	NA	MS34364	V8260PALGTMB	6.06	5		17	OK	MTBE
3C	151612	JC87092-6	4	NA	MS34364	V8260PALGTMB	6.37	5		18	OK	MTBE
3C	151613	JC87092-7	4	NA	MS34364	V8260PALGTMB	5.81	5		19	OK	MTBE
3C	151614	JC86837-2	4	NA	MS34232	V8260TCL20	5.4	5		20	OK	
3C	151615	JC86837-5	4	NA	MS34232	V8260TCL20	5.3	5		21	OK	
3C	151616	JC86837-7	4	NA	MS34232	V8260TCL20	5.6	5		22	OK	
3C	151617	JC86837-9	4	NA	MS34232	V8260TCL20	5.4	5		23	OK	
3C	151618	JC86837-10	4	NA	MS34232	V8260TCL20	4.5	5		24	OK	
3C	151619	JC86837-11	4	NA	MS34232	V8260TCL20	5.2	5		25	OK	
3C	151620	JC86837-12	4	NA	MS34232	V8260TCL20	3.5	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	151621	JC86838-1	5	NA	MS34232	V8260TCL20	6.2	5		27	OK	
3C	151622	JC86838-3	5	NA	MS34232	V8260TCL20	6.5	5		28	OK	
3C	151623	IB		NA			5.0	5		29	OK	END (19:40, 5/1/19)

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V018-2629-137.36	EC: V018-2645-01.8	Acrolein: V018-2629-145.9	
Concentration	100-10000 PPM	100 PPM	100 PPM	
Ext.Standard	Ext.ABK: V018-2645-05.3	Ext.EC: V018-2629-142.7	Ext.Acrolein: V018-2629-136.3	Ext.PA:V018-2629-120.2
Concentration	100-10000 PPM	100 PPM	100 PPM	100 PPM
Ext.Standard	3rd Source Acetone:V018-2629-128.2			
Concentration	400 PPM			
Internal/Surr	V018-2629-130			
Concentration	50/500 PPM			
Method	V8260C			
Init Calib Quant Method	MI8986			

Standard / Reagents			
GCMSI	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	11/27/2018	Data processed by	Dongmei
Column	RXI624(60mx0.25mmx1.4um)	Batch ID	VI8986
Method	V8260C	Matrix	SO
Init Calib Date	11/27/2018	Approved By:	KANYAV
Init Calib Quant Method	MI8986	Approved Date:	12/3/2018 1:18:01 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	223174	BFB		NA		Tune	5.0	5		1	OK	5:41 PM
I	223175	IC8986-0.5		NA		IC8260	5.0	5		2	OK	1uL Std.A/B/K,EC,Acrolein in 200mL DI H2O
I	223176	IC8986-1		NA		IC8260	5.0	5		3	OK	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
I	223177	IC8986-2		NA		IC8260	5.0	5		4	OK	2uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
I	223178	IC8986-4		NA		IC8260	5.0	5		5	OK	2uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223179	IC8986-8		NA		IC8260	5.0	5		6	OK	4uL Std.A/B/K,EC,Acrolein in 50mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	223180	IC8986-20		NA		IC8260	5.0	5		7	OK	10uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223181	ICC8986-50		NA		IC8260	5.0	5		8	OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223182	IC8986-100		NA		IC8260	5.0	5		9	OK	50uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223183	IC8986-200		NA		IC8260	5.0	5		10	OK	100uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
I	223184	IB		NA			5.0	5		11	OK	
I	223185	IB		NA			5.0	5		12	OK	
I	223186	ICV8986-50		NA		ICV8260	5.0	5		13	OK	25uL Ext.A/B/K,EC,Acrolein in 50mL DI H2O
I	223187	ICV8986-50		NA		ICV8260	5.0	5		14	OK	25uL Ext.PA,Acetone 3rd source in 50mL DI H2O, 12:18 AM
I	223188	IB		NA			5.0	5		15	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2645-72.44	EC: V019-2648-84.6	Acrolein: V019-2648-88.8	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-64			
I/S Concentration	50/500ppm			
Method	v8260c			
Init Calib Quant Method	mi8986			

Standard / Reagents			
GCMSI	Instrument ID:	Sequence loaded by	THIENN
Analysis Date	4/30/2019	Data processed by	Lotusa
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VI9098
		Matrix	SO
		Approved By:	MOHUI
		Approved Date:	5/3/2019 3:44:07 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	225817	IB		NA				5		1	OK	
I	225818	IB		NA				5		2	OK	
I	225819	CC8986-50		NA				5		3	NG	ABK,EC, Acrolein 25ul/50ml DI water
I	225820	BFB/CC8986-50		NA				5		4	OK/ok	8.27AM, ABK,EC, Acrolein 25ul/50ml DI water
I	225821	BS		NA				5		5	OK	ABK,EC, Acrolein 25ul/50ml DI water
I	225822	MB/JC80308D-30B		NA	MS31989	V8260SL	5	5	100	6	OK	Daily blank disp #54 MeOH lot # 187026, Fisher Chemical

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	225823	JC80308D-30A		NA	MS31989	V8260SL	5	5	100	7	OK	Daily blank disp #55 MeOH lot # 187026, Fisher Chemical
I	225824	JC86627-1	3	NA	MS34132	V8260TCL20+,TBA	5.5	5	100	8	OK	+1C
I	225825	JC86570-5	6	NA	MS34133	V8260STD,CHEX,CS2 ,F113,HEX	6.9	5	5	9	OK	+I
I	225826	JC86570-5	6	NA	MS34133	V8260STD,CHEX,CS2 ,F113,HEX	6.9	5	0.5	10	no need	
I	225827	JC86570-6	6	NA	MS34133	V8260STD,CHEX,CS2 ,F113,HEX	6.5	5	5	11	OK	+I
I	225828	JC86570-6	6	NA	MS34133	V8260STD,CHEX,CS2 ,F113,HEX	6.5	5	0.5	12	no need	
I	225829	JC86679-4	5	NA	MS34172	V8260STD,CHEX,CS2 ,F113,HEX	6.5	5	5	13	OK	+I
I	225830	JC86679-4	5	NA	MS34172	V8260STD,CHEX,CS2 ,F113,HEX	6.5	5	0.5	14	OK	+I
I	225831	JC86716-2	3	NA	MS34179	V8260TCL20	4.75	10	1	15	OK/dl	Dilution due to non targets. F/d
I	225832	JC86716-5	3	NA	MS34179	V8260TCL20	6.38	10	20	16	OK	Dilution due to non targets.
I	225833	JC86716-7	3	NA	MS34179	V8260TCL20	5.19	10	4	17	OK	Dilution due to non targets.
I	225834	JC86716-8	3	NA	MS34179	V8260TCL20	6.18	10	5	18	OK	Dilution due to non targets.
I	225835	JC86716-2MS	3	NA	MS34179	V8260TCL20	4.75	10	1	19	OK	ABK,EC, Acrolein 25ul/50ml SAMPLE
I	225836	JC86716-2MSD	3	NA	MS34179	V8260TCL20	4.75	10	1	20	OK	ABK,EC, Acrolein 25ul/50ml SAMPLE
I	225837	IB		NA				5		21	OK	
I	225838	JC86837-1	4	NA	MS34232	V8260TCL20	4.8	10	100	22	ok/rr	f/d
I	225839	JC87030-1	4	NA	MS34328	V8260BTX	10.5	10	100	23	OK	
I	225840	JC87051-8	4	NA	MS34328	V8260NJTCL20+,TBA	5.4	5	100	24	ok/rr	surr out
I	225841	JC87051-4	4	NA	MS34328	V8260NJTCL20+,TBA	5.2	5	100	25	ok/rr	surr out f/d
I	225842	JC87051-6	4	NA	MS34328	V8260NJTCL20+,TBA	5.7	5	100	26	ok/rr	surr out

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	225843	JC87051-3	4	NA	MS34328	V8260NJTCL20+,TBA	5.5	5	100	27	ok/rr	surr out 7:44pm
I	225844	IB		NA				5		28	OK	
I	225845	IB		NA				5		29	OK	
I	225846	IB		NA				5		30	OK	
I	225847	IB		NA				5		31	OK	
I	225848	IB		NA				5		32	OK	
I	225849	IB		NA				5		33	OK	
I	225850	IB		NA				5		34	OK	
I	225851	IB		NA				5		35	OK	
I	225852	IB		NA				5		36	OK	
I	225853	IB		NA				5		37	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2645-72.44	EC: V019-2648-84.6	Acrolein: V019-2648-88.8	MeOH LOT# 187026, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	100ppm	
Internal Surrogate	V019-2648-64			
I/S Concentration	50/500ppm			
Method	v8260c			
Init Calib Quant Method	mi8986			

Standard / Reagents			
GCMSI	Instrument ID:	Sequence loaded by	THIENN
Analysis Date	5/1/2019	Data processed by	nizele
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VI9099
Method	V8260C	Matrix	SO
		Approved By:	KANYAV
Init Calib Quant Method	MI8986	Approved Date:	5/3/2019 3:44:49 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
I	225854	IB		NA				5		1	OK	
I	225855	IB		NA				5		2	OK	
I	225856	CC8986-20		NA				5		3	ok	ABK,EC, Acrolein 10ul/50ml DI water
I	225857	BFB/CC8986-20		NA				5		4	ok/ok	8:24AM, ABK,EC, Acrolein 10ul/50ml DI water
I	225858	BS		NA				5		5	ok	ABK,EC, Acrolein 25ul/50ml DI water
I	225859	IB		NA				5		6	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	225860	MB		NA			5	5	100	7	ok	MeOH lot # 187026, Fisher Chemical
I	225861	JC86837-1	4	NA	MS34232	V8260TCL20	4.8	10	10	8	ok	+I
I	225862	JC87030-1	4	NA	MS34328	V8260BTX	10.5	10	100	9	ok	Dilution due to non targets.
I	225863	JC87051-8CFS	4	NA	MS34328	V8260NJTCL20+,TBA	5.4	5	20	10	ok	+I
I	225864	JC87051-4	4	NA	MS34328	V8260NJTCL20+,TBA	5.2	5	5	11	ok	+I
I	225865	JC87051-6CFS	4	NA	MS34328	V8260NJTCL20+,TBA	5.7	5	20	12	ok	+I
I	225866	JC87051-3CFS	4	NA	MS34328	V8260NJTCL20+,TBA	5.5	5	20	13	ok	+I
I	225867	JC86768-5	6	NA	MS34203	V8260TCL20	10.05	10	100	14	ok	
I	225868	JC87105-1	2	NA	MS34372	V8260PADFTMBMTBE	5.32	10	100	15	ok/dl	f/d
I	225869	JC87030-1MS	4	NA	MS34328	V8260BTX	10.5	10	100	16	ok	ABK,EC, Acrolein 25ul/50ml SAMPLE
I	225870	JC87030-1MSD	4	NA	MS34328	V8260BTX	10.5	10	100	17	ok	ABK,EC, Acrolein 25ul/50ml SAM
I	225871	IB		NA				5		18	OK	
I	225872	JC86781-2	4	NA	MS34216	V8260STD,CHEX,CS2, F113,HEX	6.6	5	100	19	rr	f/d and cc hit
I	225873	JC86781-4	4	NA	MS34216	V8260STD,CHEX,CS2, F113,HEX	5	5	100	20	ok/dl	f/d
I	225874	JC87092-1	3	NA	MS34364	V8260PALGTMB,MTBE	5.27	10	100	21	ok	
I	225875	JC87092-4	3	NA	MS34364	V8260PALGTMB,MTBE	6.22	10	100	22	ok	
I	225876	JC86837-3	3	NA	MS34232	V8260TCL20	3.44	10	100	23	ok	
I	225877	JC86837-4	3	NA	MS34232	V8260TCL20	5.68	10	100	24	ok	
I	225878	JC86837-6	3	NA	MS34232	V8260TCL20	4.78	10	100	25	ok	
I	225879	JC86837-8	3	NA	MS34232	V8260TCL20	5.44	10	100	26	ok/rr	rr LL

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
I	225880	JC87101-5	5	NA	MS34366	V8260MDVO	3	10	100	27	ok	+1C 7:44 pm
I	225881	IB		NA				5		28	ok	
I	225882	IB		NA				5		29	ok	
I	225883	IB		NA				5		30	ok	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standard	ABK: V019-2648-72.23	EC: V019-2648-80.11	Acrolein: V019-2648-54.40	
Concentration	100-10,000 PPM	100 PPM	100 PPM	
Standard	Ext ABK: V019-2648-52.7	Ext EC: V019-2648-76.5	Ext Acrolein: V019-2648-42.5	Ext PA: V019-2648-79.1
Concentration	100-10,000 PPM	100 PPM	100 PPM	100 PPM
Internal Surrogate	V019-2648-63			
Concentration	250/2500 PPM			

Standard / Reagents			
GCMSY	Instrument ID:	Sequence loaded by	Robert Szot
Analysis Date	4/24/2019	Data processed by	Robert Szot
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VY8014
Method	V8260C	Matrix	SO
Init Calib Date	4/24/19	Approved By:	KANYAV
Init Calib Quant Method	MYS8014	Approved Date:	4/26/2019 12:59:40 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184712	BFB		NA			5	5		1	ok	2:32 pm
Y	184713	IC8014-0.5		NA		8260 initial calibration	5	5		2	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
Y	184714	IC8014-1		NA		8260 initial calibration	5	5		3	ok	2 uL ABK, EC, Acrolein / 200 mL DI H2O
Y	184715	IC8014-2		NA		8260 initial calibration	5	5		4	ok	4 uL ABK, EC, Acrolein / 200 mL DI H2O
Y	184716	IC8014-4		NA		8260 initial calibration	5	5		5	ok	2 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184717	IC8014-8		NA		8260 initial calibration	5	5		6	ok	4 uL ABK, EC, Acrolein / 50 mL DI H2O

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184718	IC8014-20		NA		8260 initial calibration	5	5		7	ok	10 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184719	ICC8014-50		NA		8260 initial calibration	5	5		8	ok	25 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184720	IC8014-100		NA		8260 initial calibration	5	5		9	ok	50 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184721	IC8014-200		NA		8260 initial calibration	5	5		10	ok	100 uL ABK, EC, Acrolein / 50 mL DI H2O
Y	184722	IB		NA			5	5		11	ok	
Y	184723	IB		NA			5	5		12	ok	
Y	184724	ICV8014-50		NA		8260 initial calibration	5	5		13	ok	25 uL Ext ABK, Ext EC, Ext Acrolein / 50 mL DI H2O
Y	184725	ICV8014-50		NA		8260 initial calibration	5	5		14	ok	25 uL Ext PA / 50 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2648-72.39	EC: V019-2648-84.2	Acrolein: V019-2648-88.1	
Standard Concentration	100-10,000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-63			
I/S Concentration	250/2,500 PPM			
Rough reviewed by	Prashant B. Shukla			

Standard / Reagents			
GCMSY	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	5/2/2019	Data processed by	nizele
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VY8023
Method	V8260C	Matrix	SO
Init Calib Date	4/24/19	Approved By:	MOHUI
Init Calib Quant Method	MYS8014	Approved Date:	5/3/2019 11:33:14 AM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184879	BFB/CC8014-50		NA			5	5		1	ok/ok	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, # 18 high, 9.07AM
Y	184880	BS		NA			5	5		2	ok	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
Y	184881	IB		NA			5	5		3	OK	
Y	184882	MB		NA			5	5		4	ok	
Y	184883	JC86904-9	5	NA	MS34268	V8260TCL20+,TBA	6.1	5		5	ok	
Y	184884	JC87031-2	4	NA	MS34329	V8260TCL20	7.1	5		6	RR	Broken vial ran

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184885	JC87031-3	4	NA	MS34329	V8260TCL20	7.3	5		7	ok	
Y	184886	JC87031-4	4	NA	MS34329	V8260TCL20	2.4	5		8	ok	
Y	184887	JC87092-1	4	NA	MS34364	V8260PALGTMB,MTBE	6.68	5		9	ok	
Y	184888	JC86837-8	4	NA	MS34232	V8260TCL20	4.7	5		10	ok	
Y	184889	JC86737-12	5	NA	MS34176	V8260NJPTCL11+	6.15	5		11	ok/DL	SME (+ D264189)
Y	184890	JC86737-4	4	NA	MS34176	V8260NJPTCL11+	5.99	5		12	RR	Int. fail, RR
Y	184891	JC86737-8	4	NA	MS34176	V8260NJPTCL11+	5.5	5		13	ok	
Y	184892	JC87031-3MS	5	NA	MS34329	V8260TCL20	6.5	5		14	ok	2.5uL Std.A/B/K,EC,Acrolein in sample
Y	184893	JC87031-4DUP	5	NA	MS34329	V8260TCL20	5.4	5		15	rr	ISTD out
Y	184894	JC87313-1	6	NA	MS34435	V8260TCL20+	4.7	5		16	rr	ISTD out
Y	184895	JC87313-2	6	NA	MS34435	V8260TCL20+	5.1	5		17	rr	ISTD out
Y	184896	JC87313-3	6	NA	MS34435	V8260TCL20+	4.4	5		18	rr	ISTD out/surr out
Y	184897	JC87313-4	6	NA	MS34435	V8260TCL20+	4.6	5		19	ok	
Y	184898	JC87313-5	6	NA	MS34435	V8260TCL20+	5.4	5		20	ok	
Y	184899	JC86877-1	5	NA	MS34289	V82608010L	6.4	5		21	ok	
Y	184900	JC87074-1	6	NA	MS34368	V8260TCL20+,TBA	6.3	5		22	ok	
Y	184901	JC87074-9	6	NA	MS34368	V8260TCL20+,TBA	6.7	5		23	ok	
Y	184902	JC86737-4	5	NA	MS34176	V8260NJPTCL11+	5.61	5		24	ok	9:04 pm
Y	184903	IB		NA			5.0	5		25	OK	
Y	184904	IB		NA			5.0	5		26	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184905	IB		NA			5.0	5		27	OK	

GCMS Volatile Run Log

Standard / Reagents	Lot #			
Standards	ABK: V019-2648-72.63	EC: V019-2648-98.5	Acrolein: V019-2648-88.33	
Standard Concentration	100-10,000 PPM	100 PPM	100 PPM	
Internal Surrogate	V019-2648-96			
I/S Concentration	250/2,500 PPM			
Rough reviewed by	Prashant B. Shukla			

Standard / Reagents			
GCMSY	Instrument ID:	Sequence loaded by	Prashant B. Shukla
Analysis Date	5/4/2019	Data processed by	janellec
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VY8026
Method	V8260C	Matrix	SO
Init Calib Date	4/24/19	Approved By:	MOHUI
Init Calib Quant Method	MYS8014	Approved Date:	5/6/2019 3:35:27 PM
DI Purge Volume	5		

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184933	BFB/CC8014-50		NA			5.0	5		1	OK/OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O, 10:41 AM
Y	184934	BS		NA			5.0	5		2	OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
Y	184935	IB		NA			5.0	5		3	OK	
Y	184936	MB		NA			5.0	5		4	OK	
Y	184937	JC86877-1DUP	6	NA	MS34289	V82608010L	6.3	5		5	OK	VY8023
Y	184938	JC87324-1	8	NA	MS34442	V8260TCL20+	5.6	5		6	ok	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184939	JC87324-2	8	NA	MS34442	V8260TCL20+	4.8	5		7	ok	
Y	184940	JC87324-3	8	NA	MS34442	V8260TCL20+	6.5	5		8	ok	
Y	184941	JC87324-4	8	NA	MS34442	V8260TCL20+	5.3	5		9	ok	
Y	184942	JC87324-5	7	NA	MS34442	V8260TCL20+	5.9	5		10	ok	
Y	184943	JC87436-1	5	NA	MS34492	V8260TCL20+	5.7	5		11	ok	
Y	184944	JC87436-2	5	NA	MS34492	V8260TCL20+	4.2	5		12	ok	
Y	184945	JC87414-14	4	NA	MS34474	V8260PPTCL20+	4.57	5		13	ok	1112T,TBA
Y	184946	JC87324-2MS	7	NA	MS34442	V8260TCL20+	5.0	5		14	ok	2.5uL Std.A/B/K,EC,Acrolein in sample
Y	184947	IB		NA			5.0	5		15	OK	
Y	184948	JC87324-1DUP	7	NA	MS34442	V8260TCL20+	6.2	5		16	ok	
Y	184949	JC80589A-4C		NA	MS31723	V8260SL	5.0	5		17	ok	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O (1 PPB)
Y	184950	JC80589A-4D		NA	MS31723	V8260SL	5.0	5		18	ok	5uL Std.A/B/K,EC,Acrolein in 100mL DI H2O (5 PPB)
Y	184951	JC86825-1	5	NA	MS34231	V8260TCL20+	5.0	5		19	cf	One Surr. Low, (+C225385)
Y	184952	JC86825-2	4	NA	MS34231	V8260TCL20+	5.5	5		20	cf	One Surr. Low, (+C225386)
Y	184953	JC86825-3	5	NA	MS34231	V8260TCL20+	5.4	5		21	cf	One Surr. Low, (+C225387)
Y	184954	JC86825-4	4	NA	MS34231	V8260TCL20+	5.2	5		22	cf	One Surr. Low, (+C225388)
Y	184955	JC86867-3	5	NA	MS34246	V8260RCP	5.39	5		23	ok	
Y	184956	JC86867-4	5	NA	MS34246	V8260RCP	6.53	5		24	ok	
Y	184957	JC87419-1	8	NA	MS34474	V8260TCL20+	5.5	5		25	ok	10:36 PM
Y	184958	IB		NA			5.0	5		26	OK	

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH Purge (uL)	ALS #	Status	Comments
Y	184959	IB		NA			5.0	5		27	OK	5/6/19
Y	184960	IB		NA			5.0	5		28	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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-MB1	6P481457.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-MB1	6P481457.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-MB1	6P481457.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	80%	23-115%
4165-62-2	Phenol-d5	77%	27-114%
118-79-6	2,4,6-Tribromophenol	80%	19-152%
4165-60-0	Nitrobenzene-d5	95%	26-134%
321-60-8	2-Fluorobiphenyl	82%	39-124%
1718-51-0	Terphenyl-d14	89%	36-134%

Method Blank Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-MB	M153896.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-MB	M153896.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-MB	M153896.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	60%	23-115%
4165-62-2	Phenol-d5	62%	27-114%
118-79-6	2,4,6-Tribromophenol	103%	19-152%
4165-60-0	Nitrobenzene-d5	74%	26-134%
321-60-8	2-Fluorobiphenyl	82%	39-124%
1718-51-0	Terphenyl-d14	79%	36-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.90	300	ug/kg	J
	system artifact	2.33	200	ug/kg	J
	system artifact	2.78	5400	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-BS1	M153897.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	1110	67	44-122
59-50-7	4-Chloro-3-methyl phenol	1670	1160	70	50-123
120-83-2	2,4-Dichlorophenol	1670	1290	77	48-122
105-67-9	2,4-Dimethylphenol	1670	1410	85	48-124
51-28-5	2,4-Dinitrophenol	3330	3510	105	34-146
534-52-1	4,6-Dinitro-o-cresol	1670	1530	92	49-140
95-48-7	2-Methylphenol	1670	1120	67	40-126
	3&4-Methylphenol	1670	1170	70	40-127
88-75-5	2-Nitrophenol	1670	1410	85	44-133
100-02-7	4-Nitrophenol	1670	1230	74	35-153
87-86-5	Pentachlorophenol	1670	1790	107	15-149
108-95-2	Phenol	1670	997	60	50-109
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1450	87	44-132
95-95-4	2,4,5-Trichlorophenol	1670	1450	87	45-124
88-06-2	2,4,6-Trichlorophenol	1670	1480	89	57-122
83-32-9	Acenaphthene	1670	1280	77	53-119
208-96-8	Acenaphthylene	1670	1260	76	41-125
98-86-2	Acetophenone	1670	1060	64	52-112
120-12-7	Anthracene	1670	1240	74	51-120
1912-24-9	Atrazine	1670	1750	105	49-139
56-55-3	Benzo(a)anthracene	1670	1120	67	54-118
50-32-8	Benzo(a)pyrene	1670	1240	74	55-121
205-99-2	Benzo(b)fluoranthene	1670	1240	74	57-116
191-24-2	Benzo(g,h,i)perylene	1670	1200	72	40-124
207-08-9	Benzo(k)fluoranthene	1670	1150	69	59-116
101-55-3	4-Bromophenyl phenyl ether	1670	1210	73	60-122
85-68-7	Butyl benzyl phthalate	1670	1150	69	51-134
92-52-4	1,1'-Biphenyl	1670	1220	73	46-122
100-52-7	Benzaldehyde	1670	817	49	14-139
91-58-7	2-Chloronaphthalene	1670	1210	73	49-120
106-47-8	4-Chloroaniline	1670	820	49	10-115
86-74-8	Carbazole	1670	1290	77	52-124
105-60-2	Caprolactam	1670	1150	69	16-139
218-01-9	Chrysene	1670	1080	65	51-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1100	66	36-131
111-44-4	bis(2-Chloroethyl)ether	1670	963	58	41-131

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-BS1	M153897.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1120	67	22-134
7005-72-3	4-Chlorophenyl phenyl ether	1670	1260	76	56-118
121-14-2	2,4-Dinitrotoluene	1670	1380	83	57-131
606-20-2	2,6-Dinitrotoluene	1670	1550	93	57-132
91-94-1	3,3'-Dichlorobenzidine	3330	2430	73	10-129
123-91-1	1,4-Dioxane	1670	482	29	10-110
53-70-3	Dibenzo(a,h)anthracene	1670	1200	72	48-121
132-64-9	Dibenzofuran	1670	1300	78	51-119
84-74-2	Di-n-butyl phthalate	1670	1270	76	59-125
117-84-0	Di-n-octyl phthalate	1670	1160	70	47-147
84-66-2	Diethyl phthalate	1670	1260	76	57-116
131-11-3	Dimethyl phthalate	1670	1230	74	56-116
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1110	67	53-133
206-44-0	Fluoranthene	1670	1210	73	58-117
86-73-7	Fluorene	1670	1300	78	56-114
118-74-1	Hexachlorobenzene	1670	1320	79	50-128
87-68-3	Hexachlorobutadiene	1670	1190	71	43-129
77-47-4	Hexachlorocyclopentadiene	3330	3040	91	15-140
67-72-1	Hexachloroethane	1670	1050	63	43-123
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1120	67	49-124
78-59-1	Isophorone	1670	1100	66	38-128
91-57-6	2-Methylnaphthalene	1670	1230	74	37-124
88-74-4	2-Nitroaniline	1670	1320	79	45-144
99-09-2	3-Nitroaniline	1670	1160	70	10-134
100-01-6	4-Nitroaniline	1670	1510	91	41-130
91-20-3	Naphthalene	1670	1240	74	44-116
98-95-3	Nitrobenzene	1670	1070	64	36-132
621-64-7	N-Nitroso-di-n-propylamine	1670	1050	63	38-125
86-30-6	N-Nitrosodiphenylamine	1670	1240	74	51-122
85-01-8	Phenanthrene	1670	1330	80	53-119
129-00-0	Pyrene	1670	1110	67	54-124
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1270	76	45-128

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-BS1	M153897.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	57%	23-115%
4165-62-2	Phenol-d5	58%	27-114%
118-79-6	2,4,6-Tribromophenol	102%	19-152%
4165-60-0	Nitrobenzene-d5	65%	26-134%
321-60-8	2-Fluorobiphenyl	74%	39-124%
1718-51-0	Terphenyl-d14	74%	36-134%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-BS1	6P481458.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
OP20035-BSD	6P481459.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	1670	1420	85	1230	74	14	44-122/30
59-50-7	4-Chloro-3-methyl phenol	1670	1480	89	1410	85	5	50-123/30
120-83-2	2,4-Dichlorophenol	1670	1440	86	1230	74	16	48-122/30
105-67-9	2,4-Dimethylphenol	1670	1790	107	1490	89	18	48-124/30
51-28-5	2,4-Dinitrophenol	3330	1910	57	1580	47	19	34-146/30
534-52-1	4,6-Dinitro-o-cresol	1670	1170	70	978	59	18	49-140/30
95-48-7	2-Methylphenol	1670	1420	85	1130	68	23	40-126/30
	3&4-Methylphenol	1670	1640	98	1140	68	36* [a]	40-127/30
88-75-5	2-Nitrophenol	1670	1510	91	1330	80	13	44-133/30
100-02-7	4-Nitrophenol	1670	1460	88	1250	75	15	35-153/30
87-86-5	Pentachlorophenol	1670	1420	85	1190	71	18	15-149/30
108-95-2	Phenol	1670	1300	78	1040	62	22	50-109/30
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1310	79	1080	65	19	44-132/30
95-95-4	2,4,5-Trichlorophenol	1670	1440	86	1200	72	18	45-124/30
88-06-2	2,4,6-Trichlorophenol	1670	1500	90	1220	73	21	57-122/30
83-32-9	Acenaphthene	1670	1470	88	1250	75	16	53-119/30
208-96-8	Acenaphthylene	1670	1550	93	1320	79	16	41-125/30
98-86-2	Acetophenone	1670	1530	92	1070	64	35* [a]	52-112/30
120-12-7	Anthracene	1670	1500	90	1300	78	14	51-120/30
1912-24-9	Atrazine	1670	1290	77	1140	68	12	49-139/30
56-55-3	Benzo(a)anthracene	1670	1300	78	1120	67	15	54-118/30
50-32-8	Benzo(a)pyrene	1670	1500	90	1280	77	16	55-121/30
205-99-2	Benzo(b)fluoranthene	1670	1500	90	1230	74	20	57-116/30
191-24-2	Benzo(g,h,i)perylene	1670	1450	87	1200	72	19	40-124/30
207-08-9	Benzo(k)fluoranthene	1670	1470	88	1310	79	12	59-116/30
101-55-3	4-Bromophenyl phenyl ether	1670	1390	83	1160	70	18	60-122/30
85-68-7	Butyl benzyl phthalate	1670	1700	102	1450	87	16	51-134/30
92-52-4	1,1'-Biphenyl	1670	1540	92	1310	79	16	46-122/30
100-52-7	Benzaldehyde	1670	1040	62	912	55	13	14-139/30
91-58-7	2-Chloronaphthalene	1670	1450	87	1200	72	19	49-120/30
106-47-8	4-Chloroaniline	1670	906	54	818	49	10	10-115/30
86-74-8	Carbazole	1670	1510	91	1300	78	15	52-124/30
105-60-2	Caprolactam	1670	1400	84	1200	72	15	16-139/30
218-01-9	Chrysene	1670	1250	75	1060	64	16	51-115/30
111-91-1	bis(2-Chloroethoxy)methane	1670	1540	92	1280	77	18	36-131/30
111-44-4	bis(2-Chloroethyl)ether	1670	1400	84	1080	65	26	41-131/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-BS1	6P481458.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
OP20035-BSD	6P481459.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1470	88	1230	74	18	22-134/30
7005-72-3	4-Chlorophenyl phenyl ether	1670	1290	77	1080	65	18	56-118/30
121-14-2	2,4-Dinitrotoluene	1670	1460	88	1200	72	20	57-131/30
606-20-2	2,6-Dinitrotoluene	1670	1490	89	1250	75	18	57-132/30
91-94-1	3,3'-Dichlorobenzidine	3330	2420	73	2100	63	14	10-129/30
123-91-1	1,4-Dioxane	1670	863	52	794	48	8	10-110/30
53-70-3	Dibenzo(a,h)anthracene	1670	1390	83	1140	68	20	48-121/30
132-64-9	Dibenzofuran	1670	1500	90	1260	76	17	51-119/30
84-74-2	Di-n-butyl phthalate	1670	1580	95	1360	82	15	59-125/30
117-84-0	Di-n-octyl phthalate	1670	2060	124	1820	109	12	47-147/30
84-66-2	Diethyl phthalate	1670	1470	88	1240	74	17	57-116/30
131-11-3	Dimethyl phthalate	1670	1470	88	1220	73	19	56-116/30
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1640	98	1420	85	14	53-133/30
206-44-0	Fluoranthene	1670	1350	81	1120	67	19	58-117/30
86-73-7	Fluorene	1670	1500	90	1260	76	17	56-114/30
118-74-1	Hexachlorobenzene	1670	1350	81	1140	68	17	50-128/30
87-68-3	Hexachlorobutadiene	1670	1270	76	1160	70	9	43-129/30
77-47-4	Hexachlorocyclopentadiene	3330	2610	78	2210	66	17	15-140/30
67-72-1	Hexachloroethane	1670	1240	74	909	55	31* [a]	43-123/30
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1430	86	1190	71	18	49-124/30
78-59-1	Isophorone	1670	1610	97	1320	79	20	38-128/30
91-57-6	2-Methylnaphthalene	1670	1490	89	1380	83	8	37-124/30
88-74-4	2-Nitroaniline	1670	1750	105	1480	89	17	45-144/30
99-09-2	3-Nitroaniline	1670	1080	65	1000	60	8	10-134/30
100-01-6	4-Nitroaniline	1670	1370	82	1110	67	21	41-130/30
91-20-3	Naphthalene	1670	1480	89	1260	76	16	44-116/30
98-95-3	Nitrobenzene	1670	1540	92	1280	77	18	36-132/30
621-64-7	N-Nitroso-di-n-propylamine	1670	1610	97	1080	65	39* [a]	38-125/30
86-30-6	N-Nitrosodiphenylamine	1670	1500	90	1290	77	15	51-122/30
85-01-8	Phenanthrene	1670	1470	88	1240	74	17	53-119/30
129-00-0	Pyrene	1670	1460	88	1250	75	15	54-124/30
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1360	82	1110	67	20	45-128/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-BS1	6P481458.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
OP20035-BSD	6P481459.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	93%	73%	23-115%
4165-62-2	Phenol-d5	88%	72%	27-114%
118-79-6	2,4,6-Tribromophenol	87%	72%	19-152%
4165-60-0	Nitrobenzene-d5	96%	80%	26-134%
321-60-8	2-Fluorobiphenyl	87%	72%	39-124%
1718-51-0	Terphenyl-d14	93%	78%	36-134%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-MS	6P481463.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
OP20035-MSD	6P481464.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
JC86837-8	6P481465.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	JC86837-8 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		2290	1260	55	2210	1560	71	21	10-137/34
59-50-7	4-Chloro-3-methyl phenol	ND		2290	1440	63	2210	1740	79	19	11-147/35
120-83-2	2,4-Dichlorophenol	ND		2290	1350	59	2210	1630	74	19	15-140/34
105-67-9	2,4-Dimethylphenol	ND		2290	1730	76	2210	2080	94	18	10-151/34
51-28-5	2,4-Dinitrophenol	ND		4580	776	17	4410	798	18	3	10-148/49
534-52-1	4,6-Dinitro-o-cresol	ND		2290	344	15	2210	541	25	45	10-150/48
95-48-7	2-Methylphenol	ND		2290	1330	58	2210	1630	74	20	10-138/33
	3&4-Methylphenol	ND		2290	1310	57	2210	1630	74	22	10-143/33
88-75-5	2-Nitrophenol	ND		2290	1370	60	2210	1690	77	21	10-150/39
100-02-7	4-Nitrophenol	ND		2290	1650	72	2210	2000	91	19	10-163/38
87-86-5	Pentachlorophenol	ND		2290	1130	49	2210	1560	71	32	10-148/39
108-95-2	Phenol	ND		2290	1190	52	2210	1460	66	20	24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	ND		2290	1130	49	2210	1550	70	31	14-140/38
95-95-4	2,4,5-Trichlorophenol	ND		2290	1380	60	2210	1770	80	25	10-146/36
88-06-2	2,4,6-Trichlorophenol	ND		2290	1410	62	2210	1810	82	25	16-148/36
83-32-9	Acenaphthene	37.5	J	2290	1910	82	2210	1780	79	7	21-136/34
208-96-8	Acenaphthylene	47.3		2290	1960	84	2210	1860	82	5	10-143/36
98-86-2	Acetophenone	ND		2290	1580	69	2210	1490	68	6	24-127/31
120-12-7	Anthracene	61.6		2290	1910	81	2210	1830	80	4	10-147/39
1912-24-9	Atrazine	ND		2290	1670	73	2210	1560	71	7	10-161/38
56-55-3	Benzo(a)anthracene	79.9		2290	1650	69	2210	1620	70	2	10-151/41
50-32-8	Benzo(a)pyrene	99.0		2290	1730	71	2210	1820	78	5	10-149/40
205-99-2	Benzo(b)fluoranthene	102		2290	1750	72	2210	1730	74	1	10-147/42
191-24-2	Benzo(g,h,i)perylene	73.1		2290	1650	69	2210	1860	81	12	10-150/41
207-08-9	Benzo(k)fluoranthene	44.1	J	2290	1730	74	2210	1760	78	2	12-142/41
101-55-3	4-Bromophenyl phenyl ether	ND		2290	1730	76	2210	1650	75	5	26-138/37
85-68-7	Butyl benzyl phthalate	ND		2290	2200	96	2210	2160	98	2	24-143/36
92-52-4	1,1'-Biphenyl	24.2	J	2290	1950	84	2210	1850	83	5	18-138/32
100-52-7	Benzaldehyde	14.9	J	2290	1410	61	2210	1270	57	10	10-149/37
91-58-7	2-Chloronaphthalene	ND		2290	1790	78	2210	1720	78	4	24-130/31
106-47-8	4-Chloroaniline	ND		2290	1360	59	2210	1280	58	6	10-111/52
86-74-8	Carbazole	ND		2290	1950	85	2210	1810	82	7	12-146/39
105-60-2	Caprolactam	ND		2290	2010	88	2210	1840	83	9	10-147/40
218-01-9	Chrysene	84.1		2290	1480	61	2210	1500	64	1	10-151/41
111-91-1	bis(2-Chloroethoxy)methane	ND		2290	1880	82	2210	1790	81	5	10-144/35
111-44-4	bis(2-Chloroethyl)ether	ND		2290	1680	73	2210	1600	72	5	12-142/35

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-MS	6P481463.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
OP20035-MSD	6P481464.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
JC86837-8	6P481465.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Compound	JC86837-8 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		2290	1820	80	2210	1730	78	5	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	ND		2290	1590	69	2210	1530	69	4	21-136/35
121-14-2	2,4-Dinitrotoluene	ND		2290	1860	81	2210	1830	83	2	14-148/41
606-20-2	2,6-Dinitrotoluene	ND		2290	1870	82	2210	1810	82	3	14-152/40
91-94-1	3,3'-Dichlorobenzidine	ND		4580	3460	76	4410	3410	77	1	10-137/47
123-91-1	1,4-Dioxane	ND		2290	971	42	2210	963	44	1	10-110/40
53-70-3	Dibenzo(a,h)anthracene	ND		2290	1570	69	2210	1660	75	6	10-152/38
132-64-9	Dibenzofuran	ND		2290	1890	83	2210	1780	81	6	17-141/36
84-74-2	Di-n-butyl phthalate	ND		2290	2020	88	2210	1860	84	8	26-137/35
117-84-0	Di-n-octyl phthalate	ND		2290	2710	118	2210	2430	110	11	23-145/36
84-66-2	Diethyl phthalate	ND		2290	1830	80	2210	1850	84	1	25-133/35
131-11-3	Dimethyl phthalate	ND		2290	1860	81	2210	1780	81	4	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2290	2150	94	2210	2090	95	3	26-144/39
206-44-0	Fluoranthene	111		2290	1720	70	2210	1700	72	1	10-151/44
86-73-7	Fluorene	33.1	J	2290	1890	81	2210	1810	80	4	19-133/36
118-74-1	Hexachlorobenzene	ND		2290	1650	72	2210	1600	72	3	18-142/37
87-68-3	Hexachlorobutadiene	ND		2290	1530	67	2210	1430	65	7	16-137/32
77-47-4	Hexachlorocyclopentadiene	ND		4580	2350	51	4410	2440	55	4	10-150/50
67-72-1	Hexachloroethane	ND		2290	1280	56	2210	1210	55	6	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	53.7		2290	1640	69	2210	1760	77	7	10-148/41
78-59-1	Isophorone	ND		2290	1980	87	2210	1880	85	5	11-142/33
91-57-6	2-Methylnaphthalene	76.5		2290	1910	80	2210	1740	75	9	10-141/35
88-74-4	2-Nitroaniline	ND		2290	2370	104	2210	2120	96	11	14-156/38
99-09-2	3-Nitroaniline	ND		2290	1760	77	2210	1660	75	6	10-144/45
100-01-6	4-Nitroaniline	ND		2290	1730	76	2210	1660	75	4	10-156/44
91-20-3	Naphthalene	395		2290	2140	76	2210	1900	68	12	10-136/36
98-95-3	Nitrobenzene	ND		2290	1900	83	2210	1770	80	7	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	ND		2290	1730	76	2210	1620	73	7	10-142/31
86-30-6	N-Nitrosodiphenylamine	ND		2290	2270	99	2210	2190	99	4	10-156/37
85-01-8	Phenanthrene	72.2		2290	1880	79	2210	1770	77	6	11-145/45
129-00-0	Pyrene	156		2290	1880	75	2210	1840	76	2	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		2290	1650	72	2210	1640	74	1	23-136/32

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20035-MS	6P481463.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
OP20035-MSD	6P481464.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576
JC86837-8	6P481465.D	1	04/29/19	AR	04/28/19	OP20035	E6P2576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

CAS No.	Surrogate Recoveries	MS	MSD	JC86837-8	Limits
367-12-4	2-Fluorophenol	76%	74%	86%	23-115%
4165-62-2	Phenol-d5	76%	73%	79%	27-114%
118-79-6	2,4,6-Tribromophenol	79%	78%	75%	19-152%
4165-60-0	Nitrobenzene-d5	85%	82%	74%	26-134%
321-60-8	2-Fluorobiphenyl	78%	77%	78%	39-124%
1718-51-0	Terphenyl-d14	79%	78%	84%	36-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-MS	M153905.D	1	04/30/19	CC	04/28/19	OP20021	EM6576
OP20021-MSD	M153906.D	1	04/30/19	CC	04/28/19	OP20021	EM6576
JC86768-7	M153907.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Compound	JC86768-7 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		1830	803	44	1840	968	53	19	10-137/34
59-50-7	4-Chloro-3-methyl phenol	ND		1830	857	47	1840	1060	58	21	11-147/35
120-83-2	2,4-Dichlorophenol	ND		1830	937	51	1840	1180	64	23	15-140/34
105-67-9	2,4-Dimethylphenol	ND		1830	995	54	1840	1250	68	23	10-151/34
51-28-5	2,4-Dinitrophenol	ND		3660	877	24	3680	1290	35	38	10-148/49
534-52-1	4,6-Dinitro-o-cresol	ND		1830	421	23	1840	618	34	38	10-150/48
95-48-7	2-Methylphenol	ND		1830	813	44	1840	990	54	20	10-138/33
	3&4-Methylphenol	ND		1830	873	48	1840	1040	56	17	10-143/33
88-75-5	2-Nitrophenol	ND		1830	1000	55	1840	1190	65	17	10-150/39
100-02-7	4-Nitrophenol	ND		1830	881	48	1840	1060	58	18	10-163/38
87-86-5	Pentachlorophenol	ND		1830	1120	61	1840	1460	79	26	10-148/39
108-95-2	Phenol	ND		1830	723	40	1840	870	47	18	24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	ND		1830	1010	55	1840	1300	71	25	14-140/38
95-95-4	2,4,5-Trichlorophenol	ND		1830	1050	57	1840	1300	71	21	10-146/36
88-06-2	2,4,6-Trichlorophenol	ND		1830	1040	57	1840	1310	71	23	16-148/36
83-32-9	Acenaphthene	ND		1830	1240	68	1840	1350	73	8	21-136/34
208-96-8	Acenaphthylene	ND		1830	1220	67	1840	1310	71	7	10-143/36
98-86-2	Acetophenone	ND		1830	1010	55	1840	1030	56	2	24-127/31
120-12-7	Anthracene	ND		1830	1200	66	1840	1260	68	5	10-147/39
1912-24-9	Atrazine	ND		1830	1620	89	1840	1740	94	7	10-161/38
56-55-3	Benzo(a)anthracene	28.0	J	1830	1090	58	1840	1120	59	3	10-151/41
50-32-8	Benzo(a)pyrene	30.3	J	1830	1190	63	1840	1260	67	6	10-149/40
205-99-2	Benzo(b)fluoranthene	37.9		1830	1160	61	1840	1220	64	5	10-147/42
191-24-2	Benzo(g,h,i)perylene	21.6	J	1830	1170	63	1840	1260	67	7	10-150/41
207-08-9	Benzo(k)fluoranthene	ND		1830	1100	60	1840	1200	65	9	12-142/41
101-55-3	4-Bromophenyl phenyl ether	ND		1830	1150	63	1840	1260	68	9	26-138/37
85-68-7	Butyl benzyl phthalate	ND		1830	1130	62	1840	1140	62	1	24-143/36
92-52-4	1,1'-Biphenyl	ND		1830	1180	64	1840	1280	69	8	18-138/32
100-52-7	Benzaldehyde	ND		1830	846	46	1840	872	47	3	10-149/37
91-58-7	2-Chloronaphthalene	ND		1830	1170	64	1840	1260	68	7	24-130/31
106-47-8	4-Chloroaniline	ND		1830	890	49	1840	975	53	9	10-111/52
86-74-8	Carbazole	ND		1830	1290	71	1840	1300	71	1	12-146/39
105-60-2	Caprolactam	ND		1830	1060	58	1840	1200	65	12	10-147/40
218-01-9	Chrysene	29.1	J	1830	1060	56	1840	1080	57	2	10-151/41
111-91-1	bis(2-Chloroethoxy)methane	ND		1830	1070	58	1840	1120	61	5	10-144/35
111-44-4	bis(2-Chloroethyl)ether	ND		1830	930	51	1840	968	53	4	12-142/35

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-MS	M153905.D	1	04/30/19	CC	04/28/19	OP20021	EM6576
OP20021-MSD	M153906.D	1	04/30/19	CC	04/28/19	OP20021	EM6576
JC86768-7	M153907.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Compound	JC86768-7 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		1830	1140	62	1840	1150	62	1	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	ND		1830	1240	68	1840	1300	71	5	21-136/35
121-14-2	2,4-Dinitrotoluene	ND		1830	1280	70	1840	1380	75	8	14-148/41
606-20-2	2,6-Dinitrotoluene	ND		1830	1430	78	1840	1530	83	7	14-152/40
91-94-1	3,3'-Dichlorobenzidine	ND		3660	2320	63	3680	2590	70	11	10-137/47
123-91-1	1,4-Dioxane	ND		1830	464	25	1840	482	26	4	10-110/40
53-70-3	Dibenzo(a,h)anthracene	ND		1830	1140	62	1840	1230	67	8	10-152/38
132-64-9	Dibenzofuran	ND		1830	1350	74	1840	1370	74	1	17-141/36
84-74-2	Di-n-butyl phthalate	ND		1830	1200	66	1840	1290	70	7	26-137/35
117-84-0	Di-n-octyl phthalate	ND		1830	1090	60	1840	1150	62	5	23-145/36
84-66-2	Diethyl phthalate	ND		1830	1190	65	1840	1280	69	7	25-133/35
131-11-3	Dimethyl phthalate	ND		1830	1180	64	1840	1260	68	7	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1830	1090	60	1840	1130	61	4	26-144/39
206-44-0	Fluoranthene	48.0		1830	1160	61	1840	1250	65	7	10-151/44
86-73-7	Fluorene	ND		1830	1250	68	1840	1330	72	6	19-133/36
118-74-1	Hexachlorobenzene	ND		1830	1240	68	1840	1310	71	5	18-142/37
87-68-3	Hexachlorobutadiene	ND		1830	1130	62	1840	1200	65	6	16-137/32
77-47-4	Hexachlorocyclopentadiene	ND		3660	2410	66	3680	2560	69	6	10-150/50
67-72-1	Hexachloroethane	ND		1830	1050	57	1840	1030	56	2	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	41.5		1830	1080	57	1840	1180	62	9	10-148/41
78-59-1	Isophorone	ND		1830	1060	58	1840	1120	61	6	11-142/33
91-57-6	2-Methylnaphthalene	ND		1830	1270	69	1840	1290	70	2	10-141/35
88-74-4	2-Nitroaniline	ND		1830	1310	72	1840	1380	75	5	14-156/38
99-09-2	3-Nitroaniline	ND		1830	1250	68	1840	1280	69	2	10-144/45
100-01-6	4-Nitroaniline	ND		1830	1470	80	1840	1530	83	4	10-156/44
91-20-3	Naphthalene	ND		1830	1200	66	1840	1260	68	5	10-136/36
98-95-3	Nitrobenzene	ND		1830	1050	57	1840	1080	59	3	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	ND		1830	1070	58	1840	1120	61	5	10-142/31
86-30-6	N-Nitrosodiphenylamine	ND		1830	1210	66	1840	1260	68	4	10-156/37
85-01-8	Phenanthrene	27.4	J	1830	1260	67	1840	1340	71	6	11-145/45
129-00-0	Pyrene	44.0		1830	1130	59	1840	1130	59	0	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1830	1210	66	1840	1330	72	9	23-136/32

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20021-MS	M153905.D	1	04/30/19	CC	04/28/19	OP20021	EM6576
OP20021-MSD	M153906.D	1	04/30/19	CC	04/28/19	OP20021	EM6576
JC86768-7	M153907.D	1	04/30/19	CC	04/28/19	OP20021	EM6576

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7

CAS No.	Surrogate Recoveries	MS	MSD	JC86768-7	Limits
367-12-4	2-Fluorophenol	50%	54%		23-115%
4165-62-2	Phenol-d5	50%	54%		27-114%
118-79-6	2,4,6-Tribromophenol	85%	92%		19-152%
4165-60-0	Nitrobenzene-d5	57%	61%	53%	26-134%
321-60-8	2-Fluorobiphenyl	65%	70%	60%	39-124%
1718-51-0	Terphenyl-d14	65%	69%	58%	36-134%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC86837
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: JC86837
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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2576-DFTPP
Lab File ID: 6P481453.D
Instrument ID: GCMS6P
Injection Date: 04/29/19
Injection Time: 09:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	126492	35.7		Pass
68	Less than 2.0% of mass 69	2388	0.67	(1.65) [a]	Pass
69	Mass 69 relative abundance	144439	40.7		Pass
70	Less than 2.0% of mass 69	800	0.23	(0.55) [a]	Pass
127	40.0 - 60.0% of mass 198	200960	56.7		Pass
197	Less than 1.0% of mass 198	898	0.25		Pass
198	Base peak, 100% relative abundance	354624	100.0		Pass
199	5.0 - 9.0% of mass 198	23322	6.58		Pass
275	10.0 - 30.0% of mass 198	103341	29.1		Pass
365	1.0 - 100.0% of mass 198	16148	4.55		Pass
441	Present, but less than mass 443	48077	13.6	(81.2) [b]	Pass
442	40.0 - 100.0% of mass 198	300498	84.7		Pass
443	17.0 - 23.0% of mass 442	59197	16.7	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E6P2576-CC2562	6P481454.D	04/29/19	09:37	00:13	Continuing cal 25
E6P2576-CC2563	6P481455.D	04/29/19	10:01	00:37	Continuing cal 25
OP20035-MB1	6P481457.D	04/29/19	10:49	01:25	Method Blank
OP20035-BS1	6P481458.D	04/29/19	11:13	01:49	Blank Spike
OP20035-BSD	6P481459.D	04/29/19	11:37	02:13	Blank Spike Duplicate
ZZZZZZ	6P481460.D	04/29/19	12:01	02:37	(unrelated sample)
ZZZZZZ	6P481461.D	04/29/19	12:25	03:01	(unrelated sample)
ZZZZZZ	6P481462.D	04/29/19	12:49	03:25	(unrelated sample)
OP20035-MS	6P481463.D	04/29/19	13:14	03:50	Matrix Spike
OP20035-MSD	6P481464.D	04/29/19	13:38	04:14	Matrix Spike Duplicate
JC86837-8	6P481465.D	04/29/19	14:02	04:38	S-136(4-6)
ZZZZZZ	6P481466.D	04/29/19	14:26	05:02	(unrelated sample)
ZZZZZZ	6P481467.D	04/29/19	14:51	05:27	(unrelated sample)
ZZZZZZ	6P481468.D	04/29/19	15:15	05:51	(unrelated sample)
ZZZZZZ	6P481469.D	04/29/19	15:40	06:16	(unrelated sample)
ZZZZZZ	6P481470.D	04/29/19	16:04	06:40	(unrelated sample)
ZZZZZZ	6P481471.D	04/29/19	16:28	07:04	(unrelated sample)
ZZZZZZ	6P481472.D	04/29/19	16:53	07:29	(unrelated sample)
ZZZZZZ	6P481473.D	04/29/19	17:17	07:53	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E6P2576-DFTPP	**Injection Date:**	04/29/19
Lab File ID:	6P481453.D	**Injection Time:**	09:24
Instrument ID:	GCMS6P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	6P481474A.D	04/29/19	18:24	09:00	(unrelated sample)
JC86837-9	6P481475.D	04/29/19	18:48	09:24	S-136(7-9)
JC86837-11	6P481476.D	04/29/19	19:12	09:48	S-111(4.5-6.5)
ZZZZZZ	6P481477.D	04/29/19	19:37	10:13	(unrelated sample)
ZZZZZZ	6P481478.D	04/29/19	20:01	10:37	(unrelated sample)
ZZZZZZ	6P481479.D	04/29/19	20:25	11:01	(unrelated sample)
ZZZZZZ	6P481480.D	04/29/19	20:49	11:25	(unrelated sample)
JC86837-12	6P481481.D	04/29/19	21:14	11:50	S-107(2-4)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2578-DFTPP
Lab File ID: 6P481518.D
Instrument ID: GCMS6P
Injection Date: 05/01/19
Injection Time: 09:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	154742	42.0		Pass
68	Less than 2.0% of mass 69	2739	0.74	(1.66) [a]	Pass
69	Mass 69 relative abundance	164761	44.7		Pass
70	Less than 2.0% of mass 69	696	0.19	(0.42) [a]	Pass
127	40.0 - 60.0% of mass 198	217861	59.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	368768	100.0		Pass
199	5.0 - 9.0% of mass 198	23456	6.36		Pass
275	10.0 - 30.0% of mass 198	105477	28.6		Pass
365	1.0 - 100.0% of mass 198	18388	4.99		Pass
441	Present, but less than mass 443	45421	12.3	(78.5) [b]	Pass
442	40.0 - 100.0% of mass 198	291376	79.0		Pass
443	17.0 - 23.0% of mass 442	57853	15.7	(19.9) [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
E6P2578-CC2562	6P481519.D	05/01/19	09:27	00:14	Continuing cal 25
E6P2578-CC2563	6P481520.D	05/01/19	09:51	00:38	Continuing cal 25
OP20013-MB1	6P481522.D	05/01/19	10:39	01:26	Method Blank
ZZZZZZ	6P481523.D	05/01/19	11:03	01:50	(unrelated sample)
ZZZZZZ	6P481524.D	05/01/19	11:27	02:14	(unrelated sample)
ZZZZZZ	6P481525.D	05/01/19	11:52	02:39	(unrelated sample)
ZZZZZZ	6P481526.D	05/01/19	12:16	03:03	(unrelated sample)
ZZZZZZ	6P481527.D	05/01/19	12:40	03:27	(unrelated sample)
ZZZZZZ	6P481528.D	05/01/19	13:04	03:51	(unrelated sample)
ZZZZZZ	6P481529A.D	05/01/19	14:37	05:24	(unrelated sample)
ZZZZZZ	6P481530.D	05/01/19	15:00	05:47	(unrelated sample)
ZZZZZZ	6P481531.D	05/01/19	15:24	06:11	(unrelated sample)
ZZZZZZ	6P481532.D	05/01/19	15:48	06:35	(unrelated sample)
ZZZZZZ	6P481533.D	05/01/19	16:13	07:00	(unrelated sample)
ZZZZZZ	6P481534.D	05/01/19	16:37	07:24	(unrelated sample)
ZZZZZZ	6P481535.D	05/01/19	17:01	07:48	(unrelated sample)
JC86837-12	6P481536.D	05/01/19	17:25	08:12	S-107(2-4)
ZZZZZZ	6P481537.D	05/01/19	17:49	08:36	(unrelated sample)
ZZZZZZ	6P481538.D	05/01/19	18:13	09:00	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E6P2578-DFTPP	**Injection Date:**	05/01/19
Lab File ID:	6P481518.D	**Injection Time:**	09:13
Instrument ID:	GCMS6P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JC86837-10	6P481539.D	05/01/19	18:37	09:24	S-111(2-4)
ZZZZZZ	6P481540.D	05/01/19	19:02	09:49	(unrelated sample)
JC86952-1	6P481541.D	05/01/19	19:26	10:13	(used for QC only; not part of job JC86837)
ZZZZZZ	6P481542.D	05/01/19	19:50	10:37	(unrelated sample)
ZZZZZZ	6P481543.D	05/01/19	20:14	11:01	(unrelated sample)
ZZZZZZ	6P481544.D	05/01/19	20:38	11:25	(unrelated sample)
JC86837-10	6P481545.D	05/01/19	21:02	11:49	S-111(2-4)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-DFTPP
Lab File ID: M153400.D
Instrument ID: GCMSM
Injection Date: 04/12/19
Injection Time: 16:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	83353	36.5		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	109417	47.9		Pass
70	Less than 2.0% of mass 69	587	0.26	(0.54) [a]	Pass
127	40.0 - 60.0% of mass 198	110333	48.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	228245	100.0		Pass
199	5.0 - 9.0% of mass 198	15342	6.72		Pass
275	10.0 - 30.0% of mass 198	60088	26.3		Pass
365	1.0 - 100.0% of mass 198	7944	3.48		Pass
441	Present, but less than mass 443	22441	9.83	(76.7) [b]	Pass
442	40.0 - 100.0% of mass 198	151640	66.4		Pass
443	17.0 - 23.0% of mass 442	29258	12.8	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6556-IC6556	M153401A.D	04/12/19	17:56	00:58	Initial cal 100
EM6556-IC6556	M153402.D	04/12/19	18:24	01:26	Initial cal 80
EM6556-ICC6556	M153403.D	04/12/19	18:53	01:55	Initial cal 50
EM6556-IC6556	M153404.D	04/12/19	19:21	02:23	Initial cal 25
EM6556-IC6556	M153405.D	04/12/19	19:49	02:51	Initial cal 10
EM6556-IC6556	M153406.D	04/12/19	20:18	03:20	Initial cal 5
EM6556-IC6556	M153407.D	04/12/19	20:46	03:48	Initial cal 2
EM6556-IC6556	M153408.D	04/12/19	21:15	04:17	Initial cal 1
EM6556-ICV6556	M153409.D	04/12/19	21:43	04:45	Initial cal verification 50
EM6556-ICV6556	M153410.D	04/12/19	22:12	05:14	Initial cal verification 50
EM6556-ICV6556	M153411.D	04/12/19	22:40	05:42	Initial cal verification 50
EM6556-ICV6556	M153413.D	04/12/19	23:37	06:39	Initial cal verification 50
EM6556-ICV6556	M153414.D	04/13/19	00:06	07:08	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-DFTPP
Lab File ID: M153419.D
Instrument ID: GCMSM
Injection Date: 04/13/19
Injection Time: 01:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	79824	32.2		Pass
68	Less than 2.0% of mass 69	1315	0.53	(1.36) [a]	Pass
69	Mass 69 relative abundance	96837	39.1		Pass
70	Less than 2.0% of mass 69	513	0.21	(0.53) [a]	Pass
127	40.0 - 60.0% of mass 198	111752	45.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	247893	100.0		Pass
199	5.0 - 9.0% of mass 198	17598	7.10		Pass
275	10.0 - 30.0% of mass 198	63149	25.5		Pass
365	1.0 - 100.0% of mass 198	8195	3.31		Pass
441	Present, but less than mass 443	21483	8.67	(80.5) [b]	Pass
442	40.0 - 100.0% of mass 198	138565	55.9		Pass
443	17.0 - 23.0% of mass 442	26703	10.8	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6557-IC6557	M153420.D	04/13/19	01:52	00:33	Initial cal 100
EM6557-IC6557	M153421.D	04/13/19	02:20	01:01	Initial cal 80
EM6557-ICC6557	M153422.D	04/13/19	02:49	01:30	Initial cal 50
EM6557-IC6557	M153423.D	04/13/19	03:17	01:58	Initial cal 25
EM6557-IC6557	M153424.D	04/13/19	03:46	02:27	Initial cal 10
EM6557-IC6557	M153425.D	04/13/19	04:14	02:55	Initial cal 5
EM6557-IC6557	M153426.D	04/13/19	04:42	03:23	Initial cal 2
EM6557-IC6557	M153427.D	04/13/19	05:11	03:52	Initial cal 1

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6558-DFTPP
Lab File ID: M153431.D
Instrument ID: GCMSM
Injection Date: 04/14/19
Injection Time: 14:31

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	99360	32.8		Pass
68	Less than 2.0% of mass 69	1999	0.66	(1.64) [a]	Pass
69	Mass 69 relative abundance	121985	40.2		Pass
70	Less than 2.0% of mass 69	727	0.24	(0.60) [a]	Pass
127	40.0 - 60.0% of mass 198	139984	46.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	303253	100.0		Pass
199	5.0 - 9.0% of mass 198	20557	6.78		Pass
275	10.0 - 30.0% of mass 198	74381	24.5		Pass
365	1.0 - 100.0% of mass 198	9225	3.04		Pass
441	Present, but less than mass 443	24993	8.24	(75.9) [b]	Pass
442	40.0 - 100.0% of mass 198	162856	53.7		Pass
443	17.0 - 23.0% of mass 442	32909	10.9	(20.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6558-IC6558	M153432.D	04/14/19	14:42	00:11	Initial cal 100
EM6558-IC6558	M153433.D	04/14/19	15:11	00:40	Initial cal 80
EM6558-ICC6558	M153434.D	04/14/19	15:39	01:08	Initial cal 50
EM6558-IC6558	M153435.D	04/14/19	16:08	01:37	Initial cal 25
EM6558-IC6558	M153436.D	04/14/19	16:37	02:06	Initial cal 10
EM6558-IC6558	M153437.D	04/14/19	17:05	02:34	Initial cal 5
EM6558-IC6558	M153438.D	04/14/19	17:34	03:03	Initial cal 2
EM6558-IC6558	M153439.D	04/14/19	18:02	03:31	Initial cal 1
EM6558-ICV6558	M153440.D	04/14/19	18:31	04:00	Initial cal verification 50
EM6557-ICV6557	M153441.D	04/14/19	19:00	04:29	Initial cal verification 50
EM6557-ICV6557	M153442.D	04/14/19	19:28	04:57	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6559-DFTPP
Lab File ID: M153443.D
Instrument ID: GCMSM
Injection Date: 04/15/19
Injection Time: 13:54

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	75686	33.3		Pass
68	Less than 2.0% of mass 69	1135	0.50	(1.18) [a]	Pass
69	Mass 69 relative abundance	96290	42.4		Pass
70	Less than 2.0% of mass 69	481	0.21	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	109790	48.4		Pass
197	Less than 1.0% of mass 198	521	0.23		Pass
198	Base peak, 100% relative abundance	227010	100.0		Pass
199	5.0 - 9.0% of mass 198	15330	6.75		Pass
275	10.0 - 30.0% of mass 198	54288	23.9		Pass
365	1.0 - 100.0% of mass 198	6995	3.08		Pass
441	Present, but less than mass 443	17393	7.66	(73.0) [b]	Pass
442	40.0 - 100.0% of mass 198	120749	53.2		Pass
443	17.0 - 23.0% of mass 442	23826	10.5	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6559-ICV6556	M153444.D	04/15/19	14:05	00:11	Initial cal verification 50
EM6559-CC6556	M153445.D	04/15/19	14:34	00:40	Continuing cal 50
EM6559-CC6557	M153446.D	04/15/19	15:02	01:08	Continuing cal 50
EM6559-CC6558	M153447.D	04/15/19	15:30	01:36	Continuing cal 50
OP19732-MB1	M153453.D	04/15/19	18:20	04:26	Method Blank
OP19732-BS1	M153454.D	04/15/19	18:49	04:55	Blank Spike
OP19732-BSD	M153455.D	04/15/19	19:17	05:23	Blank Spike Duplicate
ZZZZZZ	M153456.D	04/15/19	19:45	05:51	(unrelated sample)
ZZZZZZ	M153457.D	04/15/19	20:13	06:19	(unrelated sample)
ZZZZZZ	M153458.D	04/15/19	20:41	06:47	(unrelated sample)
ZZZZZZ	M153459.D	04/15/19	21:09	07:15	(unrelated sample)
JC86204-7	M153460.D	04/15/19	21:38	07:44	(used for QC only; not part of job JC86837)
OP19732-MS	M153461.D	04/15/19	22:06	08:12	Matrix Spike
OP19732-MSD	M153462.D	04/15/19	22:34	08:40	Matrix Spike Duplicate
ZZZZZZ	M153463.D	04/15/19	23:02	09:08	(unrelated sample)
ZZZZZZ	M153464.D	04/15/19	23:30	09:36	(unrelated sample)
ZZZZZZ	M153465.D	04/15/19	23:58	10:04	(unrelated sample)
ZZZZZZ	M153466.D	04/16/19	00:26	10:32	(unrelated sample)
ZZZZZZ	M153467.D	04/16/19	00:54	11:00	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EM6559-DFTPP	**Injection Date:**	04/15/19
Lab File ID:	M153443.D	**Injection Time:**	13:54
Instrument ID:	GCMSM		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	M153468.D	04/16/19	01:22	11:28	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6576-DFTPP
Lab File ID: M153892.D
Instrument ID: GCMSM
Injection Date: 04/30/19
Injection Time: 09:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	52156	35.4		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	65186	44.2		Pass
70	Less than 2.0% of mass 69	431	0.29	(0.66) [a]	Pass
127	40.0 - 60.0% of mass 198	69122	46.9		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	147496	100.0		Pass
199	5.0 - 9.0% of mass 198	9991	6.77		Pass
275	10.0 - 30.0% of mass 198	42296	28.7		Pass
365	1.0 - 100.0% of mass 198	4715	3.20		Pass
441	Present, but less than mass 443	15749	10.7	(74.1) [b]	Pass
442	40.0 - 100.0% of mass 198	110896	75.2		Pass
443	17.0 - 23.0% of mass 442	21255	14.4	(19.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6576-CC6556	M153893.D	04/30/19	09:18	00:12	Continuing cal 50
EM6576-CC6557	M153894.D	04/30/19	09:46	00:40	Continuing cal 50
OP20021-MB	M153896.D	04/30/19	10:43	01:37	Method Blank
OP20021-BS1	M153897.D	04/30/19	11:12	02:06	Blank Spike
ZZZZZZ	M153898.D	04/30/19	11:40	02:34	(unrelated sample)
ZZZZZZ	M153899.D	04/30/19	12:09	03:03	(unrelated sample)
ZZZZZZ	M153900.D	04/30/19	12:37	03:31	(unrelated sample)
ZZZZZZ	M153901.D	04/30/19	13:06	04:00	(unrelated sample)
ZZZZZZ	M153902.D	04/30/19	13:34	04:28	(unrelated sample)
ZZZZZZ	M153903.D	04/30/19	14:03	04:57	(unrelated sample)
ZZZZZZ	M153904.D	04/30/19	14:32	05:26	(unrelated sample)
OP20021-MS	M153905.D	04/30/19	15:00	05:54	Matrix Spike
OP20021-MSD	M153906.D	04/30/19	15:29	06:23	Matrix Spike Duplicate
JC86768-7	M153907.D	04/30/19	15:58	06:52	(used for QC only; not part of job JC86837)
ZZZZZZ	M153908.D	04/30/19	16:26	07:20	(unrelated sample)
ZZZZZZ	M153909.D	04/30/19	16:55	07:49	(unrelated sample)
ZZZZZZ	M153910.D	04/30/19	17:23	08:17	(unrelated sample)
ZZZZZZ	M153911.D	04/30/19	17:52	08:46	(unrelated sample)
ZZZZZZ	M153912.D	04/30/19	18:20	09:14	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EM6576-DFTPP	**Injection Date:**	04/30/19
Lab File ID:	M153892.D	**Injection Time:**	09:06
Instrument ID:	GCMSM		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	M153913.D	04/30/19	18:49	09:43	(unrelated sample)
ZZZZZZ	M153914.D	04/30/19	19:17	10:11	(unrelated sample)
ZZZZZZ	M153915.D	04/30/19	19:46	10:40	(unrelated sample)
ZZZZZZ	M153916.D	04/30/19	20:15	11:09	(unrelated sample)
ZZZZZZ	M153917.D	04/30/19	20:43	11:37	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6577-DFTPP
Lab File ID: M153921.D
Instrument ID: GCMSM
Injection Date: 05/01/19
Injection Time: 07:15

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	57922	34.4		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	77376	46.0		Pass
70	Less than 2.0% of mass 69	712	0.42	(0.92) [a]	Pass
127	40.0 - 60.0% of mass 198	81258	48.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	168173	100.0		Pass
199	5.0 - 9.0% of mass 198	12492	7.43		Pass
275	10.0 - 30.0% of mass 198	44371	26.4		Pass
365	1.0 - 100.0% of mass 198	5450	3.24		Pass
441	Present, but less than mass 443	16175	9.62	(65.9) [b]	Pass
442	40.0 - 100.0% of mass 198	126867	75.4		Pass
443	17.0 - 23.0% of mass 442	24545	14.6	(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
EM6577-CC6556	M153922.D	05/01/19	07:27	00:12	Continuing cal 25
EM6577-CC6557	M153923.D	05/01/19	07:56	00:41	Continuing cal 25
OP20064-MB	M153925.D	05/01/19	08:58	01:43	Method Blank
OP20064-BS1	M153926.D	05/01/19	09:26	02:11	Blank Spike
ZZZZZZ	M153927.D	05/01/19	09:57	02:42	(unrelated sample)
ZZZZZZ	M153928.D	05/01/19	10:25	03:10	(unrelated sample)
ZZZZZZ	M153929.D	05/01/19	10:54	03:39	(unrelated sample)
ZZZZZZ	M153930.D	05/01/19	11:22	04:07	(unrelated sample)
ZZZZZZ	M153931.D	05/01/19	11:51	04:36	(unrelated sample)
ZZZZZZ	M153932.D	05/01/19	12:19	05:04	(unrelated sample)
ZZZZZZ	M153933.D	05/01/19	12:47	05:32	(unrelated sample)
ZZZZZZ	M153934.D	05/01/19	13:16	06:01	(unrelated sample)
OP20064-MS	M153935.D	05/01/19	13:44	06:29	Matrix Spike
OP20064-MSD	M153936.D	05/01/19	14:13	06:58	Matrix Spike Duplicate
JC87091-3	M153937.D	05/01/19	14:41	07:26	(used for QC only; not part of job JC86837)
JC86837-2	M153938.D	05/01/19	15:10	07:55	PSCB-41R(9-11)
JC86837-5	M153939.D	05/01/19	15:38	08:23	TP-44R(7-9)
JC86837-4	M153940.D	05/01/19	16:07	08:52	TP-44R(5-7)
JC86837-7	M153941.D	05/01/19	16:35	09:20	S-135(8-10)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	EM6577-DFTPP	**Injection Date:**	05/01/19
Lab File ID:	M153921.D	**Injection Time:**	07:15
Instrument ID:	GCMSM		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	M153947.D	05/01/19	17:04	09:49	(unrelated sample)
JC86837-6	M153942.D	05/01/19	17:32	10:17	S-135(4-6)
JC86837-3	M153943.D	05/01/19	18:00	10:45	TP-44R(3-5)
ZZZZZZ	M153944.D	05/01/19	18:29	11:14	(unrelated sample)
JC86837-1	M153945.D	05/01/19	18:57	11:42	PSCB-41R(0.5-2)

Instrument Performance Check (DFTPP)

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6579-DFTPP
Lab File ID: M153974.D
Instrument ID: GCMSM
Injection Date: 05/02/19
Injection Time: 13:25

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	58386	31.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	75534	41.1		Pass
70	Less than 2.0% of mass 69	434	0.24	(0.57) [a]	Pass
127	40.0 - 60.0% of mass 198	83693	45.6		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	183659	100.0		Pass
199	5.0 - 9.0% of mass 198	12696	6.91		Pass
275	10.0 - 30.0% of mass 198	52883	28.8		Pass
365	1.0 - 100.0% of mass 198	6160	3.35		Pass
441	Present, but less than mass 443	22633	12.3	(75.8) [b]	Pass
442	40.0 - 100.0% of mass 198	156104	85.0		Pass
443	17.0 - 23.0% of mass 442	29872	16.3	(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
EM6579-CC6556	M153975.D	05/02/19	13:37	00:12	Continuing cal 25
EM6579-CC6557	M153976.D	05/02/19	14:07	00:42	Continuing cal 25
OP19637-MB2	M153978.D	05/02/19	15:05	01:40	Method Blank
ZZZZZZ	M153979.D	05/02/19	15:34	02:09	(unrelated sample)
ZZZZZZ	M153980.D	05/02/19	16:03	02:38	(unrelated sample)
ZZZZZZ	M153981.D	05/02/19	16:32	03:07	(unrelated sample)
ZZZZZZ	M153982.D	05/02/19	17:01	03:36	(unrelated sample)
ZZZZZZ	M153983.D	05/02/19	17:30	04:05	(unrelated sample)
ZZZZZZ	M153984.D	05/02/19	17:59	04:34	(unrelated sample)
ZZZZZZ	M153985.D	05/02/19	18:28	05:03	(unrelated sample)
JC86837-1	M153986.D	05/02/19	18:57	05:32	PSCB-41R(0.5-2)
JC86837-1	M153987.D	05/02/19	19:25	06:00	PSCB-41R(0.5-2)
ZZZZZZ	M153988.D	05/02/19	19:54	06:29	(unrelated sample)
ZZZZZZ	M153994.D	05/02/19	22:46	09:21	(unrelated sample)

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E6P2576-CC2562	**Injection Date:**	04/29/19
Lab File ID:	6P481454.D	**Injection Time:**	09:37
Instrument ID:	GCMS6P	**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	790999	4.17	3054780	5.14	1837417	6.80	3016274	8.46	2487442	11.61	2608570	13.21
Upper Limit [a]	1581998	4.67	6109560	5.64	3674834	7.30	6032548	8.96	4974884	12.11	5217140	13.71
Lower Limit [b]	395500	3.67	1527390	4.64	918709	6.30	1508137	7.96	1243721	11.11	1304285	12.71

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
OP20035-MB1	816755	4.17	2680266	5.13	1415328	6.80	2298360	8.46	2013837	11.60	1792094	13.19
OP20035-BS1	718695	4.17	2893398	5.14	1505449	6.80	2573215	8.46	2142531	11.61	1864932	13.20
OP20035-BSD	799091	4.17	2633965	5.13	1513334	6.80	2478219	8.46	2013028	11.61	1728897	13.19
ZZZZZZ	779485	4.17	2786919	5.13	1488739	6.79	2503382	8.46	2046585	11.60	1794349	13.19
ZZZZZZ	782893	4.17	2408192	5.14	1416559	6.80	2362845	8.46	1775044	11.60	1661986	13.19
ZZZZZZ	722640	4.17	2567608	5.13	1336934	6.79	2218031	8.46	1738446	11.61	1764437	13.20
OP20035-MS	797566	4.17	2742394	5.13	1393509	6.80	2221926	8.46	1771535	11.61	1564614	13.19
OP20035-MSD	790320	4.17	2750145	5.13	1329256	6.80	2226346	8.46	1785185	11.61	1687844	13.20
JC86837-8	689368	4.17	2683261	5.13	1353742	6.80	2213024	8.46	1661840	11.60	1615107	13.19
ZZZZZZ	848107	4.17	3081500	5.13	1669612	6.80	2927056	8.46	2528841	11.60	2572960	13.20
ZZZZZZ	677401	4.17	2742684	5.13	1391774	6.79	2326800	8.45	1766104	11.60	1541723	13.19
ZZZZZZ	811778	4.17	2865742	5.13	1432198	6.79	2357518	8.45	1760471	11.60	1599839	13.19
ZZZZZZ	741364	4.17	2692113	5.13	1386195	6.79	2239780	8.45	1517948	11.60	1440566	13.19
ZZZZZZ	774428	4.17	2755258	5.13	1394080	6.79	2331403	8.45	1765982	11.60	1649769	13.19
ZZZZZZ	777782	4.17	2747360	5.13	1412038	6.79	2354505	8.45	1747807	11.60	1611764	13.19
ZZZZZZ	745942	4.17	2650054	5.13	1341328	6.79	2228285	8.45	1681136	11.60	1522905	13.18
ZZZZZZ	794826	4.17	2844059	5.13	1452752	6.79	2430080	8.45	1816101	11.60	1545880	13.19
ZZZZZZ	730453	4.17	2626334	5.13	1337013	6.79	2218250	8.45	1636420	11.60	1519534	13.19
JC86837-9	722237	4.17	2547969	5.13	1278110	6.79	2131950	8.45	1672020	11.60	1562194	13.18
JC86837-11	748802	4.17	2666309	5.13	1328069	6.79	2205611	8.45	1660044	11.60	1531807	13.18
ZZZZZZ	797556	4.17	2772623	5.13	1372759	6.79	2211327	8.45	1630900	11.60	1507258	13.19
ZZZZZZ	723255	4.17	2569376	5.13	1321545	6.79	2148549	8.45	1494550	11.60	1448454	13.19
ZZZZZZ	755429	4.17	2699256	5.13	1341421	6.79	2188645	8.45	1508386	11.60	1469231	13.19
ZZZZZZ	753625	4.17	2649263	5.13	1298920	6.79	2012787	8.45	1590476	11.60	1496313	13.20
JC86837-12	640327	4.17	2349432	5.13	1217213	6.79	2048075	8.46	1929829	11.62	1645733	13.21

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E6P2578-CC2562	**Injection Date:**	05/01/19
Lab File ID:	6P481519.D	**Injection Time:**	09:27
Instrument ID:	GCMS6P	**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	793046	4.15	3141602	5.12	1824729	6.77	3078736	8.43	2622506	11.58	2824895	13.17
Upper Limit [a]	1586092	4.65	6283204	5.62	3649458	7.27	6157472	8.93	5245012	12.08	5649790	13.67
Lower Limit [b]	396523	3.65	1570801	4.62	912365	6.27	1539368	7.93	1311253	11.08	1412448	12.67

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
OP20013-MB1	655097	4.15	2460499	5.12	1296272	6.77	2616268	8.42	2449877	11.57	2512591	13.16
ZZZZZZ	531011	4.15	1975707	5.12	1112280	6.77	2059045	8.43	2012975	11.57	2118296	13.16
ZZZZZZ	622367	4.15	2284942	5.12	1521616	6.77	2507234	8.42	2537546	11.57	2364636	13.16
ZZZZZZ	626350	4.15	2580194	5.12	1436971	6.77	2717969	8.42	2428515	11.57	2309810	13.16
ZZZZZZ	670406	4.15	2716814	5.12	1597203	6.77	2996839	8.42	2435684	11.57	2590343	13.16
ZZZZZZ	638428	4.15	2549134	5.12	1385561	6.77	2565156	8.42	2324095	11.57	2385223	13.16
ZZZZZZ	683356	4.15	2493434	5.12	1359157	6.77	2910741	8.42	2366909	11.57	2494848	13.16
ZZZZZZ	622839	4.15	2230455	5.11	1313793	6.77	2456819	8.42	2272127	11.57	2296315	13.16
ZZZZZZ	627885	4.15	2443451	5.12	1313918	6.77	2421701	8.42	2198150	11.57	2230050	13.16
ZZZZZZ	553593	4.15	1987320	5.12	999783	6.77	1893902	8.42	1840711	11.57	1821561	13.16
ZZZZZZ	583575	4.15	2178064	5.12	1125253	6.77	2026807	8.42	1744971	11.57	1752253	13.16
ZZZZZZ	589621	4.15	2191075	5.12	1161099	6.77	2079367	8.42	1721753	11.57	1677648	13.16
ZZZZZZ	568909	4.15	2081332	5.12	1120799	6.77	2010507	8.42	1728804	11.57	1695781	13.16
ZZZZZZ	651460	4.15	2579763	5.12	1398553	6.77	2584092	8.42	2347163	11.57	2380508	13.16
JC86837-12	622510	4.15	2332382	5.12	1303063	6.77	2366747	8.42	2039789	11.57	2345305	13.16
ZZZZZZ	638818	4.15	2401014	5.12	1302439	6.77	2354606	8.42	2126739	11.57	2179545	13.16
ZZZZZZ	582078	4.15	2152686	5.12	1096592	6.77	1889930	8.42	1837565	11.57	1948561	13.16
JC86837-10	694979	4.15	2273743	5.12	1184941	6.77	2480280	8.42	2272803	11.57	2334253	13.17
ZZZZZZ	590212	4.15	2291906	5.12	1253745	6.77	2546866	8.42	2335458	11.57	2507588	13.17
JC86952-1	574001	4.15	2080954	5.11	1142599	6.77	2125674	8.42	2082741	11.57	2123012	13.17
ZZZZZZ	631436	4.15	2361425	5.12	1319467	6.77	2506154	8.43	2658290	11.59	2548432	13.18
ZZZZZZ	598344	4.15	2307700	5.12	1246964	6.77	2192269	8.42	1876908	11.57	1875432	13.17
ZZZZZZ	557176	4.15	1863653	5.12	1049331	6.77	1948943	8.42	1827667	11.57	2016743	13.17
JC86837-10	604411	4.16	2242988	5.12	1159704	6.78	1935576	8.43	1857099	11.60	2030814	13.19

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EM6576-CC6556	**Injection Date:**	04/30/19
Lab File ID:	M153893.D	**Injection Time:**	09:18
Instrument ID:	GCMSM	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	152105	4.43	528716	5.49	312056	7.72	613730	10.28	555604	15.40	602344	17.99
Upper Limit [a]	304210	4.93	1057432	5.99	624112	8.22	1227460	10.78	1111208	15.90	1204688	18.49
Lower Limit [b]	76053	3.93	264358	4.99	156028	7.22	306865	9.78	277802	14.90	301172	17.49

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
OP20021-MB	176316	4.43	568956	5.49	322426	7.72	641802	10.27	626548	15.39	607164	17.98
OP20021-BS1	153579	4.43	490747	5.49	276307	7.72	585850	10.28	577462	15.39	576931	17.99
ZZZZZZ	176434	4.43	581476	5.49	326826	7.72	651074	10.27	638886	15.39	614617	17.98
ZZZZZZ	174604	4.43	570401	5.49	321167	7.72	653109	10.27	657268	15.39	657510	17.98
ZZZZZZ	186410	4.43	601110	5.49	334414	7.72	666051	10.27	651172	15.39	652337	17.98
ZZZZZZ	181311	4.43	592370	5.49	326937	7.72	655889	10.27	626824	15.39	636417	17.98
ZZZZZZ	176105	4.43	577521	5.49	318507	7.72	650679	10.27	629414	15.38	642026	17.98
ZZZZZZ	177840	4.43	592437	5.49	267020	7.73	402591	10.31	374086	15.41	449877	17.99
ZZZZZZ	183990	4.43	612836	5.49	341402	7.72	685554	10.27	640409	15.39	619161	17.98
OP20021-MS	148457	4.43	480907	5.49	272486	7.72	574657	10.28	547268	15.39	560509	17.99
OP20021-MSD	151707	4.43	482110	5.50	271649	7.73	575245	10.28	567814	15.39	567441	17.99
JC86768-7	170806	4.43	553682	5.49	313576	7.72	632026	10.27	613799	15.39	618080	17.98
ZZZZZZ	179712	4.43	582495	5.49	328917	7.72	671375	10.27	663244	15.39	663104	17.98
ZZZZZZ	192048	4.43	610770	5.49	341987	7.72	698505	10.27	679698	15.39	696005	17.98
ZZZZZZ	190826	4.43	614610	5.49	341447	7.72	703283	10.27	689496	15.39	702634	17.98
ZZZZZZ	194482	4.43	630965	5.50	353171	7.72	705181	10.28	688058	15.38	702791	17.98
ZZZZZZ	184529	4.43	614786	5.49	337981	7.72	663457	10.27	654130	15.39	679823	17.98
ZZZZZZ	195228	4.43	641271	5.49	346875	7.72	689697	10.27	673002	15.38	687128	17.98
ZZZZZZ	195731	4.43	634432	5.49	349455	7.72	687090	10.27	621158	15.39	657837	17.99
ZZZZZZ	186638	4.43	599300	5.49	334663	7.72	665095	10.27	629248	15.39	632728	17.98
ZZZZZZ	188051	4.43	607475	5.49	318522	7.72	631312	10.28	631116	15.39	625458	17.99
ZZZZZZ	179775	4.43	578872	5.49	327194	7.72	664592	10.28	632655	15.39	605321	17.99

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EM6577-CC6556	**Injection Date:**	05/01/19
Lab File ID:	M153922.D	**Injection Time:**	07:27
Instrument ID:	GCMSM	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	235855	4.42	829917	5.48	496816	7.71	934384	10.26	799335	15.37	882028	17.97
Upper Limit [a]	471710	4.92	1659834	5.98	993632	8.21	1868768	10.76	1598670	15.87	1764056	18.47
Lower Limit [b]	117928	3.92	414959	4.98	248408	7.21	467192	9.76	399668	14.87	441014	17.47

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
OP20064-MB	248543	4.42	804718	5.48	448331	7.71	889617	10.25	834210	15.37	793151	17.96
OP20064-BS1	212679	4.42	658677	5.48	373822	7.71	783719	10.26	761693	15.37	753882	17.97
ZZZZZZ	227439	4.42	744030	5.48	417019	7.71	835634	10.26	834847	15.36	825087	17.96
ZZZZZZ	248136	4.42	788023	5.48	441215	7.71	879946	10.26	844492	15.36	832001	17.96
ZZZZZZ	266817	4.42	849761	5.48	465132	7.71	923800	10.26	846660	15.37	818644	17.96
ZZZZZZ	270928	4.42	859862	5.48	464888	7.71	916123	10.26	846011	15.36	819503	17.96
ZZZZZZ	264337	4.42	856011	5.48	461747	7.70	906933	10.26	835987	15.36	820466	17.96
ZZZZZZ	262614	4.42	837359	5.48	452668	7.71	882055	10.26	811713	15.36	803373	17.96
ZZZZZZ	250828	4.42	811069	5.48	436068	7.71	860206	10.26	800031	15.36	817095	17.96
ZZZZZZ	275898	4.42	862257	5.48	457117	7.71	892882	10.26	798002	15.36	786374	17.96
OP20064-MS	237477	4.42	735363	5.49	406415	7.71	824333	10.26	755151	15.37	751260	17.96
OP20064-MSD	219622	4.42	693062	5.48	380208	7.71	787996	10.26	727009	15.37	732654	17.96
JC87091-3	259796	4.42	830994	5.48	454566	7.71	890573	10.26	828918	15.36	827398	17.96
JC86837-2	247453	4.42	782425	5.48	423197	7.71	827920	10.25	761993	15.36	769188	17.96
JC86837-5	244552	4.42	777434	5.48	404101	7.71	763513	10.26	730399	15.36	744416	17.95
JC86837-4	248901	4.42	669125	5.49	273169	7.72	487919	10.28	593534	15.37	629498	17.96
JC86837-7	223851	4.42	705713	5.48	388673	7.71	754814	10.26	710050	15.36	725690	17.95
ZZZZZZ	238109	4.42	757441	5.48	364309	7.71	647205	10.26	574193	15.38	587411	17.98
JC86837-6	219945	4.42	622688	5.48	286234	7.72	532622	10.27	563148	15.36	561940	17.96
JC86837-3	249667	4.42	723292	5.48	323419	7.72	569981	10.27	583958	15.37	594187	17.96
ZZZZZZ	255807	4.42	790483	5.48	423516	7.71	810540	10.26	686128	15.37	672846	17.96
JC86837-1	169490	4.43	532416	5.49	312497	7.72	551501	10.34	488193	15.43	516745	18.01

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	EM6579-CC6556	**Injection Date:**	05/02/19
Lab File ID:	M153975.D	**Injection Time:**	13:37
Instrument ID:	GCMSM	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	203868	4.40	705420	5.45	422659	7.66	811706	10.21	735865	15.31	852302	17.90
Upper Limit [a]	407736	4.90	1410840	5.95	845318	8.16	1623412	10.71	1471730	15.81	1704604	18.40
Lower Limit [b]	101934	3.90	352710	4.95	211330	7.16	405853	9.71	367933	14.81	426151	17.40

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
OP19637-MB2	227456	4.39	783712	5.45	453413	7.66	830455	10.20	752856	15.31	871855	17.90
ZZZZZZ	230436	4.40	805464	5.45	455462	7.66	839710	10.21	752373	15.31	871058	17.90
ZZZZZZ	229212	4.39	804011	5.45	448947	7.66	831971	10.20	752823	15.31	868850	17.90
ZZZZZZ	237046	4.40	816393	5.45	468724	7.66	849730	10.21	757966	15.30		
ZZZZZZ	265556	4.40	856069	5.45	462053	7.66	891063	10.20	840261	15.30	853196	17.90
ZZZZZZ	251295	4.40	805196	5.45	439853	7.66	860062	10.21	817402	15.30	834160	17.90
ZZZZZZ	266830	4.39	874819	5.45	471472	7.66	902219	10.20	835722	15.31	829093	17.90
ZZZZZZ	270569	4.39	862784	5.45	466329	7.66	906333	10.21	795793	15.31	790439	17.90
JC86837-1	230171	4.40	783766	5.45	442627	7.66	900689	10.21	884603	15.31	944163	17.90
JC86837-1	207834	4.40	672930	5.45	393618	7.66	763100	10.21	748944	15.32	816506	17.90
ZZZZZZ	242882	4.40	781254	5.45	440032	7.66	819395	10.21	785544	15.31	856890	17.90
ZZZZZZ	275210	4.40	898619	5.46	477425	7.67	924761	10.21	775048	15.34	738279	17.97

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC86837
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
JC86837-1	M153986.D	0* [a]	0* [a]	123	83	73	69
JC86837-1	M153987.D	48	56	86	72	72	69
JC86837-1	M153945.D	57	51	84	67	68	60
JC86837-2	M153938.D	62	62	105	76	87	81
JC86837-3	M153943.D	46	47	89	62	72	60
JC86837-4	M153940.D	65	60	112	81	95	63
JC86837-5	M153939.D	63	63	109	77	86	79
JC86837-6	M153942.D	59	56	100	75	89	70
JC86837-7	M153941.D	59	58	102	75	81	73
JC86837-8	6P481465.D	86	79	75	74	78	84
JC86837-9	6P481475.D	80	79	71	95	79	85
JC86837-10	6P481545.D	78	80	79	94	84	78
JC86837-10	6P481539.D	69	74	73	88	82	79
JC86837-11	6P481476.D	76	75	64	89	74	85
JC86837-12	6P481536.D	59	68	64	75	66	70
JC86837-12	6P481481.D	73	77	70	84	72	63
OP20021-BS1	M153897.D	57	58	102	65	74	74
OP20021-MB	M153896.D	60	62	103	74	82	79
OP20021-MS	M153905.D	50	50	85	57	65	65
OP20021-MSD	M153906.D	54	54	92	61	70	69
OP20035-BS1	6P481458.D	93	88	87	96	87	93
OP20035-BSD	6P481459.D	73	72	72	80	72	78
OP20035-MB1	6P481457.D	80	77	80	95	82	89
OP20035-MS	6P481463.D	76	76	79	85	78	79
OP20035-MSD	6P481464.D	74	73	78	82	77	78

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: JC86837
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

8.8.1

8

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2562-ICC2562
Lab FileID: 6P481129.D

```
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
```

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2562-ICC2562
Lab FileID: 6P481129.D

```
 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
```

8.8.1

8

Initial Calibration Verification

Job Number: JC86837
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

8.8.2

8

Initial Calibration Verification

Job Number: JC86837
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

8.8.2

8

Initial Calibration Verification

Job Number: JC86837
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

Initial Calibration Verification

Job Number: JC86837
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

8.8.4

Initial Calibration Verification

Job Number: JC86837
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

8.8.5

Initial Calibration Verification

Job Number: JC86837
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

8.8.6

8

Initial Calibration Verification

Job Number: JC86837
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

8.8.7

Initial Calibration Summary

Job Number: JC86837
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: JC86837
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

Initial Calibration Verification

Job Number: JC86837
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

8.8.10

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2576-CC2562
Lab FileID: 6P481454.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2576\6p481454.D Vial: 2
Acq On : 29 Apr 2019 9:37 am Operator: angelar
Sample : cc2562-25 Inst : MS6P
Misc : op17006,e6p2576,1000,,,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 Apr 29 10:51:12 2019
Last Update : Mon Apr 29 10:51:12 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	106	-0.16	4.17
2	t	1,4-Dioxane	0.527	0.546	-3.6	109	-0.20	1.57
3	t	Pyridine	1.198	1.241	-3.6	103	-0.23	1.88
4	t	N-Nitrosodimethylamine	0.698	0.740	-6.0	103	-0.23	1.86
5	S	2-Fluorophenol	1.170	1.312	-12.1	109	-0.17	3.19
6	t	Indene	2.169	2.386	-10.0	114	-0.16	4.35
7	t	Cumene	3.107	3.092	0.5	104	0.00	3.56
8	S	Phenol-d5	1.429	1.459	-2.1	103	-0.15	3.95
9	t	Phenol	1.744	1.609	7.7	94	-0.15	3.96
10		Aniline	1.556	1.731	-11.2	118	-0.16	3.93
11	t	bis(2-Chloroethyl)ether	1.208	1.342	-11.1	115	-0.15	3.98
12	t	2-Chlorophenol	1.383	1.484	-7.3	110	-0.16	4.02
13	t	Decane	1.061	1.165	-9.8	115	-0.15	4.06
14	t	1,3-Dichlorobenzene	1.577	1.643	-4.2	109	-0.16	4.12
15	t	1,4-Dichlorobenzene	1.614	1.642	-1.7	108	-0.16	4.18
16	t	Benzyl alcohol	0.751	0.890	-18.5	119	-0.16	4.29
17	t	1,2-Dichlorobenzene	1.482	1.551	-4.7	108	-0.16	4.29
18	t	Acetophenone	1.859	2.041	-9.8	113	-0.16	4.47
19	t	2-Methylphenol	1.174	1.329	-13.2	114	-0.15	4.39
20	t	2,2'-oxybis(1-Chloropropa	0.431	0.456	-5.8	111	-0.15	4.38
21	t	3&4-Methylphenol	1.234	1.387	-12.4	110	-0.15	4.51
22	t	n-Nitroso-di-n-propylamin	0.832	0.941	-13.1	116	-0.16	4.48
23	t	Hexachloroethane	0.563	0.500	11.2	93	-0.16	4.54
24	I	Naphthalene-d8	1.000	1.000	0.0	103	-0.17	5.14
25	S	Nitrobenzene-d5	0.333	0.385	-15.6	115	-0.16	4.58
26	t	Nitrobenzene	0.339	0.385	-13.6	112	-0.16	4.59
27	t	Quinoline	0.726	0.675	7.0	92	-0.19	5.46
28	t	Isophorone	0.579	0.651	-12.4	112	-0.16	4.78
29	t	2-Nitrophenol	0.198	0.212	-7.1	102	-0.17	4.84
30	t	2,4-Dimethylphenol	0.302	0.344	-13.9	112	-0.16	4.90
31	t	Benzoic acid	0.305	0.297	2.6	101	-0.18	5.04
32	t	bis(2-Chloroethoxy)methan	0.364	0.363	0.3	100	-0.16	4.96
33	t	2,4-Dichlorophenol	0.299	0.298	0.3	97	-0.16	5.05
34	t	2,6-Dichlorophenol	0.296	0.287	3.0	96	-0.17	5.22
35		1,3,5-Trichlorobenzene	0.354	0.340	4.0	96	-0.17	4.85
36	t	1,2,4-Trichlorobenzene	0.342	0.297	13.2	89	-0.17	5.10
37		1,2,3-Trichlorobenzene	0.340	0.296	12.9	88	-0.18	5.28
38	t	Naphthalene	1.042	1.070	-2.7	104	-0.17	5.16
39	t	4-Chloroaniline	0.420	0.410	2.4	99	-0.17	5.21
40	t	2,3-Dichloroaniline	0.379	0.355	6.3	93	-0.19	6.04
41	t	Caprolactam	0.128	0.112	12.5	84	-0.19	5.53

Continuing Calibration Summary

Job Number: JC86837 **Sample:** E6P2576-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481454.D
Project: National Grid, Philly Coke, Philadelphia, PA

42	t	Hexachlorobutadiene	0.195	0.158	19.0	83	-0.17	5.27
43	t	4-Chloro-3-methylphenol	0.307	0.294	4.2	94	-0.18	5.67
44	t	2-Methylnaphthalene	0.589	0.546	7.3	93	-0.18	5.77
45	t	1-Methylnaphthalene	0.658	0.619	5.9	95	-0.18	5.86
46	t	Dimethylnaphthalene	0.700	0.633	9.6	91	-0.19	6.38
47	I	Acenaphthene-d10	1.000	1.000	0.0	101	-0.19	6.80
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	40.509	19.0	84	-0.19	5.92
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.373	0.326	12.6	85	-0.18	6.05
50	t	2,4,5-Trichlorophenol	0.397	0.349	12.1	84	-0.18	6.10
51	S	2-Fluorobiphenyl	1.413	1.388	1.8	99	-0.18	6.12
52	t	2-Chloronaphthalene	1.180	1.079	8.6	92	-0.19	6.23
53	t	Biphenyl	1.530	1.494	2.4	97	-0.19	6.22
54	t	2-Nitroaniline	0.307	0.300	2.3	91	-0.19	6.35
55	t	Dimethylphthalate	1.370	1.424	-3.9	104	-0.19	6.55
56	t	Acenaphthylene	1.820	2.009	-10.4	108	-0.20	6.65
57	t	2,6-Dinitrotoluene	0.310	0.336	-8.4	103	-0.19	6.61
58	t	3-Nitroaniline	0.337	0.365	-8.3	103	-0.19	6.79
59	t	Acenaphthene	1.208	1.309	-8.4	107	-0.20	6.84
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	30.953	38.1#	61	-0.18	6.92
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.173	0.196	-13.3	113	-0.18	7.04
62	t	Dibenzofuran	1.683	1.756	-4.3	104	-0.20	7.02
63	t	2,4-Dinitrotoluene	0.430	0.459	-6.7	101	-0.19	7.05
64		2,3,4,6-Tetrachlorophenol	0.325	0.305	6.2	91	-0.19	7.18
65	t	Diethylphthalate	1.351	1.440	-6.6	105	-0.19	7.32
66	t	Fluorene	1.366	1.438	-5.3	105	-0.21	7.40
67	t	4-Chlorophenyl-phenylethe	0.693	0.622	10.2	91	-0.19	7.41
68	t	4-Nitroaniline	0.357	0.310	13.2	88	-0.21	7.46
69	I	Phenanthrene-d10	1.000	1.000	0.0	91	-0.21	8.46
70	t	4,6-Dinitro-2-methylpheno	0.154	0.122	20.8#	70	-0.19	7.51
71	t	n-Nitrosodiphenylamine	0.553	0.602	-8.9	96	-0.21	7.55
72	t	1,2-Diphenylhydrazine	0.626	0.821	-31.2#	113	-0.20	7.59
73	S	2,4,6-Tribromophenol	0.129	0.132	-2.3	96	-0.20	7.68
74	t	4-Bromophenyl-phenylether	0.215	0.218	-1.4	89	-0.20	7.96
75	t	Hexachlorobenzene	0.252	0.252	0.0	89	-0.20	8.03
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	47.026	5.9	88	-0.20	8.28
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.074	1.192	-11.0	101	-0.21	8.49
78	t	Anthracene	1.077	1.250	-16.1	101	-0.21	8.55
79	t	Carbazole	1.020	1.030	-1.0	88	-0.21	8.76
80	t	Di-n-butylphthalate	1.191	1.483	-24.5#	105	-0.19	9.23
81	t	Fluoranthene	1.167	1.186	-1.6	89	-0.22	9.89
82	t	Octadecane	0.360	0.472	-31.1#	113	-0.19	8.43
83	I	Chrysene-d12	1.000	1.000	0.0	81	-0.22	11.61
84	t	Pyrene	1.333	1.521	-14.1	90	-0.22	10.15
85	S	Terphenyl-d14	0.932	0.983	-5.5	84	-0.21	10.38
86	t	Butylbenzylphthalate	0.574	0.785	-36.8#	101	-0.21	11.00

8.8.11

8

Continuing Calibration Summary

Job Number: JC86837 **Sample:** E6P2576-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481454.D
Project: National Grid, Philly Coke, Philadelphia, PA

87	t	Benzo[a]anthracene	1.274	1.349	-5.9	84	-0.21	11.60
88	t	3,3'-Dichlorobenzidine	0.479	0.487	-1.7	76	-0.21	11.60
89	t	Chrysene	1.249	1.282	-2.6	83	-0.22	11.64
90	t	bis(2-Ethylhexyl)phthalat	0.794	1.080	-36.0#	99	-0.20	11.72
91	I	Perylene-d12	1.000	1.000	0.0	75	-0.22	13.21
92	t	Di-n-octylphthalate	1.192	1.751	-46.9#	98	-0.19	12.47
93	t	Benzo[b]fluoranthene	1.222	1.248	-2.1	73	-0.22	12.82
94	t	Benzo[k]fluoranthene	1.082	1.185	-9.5	80	-0.22	12.84
95	t	Benzo[a]pyrene	1.004	1.102	-9.8	78	-0.22	13.14
96	t	Indeno[1,2,3-cd]pyrene	1.340	1.466	-9.4	78	-0.25	14.22
97	t	Dibenz(a,h)acridine	0.984	1.117	-13.5	80	-0.23	14.00
98	t	Dibenz[a,h]anthracene	1.188	1.293	-8.8	79	-0.25	14.23

			True	Calc.	% Drift			
99	t	7,12-Dimethylbenz(a)anthr	25.000	27.054	-8.2	86	-0.22	12.80

			AvgRF	CCRF	% Dev			
100	t	Benzo[g,h,i]perylene	1.045	1.128	-7.9	78	-0.27	14.47

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481201a.D M6P2562.M Mon Apr 29 10:53:15 2019 ACLIMS

8.8.11

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2576-CC2563
Lab FileID: 6P481455.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2576\6p481455.D Vial: 3
Acq On : 29 Apr 2019 10:01 am Operator: angelar
Sample : cc2563-25 Inst : MS6P
Misc : op17006,e6p2576,1000,,,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 Apr 29 10:54:56 2019
Last Update : Mon Apr 29 10:54:56 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	97	0.00	4.17
102	Benzaldehyde	0.993	1.154	-16.2	100	-0.19	3.84
103	Acenaphthene-d10a	1.000	1.000	0.0	92	-0.19	6.80
104	1,2,4,5-Tetrachlorobenzen	0.534	0.557	-4.3	90	-0.19	5.93
105	Phenanthrene-d10a	1.000	1.000	0.0	82	-0.21	8.46
106 S	1-chlorooctadecane	0.239	0.334	-39.7#	97	-0.19	9.85
107 S	o-terphenyl	0.584	0.648	-11.0	85	-0.21	8.94
		True	Calc.	% Drift			
108	Atrazine	25.000	26.342	-5.4	87	-0.19	8.20
111 I	Naphthalene-d8a	1.000	1.000	0.0	94	-0.17	5.13
112 T	Hydroquinone	0.307	0.337	-9.8	102	-0.20	5.55
113	Phenanthrene-d10b	1.000	1.000	0.0	82	-0.21	8.46
114	Pentachloronitrobenzene	0.049	0.050#	-2.0	78	-0.21	8.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481201a.D M6P2562.M Mon Apr 29 10:56:22 2019 ACLIMS

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2578-CC2562
Lab FileID: 6P481519.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2578\6p481519.D Vial: 2
Acq On : 1 May 2019 9:27 am Operator: angelar
Sample : cc2562-25 Inst : MS6P
Misc : op17006,e6p2578,1000,,,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 Apr 22 11:56:54 2019
Last Update : Mon Apr 22 11:56:54 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	106	-0.17	4.15
2	t	1,4-Dioxane	0.527	0.551	-4.6	110	-0.22	1.56
3	t	Pyridine	1.198	1.372	-14.5	114	-0.25	1.86
4	t	N-Nitrosodimethylamine	0.698	0.777	-11.3	108	-0.25	1.83
5	S	2-Fluorophenol	1.170	1.337	-14.3	111	-0.19	3.17
6	t	Indene	2.169	2.396	-10.5	115	-0.17	4.34
7	t	Cumene	3.107	3.530	-13.6	119	-0.18	3.54
8	S	Phenol-d5	1.429	1.637	-14.6	115	-0.17	3.93
9	t	Phenol	1.744	1.794	-2.9	105	-0.16	3.94
10		Aniline	1.556	2.072	-33.2#	142	-0.17	3.92
11	t	bis(2-Chloroethyl)ether	1.208	1.297	-7.4	111	-0.17	3.97
12	t	2-Chlorophenol	1.383	1.486	-7.4	111	-0.17	4.01
13	t	Decane	1.061	1.178	-11.0	116	-0.17	4.05
14	t	1,3-Dichlorobenzene	1.577	1.622	-2.9	108	-0.17	4.11
15	t	1,4-Dichlorobenzene	1.614	1.664	-3.1	109	-0.17	4.16
16	t	Benzyl alcohol	0.751	0.881	-17.3	118	-0.17	4.27
17	t	1,2-Dichlorobenzene	1.482	1.570	-5.9	110	-0.17	4.27
18	t	Acetophenone	1.859	2.063	-11.0	115	-0.17	4.46
19	t	2-Methylphenol	1.174	1.351	-15.1	116	-0.17	4.38
20	t	2,2'-oxybis(1-Chloropropa	0.431	0.448	-3.9	109	-0.17	4.36
21	t	3&4-Methylphenol	1.234	1.397	-13.2	111	-0.16	4.49
22	t	n-Nitroso-di-n-propylamin	0.832	0.951	-14.3	117	-0.17	4.47
23	t	Hexachloroethane	0.563	0.524	6.9	98	-0.17	4.52
24	I	Naphthalene-d8	1.000	1.000	0.0	106	-0.19	5.12
25	S	Nitrobenzene-d5	0.333	0.386	-15.9	119	-0.17	4.57
26	t	Nitrobenzene	0.339	0.386	-13.9	115	-0.18	4.58
27	t	Quinoline	0.726	0.765	-5.4	107	-0.22	5.43
28	t	Isophorone	0.579	0.657	-13.5	116	-0.18	4.77
29	t	2-Nitrophenol	0.198	0.213	-7.6	105	-0.18	4.82
30	t	2,4-Dimethylphenol	0.302	0.363	-20.2#	122	-0.17	4.88
31	t	Benzoic acid	0.305	0.316	-3.6	110	-0.20	5.02
32	t	bis(2-Chloroethoxy)methan	0.364	0.392	-7.7	112	-0.18	4.94
33	t	2,4-Dichlorophenol	0.299	0.309	-3.3	103	-0.18	5.03
34	t	2,6-Dichlorophenol	0.296	0.309	-4.4	107	-0.19	5.20
35		1,3,5-Trichlorobenzene	0.354	0.336	5.1	98	-0.18	4.83
36	t	1,2,4-Trichlorobenzene	0.342	0.324	5.3	100	-0.18	5.08
37		1,2,3-Trichlorobenzene	0.340	0.318	6.5	97	-0.19	5.26
38	t	Naphthalene	1.042	1.100	-5.6	110	-0.19	5.13
39	t	4-Chloroaniline	0.420	0.457	-8.8	114	-0.19	5.20
40	t	2,3-Dichloroaniline	0.379	0.375	1.1	101	-0.21	6.02
41	t	Caprolactam	0.128	0.143	-11.7	110	-0.21	5.51

Continuing Calibration Summary

Job Number: JC86837 **Sample:** E6P2578-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481519.D
Project: National Grid, Philly Coke, Philadelphia, PA

			True	Calc.	% Drift			
42	t	Hexachlorobutadiene	0.195	0.179	8.2	96	-0.19	5.25
43	t	4-Chloro-3-methylphenol	0.307	0.345	-12.4	113	-0.20	5.65
44	t	2-Methylnaphthalene	0.589	0.609	-3.4	107	-0.21	5.74
45	t	1-Methylnaphthalene	0.658	0.702	-6.7	111	-0.21	5.83
46	t	Dimethylnaphthalene	0.700	0.686	2.0	101	-0.22	6.35
47	I	Acenaphthene-d10	1.000	1.000	0.0	101	-0.23	6.77
			True	Calc.	% Drift			
48	t	Hexachlorocyclopentadiene	50.000	38.140	23.7#	78	-0.21	5.89
			AvgRF	CCRF	% Dev			
49	t	2,4,6-Trichlorophenol	0.373	0.358	4.0	92	-0.21	6.03
50	t	2,4,5-Trichlorophenol	0.397	0.388	2.3	93	-0.21	6.08
51	S	2-Fluorobiphenyl	1.413	1.416	-0.2	100	-0.21	6.10
52	t	2-Chloronaphthalene	1.180	1.187	-0.6	100	-0.22	6.20
53	t	Biphenyl	1.530	1.627	-6.3	104	-0.21	6.19
54	t	2-Nitroaniline	0.307	0.383	-24.8#	115	-0.22	6.33
55	t	Dimethylphthalate	1.370	1.406	-2.6	102	-0.22	6.52
56	t	Acenaphthylene	1.820	1.982	-8.9	106	-0.23	6.62
57	t	2,6-Dinitrotoluene	0.310	0.326	-5.2	100	-0.22	6.58
58	t	3-Nitroaniline	0.337	0.373	-10.7	105	-0.22	6.76
59	t	Acenaphthene	1.208	1.297	-7.4	106	-0.23	6.81
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	50.000	34.122	31.8#	68	-0.21	6.89
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.173	0.186	-7.5	106	-0.21	7.01
62	t	Dibenzofuran	1.683	1.753	-4.2	103	-0.23	7.00
63	t	2,4-Dinitrotoluene	0.430	0.457	-6.3	100	-0.22	7.03
64		2,3,4,6-Tetrachlorophenol	0.325	0.306	5.8	90	-0.22	7.16
65	t	Diethylphthalate	1.351	1.415	-4.7	103	-0.22	7.29
66	t	Fluorene	1.366	1.427	-4.5	103	-0.23	7.37
67	t	4-Chlorophenyl-phenylethe	0.693	0.621	10.4	90	-0.22	7.39
68	t	4-Nitroaniline	0.357	0.334	6.4	94	-0.23	7.43
69	I	Phenanthrene-d10	1.000	1.000	0.0	93	-0.24	8.43
70	t	4,6-Dinitro-2-methylpheno	0.154	0.129	16.2	76	-0.22	7.49
71	t	n-Nitrosodiphenylamine	0.553	0.594	-7.4	97	-0.23	7.53
72	t	1,2-Diphenylhydrazine	0.626	0.785	-25.4#	111	-0.23	7.56
73	S	2,4,6-Tribromophenol	0.129	0.128	0.8	95	-0.23	7.65
74	t	4-Bromophenyl-phenylether	0.215	0.214	0.5	89	-0.23	7.93
75	t	Hexachlorobenzene	0.252	0.245	2.8	89	-0.23	8.00
			True	Calc.	% Drift			
76	t	Pentachlorophenol	50.000	45.002	10.0	85	-0.23	8.25
			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.074	1.161	-8.1	101	-0.24	8.46
78	t	Anthracene	1.077	1.218	-13.1	101	-0.24	8.51
79	t	Carbazole	1.020	1.070	-4.9	94	-0.24	8.73
80	t	Di-n-butylphthalate	1.191	1.436	-20.6#	104	-0.23	9.19
81	t	Fluoranthene	1.167	1.192	-2.1	92	-0.25	9.86
82	t	Octadecane	0.360	0.460	-27.8#	112	-0.22	8.40
83	I	Chrysene-d12	1.000	1.000	0.0	86	-0.25	11.58
84	t	Pyrene	1.333	1.457	-9.3	91	-0.25	10.12
85	S	Terphenyl-d14	0.932	0.943	-1.2	85	-0.24	10.35
86	t	Butylbenzylphthalate	0.574	0.766	-33.4#	103	-0.23	10.98

8.8.13

8

Continuing Calibration Summary

Job Number: JC86837 **Sample:** E6P2578-CC2562
Account: BBLNYS Arcadis **Lab FileID:** 6P481519.D
Project: National Grid, Philly Coke, Philadelphia, PA

87	t	Benzo[a]anthracene	1.274	1.327	-4.2	87	-0.25	11.56
88	t	3,3'-Dichlorobenzidine	0.479	0.491	-2.5	81	-0.24	11.57
89	t	Chrysene	1.249	1.268	-1.5	87	-0.25	11.61
90	t	bis(2-Ethylhexyl)phthalat	0.794	1.057	-33.1#	103	-0.23	11.70
91	I	Perylene-d12	1.000	1.000	0.0	81	-0.25	13.17
92	t	Di-n-octylphthalate	1.192	1.679	-40.9#	102	-0.23	12.44
93	t	Benzo[b]fluoranthene	1.222	1.266	-3.6	80	-0.25	12.78
94	t	Benzo[k]fluoranthene	1.082	1.148	-6.1	84	-0.25	12.81
95	t	Benzo[a]pyrene	1.004	1.081	-7.7	83	-0.25	13.11
96	t	Indeno[1,2,3-cd]pyrene	1.340	1.474	-10.0	85	-0.29	14.18
97	t	Dibenz(a,h)acridine	0.984	1.089	-10.7	85	-0.26	13.97
98	t	Dibenz[a,h]anthracene	1.188	1.301	-9.5	86	-0.29	14.19

			True	Calc.	% Drift			
99	t	7,12-Dimethylbenz(a)anthr	25.000	26.856	-7.4	92	-0.25	12.77

			AvgRF	CCRF	% Dev			
100	t	Benzo[g,h,i]perylene	1.045	1.121	-7.3	84	-0.31	14.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481201a.D M6P2562.M Wed May 01 15:52:39 2019 ACLIMS

8.8.13

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E6P2578-CC2563
Lab FileID: 6P481520.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2578\6p481520.D Vial: 3
Acq On : 1 May 2019 9:51 am Operator: angelar
Sample : cc2563-25 Inst : MS6P
Misc : op17006,e6p2578,1000,,,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 Apr 22 11:56:54 2019
Last Update : Mon Apr 22 11:56:54 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	139	-0.17	4.15
102	Benzaldehyde	0.993	1.052	-5.9	131	-0.21	3.82
103	Acenaphthene-d10a	1.000	1.000	0.0	116	-0.22	6.77
104	1,2,4,5-Tetrachlorobenzen	0.534	0.531	0.6	108	-0.21	5.90
105	Phenanthrene-d10a	1.000	1.000	0.0	110	-0.24	8.43
106 S	1-chlorooctadecane	0.239	0.316	-32.2#	122	-0.23	9.81
107 S	o-terphenyl	0.584	0.616	-5.5	109	-0.23	8.91
		True	Calc.	% Drift			
108	Atrazine	25.000	26.853	-7.4	118	-0.22	8.17
		AvgRF	CCRF	% Dev			
111 I	Naphthalene-d8a	1.000	1.000	0.0	115	-0.19	5.12
112 T	Hydroquinone	0.307	0.376	-22.5#	139	-0.23	5.53
113	Phenanthrene-d10b	1.000	1.000	0.0	110	-0.24	8.43
114	Pentachloronitrobenzene	0.049	0.052	-6.1	110	-0.23	8.25

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p481201a.D M6P2562.M Wed May 01 15:52:42 2019 ACLIMS

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICC6556
Lab FileID: M153403.D

Response Factor Report MSM

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration

Calibration Files
2 =m153407.D 5 =m153406.D 100 =m153401a.D 50 =m153403.D
1 =m153408.D 10 =m153405.D 80 =m153402.D 25 =m153404.D

Compound	2	5	100	50	1	10	80	25	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	ISTD									
2) 1,4-Dioxane	0.708	0.743	0.878	0.834	0.754	0.769	0.838	0.806	0.791	7.22
3) Pyridine	1.719	1.899	2.080	1.986	1.599	1.929	2.017	2.015	1.906	8.67
4) N-Nitrosodim	0.611	0.658	0.748	0.726	0.596	0.660	0.712	0.712	0.678	8.19
5) 2-Fluorophen	1.392	1.557	1.642	1.697	1.337	1.606	1.626	1.654	1.564	8.32
6) Indene	2.197	2.273	1.875	2.043	2.326	2.246	1.879	2.081	2.115	8.25
7) Cumene	3.772	3.943	3.403	3.707	3.790	3.993	3.431	3.854	3.737	5.83
8) Phenol-d5	1.761	1.954	1.939	2.047	1.803	2.022	1.926	1.997	1.931	5.25
9) Phenol	2.008	2.159	1.806	2.027	2.088	2.201	1.835	2.112	2.030	7.08
10) Aniline	2.230	2.299		1.746	2.255	2.178	1.604	1.919	2.033	13.60
11) bis(2-Chloro	1.442	1.502	1.304	1.367	1.444	1.477	1.291	1.404	1.404	5.53
12) 2-Chlorophen	1.342	1.505	1.320	1.415	1.325	1.493	1.323	1.431	1.394	5.56
13) Decane	1.149	1.177	0.887	0.992	1.191	1.157	0.904	1.063	1.065	11.59
14) 1,3-Dichloro	1.704	1.742	1.423	1.582	1.760	1.682	1.435	1.629	1.620	8.08
15) 1,4-Dichloro	1.545	1.528	1.346	1.462	1.480	1.533	1.382	1.491	1.471	4.92
16) Benzyl alcoh	0.716	0.815	0.858	0.887	0.795	0.828	0.836	0.838	0.822	6.20
17) 1,2-Dichloro	1.478	1.541	1.289	1.452	1.528	1.552	1.324	1.480	1.455	6.77
18) Acetophenone	1.906	1.989	1.617	1.746	2.053	1.960	1.627	1.824	1.840	8.97
19) 2-Methylphen	1.157	1.289	1.049	1.152	1.225	1.264	1.052	1.202	1.174	7.63
20) 2,2'-oxybis(	0.347	0.382	0.334	0.356	0.421	0.370	0.335	0.358	0.363	7.84
21) 3&4-Methylph	1.176	1.253	1.052	1.174	1.212	1.284	1.084	1.208	1.180	6.68
22) n-Nitroso-di	0.983	1.035	0.775	0.855	0.991	1.011	0.778	0.915	0.918	11.35
23) Hexachloroet	0.615	0.653	0.576	0.628	0.629	0.644	0.590	0.637	0.621	4.29
24) I Naphthalene-d8	ISTD									
25) Nitrobenzene	0.405	0.451	0.411	0.428	0.422	0.451	0.411	0.436	0.427	4.23
26) Nitrobenzene	0.423	0.440	0.377	0.407	0.412	0.450	0.385	0.420	0.414	6.01
27) Quinoline	0.727	0.785	0.726	0.777	0.735	0.801	0.739	0.772	0.758	3.87
28) Isophorone	0.769	0.806	0.711	0.775	0.767	0.826	0.729	0.801	0.773	5.02
29) 2-Nitropheno	0.156	0.189	0.192	0.216	0.144	0.215	0.205	0.216	0.192	14.59
30) 2,4-Dimethyl	0.268	0.310	0.342	0.348	0.251	0.321	0.347	0.351	0.317	12.19
31) Benzoic acid		0.168	0.256	0.297		0.239	0.292	0.262	0.252	18.58
32) bis(2-Chloro	0.476	0.495	0.432	0.456	0.503	0.488	0.438	0.463	0.469	5.55
33) 2,4-Dichloro	0.318	0.354	0.303	0.339	0.331	0.350	0.318	0.348	0.333	5.47
34) 2,6-Dichloro	0.297	0.328	0.277	0.303	0.288	0.324	0.285	0.312	0.302	6.18
35) 1,3,5-Trichl	0.456	0.454	0.341	0.390	0.474	0.450	0.355	0.421	0.418	12.02
36) 1,2,4-Trichl	0.439	0.438	0.348	0.390	0.434	0.433	0.364	0.408	0.407	8.83
37) 1,2,3-Trichl	0.403	0.405	0.315	0.351	0.442	0.402	0.328	0.374	0.378	11.49
38) Naphthalene	0.990	1.041	0.871	0.955	1.062	1.027	0.900	0.989	0.979	6.87
39) 4-Chloroanil	0.451	0.466	0.383	0.434	0.432	0.467	0.399	0.441	0.434	6.85
40) 2,3-Dichloro	0.432	0.459	0.379	0.418	0.416	0.458	0.395	0.436	0.424	6.62
41) Caprolactam	0.133	0.160	0.163	0.166	0.122	0.165	0.164	0.159	0.154	10.90
42) Hexachlorobu	0.245	0.261	0.213	0.234	0.261	0.260	0.220	0.245	0.242	7.75
43) 4-Chloro-3-m	0.311	0.354	0.344	0.372	0.286	0.369	0.352	0.367	0.344	8.87
44) 2-Methylnaph	0.614	0.662	0.549	0.614	0.649	0.668	0.575	0.637	0.621	6.76
45) 1-Methylnaph	0.822	0.839	0.690	0.768	0.854	0.835	0.713	0.795	0.790	7.72

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICC6556
Lab FileID: M153403.D

```
46) Dimethylnaph 0.710 0.748 0.603 0.672 0.698 0.746 0.624 0.699 0.687   7.63

47) I   Acenaphthene-d10      ----------------ISTD--------------------
48) Hexachlorocy 0.348 0.400 0.384 0.414 0.335 0.419 0.397 0.415 0.389   8.17
49) 2,4,6-Trichl 0.448 0.456 0.391 0.426 0.418 0.474 0.404 0.447 0.433   6.49
50) 2,4,5-Trichl 0.470 0.471 0.434 0.465 0.442 0.509 0.458 0.467 0.465   4.87
51) 2-Fluorobiph 1.636 1.609 1.284 1.377 1.646 1.579 1.311 1.454 1.487  10.04
52) 2-Chloronaph 1.385 1.362 1.026 1.108 1.411 1.306 1.054 1.193 1.231  12.62
53) Biphenyl     1.718 1.712 1.406 1.518 1.746 1.720 1.431 1.605 1.607   8.64
54) 2-Nitroanili 0.238 0.328 0.375 0.374 0.254 0.359 0.371 0.356 0.332  16.70
55) Dimethylphth 1.523 1.567 1.384 1.472 1.580 1.595 1.408 1.498 1.503   5.21
56) Acenaphthyle 2.012 2.074 1.715 1.849 2.035 2.078 1.751 1.942 1.932   7.46
57) 2,6-Dinitrot 0.208 0.271 0.307 0.330 0.195 0.308 0.314 0.320 0.282  18.60
58) 3-Nitroanili 0.258 0.324 0.368 0.376       0.367 0.371 0.366 0.347  12.41
59) Acenaphthene 1.184 1.223 1.081 1.142 1.219 1.222 1.112 1.177 1.170   4.59
60) 2,4-Dinitrop 0.037 0.065 0.162 0.168       0.101 0.170 0.133 0.119  44.46
          ----- Quadratic regression -----              Coefficient =  0.9976
               Response Ratio = -0.03138 + 0.18187 *A + -0.00221 *A^2

61) 4-Nitropheno       0.151 0.212 0.209       0.183 0.205 0.196 0.193  11.89
62) Dibenzofuran 1.894 1.911 1.525 1.637 1.871 1.865 1.554 1.736 1.749   9.08
63) 2,4-Dinitrot 0.224 0.340 0.380 0.398 0.229 0.399 0.381 0.397 0.344  21.80
          ----- Quadratic regression -----              Coefficient =  0.9999
               Response Ratio = -0.00674 + 0.41733 *A + -0.01431 *A^2

64) 2,3,4,6-Tetr 0.354 0.432 0.430 0.461 0.292 0.459 0.441 0.459 0.416  14.64
65) Diethylphtha 1.430 1.511 1.380 1.463 1.412 1.539 1.399 1.488 1.453   3.92
66) Fluorene     1.516 1.533 1.303 1.397 1.567 1.528 1.331 1.438 1.452   6.88
67) 4-Chlorophen 0.802 0.818 0.646 0.699 0.848 0.799 0.666 0.752 0.754   9.97
68) 4-Nitroanili 0.258 0.325 0.333 0.335 0.222 0.338 0.328 0.334 0.309  14.20

69) I   Phenanthrene-d10      ----------------ISTD--------------------
70) 4,6-Dinitro- 0.040 0.064 0.119 0.126       0.091 0.127 0.108 0.096  34.65
          ----- Quadratic regression -----              Coefficient =  0.9979
               Response Ratio = -0.01033 + 0.14209 *A + -0.00691 *A^2

71) n-Nitrosodip 0.547 0.581 0.465 0.508 0.565 0.574 0.479 0.534 0.532   8.25
72) 1,2-Diphenyl 0.746 0.781 0.656 0.692 0.763 0.791 0.668 0.735 0.729   7.05
73) 2,4,6-Tribro 0.105 0.140 0.134 0.148 0.112 0.148 0.141 0.148 0.135  12.52
74) 4-Bromopheny 0.273 0.289 0.243 0.269 0.287 0.294 0.254 0.275 0.273   6.54
75) Hexachlorobe 0.336 0.325 0.254 0.282 0.343 0.323 0.264 0.299 0.303  11.10
76) Pentachlorop 0.114 0.167 0.168 0.186       0.185 0.175 0.188 0.169  15.31
77) Phenanthrene 1.093 1.072 0.832 0.913 1.139 1.050 0.861 0.975 0.992  11.50
78) Anthracene   1.096 1.138 0.912 1.003 1.077 1.134 0.941 1.056 1.045   8.13
79) Carbazole    1.008 1.095 0.897 0.986 0.992 1.090 0.928 1.038 1.004   7.00
80) Di-n-butylph 1.063 1.269 1.168 1.274 1.029 1.350 1.206 1.321 1.210   9.67
81) Fluoranthene 1.306 1.426 1.155 1.283 1.315 1.441 1.201 1.362 1.311   7.63
82) Octadecane   0.318 0.339 0.293 0.313 0.325 0.346 0.304 0.330 0.321   5.47

83) I   Chrysene-d12          ----------------ISTD--------------------
84) Pyrene       1.449 1.522 1.423 1.470 1.454 1.535 1.390 1.474 1.465   3.28
85) Terphenyl-d1 1.025 1.080 1.100 1.104 1.041 1.111 1.071 1.098 1.079   2.90
86) Butylbenzylp 0.422 0.545 0.671 0.671       0.609 0.656 0.638 0.602  15.09
87) Benzo[a]anth 1.245 1.356 1.360 1.463 1.305 1.401 1.408 1.419 1.370   5.07
88) 3,3'-Dichlor 0.325 0.417 0.525 0.516       0.457 0.509 0.488 0.463  15.43
89) Chrysene     1.227 1.229 1.237 1.216 1.232 1.224 1.177 1.196 1.217   1.70
90) bis(2-Ethylh 0.429 0.641 0.885 0.849       0.736 0.822 0.795 0.737  21.41
          ----- Quadratic regression -----              Coefficient =  0.9986
               Response Ratio = -0.01303 + 0.78239 *A + 0.03842 *A^2
```

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICC6556
Lab FileID: M153403.D

```
 91) I   Perylene-d12          ----------------ISTD--------------------
 92) Di-n-octylph 0.593 0.938 1.309 1.353       1.204 1.308 1.292 1.142  24.47
          ----- Quadratic regression -----                Coefficient =  0.9998
               Response Ratio = -0.05184 + 1.42207 *A + -0.03846 *A^2

 93) Benzo[b]fluo 1.115 1.346 1.253 1.322 0.999 1.407 1.283 1.357 1.260  10.92
 94) Benzo[k]fluo 1.279 1.297 1.061 1.153 1.238 1.296 1.064 1.208 1.200   8.13
 95) Benzo[a]pyre 0.955 1.160 1.036 1.200 0.887 1.245 1.147 1.219 1.106  11.88
 96) Indeno[1,2,3 0.695 0.937 1.073 1.100 0.589 1.099 1.069 1.119 0.960  21.46
          ----- Quadratic regression -----                Coefficient =  0.9999
               Response Ratio = -0.01582 + 1.14231 *A + -0.02711 *A^2

 97) Dibenz(a,h)a 0.719 0.949 1.041 1.109       1.095 1.056 1.131 1.014  14.13
 98) Dibenz[a,h]a 0.822 1.081 1.067 1.108 0.708 1.172 1.069 1.129 1.020  16.04
 99) 7,12-Dimethy 0.350 0.395 0.534 0.542       0.490 0.525 0.546 0.483  16.29
100) Benzo[g,h,i] 0.883 1.072 1.069 1.118 0.845 1.179 1.072 1.154 1.049  11.58

 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MM6556.M          Mon Apr 15 12:00:07 2019
```

8.8.15

8

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153409.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153409.D Vial: 10
Acq On : 12 Apr 2019 9:43 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:20:55 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	4.59
4	t	N-Nitrosodimethylamine	0.678	0.565	16.7	76	0.01	2.42
11	t	bis(2-Chloroethyl)ether	1.404	1.437	-2.4	102	0.00	4.39
14	t	1,3-Dichlorobenzene	1.620	1.516	6.4	93	0.00	4.55
15	t	1,4-Dichlorobenzene	1.471	1.383	6.0	92	0.00	4.60
17	t	1,2-Dichlorobenzene	1.455	1.349	7.3	90	0.00	4.72
20	t	2,2'-oxybis(1-Chloropropa	0.363	0.401	-10.5	110	0.00	4.80
22	t	n-Nitroso-di-n-propylamin	0.918	0.943	-2.7	107	0.00	4.91
23	t	Hexachloroethane	0.621	0.560	9.8	87	0.00	5.00
24	I	Naphthalene-d8	1.000	1.000	0.0	90	0.00	5.70
26	t	Nitrobenzene	0.414	0.373	9.9	83	0.00	5.04
28	t	Isophorone	0.773	0.707	8.5	82	0.00	5.25
32	t	bis(2-Chloroethoxy)methan	0.469	0.458	2.3	91	0.00	5.46
36	t	1,2,4-Trichlorobenzene	0.407	0.384	5.7	89	0.00	5.64
38	t	Naphthalene	0.979	0.926	5.4	87	0.00	5.72
42	t	Hexachlorobutadiene	0.242	0.234	3.3	90	0.00	5.86
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.99
48	t	Hexachlorocyclopentadiene	0.389	0.377	3.1	81	0.00	6.73
52	t	2-Chloronaphthalene	1.231	1.176	4.5	95	0.00	7.15
55	t	Dimethylphthalate	1.503	1.333	11.3	81	0.00	7.61
56	t	Acenaphthylene	1.932	1.650	14.6	80	0.00	7.76
57	t	2,6-Dinitrotoluene	0.282	0.244	13.5	66	0.00	7.68
59	t	Acenaphthene	1.170	0.994	15.0	78	0.00	8.04
		----------	True	Calc.	% Drift	----------		
63	t	2,4-Dinitrotoluene	50.000	38.321	23.4	68	0.00	8.33
		----------	AvgRF	CCRF	% Dev	----------		
65	t	Diethylphthalate	1.453	1.283	11.7	79	0.00	8.79
66	t	Fluorene	1.452	1.263	13.0	81	0.00	8.90
67	t	4-Chlorophenyl-phenylethe	0.754	0.629	16.6	81	0.00	8.94
69	I	Phenanthrene-d10	1.000	1.000	0.0	85	0.00	10.57

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153409.D

71	t	n-Nitrosodiphenylamine	0.532	0.445	16.4	74	0.00	9.15
72	t	1,2-Diphenylhydrazine	0.729	0.634	13.0	78	0.00	9.21
74	t	4-Bromophenyl-phenylether	0.273	0.245	10.3	77	0.00	9.80
75	t	Hexachlorobenzene	0.303	0.254	16.2	76	0.00	9.89
77	t	Phenanthrene	0.992	0.904	8.9	84	0.00	10.62
78	t	Anthracene	1.045	0.924	11.6	78	0.00	10.71
80	t	Di-n-butylphthalate	1.210	1.104	8.8	74	0.00	11.88
81	t	Fluoranthene	1.311	1.142	12.9	76	0.00	12.89
83	I	Chrysene-d12	1.000	1.000	0.0	79	0.00	15.71
84	t	Pyrene	1.465	1.357	7.4	73	0.00	13.31
86	t	Butylbenzylphthalate	0.602	0.596	1.0	70	0.00	14.80
87	t	Benzo[a]anthracene	1.370	1.292	5.7	70	0.00	15.69
89	t	Chrysene	1.217	1.090	10.4	71	0.00	15.75
			True	Calc.	% Drift			
90	t	bis(2-Ethylhexyl)phthalat	50.000	45.228	9.5	68	0.00	16.03
			AvgRF	CCRF	% Dev			
91	I	Perylene-d12	1.000	1.000	0.0	75	0.00	18.30
			True	Calc.	% Drift			
92	t	Di-n-octylphthalate	50.000	44.043	11.9	65	0.00	17.25
			AvgRF	CCRF	% Dev			
93	t	Benzo[b]fluoranthene	1.260	1.158	8.1	66	0.00	17.67
94	t	Benzo[k]fluoranthene	1.200	1.130	5.8	74	-0.01	17.72
95	t	Benzo[a]pyrene	1.106	1.111	-0.5	70	0.00	18.20
			True	Calc.	% Drift			
96	t	Indeno[1,2,3-cd]pyrene	50.000	46.704	6.6	70	-0.01	19.96
			AvgRF	CCRF	% Dev			
98	t	Dibenz[a,h]anthracene	1.020	0.964	5.5	66	0.00	20.02
100	t	Benzo[g,h,i]perylene	1.049	1.073	-2.3	72	0.00	20.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:24:59 2019

8.8.16

8

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153410.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153410.D Vial: 11
Acq On : 12 Apr 2019 10:12 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:20:55 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	4.59
2	t	1,4-Dioxane	0.791	0.669	15.4	83	0.02	2.14
6	t	Indene	2.115	2.248	-6.3	114	0.00	4.79
7	t	Cumene	3.737	3.309	11.5	92	0.00	4.00
13	t	Decane	1.065	0.918	13.8	96	0.00	4.48
18	t	Acetophenone	1.840	1.709	7.1	101	0.00	4.90
24	I	Naphthalene-d8	1.000	1.000	0.0	106	0.00	5.70
27	t	Quinoline	0.758	0.648	14.5	88	-0.02	6.07
40	t	2,3-Dichloroaniline	0.424	0.327	22.9	83	0.00	6.87
41	t	Caprolactam	0.154	0.115	25.3	74	-0.04	6.14
45	t	1-Methylnaphthalene	0.790	0.638	19.2	88	0.00	6.63
46	t	Dimethylnaphthalene	0.687	0.576	16.2	91	0.00	7.36
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.99
53	t	Biphenyl	1.607	1.507	6.2	90	0.00	7.13
69	I	Phenanthrene-d10	1.000	1.000	0.0	90	0.00	10.57
82	t	Octadecane	0.321	0.314	2.2	91	0.00	10.61
83	I	Chrysene-d12	1.000	1.000	0.0	105	-0.02	15.70
		----------	AvgRF	CCRF	% Dev		----------	
91	I	Perylene-d12	1.000	1.000	0.0	77	0.00	18.30
99	t	7,12-Dimethylbenz(a)anthr	0.483	0.387	19.9	55	-0.02	17.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:34:24 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153411.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153411.D Vial: 12
Acq On : 12 Apr 2019 10:40 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:38:00 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	4.59
9	t	Phenol	2.030	1.988	2.1	99	0.00	4.34
12	t	2-Chlorophenol	1.394	1.399	-0.4	99	0.00	4.43
19	t	2-Methylphenol	1.174	1.239	-5.5	108	0.00	4.78
21	t	3&4-Methylphenol	1.180	1.273	-7.9	109	0.00	4.91
24	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00	5.70
29	t	2-Nitrophenol	0.192	0.214	-11.5	90	0.00	5.33
30	t	2,4-Dimethylphenol	0.317	0.372	-17.4	97	0.00	5.37
31	t	Benzoic acid	0.252	0.240	4.8	74	-0.02	5.48
33	t	2,4-Dichlorophenol	0.333	0.329	1.2	88	0.00	5.55
34	t	2,6-Dichlorophenol	0.302	0.324	-7.3	97	0.00	5.78
43	t	4-Chloro-3-methylphenol	0.344	0.347	-0.9	85	-0.02	6.32
47	I	Acenaphthene-d10	1.000	1.000	0.0	92	0.00	7.99
49	t	2,4,6-Trichlorophenol	0.433	0.467	-7.9	101	0.00	6.88
50	t	2,4,5-Trichlorophenol	0.465	0.447	3.9	89	-0.01	6.93
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	50.000	37.761	24.5	76	-0.02	8.10
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.193	0.172	10.9	76	-0.02	8.25
			AvgRF	CCRF	% Dev			
64	t	2,3,4,6-Tetrachlorophenol	0.416	0.402	3.4	81	0.00	8.54
69	I	Phenanthrene-d10	1.000	1.000	0.0	81	0.00	10.57
			True	Calc.	% Drift			
70	t	4,6-Dinitro-2-methylpheno	50.000	46.695	6.6	75	-0.02	9.01
76	t	Pentachlorophenol	0.169	0.216	-27.8	94	0.00	10.26

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:41:07 2019

8.8.18

8

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153413.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153413.D Vial: 14
Acq On : 12 Apr 2019 11:37 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:48:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	4.59
5	S	2-Fluorophenol	1.564	1.346	13.9	85	0.00	3.61
8	S	Phenol-d5	1.931	1.610	16.6	84	0.00	4.32
24	I	Naphthalene-d8	1.000	1.000	0.0	101	0.00	5.70
25	S	Nitrobenzene-d5	0.427	0.382	10.5	91	0.00	5.03
47	I	Acenaphthene-d10	1.000	1.000	0.0	93	0.00	7.99
51	S	2-Fluorobiphenyl	1.487	1.360	8.5	92	0.00	7.00
69	I	Phenanthrene-d10	1.000	1.000	0.0	85	0.00	10.57
73	S	2,4,6-Tribromophenol	0.135	0.136	-0.7	78	0.00	9.32
83	I	Chrysene-d12	1.000	1.000	0.0	85	-0.01	15.70
85	S	Terphenyl-d14	1.079	1.040	3.6	80	0.00	13.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:56:06 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6556-ICV6556
Lab FileID: M153414.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6556\m153414.D Vial: 15
Acq On : 13 Apr 2019 12:06 am Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 11:48:45 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	155	0.00	15.71
88 t	3,3'-Dichlorobenzidine	0.463	0.428	7.6	129	0.00	15.73

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153403.D MM6556.M Mon Apr 15 11:59:07 2019

8.8.20

8

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-ICC6557
Lab FileID: M153422.D

Response Factor Report MSM

Method : C:\MSDCHEM\1\METHODS\MM6557.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration

Calibration Files
2 =m153426.D 5 =m153425.D 100 =m153420.D 50 =m153422.D
1 =m153427.D 10 =m153424.D 80 =m153421.D 25 =m153423.D

Compound	2	5	100	50	1	10	80	25	Avg	%RSD
101) I 1,4-Dichlorobenzene-d	ISTD									
102) Benzaldehyde	1.151	1.145	1.016	1.112	1.161	1.125	1.076	1.194	1.122	4.93
103) I Acenaphthene-d10a	ISTD									
104) 1,2,4,5-Tetr	0.709	0.733	0.583	0.654	0.751	0.705	0.610	0.718	0.683	8.87
105) Atrazine	0.138	0.163	0.196	0.213		0.186	0.202	0.214	0.187	14.95
108) Chrysene-d12b	ISTD									
109) 1-chloroocta		0.208	0.240	0.265		0.238	0.246	0.280	0.246	9.95
110) I Phenanthrene-d10a	ISTD									
111) o-terphenyl	0.576	0.606	0.551	0.609	0.568	0.607	0.572	0.661	0.594	5.80
112) Pentachloron		0.033	0.052	0.054		0.041	0.053	0.051	0.047#	18.00
113) I Naphthalene-d8a	ISTD									
114) Hydroquinone			0.353	0.351		0.240	0.356	0.328	0.326	15.05

(#) = Out of Range ### Number of calibration levels exceeded format ###

MM6556.M Mon Apr 15 12:56:13 2019

8.8.21

8

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-ICV6557
Lab FileID: M153441.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6557\m153441.D Vial: 21
Acq On : 14 Apr 2019 7:00 pm Operator: chriss2
Sample : icv6557-50 Inst : MSM
Misc : op17006,em6557,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 12:52:14 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	101	0.00	4.59
102	t	Benzaldehyde	1.122	1.084	3.4	99	0.00	4.26
103	I	Acenaphthene-d10a	1.000	1.000	0.0	103	0.00	7.99
104	I	1,2,4,5-Tetrachlorobenzen	0.683	0.641	6.1	101	0.00	6.73
105	t	Atrazine	0.187	0.205	-9.6	99	0.01	10.19
110	I	Phenanthrene-d10a	1.000	1.000	0.0	100	0.00	10.57
112		Pentachloronitrobenzene	0.047	0.047#	0.0	86	0.00	10.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153422a.D MM6556.M Mon Apr 15 12:56:40 2019

8.8.22

8

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6557-ICV6557
Lab FileID: M153442.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6557\m153442.D Vial: 22
Acq On : 14 Apr 2019 7:28 pm Operator: chriss2
Sample : icv6557-50 Inst : MSM
Misc : op17006,em6557,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 12:52:14 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
113 I	Naphthalene-d8a	1.000	1.000	0.0	116	0.00	5.69
114	Hydroquinone	0.326	0.304	6.7	101	0.00	6.14

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153422a.D MM6556.M Mon Apr 15 12:56:42 2019

8.8.23

8

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6559-ICV6556
Lab FileID: M153444.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6559\m153444.D Vial: 2
Acq On : 15 Apr 2019 2:05 pm Operator: christc2
Sample : icv6556-50 Inst : MSM
Misc : op17006,em6559,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Mon Apr 15 13:37:21 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	4.59
3	t	Pyridine	1.906	1.645	13.7	82	0.08	2.53
10	t	Aniline	2.033	2.248	-10.6	127	0.00	4.35
16	t	Benzyl alcohol	0.822	0.855	-4.0	95	0.00	4.70
24	I	Naphthalene-d8	1.000	1.000	0.0	100	0.00	5.69
39	t	4-Chloroaniline	0.434	0.404	6.9	94	0.00	5.77
44	t	2-Methylnaphthalene	0.621	0.527	15.1	86	0.00	6.50
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.99
54	t	2-Nitroaniline	0.332	0.313	5.7	75	-0.01	7.30
58	t	3-Nitroaniline	0.347	0.328	5.5	78	-0.01	7.93
62	t	Dibenzofuran	1.749	1.620	7.4	89	0.00	8.32
68	t	4-Nitroaniline	0.309	0.317	-2.6	85	-0.02	8.95
69	I	Phenanthrene-d10	1.000	1.000	0.0	83	-0.01	10.57
79	t	Carbazole	1.004	0.941	6.3	79	-0.01	11.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153434A.D MM6556.M Mon Apr 15 14:54:07 2019

8.8.24
8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6576-CC6556
Lab FileID: M153893.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6576\m153893.D Vial: 2
Acq On : 30 Apr 2019 9:18 am Operator: christc2
Sample : cc6556-50 Inst : MSM
Misc : op17006,em6576,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Tue Apr 30 12:06:53 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	58	0.00	4.43
2	t	1,4-Dioxane	0.791	0.567	28.3#	39#	-0.04	1.91
3	t	Pyridine	1.906	1.397	26.7#	41#	-0.11	2.26
4	t	N-Nitrosodimethylamine	0.678	0.537	20.8#	43#	-0.11	2.22
5	S	2-Fluorophenol	1.564	1.333	14.8	45#	-0.03	3.45
6	t	Indene	2.115	2.027	4.2	57	0.11	4.62
7	t	Cumene	3.737	3.118	16.6	49#	-0.03	3.83
8	S	Phenol-d5	1.931	1.695	12.2	48#	0.00	4.19
9	t	Phenol	2.030	1.754	13.6	50#	0.00	4.20
10	t	Aniline	2.033	1.782	12.3	59	-0.01	4.19
11	t	bis(2-Chloroethyl)ether	1.404	1.172	16.5	50#	-0.01	4.24
12	t	2-Chlorophenol	1.394	1.340	3.9	55	0.00	4.28
13	t	Decane	1.065	0.950	10.8	55	0.00	4.32
14	t	1,3-Dichlorobenzene	1.620	1.560	3.7	57	-0.01	4.39
15	t	1,4-Dichlorobenzene	1.471	1.499	-1.9	59	0.00	4.44
16	t	Benzyl alcohol	0.822	0.800	2.7	52	0.00	4.54
17	t	1,2-Dichlorobenzene	1.455	1.435	1.4	57	-0.01	4.55
18	t	Acetophenone	1.840	1.725	6.2	57	0.00	4.74
19	t	2-Methylphenol	1.174	1.124	4.3	56	0.00	4.63
20	t	2,2'-oxybis(1-Chloropropa	0.363	0.315	13.2	51	0.00	4.64
21	t	3&4-Methylphenol	1.180	1.156	2.0	57	0.01	4.75
22	t	n-Nitroso-di-n-propylamin	0.918	0.862	6.1	58	0.00	4.74
23	t	Hexachloroethane	0.621	0.625	-0.6	58	-0.02	4.82
24	I	Naphthalene-d8	1.000	1.000	0.0	56	0.00	5.49
25	S	Nitrobenzene-d5	0.427	0.366	14.3	48#	0.00	4.86
26	t	Nitrobenzene	0.414	0.366	11.6	50	0.00	4.88
27	t	Quinoline	0.758	0.711	6.2	51	0.00	5.87
28	t	Isophorone	0.773	0.667	13.7	48#	0.00	5.08
29	t	2-Nitrophenol	0.192	0.224	-16.7	58	0.00	5.14
30	t	2,4-Dimethylphenol	0.317	0.323	-1.9	52	0.00	5.20
31	t	Benzoic acid	0.252	0.304	-20.6#	57	0.01	5.32
32	t	bis(2-Chloroethoxy)methan	0.469	0.405	13.6	50#	0.00	5.27
33	t	2,4-Dichlorophenol	0.333	0.343	-3.0	56	0.00	5.37
34	t	2,6-Dichlorophenol	0.302	0.319	-5.6	59	0.00	5.59
35	t	1,3,5-Trichlorobenzene	0.418	0.409	2.2	58	-0.01	5.15
36	t	1,2,4-Trichlorobenzene	0.407	0.393	3.4	56	-0.01	5.44
37	t	1,2,3-Trichlorobenzene	0.378	0.361	4.5	58	0.00	5.67
38	t	Naphthalene	0.979	0.980	-0.1	57	0.00	5.52
39	t	4-Chloroaniline	0.434	0.429	1.2	55	0.00	5.57
40	t	2,3-Dichloroaniline	0.424	0.429	-1.2	57	0.00	6.64
41	t	Caprolactam	0.154	0.144	6.5	48#	0.00	5.95

8.8.25

8

Continuing Calibration Summary

Job Number: JC86837 **Sample:** EM6576-CC6556
Account: BBLNYS Arcadis **Lab FileID:** M153893.D
Project: National Grid, Philly Coke, Philadelphia, PA

42	t	Hexachlorobutadiene	0.242	0.230	5.0	55	-0.01	5.65
43	t	4-Chloro-3-methylphenol	0.344	0.304	11.6	46#	0.00	6.13
44	t	2-Methylnaphthalene	0.621	0.591	4.8	54	-0.01	6.27
45	t	1-Methylnaphthalene	0.790	0.751	4.9	55	0.00	6.40
46	t	Dimethylnaphthalene	0.687	0.646	6.0	54	0.00	7.11
47	I	Acenaphthene-d10	1.000	1.000	0.0	54	-0.01	7.72
48	t	Hexachlorocyclopentadiene	0.389	0.465	-19.5	61	-0.02	6.49
49	t	2,4,6-Trichlorophenol	0.433	0.467	-7.9	59	-0.01	6.65
50	t	2,4,5-Trichlorophenol	0.465	0.490	-5.4	57	-0.01	6.70
51	S	2-Fluorobiphenyl	1.487	1.426	4.1	56	-0.02	6.76
52	t	2-Chloronaphthalene	1.231	1.177	4.4	57	-0.02	6.90
53	t	Biphenyl	1.607	1.588	1.2	57	-0.02	6.89
54	t	2-Nitroaniline	0.332	0.373	-12.3	54	-0.02	7.06
55	t	Dimethylphthalate	1.503	1.408	6.3	52	0.00	7.36
56	t	Acenaphthylene	1.932	1.877	2.8	55	-0.01	7.50
57	t	2,6-Dinitrotoluene	0.282	0.330	-17.0	54	0.00	7.44
58	t	3-Nitroaniline	0.347	0.369	-6.3	53	0.00	7.69
59	t	Acenaphthene	1.170	1.167	0.3	55	-0.01	7.78
			True	Calc.	% Drift			
60	t	2,4-Dinitrophenol	100.000	125.609	-25.6#	67	0.00	7.86
			AvgRF	CCRF	% Dev			
61	t	4-Nitrophenol	0.193	0.178	7.8	46#	0.05	8.03
62	t	Dibenzofuran	1.749	1.701	2.7	56	0.00	8.05
			True	Calc.	% Drift			
63	t	2,4-Dinitrotoluene	50.000	53.019	-6.0	57	0.00	8.07
			AvgRF	CCRF	% Dev			
64	t	2,3,4,6-Tetrachlorophenol	0.416	0.478	-14.9	56	0.00	8.28
65	t	Diethylphthalate	1.453	1.360	6.4	50	0.01	8.53
66	t	Fluorene	1.452	1.409	3.0	55	0.00	8.62
67	t	4-Chlorophenyl-phenylethe	0.754	0.717	4.9	55	0.01	8.66
68	t	4-Nitroaniline	0.309	0.316	-2.3	51	0.02	8.70
69	I	Phenanthrene-d10	1.000	1.000	0.0	52	-0.03	10.28
			True	Calc.	% Drift			
70	t	4,6-Dinitro-2-methylpheno	50.000	60.763	-21.5#	62	-0.03	8.76
			AvgRF	CCRF	% Dev			
71	t	n-Nitrosodiphenylamine	0.532	0.516	3.0	52	-0.04	8.88
72	t	1,2-Diphenylhydrazine	0.729	0.623	14.5	47#	-0.04	8.93
73	S	2,4,6-Tribromophenol	0.135	0.181	-34.1#	63	-0.04	9.04
74	t	4-Bromophenyl-phenylether	0.273	0.270	1.1	52	-0.04	9.52
75	t	Hexachlorobenzene	0.303	0.323	-6.6	59	-0.03	9.60
76	t	Pentachlorophenol	0.169	0.230	-36.1#	64	-0.02	9.98
77	t	Phenanthrene	0.992	1.080	-8.9	61	-0.02	10.32
78	t	Anthracene	1.045	1.043	0.2	54	-0.02	10.42
79	t	Carbazole	1.004	0.992	1.2	52	0.00	10.77
80	t	Di-n-butylphthalate	1.210	1.263	-4.4	51	0.07	11.59
81	t	Fluoranthene	1.311	1.284	2.1	52	0.00	12.58
82	t	Octadecane	0.321	0.308	4.0	51	0.00	10.32
83	I	Chrysene-d12	1.000	1.000	0.0	54	-0.06	15.40
84	t	Pyrene	1.465	1.450	1.0	53	-0.08	13.00
85	S	Terphenyl-d14	1.079	1.049	2.8	51	-0.07	13.44
86	t	Butylbenzylphthalate	0.602	0.618	-2.7	50#	-0.04	14.50

8.8.25

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6576-CC6556
Lab FileID: M153893.D

87	t	Benzo[a]anthracene	1.370	1.366	0.3	50	-0.07	15.38
88	t	3,3'-Dichlorobenzidine	0.463	0.522	-12.7	54	-0.09	15.42
89	t	Chrysene	1.217	1.173	3.6	52	-0.07	15.45
		----------	True	Calc.	% Drift	----------		
90	t	bis(2-Ethylhexyl)phthalat	50.000	49.039	1.9	51	-0.04	15.73
		----------	AvgRF	CCRF	% Dev	----------		
91	I	Perylene-d12	1.000	1.000	0.0	50	-0.06	17.99
		----------	True	Calc.	% Drift	----------		
92	t	Di-n-octylphthalate	50.000	47.571	4.9	47	-0.05	16.95
		----------	AvgRF	CCRF	% Dev	----------		
93	t	Benzo[b]fluoranthene	1.260	1.274	-1.1	48#	-0.06	17.36
94	t	Benzo[k]fluoranthene	1.200	1.100	8.3	48#	-0.07	17.41
95	t	Benzo[a]pyrene	1.106	1.097	0.8	46#	-0.06	17.89
		----------	True	Calc.	% Drift	----------		
96	t	Indeno[1,2,3-cd]pyrene	50.000	47.223	5.6	47	-0.05	19.63
		----------	AvgRF	CCRF	% Dev	----------		
97	t	Dibenz(a,h)acridine	1.014	0.990	2.4	45#	-0.03	19.32
98	t	Dibenz[a,h]anthracene	1.020	1.075	-5.4	49#	-0.06	19.68
99	t	7,12-Dimethylbenz(a)anthr	0.483	0.557	-15.3	52	-0.07	17.38
100	t	Benzo[g,h,i]perylene	1.049	1.013	3.4	46#	-0.08	20.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153434A.D MM6556.M Tue Apr 30 12:09:39 2019

8.8.25

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6576-CC6557
Lab FileID: M153894.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6576\m153894.D Vial: 3
Acq On : 30 Apr 2019 9:46 am Operator: christc2
Sample : cc6557-50 Inst : MSM
Misc : op17006,em6576,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Tue Apr 30 08:49:12 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	57	0.00	4.43
102	t	Benzaldehyde	1.122	1.063	5.3	55	-0.02	4.11
103	I	Acenaphthene-d10a	1.000	1.000	0.0	61	-0.02	7.72
104	I	1,2,4,5-Tetrachlorobenzen	0.683	0.685	-0.3	64	-0.02	6.49
105	t	Atrazine	0.187	0.234	-25.1#	67	0.06	9.92
108		Chrysene-d12b	1.000	1.000	0.0	63	-0.07	15.39
109	s	1-chlorooctadecane	0.246	0.254	-3.3	60	-0.09	12.63
110	I	Phenanthrene-d10a	1.000	1.000	0.0	64	-0.03	10.28
111	s	o-terphenyl	0.594	0.648	-9.1	68	-0.01	11.10
112		Pentachloronitrobenzene	0.047	0.061	-29.8#	72	-0.03	10.00
113	I	Naphthalene-d8a	1.000	1.000	0.0	58	0.00	5.49
114		Hydroquinone	0.326	0.339	-4.0	56	0.03	5.95

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153434A.D MM6556.M Tue Apr 30 12:01:25 2019

8.8.26

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6577-CC6556
Lab FileID: M153922.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jeryllr\em6577\m153922.d Vial: 2
Acq On : 1 May 2019 7:27 am Operator: christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Thu May 02 03:12:59 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	85	0.00	4.42
2	t	1,4-Dioxane	0.791	0.580	26.7#	61	0.00	1.89
3	t	Pyridine	1.906	1.402	26.4#	59	-0.11	2.24
4	t	N-Nitrosodimethylamine	0.678	0.509	24.9#	61	-0.11	2.20
5	S	2-Fluorophenol	1.564	1.276	18.4	66	-0.03	3.44
6	t	Indene	2.115	2.088	1.3	85	0.00	4.61
7	t	Cumene	3.737	3.053	18.3	67	-0.02	3.83
8	S	Phenol-d5	1.931	1.681	12.9	72	0.01	4.17
9	t	Phenol	2.030	1.795	11.6	72	0.01	4.18
10	t	Aniline	2.033	1.863	8.4	82	0.00	4.18
11	t	bis(2-Chloroethyl)ether	1.404	1.197	14.7	72	0.00	4.23
12	t	2-Chlorophenol	1.394	1.348	3.3	80	0.00	4.27
13	t	Decane	1.065	1.005	5.6	80	0.00	4.32
14	t	1,3-Dichlorobenzene	1.620	1.596	1.5	83	0.00	4.38
15	t	1,4-Dichlorobenzene	1.471	1.495	-1.6	85	0.00	4.43
16	t	Benzyl alcohol	0.822	0.792	3.6	80	0.00	4.53
17	t	1,2-Dichlorobenzene	1.455	1.463	-0.5	84	0.00	4.55
18	t	Acetophenone	1.840	1.754	4.7	82	0.00	4.73
19	t	2-Methylphenol	1.174	1.146	2.4	81	0.02	4.63
20	t	2,2'-oxybis(1-Chloropropa	0.363	0.328	9.6	78	0.00	4.63
21	t	3&4-Methylphenol	1.180	1.187	-0.6	83	0.02	4.74
22	t	n-Nitroso-di-n-propylamin	0.918	0.909	1.0	84	0.00	4.73
23	t	Hexachloroethane	0.621	0.628	-1.1	84	0.00	4.81
24	I	Naphthalene-d8	1.000	1.000	0.0	86	0.00	5.48
25	S	Nitrobenzene-d5	0.427	0.376	11.9	74	0.00	4.85
26	t	Nitrobenzene	0.414	0.368	11.1	75	0.00	4.86
27	t	Quinoline	0.758	0.725	4.4	81	0.00	5.85
28	t	Isophorone	0.773	0.667	13.7	72	0.00	5.06
29	t	2-Nitrophenol	0.192	0.235	-22.4#	94	0.00	5.13
30	t	2,4-Dimethylphenol	0.317	0.315	0.6	77	0.01	5.18
31	t	Benzoic acid	0.252	0.295	-17.1	97	0.00	5.29
32	t	bis(2-Chloroethoxy)methan	0.469	0.418	10.9	78	0.00	5.26
33	t	2,4-Dichlorophenol	0.333	0.341	-2.4	84	0.01	5.36
34	t	2,6-Dichlorophenol	0.302	0.321	-6.3	89	0.00	5.57
35	t	1,3,5-Trichlorobenzene	0.418	0.412	1.4	84	0.00	5.14
36	t	1,2,4-Trichlorobenzene	0.407	0.397	2.5	84	0.00	5.43
37	t	1,2,3-Trichlorobenzene	0.378	0.367	2.9	84	0.00	5.65
38	t	Naphthalene	0.979	0.968	1.1	84	0.00	5.50
39	t	4-Chloroaniline	0.434	0.445	-2.5	87	0.00	5.56
40	t	2,3-Dichloroaniline	0.424	0.436	-2.8	86	0.00	6.62
41	t	Caprolactam	0.154	0.145	5.8	78	0.00	5.93

Continuing Calibration Summary

Job Number: JC86837 **Sample:** EM6577-CC6556
Account: BBLNYS Arcadis **Lab FileID:** M153922.D
Project: National Grid, Philly Coke, Philadelphia, PA

42	t	Hexachlorobutadiene	0.242	0.218	9.9	76	0.00	5.64
43	t	4-Chloro-3-methylphenol	0.344	0.314	8.7	74	0.01	6.11
44	t	2-Methylnaphthalene	0.621	0.601	3.2	81	0.00	6.27
45	t	1-Methylnaphthalene	0.790	0.767	2.9	83	0.00	6.38
46	t	Dimethylnaphthalene	0.687	0.657	4.4	81	0.01	7.09
47	I	Acenaphthene-d10	1.000	1.000	0.0	85	0.00	7.71
48	t	Hexachlorocyclopentadiene	0.389	0.429	-10.3	88	-0.01	6.47
49	t	2,4,6-Trichlorophenol	0.433	0.454	-4.8	87	0.00	6.63
50	t	2,4,5-Trichlorophenol	0.465	0.493	-6.0	90	0.00	6.69
51	S	2-Fluorobiphenyl	1.487	1.426	4.1	84	-0.01	6.74
52	t	2-Chloronaphthalene	1.231	1.176	4.5	84	0.00	6.89
53	t	Biphenyl	1.607	1.560	2.9	83	0.00	6.87
54	t	2-Nitroaniline	0.332	0.380	-14.5	91	0.00	7.05
55	t	Dimethylphthalate	1.503	1.394	7.3	79	0.00	7.34
56	t	Acenaphthylene	1.932	1.899	1.7	83	0.00	7.48
57	t	2,6-Dinitrotoluene	0.282	0.337	-19.5	90	0.00	7.42
58	t	3-Nitroaniline	0.347	0.360	-3.7	84	0.00	7.67
59	t	Acenaphthene	1.170	1.171	-0.1	85	0.00	7.76
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	59.774	-19.5	121	0.02	7.84
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.193	0.168	13.0	73	0.00	8.01
62	t	Dibenzofuran	1.749	1.701	2.7	84	0.00	8.03
		----------	True	Calc.	% Drift	----------		
63	t	2,4-Dinitrotoluene	25.000	26.639	-6.6	91	0.02	8.06
		----------	AvgRF	CCRF	% Dev	----------		
64	t	2,3,4,6-Tetrachlorophenol	0.416	0.449	-7.9	83	0.02	8.26
65	t	Diethylphthalate	1.453	1.367	5.9	78	0.02	8.50
66	t	Fluorene	1.452	1.422	2.1	84	0.02	8.60
67	t	4-Chlorophenyl-phenylethe	0.754	0.710	5.8	81	0.02	8.64
68	t	4-Nitroaniline	0.309	0.312	-1.0	80	0.02	8.67
69	I	Phenanthrene-d10	1.000	1.000	0.0	80	0.00	10.26
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	25.000	29.814	-19.3	109	-0.01	8.74
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.532	0.545	-2.4	81	0.00	8.86
72	t	1,2-Diphenylhydrazine	0.729	0.659	9.6	72	-0.02	8.92
73	S	2,4,6-Tribromophenol	0.135	0.174	-28.9#	94	-0.02	9.02
74	t	4-Bromophenyl-phenylether	0.273	0.265	2.9	77	-0.02	9.50
75	t	Hexachlorobenzene	0.303	0.326	-7.6	87	-0.02	9.58
76	t	Pentachlorophenol	0.169	0.222	-31.4#	94	0.00	9.96
77	t	Phenanthrene	0.992	1.067	-7.6	87	0.00	10.30
78	t	Anthracene	1.045	1.096	-4.9	83	0.00	10.39
79	t	Carbazole	1.004	1.012	-0.8	78	0.01	10.74
80	t	Di-n-butylphthalate	1.210	1.267	-4.7	77	0.00	11.58
81	t	Fluoranthene	1.311	1.251	4.6	73	0.00	12.56
82	t	Octadecane	0.321	0.318	0.9	77	0.02	10.30
83	I	Chrysene-d12	1.000	1.000	0.0	74	0.00	15.37
84	t	Pyrene	1.465	1.521	-3.8	76	0.00	12.98
85	S	Terphenyl-d14	1.079	1.066	1.2	72	-0.03	13.41
86	t	Butylbenzylphthalate	0.602	0.639	-6.1	74	0.00	14.48

8.8.27

8

Continuing Calibration Summary

Job Number: JC86837 **Sample:** EM6577-CC6556
Account: BBLNYS Arcadis **Lab FileID:** M153922.D
Project: National Grid, Philly Coke, Philadelphia, PA

87	t	Benzo[a]anthracene	1.370	1.364	0.4	71	0.00	15.35
88	t	3,3'-Dichlorobenzidine	0.463	0.512	-10.6	77	0.00	15.39
89	t	Chrysene	1.217	1.214	0.2	75	0.00	15.42
		----------	True	Calc.	% Drift	----------		
90	t	bis(2-Ethylhexyl)phthalat	25.000	26.201	-4.8	77	0.02	15.71
		----------	AvgRF	CCRF	% Dev	----------		
91	I	Perylene-d12	1.000	1.000	0.0	73	0.00	17.97
		----------	True	Calc.	% Drift	----------		
92	t	Di-n-octylphthalate	25.000	23.796	4.8	70	0.00	16.93
		----------	AvgRF	CCRF	% Dev	----------		
93	t	Benzo[b]fluoranthene	1.260	1.247	1.0	67	-0.01	17.33
94	t	Benzo[k]fluoranthene	1.200	1.118	6.8	67	-0.02	17.38
95	t	Benzo[a]pyrene	1.106	1.098	0.7	66	-0.01	17.86
		----------	True	Calc.	% Drift	----------		
96	t	Indeno[1,2,3-cd]pyrene	25.000	24.032	3.9	69	0.00	19.60
		----------	AvgRF	CCRF	% Dev	----------		
97	t	Dibenz(a,h)acridine	1.014	1.006	0.8	65	0.02	19.29
98	t	Dibenz[a,h]anthracene	1.020	1.062	-4.1	69	0.00	19.65
99	t	7,12-Dimethylbenz(a)anthr	0.483	0.544	-12.6	72	-0.02	17.35
100	t	Benzo[g,h,i]perylene	1.049	1.030	1.8	65	-0.03	19.98

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153435A.D MM6556.M Thu May 02 03:23:01 2019

8.8.27

8

Continuing Calibration Summary

Job Number: JC86837 **Sample:** EM6577-CC6557
Account: BBLNYS Arcadis **Lab FileID:** M153923.D
Project: National Grid, Philly Coke, Philadelphia, PA

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\jeryllr\em6577\m153923.d Vial: 3
Acq On : 1 May 2019 7:56 am Operator: christc2
Sample : cc6557-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Thu May 02 03:12:59 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	94	0.00	4.42
102	t	Benzaldehyde	1.122	1.046	6.8	83	0.00	4.10
103	I	Acenaphthene-d10a	1.000	1.000	0.0	96	0.00	7.71
104	I	1,2,4,5-Tetrachlorobenzen	0.683	0.727	-6.4	97	0.00	6.48
105	t	Atrazine	0.187	0.229	-22.5#	103	0.08	9.89
108		Chrysene-d12b	1.000	1.000	0.0	96	0.00	15.37
109	s	1-chlorooctadecane	0.246	0.273	-11.0	93	-0.04	12.61
110	I	Phenanthrene-d10a	1.000	1.000	0.0	100	0.00	10.26
111	s	o-terphenyl	0.594	0.635	-6.9	96	0.02	11.08
112		Pentachloronitrobenzene	0.047	0.065	-38.3#	127	0.00	9.98
113	I	Naphthalene-d8a	1.000	1.000	0.0	91	0.00	5.48
114		Hydroquinone	0.326	0.343	-5.2	95	0.03	5.93

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153435A.D MM6556.M Thu May 02 03:23:04 2019

8.8.28

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6579-CC6556
Lab FileID: M153975.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...meel\em6579\m153975.d Vial: 2
Acq On : 2 May 2019 1:37 pm Operator: christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Fri May 03 11:51:36 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	0.00	4.40
2	t	1,4-Dioxane	0.791	0.603	23.8#	55	0.00	1.86
3	t	Pyridine	1.906	1.327	30.4#	48#	-0.07	2.22
4	t	N-Nitrosodimethylamine	0.678	0.524	22.7#	54	-0.07	2.17
5	S	2-Fluorophenol	1.564	1.261	19.4	56	-0.03	3.41
6	t	Indene	2.115	2.037	3.7	72	0.00	4.58
7	t	Cumene	3.737	3.051	18.4	58	-0.02	3.80
8	S	Phenol-d5	1.931	1.673	13.4	62	0.00	4.14
9	t	Phenol	2.030	1.830	9.9	64	0.00	4.16
10	t	Aniline	2.033	1.179	42.0#	45#	0.04	4.20
11	t	bis(2-Chloroethyl)ether	1.404	1.180	16.0	62	0.00	4.20
12	t	2-Chlorophenol	1.394	1.327	4.8	68	0.00	4.24
13	t	Decane	1.065	1.014	4.8	70	0.00	4.29
14	t	1,3-Dichlorobenzene	1.620	1.564	3.5	71	0.00	4.35
15	t	1,4-Dichlorobenzene	1.471	1.474	-0.2	73	0.00	4.41
16	t	Benzyl alcohol	0.822	0.814	1.0	71	0.00	4.50
17	t	1,2-Dichlorobenzene	1.455	1.433	1.5	71	0.00	4.52
18	t	Acetophenone	1.840	1.734	5.8	70	0.00	4.70
19	t	2-Methylphenol	1.174	1.141	2.8	70	0.00	4.60
20	t	2,2'-oxybis(1-Chloropropa	0.363	0.321	11.6	66	0.00	4.60
21	t	3&4-Methylphenol	1.180	1.213	-2.8	74	0.00	4.72
22	t	n-Nitroso-di-n-propylamin	0.918	0.919	-0.1	74	0.00	4.71
23	t	Hexachloroethane	0.621	0.613	1.3	71	0.00	4.78
24	I	Naphthalene-d8	1.000	1.000	0.0	73	0.00	5.45
25	S	Nitrobenzene-d5	0.427	0.385	9.8	65	0.00	4.82
26	t	Nitrobenzene	0.414	0.383	7.5	67	0.00	4.83
27	t	Quinoline	0.758	0.733	3.3	69	0.00	5.82
28	t	Isophorone	0.773	0.693	10.3	63	0.00	5.03
29	t	2-Nitrophenol	0.192	0.225	-17.2	76	0.00	5.10
30	t	2,4-Dimethylphenol	0.317	0.324	-2.2	67	0.00	5.15
31	t	Benzoic acid	0.252	0.308	-22.2#	86	-0.02	5.25
32	t	bis(2-Chloroethoxy)methan	0.469	0.413	11.9	65	0.00	5.23
33	t	2,4-Dichlorophenol	0.333	0.343	-3.0	72	0.00	5.33
34	t	2,6-Dichlorophenol	0.302	0.316	-4.6	74	0.00	5.54
35	t	1,3,5-Trichlorobenzene	0.418	0.425	-1.7	74	0.00	5.11
36	t	1,2,4-Trichlorobenzene	0.407	0.406	0.2	73	0.00	5.40
37	t	1,2,3-Trichlorobenzene	0.378	0.375	0.8	73	0.00	5.62
38	t	Naphthalene	0.979	0.980	-0.1	73	0.00	5.47
39	t	4-Chloroaniline	0.434	0.447	-3.0	74	0.00	5.53
40	t	2,3-Dichloroaniline	0.424	0.426	-0.5	72	0.00	6.59
41	t	Caprolactam	0.154	0.149	3.2	68	-0.01	5.89

Continuing Calibration Summary

Job Number: JC86837 **Sample:** EM6579-CC6556
Account: BBLNYS Arcadis **Lab FileID:** M153975.D
Project: National Grid, Philly Coke, Philadelphia, PA

42	t	Hexachlorobutadiene	0.242	0.233	3.7	70	0.00	5.61
43	t	4-Chloro-3-methylphenol	0.344	0.312	9.3	62	0.00	6.07
44	t	2-Methylnaphthalene	0.621	0.602	3.1	69	0.00	6.22
45	t	1-Methylnaphthalene	0.790	0.772	2.3	71	0.00	6.35
46	t	Dimethylnaphthalene	0.687	0.669	2.6	70	0.00	7.06
47	I	Acenaphthene-d10	1.000	1.000	0.0	73	0.00	7.66
48	t	Hexachlorocyclopentadiene	0.389	0.439	-12.9	77	0.00	6.44
49	t	2,4,6-Trichlorophenol	0.433	0.471	-8.8	77	0.00	6.60
50	t	2,4,5-Trichlorophenol	0.465	0.498	-7.1	77	-0.01	6.64
51	S	2-Fluorobiphenyl	1.487	1.422	4.4	71	0.00	6.70
52	t	2-Chloronaphthalene	1.231	1.214	1.4	74	-0.01	6.85
53	t	Biphenyl	1.607	1.549	3.6	70	0.00	6.84
54	t	2-Nitroaniline	0.332	0.395	-19.0	81	0.00	7.01
55	t	Dimethylphthalate	1.503	1.388	7.7	67	0.00	7.30
56	t	Acenaphthylene	1.932	1.895	1.9	71	0.00	7.44
57	t	2,6-Dinitrotoluene	0.282	0.324	-14.9	73	0.00	7.38
58	t	3-Nitroaniline	0.347	0.364	-4.9	72	0.00	7.62
59	t	Acenaphthene	1.170	1.180	-0.9	73	0.00	7.71
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	66.221	-32.4#	115	0.00	7.79
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.193	0.167	13.5	62	0.00	7.96
62	t	Dibenzofuran	1.749	1.715	1.9	72	0.00	7.99
		----------	True	Calc.	% Drift	----------		
63	t	2,4-Dinitrotoluene	25.000	26.645	-6.6	78	0.00	8.01
		----------	AvgRF	CCRF	% Dev	----------		
64	t	2,3,4,6-Tetrachlorophenol	0.416	0.460	-10.6	73	0.00	8.21
65	t	Diethylphthalate	1.453	1.346	7.4	66	0.00	8.46
66	t	Fluorene	1.452	1.403	3.4	71	0.00	8.56
67	t	4-Chlorophenyl-phenylethe	0.754	0.723	4.1	70	0.00	8.59
68	t	4-Nitroaniline	0.309	0.337	-9.1	73	0.00	8.63
69	I	Phenanthrene-d10	1.000	1.000	0.0	69	0.00	10.21
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	25.000	32.310	-29.2#	103	-0.02	8.69
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.532	0.537	-0.9	70	-0.01	8.81
72	t	1,2-Diphenylhydrazine	0.729	0.656	10.0	62	-0.01	8.87
73	S	2,4,6-Tribromophenol	0.135	0.174	-28.9#	81	-0.01	8.97
74	t	4-Bromophenyl-phenylether	0.273	0.264	3.3	66	0.00	9.45
75	t	Hexachlorobenzene	0.303	0.325	-7.3	75	0.00	9.53
76	t	Pentachlorophenol	0.169	0.222	-31.4#	82	0.00	9.91
77	t	Phenanthrene	0.992	1.056	-6.5	75	0.00	10.25
78	t	Anthracene	1.045	1.063	-1.7	70	0.00	10.34
79	t	Carbazole	1.004	1.027	-2.3	69	0.00	10.69
80	t	Di-n-butylphthalate	1.210	1.249	-3.2	66	0.03	11.53
81	t	Fluoranthene	1.311	1.270	3.1	65	0.03	12.50
82	t	Octadecane	0.321	0.332	-3.4	70	0.02	10.26
83	I	Chrysene-d12	1.000	1.000	0.0	68	0.00	15.31
84	t	Pyrene	1.465	1.428	2.5	66	-0.03	12.92
85	S	Terphenyl-d14	1.079	1.038	3.8	64	-0.02	13.36
86	t	Butylbenzylphthalate	0.602	0.611	-1.5	65	0.00	14.43

8.8.29

8

Continuing Calibration Summary

Job Number: JC86837 **Sample:** EM6579-CC6556
Account: BBLNYS Arcadis **Lab FileID:** M153975.D
Project: National Grid, Philly Coke, Philadelphia, PA

87	t	Benzo[a]anthracene	1.370	1.345	1.8	64	0.00	15.29
88	t	3,3'-Dichlorobenzidine	0.463	0.524	-13.2	73	0.00	15.34
89	t	Chrysene	1.217	1.182	2.9	67	0.00	15.36
		----------	True	Calc.	% Drift	----------		
90	t	bis(2-Ethylhexyl)phthalat	25.000	25.698	-2.8	69	0.03	15.66
		----------	AvgRF	CCRF	% Dev	----------		
91	I	Perylene-d12	1.000	1.000	0.0	70	0.00	17.90
		----------	True	Calc.	% Drift	----------		
92	t	Di-n-octylphthalate	25.000	23.219	7.1	66	0.00	16.87
		----------	AvgRF	CCRF	% Dev	----------		
93	t	Benzo[b]fluoranthene	1.260	1.207	4.2	63	-0.01	17.26
94	t	Benzo[k]fluoranthene	1.200	1.106	7.8	64	-0.02	17.32
95	t	Benzo[a]pyrene	1.106	1.118	-1.1	65	-0.01	17.80
		----------	True	Calc.	% Drift	----------		
96	t	Indeno[1,2,3-cd]pyrene	25.000	23.585	5.7	65	0.00	19.53
		----------	AvgRF	CCRF	% Dev	----------		
97	t	Dibenz(a,h)acridine	1.014	1.019	-0.5	63	0.00	19.22
98	t	Dibenz[a,h]anthracene	1.020	1.075	-5.4	67	0.00	19.58
99	t	7,12-Dimethylbenz(a)anthr	0.483	0.540	-11.8	70	-0.01	17.28
100	t	Benzo[g,h,i]perylene	1.049	1.072	-2.2	65	-0.02	19.91

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153975.d MM6556.M Fri May 03 12:23:50 2019

8.8.29

8

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: EM6579-CC6557
Lab FileID: M153976.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...meel\em6579\m153976.d Vial: 3
Acq On : 2 May 2019 2:07 pm Operator: christc2
Sample : cc6557-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6556.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Fri May 03 11:51:36 2019
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	89	0.00	4.39
102	t	Benzaldehyde	1.122	1.090	2.9	82	0.00	4.07
103	I	Acenaphthene-d10a	1.000	1.000	0.0	92	0.00	7.66
104	I	1,2,4,5-Tetrachlorobenzen	0.683	0.718	-5.1	92	0.00	6.44
105	t	Atrazine	0.187	0.234	-25.1#	101	0.00	9.84
108		Chrysene-d12b	1.000	1.000	0.0	96	0.00	15.31
109	s	1-chlorooctadecane	0.246	0.279	-13.4	95	0.00	12.57
110	I	Phenanthrene-d10a	1.000	1.000	0.0	97	0.00	10.21
111	s	o-terphenyl	0.594	0.638	-7.4	93	0.02	11.03
112		Pentachloronitrobenzene	0.047	0.060	-27.7#	113	0.00	9.93
113	I	Naphthalene-d8a	1.000	1.000	0.0	88	0.00	5.45
114		Hydroquinone	0.326	0.388	-19.0	104	0.00	5.90

(#) = Out of Range SPCC's out = 0 CCC's out = 0
m153975.d MM6556.M Fri May 03 12:19:10 2019

8.8.30

8

MS Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/06/19 12:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:24:44 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

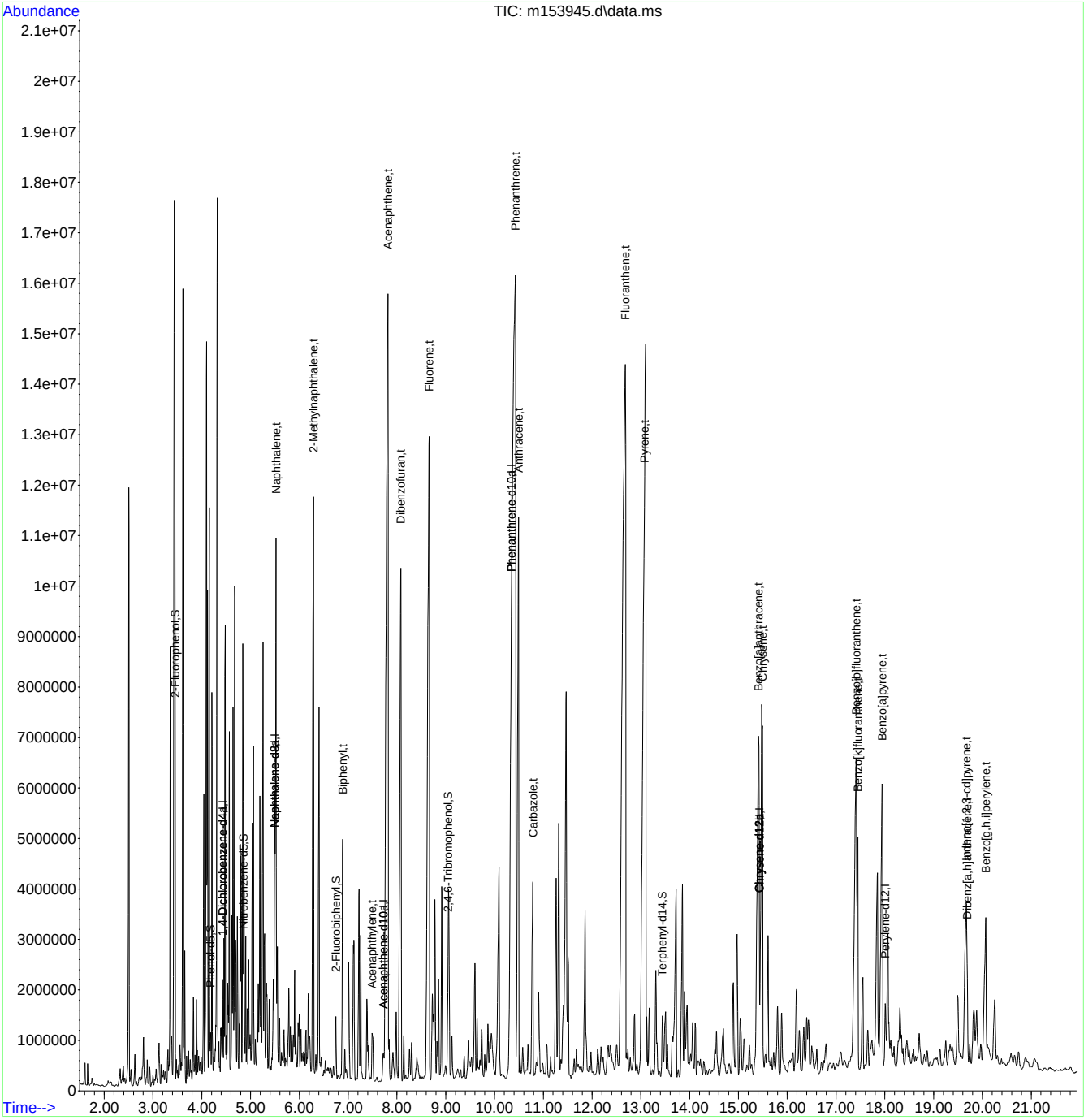
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.426	152	169490	40.00	ppm	0.00
24) Naphthalene-d8	5.489	136	532416	40.00	ppm	0.00
47) Acenaphthene-d10	7.721	164	312497	40.00	ppm	0.01
69) Phenanthrene-d10	10.344	188	551501	40.00	ppm	0.08
83) Chrysene-d12	15.428	240	488193m	40.00	ppm	0.06
91) Perylene-d12	18.008	264	516745	40.00	ppm	0.04
101) 1,4-Dichlorobenzene-d4a	4.426	152	169490	40.00	ppm	0.00
103) Acenaphthene-d10a	7.721	164	312497	40.00	ppm	0.01
106) Chrysene-d12a	15.428	240	491473	40.00	ppm	0.06
108) Chrysene-d12b	15.428	240	491473	40.00	ppm	# 0.06
110) Phenanthrene-d10a	10.344	188	551501	40.00	ppm	0.08
113) Naphthalene-d8a	5.489	136	532555	40.00	ppm	0.00
115) Chrysene-d12c	15.428	240	493276	40.00	ppm	0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.454	112	188530	28.45	ppm	0.01
Spiked Amount 50.000			Recovery =	56.90%		
8) Phenol-d5	4.180	99	210349	25.70	ppm	0.00
Spiked Amount 50.000			Recovery =	51.40%		
25) Nitrobenzene-d5	4.853	82	189405	33.35	ppm	0.00
Spiked Amount 50.000			Recovery =	66.70%		
51) 2-Fluorobiphenyl	6.749	172	393389	33.86	ppm	0.00
Spiked Amount 50.000			Recovery =	67.72%		
73) 2,4,6-Tribromophenol	9.046	330	77819	41.94	ppm	0.02
Spiked Amount 50.000			Recovery =	83.88%		
85) Terphenyl-d14	13.436	244	395921m	30.07	ppm	0.02
Spiked Amount 50.000			Recovery =	60.14%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.521	128	3843624m	294.84	ppm	
44) 2-Methylnaphthalene	6.290	141	4132285	499.91	ppm	94
53) Biphenyl	6.888	154	1853347	147.63	ppm	98
56) Acenaphthylene	7.491	152	432721	28.67	ppm	93
59) Acenaphthene	7.817	153	11757425	1286.40	ppm	88
62) Dibenzofuran	8.079	168	9167131	670.85	ppm	93
66) Fluorene	8.661	166	10989870	969.08	ppm	91
77) Phenanthrene	10.429	178	36170980	2645.26	ppm	91
78) Anthracene	10.493	178	8757404	608.00	ppm	95
79) Carbazole	10.787	167	2857671	206.37	ppm	98
81) Fluoranthene	12.683	202	29513473	1632.79	ppm	89
84) Pyrene	13.073	202	20622563	1153.67	ppm	93
87) Benzo[a]anthracene	15.412	228	7764904m	464.55	ppm	
89) Chrysene	15.492	228	6391114	430.16	ppm	92
93) Benzo[b]fluoranthene	17.410	252	8558342	525.70	ppm	94
94) Benzo[k]fluoranthene	17.447	252	2019355m	130.31	ppm	
95) Benzo[a]pyrene	17.949	252	5539202	387.62	ppm	95
96) Indeno[1,2,3-cd]pyrene	19.669	276	3636505	300.58	ppm	98
98) Dibenz[a,h]anthracene	19.685	278	878958	66.74	ppm	94
100) Benzo[g,h,i]perylene	20.070	276	3164728	233.50	ppm	99

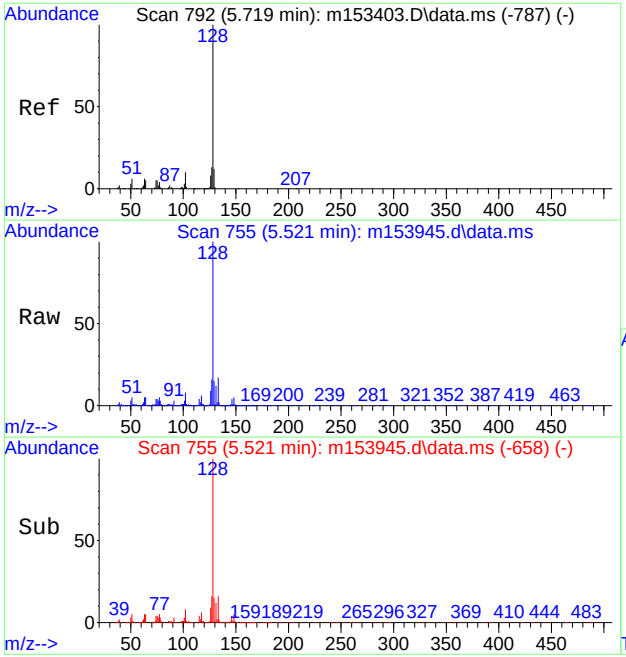
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:24:44 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

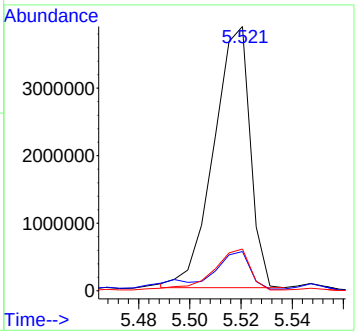


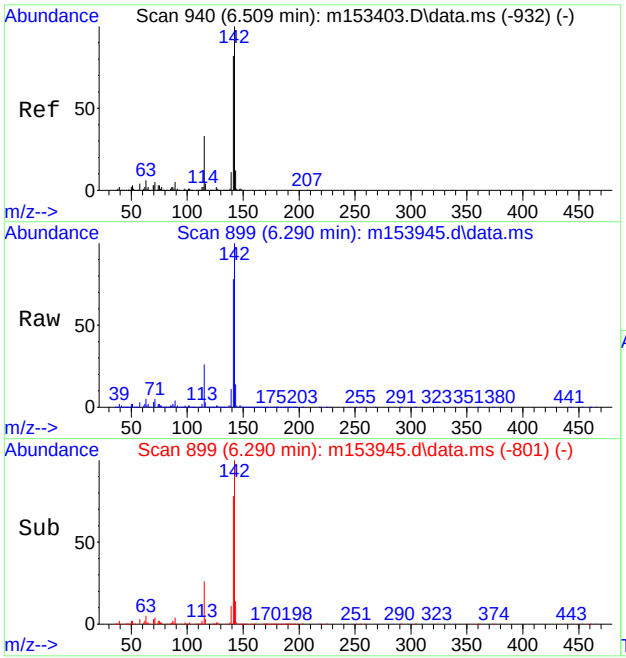


#38
Naphthalene
Concen: 294.84 ppm m
RT: 5.521 min Scan# 755
Delta R.T. 0.018 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:128 Resp: 3843624

Ion	Ratio	Lower	Upper
128	100		
129	14.8	0.0	41.9
127	15.8	0.0	43.9

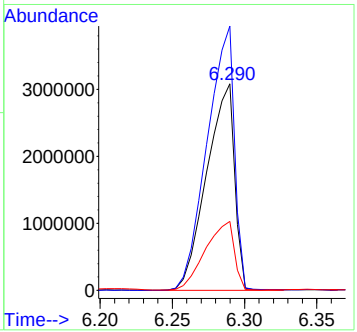


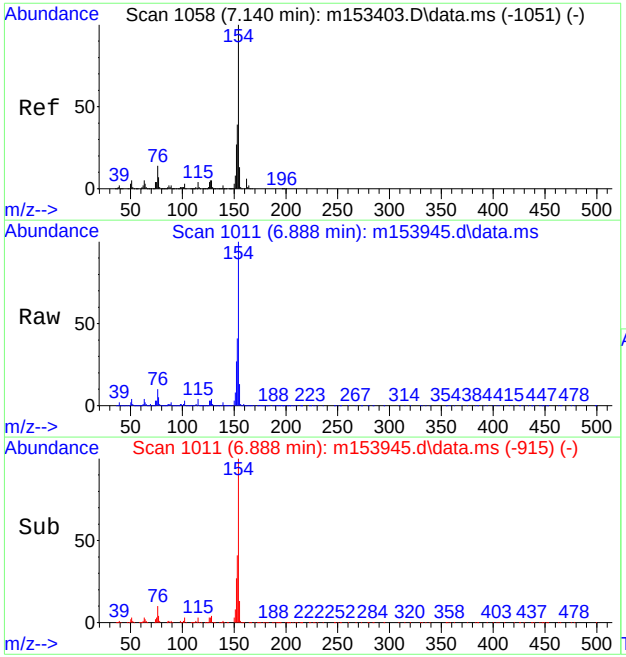


#44
2-Methylnaphthalene
Concen: 499.91 ppm
RT: 6.290 min Scan# 899
Delta R.T. 0.024 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:141 Resp: 4132285

Ion	Ratio	Lower	Upper
141	100		
142	128.1	91.0	151.0
115	33.3	1.1	61.1

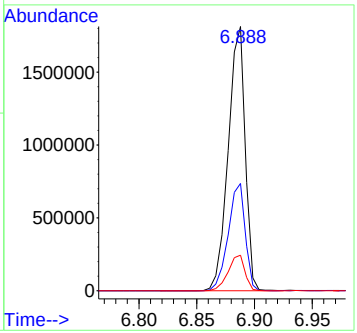


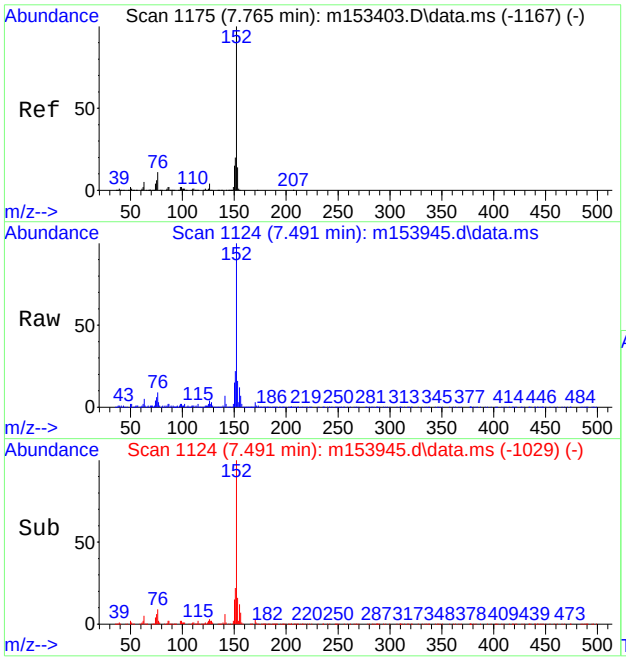


#53
Biphenyl
Concen: 147.63 ppm
RT: 6.888 min Scan# 1011
Delta R.T. 0.013 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:154 Resp: 1853347

Ion	Ratio	Lower	Upper
154	100		
153	40.6	9.3	69.3
155	13.5	0.0	42.8

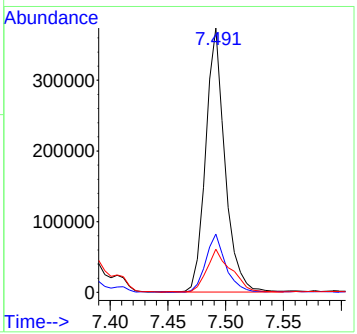


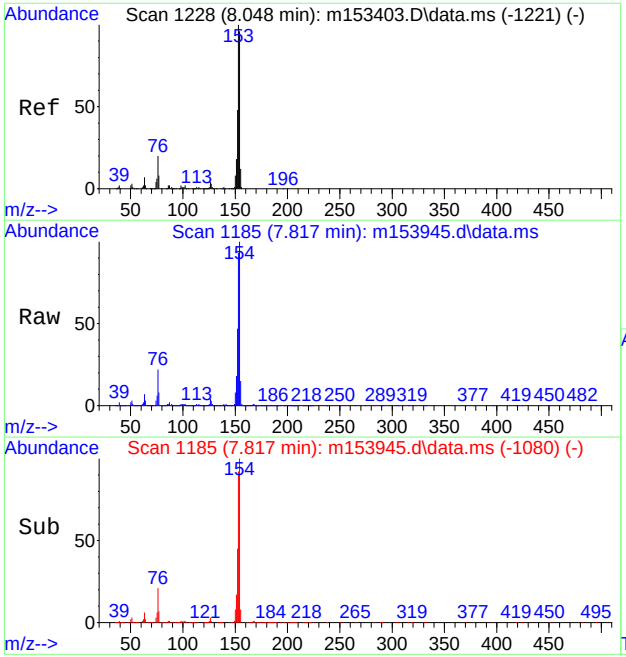


#56
Acenaphthylene
Concen: 28.67 ppm
RT: 7.491 min Scan# 1124
Delta R.T. 0.008 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:152 Resp: 432721

Ion	Ratio	Lower	Upper
152	100		
151	22.0	0.0	49.6
153	16.2	0.0	42.7

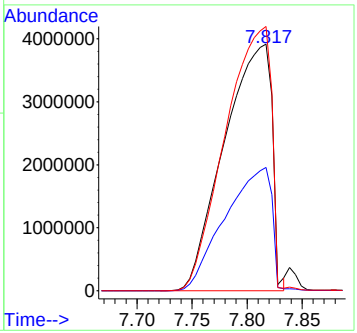


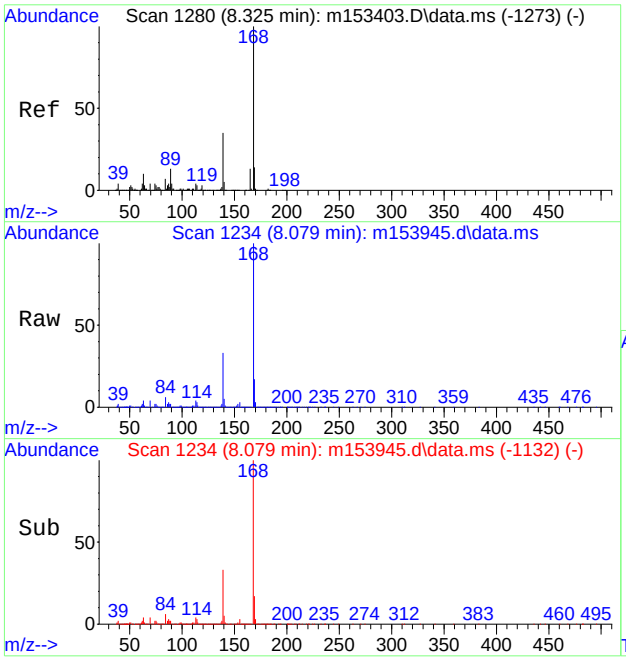


#59
Acenaphthene
Concen: 1286.40 ppm
RT: 7.817 min Scan# 1185
Delta R.T. 0.061 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:153 Resp:11757425

Ion	Ratio	Lower	Upper
153	100		
152	51.0	18.4	78.4
154	109.6	64.6	124.6

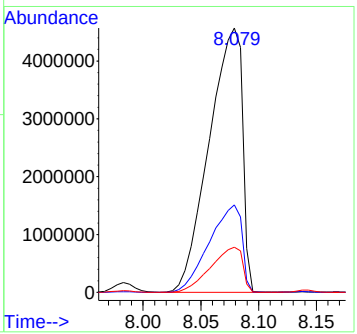


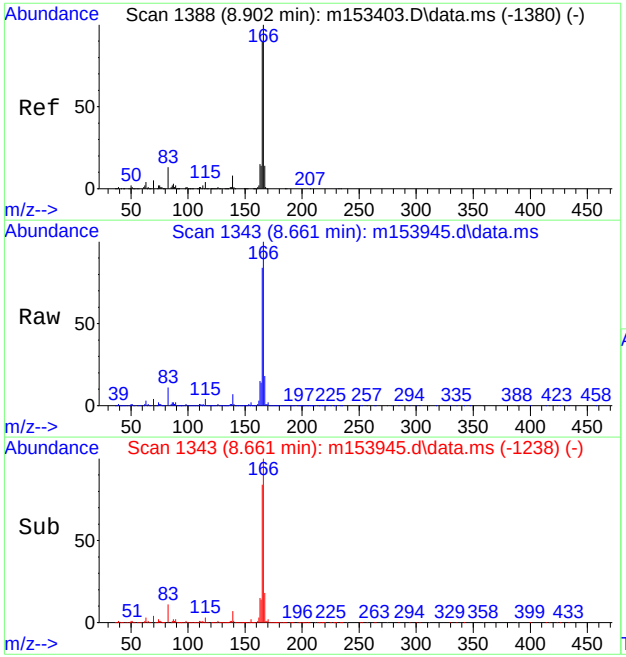


#62
Dibenzofuran
Concen: 670.85 ppm
RT: 8.079 min Scan# 1234
Delta R.T. 0.045 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:168 Resp: 9167131

Ion	Ratio	Lower	Upper
168	100		
139	33.0	0.0	59.9
169	17.1	0.0	43.1

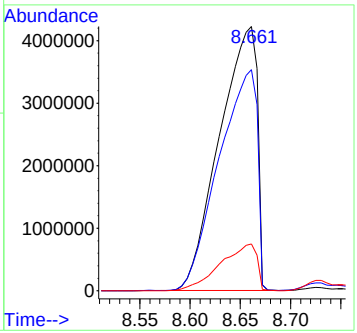


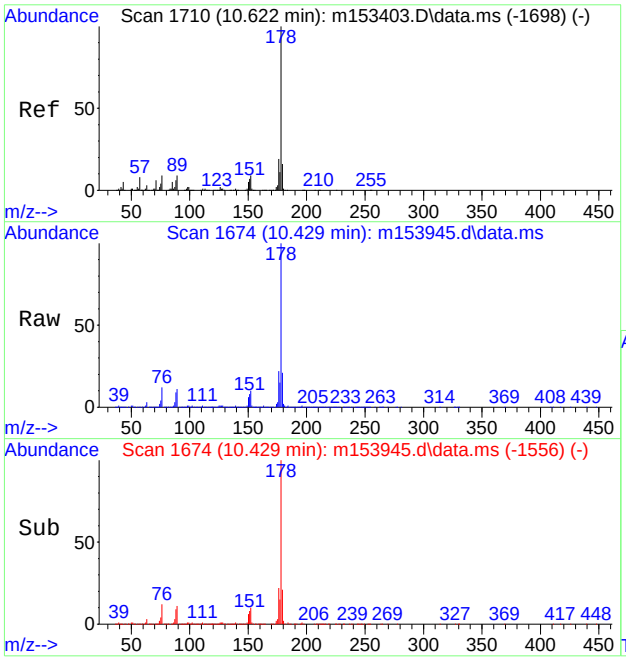


#66
Fluorene
Concen: 969.08 ppm
RT: 8.661 min Scan# 1343
Delta R.T. 0.061 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:166 Resp:10989870

Ion	Ratio	Lower	Upper
166	100		
165	83.6	61.3	121.3
167	17.7	0.0	43.0

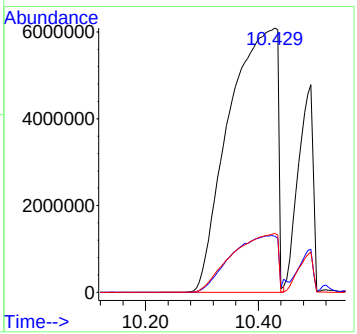


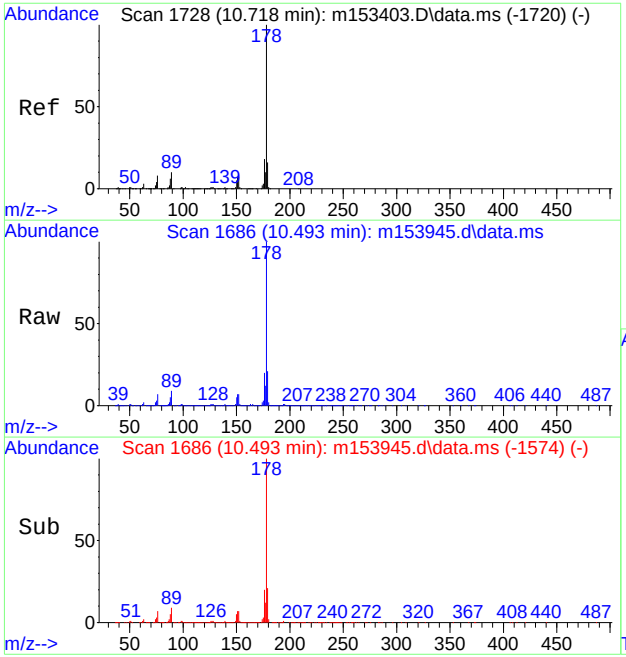


#77
Phenanthrene
Concen: 2645.26 ppm
RT: 10.429 min Scan# 1674
Delta R.T. 0.131 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:178 Resp:36170980

Ion	Ratio	Lower	Upper
178	100		
179	18.9	0.0	45.1
176	22.4	0.0	48.1

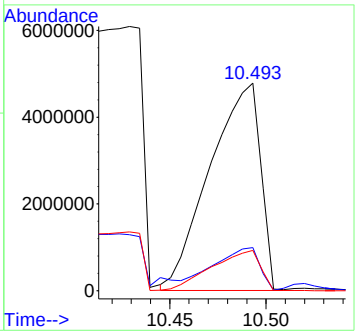


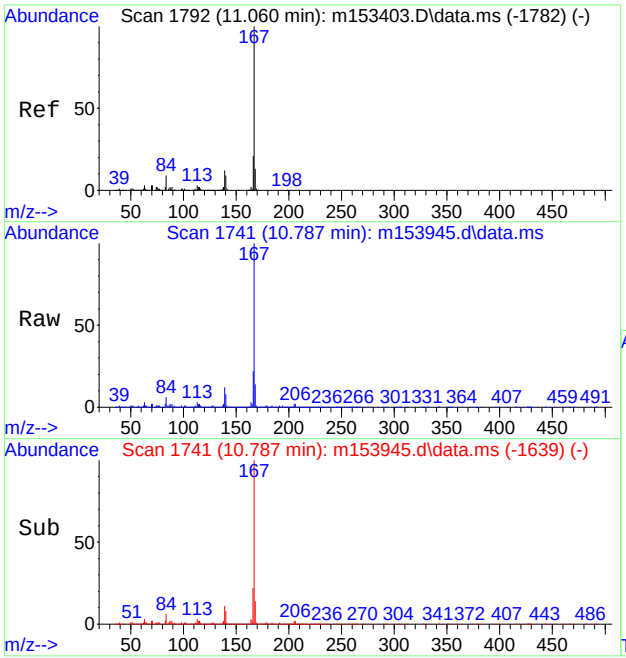


#78
Anthracene
Concen: 608.00 ppm
RT: 10.493 min Scan# 1686
Delta R.T. 0.098 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:178 Resp: 8757404

Ion	Ratio	Lower	Upper
178	100		
179	17.3	0.0	45.3
176	19.7	0.0	47.7

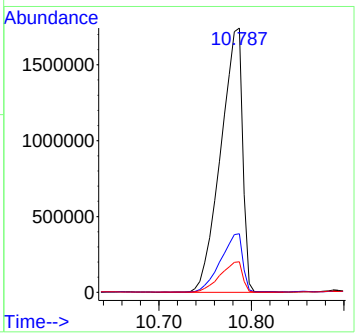


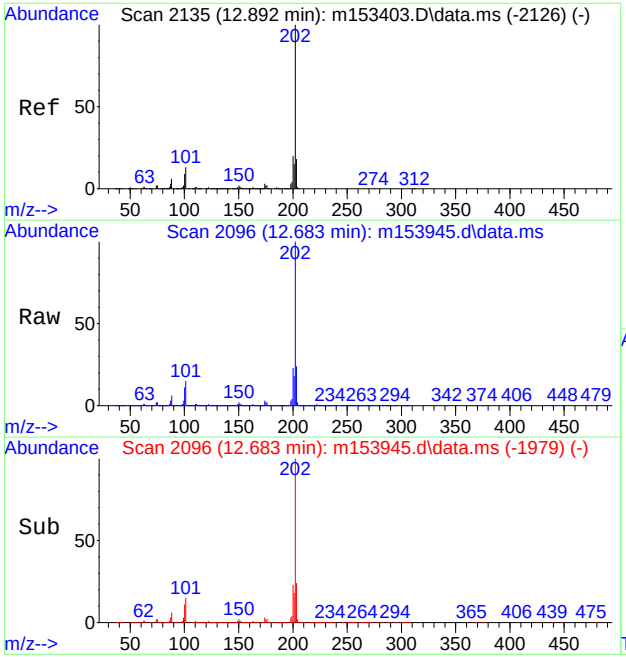


#79
Carbazole
Concen: 206.37 ppm
RT: 10.787 min Scan# 1741
Delta R.T. 0.045 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:167 Resp: 2857671

Ion	Ratio	Lower	Upper
167	100		
166	22.0	0.0	50.7
139	11.4	0.0	40.8

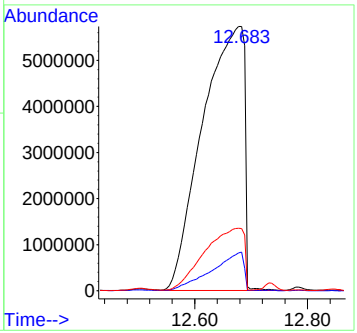


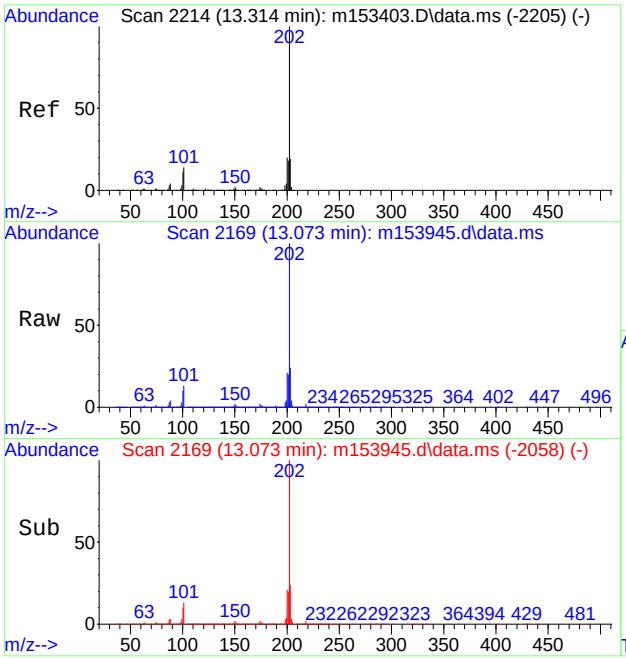


#81
Fluoranthene
Concen: 1632.79 ppm
RT: 12.683 min Scan# 2096
Delta R.T. 0.125 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:202 Resp:29513473

Ion	Ratio	Lower	Upper
202	100		
101	14.6	0.0	41.5
203	23.3	0.0	47.7

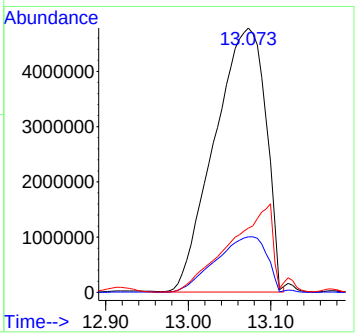


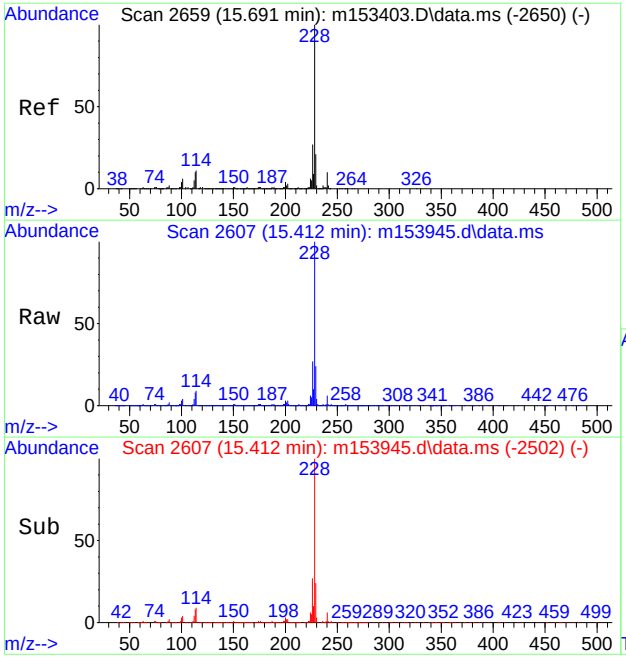


#84
Pyrene
Concen: 1153.67 ppm
RT: 13.073 min Scan# 2169
Delta R.T. 0.093 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:202 Resp:20622563

Ion	Ratio	Lower	Upper
202	100		
200	20.9	0.0	49.2
203	22.7	0.0	48.1

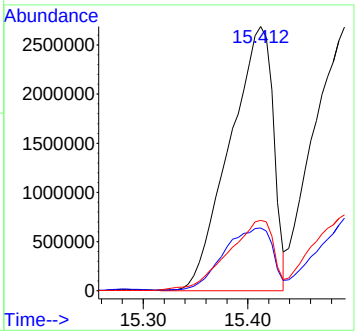


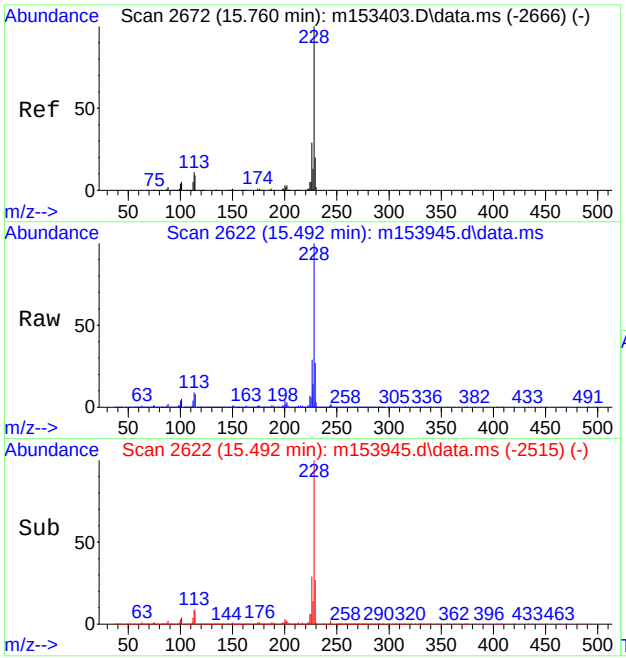


#87
Benzo[a]anthracene
Concen: 464.55 ppm m
RT: 15.412 min Scan# 2607
Delta R.T. 0.061 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:228 Resp: 7764904

Ion	Ratio	Lower	Upper
228	100		
229	23.8	0.0	49.7
226	26.6	0.0	54.7

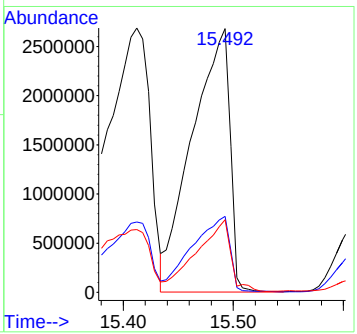


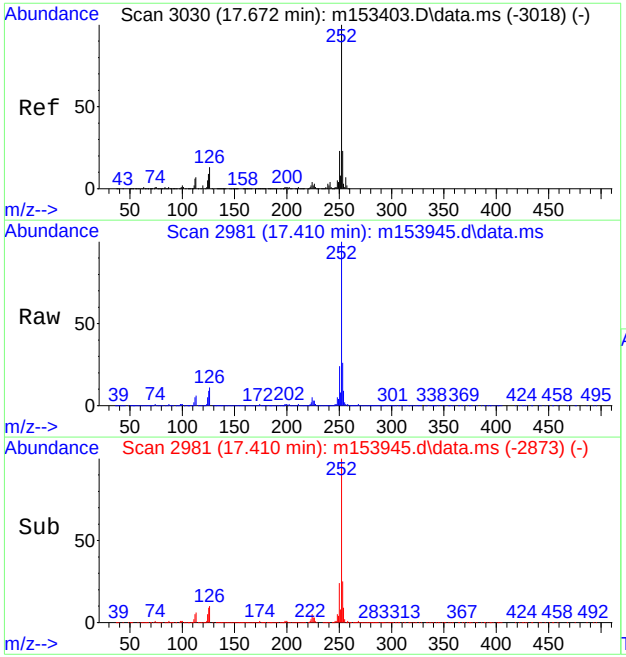


#89
Chrysene
Concen: 430.16 ppm
RT: 15.492 min Scan# 2622
Delta R.T. 0.072 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:228 Resp: 6391114

Ion	Ratio	Lower	Upper
228	100		
226	28.7	0.0	57.4
229	27.3	0.0	50.4

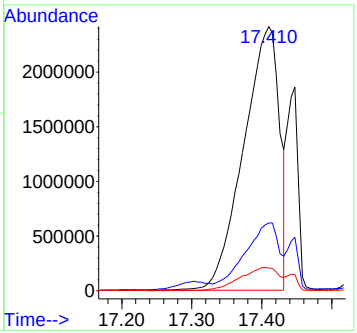


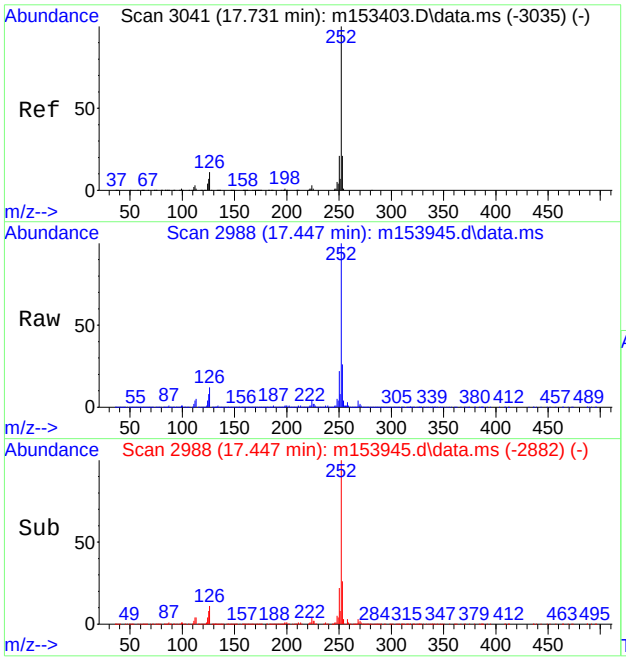


#93
Benzo[b]fluoranthene
Concen: 525.70 ppm
RT: 17.410 min Scan# 2981
Delta R.T. 0.077 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:252 Resp: 8558342

Ion	Ratio	Lower	Upper
252	100		
253	25.6	0.0	52.2
125	8.3	0.0	39.2

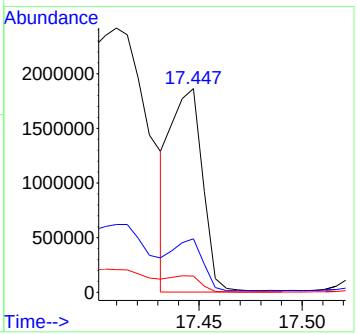


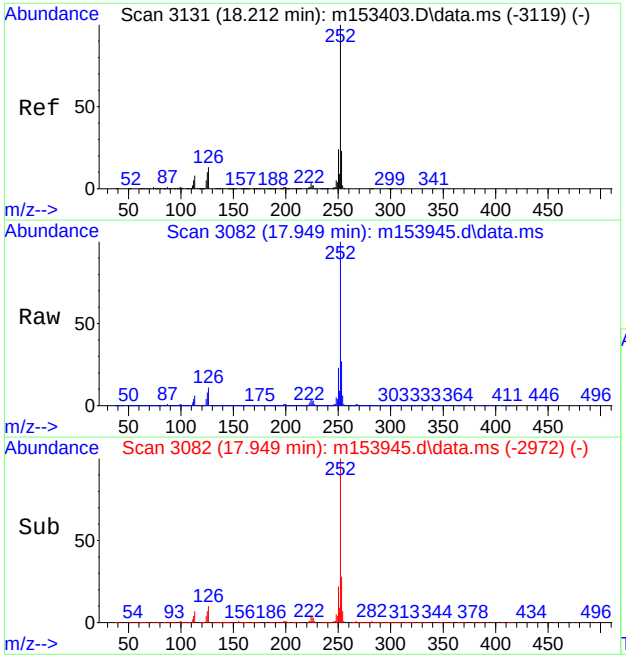


#94
Benzo[k]fluoranthene
Concen: 130.31 ppm m
RT: 17.447 min Scan# 2988
Delta R.T. 0.066 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:252 Resp: 2019355

Ion	Ratio	Lower	Upper
252	100		
253	26.3	0.0	50.9
125	8.0	0.0	40.3

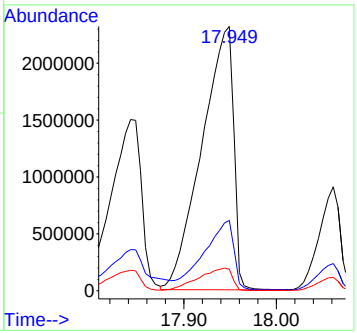


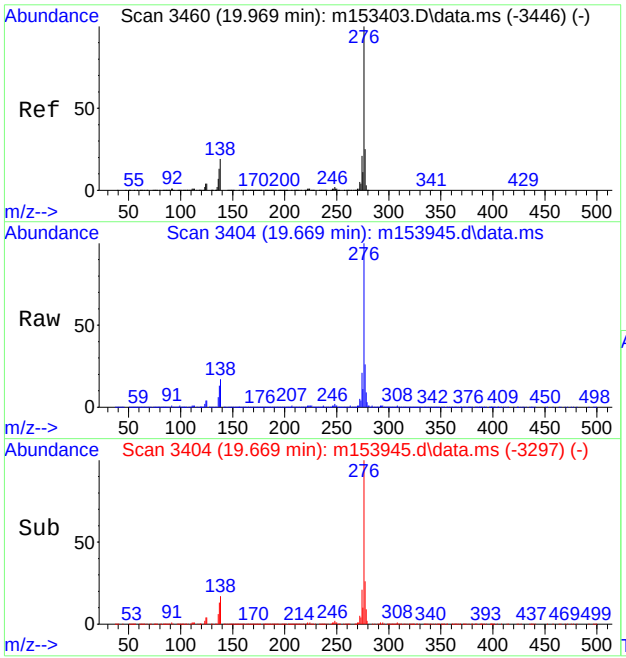


#95
Benzo[a]pyrene
Concen: 387.62 ppm
RT: 17.949 min Scan# 3082
Delta R.T. 0.088 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:252 Resp: 5539202

Ion	Ratio	Lower	Upper
252	100		
253	24.5	0.0	51.8
125	8.1	0.0	39.9

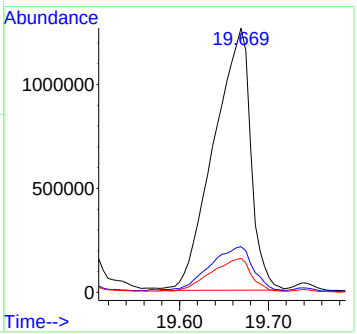


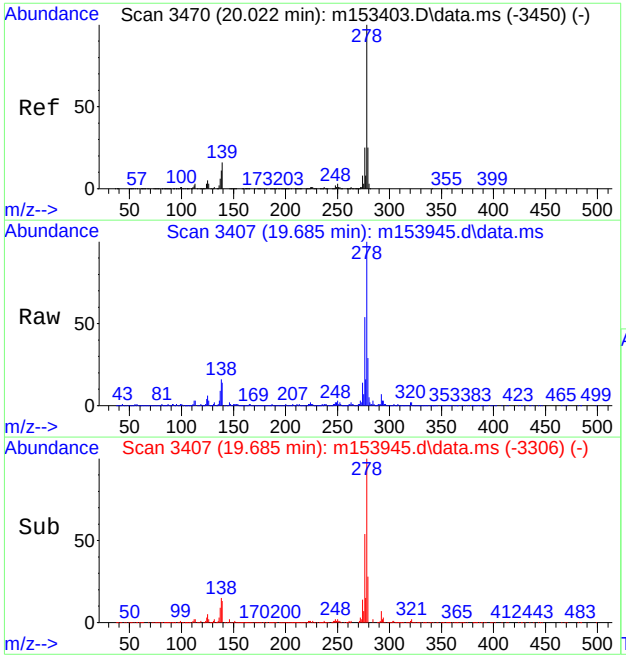


#96
Indeno[1,2,3-cd]pyrene
Concen: 300.58 ppm
RT: 19.669 min Scan# 3404
Delta R.T. 0.072 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:276 Resp: 3636505

Ion	Ratio	Lower	Upper
276	100		
138	16.6	0.0	45.7
137	12.5	0.0	42.0

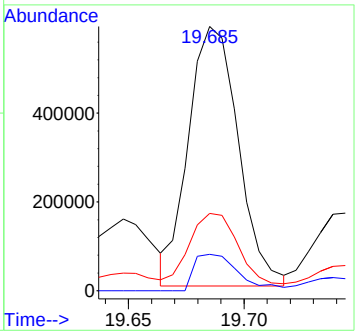


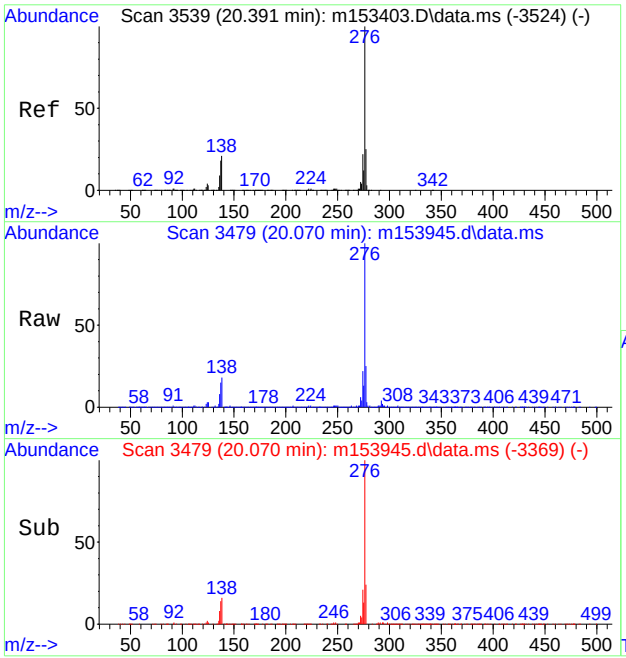


#98
Dibenz[a,h]anthracene
Concen: 66.74 ppm
RT: 19.685 min Scan# 3407
Delta R.T. 0.040 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:278 Resp: 878958

Ion	Ratio	Lower	Upper
278	100		
139	14.6	0.0	43.5
279	28.8	0.0	54.8

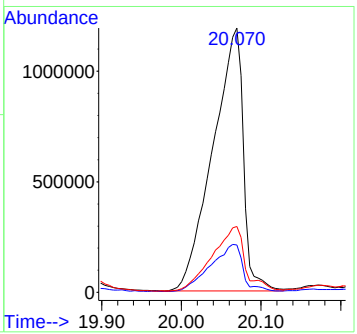




#100
Benzo[g,h,i]perylene
Concen: 233.50 ppm
RT: 20.070 min Scan# 3479
Delta R.T. 0.088 min
Lab File: m153945.d
Acq: 1 May 2019 6:57 pm

Tgt Ion:276 Resp: 3164728

Ion	Ratio	Lower	Upper
276	100		
138	17.6	0.0	48.0
277	24.4	0.0	55.0



Manual Integration Approval Summary

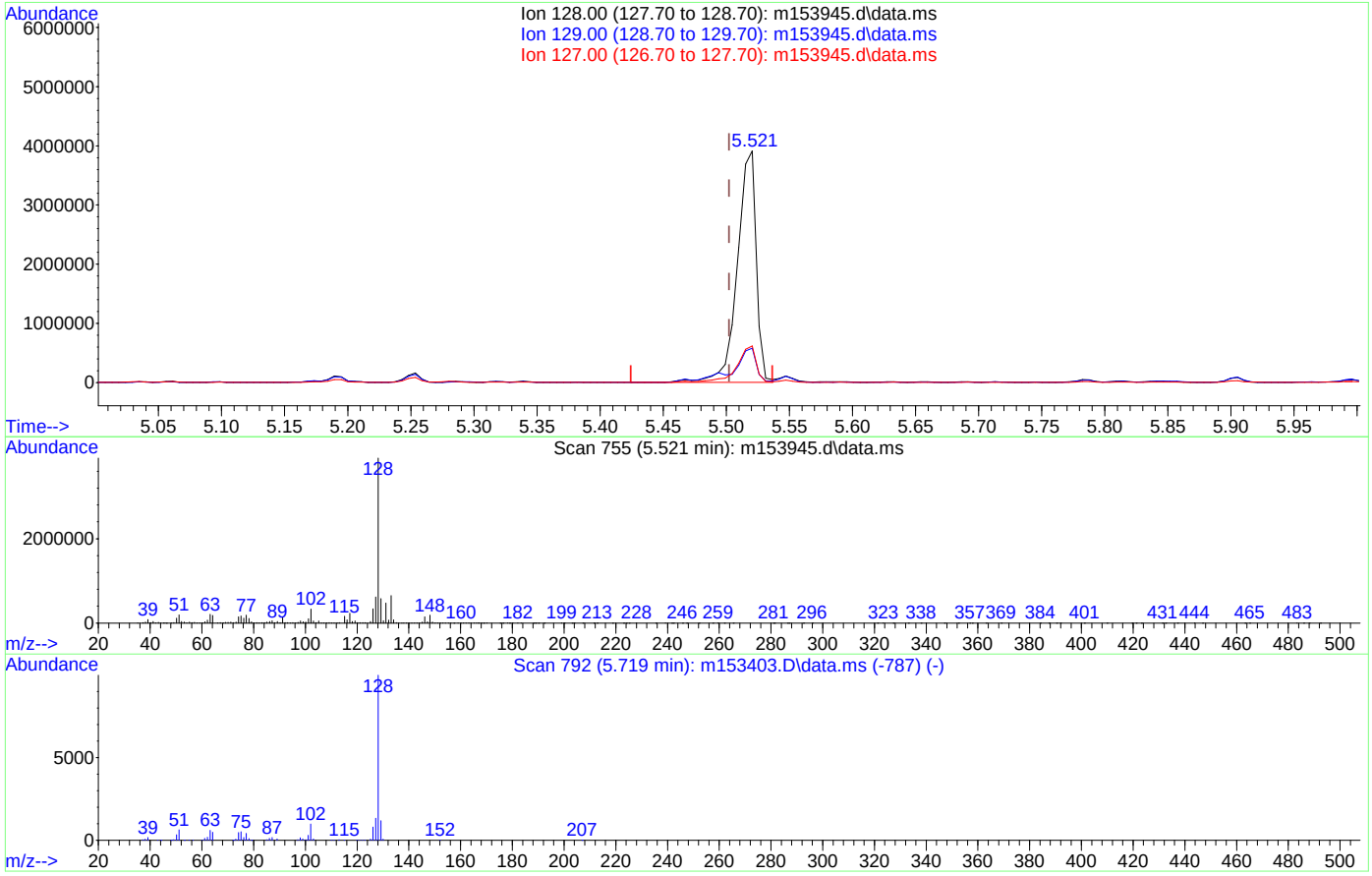
Sample Number: JC86837-1
Lab FileID: M153945.D
Injection Time: 05/01/19 18:57
Method: SW846 8270D
Analyst approved: 05/02/19 05:57 Jeryll Fabriene Reyes
Supervisor approved: 05/06/19 12:18 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3		5.52	Poor instrument integration
Terphenyl-d14	1718-51-0		13.44	Poor instrument integration
Benzo(a)anthracene	56-55-3		15.41	Poor instrument integration
Chrysene-d12	1719-03-5		15.43	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		17.45	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:33:24 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



TIC: m153945.d\data.ms

(38) Naphthalene (t)

5.521min (+0.018) 313.26ppm

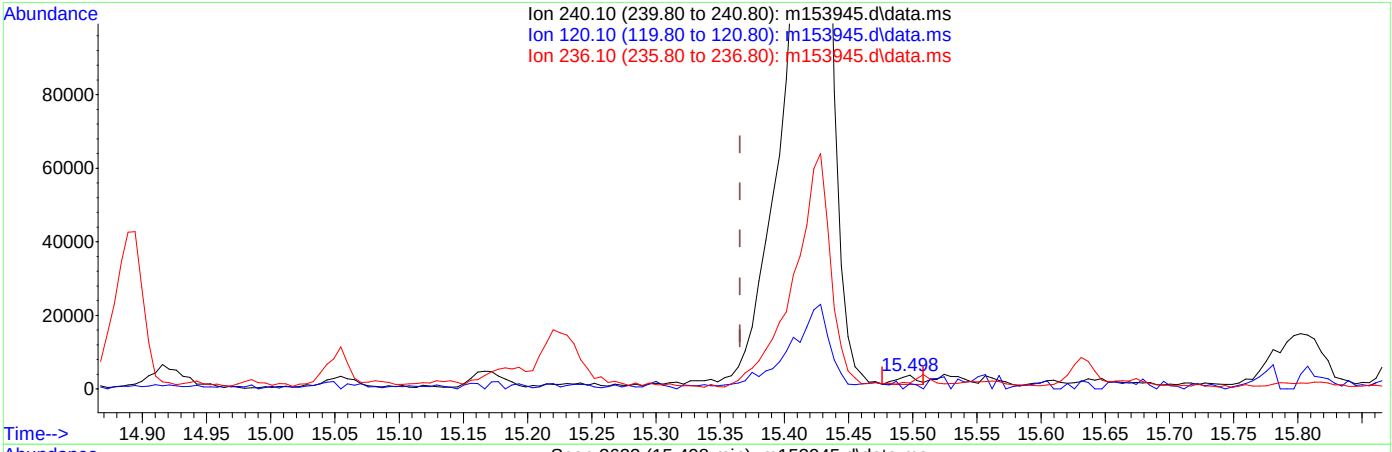
response 4083634

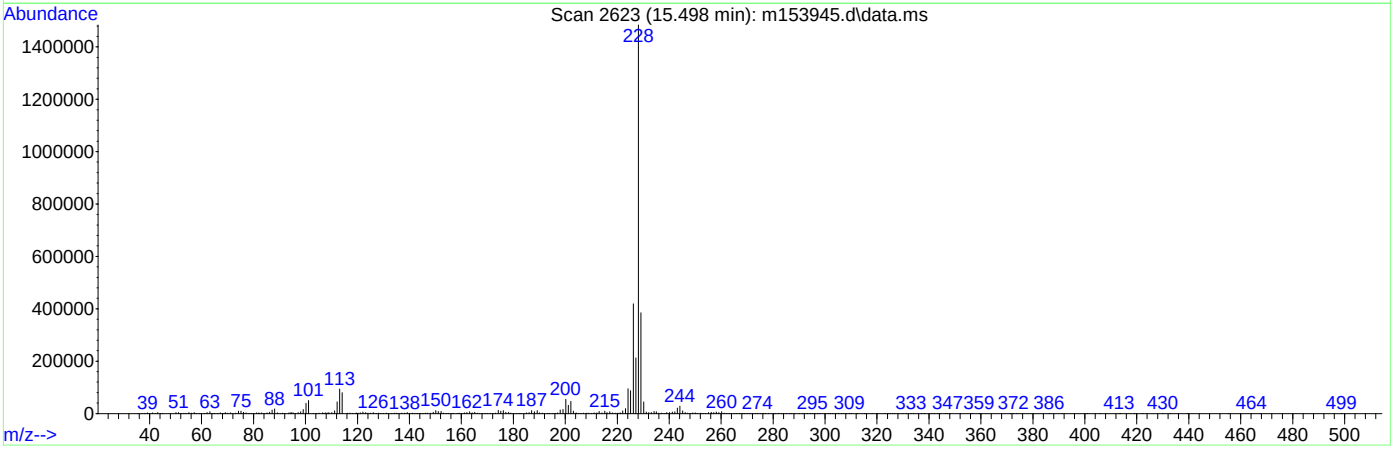
Ion	Exp%	Act%
128.00	100	100
129.00	11.90	14.58
127.00	13.90	15.69
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:20:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration





TIC: m153945.d\data.ms

(83) Chrysene-d12 (I)

15.498min (+0.132) 40.00ppm

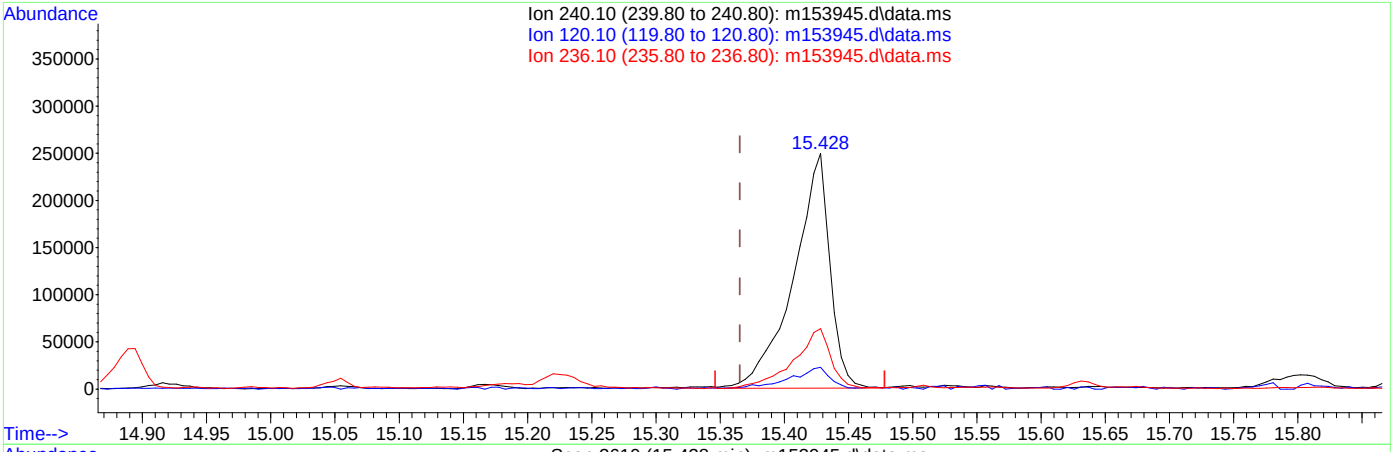
response 2629

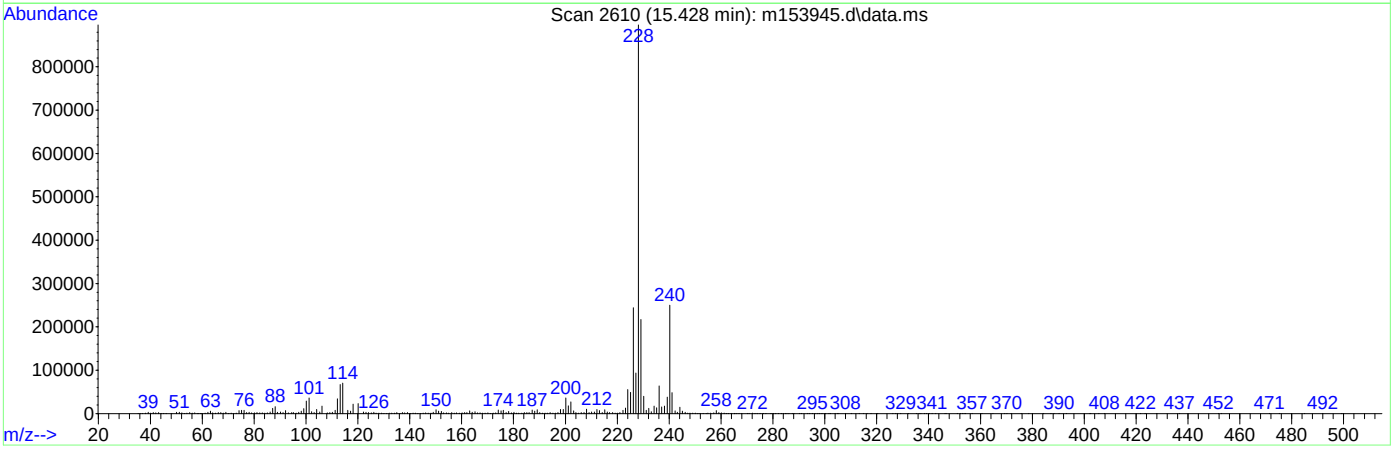
Ion	Exp%	Act%
240.10	100	100
120.10	10.90	36.62
236.10	22.80	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:20:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration





TIC: m153945.d\data.ms

(83) Chrysene-d12 (I)

15.428min (+0.063) 40.00ppm m

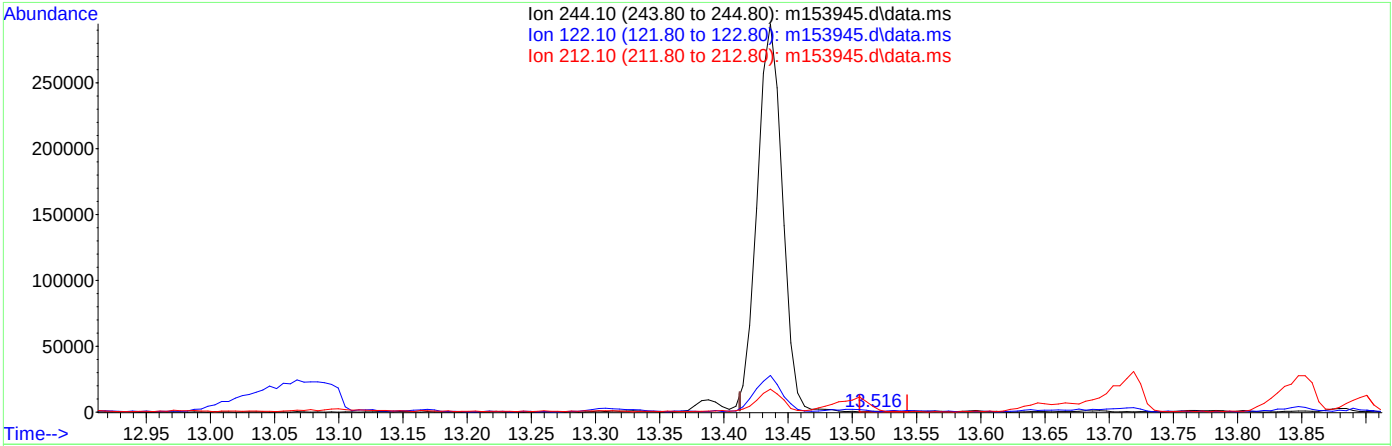
response 488193

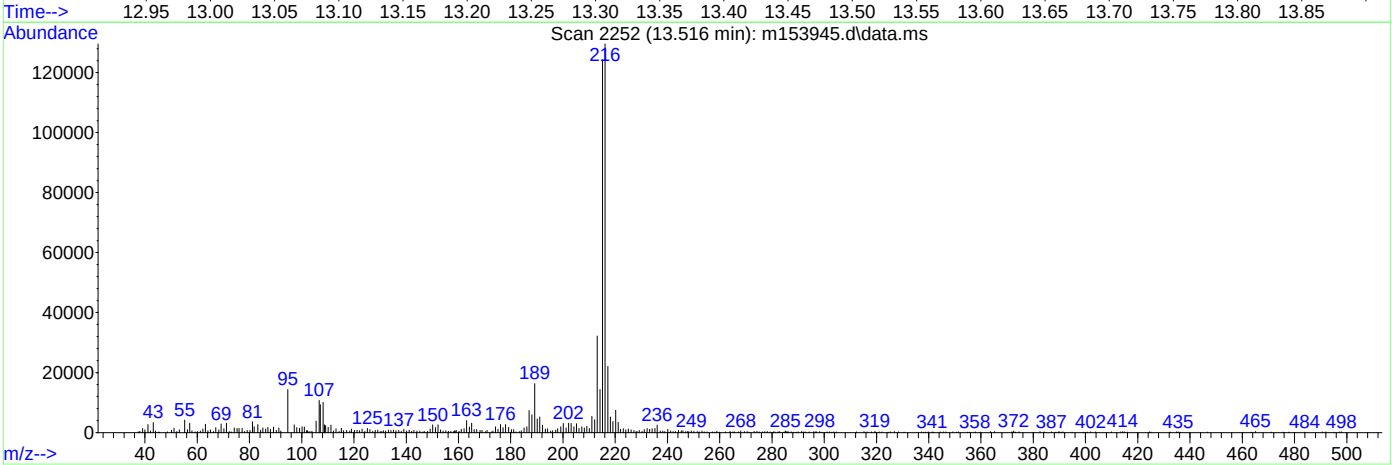
Ion	Exp%	Act%
240.10	100	100
120.10	10.90	9.21
236.10	22.80	25.63
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:20:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration





TIC: m153945.d\data.ms

(85) Terphenyl-d14 (S)

13.516min (+0.104) 0.05ppm

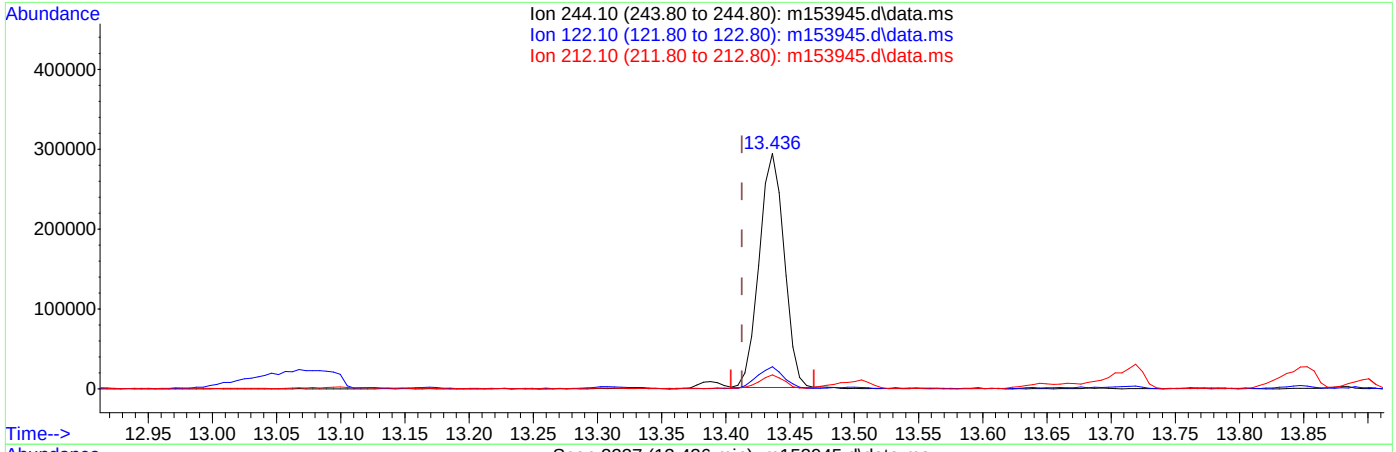
response 678

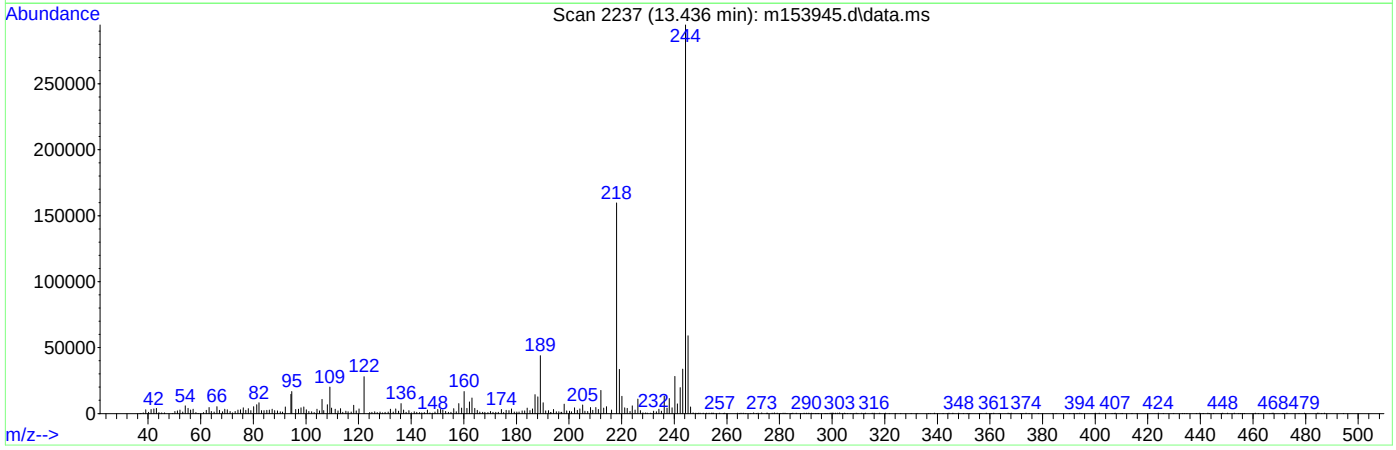
Ion	Exp%	Act%
244.10	100	100
122.10	10.80	0.00
212.10	6.20	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:20:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration





TIC: m153945.d\data.ms

(85) Terphenyl-d14 (S)

13.436min (+0.024) 30.07ppm m

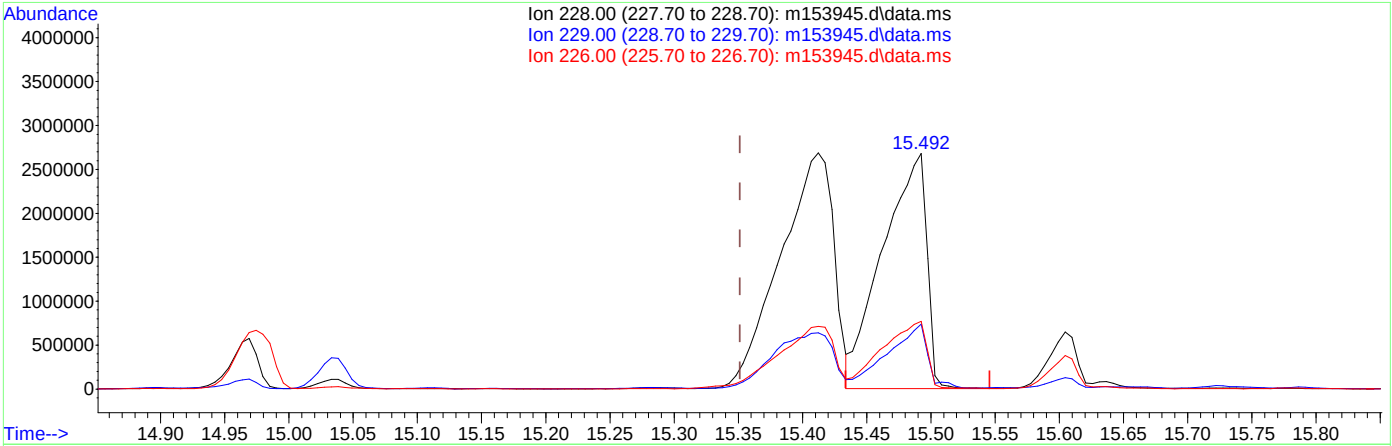
response 395921

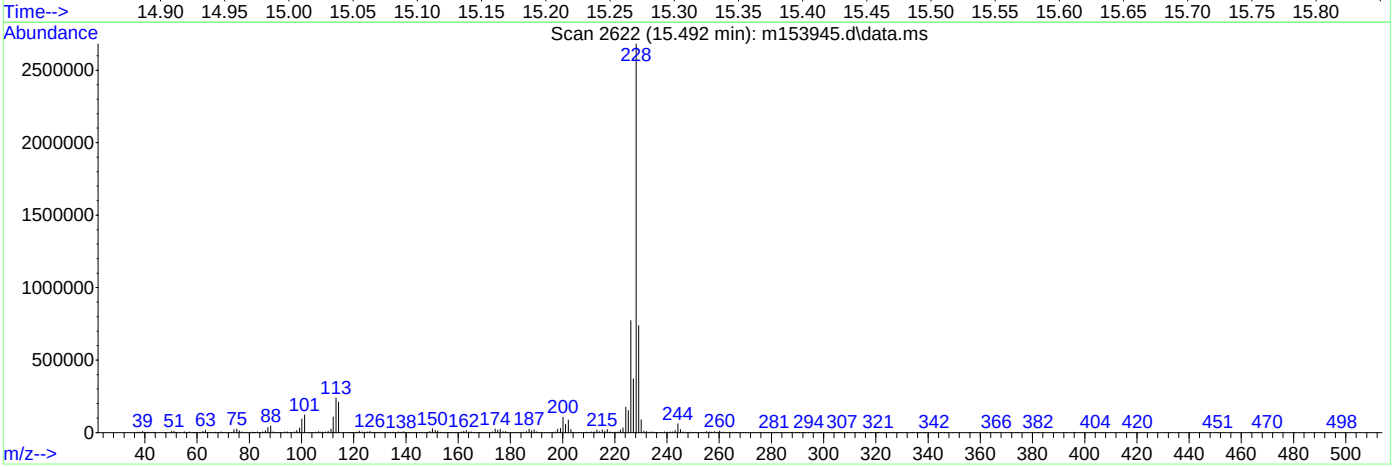
Ion	Exp%	Act%
244.10	100	100
122.10	10.80	9.48
212.10	6.20	5.96
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:20:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration





TIC: m153945.d\data.ms

(87) Benzo[a]anthracene (t)

15.492min (+0.141) 382.06ppm

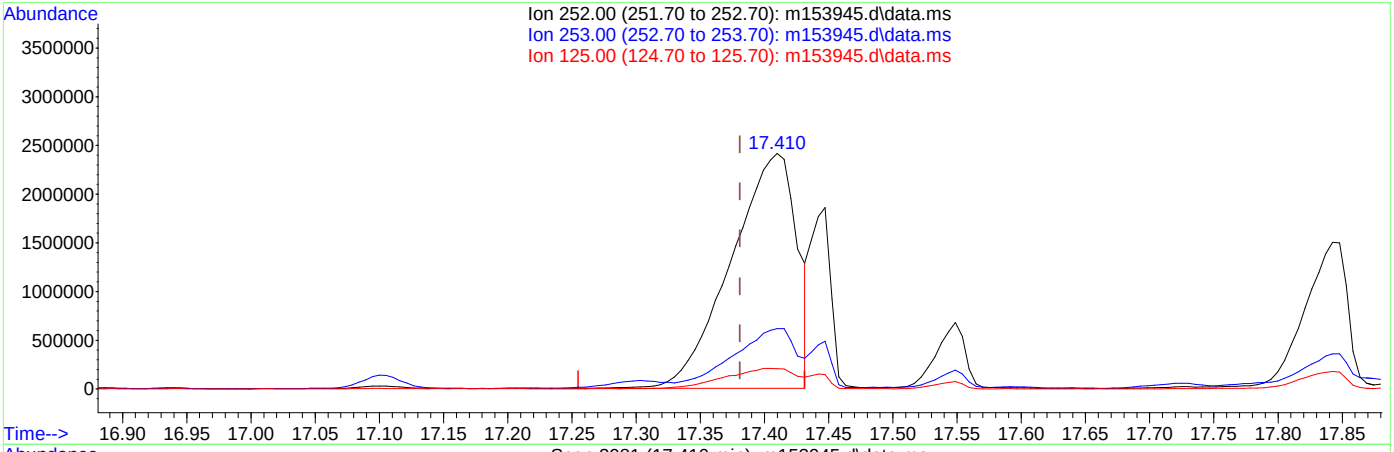
response 6386074

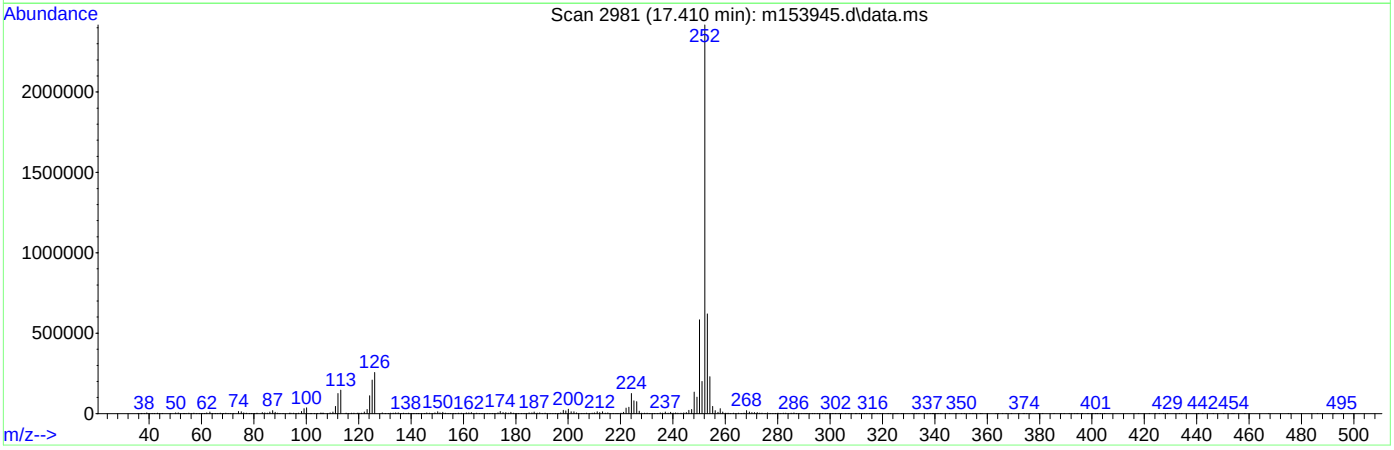
Ion	Exp%	Act%
228.00	100	100
229.00	19.70	27.28
226.00	24.70	28.70
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153945.d
Acq On : 1 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6577,30.7,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:20:47 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration





TIC: m153945.d\data.ms

(94) Benzo[k]fluoranthene (t)

17.410min (+0.029) 552.28ppm

response 8558342

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	25.64
125.00	10.30	8.29
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153986.d
Acq On : 2 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6579,30.7,,,1,100
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 13:41:20 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:33:50 2019
Response via : Initial Calibration

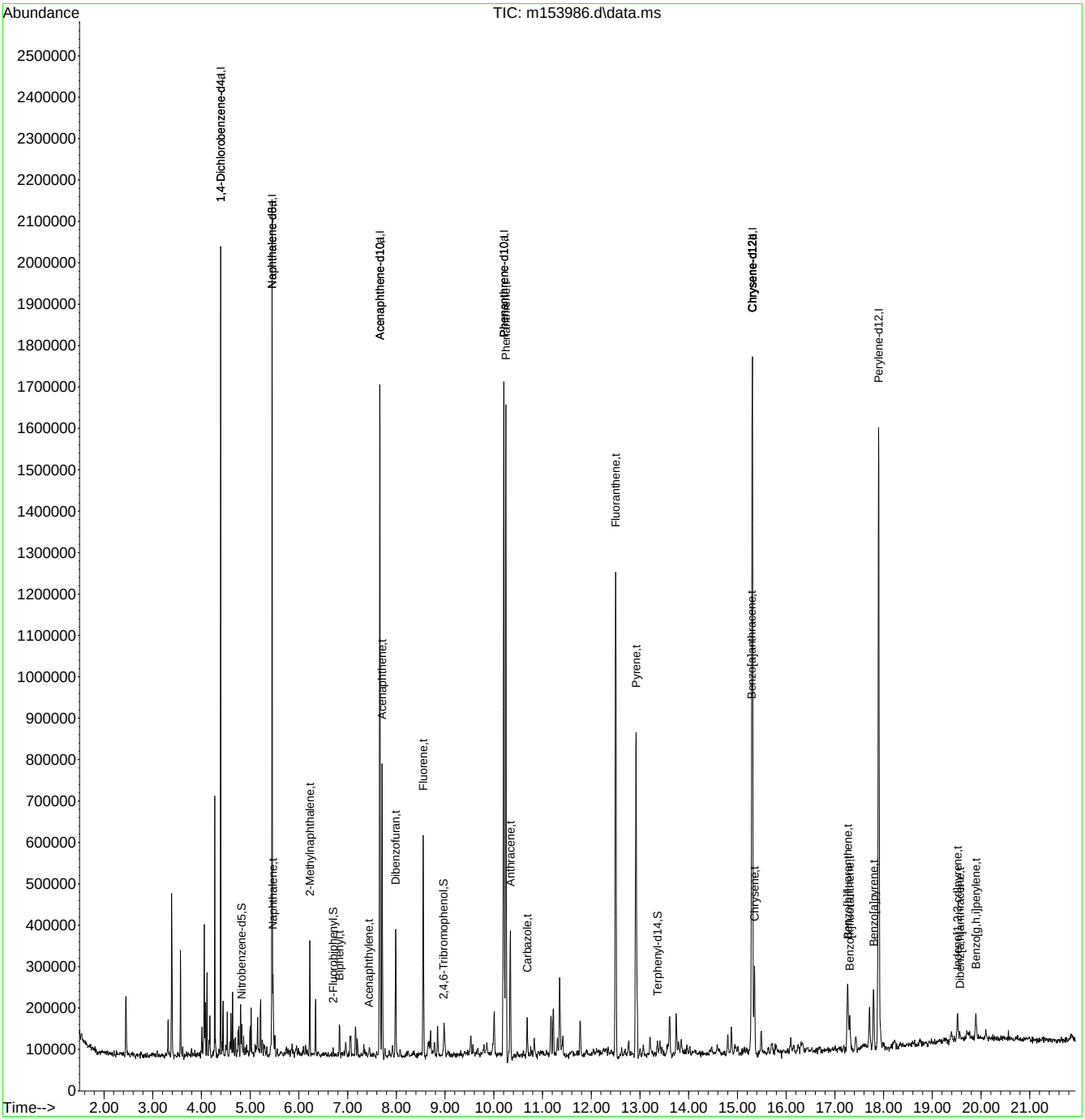
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.395	152	230171	40.00	ppm	0.00
24) Naphthalene-d8	5.448	136	783766	40.00	ppm	0.00
47) Acenaphthene-d10	7.659	164	442627	40.00	ppm	0.00
69) Phenanthrene-d10	10.206	188	900689	40.00	ppm	0.00
83) Chrysene-d12	15.307	240	884603	40.00	ppm	0.00
91) Perylene-d12	17.898	264	944163	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.395	152	230171	40.00	ppm	0.00
103) Acenaphthene-d10a	7.659	164	442627	40.00	ppm	0.00
106) Chrysene-d12a	15.307	240	885114	40.00	ppm	0.00
108) Chrysene-d12b	15.307	240	886656	40.00	ppm	0.00
110) Phenanthrene-d10a	10.206	188	900689	40.00	ppm	0.00
113) Naphthalene-d8a	5.448	136	783766	40.00	ppm	0.00
115) Chrysene-d12c	15.307	240	885210	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	4.817	82	3454	0.41	ppm	0.00
Spiked Amount 50.000			Recovery =	0.82%		
51) 2-Fluorobiphenyl	6.703	172	6000	0.36	ppm	0.00
Spiked Amount 50.000			Recovery =	0.72%		
73) 2,4,6-Tribromophenol	8.967	330	1866	0.62	ppm	-0.02
Spiked Amount 50.000			Recovery =	1.24%		
85) Terphenyl-d14	13.358	244	8282	0.35	ppm	-0.02
Spiked Amount 50.000			Recovery =	0.70%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.469	128	66047	3.44	ppm	98
44) 2-Methylnaphthalene	6.222	141	71036	5.84	ppm	99
53) Biphenyl	6.831	154	28610	1.61	ppm	96
56) Acenaphthylene	7.434	152	6834	0.32	ppm	93
59) Acenaphthene	7.707	153	212827	16.44	ppm	99
62) Dibenzofuran	7.985	168	164076	8.48	ppm	99
66) Fluorene	8.551	166	193314	12.03	ppm	99
77) Phenanthrene	10.249	178	878828	39.35	ppm	98
78) Anthracene	10.340	178	179936	7.65	ppm	99
79) Carbazole	10.687	167	55279	2.44	ppm	96
81) Fluoranthene	12.503	202	717752	24.31	ppm	99
84) Pyrene	12.920	202	495731	15.30	ppm	99
87) Benzo[a]anthracene	15.291	228	150344	4.96	ppm	89
89) Chrysene	15.350	228	117115	4.35	ppm	69
93) Benzo[b]fluoranthene	17.262	252	127769	4.30	ppm	71
94) Benzo[k]fluoranthene	17.305	252	53122	1.88	ppm	100
95) Benzo[a]pyrene	17.796	252	96502	3.70	ppm	56
96) Indeno[1,2,3-cd]pyrene	19.516	276	55715	2.62	ppm	100
98) Dibenz[a,h]anthracene	19.569	278	11550	0.48	ppm	91
100) Benzo[g,h,i]perylene	19.895	276	51333	2.07	ppm	69

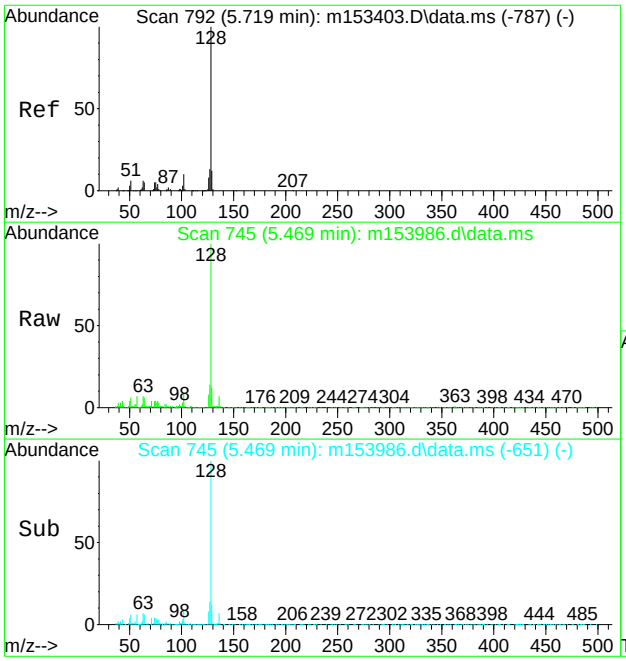
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153986.d
Acq On : 2 May 2019 6:57 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6579,30.7,,,1,100
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 13:41:20 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:33:50 2019
Response via : Initial Calibration

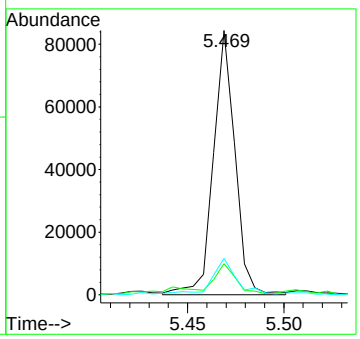


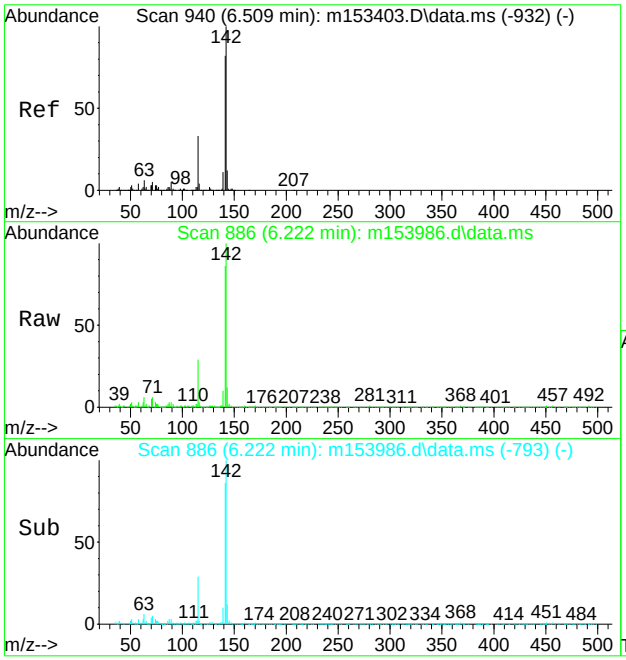


#38
Naphthalene
Concen: 3.44 ppm
RT: 5.469 min Scan# 745
Delta R.T. -0.000 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:128 Resp: 66047

Ion	Ratio	Lower	Upper
128	100		
129	10.5	0.0	41.6
127	13.3	0.0	43.5

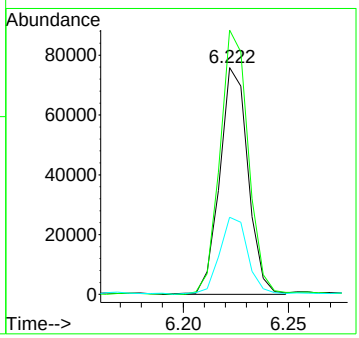


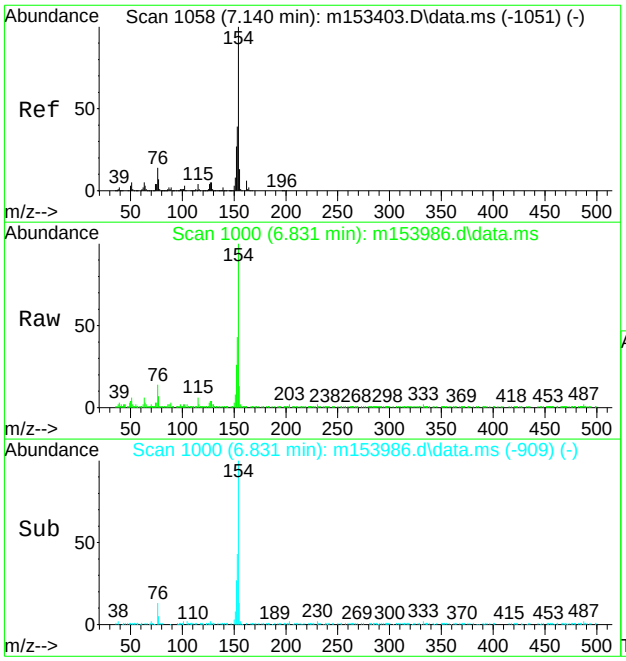


#44
2-Methylnaphthalene
Concen: 5.84 ppm
RT: 6.222 min Scan# 886
Delta R.T. -0.004 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:141 Resp: 71036

Ion	Ratio	Lower	Upper
141	100		
142	116.4	87.4	147.4
115	33.7	4.0	64.0

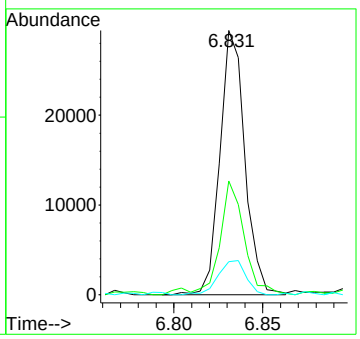


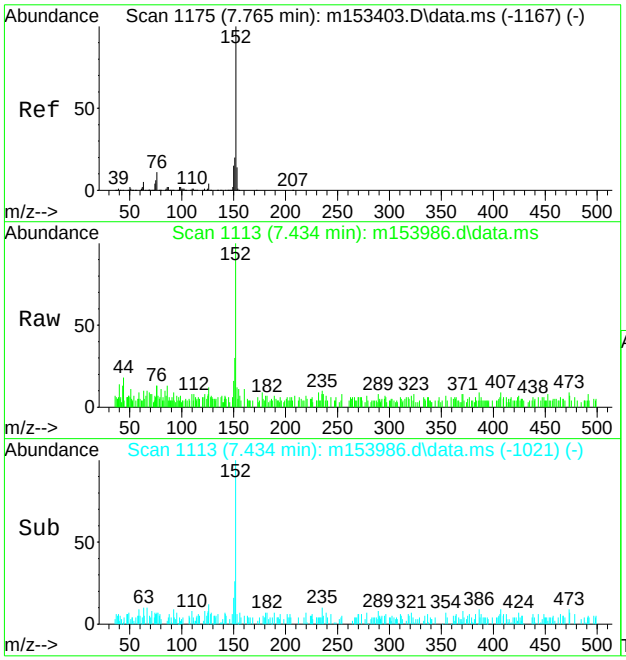


#53
Biphenyl
Concen: 1.61 ppm
RT: 6.831 min Scan# 1000
Delta R.T. -0.013 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:154 Resp: 28610

Ion	Ratio	Lower	Upper
154	100		
153	42.9	10.3	70.3
155	11.9	0.0	43.2

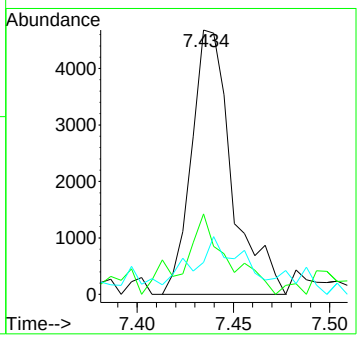


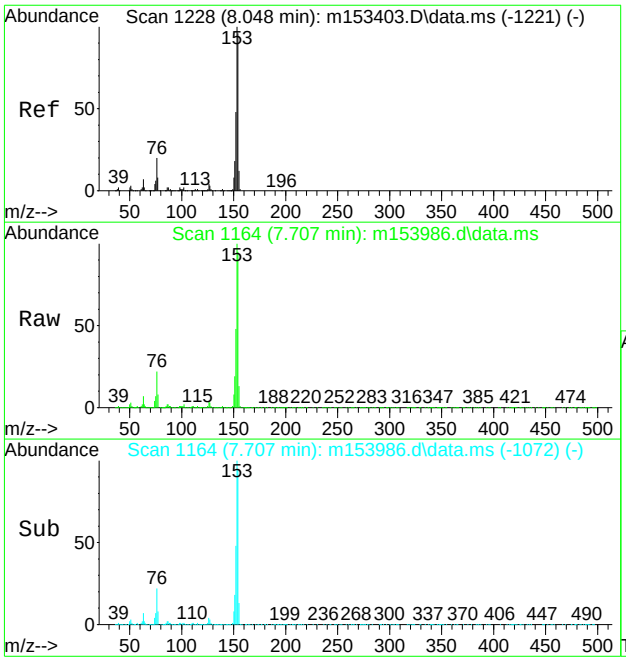


#56
Acenaphthylene
Concen: 0.32 ppm
RT: 7.434 min Scan# 1113
Delta R.T. -0.011 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:152 Resp: 6834

Ion	Ratio	Lower	Upper
152	100		
151	22.3	0.0	51.4
153	5.8	0.0	42.4

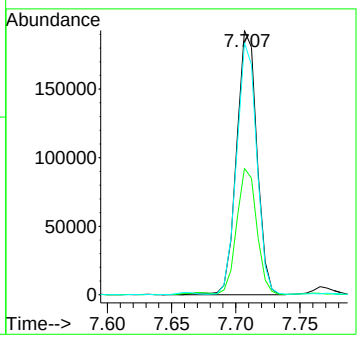


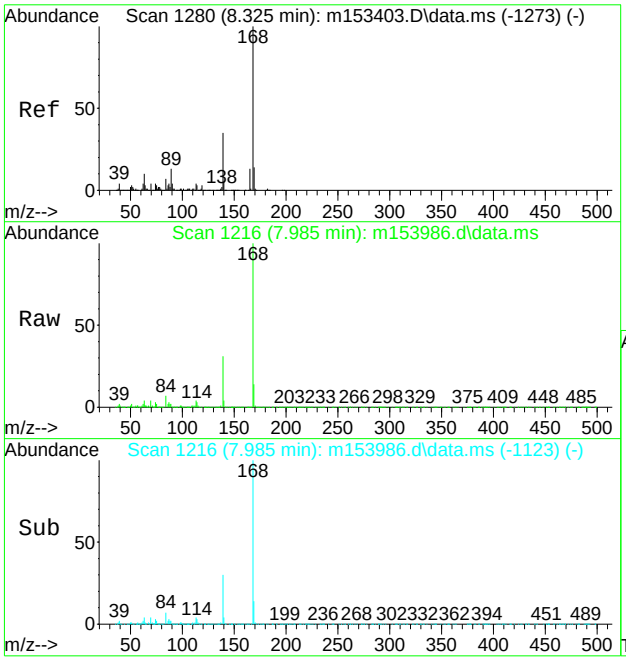


#59
Acenaphthene
Concen: 16.44 ppm
RT: 7.707 min Scan# 1164
Delta R.T. -0.010 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:153 Resp: 212827

Ion	Ratio	Lower	Upper
153	100		
152	47.7	16.1	76.1
154	95.2	66.1	126.1

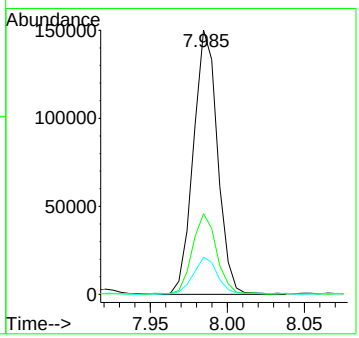


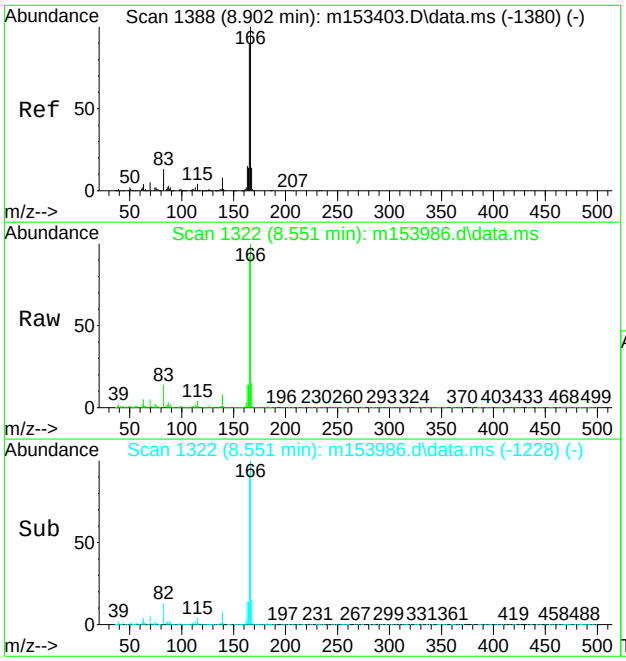


#62
Dibenzofuran
Concen: 8.48 ppm
RT: 7.985 min Scan# 1216
Delta R.T. -0.004 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:168 Resp: 164076

Ion	Ratio	Lower	Upper
168	100		
139	30.3	0.0	59.8
169	13.9	0.0	43.5

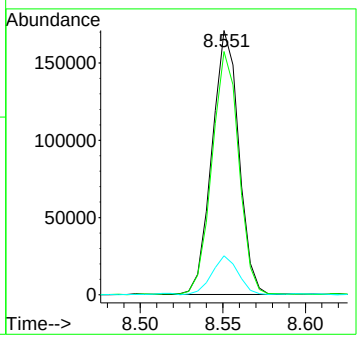


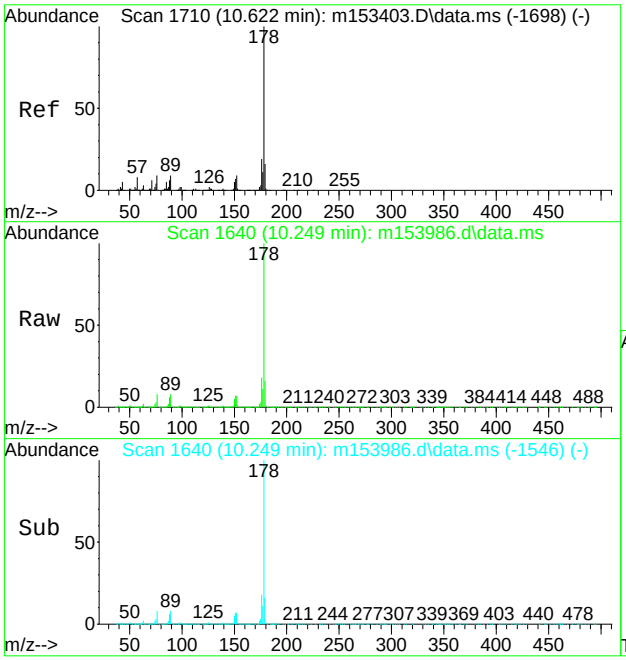


#66
Fluorene
Concen: 12.03 ppm
RT: 8.551 min Scan# 1322
Delta R.T. 0.002 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:166 Resp: 193314

Ion	Ratio	Lower	Upper
166	100		
165	91.9	60.8	120.8
167	14.4	0.0	43.6

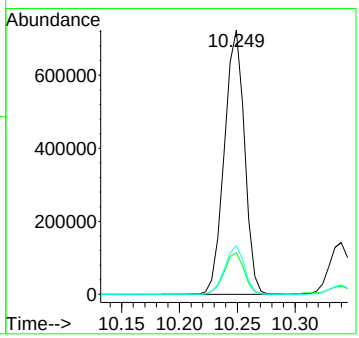


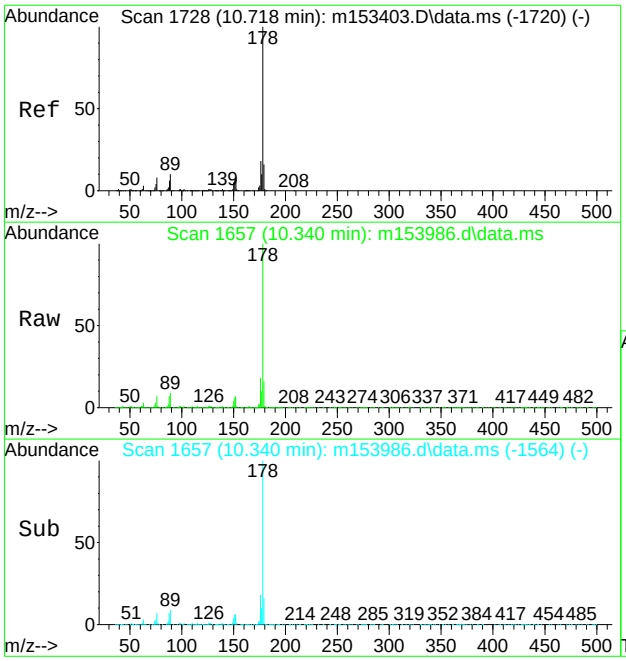


#77
Phenanthrene
Concen: 39.35 ppm
RT: 10.249 min Scan# 1640
Delta R.T. 0.000 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:178 Resp: 878828

Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	46.4
176	18.5	0.0	49.4

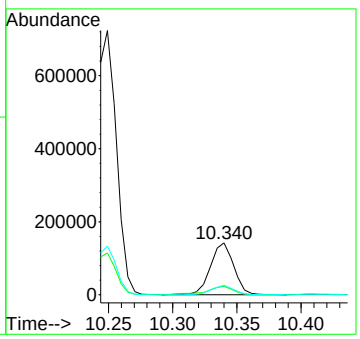


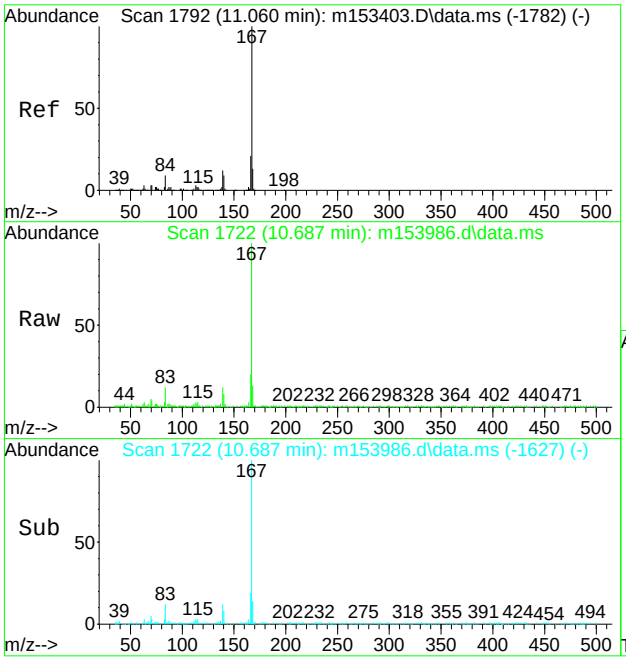


#78
Anthracene
Concen: 7.65 ppm
RT: 10.340 min Scan# 1657
Delta R.T. -0.003 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:178 Resp: 179936

Ion	Ratio	Lower	Upper
178	100		
179	15.9	0.0	46.0
176	18.3	0.0	48.8

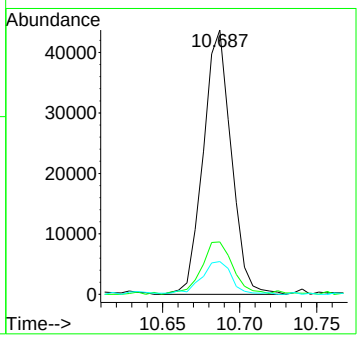


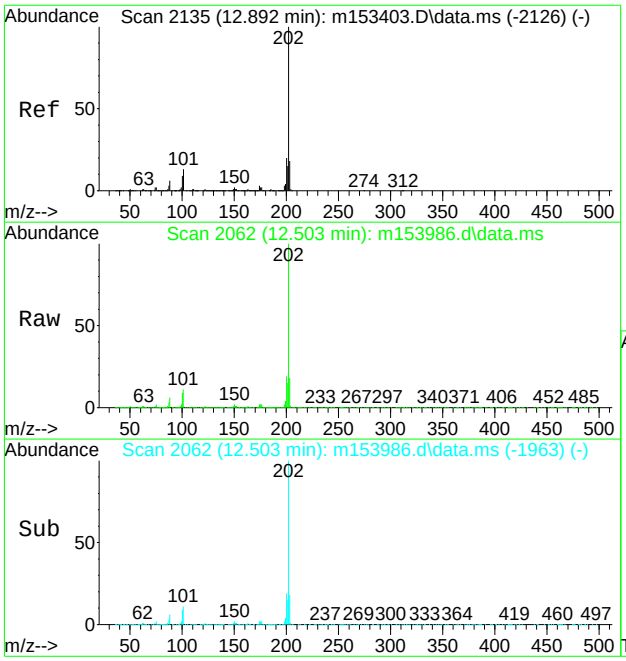


#79
Carbazole
Concen: 2.44 ppm
RT: 10.687 min Scan# 1722
Delta R.T. 0.008 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:167 Resp: 55279

Ion	Ratio	Lower	Upper
167	100		
166	19.6	0.0	51.5
139	12.2	0.0	40.9

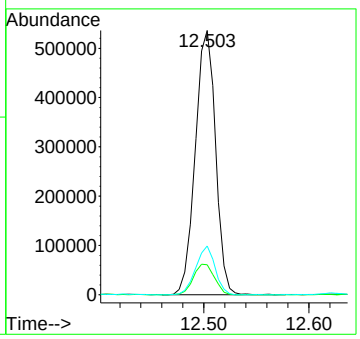


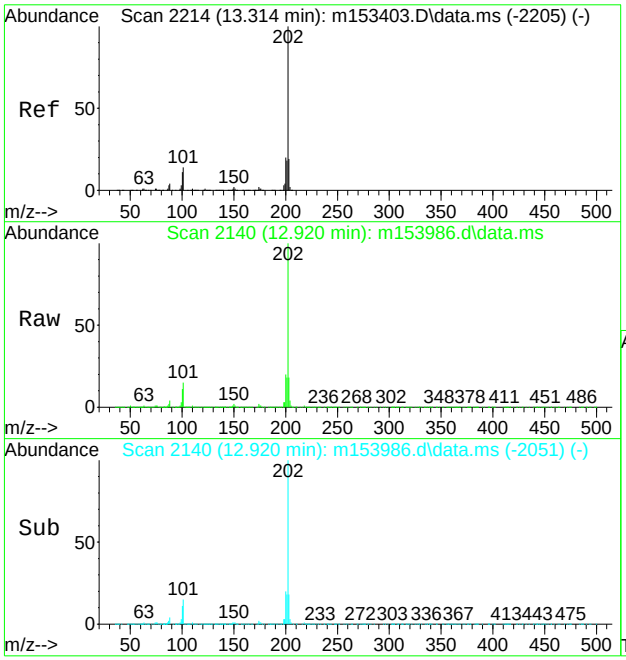


#81
Fluoranthene
Concen: 24.31 ppm
RT: 12.503 min Scan# 2062
Delta R.T. 0.030 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:202 Resp: 717752

Ion	Ratio	Lower	Upper
202	100		
101	11.3	0.0	40.8
203	18.4	0.0	48.4

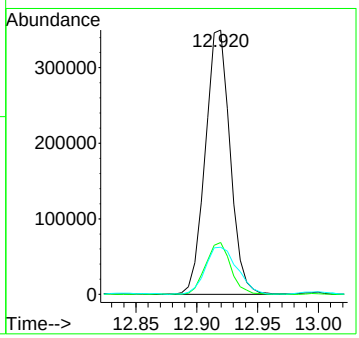


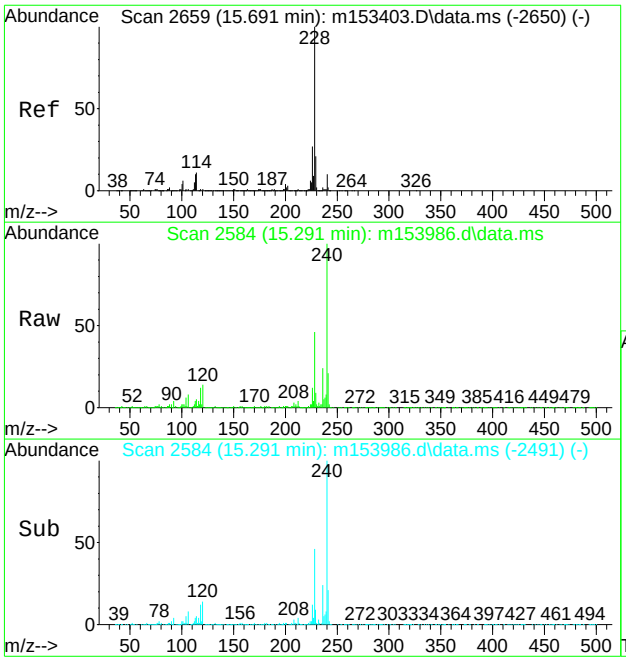


#84
Pyrene
Concen: 15.30 ppm
RT: 12.920 min Scan# 2140
Delta R.T. -0.027 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:202 Resp: 495731

Ion	Ratio	Lower	Upper
202	100		
200	19.6	0.0	50.6
203	17.8	0.0	47.9

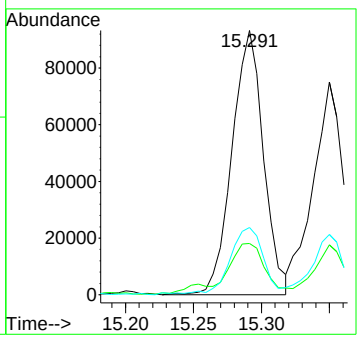


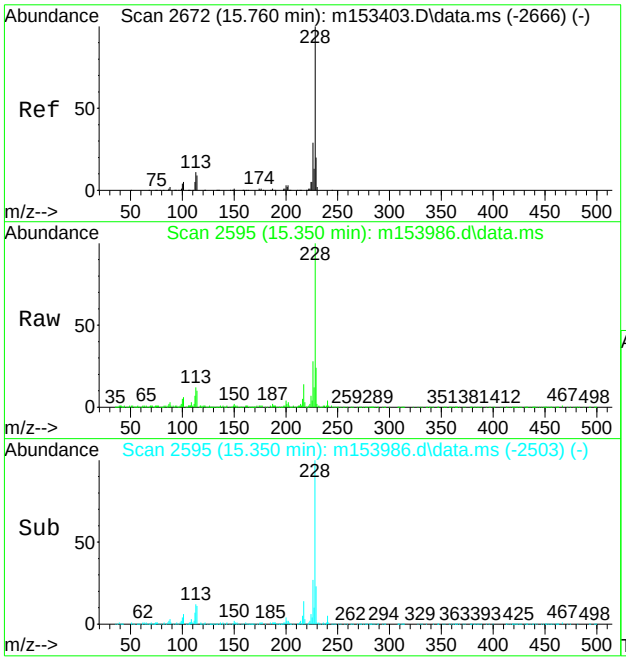


#87
Benzo[a]anthracene
Concen: 4.96 ppm
RT: 15.291 min Scan# 2584
Delta R.T. -0.001 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:228 Resp: 150344

Ion	Ratio	Lower	Upper
228	100		
229	18.5	0.0	55.7
226	24.6	0.0	50.9

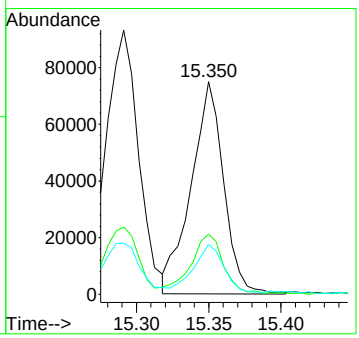


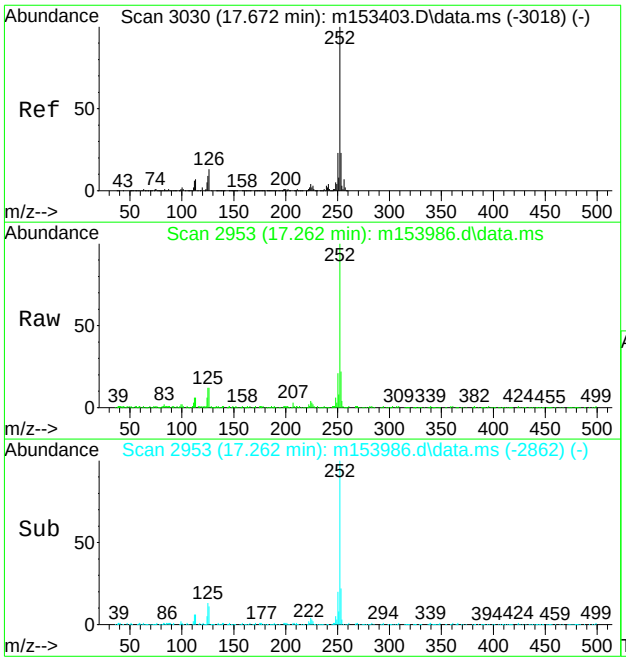


#89
Chrysene
Concen: 4.35 ppm
RT: 15.350 min Scan# 2595
Delta R.T. -0.011 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:228 Resp: 117115

Ion	Ratio	Lower	Upper
228	100		
226	27.9	0.0	44.9
229	22.5	0.0	30.0

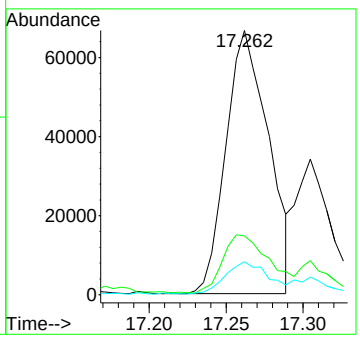


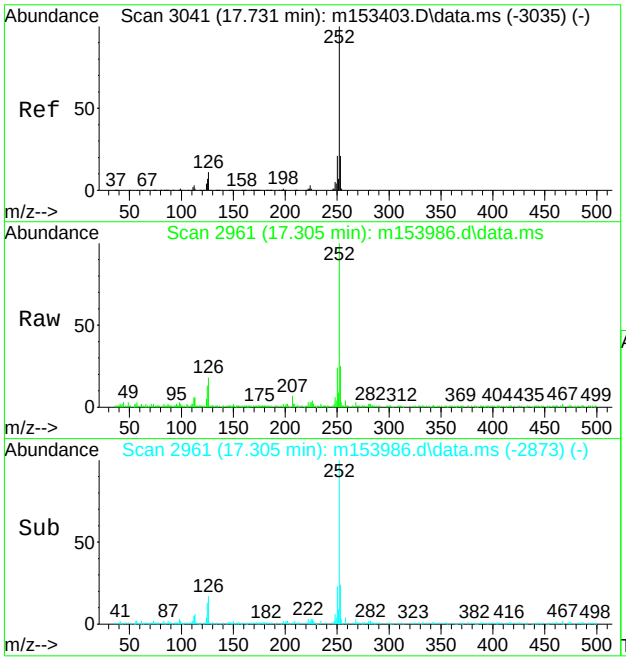


#93
Benzo[b]fluoranthene
Concen: 4.30 ppm
RT: 17.262 min Scan# 2953
Delta R.T. -0.013 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:252 Resp: 127769

Ion	Ratio	Lower	Upper
252	100		
253	20.4	0.0	32.6
125	12.2	0.0	55.9

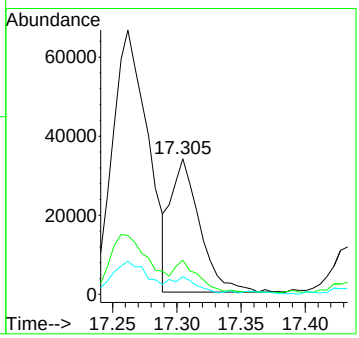


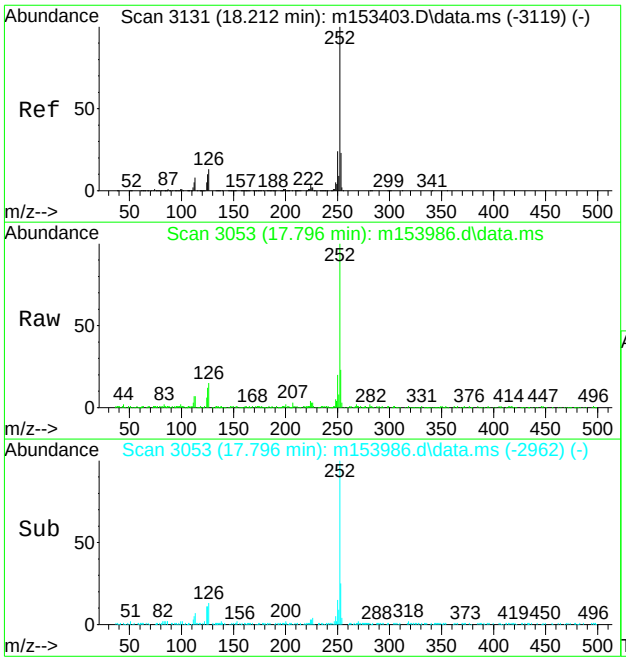


#94
Benzo[k]fluoranthene
Concen: 1.88 ppm
RT: 17.305 min Scan# 2961
Delta R.T. -0.028 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:252 Resp: 53122

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	30.0
125	13.1	0.0	30.0

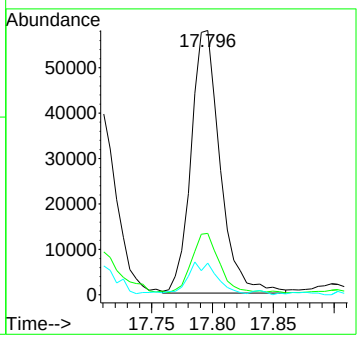


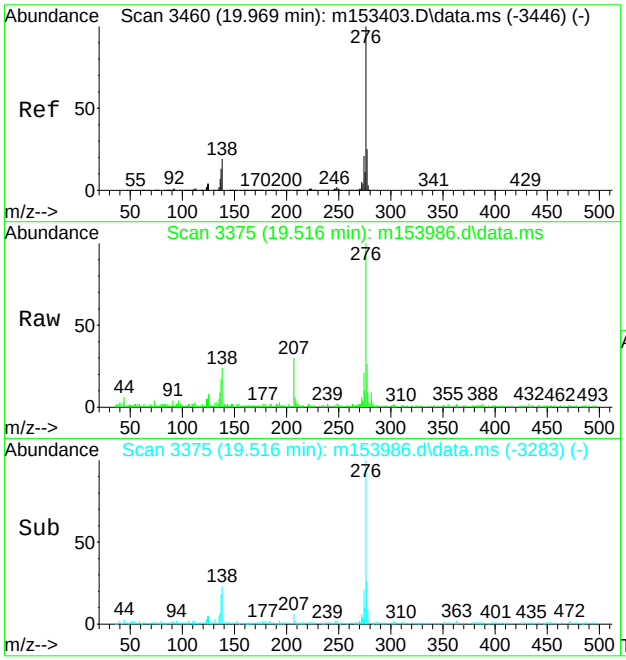


#95
Benzo[a]pyrene
Concen: 3.70 ppm
RT: 17.796 min Scan# 3053
Delta R.T. -0.012 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:252 Resp: 96502

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	30.0
125	11.6	8.1	68.1

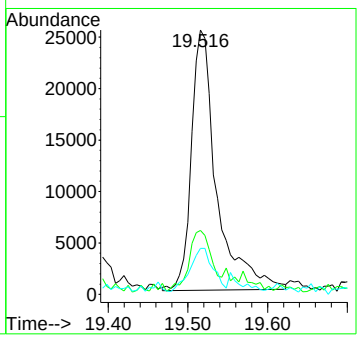


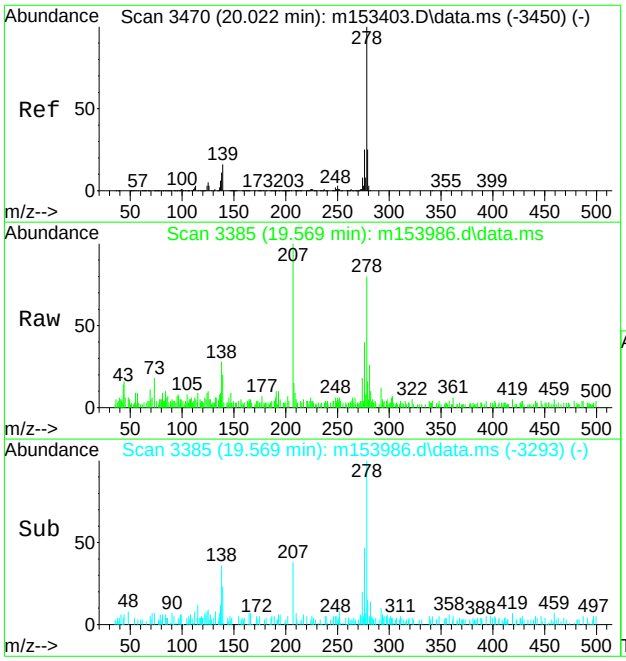


#96
Indeno[1,2,3-cd]pyrene
Concen: 2.62 ppm
RT: 19.516 min Scan# 3375
Delta R.T. -0.009 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:276 Resp: 55715

Ion	Ratio	Lower	Upper
276	100		
138	21.4	0.0	30.0
137	16.0	0.0	30.0

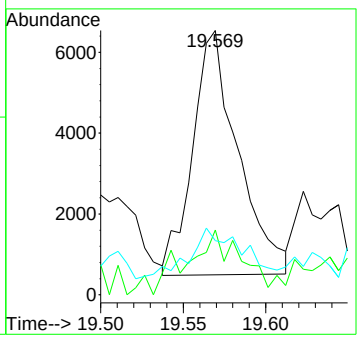


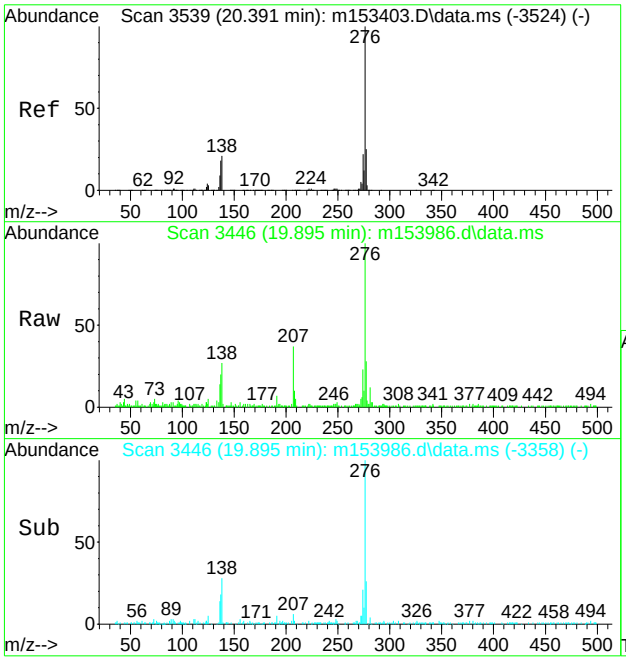


#98
Dibenz[a,h]anthracene
Concen: 0.48 ppm
RT: 19.569 min Scan# 3385
Delta R.T. -0.008 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:278 Resp: 11550

Ion	Ratio	Lower	Upper
278	100		
139	21.6	0.0	47.8
279	11.4	0.0	30.0

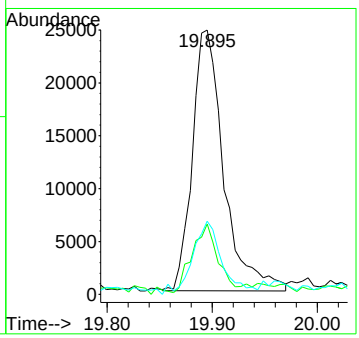




#100
Benzo[g,h,i]perylene
Concen: 2.07 ppm
RT: 19.895 min Scan# 3446
Delta R.T. -0.031 min
Lab File: m153986.d
Acq: 2 May 2019 6:57 pm

Tgt Ion:276 Resp: 51333

Ion	Ratio	Lower	Upper
276	100		
138	24.6	0.0	42.4
277	26.6	0.0	30.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153987.d
Acq On : 2 May 2019 7:25 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6579,30.7,,,1,10
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 13:47:05 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:33:50 2019
Response via : Initial Calibration

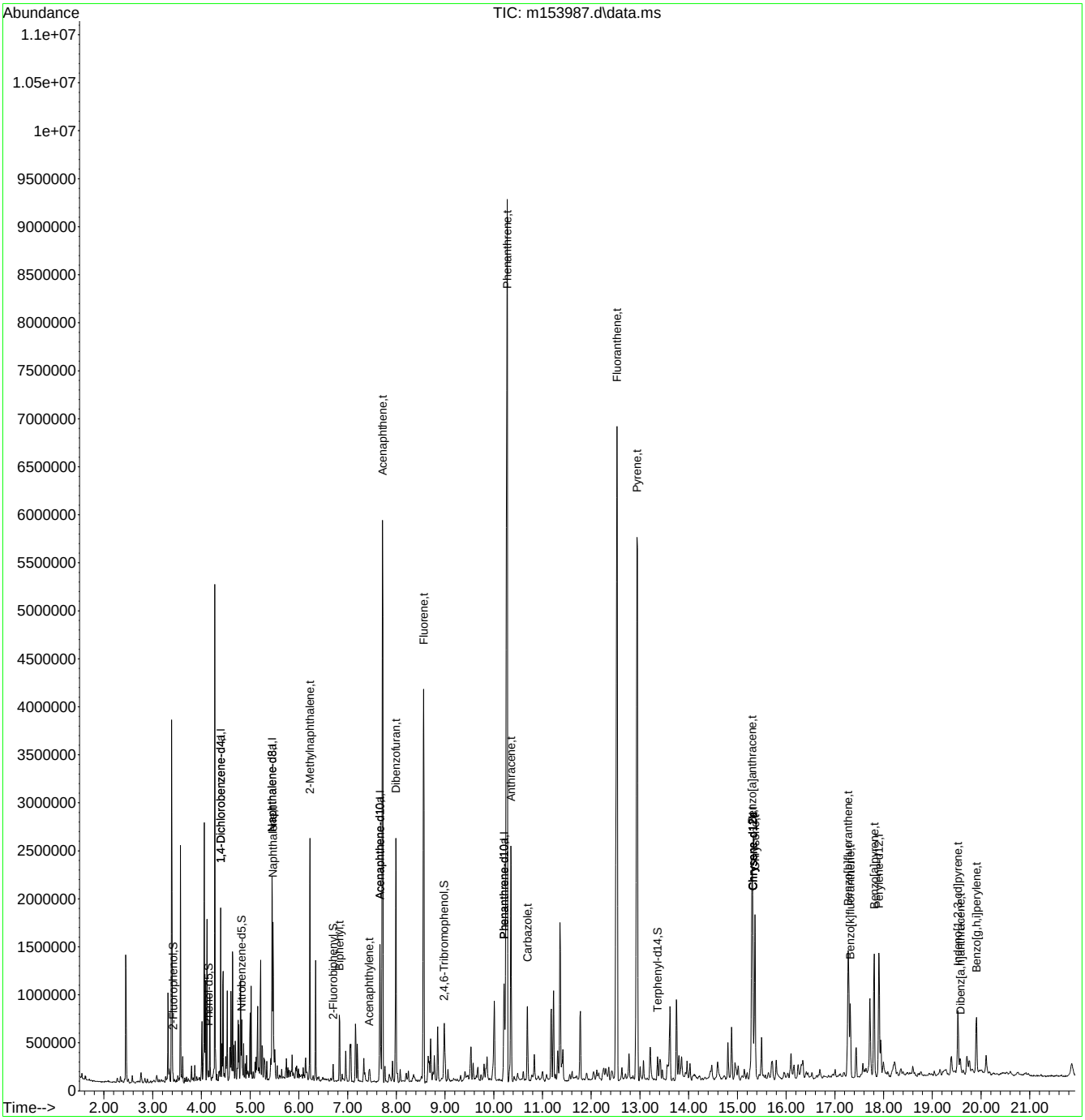
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.396	152	207834	40.00	ppm	0.00
24) Naphthalene-d8	5.448	136	672930	40.00	ppm	0.00
47) Acenaphthene-d10	7.664	164	393618	40.00	ppm	0.00
69) Phenanthrene-d10	10.212	188	763100	40.00	ppm	0.00
83) Chrysene-d12	15.318	240	748944	40.00	ppm	0.01
91) Perylene-d12	17.903	264	816506	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.396	152	207834	40.00	ppm	0.00
103) Acenaphthene-d10a	7.664	164	393618	40.00	ppm	0.00
106) Chrysene-d12a	15.318	240	747090	40.00	ppm	0.01
108) Chrysene-d12b	15.318	240	748270	40.00	ppm	0.01
110) Phenanthrene-d10a	10.212	188	763628	40.00	ppm	0.00
113) Naphthalene-d8a	5.448	136	672930	40.00	ppm	0.00
115) Chrysene-d12c	15.318	240	748935	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.418	112	19578	2.41	ppm	-0.02
Spiked Amount 50.000			Recovery =	4.82%		
8) Phenol-d5	4.145	99	28082	2.80	ppm	0.00
Spiked Amount 50.000			Recovery =	5.60%		
25) Nitrobenzene-d5	4.818	82	25837	3.60	ppm	0.00
Spiked Amount 50.000			Recovery =	7.20%		
51) 2-Fluorobiphenyl	6.703	172	52355	3.58	ppm	0.00
Spiked Amount 50.000			Recovery =	7.16%		
73) 2,4,6-Tribromophenol	8.973	330	11065	4.31	ppm	-0.01
Spiked Amount 50.000			Recovery =	8.62%		
85) Terphenyl-d14	13.358	244	69798	3.46	ppm	-0.02
Spiked Amount 50.000			Recovery =	6.92%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.469	128	575354	34.92	ppm	99
44) 2-Methylnaphthalene	6.228	141	592484	56.71	ppm	97
53) Biphenyl	6.831	154	252597	15.97	ppm	100
56) Acenaphthylene	7.440	152	55785	2.93	ppm	96
59) Acenaphthene	7.718	153	1847421	160.47	ppm	96
62) Dibenzofuran	7.990	168	1388125	80.65	ppm	99
66) Fluorene	8.562	166	1653847	115.78	ppm	98
77) Phenanthrene	10.276	178	7281582	384.86	ppm	97
78) Anthracene	10.351	178	1391702	69.83	ppm	99
79) Carbazole	10.693	167	470516	24.56	ppm	99
81) Fluoranthene	12.530	202	5681286	227.15	ppm	98
84) Pyrene	12.941	202	3968944	144.73	ppm	91
87) Benzo[a]anthracene	15.302	228	1238259	48.29	ppm	90
89) Chrysene	15.361	228	999982	43.87	ppm	68
93) Benzo[b]fluoranthene	17.273	252	1139471	44.30	ppm	66
94) Benzo[k]fluoranthene	17.316	252	423578	17.30	ppm	100
95) Benzo[a]pyrene	17.807	252	810231	35.88	ppm	53
96) Indeno[1,2,3-cd]pyrene	19.527	276	509270	22.70	ppm	100
98) Dibenz[a,h]anthracene	19.575	278	105122	5.05	ppm	93
100) Benzo[g,h,i]perylene	19.906	276	450171	21.02	ppm	82

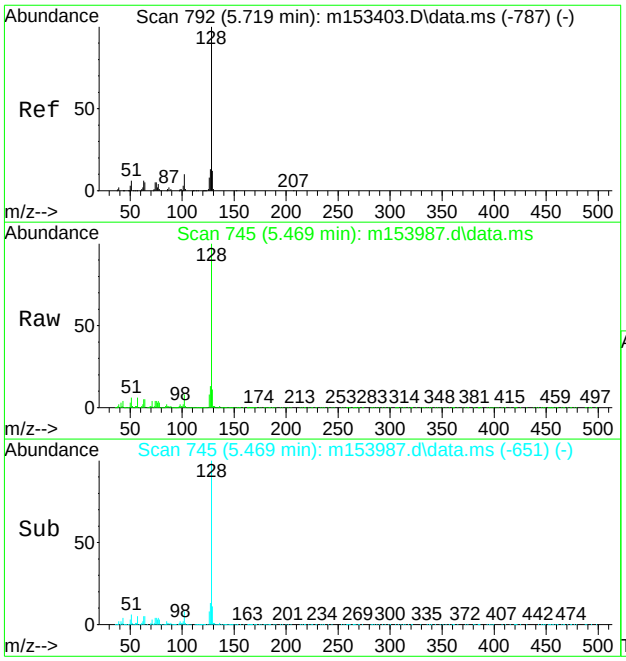
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153987.d
Acq On : 2 May 2019 7:25 pm
Operator : christc2
Sample : jc86837-1 Inst : MSM
Misc : op20021,em6579,30.7,,,1,10
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 13:47:05 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:33:50 2019
Response via : Initial Calibration

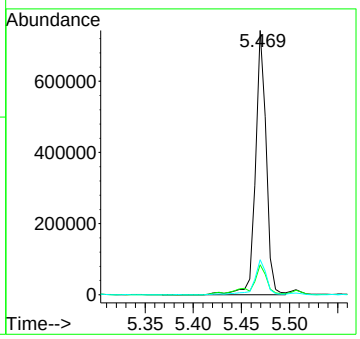


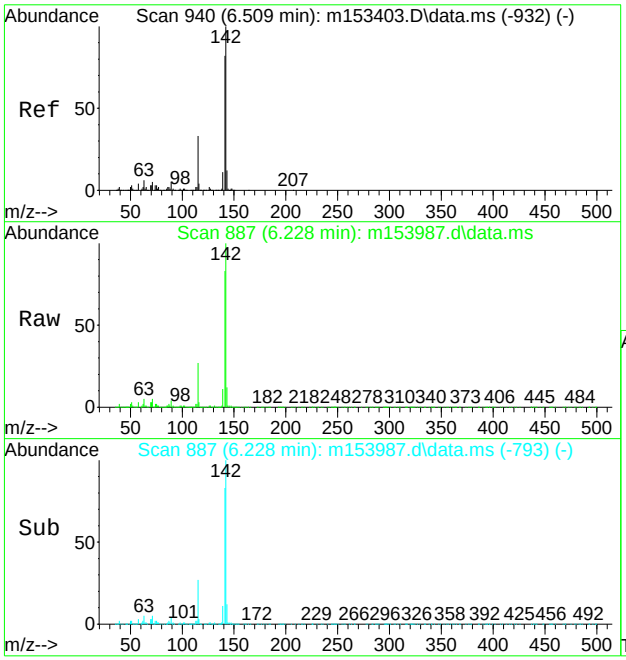


#38
Naphthalene
Concen: 34.92 ppm
RT: 5.469 min Scan# 745
Delta R.T. 0.000 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:128 Resp: 575354

Ion	Ratio	Lower	Upper
128	100		
129	11.2	0.0	41.6
127	13.1	0.0	43.5

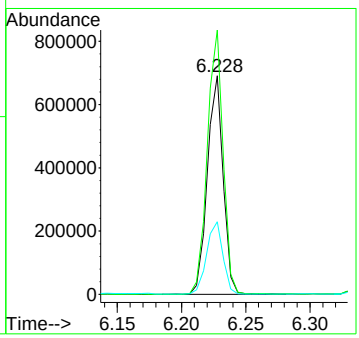


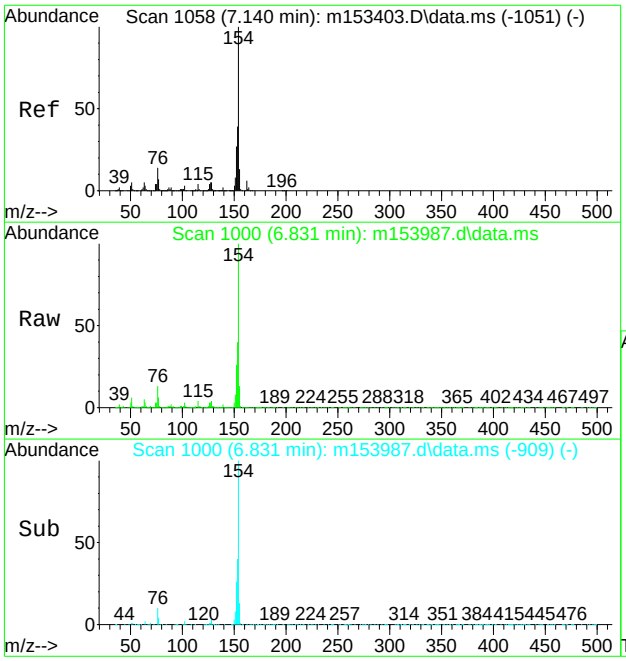


#44
2-Methylnaphthalene
Concen: 56.71 ppm
RT: 6.228 min Scan# 887
Delta R.T. 0.001 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:141 Resp: 592484

Ion	Ratio	Lower	Upper
141	100		
142	120.9	87.4	147.4
115	33.1	4.0	64.0

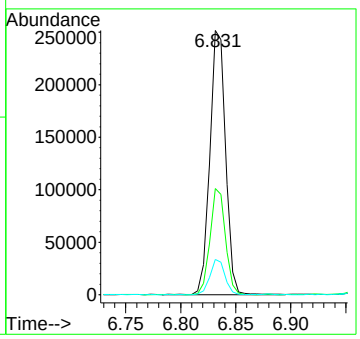


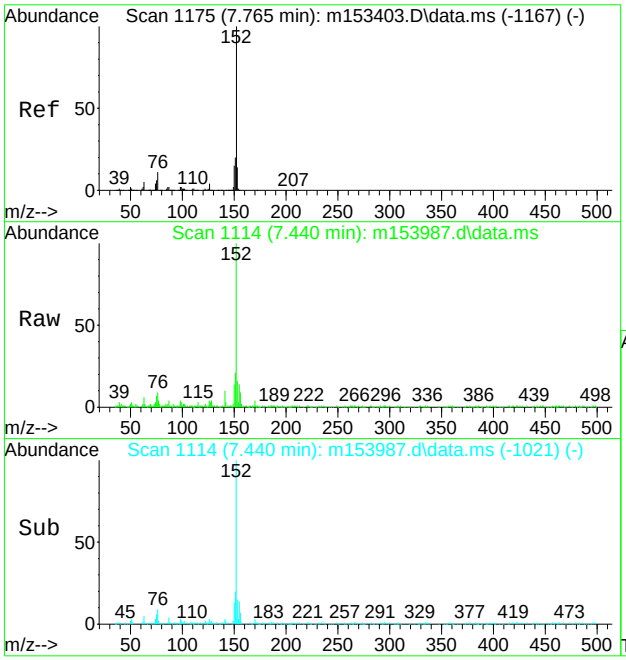


#53
Biphenyl
Concen: 15.97 ppm
RT: 6.831 min Scan# 1000
Delta R.T. -0.012 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:154 Resp: 252597

Ion	Ratio	Lower	Upper
154	100		
153	40.1	10.3	70.3
155	13.3	0.0	43.2

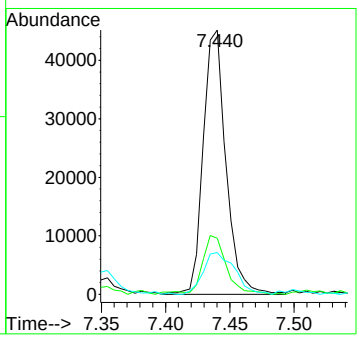


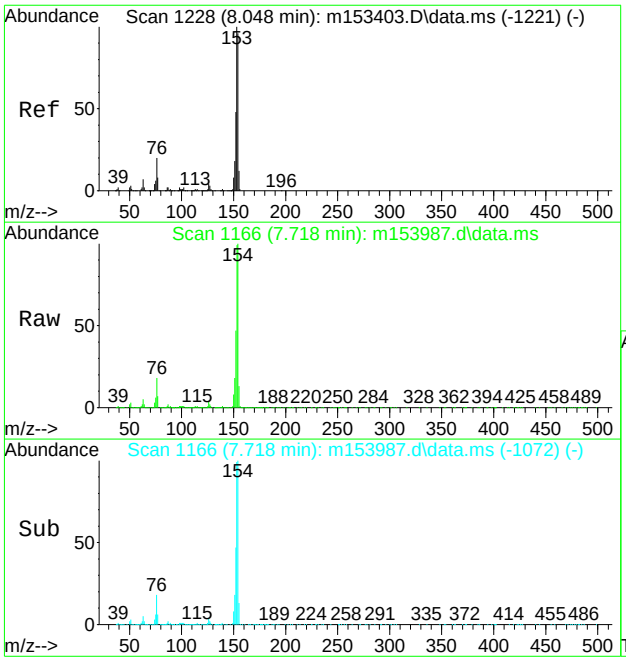


#56
Acenaphthylene
Concen: 2.93 ppm
RT: 7.440 min Scan# 1114
Delta R.T. -0.005 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:152 Resp: 55785

Ion	Ratio	Lower	Upper
152	100		
151	20.9	0.0	51.4
153	15.5	0.0	42.4

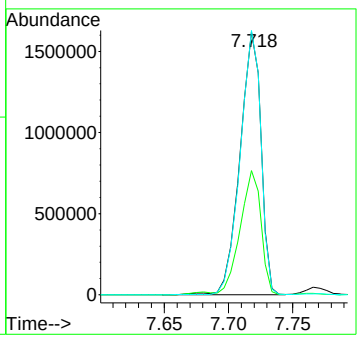


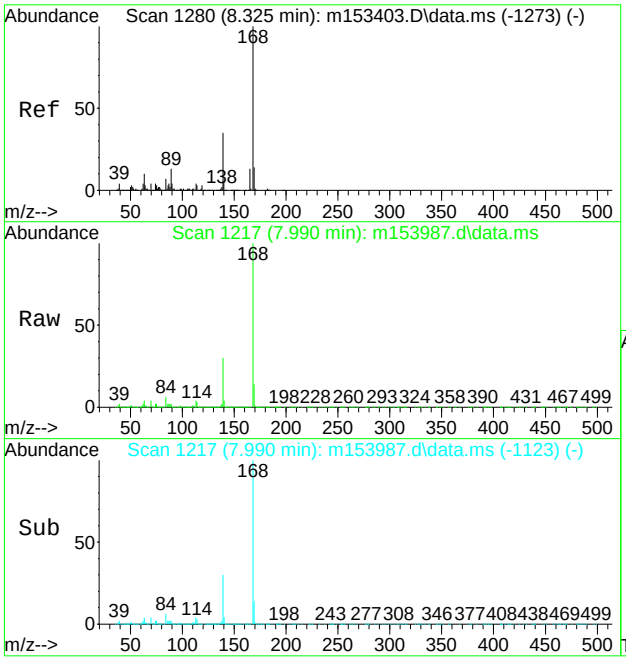


#59
Acenaphthene
Concen: 160.47 ppm
RT: 7.718 min Scan# 1166
Delta R.T. 0.001 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:153 Resp: 1847421

Ion	Ratio	Lower	Upper
153	100		
152	47.2	16.1	76.1
154	100.6	66.1	126.1

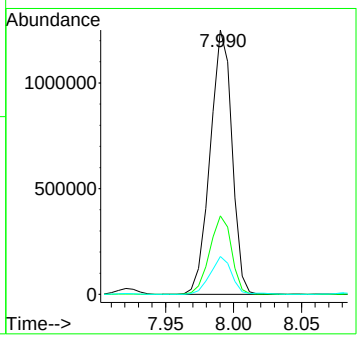


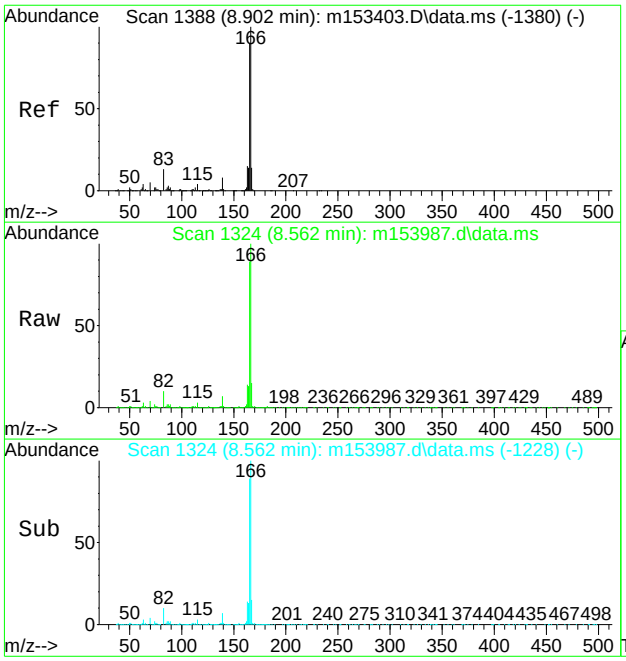


#62
Dibenzofuran
Concen: 80.65 ppm
RT: 7.990 min Scan# 1217
Delta R.T. 0.001 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:168 Resp: 1388125

Ion	Ratio	Lower	Upper
168	100		
139	29.6	0.0	59.8
169	14.3	0.0	43.5

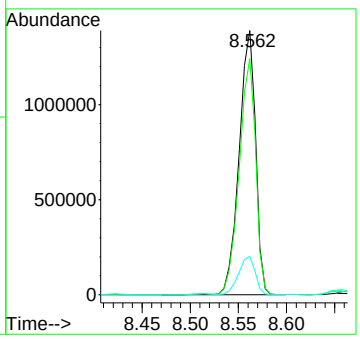


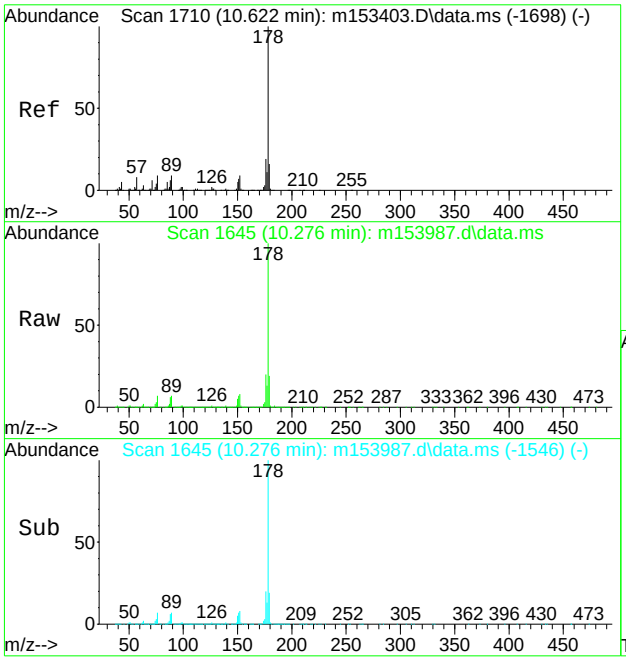


#66
Fluorene
Concen: 115.78 ppm
RT: 8.562 min Scan# 1324
Delta R.T. 0.013 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:166 Resp: 1653847

Ion	Ratio	Lower	Upper
166	100		
165	89.3	60.8	120.8
167	14.4	0.0	43.6

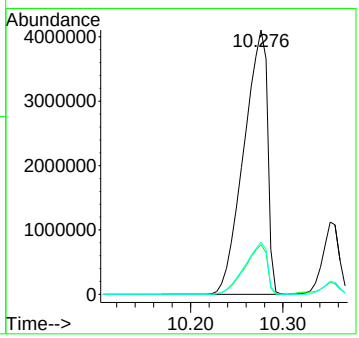


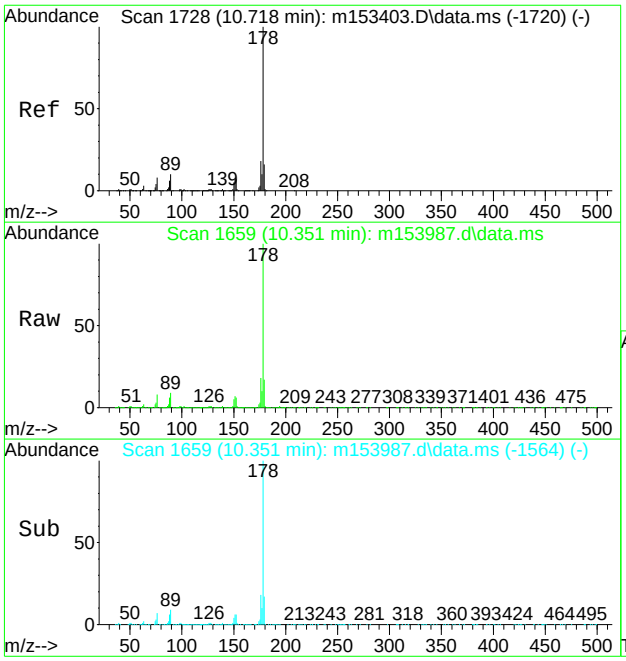


#77
Phenanthrene
Concen: 384.86 ppm
RT: 10.276 min Scan# 1645
Delta R.T. 0.027 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:178 Resp: 7281582

Ion	Ratio	Lower	Upper
178	100		
179	18.8	0.0	46.4
176	19.7	0.0	49.4

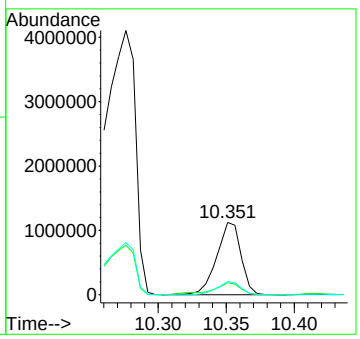


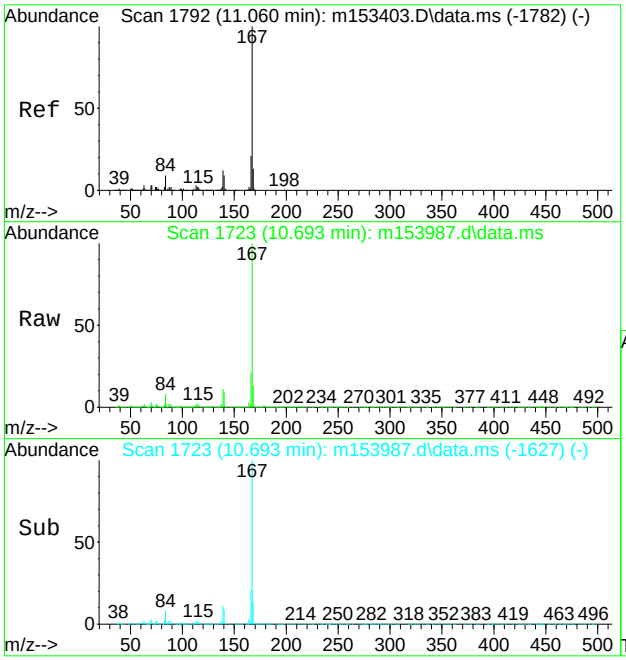


#78
Anthracene
Concen: 69.83 ppm
RT: 10.351 min Scan# 1659
Delta R.T. 0.008 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:178 Resp: 1391702

Ion	Ratio	Lower	Upper
178	100		
179	16.4	0.0	46.0
176	18.3	0.0	48.8

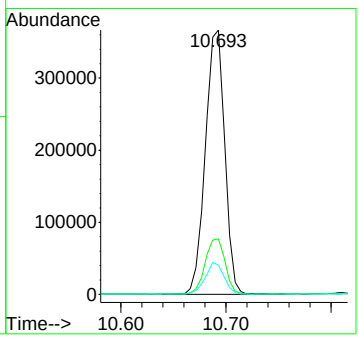


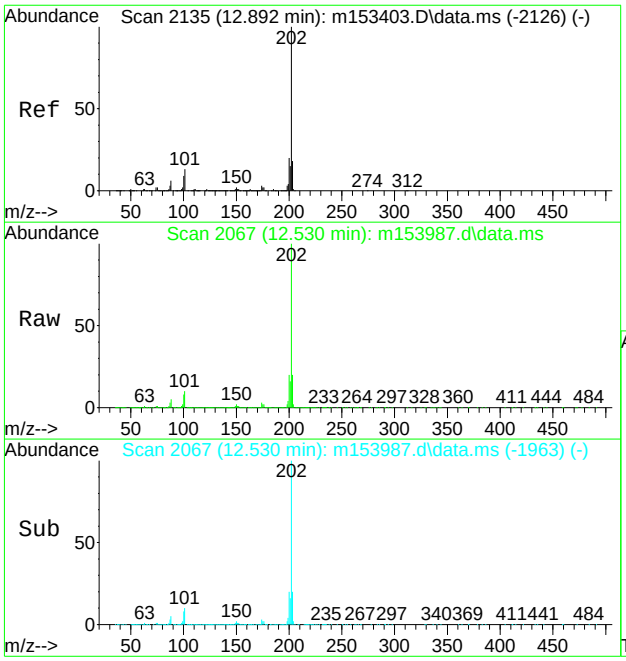


#79
Carbazole
Concen: 24.56 ppm
RT: 10.693 min Scan# 1723
Delta R.T. 0.014 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:167 Resp: 470516

Ion	Ratio	Lower	Upper
167	100		
166	20.9	0.0	51.5
139	11.0	0.0	40.9

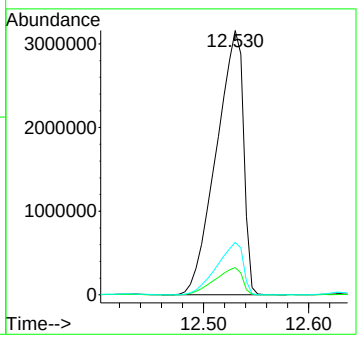


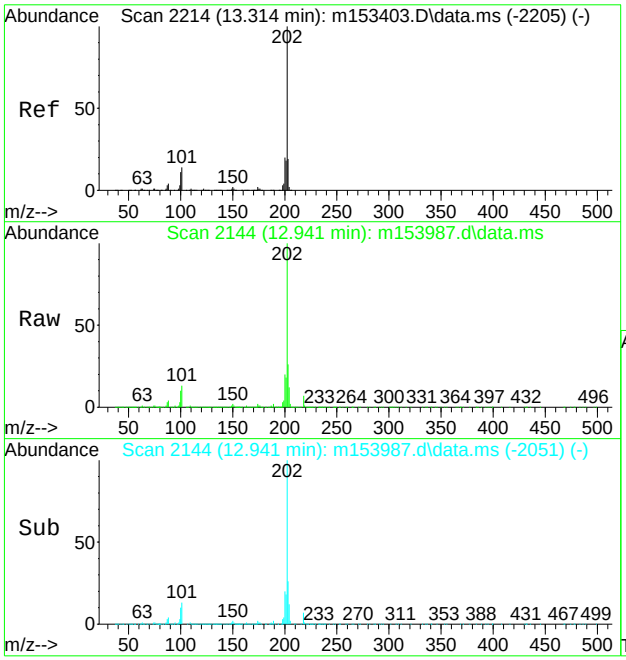


#81
Fluoranthene
Concen: 227.15 ppm
RT: 12.530 min Scan# 2067
Delta R.T. 0.057 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:202 Resp: 5681286

Ion	Ratio	Lower	Upper
202	100		
101	10.3	0.0	40.8
203	19.8	0.0	48.4

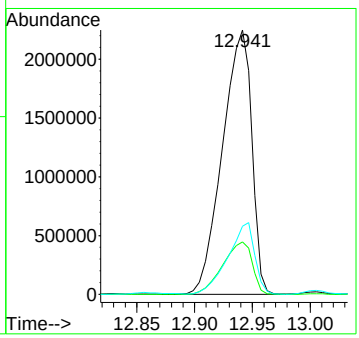


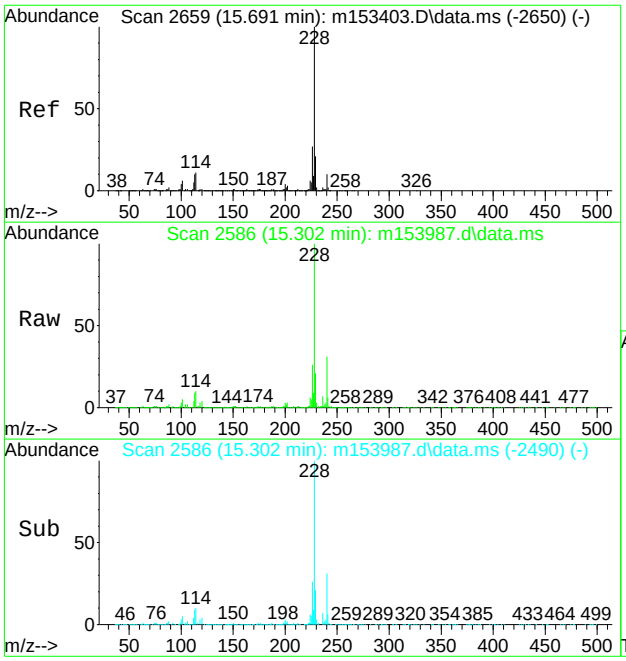


#84
Pyrene
Concen: 144.73 ppm
RT: 12.941 min Scan# 2144
Delta R.T. -0.005 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:202 Resp: 3968944

Ion	Ratio	Lower	Upper
202	100		
200	19.9	0.0	50.6
203	25.6	0.0	47.9

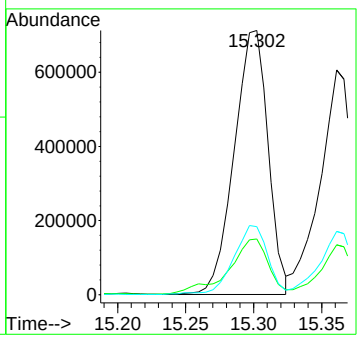


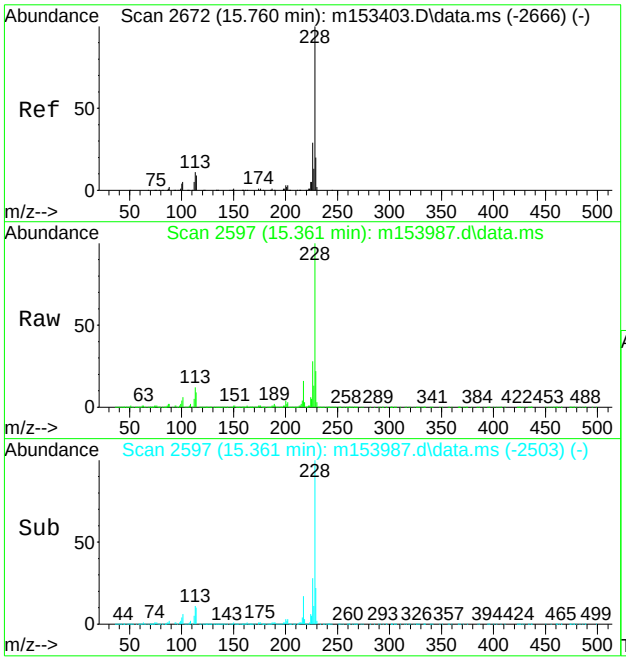


#87
Benzo[a]anthracene
Concen: 48.29 ppm
RT: 15.302 min Scan# 2586
Delta R.T. 0.010 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:228 Resp: 1238259

Ion	Ratio	Lower	Upper
228	100		
229	20.7	0.0	55.7
226	25.7	0.0	50.9

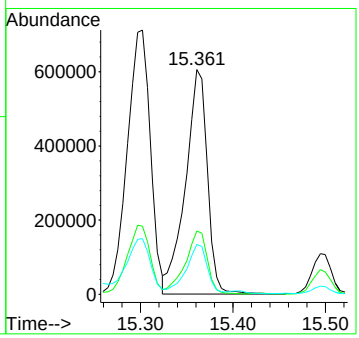


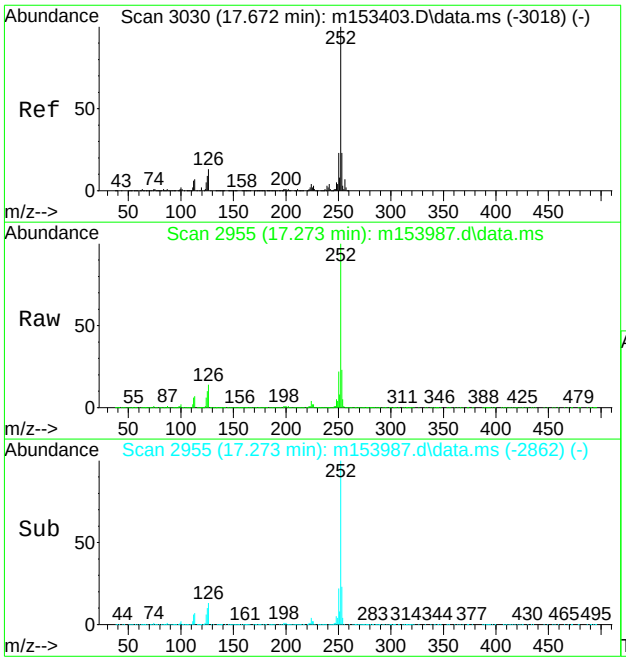


#89
Chrysene
Concen: 43.87 ppm
RT: 15.361 min Scan# 2597
Delta R.T. 0.000 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:228 Resp: 999982

Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.0	44.9
229	21.8	0.0	30.0

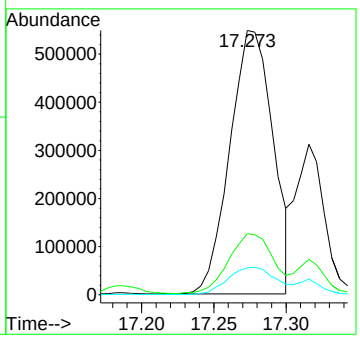


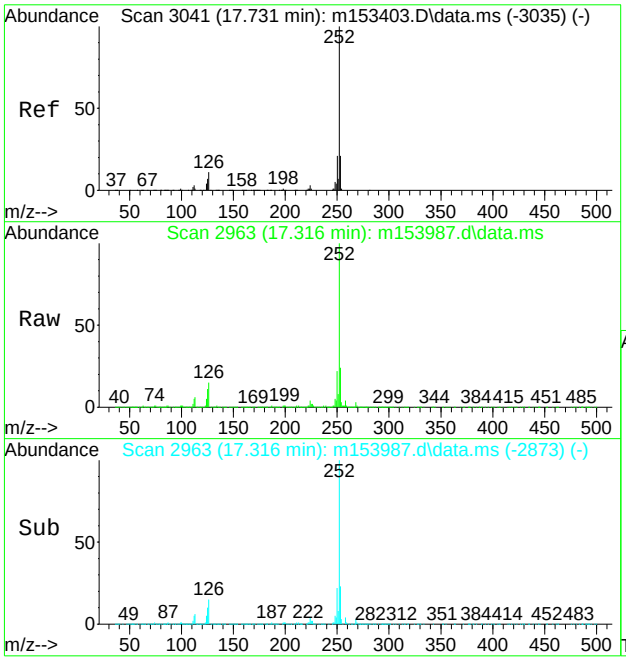


#93
Benzo[b]fluoranthene
Concen: 44.30 ppm
RT: 17.273 min Scan# 2955
Delta R.T. -0.002 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:252 Resp: 1139471

Ion	Ratio	Lower	Upper
252	100		
253	22.9	0.0	32.6
125	9.7	0.0	55.9

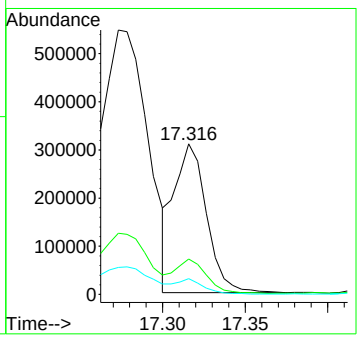


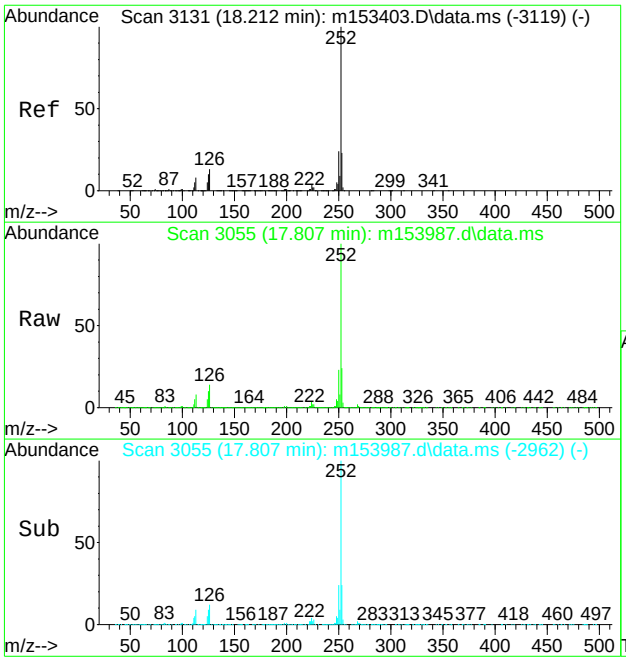


#94
Benzo[k]fluoranthene
Concen: 17.30 ppm
RT: 17.316 min Scan# 2963
Delta R.T. -0.017 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:252 Resp: 423578

Ion	Ratio	Lower	Upper
252	100		
253	23.6	0.0	30.0
125	9.8	0.0	30.0

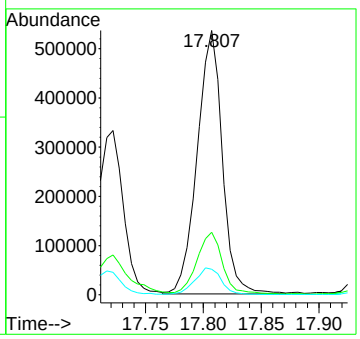


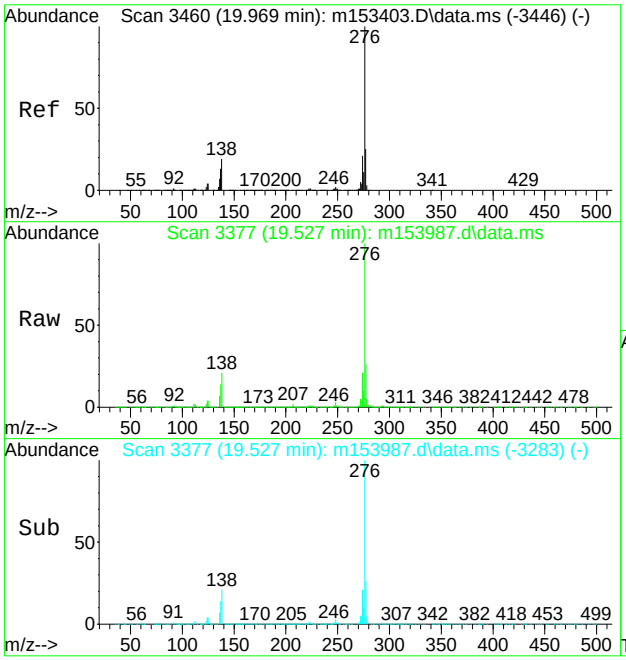


#95
Benzo[a]pyrene
Concen: 35.88 ppm
RT: 17.807 min Scan# 3055
Delta R.T. -0.001 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:252 Resp: 810231

Ion	Ratio	Lower	Upper
252	100		
253	23.1	0.0	30.0
125	9.6	8.1	68.1

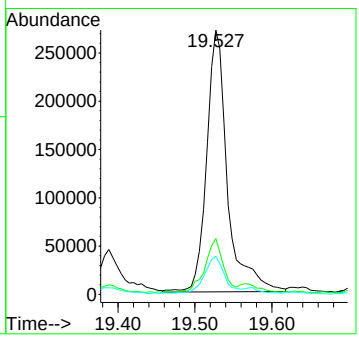


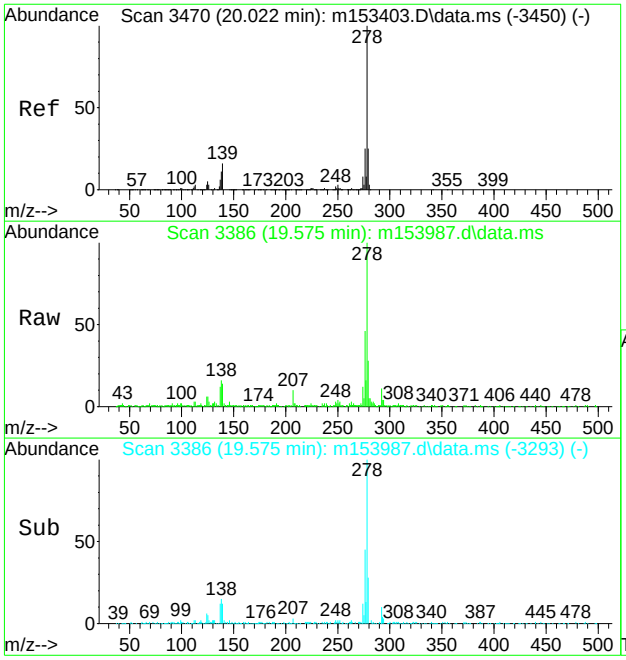


#96
Indeno[1,2,3-cd]pyrene
Concen: 22.70 ppm
RT: 19.527 min Scan# 3377
Delta R.T. 0.002 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:276 Resp: 509270

Ion	Ratio	Lower	Upper
276	100		
138	20.4	0.0	30.0
137	14.0	0.0	30.0

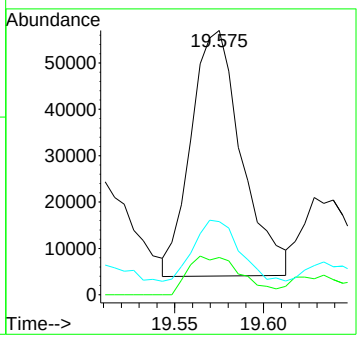


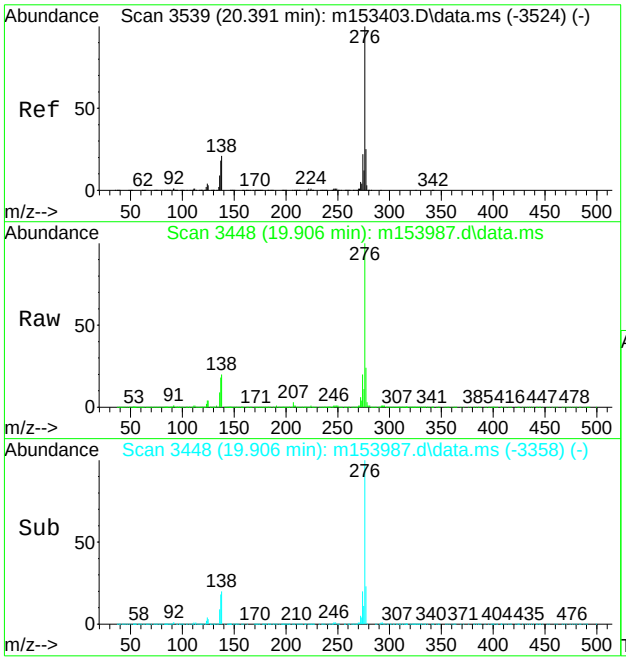


#98
Dibenz[a,h]anthracene
Concen: 5.05 ppm
RT: 19.575 min Scan# 3386
Delta R.T. -0.003 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:278 Resp: 105122

Ion	Ratio	Lower	Upper
278	100		
139	14.9	0.0	47.8
279	26.6	0.0	30.0

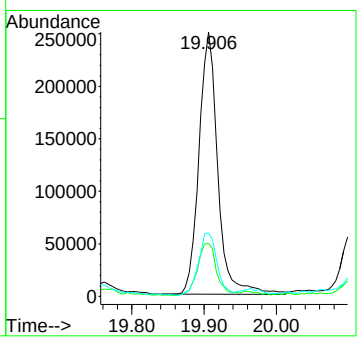




#100
Benzo[g,h,i]perylene
Concen: 21.02 ppm
RT: 19.906 min Scan# 3448
Delta R.T. -0.020 min
Lab File: m153987.d
Acq: 2 May 2019 7:25 pm

Tgt Ion:276 Resp: 450171

Ion	Ratio	Lower	Upper
276	100		
138	19.5	0.0	42.4
277	23.1	0.0	30.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153938.d
Acq On : 1 May 2019 3:10 pm
Operator : christc2
Sample : jc86837-2 Inst : MSM
Misc : op20021,em6577,30.4,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:24:52 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.422	152	247453	40.00	ppm	0.00
24) Naphthalene-d8	5.480	136	782425	40.00	ppm	0.00
47) Acenaphthene-d10	7.707	164	423197	40.00	ppm	0.00
69) Phenanthrene-d10	10.255	188	827920	40.00	ppm	0.00
83) Chrysene-d12	15.361	240	761993	40.00	ppm	0.00
91) Perylene-d12	17.956	264	769188	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.422	152	247453	40.00	ppm	0.00
103) Acenaphthene-d10a	7.707	164	423197	40.00	ppm	0.00
106) Chrysene-d12a	15.361	240	761993	40.00	ppm	0.00
108) Chrysene-d12b	15.361	240	762065	40.00	ppm	0.00
110) Phenanthrene-d10a	10.255	188	827920	40.00	ppm	0.00
113) Naphthalene-d8a	5.480	136	782425	40.00	ppm	0.00
115) Chrysene-d12c	15.361	240	761993	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.445	112	300896	31.10	ppm	0.00
Spiked Amount 50.000			Recovery =	62.20%		
8) Phenol-d5	4.171	99	368693	30.86	ppm	0.00
Spiked Amount 50.000			Recovery =	61.72%		
25) Nitrobenzene-d5	4.844	82	318121	38.11	ppm	0.00
Spiked Amount 50.000			Recovery =	76.22%		
51) 2-Fluorobiphenyl	6.746	172	683118	43.42	ppm	0.00
Spiked Amount 50.000			Recovery =	86.84%		
73) 2,4,6-Tribromophenol	9.021	330	146397	52.56	ppm	0.00
Spiked Amount 50.000			Recovery =	105.12%		
85) Terphenyl-d14	13.411	244	836496	40.71	ppm	0.00
Spiked Amount 50.000			Recovery =	81.42%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		

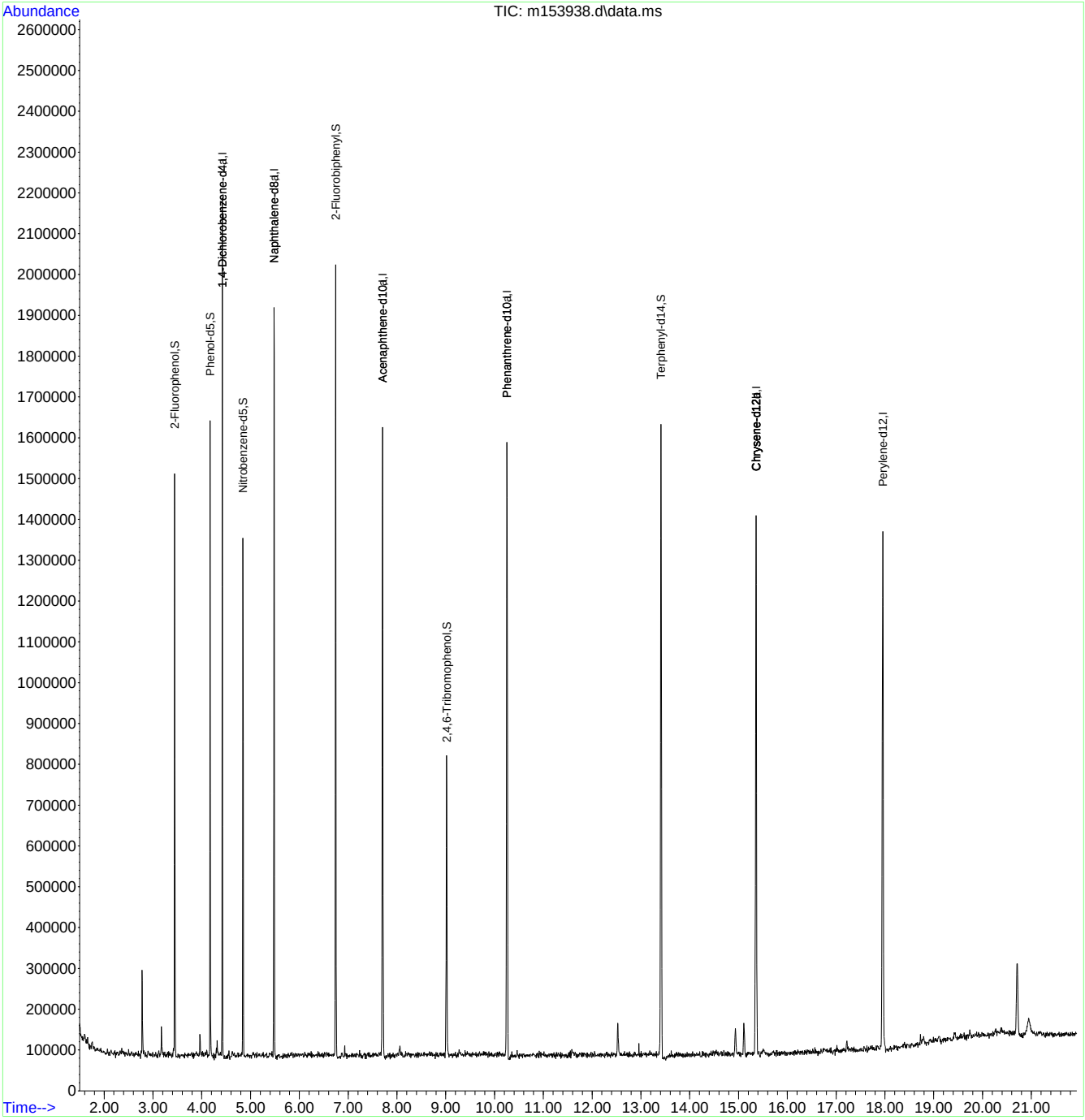
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153938.d
Acq On : 1 May 2019 3:10 pm
Operator : christc2
Sample : jc86837-2 Inst : MSM
Misc : op20021,em6577,30.4,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:24:52 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/06/19 11:58

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153943.d
Acq On : 1 May 2019 6:00 pm
Operator : christc2
Sample : jc86837-3 Inst : MSM
Misc : op20021,em6577,30.8,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:12:49 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

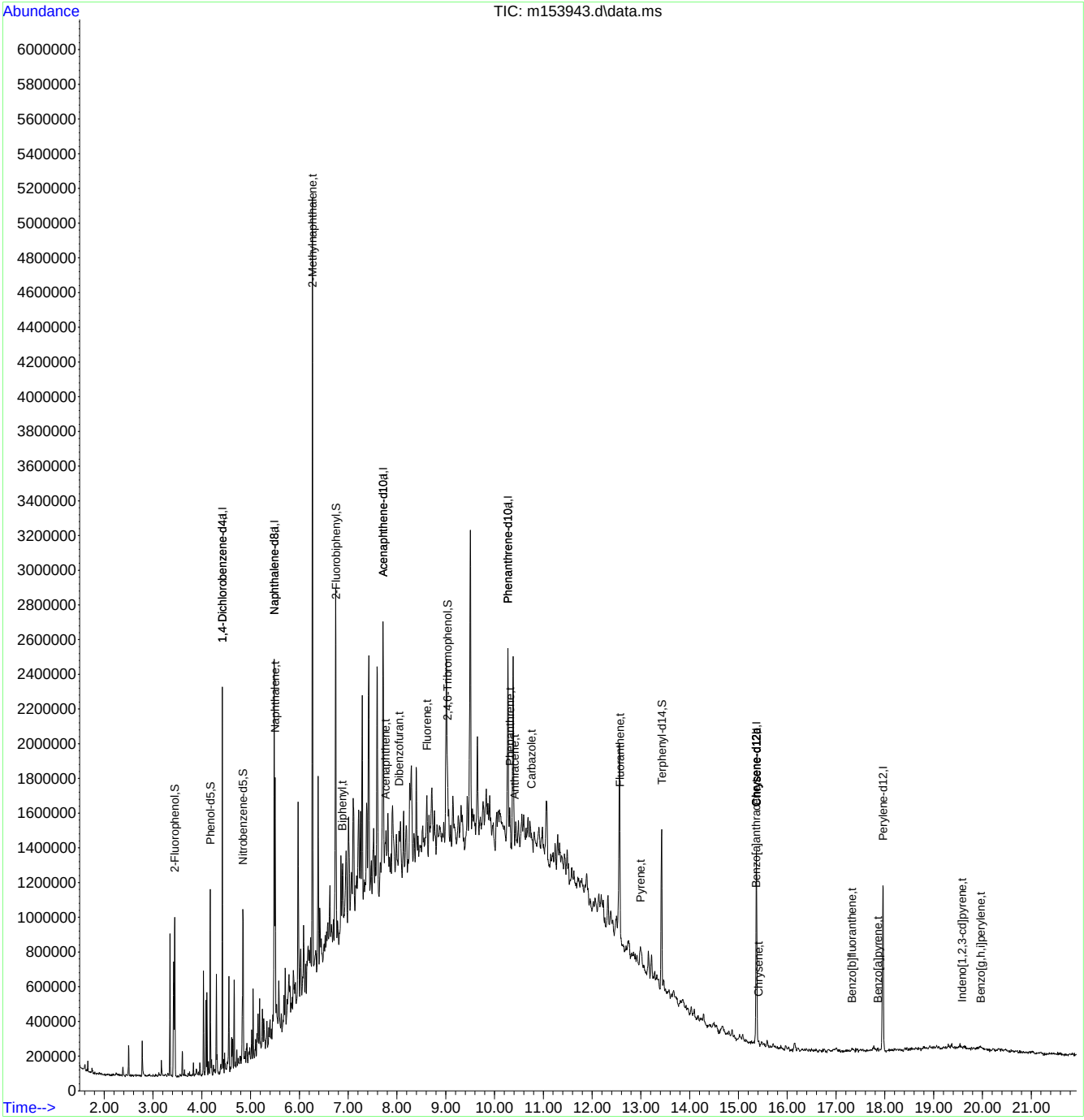
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.421	152	249667	40.00	ppm	0.00
24) Naphthalene-d8	5.484	136	723292	40.00	ppm	0.00
47) Acenaphthene-d10	7.716	164	323419	40.00	ppm	0.00
69) Phenanthrene-d10	10.274	188	569981	40.00	ppm	0.02
83) Chrysene-d12	15.370	240	583958	40.00	ppm	0.00
91) Perylene-d12	17.960	264	594187	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.421	152	249667	40.00	ppm	0.00
103) Acenaphthene-d10a	7.716	164	323419	40.00	ppm	0.00
106) Chrysene-d12a	15.370	240	583608	40.00	ppm	0.00
108) Chrysene-d12b	15.370	240	583608	40.00	ppm	0.00
110) Phenanthrene-d10a	10.274	188	569776	40.00	ppm	0.02
113) Naphthalene-d8a	5.484	136	723105	40.00	ppm	0.00
115) Chrysene-d12c	15.370	240	583608	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.449	112	224082	22.96	ppm	0.00
Spiked Amount 50.000			Recovery =	45.92%		
8) Phenol-d5	4.175	99	282174	23.41	ppm	0.00
Spiked Amount 50.000			Recovery =	46.82%		
25) Nitrobenzene-d5	4.843	82	239678	31.06	ppm	0.00
Spiked Amount 50.000			Recovery =	62.12%		
51) 2-Fluorobiphenyl	6.749	172	433480	36.05	ppm	0.00
Spiked Amount 50.000			Recovery =	72.10%		
73) 2,4,6-Tribromophenol	9.035	330	85550	44.61	ppm	0.01
Spiked Amount 50.000			Recovery =	89.22%		
85) Terphenyl-d14	13.426	244	473850	30.09	ppm	0.01
Spiked Amount 50.000			Recovery =	60.18%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.505	128	608476	34.36	ppm	97
44) 2-Methylnaphthalene	6.269	141	1120026	99.74	ppm	98
53) Biphenyl	6.878	154	71522	5.50	ppm	99
59) Acenaphthene	7.764	153	16222	1.71	ppm	96
62) Dibenzofuran	8.042	168	75146	5.31	ppm	97
66) Fluorene	8.613	166	45693	3.89	ppm	92
77) Phenanthrene	10.317	178	97350	6.89	ppm	97
78) Anthracene	10.408	178	12649	0.85	ppm	76
79) Carbazole	10.755	167	21921	1.53	ppm	78
81) Fluoranthene	12.571	202	10521	0.56	ppm	76
84) Pyrene	12.988	202	36372	1.70	ppm	93
87) Benzo[a]anthracene	15.359	228	7982m	0.40	ppm	
89) Chrysene	15.413	228	17140	0.96	ppm	90
93) Benzo[b]fluoranthene	17.325	252	8690	0.46	ppm	88
95) Benzo[a]pyrene	17.853	252	5986	0.36	ppm	81
96) Indeno[1,2,3-cd]pyrene	19.579	276	3612	0.77	ppm	78
100) Benzo[g,h,i]perylene	19.968	276	7100	0.46	ppm	87

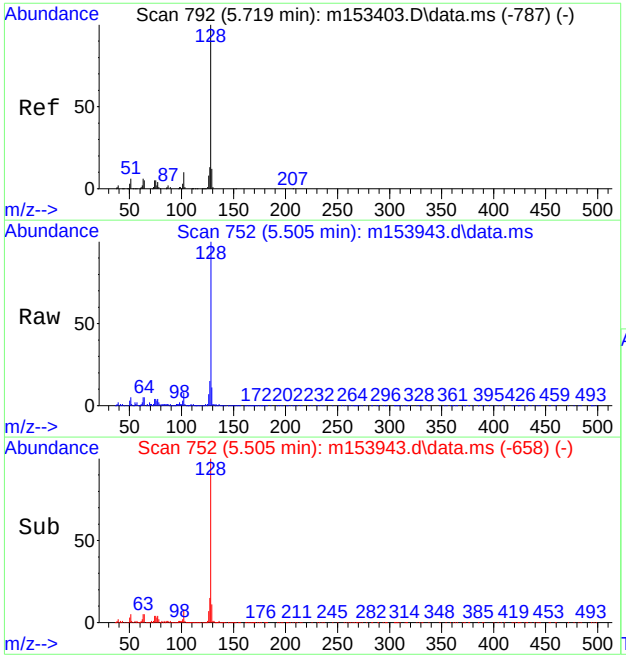
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153943.d
Acq On : 1 May 2019 6:00 pm
Operator : christc2
Sample : jc86837-3 Inst : MSM
Misc : op20021,em6577,30.8,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 05:12:49 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

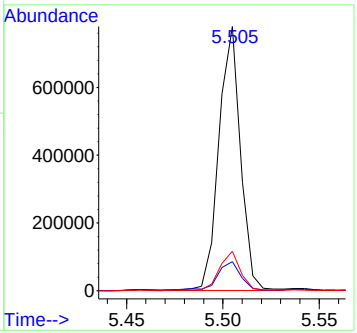


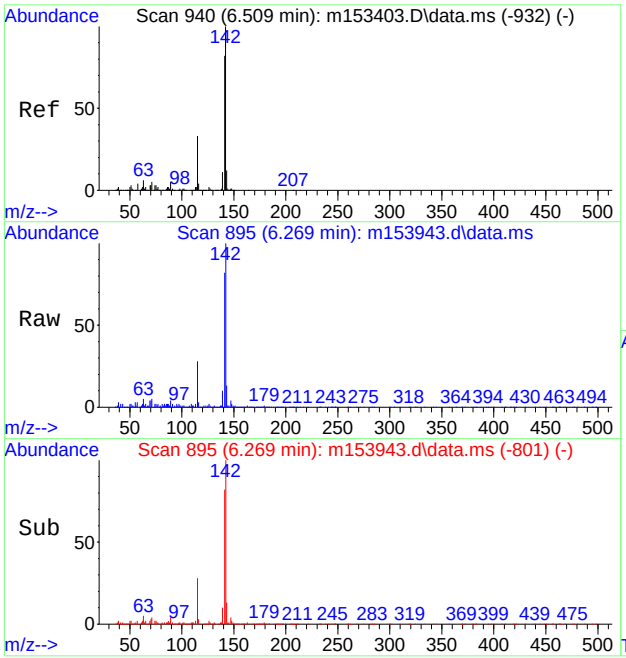


#38
Naphthalene
Concen: 34.36 ppm
RT: 5.505 min Scan# 752
Delta R.T. 0.003 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:128 Resp: 608476

Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	41.9
127	14.8	0.0	43.9

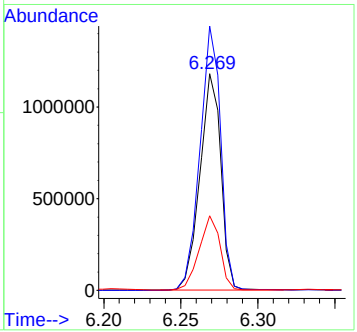


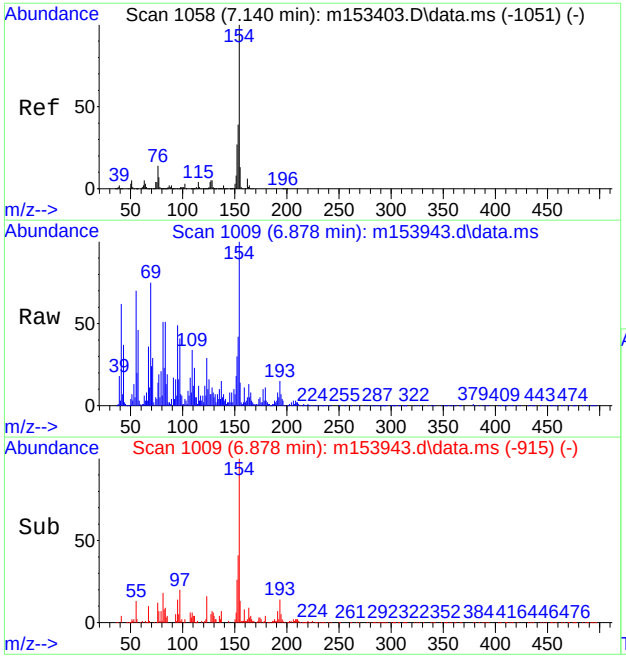


#44
2-Methylnaphthalene
Concen: 99.74 ppm
RT: 6.269 min Scan# 895
Delta R.T. 0.003 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:141 Resp: 1120026

Ion	Ratio	Lower	Upper
141	100		
142	122.1	91.0	151.0
115	34.3	1.1	61.1

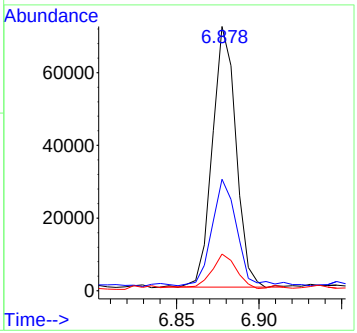


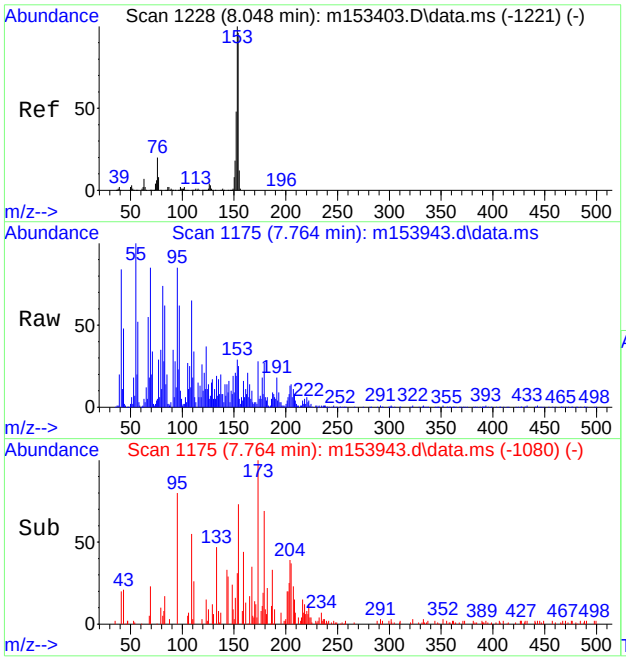


#53
Biphenyl
Concen: 5.50 ppm
RT: 6.878 min Scan# 1009
Delta R.T. 0.003 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:154 Resp: 71522

Ion	Ratio	Lower	Upper
154	100		
153	39.8	9.3	69.3
155	12.9	0.0	42.8

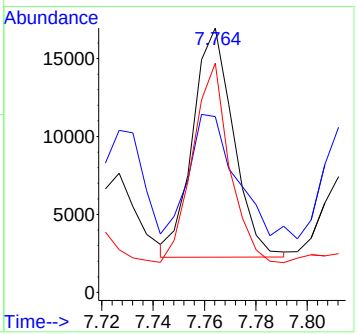


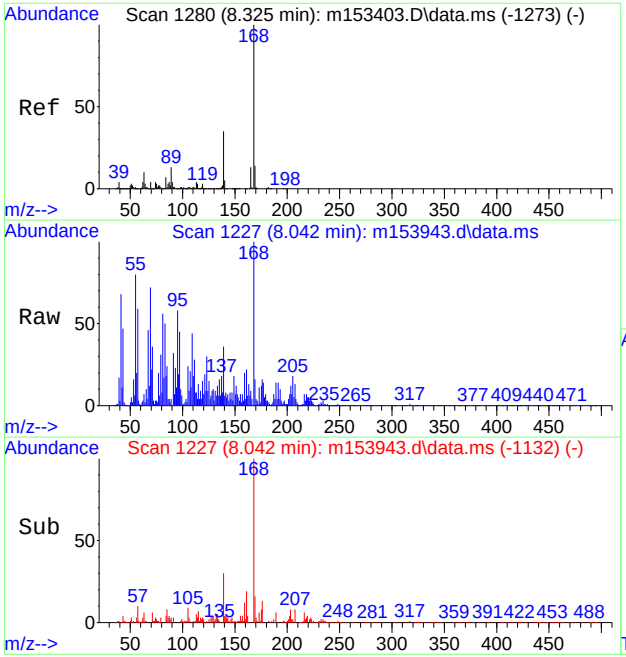


#59
Acenaphthene
Concen: 1.71 ppm
RT: 7.764 min Scan# 1175
Delta R.T. 0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:153 Resp: 16222

Ion	Ratio	Lower	Upper
153	100		
152	51.6	18.4	78.4
154	90.5	64.6	124.6

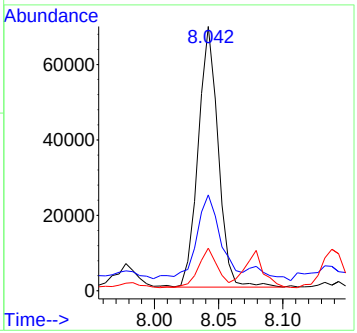


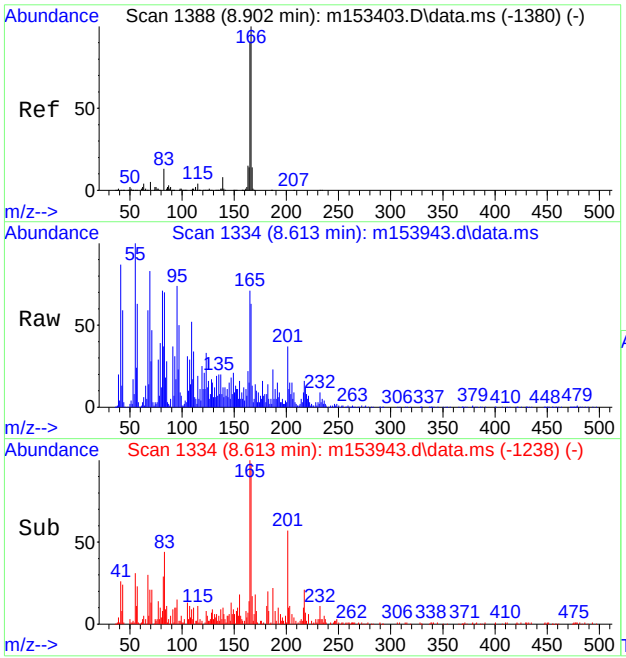


#62
Dibenzofuran
Concen: 5.31 ppm
RT: 8.042 min Scan# 1227
Delta R.T. 0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:168 Resp: 75146

Ion	Ratio	Lower	Upper
168	100		
139	31.3	0.0	59.9
169	14.9	0.0	43.1

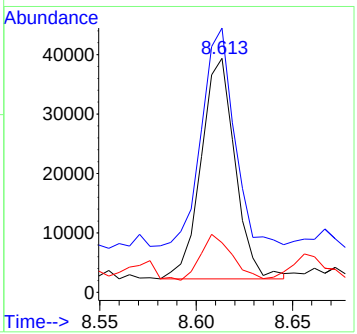


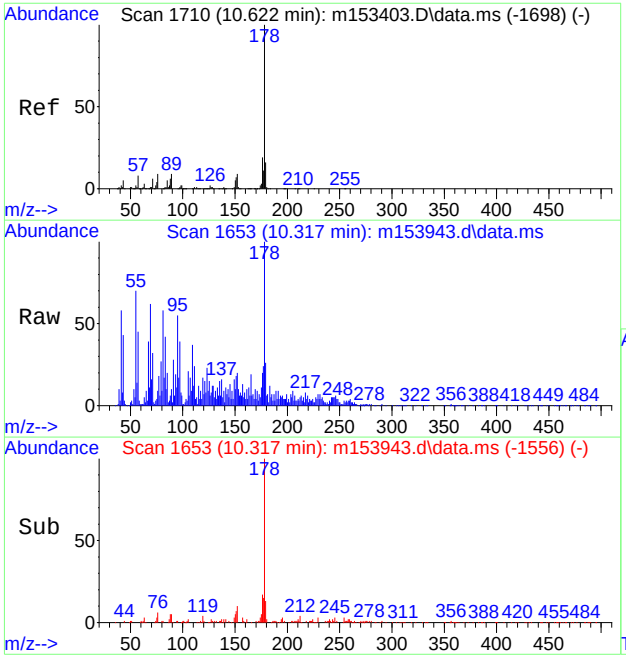


#66
Fluorene
Concen: 3.89 ppm
RT: 8.613 min Scan# 1334
Delta R.T. 0.013 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:166 Resp: 45693

Ion	Ratio	Lower	Upper
166	100		
165	99.6	61.3	121.3
167	14.9	0.0	43.0

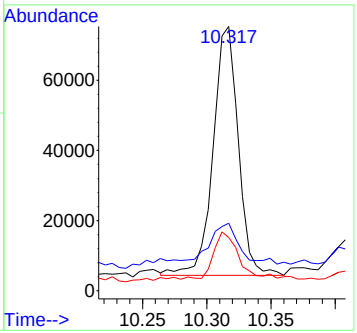


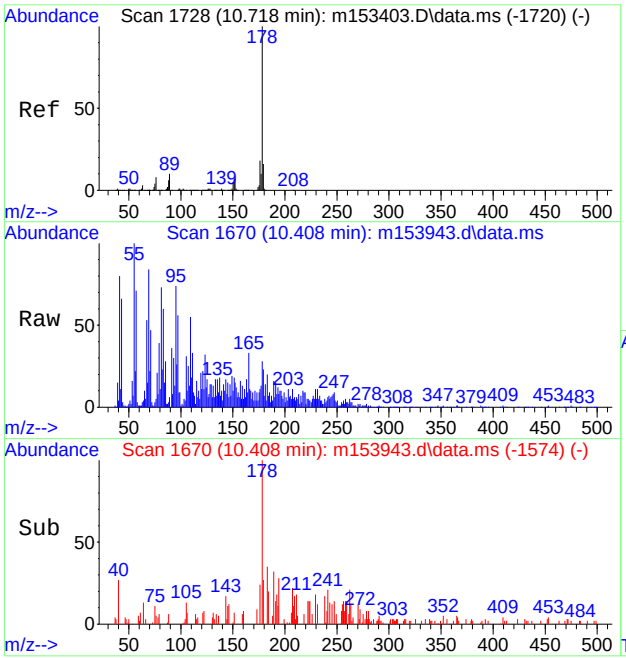


#77
Phenanthrene
Concen: 6.89 ppm
RT: 10.317 min Scan# 1653
Delta R.T. 0.019 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:178 Resp: 97350

Ion	Ratio	Lower	Upper
178	100		
179	15.0	0.0	45.1
176	16.0	0.0	48.1

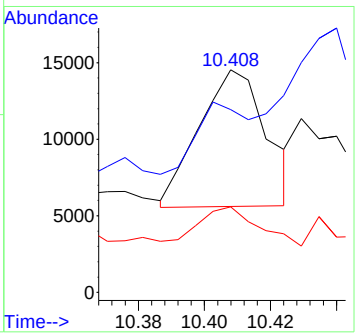


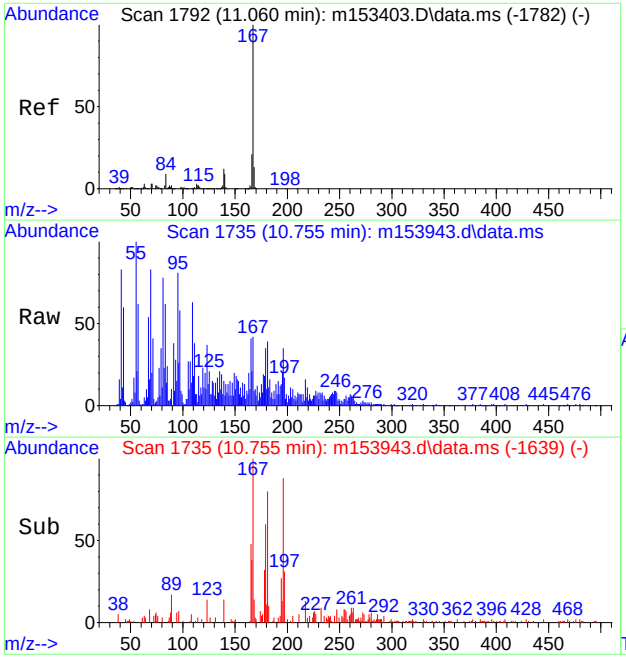


#78
Anthracene
Concen: 0.85 ppm
RT: 10.408 min Scan# 1670
Delta R.T. 0.013 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:178 Resp: 12649

Ion	Ratio	Lower	Upper
178	100		
179	24.0	0.0	45.3
176	29.3	0.0	47.7

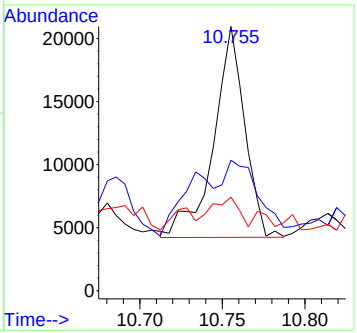


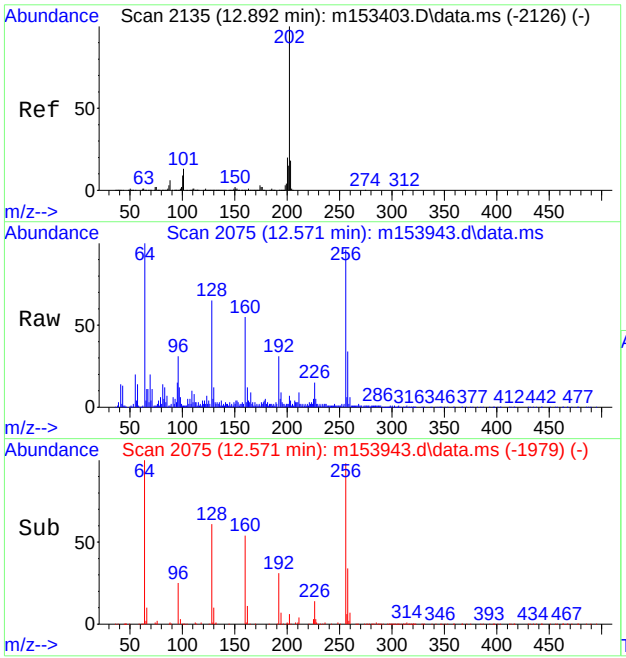


#79
Carbazole
Concen: 1.53 ppm
RT: 10.755 min Scan# 1735
Delta R.T. 0.013 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:167 Resp: 21921

Ion	Ratio	Lower	Upper
167	100		
166	34.5	0.0	50.7
139	14.1	0.0	40.8

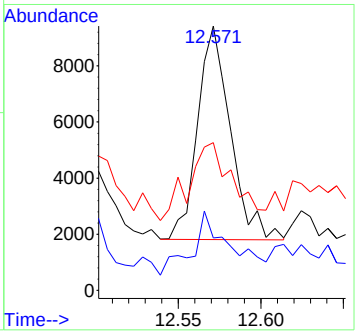


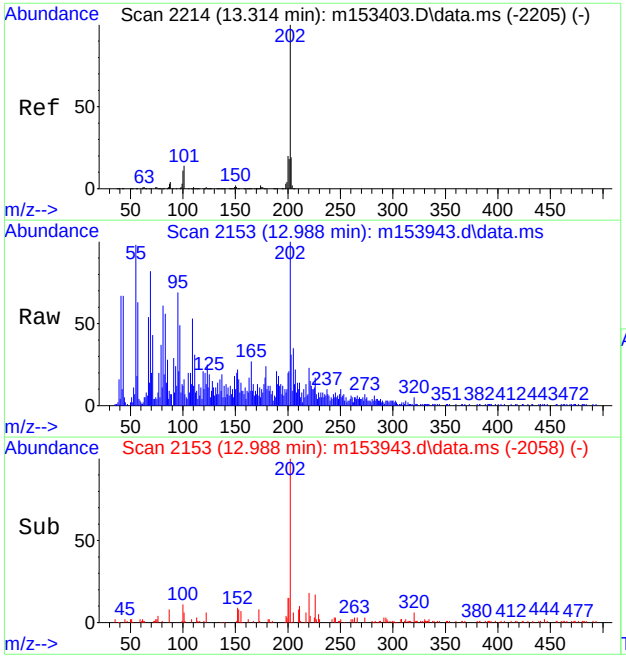


#81
Fluoranthene
Concen: 0.56 ppm
RT: 12.571 min Scan# 2075
Delta R.T. 0.013 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:202 Resp: 10521

Ion	Ratio	Lower	Upper
202	100		
101	10.3	0.0	41.5
203	34.4	0.0	47.7

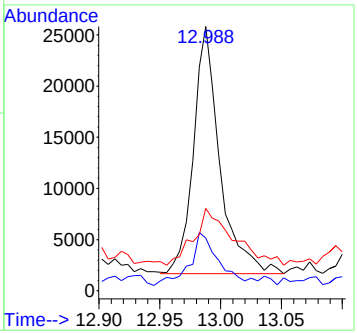


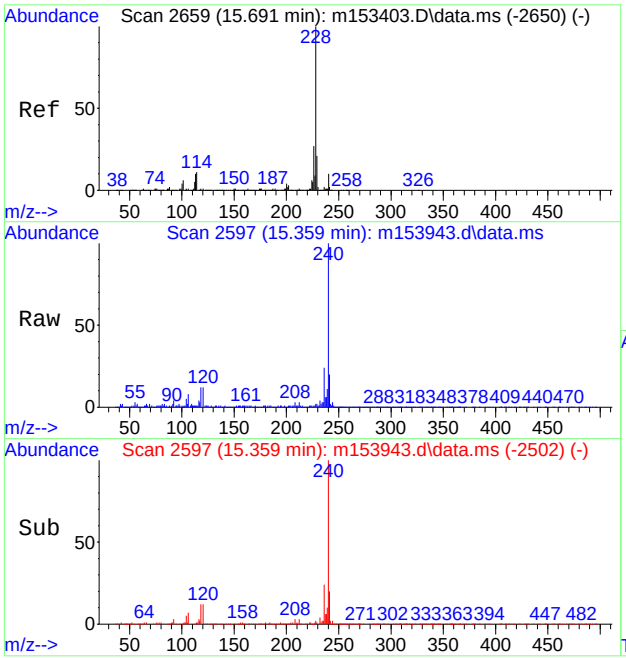


#84
Pyrene
Concen: 1.70 ppm
RT: 12.988 min Scan# 2153
Delta R.T. 0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:202 Resp: 36372

Ion	Ratio	Lower	Upper
202	100		
200	16.8	0.0	49.2
203	22.4	0.0	48.1

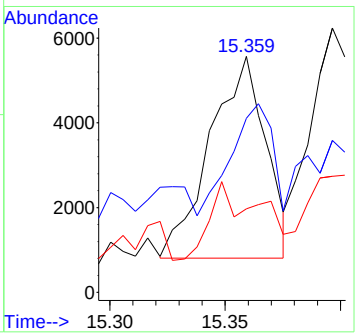


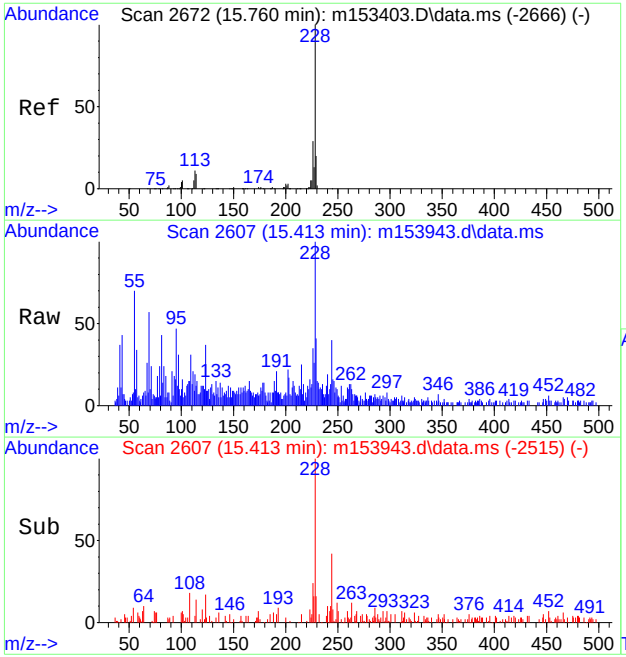


#87
Benzo[a]anthracene
Concen: 0.40 ppm m
RT: 15.359 min Scan# 2597
Delta R.T. 0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:228 Resp: 7982

Ion	Ratio	Lower	Upper
228	100		
229	73.8	0.0	49.7#
226	35.3	0.0	54.7

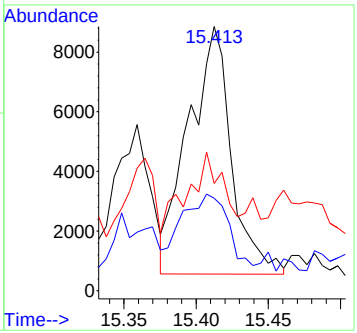


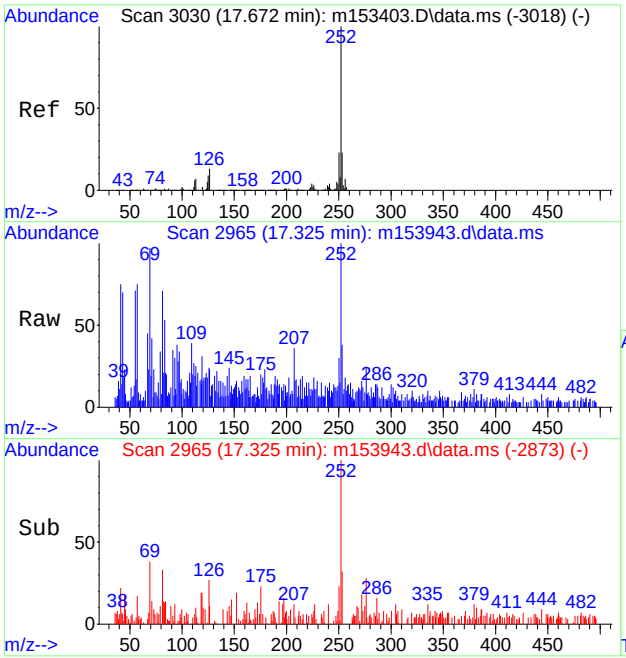


#89
Chrysene
Concen: 0.96 ppm
RT: 15.413 min Scan# 2607
Delta R.T. -0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:228 Resp: 17140

Ion	Ratio	Lower	Upper
228	100		
226	25.0	0.0	57.4
229	12.7	0.0	50.4

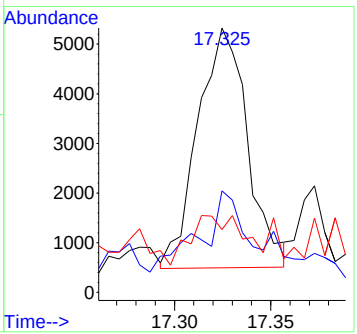


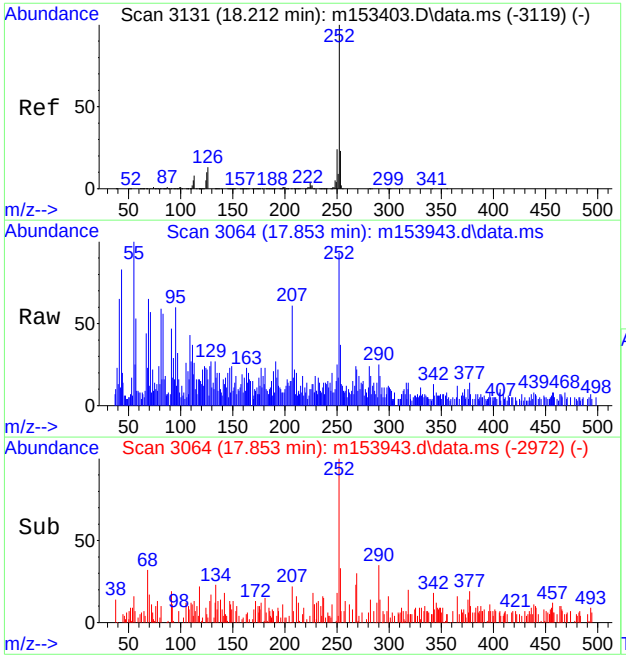


#93
Benzo[b]fluoranthene
Concen: 0.46 ppm
RT: 17.325 min Scan# 2965
Delta R.T. -0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:252 Resp: 8690

Ion	Ratio	Lower	Upper
252	100		
253	29.2	0.0	52.2
125	11.2	0.0	39.2

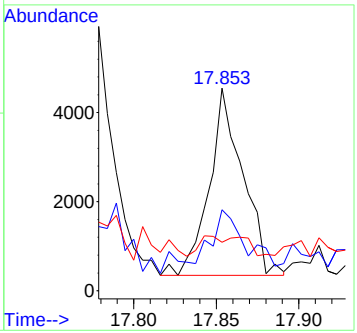


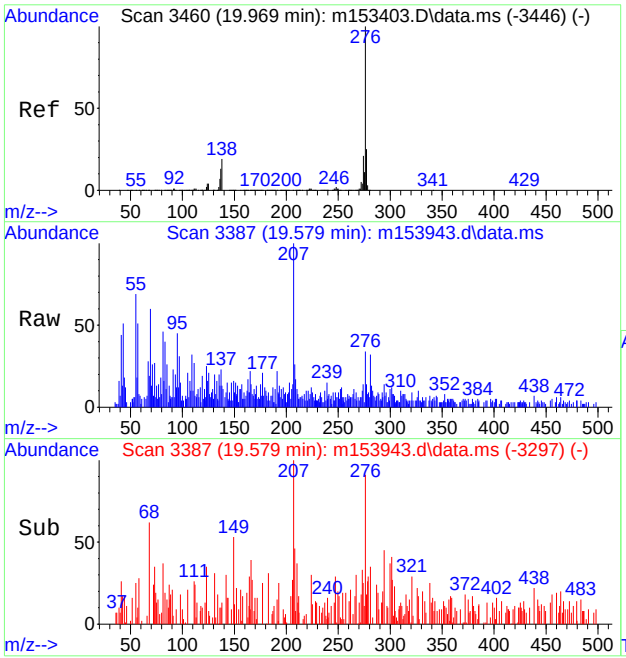


#95
Benzo[a]pyrene
Concen: 0.36 ppm
RT: 17.853 min Scan# 3064
Delta R.T. -0.008 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:252 Resp: 5986

Ion	Ratio	Lower	Upper
252	100		
253	31.6	0.0	51.8
125	4.0	0.0	39.9

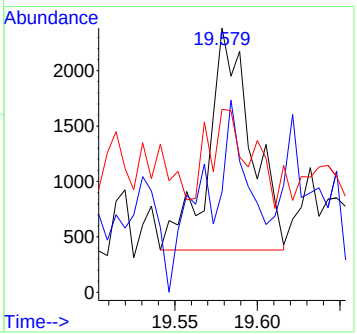


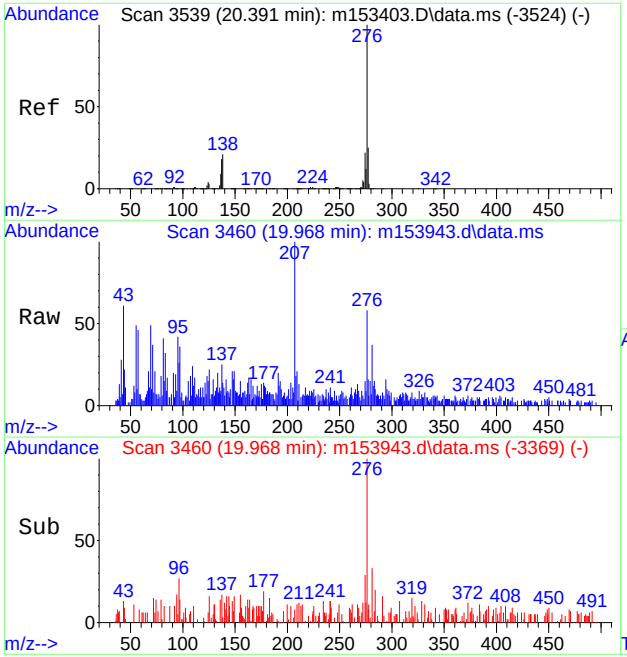


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.77 ppm
RT: 19.579 min Scan# 3387
Delta R.T. -0.019 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:276 Resp: 3612

Ion	Ratio	Lower	Upper
276	100		
138	6.5	0.0	45.7
137	20.6	0.0	42.0

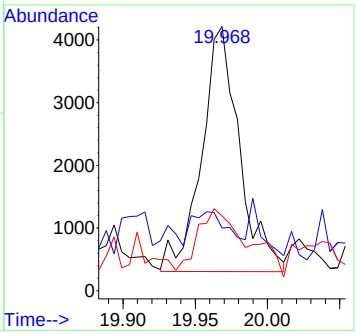




#100
Benzo[g,h,i]perylene
Concen: 0.46 ppm
RT: 19.968 min Scan# 3460
Delta R.T. -0.013 min
Lab File: m153943.d
Acq: 1 May 2019 6:00 pm

Tgt Ion:276 Resp: 7100

Ion	Ratio	Lower	Upper
276	100		
138	8.4	0.0	48.0
277	21.9	0.0	55.0



Manual Integration Approval Summary

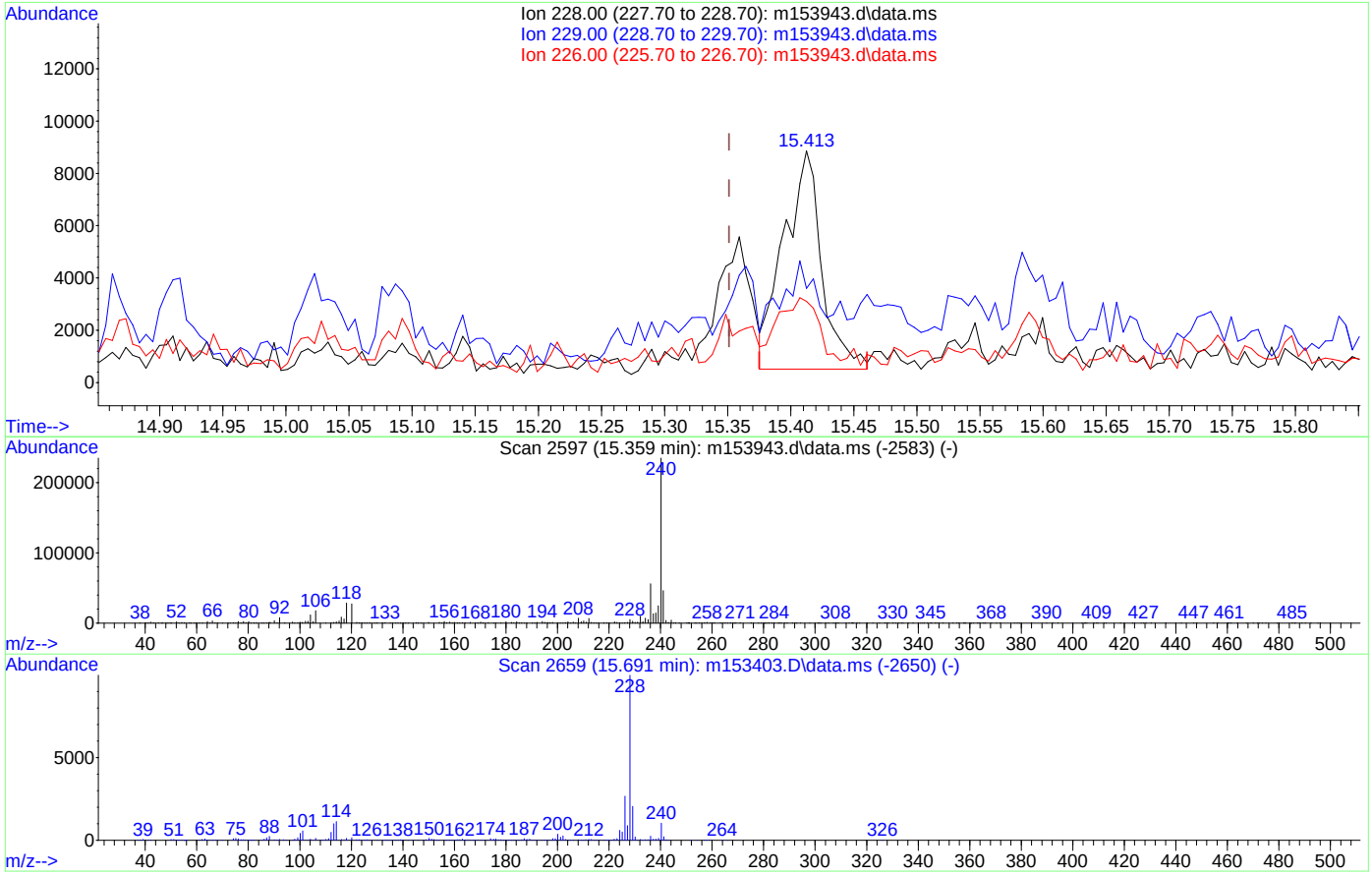
Sample Number:	JC86837-3	**Method:**	SW846 8270D
Lab FileID:	M153943.D	**Analyst approved:**	05/02/19 05:57 Jeryll Fabriene Reyes
Injection Time:	05/01/19 18:00	**Supervisor approved:**	05/06/19 11:58 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(a)anthracene	56-55-3		15.36	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153943.d
Acq On : 1 May 2019 6:00 pm
Operator : christc2
Sample : jc86837-3 Inst : MSM
Misc : op20021,em6577,30.8,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:32:54 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



TIC: m153943.d\data.ms

(87) Benzo[a]anthracene (t)

15.413min (+0.061) 0.87ppm

response 17394

Ion	Exp%	Act%
228.00	100	100
229.00	19.70	12.67
226.00	24.70	25.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153940.d
Acq On : 1 May 2019 4:07 pm
Operator : christc2
Sample : jc86837-4 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:38:34 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

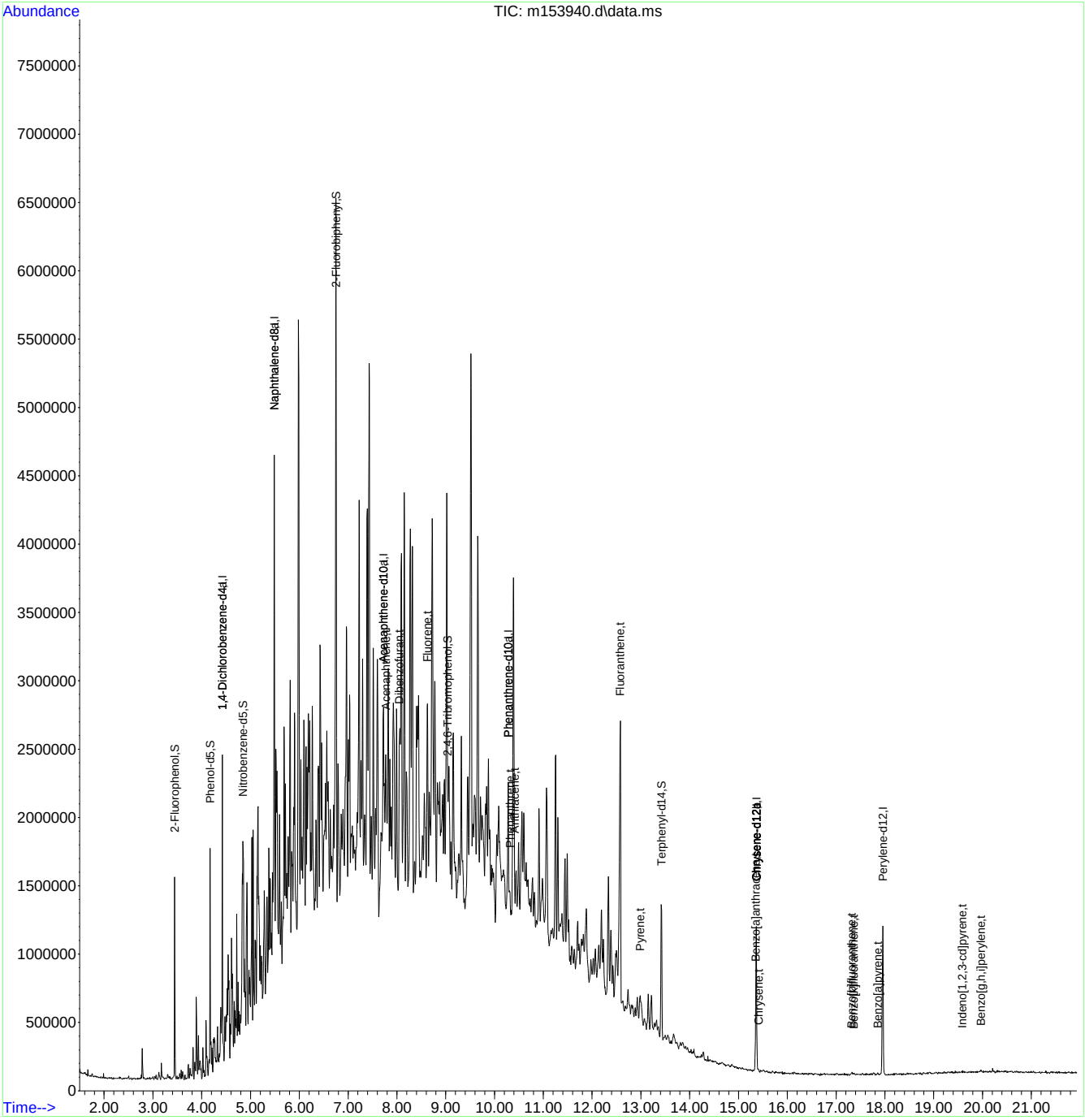
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.423	152	248901	40.00	ppm	0.00
24) Naphthalene-d8	5.485	136	669125	40.00	ppm	0.00
47) Acenaphthene-d10	7.723	164	273169	40.00	ppm	0.02
69) Phenanthrene-d10	10.282	188	487919	40.00	ppm	0.02
83) Chrysene-d12	15.366	240	593534	40.00	ppm	0.00
91) Perylene-d12	17.957	264	629498	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.423	152	248901	40.00	ppm	0.00
103) Acenaphthene-d10a	7.723	164	273169	40.00	ppm	0.02
106) Chrysene-d12a	15.366	240	593534	40.00	ppm	0.00
108) Chrysene-d12b	15.366	240	593384	40.00	ppm	0.00
110) Phenanthrene-d10a	10.282	188	487919	40.00	ppm	0.02
113) Naphthalene-d8a	5.485	136	669156	40.00	ppm	0.00
115) Chrysene-d12c	15.366	240	593534	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.445	112	314613	32.33	ppm	0.00
Spiked Amount 50.000			Recovery =	64.66%		
8) Phenol-d5	4.172	99	360105	29.96	ppm	0.00
Spiked Amount 50.000			Recovery =	59.92%		
25) Nitrobenzene-d5	4.844	82	287821	40.32	ppm	0.00
Spiked Amount 50.000			Recovery =	80.64%		
51) 2-Fluorobiphenyl	6.751	172	481113	47.37	ppm	0.00
Spiked Amount 50.000			Recovery =	94.74%		
73) 2,4,6-Tribromophenol	9.043	330	92252	56.20	ppm	0.02
Spiked Amount 50.000			Recovery =	112.40%		
85) Terphenyl-d14	13.422	244	505783	31.60	ppm	0.00
Spiked Amount 50.000			Recovery =	63.20%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
59) Acenaphthene	7.771	153	123232	15.42	ppm	94
62) Dibenzofuran	8.049	168	164639	13.78	ppm	91
66) Fluorene	8.621	166	274894	27.73	ppm	98
77) Phenanthrene	10.319	178	65742	5.43	ppm	92
78) Anthracene	10.410	178	66257	5.20	ppm	86
81) Fluoranthene	12.573	202	49392	3.09	ppm	96
84) Pyrene	12.984	202	76873	3.54	ppm	95
87) Benzo[a]anthracene	15.350	228	15282	0.75	ppm	85
89) Chrysene	15.414	228	12302	0.68	ppm	89
93) Benzo[b]fluoranthene	17.316	252	9934	0.50	ppm	92
94) Benzo[k]fluoranthene	17.364	252	4255	0.23	ppm	67
95) Benzo[a]pyrene	17.850	252	6591	0.38	ppm	93
96) Indeno[1,2,3-cd]pyrene	19.580	276	4364	0.80	ppm	91
100) Benzo[g,h,i]perylene	19.965	276	4709	0.29	ppm	82

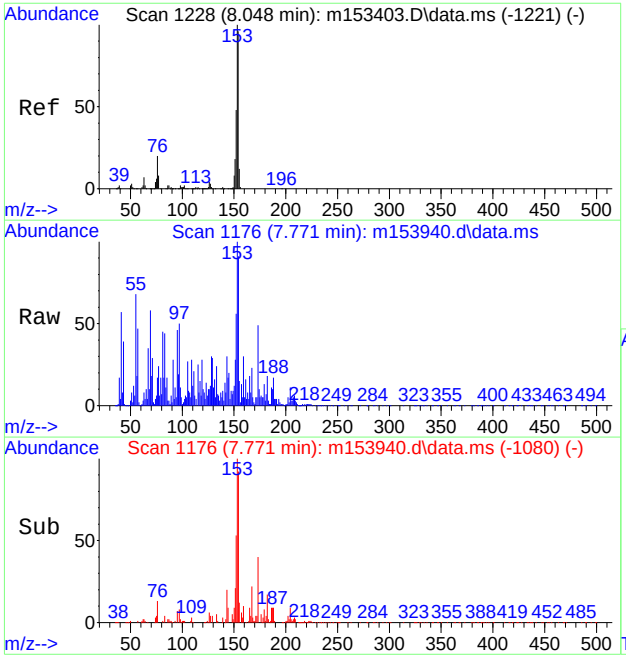
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153940.d
Acq On : 1 May 2019 4:07 pm
Operator : christc2
Sample : jc86837-4 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:38:34 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

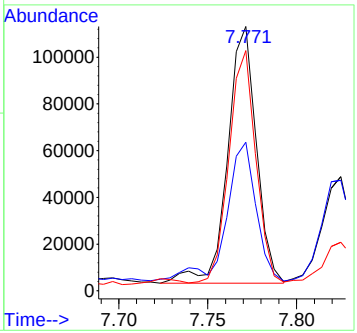


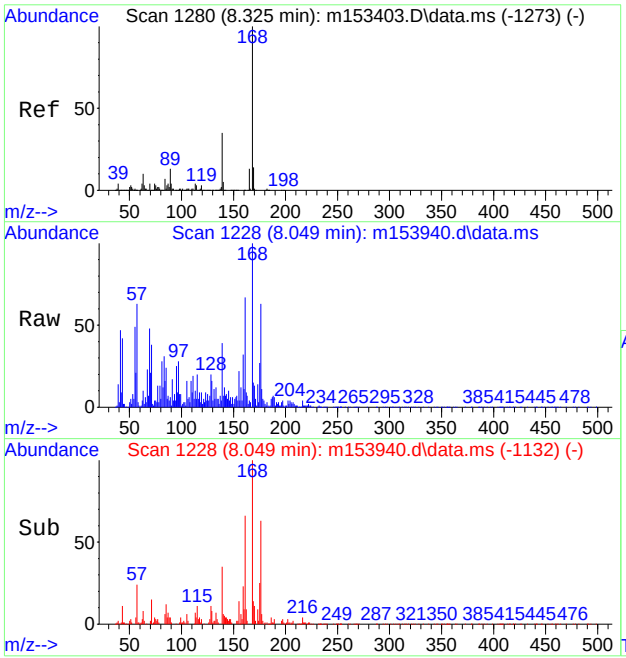


#59
Acenaphthene
Concen: 15.42 ppm
RT: 7.771 min Scan# 1176
Delta R.T. 0.015 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:153 Resp: 123232

Ion	Ratio	Lower	Upper
153	100		
152	53.8	18.4	78.4
154	89.7	64.6	124.6

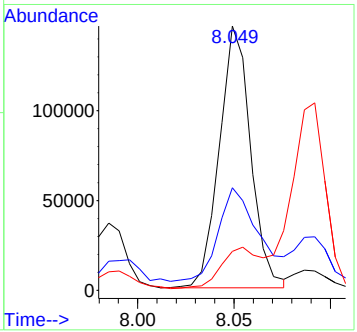


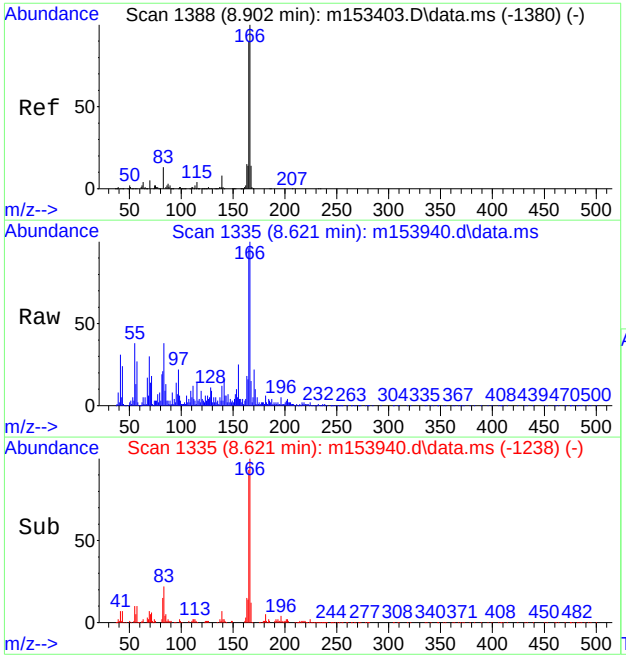


#62
Dibenzofuran
Concen: 13.78 ppm
RT: 8.049 min Scan# 1228
Delta R.T. 0.015 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:168 Resp: 164639

Ion	Ratio	Lower	Upper
168	100		
139	31.1	0.0	59.9
169	2.8	0.0	43.1

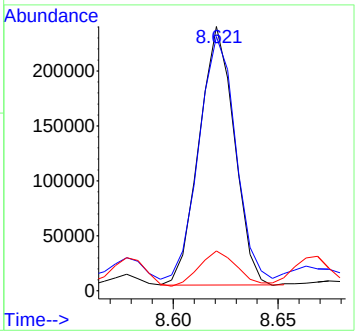


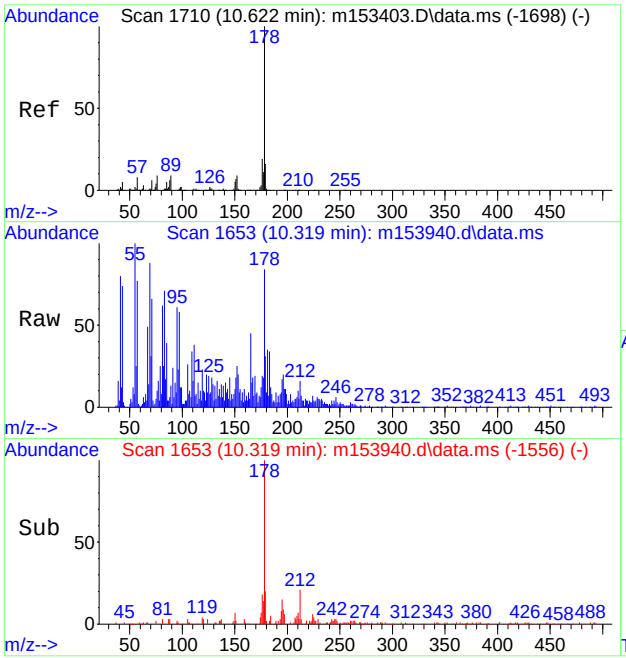


#66
Fluorene
Concen: 27.73 ppm
RT: 8.621 min Scan# 1335
Delta R.T. 0.021 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:166 Resp: 274894

Ion	Ratio	Lower	Upper
166	100		
165	92.9	61.3	121.3
167	11.7	0.0	43.0

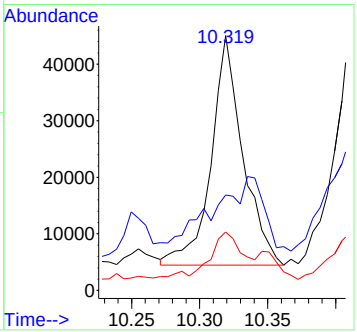


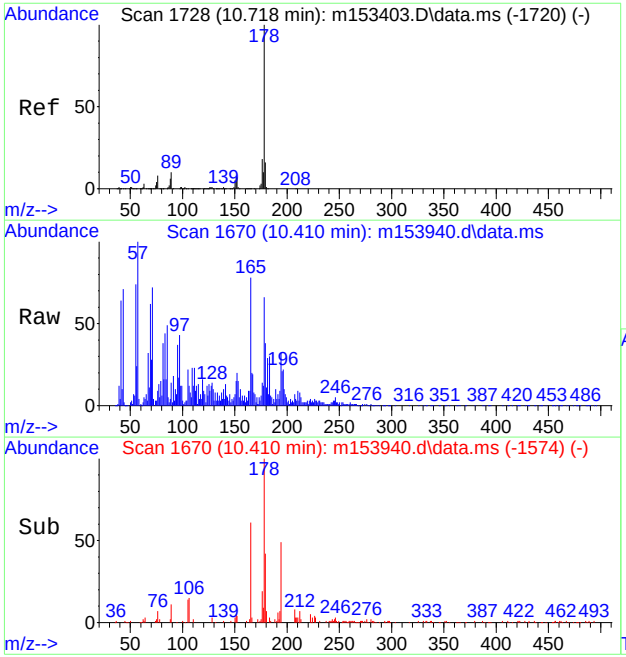


#77
Phenanthrene
Concen: 5.43 ppm
RT: 10.319 min Scan# 1653
Delta R.T. 0.021 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:178 Resp: 65742

Ion	Ratio	Lower	Upper
178	100		
179	21.9	0.0	45.1
176	18.6	0.0	48.1

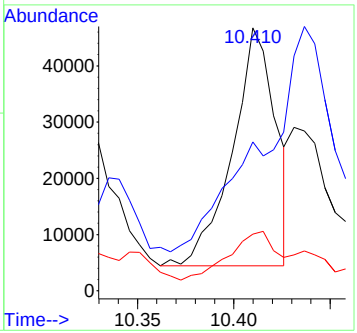


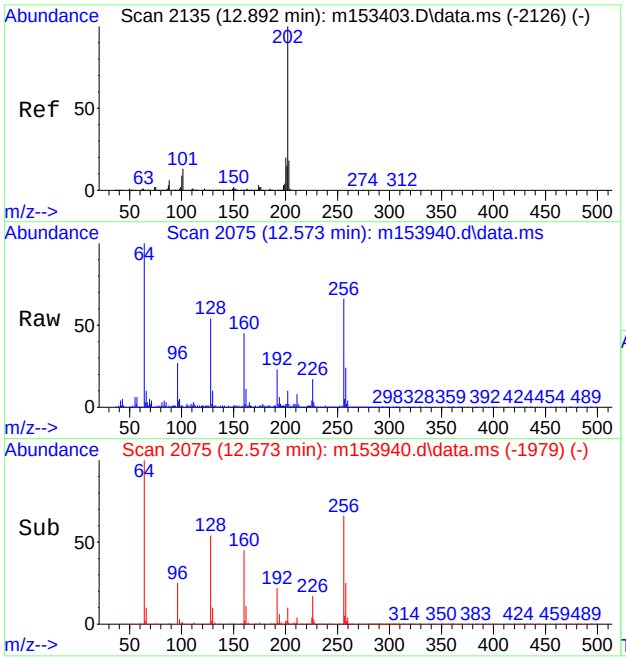


#78
Anthracene
Concen: 5.20 ppm
RT: 10.410 min Scan# 1670
Delta R.T. 0.015 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:178 Resp: 66257

Ion	Ratio	Lower	Upper
178	100		
179	26.8	0.0	45.3
176	17.1	0.0	47.7

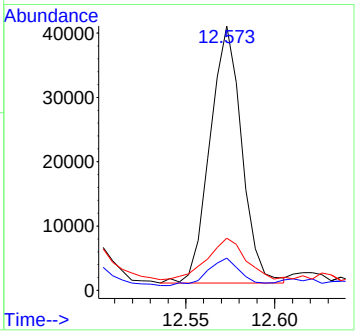


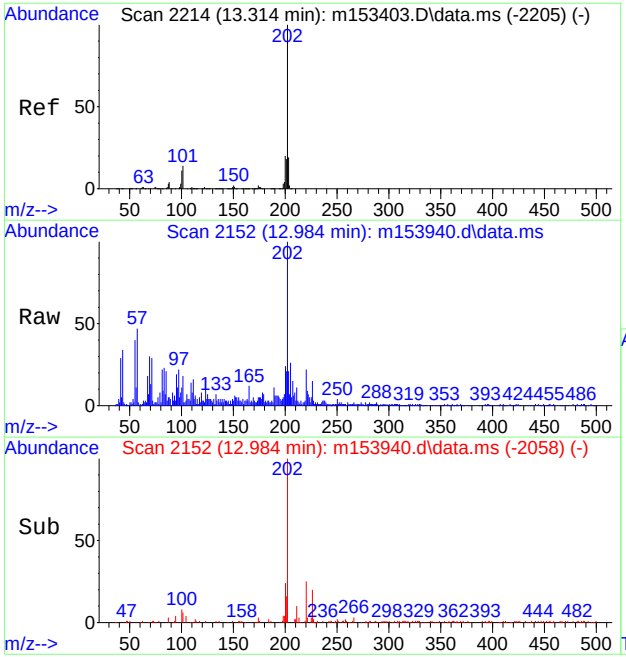


#81
Fluoranthene
Concen: 3.09 ppm
RT: 12.573 min Scan# 2075
Delta R.T. 0.015 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:202 Resp: 49392

Ion	Ratio	Lower	Upper
202	100		
101	9.7	0.0	41.5
203	15.8	0.0	47.7

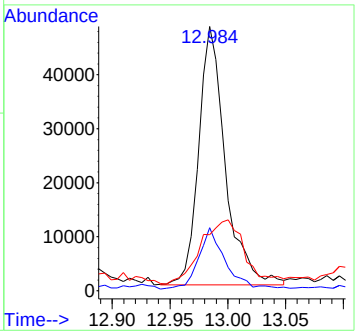


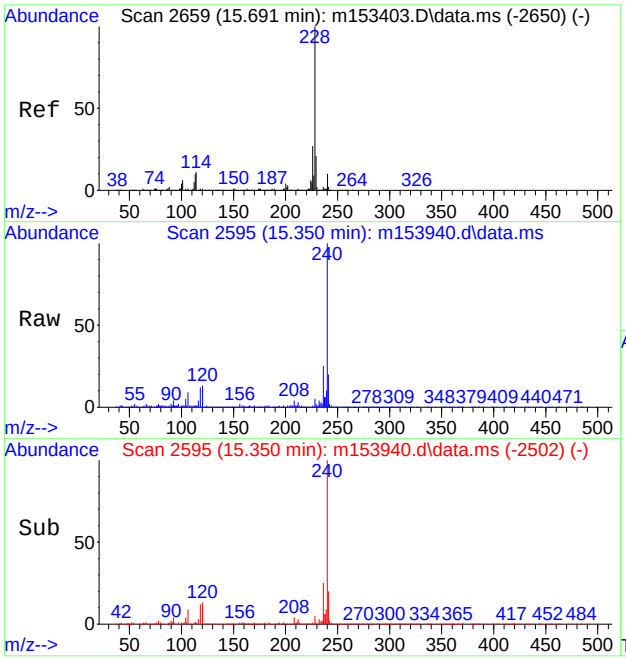


#84
Pyrene
Concen: 3.54 ppm
RT: 12.984 min Scan# 2152
Delta R.T. 0.005 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:202 Resp: 76873

Ion	Ratio	Lower	Upper
202	100		
200	23.6	0.0	49.2
203	18.2	0.0	48.1

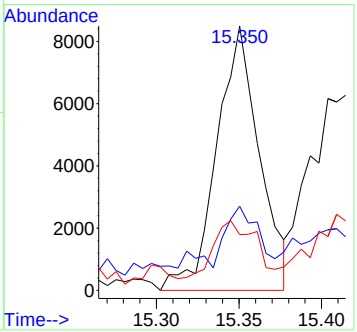


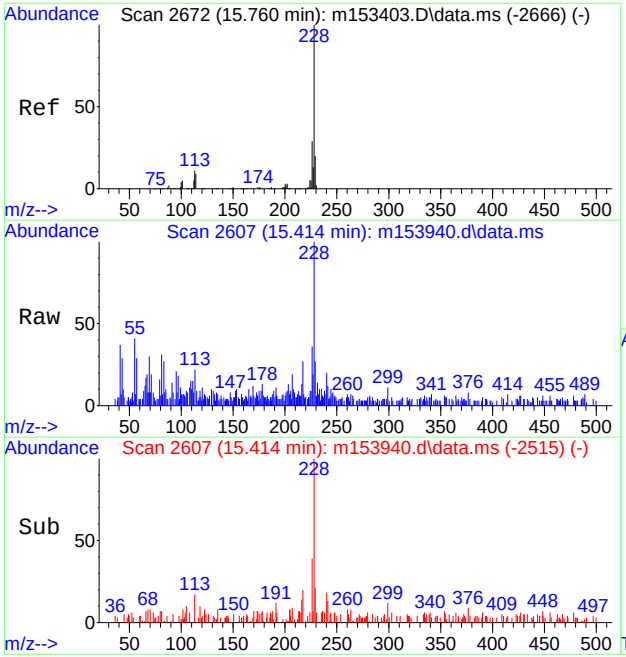


#87
Benzo[a]anthracene
Concen: 0.75 ppm
RT: 15.350 min Scan# 2595
Delta R.T. -0.001 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:228 Resp: 15282

Ion	Ratio	Lower	Upper
228	100		
229	22.1	0.0	49.7
226	13.5	0.0	54.7

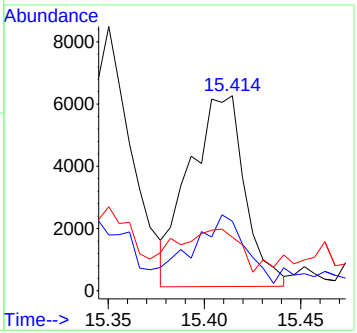


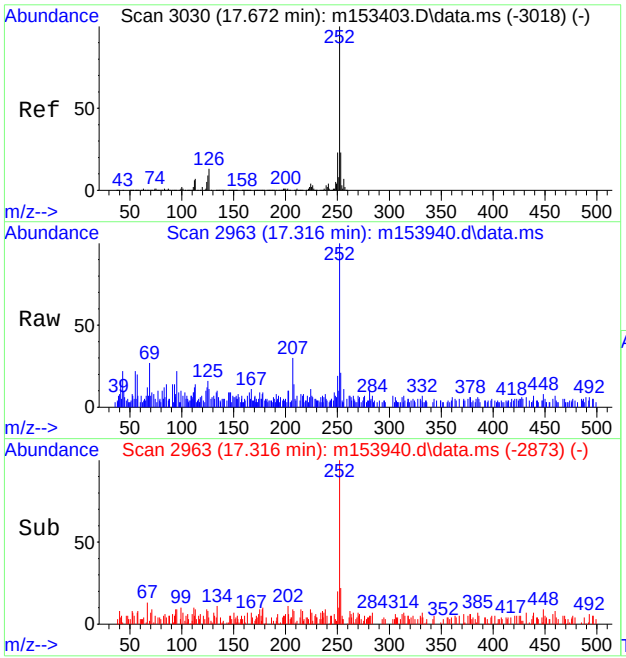


#89
Chrysene
Concen: 0.68 ppm
RT: 15.414 min Scan# 2607
Delta R.T. -0.006 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:228 Resp: 12302

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	57.4
229	10.1	0.0	50.4

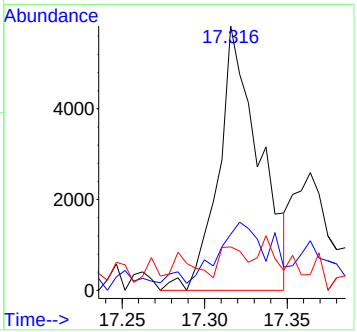


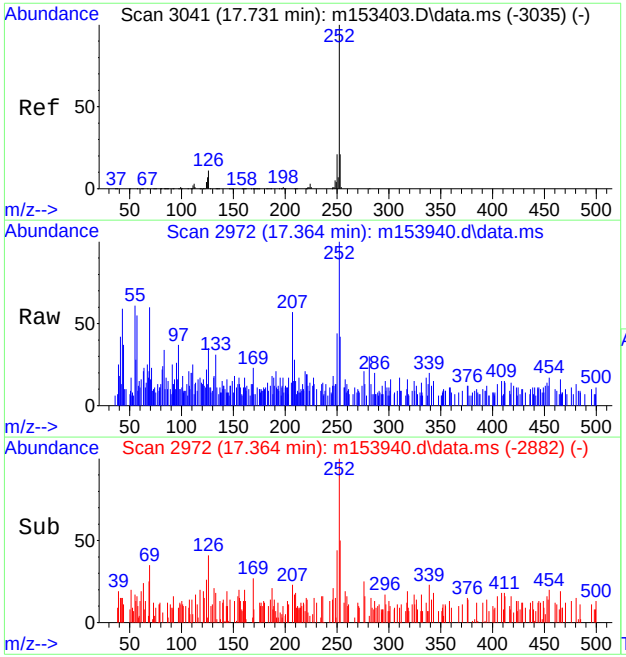


#93
Benzo[b]fluoranthene
Concen: 0.50 ppm
RT: 17.316 min Scan# 2963
Delta R.T. -0.017 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:252 Resp: 9934

Ion	Ratio	Lower	Upper
252	100		
253	18.0	0.0	52.2
125	11.6	0.0	39.2

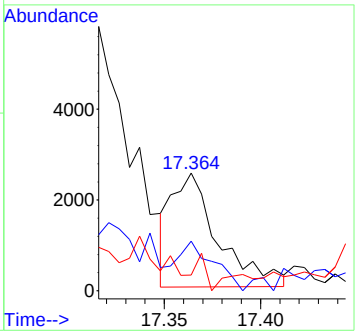


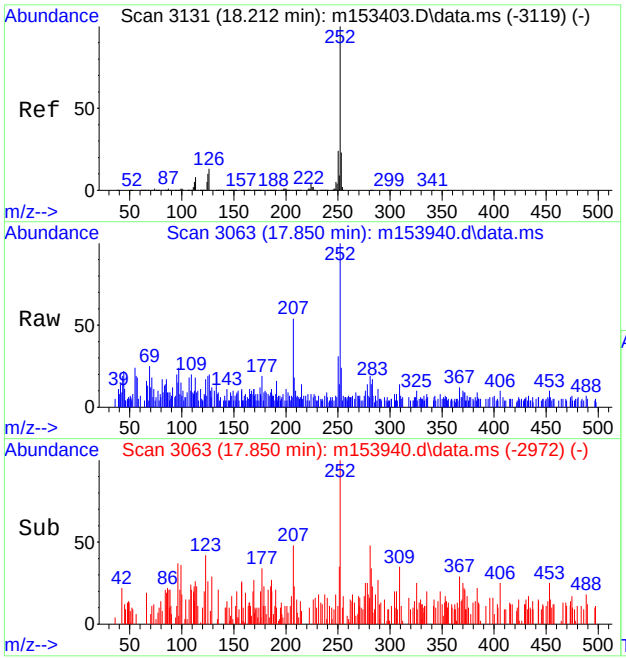


#94
Benzo[k]fluoranthene
Concen: 0.23 ppm
RT: 17.364 min Scan# 2972
Delta R.T. -0.017 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:252 Resp: 4255

Ion	Ratio	Lower	Upper
252	100		
253	37.5	0.0	50.9
125	0.0	0.0	40.3

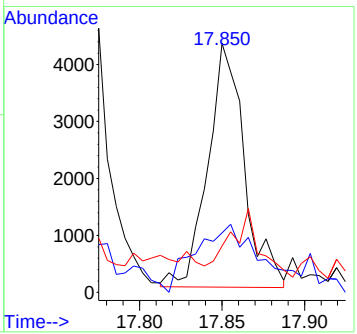


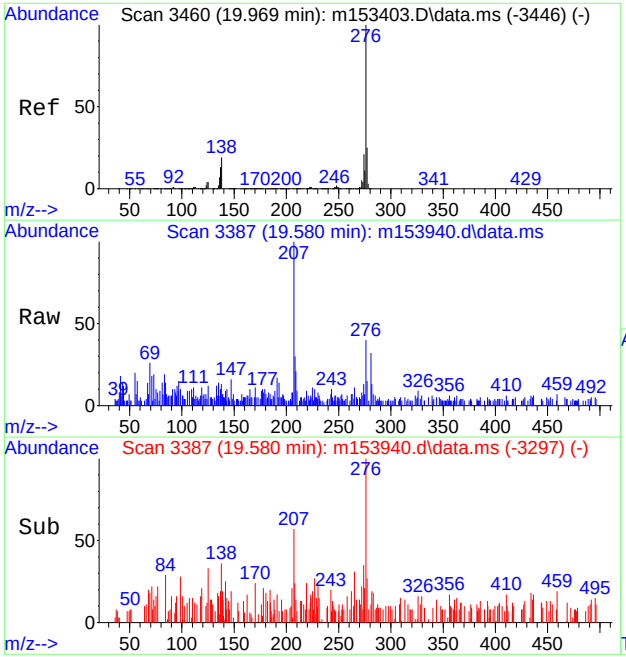


#95
Benzo[a]pyrene
Concen: 0.38 ppm
RT: 17.850 min Scan# 3063
Delta R.T. -0.011 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:252 Resp: 6591

Ion	Ratio	Lower	Upper
252	100		
253	18.5	0.0	51.8
125	7.0	0.0	39.9

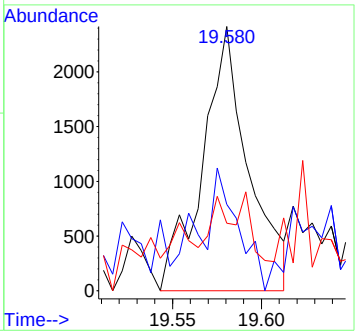


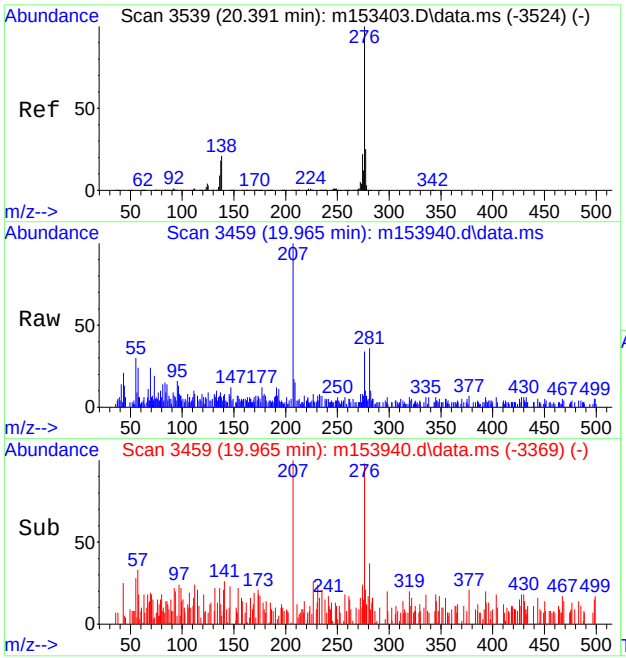


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.80 ppm
RT: 19.580 min Scan# 3387
Delta R.T. -0.017 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:276 Resp: 4364

Ion	Ratio	Lower	Upper
276	100		
138	17.4	0.0	45.7
137	6.3	0.0	42.0

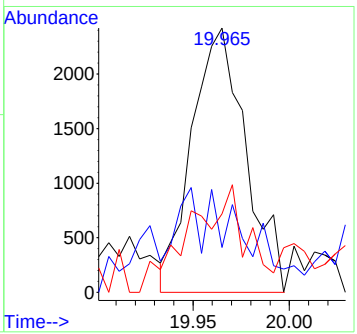




#100
Benzo[g,h,i]perylene
Concen: 0.29 ppm
RT: 19.965 min Scan# 3459
Delta R.T. -0.017 min
Lab File: m153940.d
Acq: 1 May 2019 4:07 pm

Tgt Ion:276 Resp: 4709

Ion	Ratio	Lower	Upper
276	100		
138	7.1	0.0	48.0
277	18.0	0.0	55.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153939.d
Acq On : 1 May 2019 3:38 pm
Operator : christc2
Sample : jc86837-5 Inst : MSM
Misc : op20021,em6577,30.6,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:33:56 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

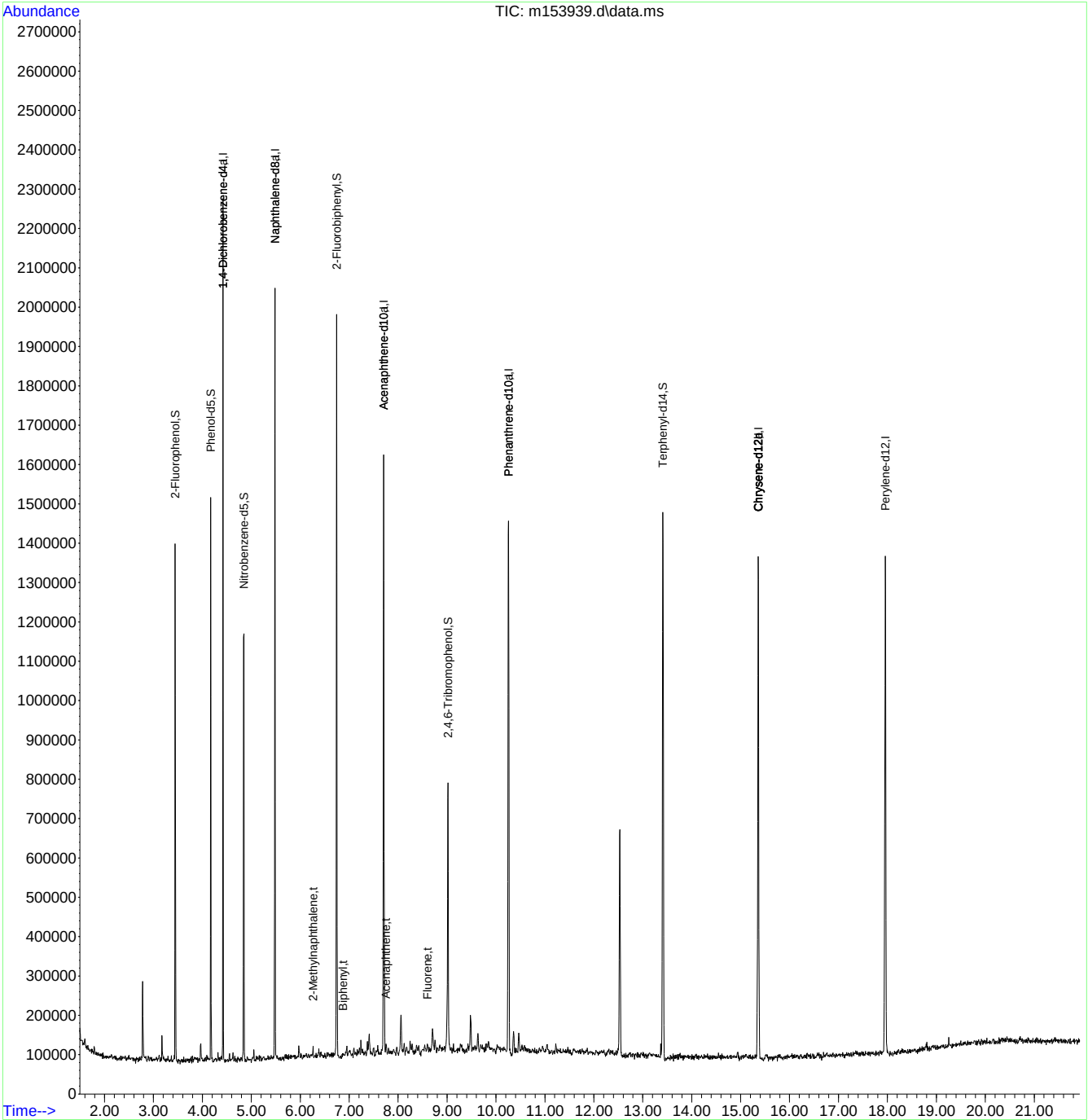
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	244552	40.00	ppm	0.00
24) Naphthalene-d8	5.483	136	777434	40.00	ppm	0.00
47) Acenaphthene-d10	7.705	164	404101	40.00	ppm	0.00
69) Phenanthrene-d10	10.258	188	763513	40.00	ppm	0.00
83) Chrysene-d12	15.359	240	730399	40.00	ppm	0.00
91) Perylene-d12	17.955	264	744416	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.420	152	244552	40.00	ppm	0.00
103) Acenaphthene-d10a	7.705	164	404101	40.00	ppm	0.00
106) Chrysene-d12a	15.359	240	729248	40.00	ppm	0.00
108) Chrysene-d12b	15.359	240	729478	40.00	ppm	0.00
110) Phenanthrene-d10a	10.258	188	763513	40.00	ppm	0.00
113) Naphthalene-d8a	5.483	136	777434	40.00	ppm	0.00
115) Chrysene-d12c	15.359	240	730399	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.443	112	299005	31.27	ppm	0.00
Spiked Amount 50.000			Recovery =	62.54%		
8) Phenol-d5	4.169	99	369401	31.28	ppm	0.00
Spiked Amount 50.000			Recovery =	62.56%		
25) Nitrobenzene-d5	4.848	82	317399	38.27	ppm	0.00
Spiked Amount 50.000			Recovery =	76.54%		
51) 2-Fluorobiphenyl	6.744	172	648247	43.15	ppm	0.00
Spiked Amount 50.000			Recovery =	86.30%		
73) 2,4,6-Tribromophenol	9.019	330	140168	54.57	ppm	0.00
Spiked Amount 50.000			Recovery =	109.14%		
85) Terphenyl-d14	13.409	244	780425	39.62	ppm	0.00
Spiked Amount 50.000			Recovery =	79.24%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
44) 2-Methylnaphthalene	6.263	141	4218	0.35	ppm	95
53) Biphenyl	6.872	154	2590	0.16	ppm	65
59) Acenaphthene	7.753	153	8268	0.70	ppm	96
66) Fluorene	8.597	166	3602	0.25	ppm	75

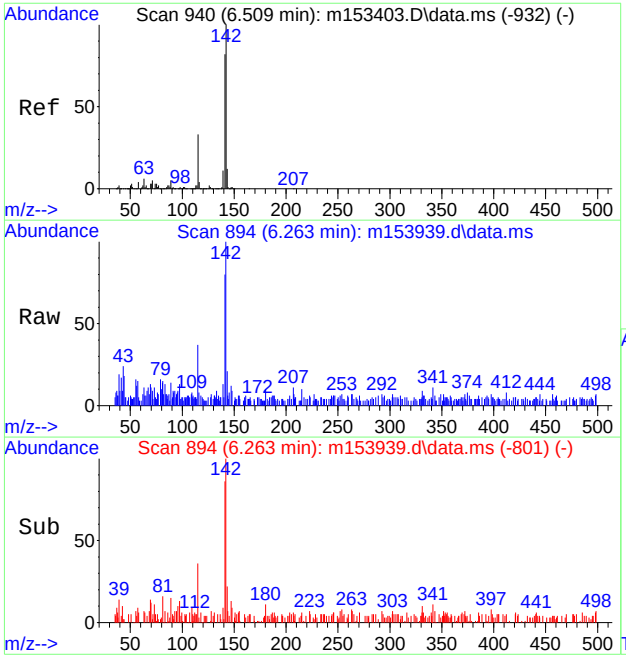
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153939.d
Acq On : 1 May 2019 3:38 pm
Operator : christc2
Sample : jc86837-5 Inst : MSM
Misc : op20021,em6577,30.6,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:33:56 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

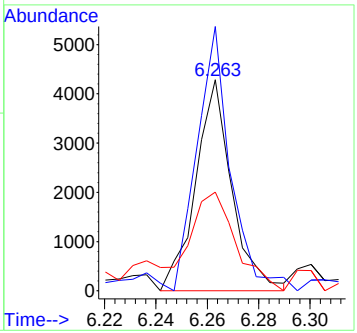


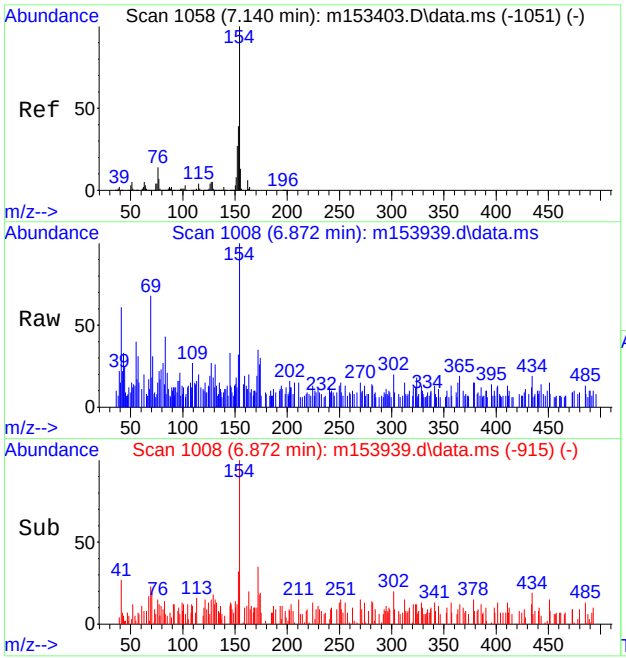


#44
2-Methylnaphthalene
Concen: 0.35 ppm
RT: 6.263 min Scan# 894
Delta R.T. -0.003 min
Lab File: m153939.d
Acq: 1 May 2019 3:38 pm

Tgt Ion:141 Resp: 4218

Ion	Ratio	Lower	Upper
141	100		
142	122.6	91.0	151.0
115	42.1	1.1	61.1

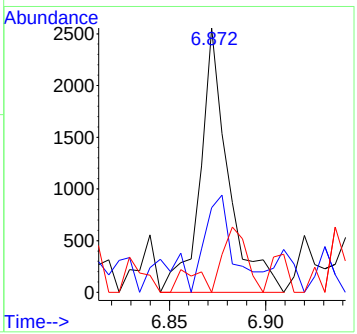


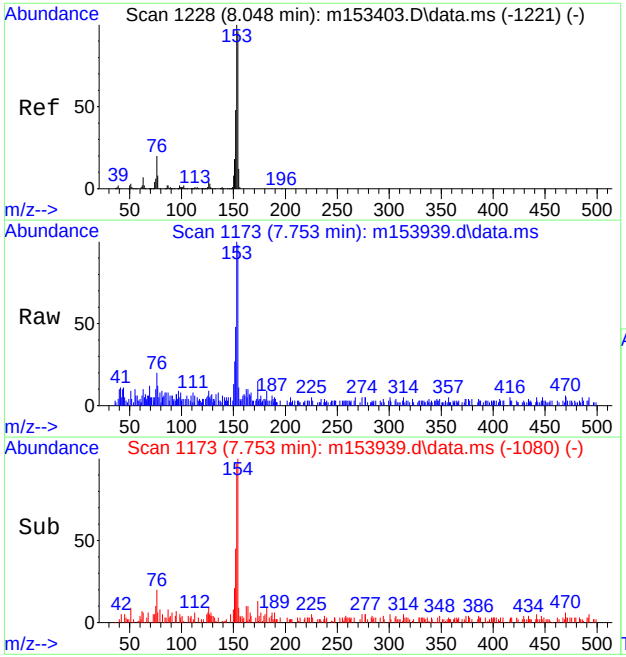


#53
Biphenyl
Concen: 0.16 ppm
RT: 6.872 min Scan# 1008
Delta R.T. -0.003 min
Lab File: m153939.d
Acq: 1 May 2019 3:38 pm

Tgt Ion:154 Resp: 2590

Ion	Ratio	Lower	Upper
154	100		
153	17.6	9.3	69.3
155	0.0	0.0	42.8

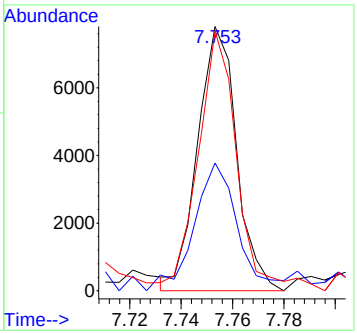


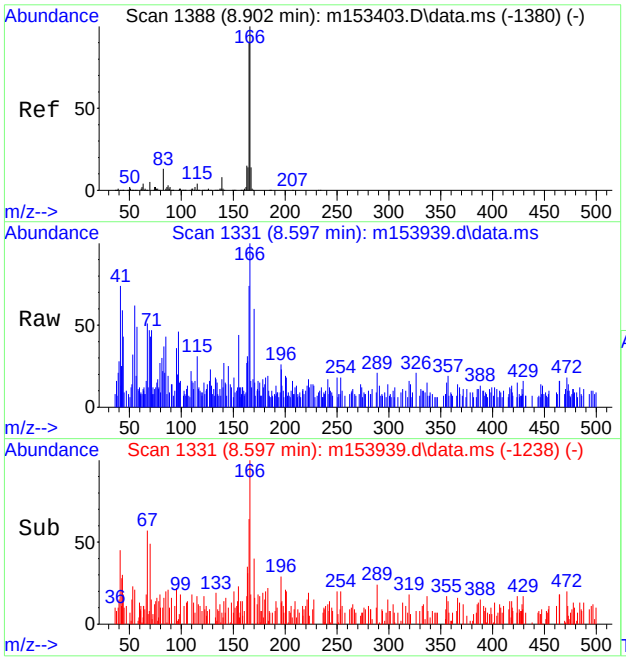


#59
Acenaphthene
Concen: 0.70 ppm
RT: 7.753 min Scan# 1173
Delta R.T. -0.003 min
Lab File: m153939.d
Acq: 1 May 2019 3:38 pm

Tgt Ion:153 Resp: 8268

Ion	Ratio	Lower	Upper
153	100		
152	44.6	18.4	78.4
154	97.6	64.6	124.6

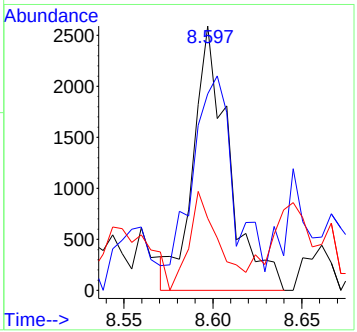




#66
Fluorene
Concen: 0.25 ppm
RT: 8.597 min Scan# 1331
Delta R.T. -0.003 min
Lab File: m153939.d
Acq: 1 May 2019 3:38 pm

Tgt Ion:166 Resp: 3602

Ion	Ratio	Lower	Upper
166	100		
165	67.3	61.3	121.3
167	5.1	0.0	43.0



Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/06/19 11:58

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153942.d
Acq On : 1 May 2019 5:32 pm
Operator : christc2
Sample : jc86837-6 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:51:10 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

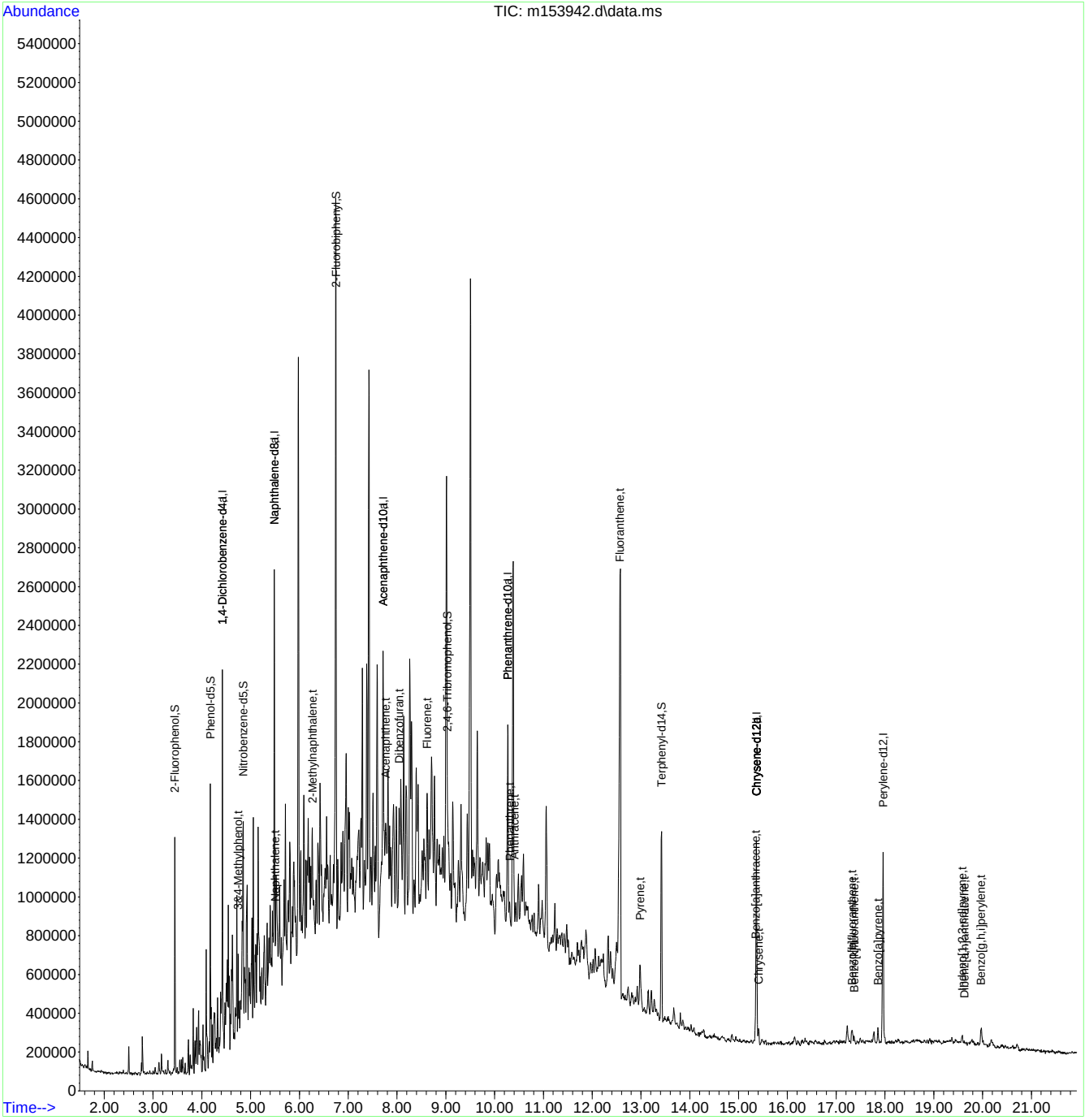
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	219945	40.00	ppm	0.00
24) Naphthalene-d8	5.483	136	622688	40.00	ppm	0.00
47) Acenaphthene-d10	7.716	164	286234	40.00	ppm	0.00
69) Phenanthrene-d10	10.269	188	532622	40.00	ppm	0.00
83) Chrysene-d12	15.364	240	563148	40.00	ppm	0.00
91) Perylene-d12	17.960	264	561940	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.420	152	219945	40.00	ppm	0.00
103) Acenaphthene-d10a	7.716	164	286234	40.00	ppm	0.00
106) Chrysene-d12a	15.364	240	563162	40.00	ppm	0.00
108) Chrysene-d12b	15.364	240	563274	40.00	ppm	0.00
110) Phenanthrene-d10a	10.269	188	532622	40.00	ppm	0.00
113) Naphthalene-d8a	5.483	136	622688	40.00	ppm	0.00
115) Chrysene-d12c	15.364	240	563148	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.448	112	253240	29.45	ppm	0.00
Spiked Amount 50.000			Recovery =	58.90%		
8) Phenol-d5	4.175	99	296443	27.91	ppm	0.00
Spiked Amount 50.000			Recovery =	55.82%		
25) Nitrobenzene-d5	4.848	82	248134	37.35	ppm	0.00
Spiked Amount 50.000			Recovery =	74.70%		
51) 2-Fluorobiphenyl	6.749	172	472740	44.42	ppm	0.00
Spiked Amount 50.000			Recovery =	88.84%		
73) 2,4,6-Tribromophenol	9.030	330	89474	49.93	ppm	0.00
Spiked Amount 50.000			Recovery =	99.86%		
85) Terphenyl-d14	13.420	244	532542	35.07	ppm	0.00
Spiked Amount 50.000			Recovery =	70.14%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
21) 3&4-Methylphenol	4.741	108	11551	1.78	ppm	92
38) Naphthalene	5.505	128	34101m	2.24	ppm	
44) 2-Methylnaphthalene	6.268	141	22538	2.33	ppm #	76
59) Acenaphthene	7.764	153	39021	4.66	ppm	90
62) Dibenzofuran	8.042	168	35415	2.83	ppm	86
66) Fluorene	8.613	166	67447	6.49	ppm	99
77) Phenanthrene	10.312	178	40504m	3.07	ppm	
78) Anthracene	10.402	178	34294m	2.47	ppm	
81) Fluoranthene	12.566	202	114560	6.56	ppm	96
84) Pyrene	12.982	202	121525	5.89	ppm	96
87) Benzo[a]anthracene	15.348	228	52130	2.70	ppm	93
89) Chrysene	15.412	228	55426	3.23	ppm	97
93) Benzo[b]fluoranthene	17.324	252	58034	3.28	ppm	95
94) Benzo[k]fluoranthene	17.367	252	22604	1.34	ppm	87
95) Benzo[a]pyrene	17.859	252	47838	3.08	ppm	95
96) Indeno[1,2,3-cd]pyrene	19.584	276	27409	2.26	ppm	90
98) Dibenz[a,h]anthracene	19.626	278	8846	0.62	ppm	88
100) Benzo[g,h,i]perylene	19.963	276	30651	2.08	ppm	89

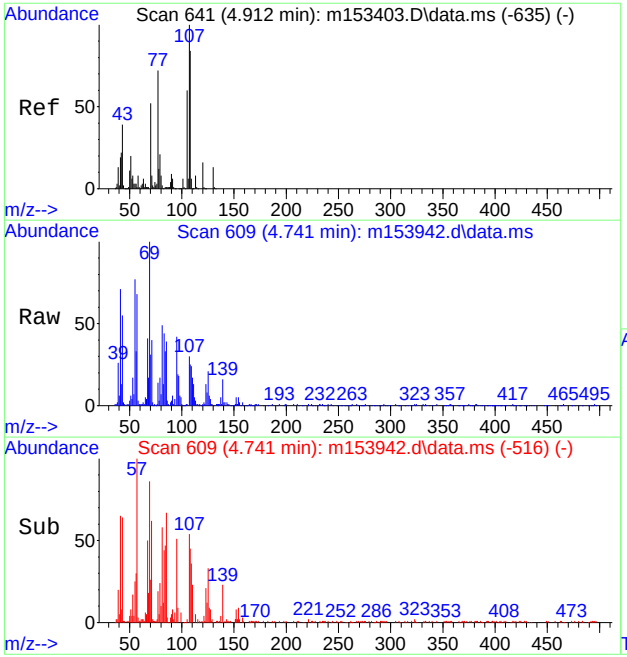
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153942.d
Acq On : 1 May 2019 5:32 pm
Operator : christc2
Sample : jc86837-6 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:51:10 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

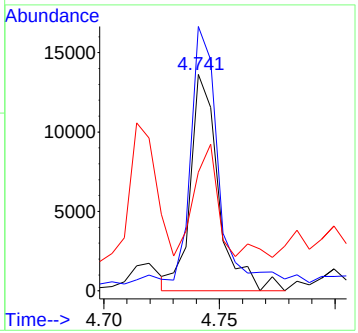


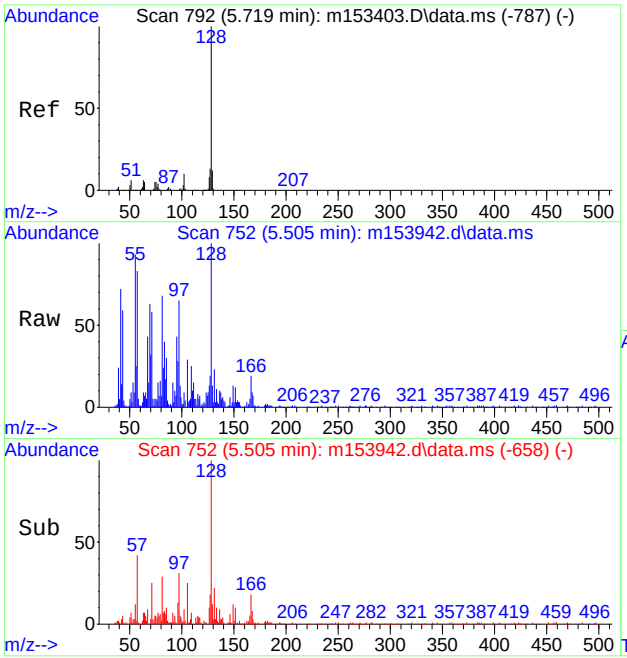


#21
3&4-Methylphenol
Concen: 1.78 ppm
RT: 4.741 min Scan# 609
Delta R.T. -0.003 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:108 Resp: 11551

Ion	Ratio	Lower	Upper
108	100		
107	120.8	82.1	142.1
77	27.7	0.8	60.8

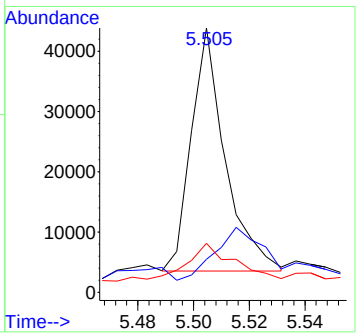


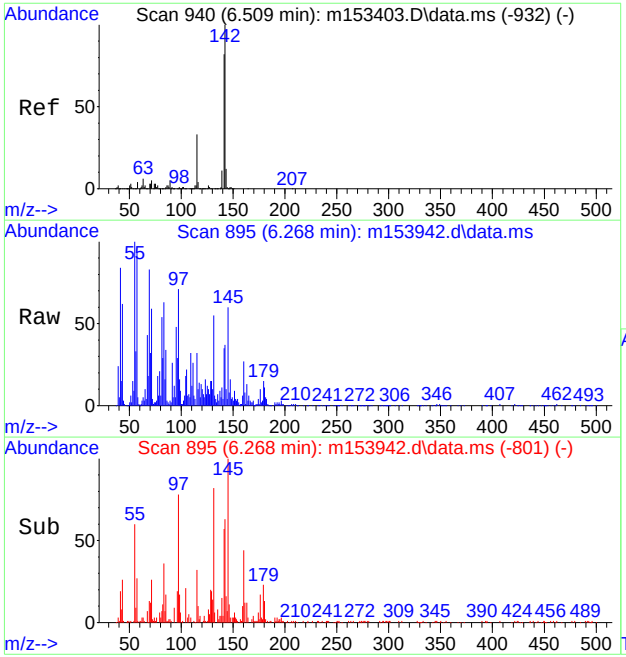


#38
Naphthalene
Concen: 2.24 ppm m
RT: 5.505 min Scan# 752
Delta R.T. 0.002 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:128 Resp: 34101

Ion	Ratio	Lower	Upper
128	100		
129	12.6	0.0	41.9
127	18.5	0.0	43.9

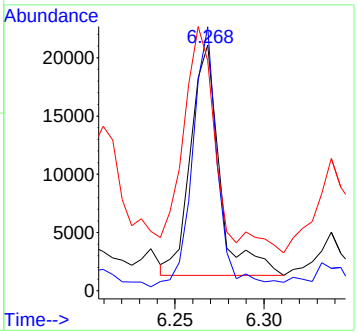


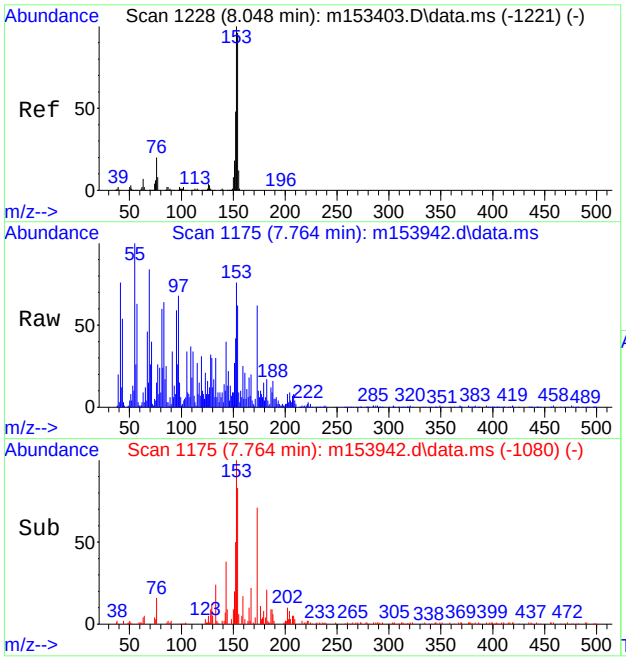


#44
2-Methylnaphthalene
Concen: 2.33 ppm
RT: 6.268 min Scan# 895
Delta R.T. 0.002 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:141 Resp: 22538

Ion	Ratio	Lower	Upper
141	100		
142	113.4	91.0	151.0
115	81.9	1.1	61.1#

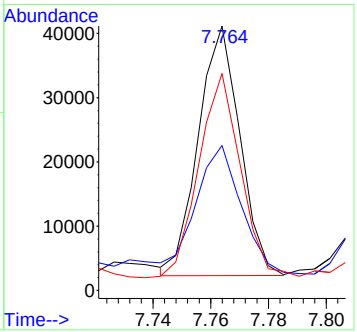


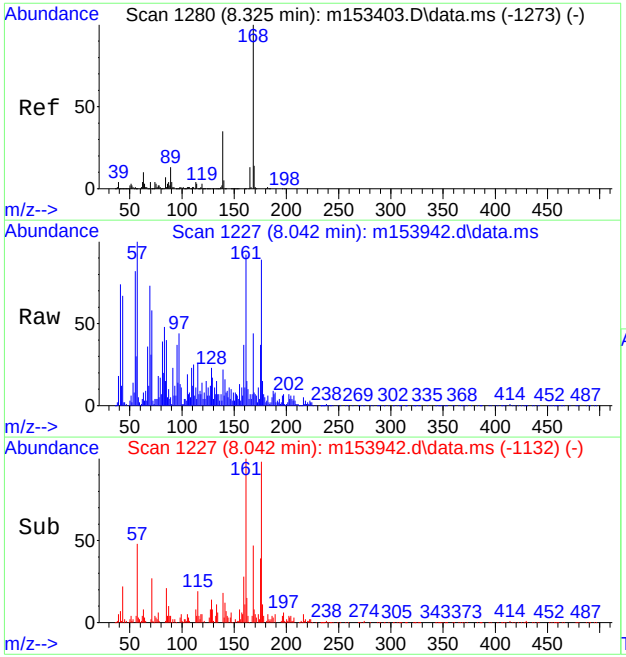


#59
Acenaphthene
Concen: 4.66 ppm
RT: 7.764 min Scan# 1175
Delta R.T. 0.008 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:153 Resp: 39021

Ion	Ratio	Lower	Upper
153	100		
152	49.9	18.4	78.4
154	81.7	64.6	124.6

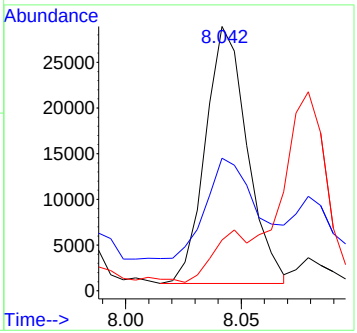


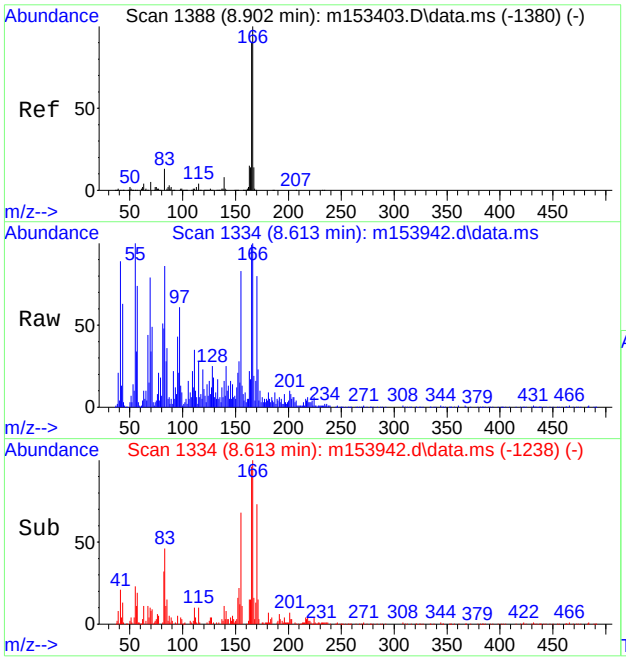


#62
Dibenzofuran
Concen: 2.83 ppm
RT: 8.042 min Scan# 1227
Delta R.T. 0.008 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:168 Resp: 35415

Ion	Ratio	Lower	Upper
168	100		
139	33.0	0.0	59.9
169	0.0	0.0	43.1

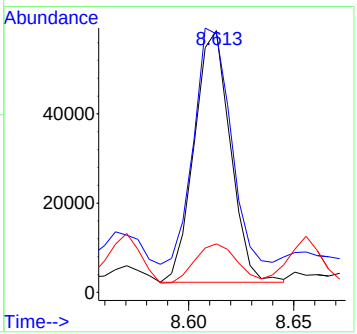


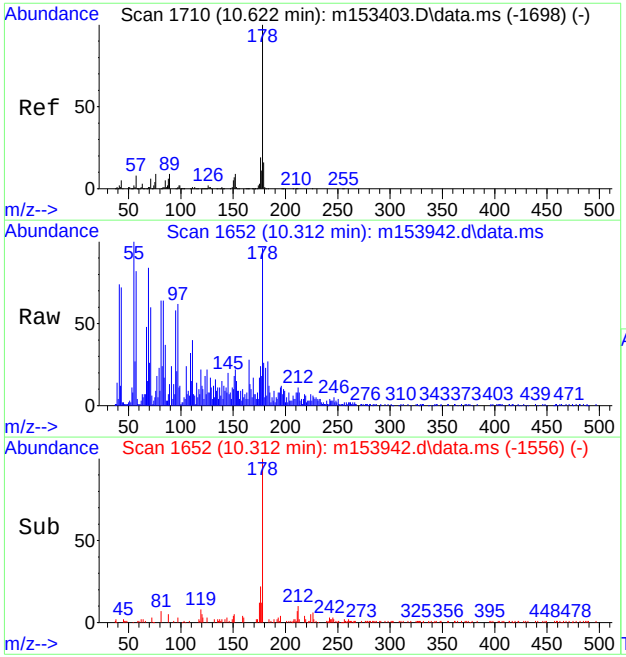


#66
Fluorene
Concen: 6.49 ppm
RT: 8.613 min Scan# 1334
Delta R.T. 0.013 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:166 Resp: 67447

Ion	Ratio	Lower	Upper
166	100		
165	90.6	61.3	121.3
167	12.1	0.0	43.0

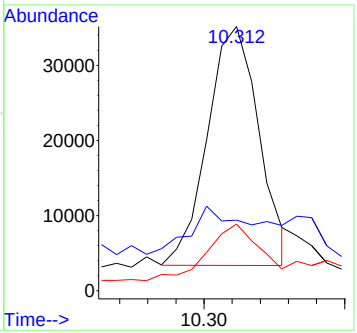


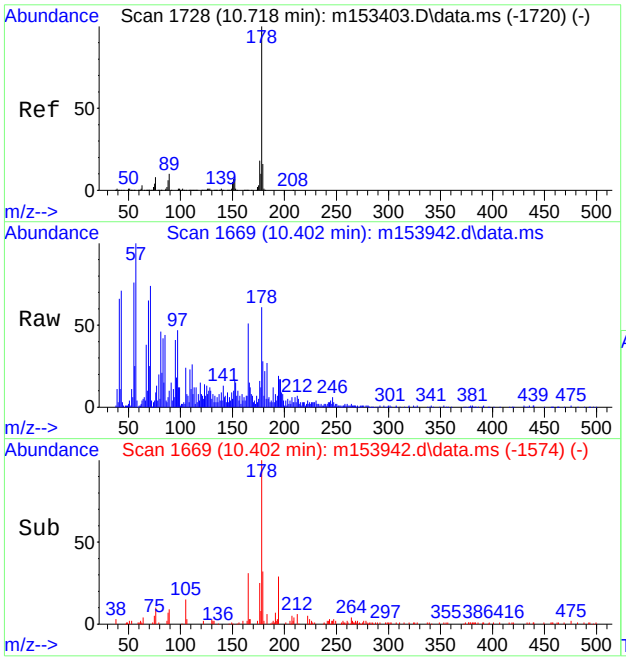


#77
Phenanthrene
Concen: 3.07 ppm m
RT: 10.312 min Scan# 1652
Delta R.T. 0.013 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:178 Resp: 40504

Ion	Ratio	Lower	Upper
178	100		
179	26.7	0.0	45.1
176	25.3	0.0	48.1

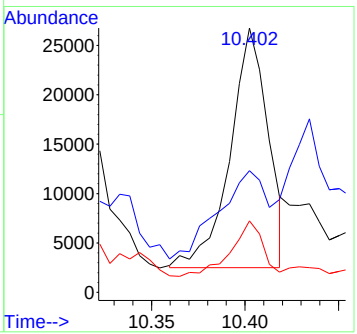


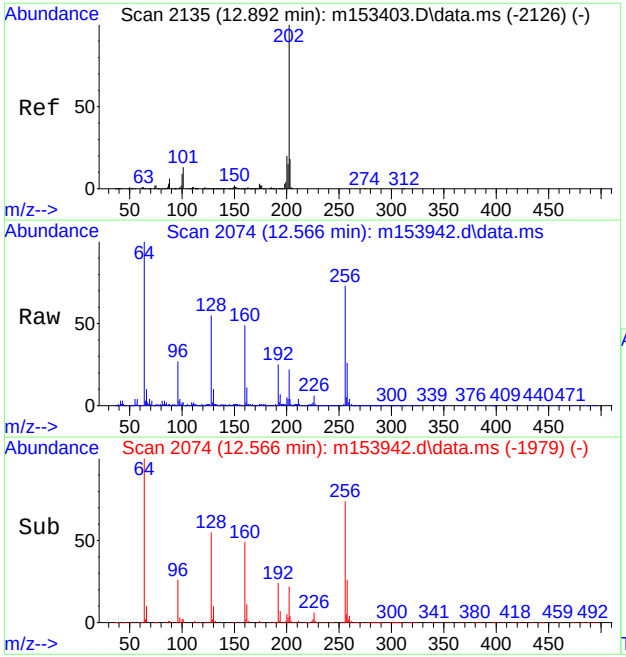


#78
Anthracene
Concen: 2.47 ppm m
RT: 10.402 min Scan# 1669
Delta R.T. 0.008 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:178 Resp: 34294

Ion	Ratio	Lower	Upper
178	100		
179	46.0	0.0	45.3#
176	27.1	0.0	47.7

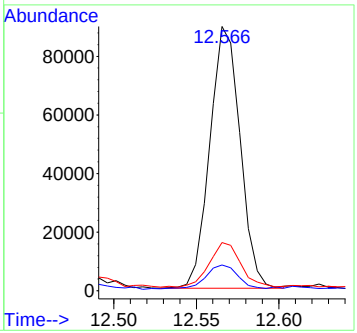


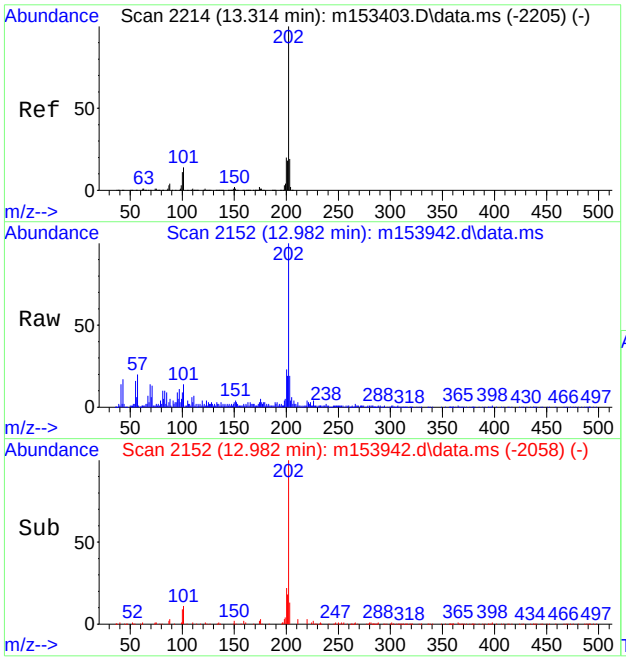


#81
Fluoranthene
Concen: 6.56 ppm
RT: 12.566 min Scan# 2074
Delta R.T. 0.008 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:202 Resp: 114560

Ion	Ratio	Lower	Upper
202	100		
101	9.0	0.0	41.5
203	16.9	0.0	47.7

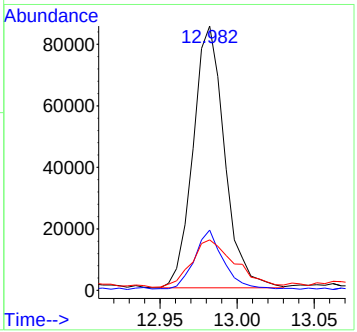


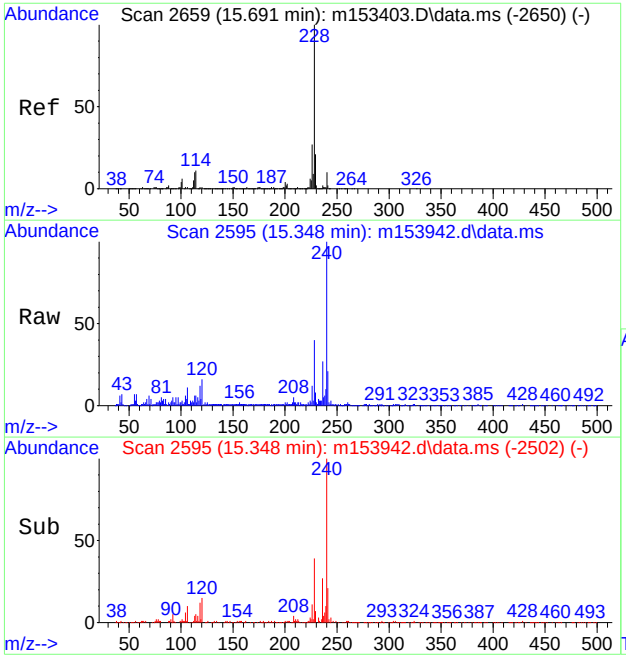


#84
Pyrene
Concen: 5.89 ppm
RT: 12.982 min Scan# 2152
Delta R.T. 0.002 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:202 Resp: 121525

Ion	Ratio	Lower	Upper
202	100		
200	22.3	0.0	49.2
203	17.6	0.0	48.1

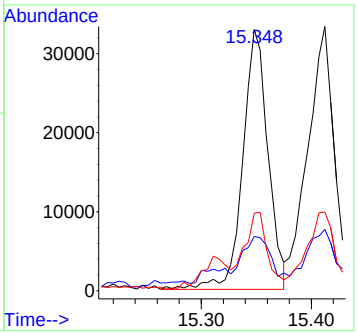


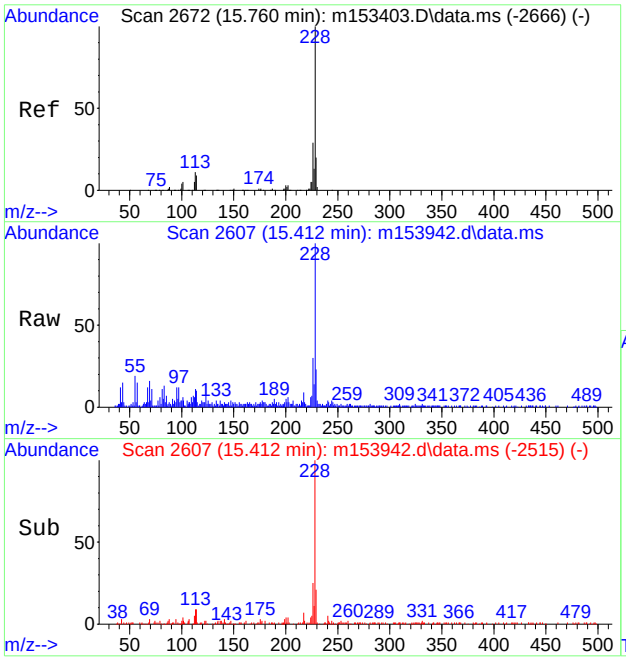


#87
Benzo[a]anthracene
Concen: 2.70 ppm
RT: 15.348 min Scan# 2595
Delta R.T. -0.003 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:228 Resp: 52130

Ion	Ratio	Lower	Upper
228	100		
229	16.9	0.0	49.7
226	28.6	0.0	54.7

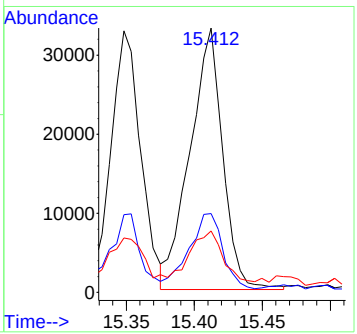


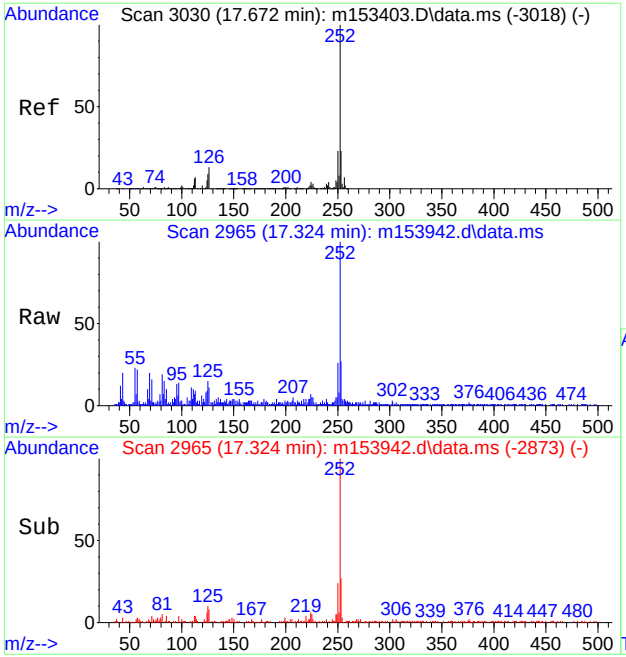


#89
Chrysene
Concen: 3.23 ppm
RT: 15.412 min Scan# 2607
Delta R.T. -0.008 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:228 Resp: 55426

Ion	Ratio	Lower	Upper
228	100		
226	28.1	0.0	57.4
229	18.1	0.0	50.4

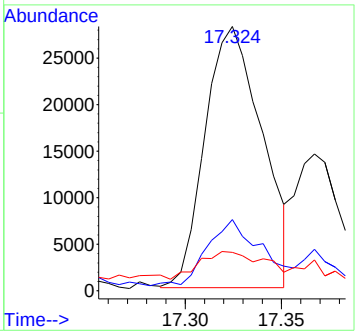


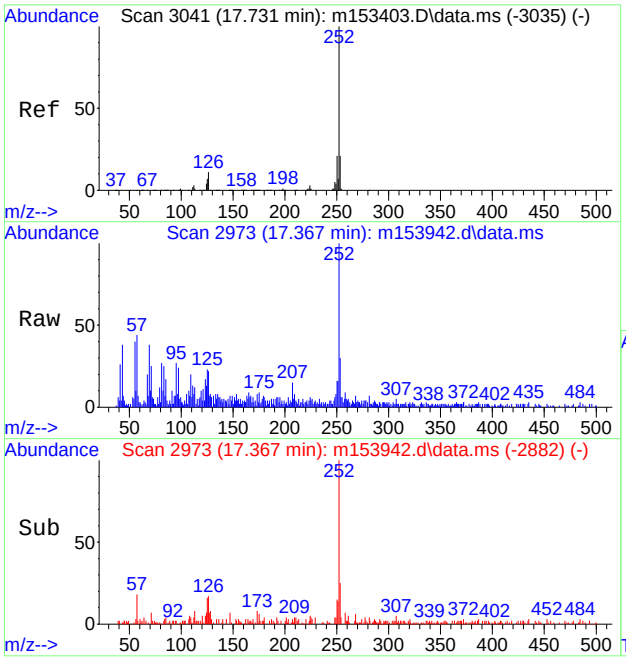


#93
Benzo[b]fluoranthene
Concen: 3.28 ppm
RT: 17.324 min Scan# 2965
Delta R.T. -0.008 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:252 Resp: 58034

Ion	Ratio	Lower	Upper
252	100		
253	25.1	0.0	52.2
125	9.8	0.0	39.2

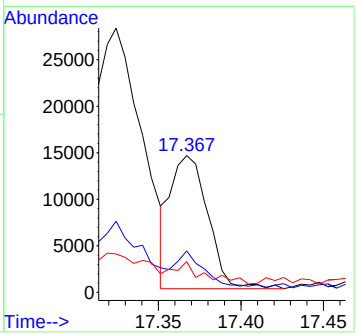


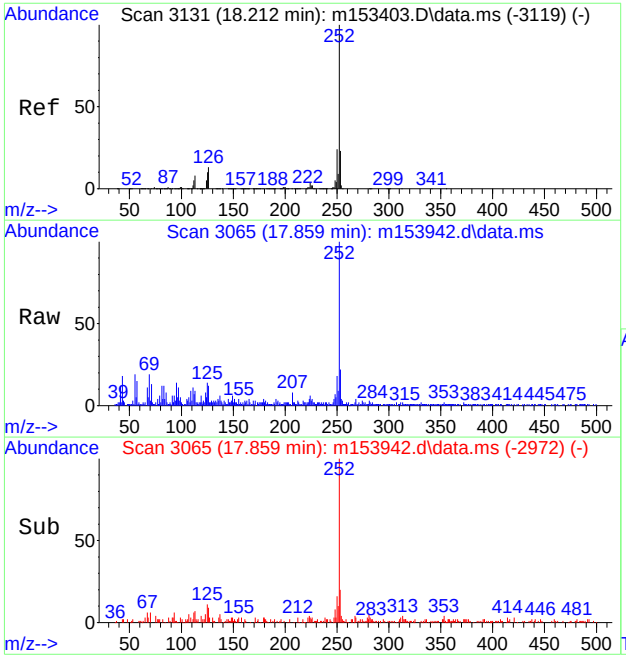


#94
Benzo[k]fluoranthene
Concen: 1.34 ppm
RT: 17.367 min Scan# 2973
Delta R.T. -0.014 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:252 Resp: 22604

Ion	Ratio	Lower	Upper
252	100		
253	27.1	0.0	50.9
125	15.4	0.0	40.3

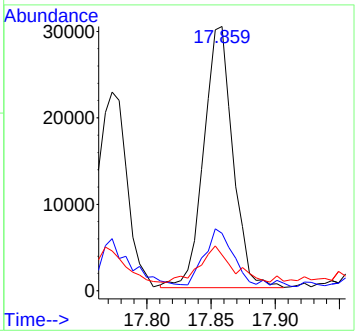


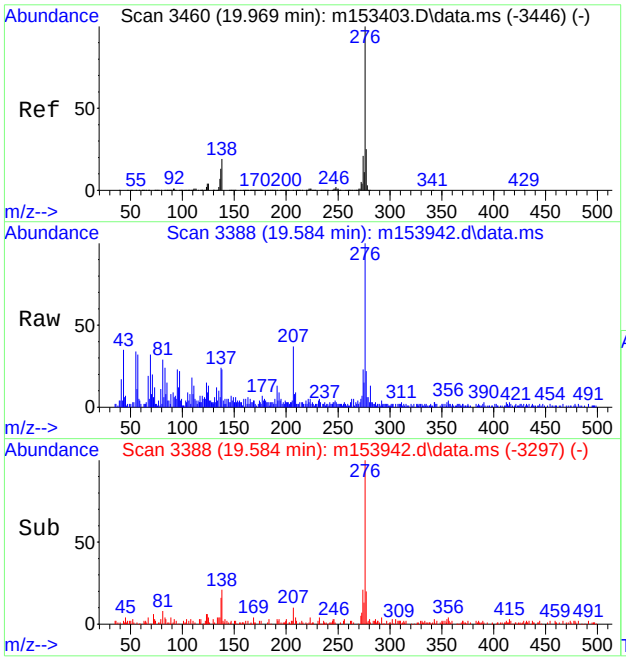


#95
Benzo[a]pyrene
Concen: 3.08 ppm
RT: 17.859 min Scan# 3065
Delta R.T. -0.003 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:252 Resp: 47838

Ion	Ratio	Lower	Upper
252	100		
253	18.8	0.0	51.8
125	10.3	0.0	39.9

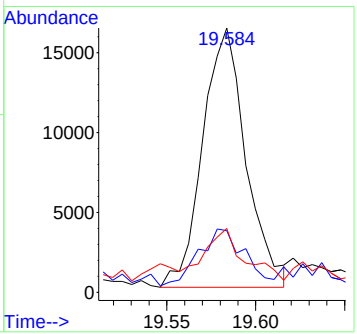


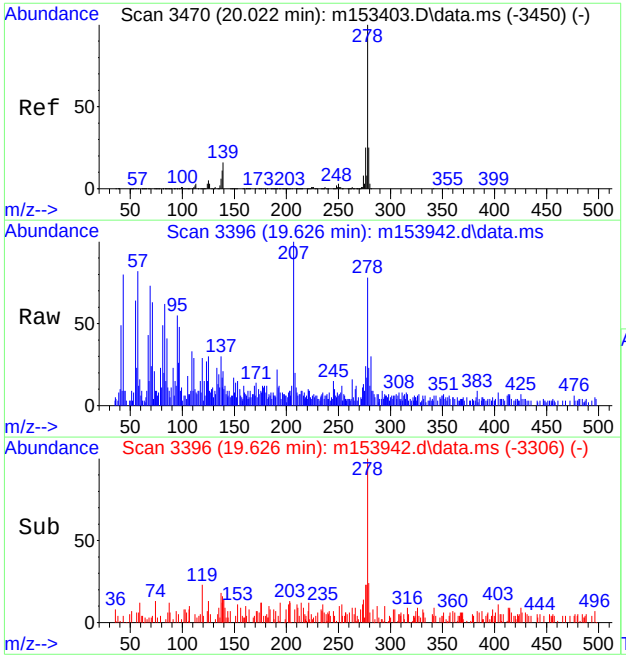


#96
Indeno[1,2,3-cd]pyrene
Concen: 2.26 ppm
RT: 19.584 min Scan# 3388
Delta R.T. -0.014 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:276 Resp: 27409

Ion	Ratio	Lower	Upper
276	100		
138	18.4	0.0	45.7
137	17.5	0.0	42.0

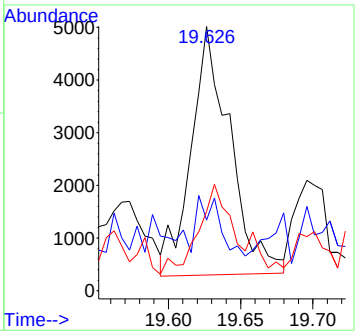


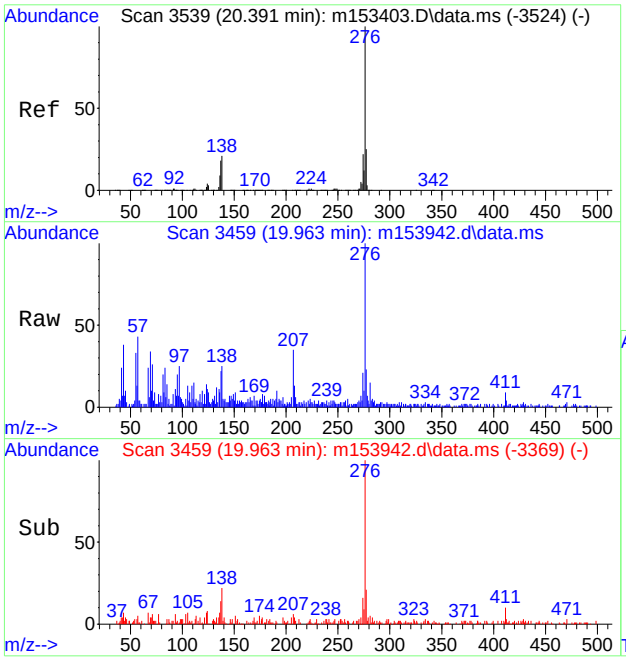


#98
Dibenz[a,h]anthracene
Concen: 0.62 ppm
RT: 19.626 min Scan# 3396
Delta R.T. -0.019 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:278 Resp: 8846

Ion	Ratio	Lower	Upper
278	100		
139	1.9	0.0	43.5
279	25.8	0.0	54.8

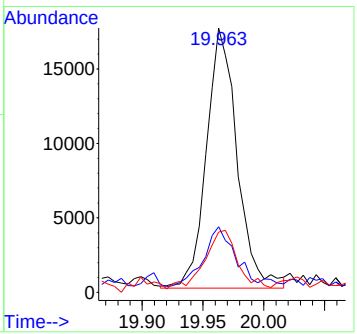




#100
Benzo[g,h,i]perylene
Concen: 2.08 ppm
RT: 19.963 min Scan# 3459
Delta R.T. -0.019 min
Lab File: m153942.d
Acq: 1 May 2019 5:32 pm

Tgt Ion:276 Resp: 30651

Ion	Ratio	Lower	Upper
276	100		
138	22.7	0.0	48.0
277	19.7	0.0	55.0



Manual Integration Approval Summary

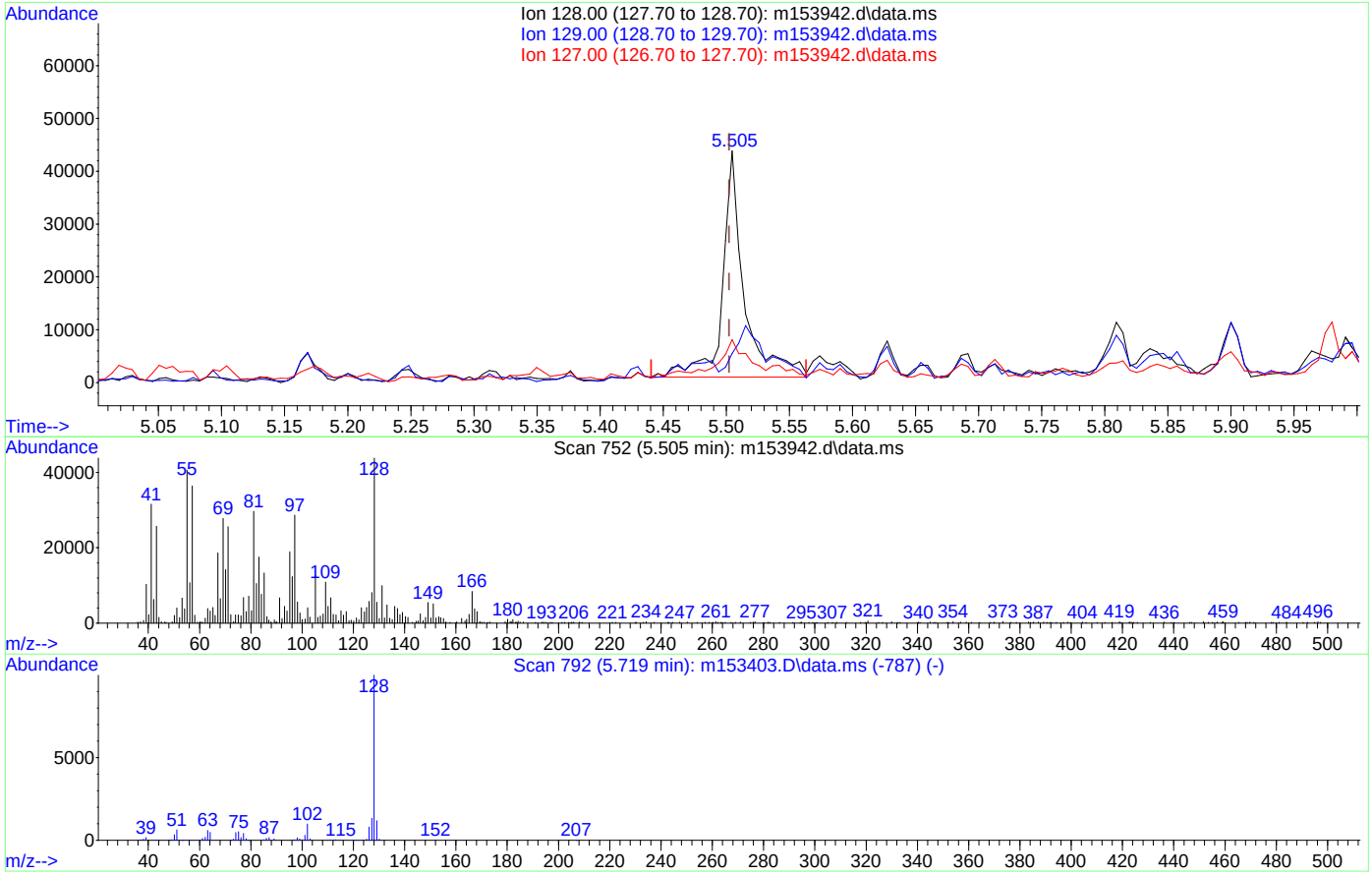
Sample Number: JC86837-6
Lab FileID: M153942.D
Injection Time: 05/01/19 17:32
Method: SW846 8270D
Analyst approved: 05/02/19 05:57 Jeryll Fabriene Reyes
Supervisor approved: 05/06/19 11:58 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3		5.50	Poor instrument integration
Phenanthrene	85-01-8		10.31	Poor instrument integration
Anthracene	120-12-7		10.40	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153942.d
Acq On : 1 May 2019 5:32 pm
Operator : christc2
Sample : jc86837-6 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:32:37 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



TIC: m153942.d\data.ms

(38) Naphthalene (t)

5.505min (+0.002) 3.39ppm

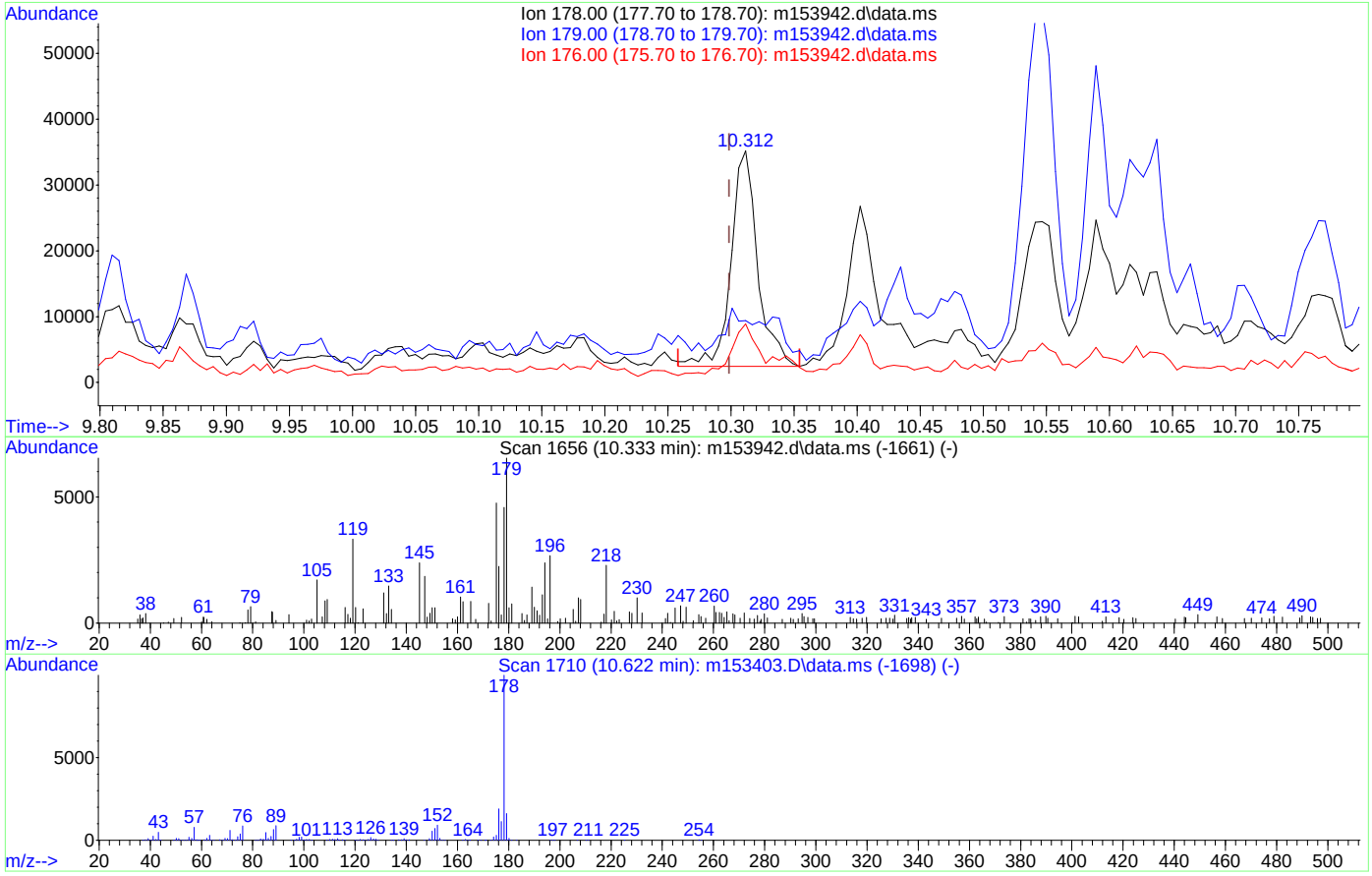
response 51698

Ion	Exp%	Act%
128.00	100	100
129.00	11.90	10.89
127.00	13.90	16.57
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153942.d
Acq On : 1 May 2019 5:32 pm
Operator : christc2
Sample : jc86837-6 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:32:37 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



TIC: m153942.d\data.ms

(77) Phenanthrene (t)

10.312min (+0.013) 3.63ppm

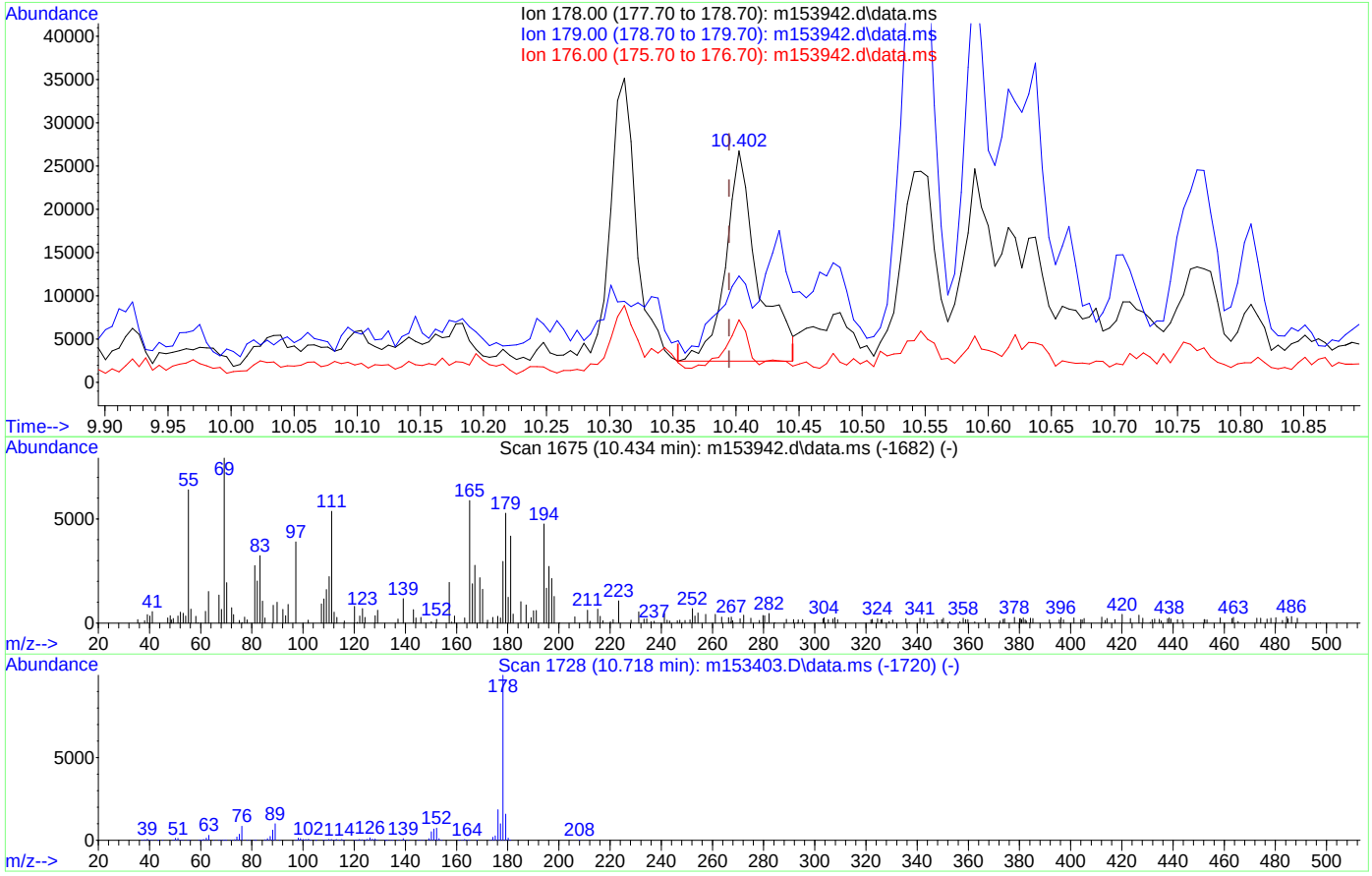
response 47894

Ion	Exp%	Act%
178.00	100	100
179.00	15.10	10.53
176.00	18.10	22.27
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153942.d
Acq On : 1 May 2019 5:32 pm
Operator : christc2
Sample : jc86837-6 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:32:37 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



TIC: m153942.d\data.ms

(78) Anthracene (t)

10.402min (+0.008) 3.09ppm

response 43040

Ion	Exp%	Act%
178.00	100	100
179.00	15.30	20.60
176.00	17.70	22.57
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/06/19 11:58

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153941.d
Acq On : 1 May 2019 4:35 pm
Operator : christc2
Sample : jc86837-7 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:45:09 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

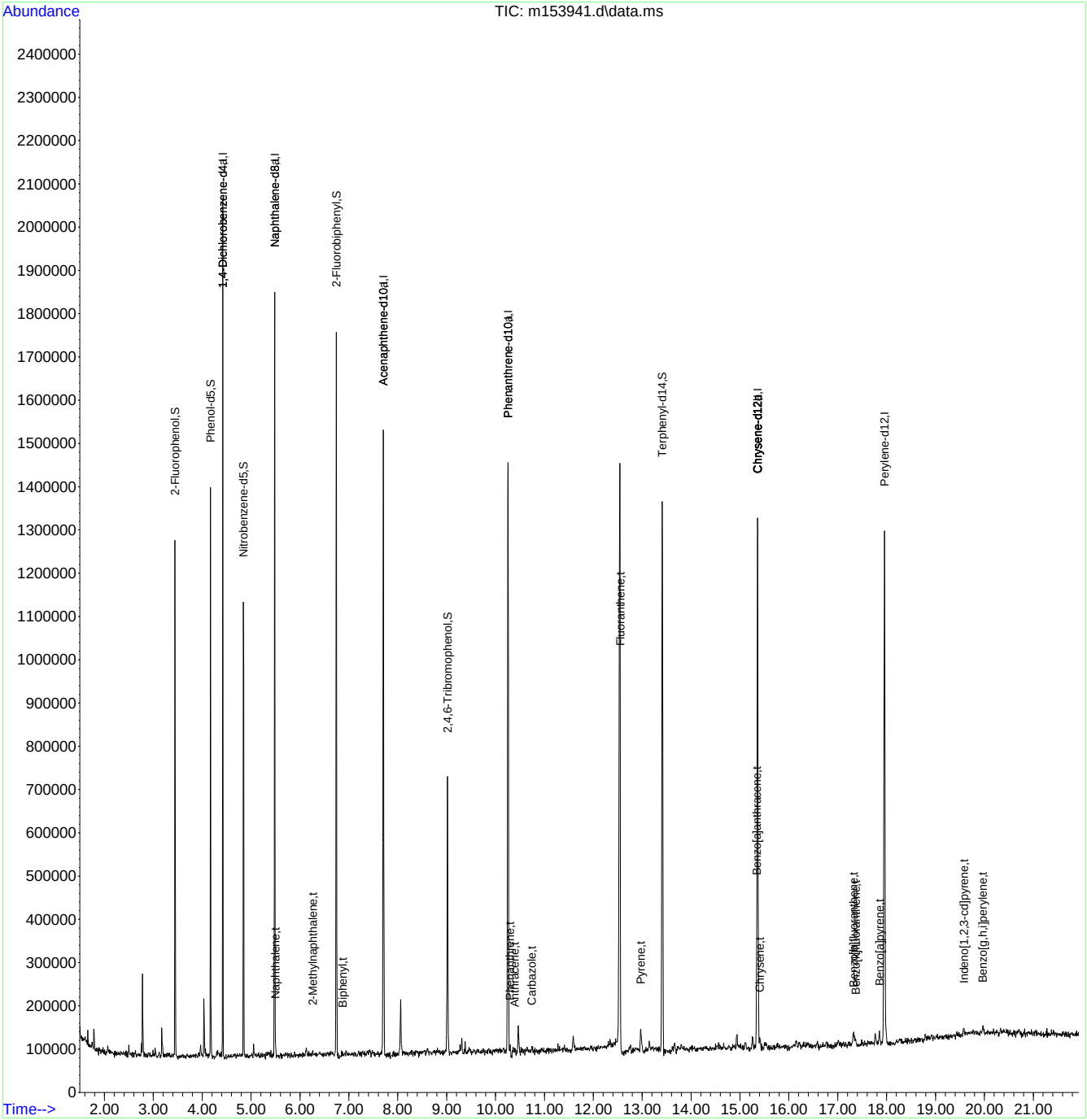
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.421	152	223851	40.00	ppm	0.00
24) Naphthalene-d8	5.484	136	705713	40.00	ppm	0.00
47) Acenaphthene-d10	7.705	164	388673	40.00	ppm	0.00
69) Phenanthrene-d10	10.258	188	754814	40.00	ppm	0.00
83) Chrysene-d12	15.359	240	710050	40.00	ppm	0.00
91) Perylene-d12	17.955	264	725690	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.421	152	223851	40.00	ppm	0.00
103) Acenaphthene-d10a	7.705	164	388264	40.00	ppm	0.00
106) Chrysene-d12a	15.359	240	710050	40.00	ppm	0.00
108) Chrysene-d12b	15.359	240	710050	40.00	ppm	0.00
110) Phenanthrene-d10a	10.258	188	754814	40.00	ppm	0.00
113) Naphthalene-d8a	5.484	136	705713	40.00	ppm	0.00
115) Chrysene-d12c	15.359	240	710050	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.443	112	256570	29.32	ppm	0.00
Spiked Amount 50.000			Recovery =	58.64%		
8) Phenol-d5	4.170	99	314055	29.06	ppm	0.00
Spiked Amount 50.000			Recovery =	58.12%		
25) Nitrobenzene-d5	4.843	82	283268	37.63	ppm	0.00
Spiked Amount 50.000			Recovery =	75.26%		
51) 2-Fluorobiphenyl	6.744	172	583157	40.36	ppm	0.00
Spiked Amount 50.000			Recovery =	80.72%		
73) 2,4,6-Tribromophenol	9.019	330	130086	51.23	ppm	0.00
Spiked Amount 50.000			Recovery =	102.46%		
85) Terphenyl-d14	13.410	244	698634	36.49	ppm	0.00
Spiked Amount 50.000			Recovery =	72.98%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
38) Naphthalene	5.500	128	9420	0.55	ppm	88
44) 2-Methylnaphthalene	6.263	141	2543	0.23	ppm	91
53) Biphenyl	6.872	154	3015	0.19	ppm	93
77) Phenanthrene	10.296	178	13557	0.72	ppm	93
78) Anthracene	10.392	178	7741	0.39	ppm	79
79) Carbazole	10.739	167	2823	0.15	ppm	66
81) Fluoranthene	12.550	202	25120	1.02	ppm	93
84) Pyrene	12.972	202	31520	1.21	ppm	95
87) Benzo[a]anthracene	15.343	228	21660	0.89	ppm	99
89) Chrysene	15.407	228	17834	0.83	ppm	99
93) Benzo[b]fluoranthene	17.325	252	23735	1.04	ppm	94
94) Benzo[k]fluoranthene	17.367	252	7573	0.35	ppm	88
95) Benzo[a]pyrene	17.853	252	17295	0.86	ppm	92
96) Indeno[1,2,3-cd]pyrene	19.584	276	8789m	0.98	ppm	
100) Benzo[g,h,i]perylene	19.963	276	11709	0.62	ppm	98

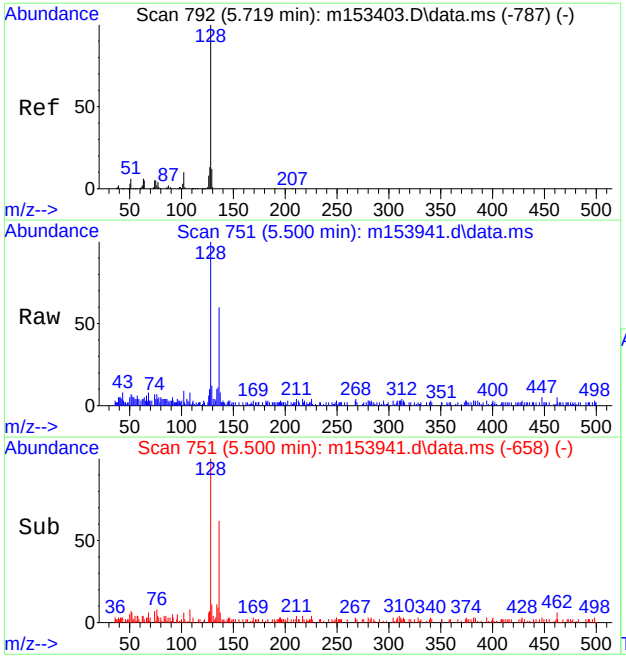
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153941.d
Acq On : 1 May 2019 4:35 pm
Operator : christc2
Sample : jc86837-7 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 04:45:09 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration

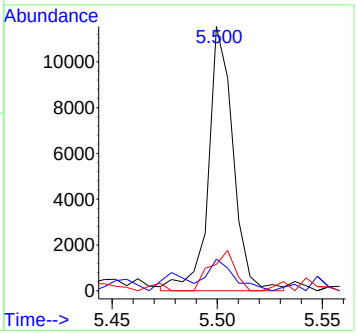


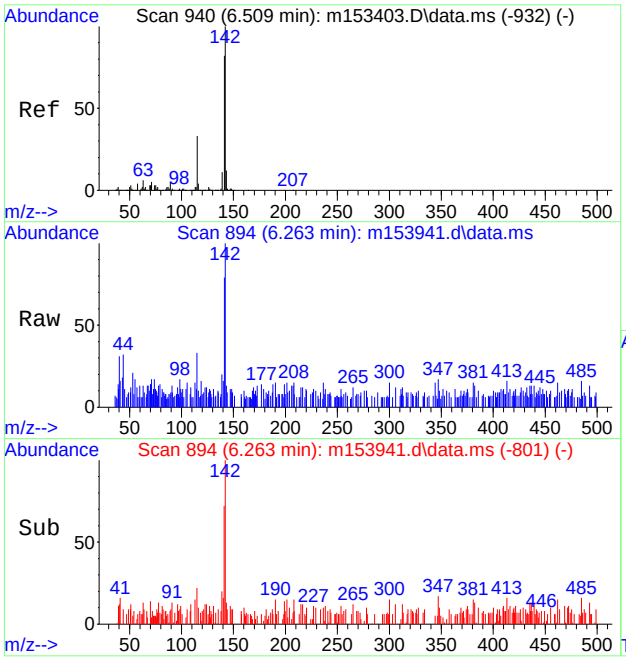


#38
Naphthalene
Concen: 0.55 ppm
RT: 5.500 min Scan# 751
Delta R.T. -0.003 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:128 Resp: 9420

Ion	Ratio	Lower	Upper
128	100		
129	9.7	0.0	41.9
127	6.8	0.0	43.9

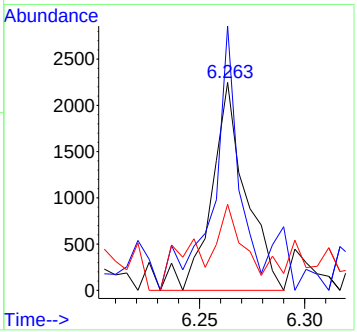


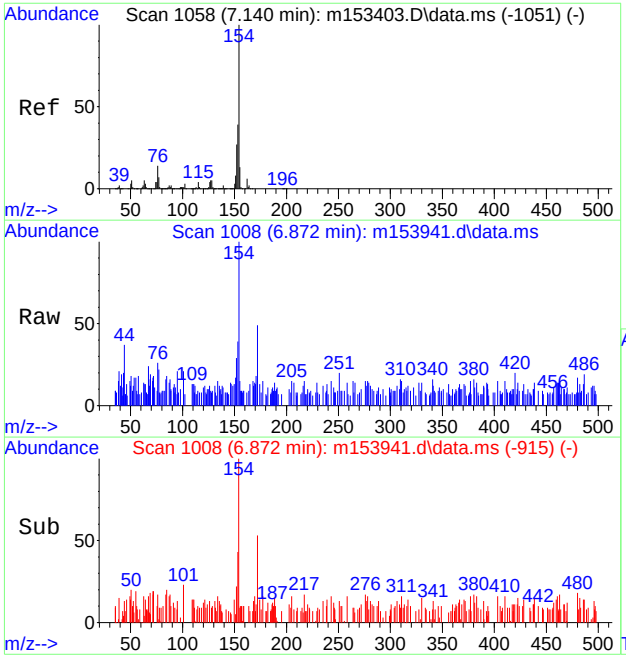


#44
2-Methylnaphthalene
Concen: 0.23 ppm
RT: 6.263 min Scan# 894
Delta R.T. -0.003 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:141 Resp: 2543

Ion	Ratio	Lower	Upper
141	100		
142	111.8	91.0	151.0
115	37.4	1.1	61.1

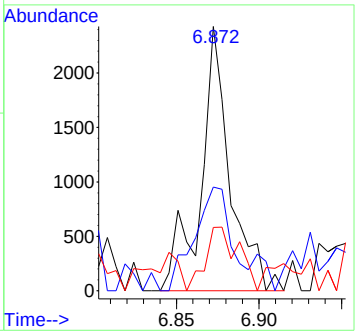


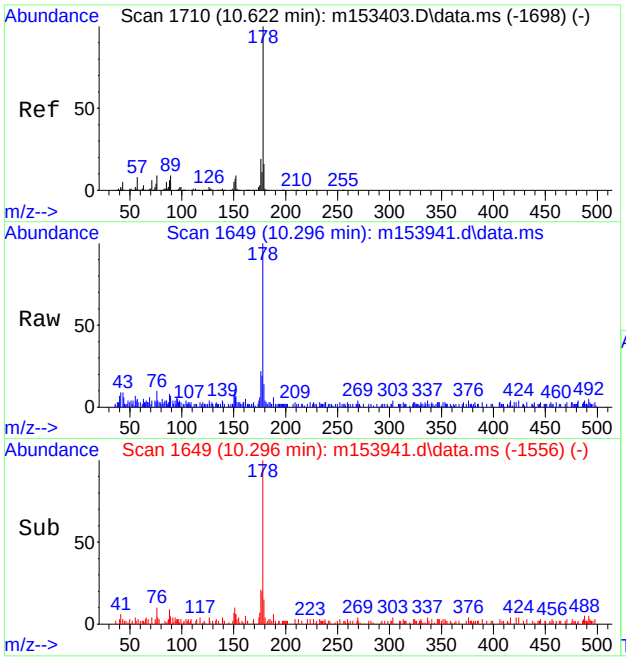


#53
Biphenyl
Concen: 0.19 ppm
RT: 6.872 min Scan# 1008
Delta R.T. -0.003 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:154 Resp: 3015

Ion	Ratio	Lower	Upper
154	100		
153	35.0	9.3	69.3
155	15.4	0.0	42.8

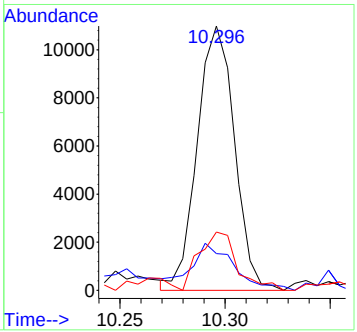


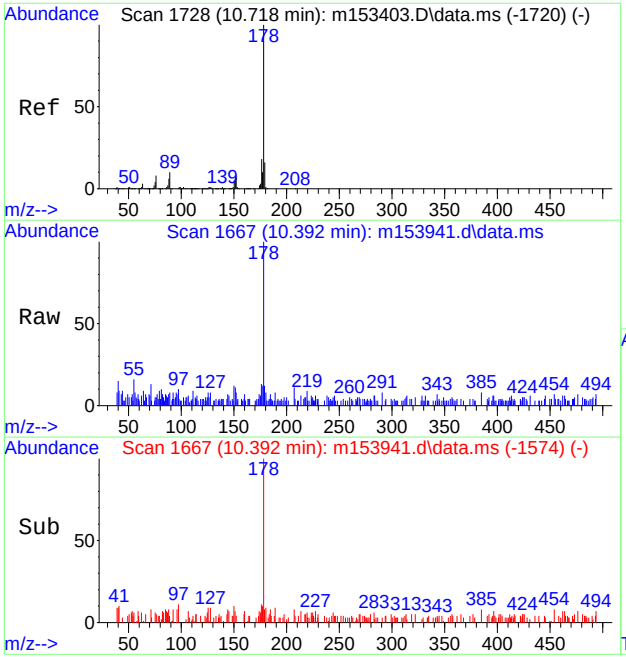


#77
Phenanthrene
Concen: 0.72 ppm
RT: 10.296 min Scan# 1649
Delta R.T. -0.003 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:178 Resp: 13557

Ion	Ratio	Lower	Upper
178	100		
179	11.1	0.0	45.1
176	20.2	0.0	48.1

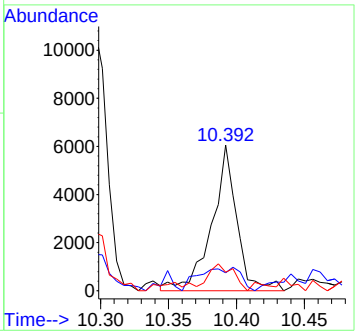


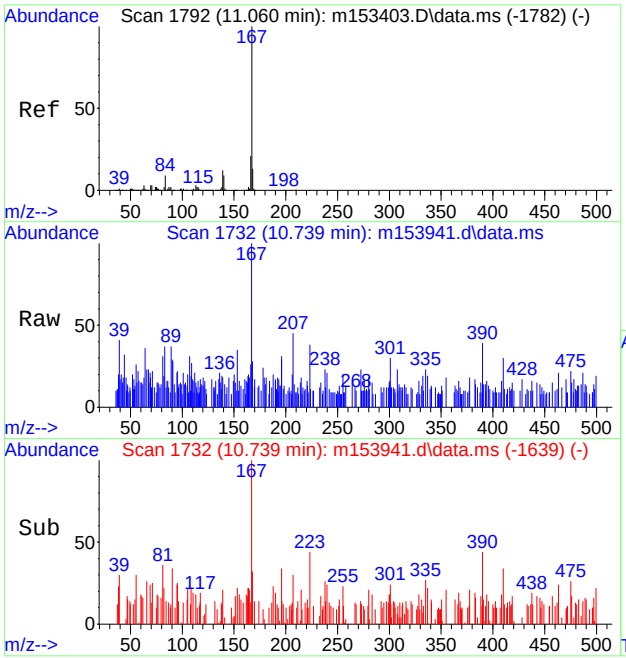


#78
Anthracene
Concen: 0.39 ppm
RT: 10.392 min Scan# 1667
Delta R.T. -0.003 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:178 Resp: 7741

Ion	Ratio	Lower	Upper
178	100		
179	8.1	0.0	45.3
176	6.7	0.0	47.7

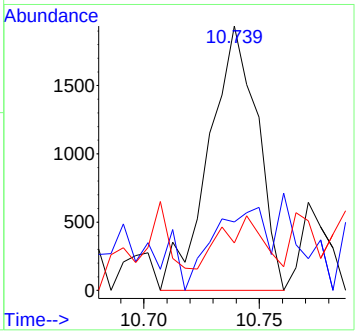


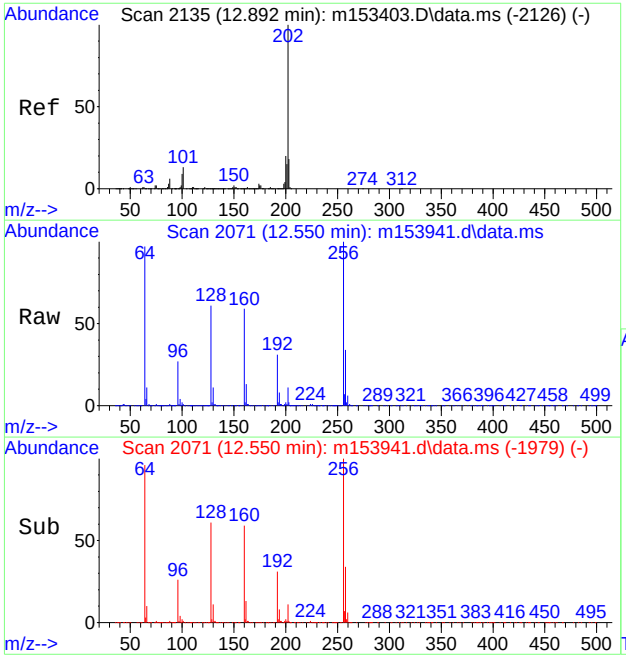


#79
Carbazole
Concen: 0.15 ppm
RT: 10.739 min Scan# 1732
Delta R.T. -0.003 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:167 Resp: 2823

Ion	Ratio	Lower	Upper
167	100		
166	3.5	0.0	50.7
139	0.0	0.0	40.8

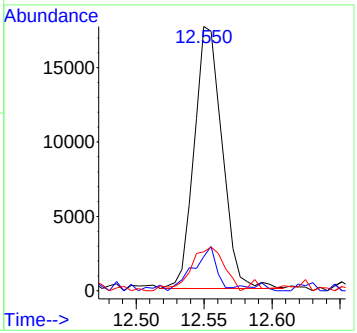


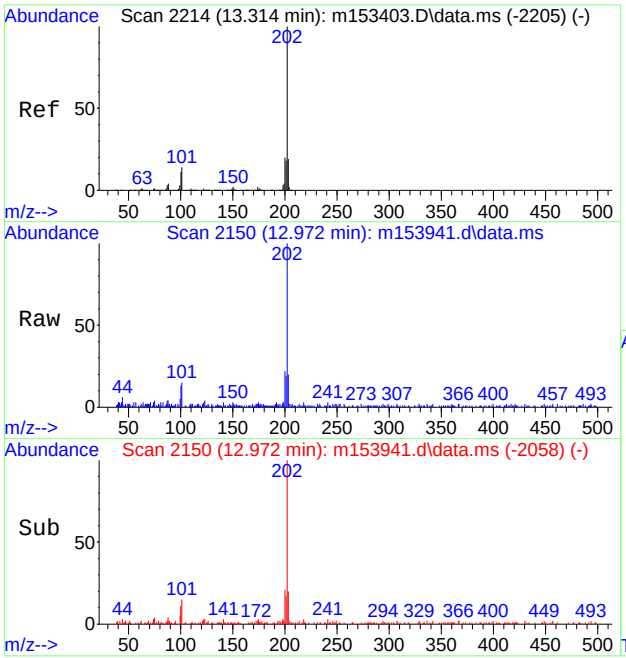


#81
Fluoranthene
Concen: 1.02 ppm
RT: 12.550 min Scan# 2071
Delta R.T. -0.008 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:202 Resp: 25120

Ion	Ratio	Lower	Upper
202	100		
101	12.1	0.0	41.5
203	13.0	0.0	47.7

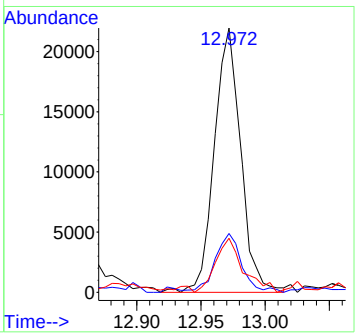


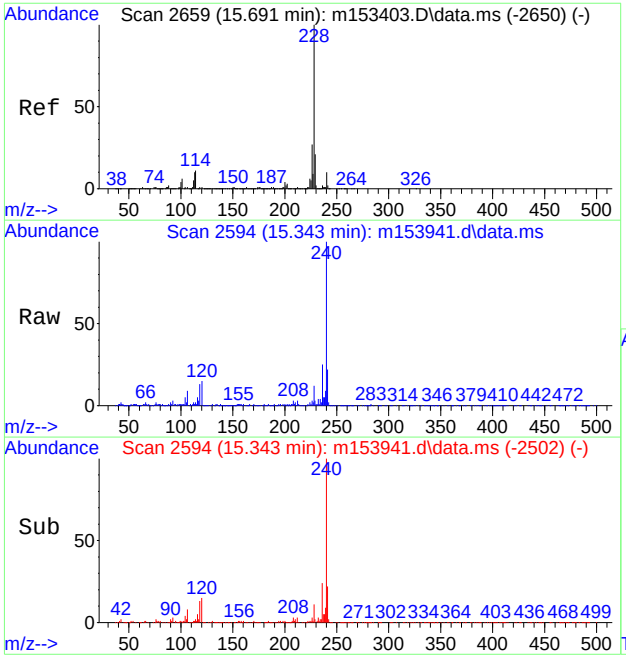


#84
Pyrene
Concen: 1.21 ppm
RT: 12.972 min Scan# 2150
Delta R.T. -0.008 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:202 Resp: 31520

Ion	Ratio	Lower	Upper
202	100		
200	22.5	0.0	49.2
203	19.7	0.0	48.1

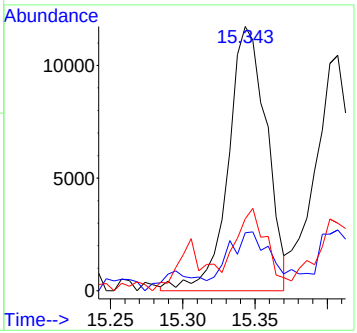


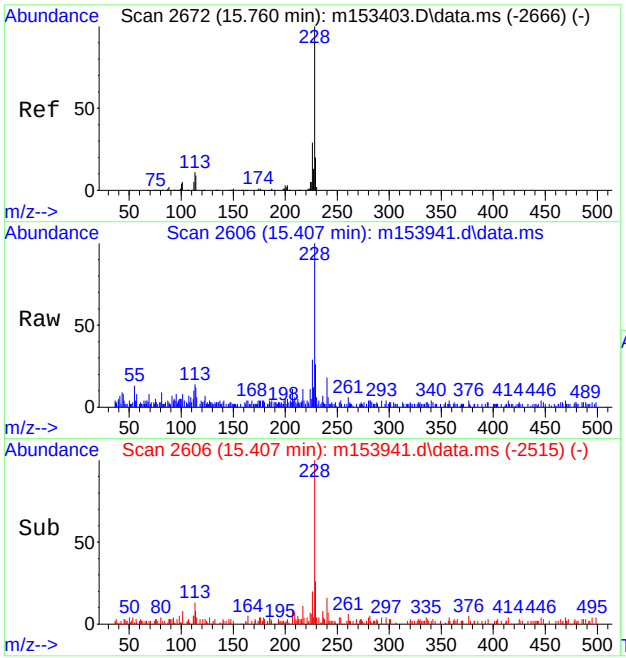


#87
Benzo[a]anthracene
Concen: 0.89 ppm
RT: 15.343 min Scan# 2594
Delta R.T. -0.008 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:228 Resp: 21660

Ion	Ratio	Lower	Upper
228	100		
229	18.6	0.0	49.7
226	25.0	0.0	54.7

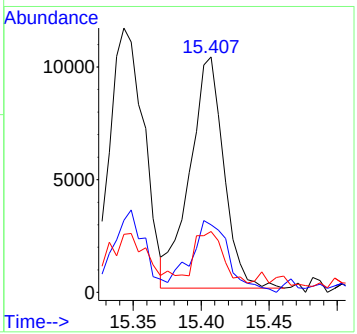


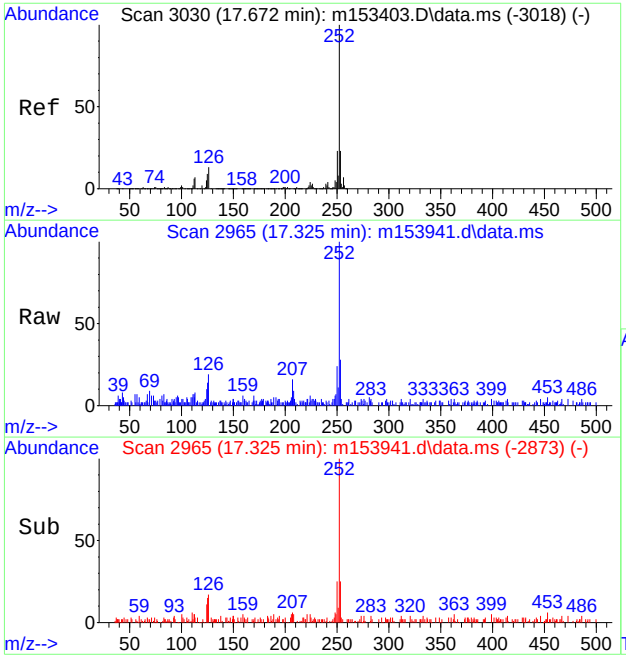


#89
Chrysene
Concen: 0.83 ppm
RT: 15.407 min Scan# 2606
Delta R.T. -0.013 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:228 Resp: 17834

Ion	Ratio	Lower	Upper
228	100		
226	26.5	0.0	57.4
229	20.4	0.0	50.4

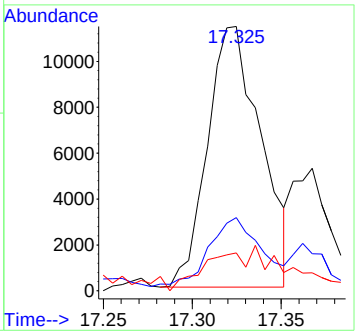


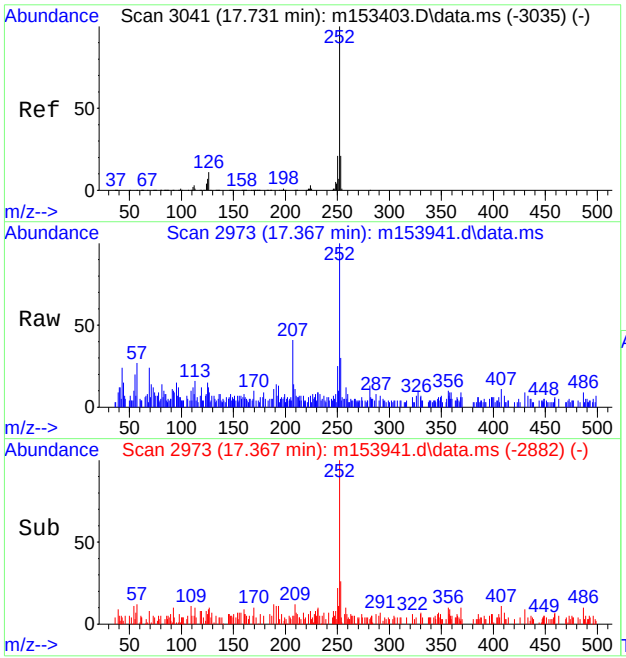


#93
Benzo[b]fluoranthene
Concen: 1.04 ppm
RT: 17.325 min Scan# 2965
Delta R.T. -0.008 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:252 Resp: 23735

Ion	Ratio	Lower	Upper
252	100		
253	25.9	0.0	52.2
125	9.7	0.0	39.2

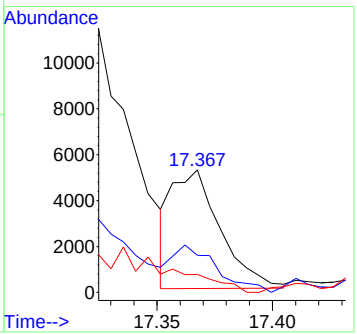


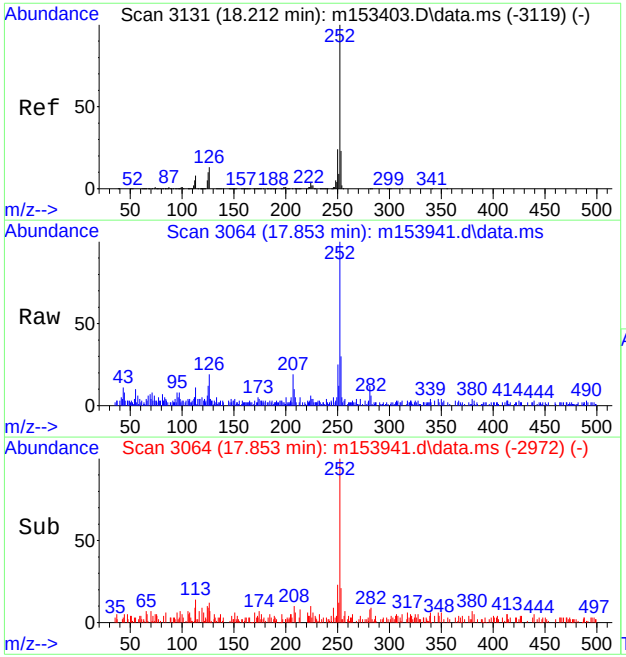


#94
Benzo[k]fluoranthene
Concen: 0.35 ppm
RT: 17.367 min Scan# 2973
Delta R.T. -0.013 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:252 Resp: 7573

Ion	Ratio	Lower	Upper
252	100		
253	28.0	0.0	50.9
125	7.8	0.0	40.3

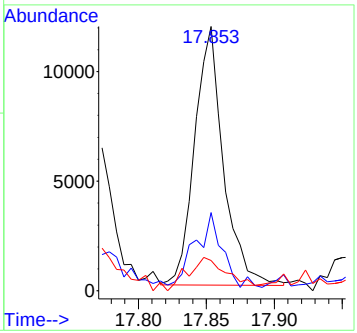


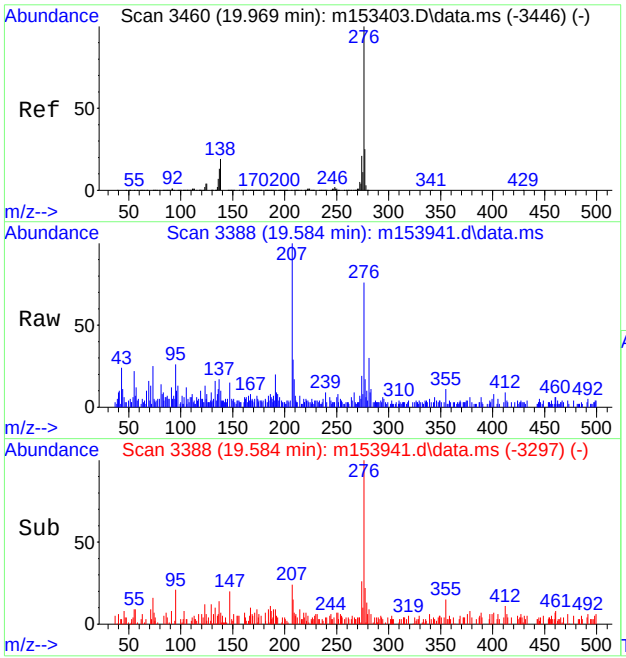


#95
Benzo[a]pyrene
Concen: 0.86 ppm
RT: 17.853 min Scan# 3064
Delta R.T. -0.008 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:252 Resp: 17295

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.8
125	6.9	0.0	39.9

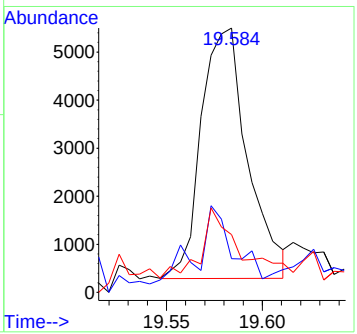


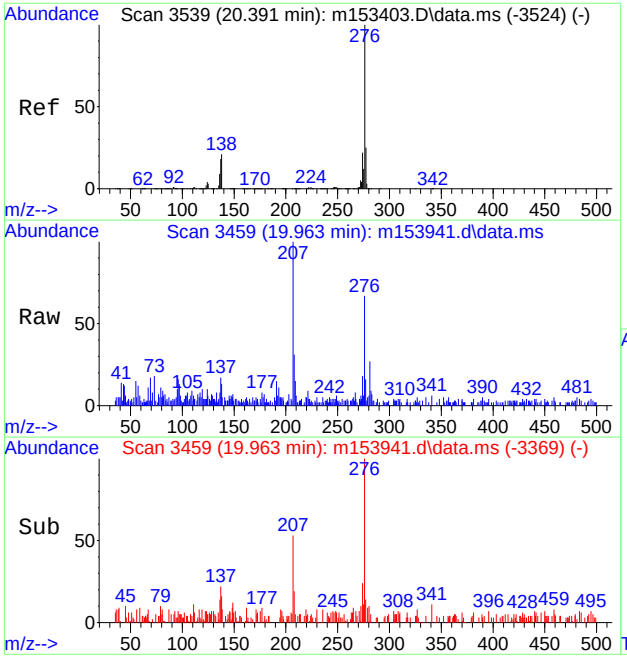


#96
Indeno[1,2,3-cd]pyrene
Concen: 0.98 ppm m
RT: 19.584 min Scan# 3388
Delta R.T. -0.013 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:276 Resp: 8789

Ion	Ratio	Lower	Upper
276	100		
138	12.8	0.0	45.7
137	21.9	0.0	42.0

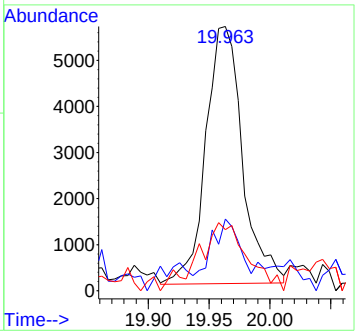




#100
Benzo[g,h,i]perylene
Concen: 0.62 ppm
RT: 19.963 min Scan# 3459
Delta R.T. -0.019 min
Lab File: m153941.d
Acq: 1 May 2019 4:35 pm

Tgt Ion:276 Resp: 11709

Ion	Ratio	Lower	Upper
276	100		
138	18.7	0.0	48.0
277	24.2	0.0	55.0



Manual Integration Approval Summary

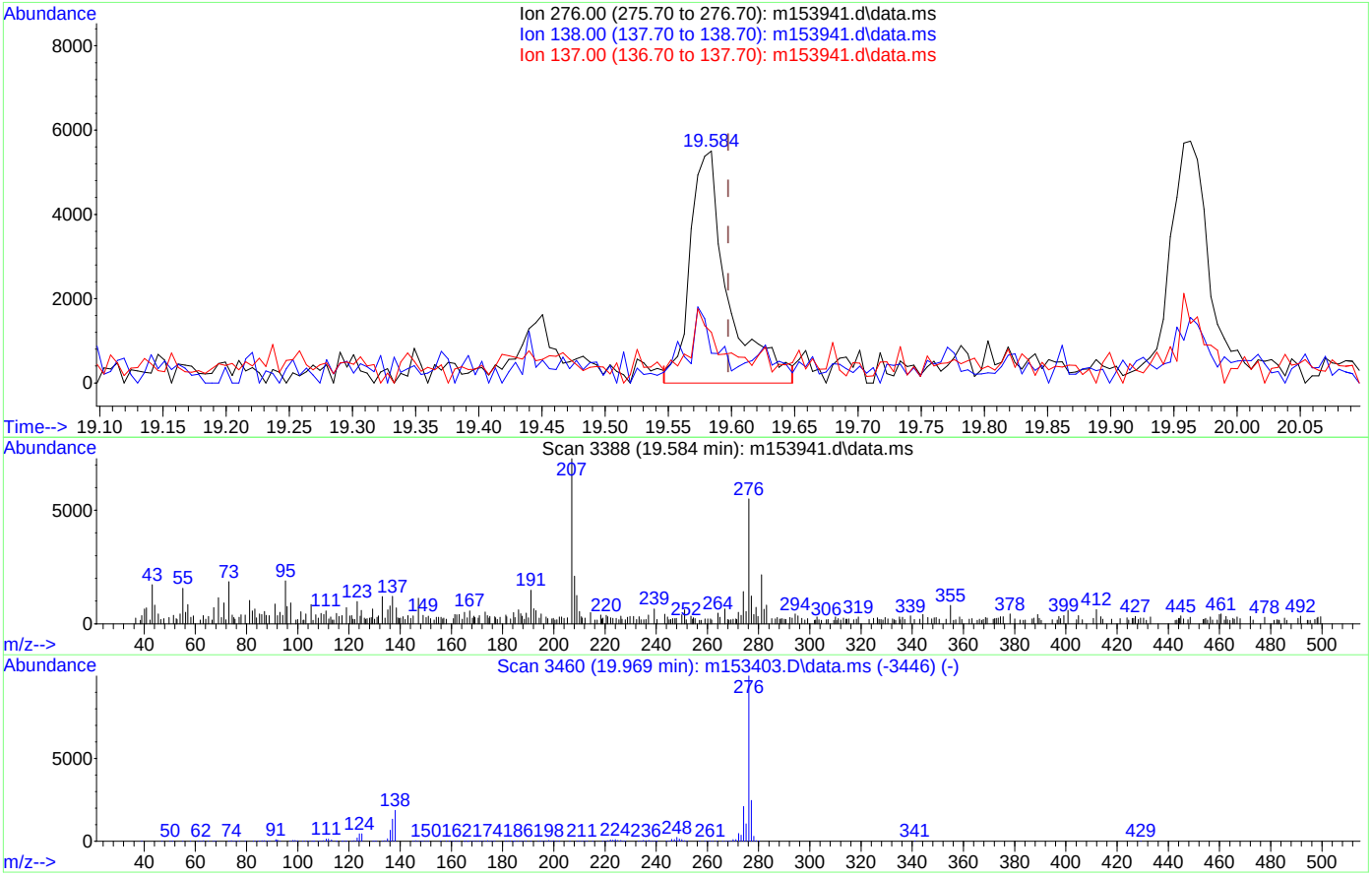
Sample Number:	JC86837-7	**Method:**	SW846 8270D
Lab FileID:	M153941.D	**Analyst approved:**	05/02/19 05:57 Jeryll Fabriene Reyes
Injection Time:	05/01/19 16:35	**Supervisor approved:**	05/06/19 11:58 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		19.58	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153941.d
Acq On : 1 May 2019 4:35 pm
Operator : christc2
Sample : jc86837-7 Inst : MSM
Misc : op20021,em6577,30.2,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:32:22 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:27:18 2019
Response via : Initial Calibration



TIC: m153941.d\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

19.584min (-0.013) 1.11ppm

response 11471

Ion	Exp%	Act%
276.00	100	100
138.00	15.70	8.87
137.00	12.00	15.77
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/06/19 13:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481465.d
Acq On : 29 Apr 2019 2:02 pm
Operator : angelar
Sample : jc86837-8 Inst : MS6P
Misc : op20035,e6p2576,30.2,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:42:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

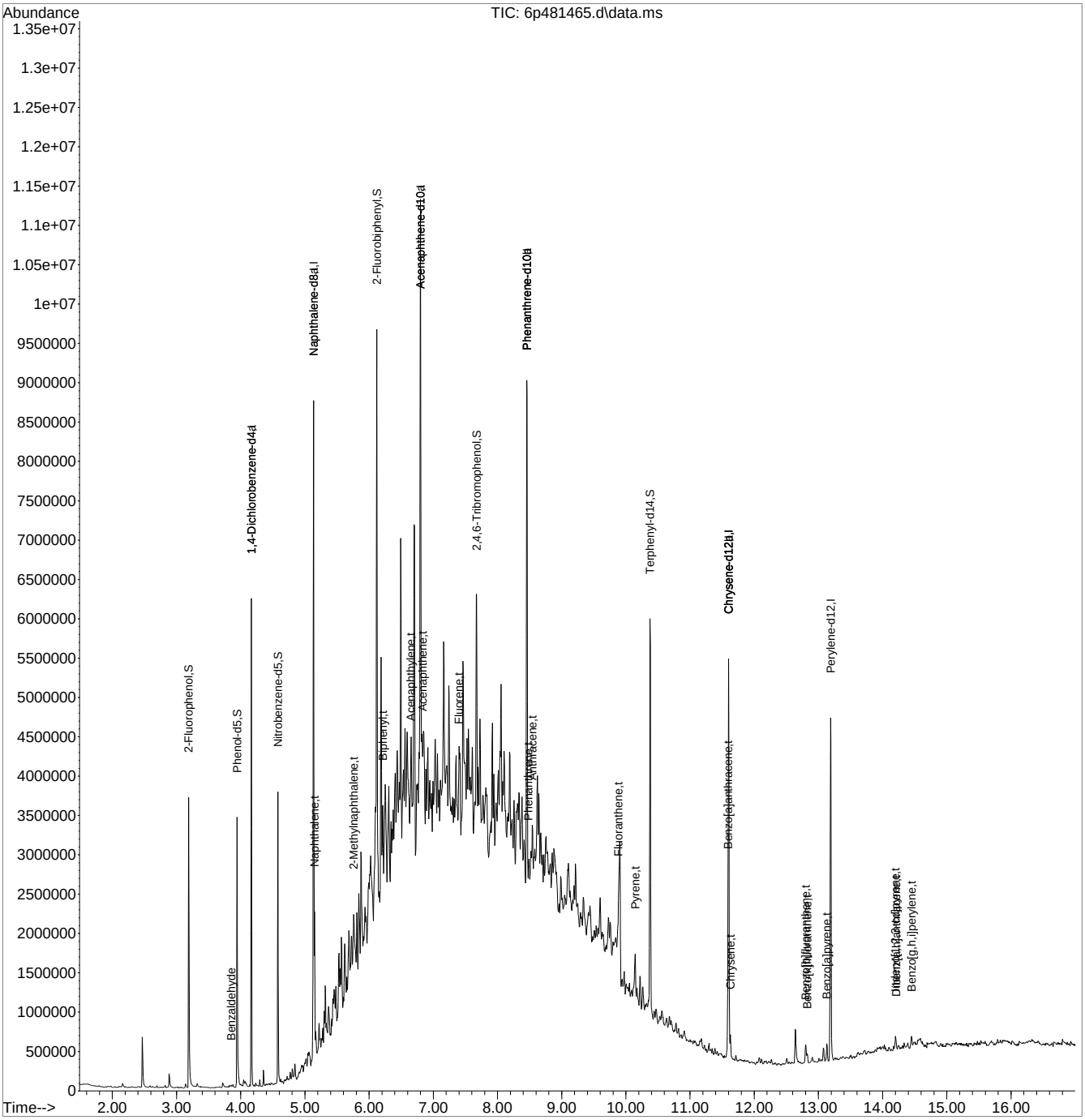
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.167	152	689368	40.00	ppm	0.00
24) Naphthalene-d8	5.135	136	2683261	40.00	ppm	0.00
47) Acenaphthene-d10	6.798	164	1353742	40.00	ppm	0.00
69) Phenanthrene-d10	8.461	188	2213024	40.00	ppm	0.00
83) Chrysene-d12	11.601	240	1661840	40.00	ppm	-0.01
91) Perylene-d12	13.190	264	1615107	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.167	152	689368	40.00	ppm	0.00
103) Acenaphthene-d10a	6.798	164	1353742	40.00	ppm	0.00
105) Phenanthrene-d10a	8.461	188	2213024	40.00	ppm	0.00
109) Chrysene-d12a	11.601	240	1661840	40.00	ppm	-0.01
111) Naphthalene-d8a	5.135	136	2683261	40.00	ppm	0.00
113) Phenanthrene-d10b	8.461	188	2213024	40.00	ppm	0.00
115) Chrysene-d12b	11.601	240	1661840	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.188	112	865953	42.94	ppm	0.00
Spiked Amount 50.000			Recovery =	85.88%		
8) Phenol-d5	3.942	99	971545	39.46	ppm	0.00
Spiked Amount 50.000			Recovery =	78.92%		
25) Nitrobenzene-d5	4.578	82	831296	37.23	ppm	0.00
Spiked Amount 50.000			Recovery =	74.46%		
51) 2-Fluorobiphenyl	6.119	172	1866139	39.02	ppm	0.00
Spiked Amount 50.000			Recovery =	78.04%		
73) 2,4,6-Tribromophenol	7.675	330	266224	37.38	ppm	0.00
Spiked Amount 50.000			Recovery =	74.76%		
85) Terphenyl-d14	10.376	244	1623642	41.94	ppm	0.00
Spiked Amount 50.000			Recovery =	83.88%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
38) Naphthalene	5.151	128	604475	8.65	ppm	100
44) 2-Methylnaphthalene	5.760	141	66330	1.68	ppm	93
53) Biphenyl	6.215	154	27487	0.53	ppm	88
56) Acenaphthylene	6.648	152	63959	1.04	ppm	83
59) Acenaphthene	6.830	153	33602	0.82	ppm	94
66) Fluorene	7.397	166	33553	0.73	ppm	75
77) Phenanthrene	8.483	178	94048	1.58	ppm	92
78) Anthracene	8.542	178	80447m	1.35	ppm	
81) Fluoranthene	9.884	202	156862	2.43	ppm	98
84) Pyrene	10.146	202	189836	3.43	ppm	94
87) Benzo[a]anthracene	11.590	228	92688	1.75	ppm	95
89) Chrysene	11.628	228	95736	1.84	ppm	96
93) Benzo[b]fluoranthene	12.799	252	110283m	2.24	ppm	
94) Benzo[k]fluoranthene	12.826	252	42229m	0.97	ppm	
95) Benzo[a]pyrene	13.131	252	87953	2.17	ppm	94
96) Indeno[1,2,3-cd]pyrene	14.201	276	63678	1.18	ppm	98
98) Dibenz[a,h]anthracene	14.211	278	19906m	0.42	ppm	
100) Benzo[g,h,i]perylene	14.452	276	67605	1.60	ppm	99
102) Benzaldehyde	3.851	105	5574	0.33	ppm #	83

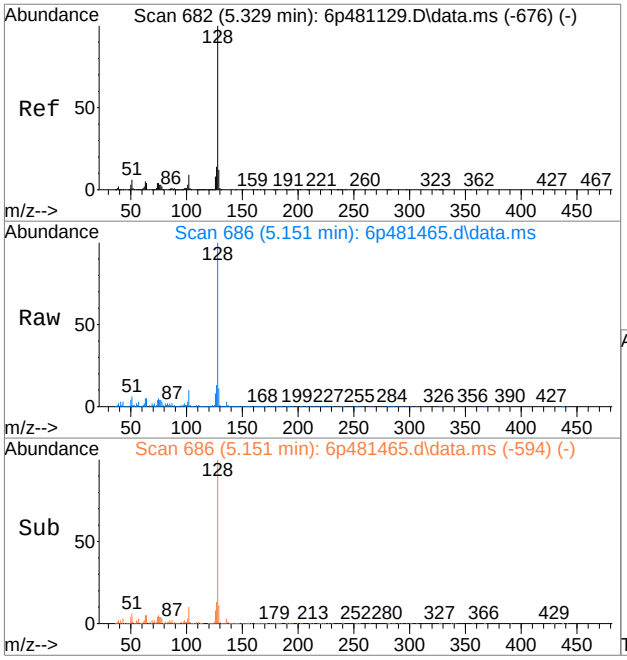
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481465.d
Acq On : 29 Apr 2019 2:02 pm
Operator : angelar
Sample : jc86837-8 Inst : MS6P
Misc : op20035,e6p2576,30.2,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:42:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

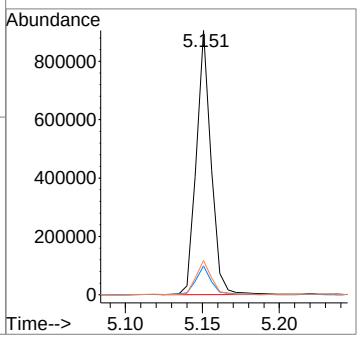


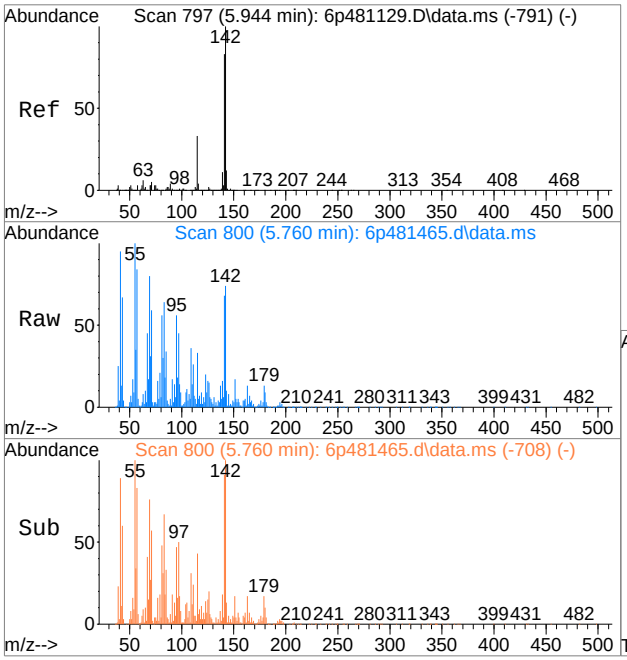


#38
Naphthalene
Concen: 8.65 ppm
RT: 5.151 min Scan# 686
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:128 Resp: 604475

Ion	Ratio	Lower	Upper
128	100		
129	10.9	0.0	40.9
127	12.9	0.0	42.6

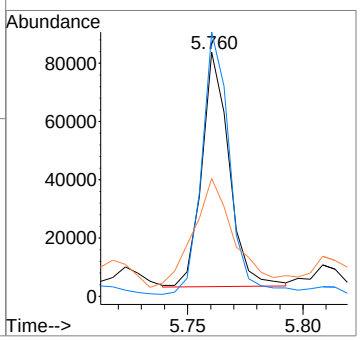


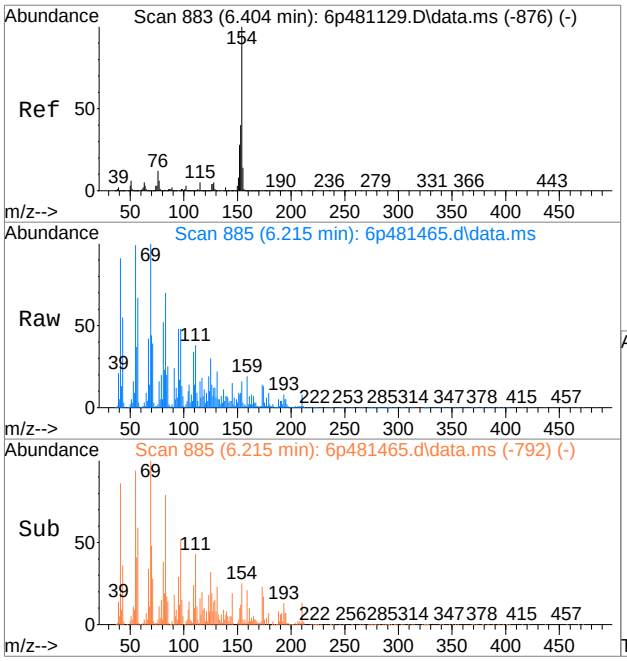


#44
2-Methylnaphthalene
Concen: 1.68 ppm
RT: 5.760 min Scan# 800
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:141 Resp: 66330

Ion	Ratio	Lower	Upper
141	100		
142	111.8	89.8	149.8
115	43.5	9.1	69.1

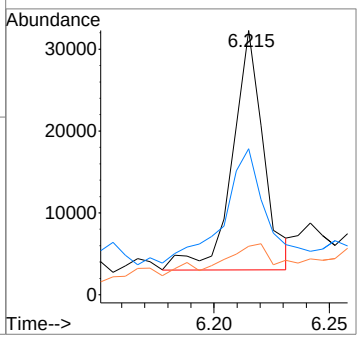


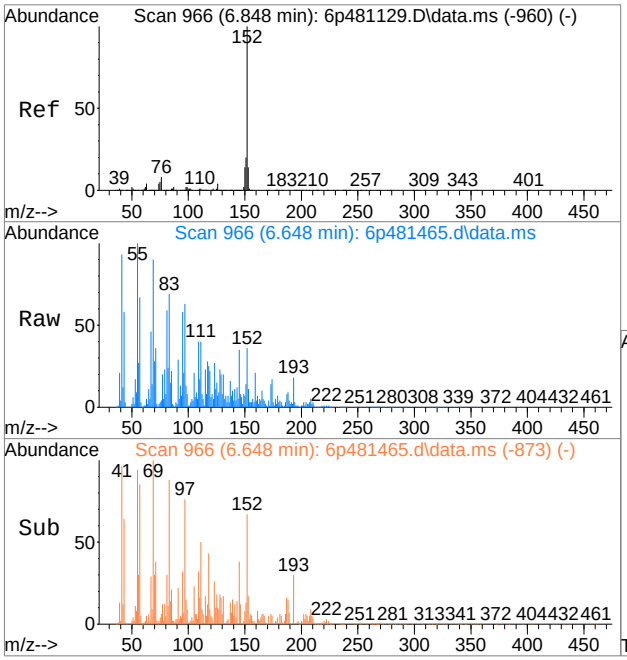


#53
Biphenyl
Concen: 0.53 ppm
RT: 6.215 min Scan# 885
Delta R.T. -0.000 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:154 Resp: 27487

Ion	Ratio	Lower	Upper
154	100		
153	46.9	8.6	68.6
155	9.7	0.0	43.0

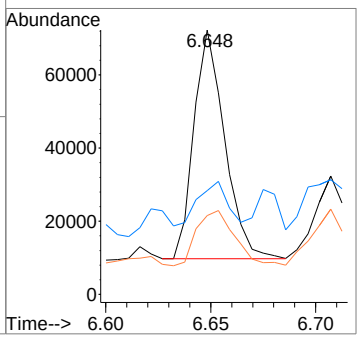


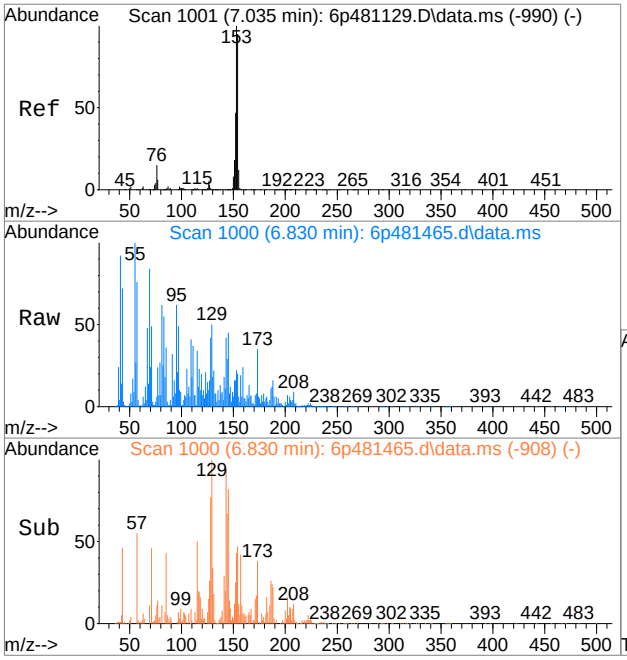


#56
Acenaphthylene
Concen: 1.04 ppm
RT: 6.648 min Scan# 966
Delta R.T. -0.000 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:152 Resp: 63959

Ion	Ratio	Lower	Upper
152	100		
151	13.0	0.0	49.7
153	21.5	0.0	43.5

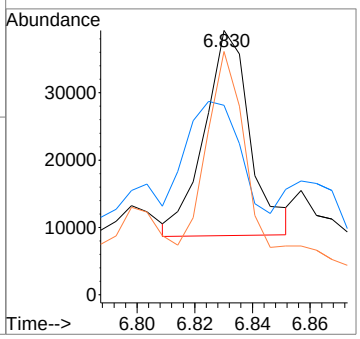


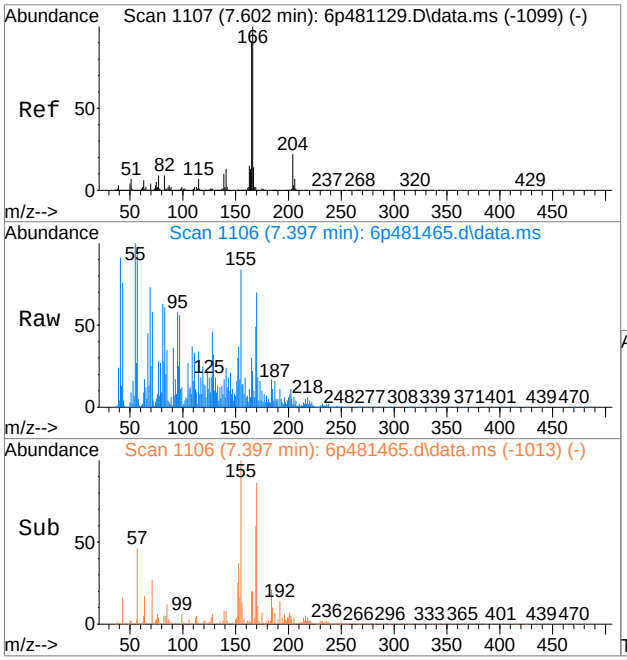


#59
Acenaphthene
Concen: 0.82 ppm
RT: 6.830 min Scan# 1000
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:153 Resp: 33602

Ion	Ratio	Lower	Upper
153	100		
152	49.9	18.0	78.0
154	102.1	65.4	125.4

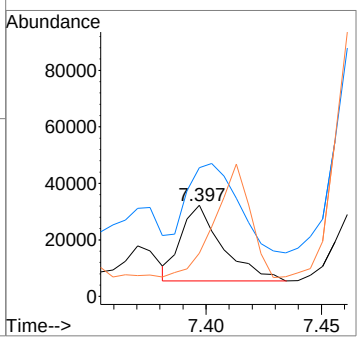


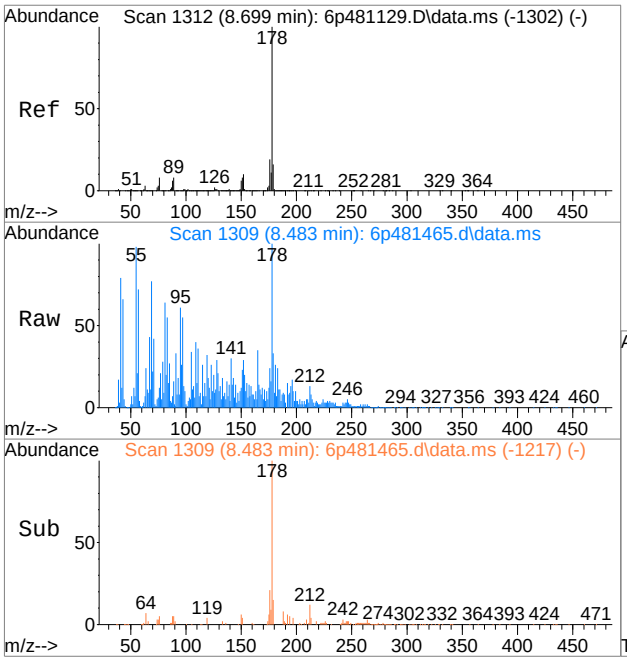


#66
Fluorene
Concen: 0.73 ppm
RT: 7.397 min Scan# 1106
Delta R.T. -0.000 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:166 Resp: 33553

Ion	Ratio	Lower	Upper
166	100		
165	111.9	62.0	122.0
167	34.6	0.0	43.3

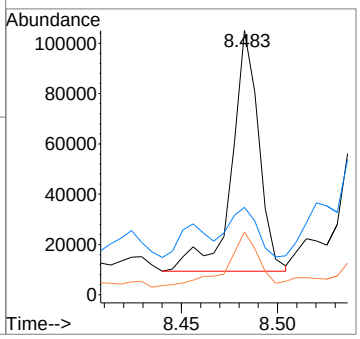


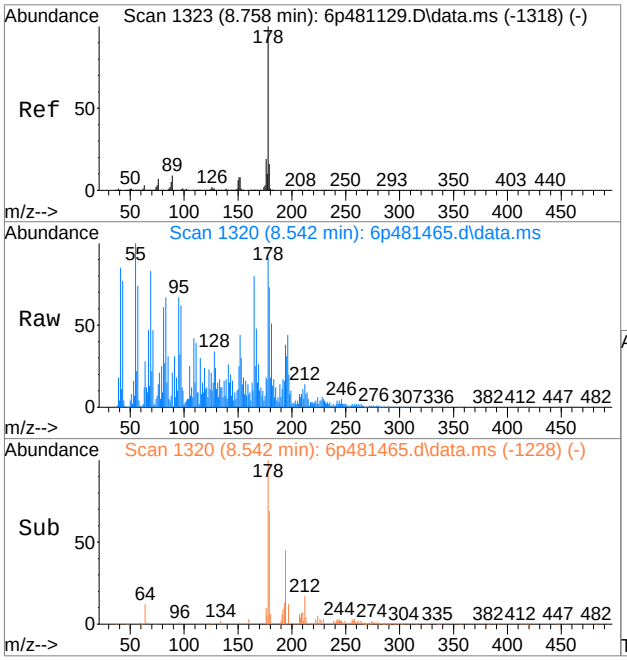


#77
Phenanthrene
Concen: 1.58 ppm
RT: 8.483 min Scan# 1309
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:178 Resp: 94048

Ion	Ratio	Lower	Upper
178	100		
179	20.7	0.0	46.0
176	21.6	0.0	49.2

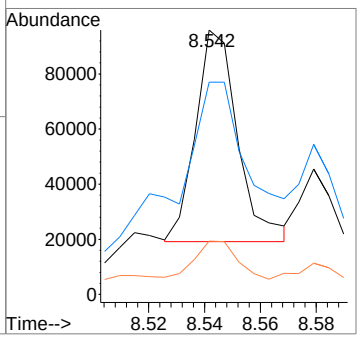


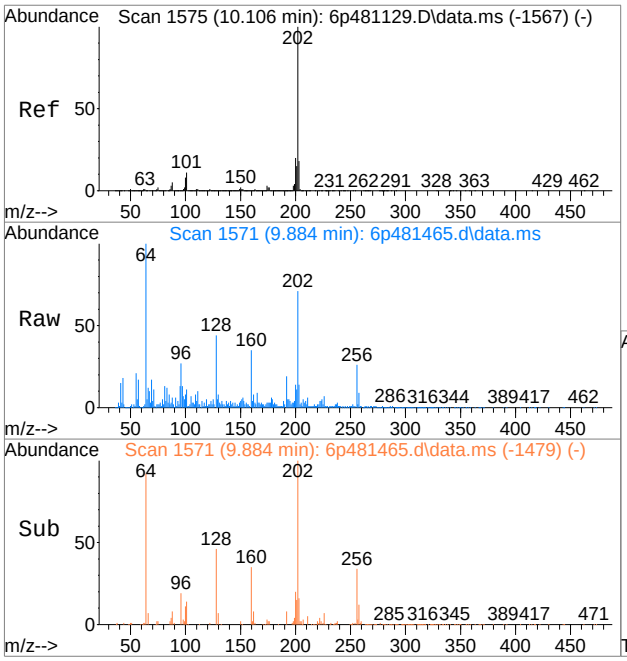


#78
Anthracene
Concen: 1.35 ppm m
RT: 8.542 min Scan# 1320
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:178 Resp: 80447

Ion	Ratio	Lower	Upper
178	100		
179	80.2	0.0	45.3#
176	20.2	0.0	48.5

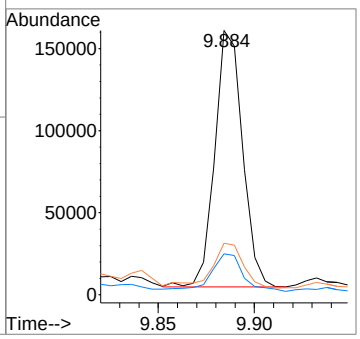


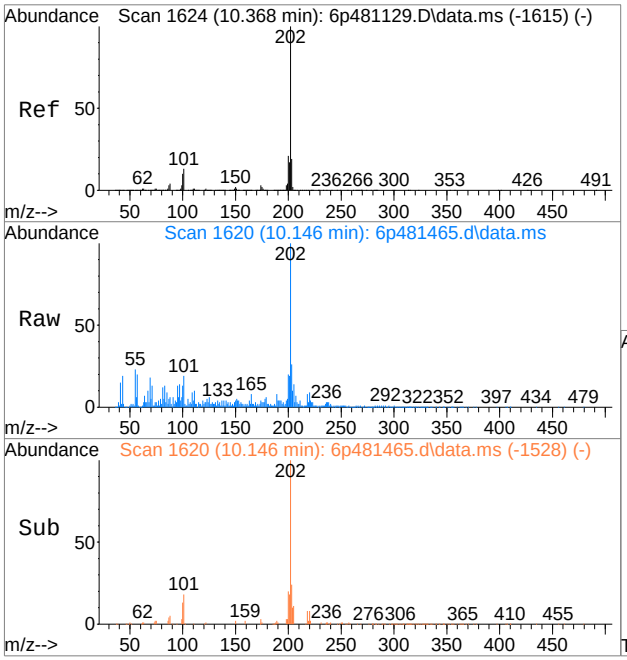


#81
Fluoranthene
Concen: 2.43 ppm
RT: 9.884 min Scan# 1571
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:202 Resp: 156862

Ion	Ratio	Lower	Upper
202	100		
101	14.2	0.0	43.8
203	17.0	0.0	47.8

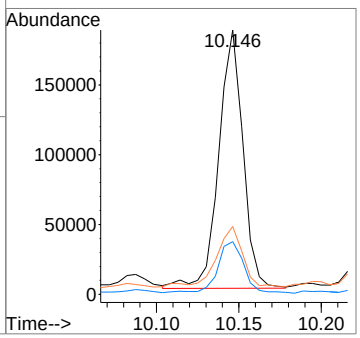


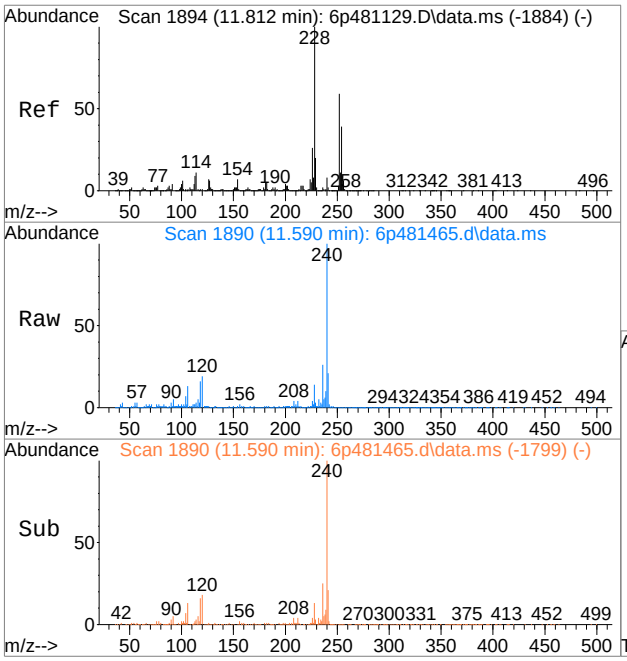


#84
Pyrene
Concen: 3.43 ppm
RT: 10.146 min Scan# 1620
Delta R.T. -0.005 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:202 Resp: 189836

Ion	Ratio	Lower	Upper
202	100		
200	19.8	0.0	51.0
203	23.5	0.0	48.7

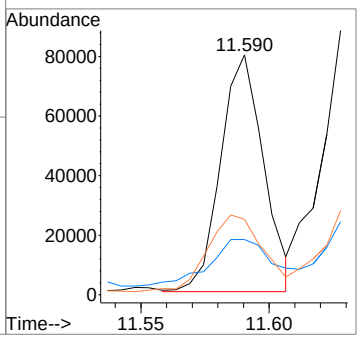


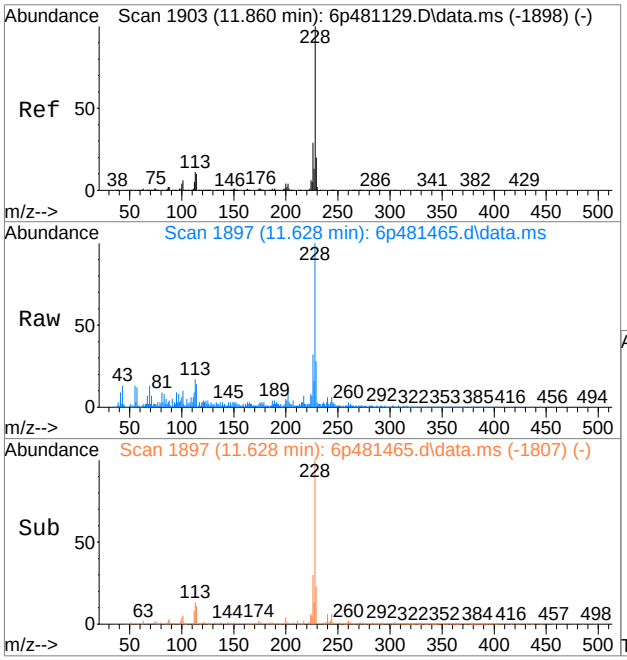


#87
Benzo[a]anthracene
Concen: 1.75 ppm
RT: 11.590 min Scan# 1890
Delta R.T. -0.011 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:228 Resp: 92688

Ion	Ratio	Lower	Upper
228	100		
229	16.3	0.0	49.8
226	29.0	0.0	57.3

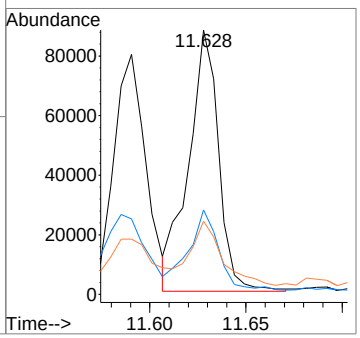


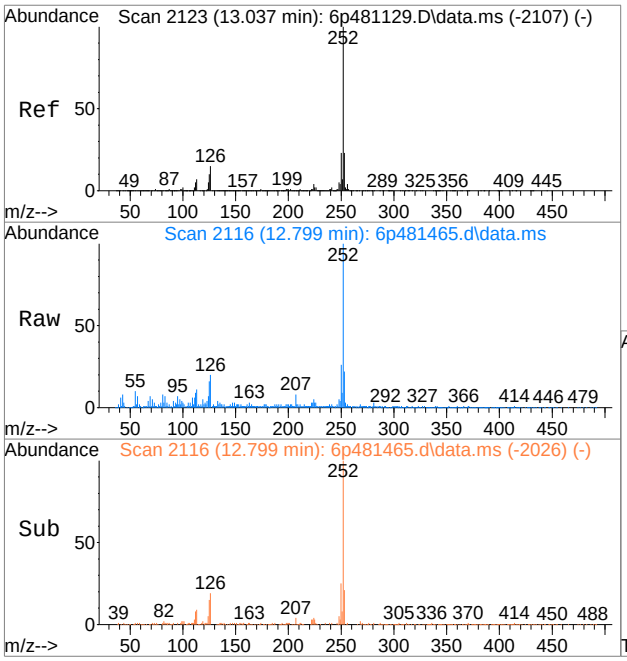


#89
Chrysene
Concen: 1.84 ppm
RT: 11.628 min Scan# 1897
Delta R.T. -0.016 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:228 Resp: 95736

Ion	Ratio	Lower	Upper
228	100		
226	30.2	0.0	59.1
229	22.4	0.0	49.2

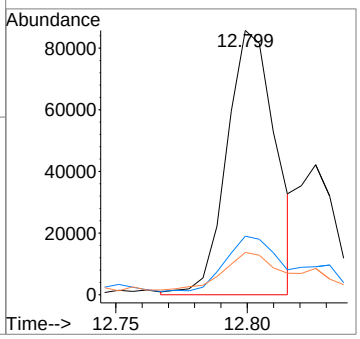


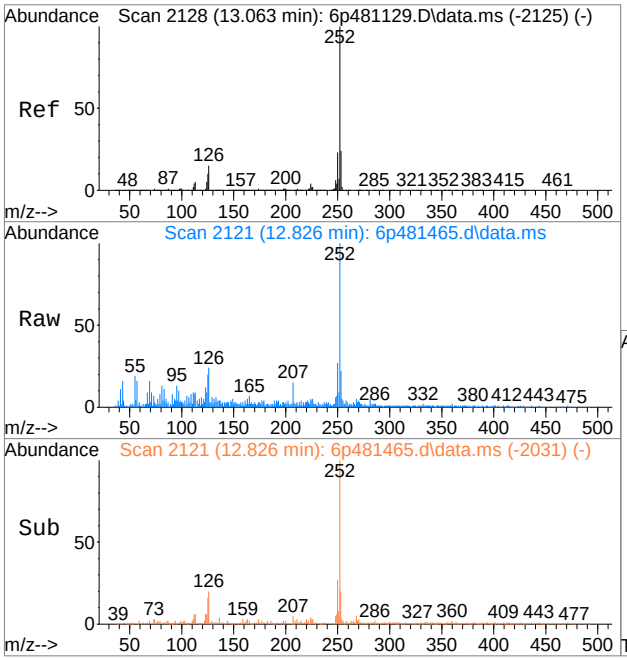


#93
Benzo[b]fluoranthene
Concen: 2.24 ppm m
RT: 12.799 min Scan# 2116
Delta R.T. -0.016 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:252 Resp: 110283

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	53.5
125	16.0	0.0	43.4

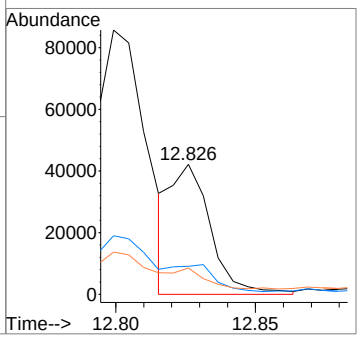


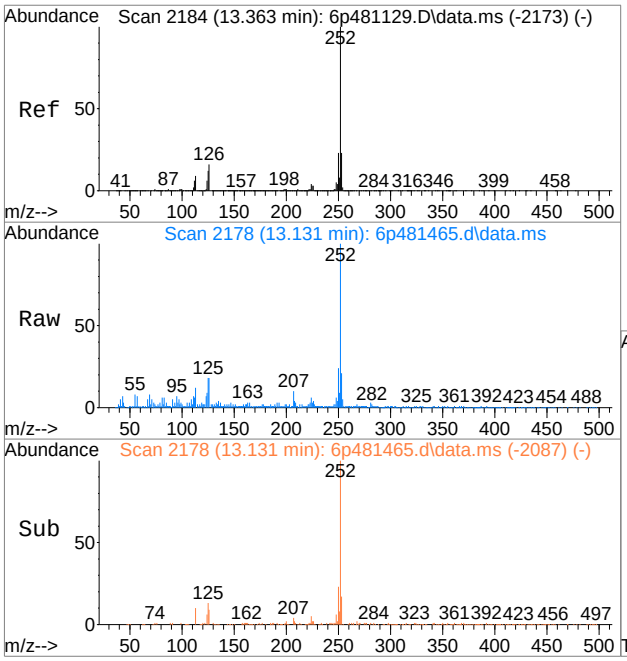


#94
Benzo[k]fluoranthene
Concen: 0.97 ppm m
RT: 12.826 min Scan# 2121
Delta R.T. -0.016 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:252 Resp: 42229

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.6
125	20.4	0.0	42.6

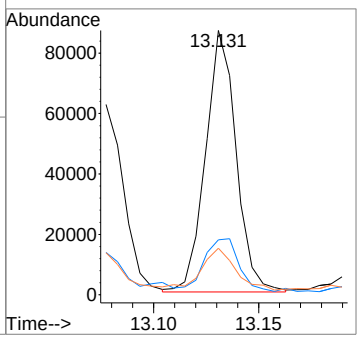


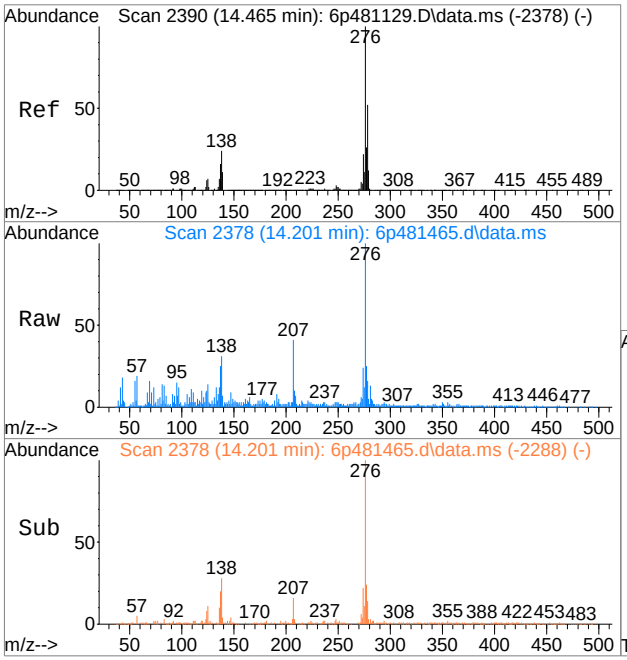


#95
Benzo[a]pyrene
Concen: 2.17 ppm
RT: 13.131 min Scan# 2178
Delta R.T. -0.011 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:252 Resp: 87953

Ion	Ratio	Lower	Upper
252	100		
253	17.6	0.0	51.9
125	15.3	0.0	44.5

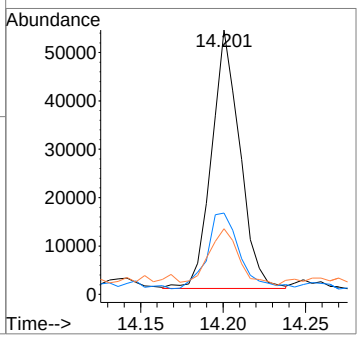


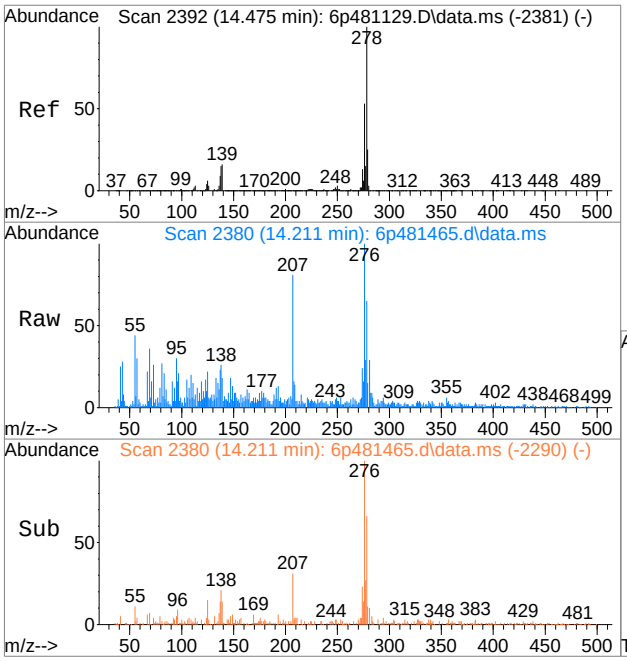


#96
Indeno[1,2,3-cd]pyrene
Concen: 1.18 ppm
RT: 14.201 min Scan# 2378
Delta R.T. -0.016 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:276 Resp: 63678

Ion	Ratio	Lower	Upper
276	100		
138	28.0	0.0	57.4
137	19.9	0.0	48.8

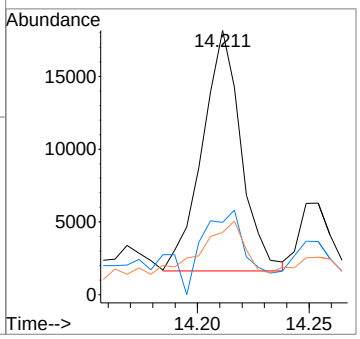


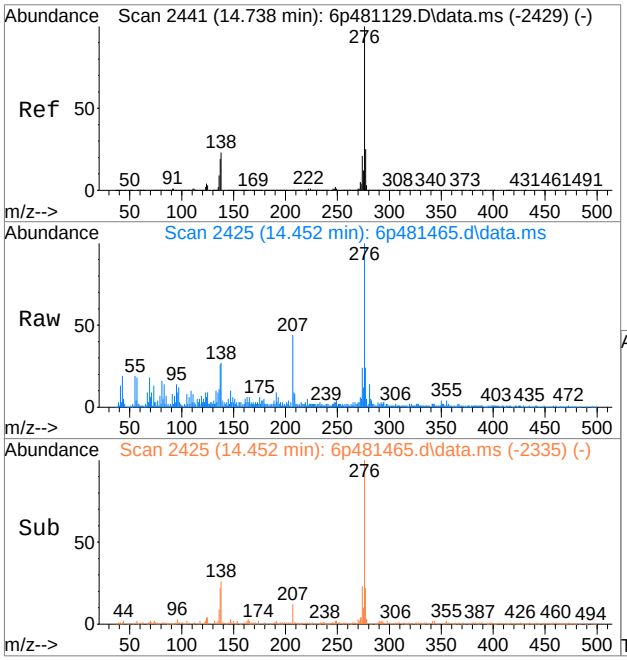


#98
Dibenz[a,h]anthracene
Concen: 0.42 ppm m
RT: 14.211 min Scan# 2380
Delta R.T. -0.016 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:278 Resp: 19906

Ion	Ratio	Lower	Upper
278	100		
139	27.3	0.0	49.5
279	23.6	0.0	54.7

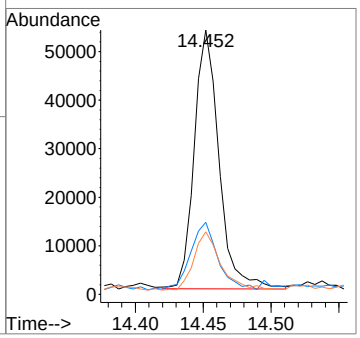


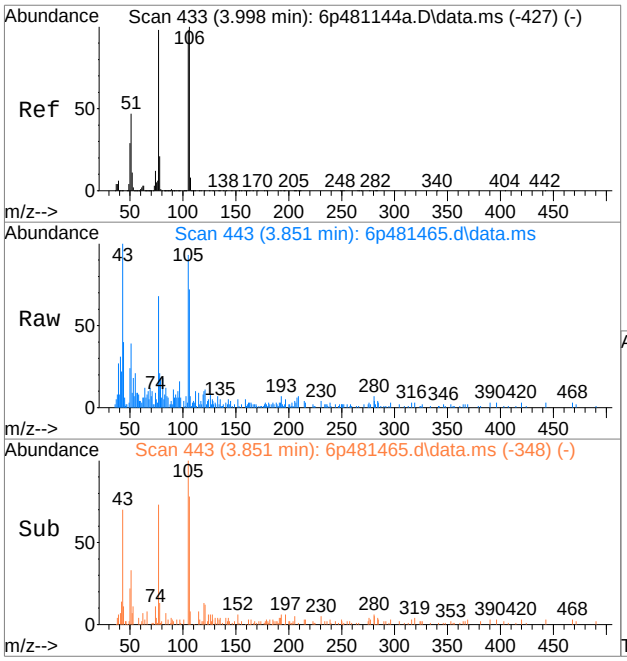


#100
Benzo[g,h,i]perylene
Concen: 1.60 ppm
RT: 14.452 min Scan# 2425
Delta R.T. -0.016 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:276 Resp: 67605

Ion	Ratio	Lower	Upper
276	100		
138	24.2	0.0	54.9
277	22.6	0.0	53.3

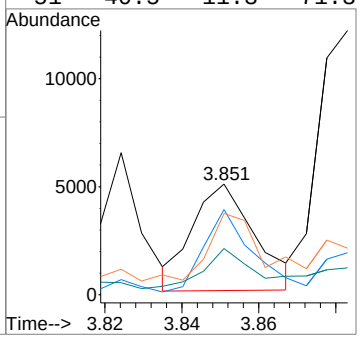




#102
Benzaldehyde
Concen: 0.33 ppm
RT: 3.851 min Scan# 443
Delta R.T. 0.011 min
Lab File: 6p481465.d
Acq: 29 Apr 2019 2:02 pm

Tgt Ion:105 Resp: 5574

Ion	Ratio	Lower	Upper
105	100		
106	93.0	69.7	129.7
77	60.3	64.2	124.2#
51	40.5	11.3	71.3



9.1.10

9

Manual Integration Approval Summary

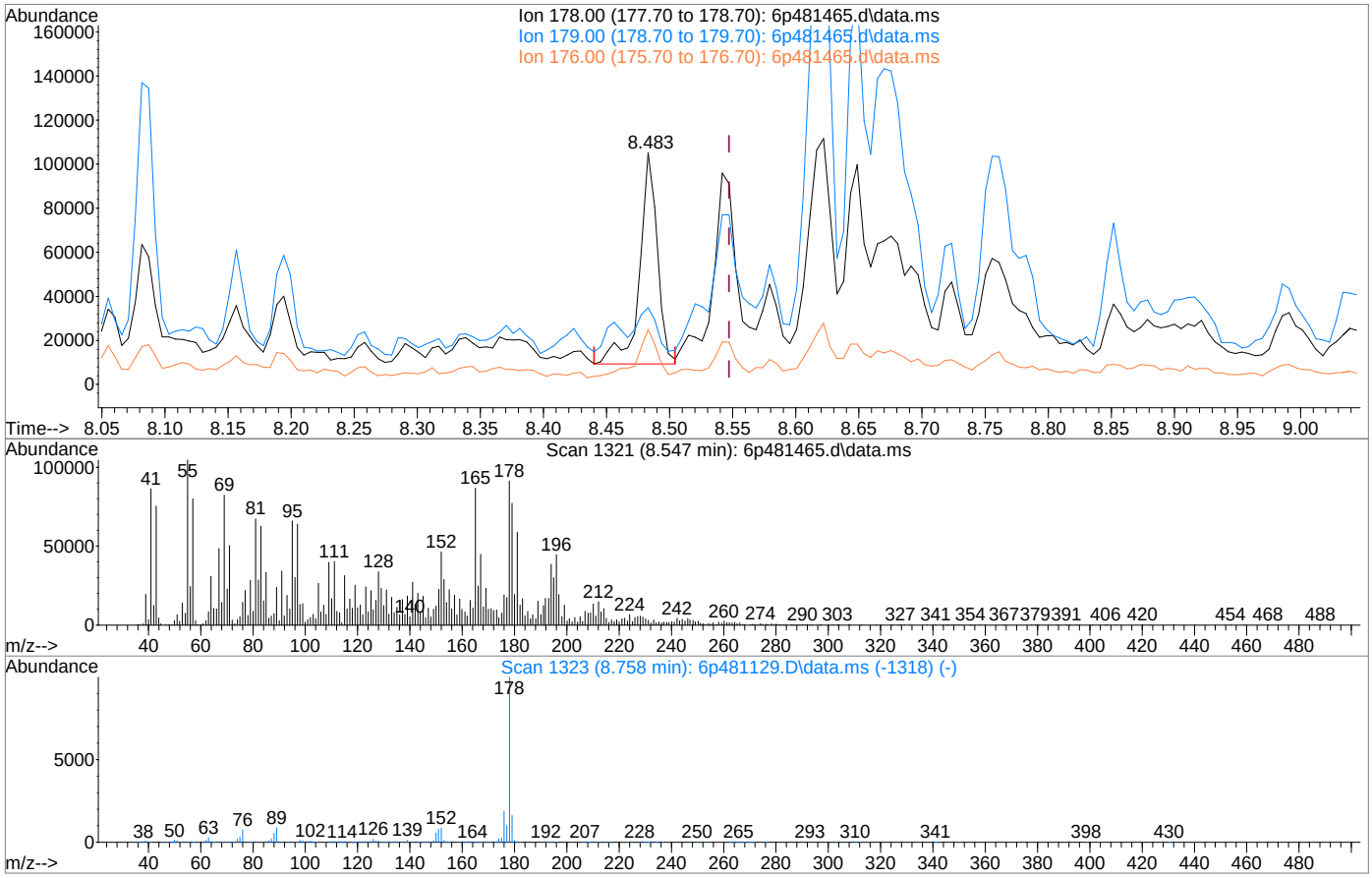
Sample Number: JC86837-8
Lab FileID: 6P481465.D
Injection Time: 04/29/19 14:02
Method: SW846 8270D
Analyst approved: 05/06/19 12:49 Kristi Schollenberger
Supervisor approved: 05/06/19 13:03 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Anthracene	120-12-7		8.54	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		12.80	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.83	Overlapping peak
Dibenzo(a,h)anthracene	53-70-3		14.21	Overlapping peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481465.d
Acq On    : 29 Apr 2019   2:02 pm
Operator  : angelar
Sample    : jc86837-8                                  Inst    : MS6P
Misc      : op20035,e6p2576,30.2,,,1,1
ALS Vial  : 13   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:19:02 2019
Quant Title  : Semi Volatile  GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration
```



TIC: 6p481465.d\data.ms

(78) Anthracene (t)

8.483min (-0.064) 1.58ppm

response 94048

Ion	Exp%	Act%
178.00	100	100
179.00	15.30	20.73
176.00	18.50	21.58
0.00	0.00	0.00

M6P2562.M Tue Apr 30 04:33:25 2019 Page: 1

9.1.10.2 9

756 of 1895

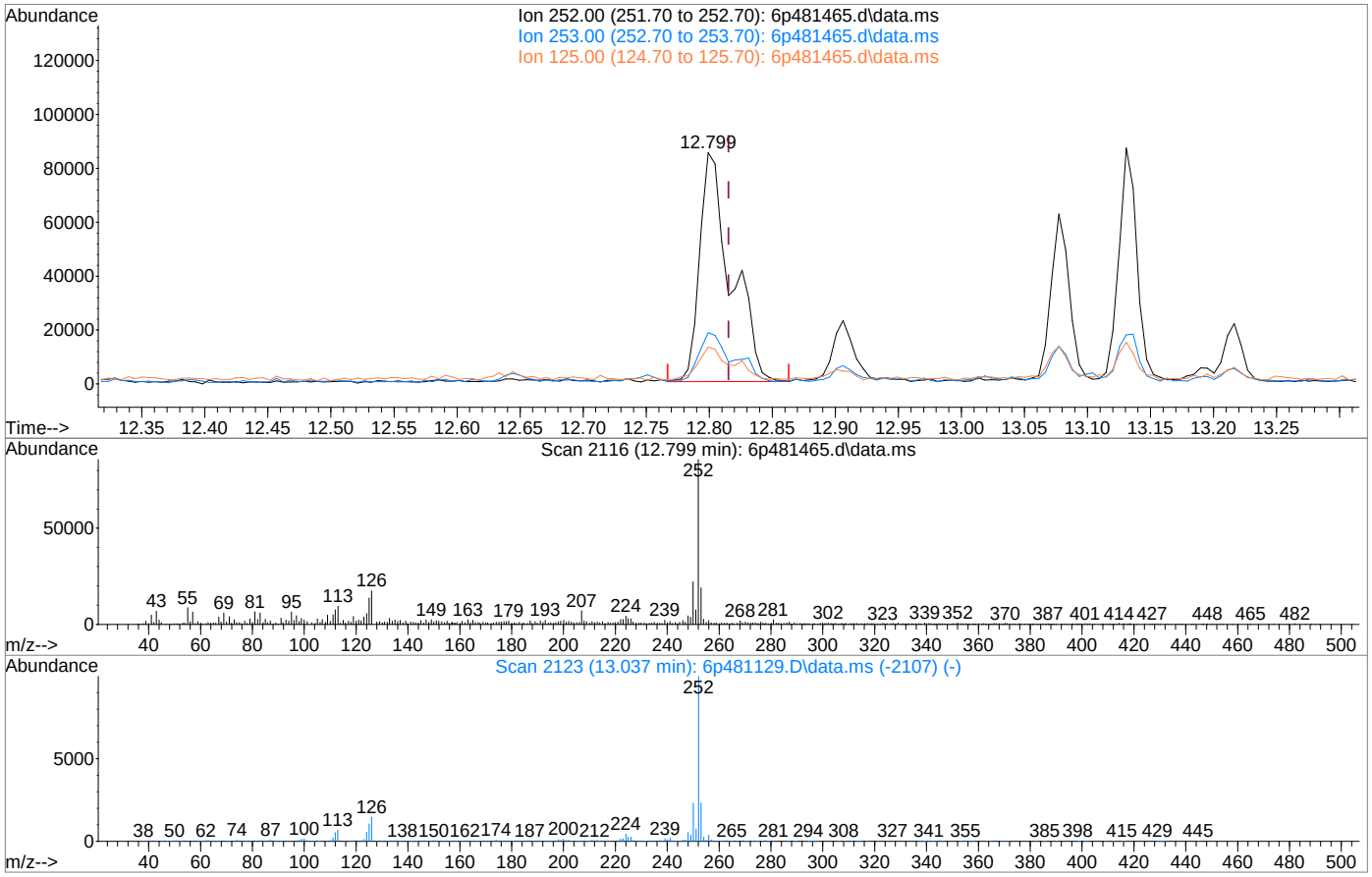
6P481465.D edits: Anthracene

JC86837

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481465.d
Acq On : 29 Apr 2019 2:02 pm
Operator : angelar
Sample : jc86837-8 Inst : MS6P
Misc : op20035,e6p2576,30.2,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:19:02 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481465.d\data.ms

(93) Benzo[b]fluoranthene (t)

12.799min (-0.016) 2.99ppm

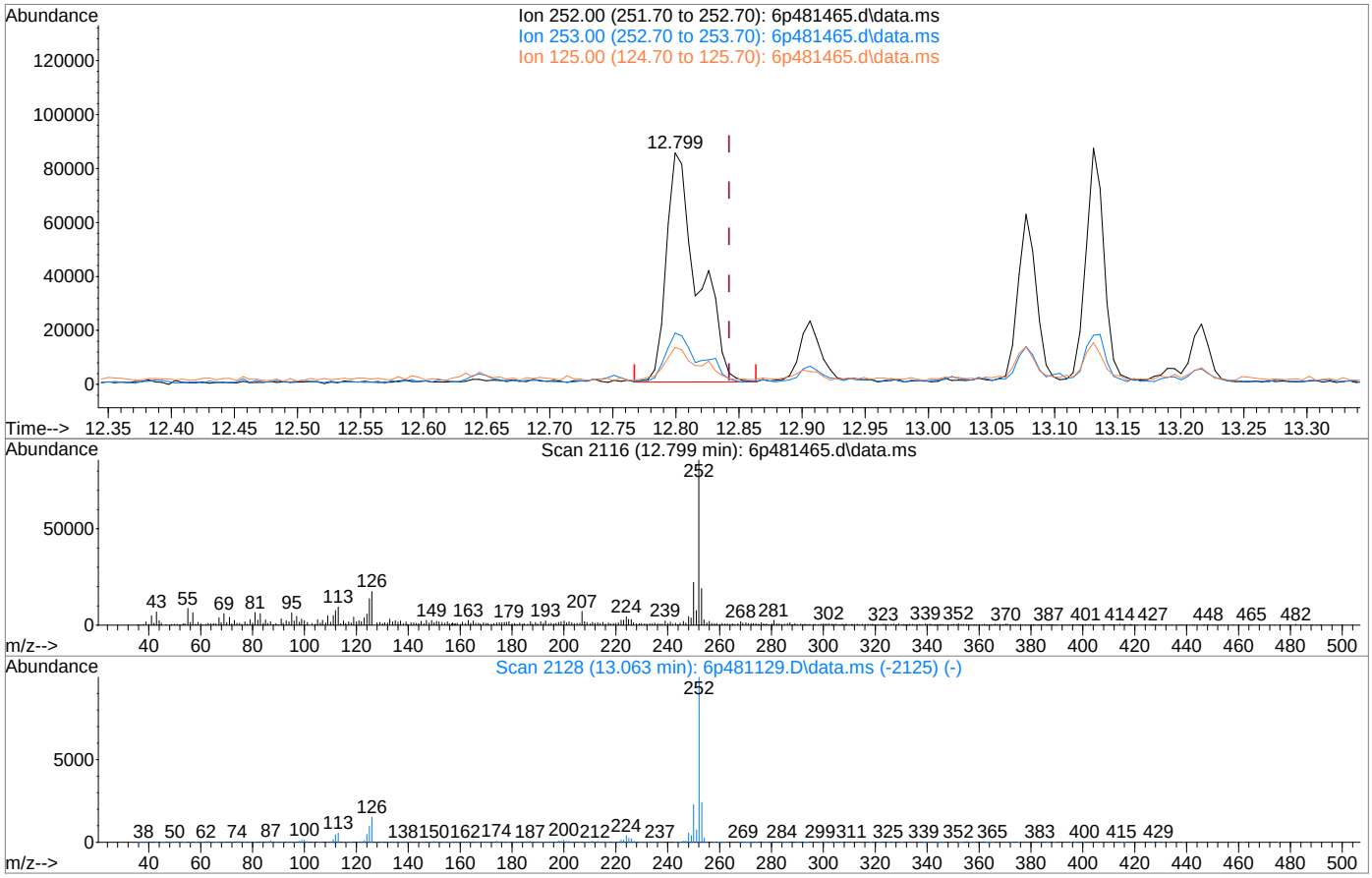
response 147406

Ion	Exp%	Act%
252.00	100	100
253.00	23.50	21.08
125.00	13.40	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481465.d
Acq On : 29 Apr 2019 2:02 pm
Operator : angelar
Sample : jc86837-8 Inst : MS6P
Misc : op20035,e6p2576,30.2,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:19:02 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481465.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.799min (-0.043) 3.38ppm

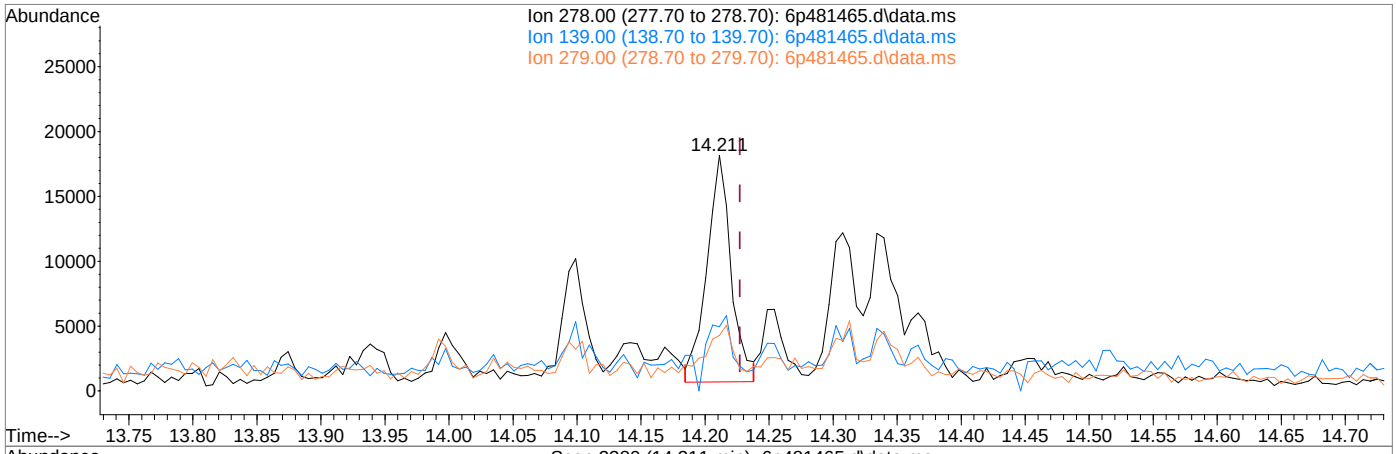
response 147406

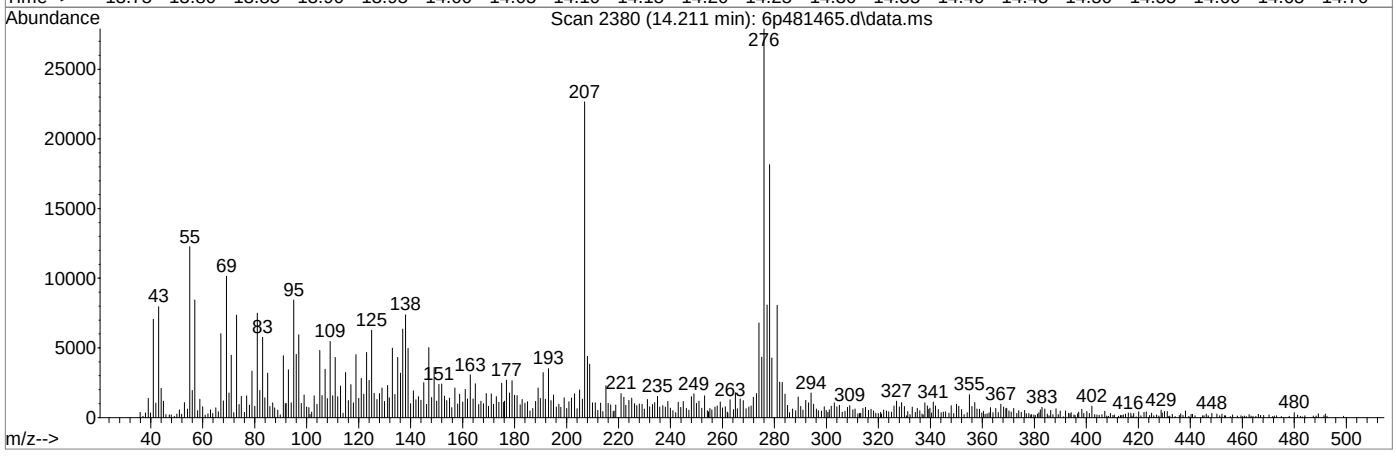
Ion	Exp%	Act%
252.00	100	100
253.00	21.60	21.08
125.00	12.60	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481465.d
Acq On : 29 Apr 2019 2:02 pm
Operator : angelar
Sample : jc86837-8 Inst : MS6P
Misc : op20035,e6p2576,30.2,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:35:51 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration





TIC: 6p481465.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.211min (-0.016) 0.48ppm

response 22927

Ion	Exp%	Act%
278.00	100	100
139.00	19.50	17.15
279.00	24.70	14.39
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481475.d
Acq On : 29 Apr 2019 6:48 pm
Operator : angelar
Sample : jc86837-9 Inst : MS6P
Misc : op20035,e6p2576,30.9,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 05:07:51 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

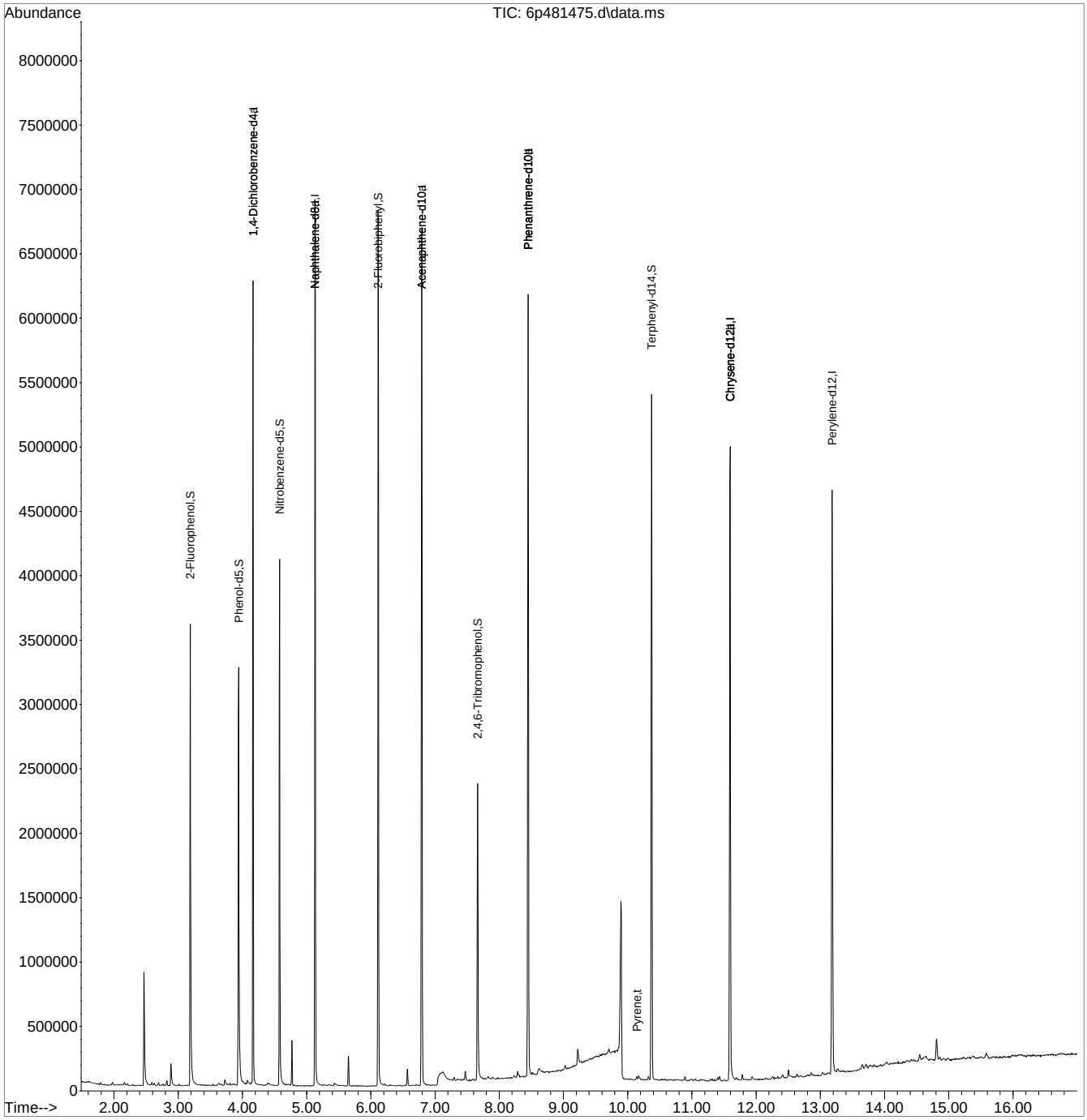
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.167	152	722237	40.00	ppm	0.00
24) Naphthalene-d8	5.129	136	2547969	40.00	ppm	-0.01
47) Acenaphthene-d10	6.793	164	1278110	40.00	ppm	-0.01
69) Phenanthrene-d10	8.451	188	2131950	40.00	ppm	-0.01
83) Chrysene-d12	11.596	240	1672020	40.00	ppm	-0.02
91) Perylene-d12	13.184	264	1562194	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.167	152	722237	40.00	ppm	0.00
103) Acenaphthene-d10a	6.793	164	1278110	40.00	ppm	-0.01
105) Phenanthrene-d10a	8.451	188	2131950	40.00	ppm	-0.01
109) Chrysene-d12a	11.596	240	1672020	40.00	ppm	-0.02
111) Naphthalene-d8a	5.129	136	2547969	40.00	ppm	-0.01
113) Phenanthrene-d10b	8.451	188	2131950	40.00	ppm	-0.01
115) Chrysene-d12b	11.596	240	1672020	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.188	112	842471	39.87	ppm	0.00
Spiked Amount 50.000			Recovery =	79.74%		
8) Phenol-d5	3.942	99	1021277	39.59	ppm	0.00
Spiked Amount 50.000			Recovery =	79.18%		
25) Nitrobenzene-d5	4.578	82	1008302	47.55	ppm	0.00
Spiked Amount 50.000			Recovery =	95.10%		
51) 2-Fluorobiphenyl	6.114	172	1780447	39.43	ppm	-0.01
Spiked Amount 50.000			Recovery =	78.86%		
73) 2,4,6-Tribromophenol	7.665	330	244511	35.64	ppm	-0.01
Spiked Amount 50.000			Recovery =	71.28%		
85) Terphenyl-d14	10.371	244	1659788	42.61	ppm	-0.01
Spiked Amount 50.000			Recovery =	85.22%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
84) Pyrene	10.141	202	10392	0.19	ppm	91

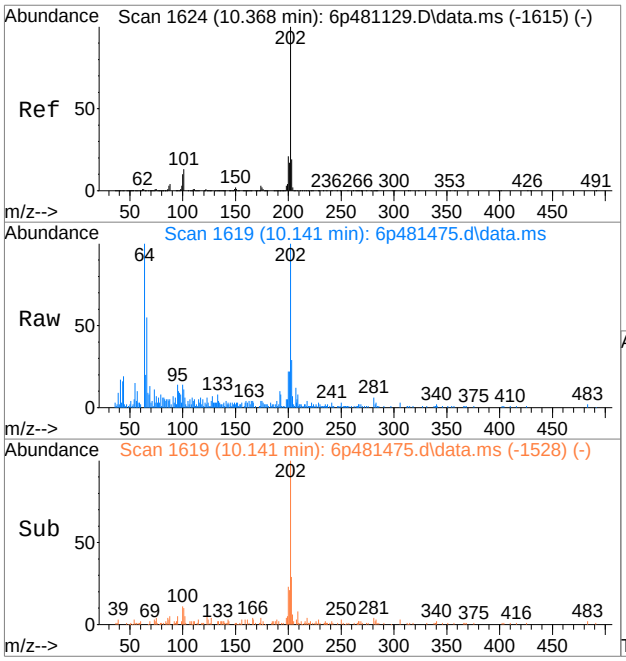
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481475.d
Acq On : 29 Apr 2019 6:48 pm
Operator : angelar
Sample : jc86837-9 Inst : MS6P
Misc : op20035,e6p2576,30.9,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 05:07:51 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

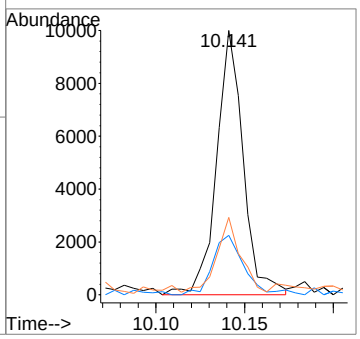




#84
Pyrene
Concen: 0.19 ppm
RT: 10.141 min Scan# 1619
Delta R.T. -0.011 min
Lab File: 6p481475.d
Acq: 29 Apr 2019 6:48 pm

Tgt Ion:202 Resp: 10392

Ion	Ratio	Lower	Upper
202	100		
200	21.4	0.0	51.0
203	27.1	0.0	48.7



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/07/19 11:19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481539.d
Acq On : 1 May 2019 6:37 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,5
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:52:03 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

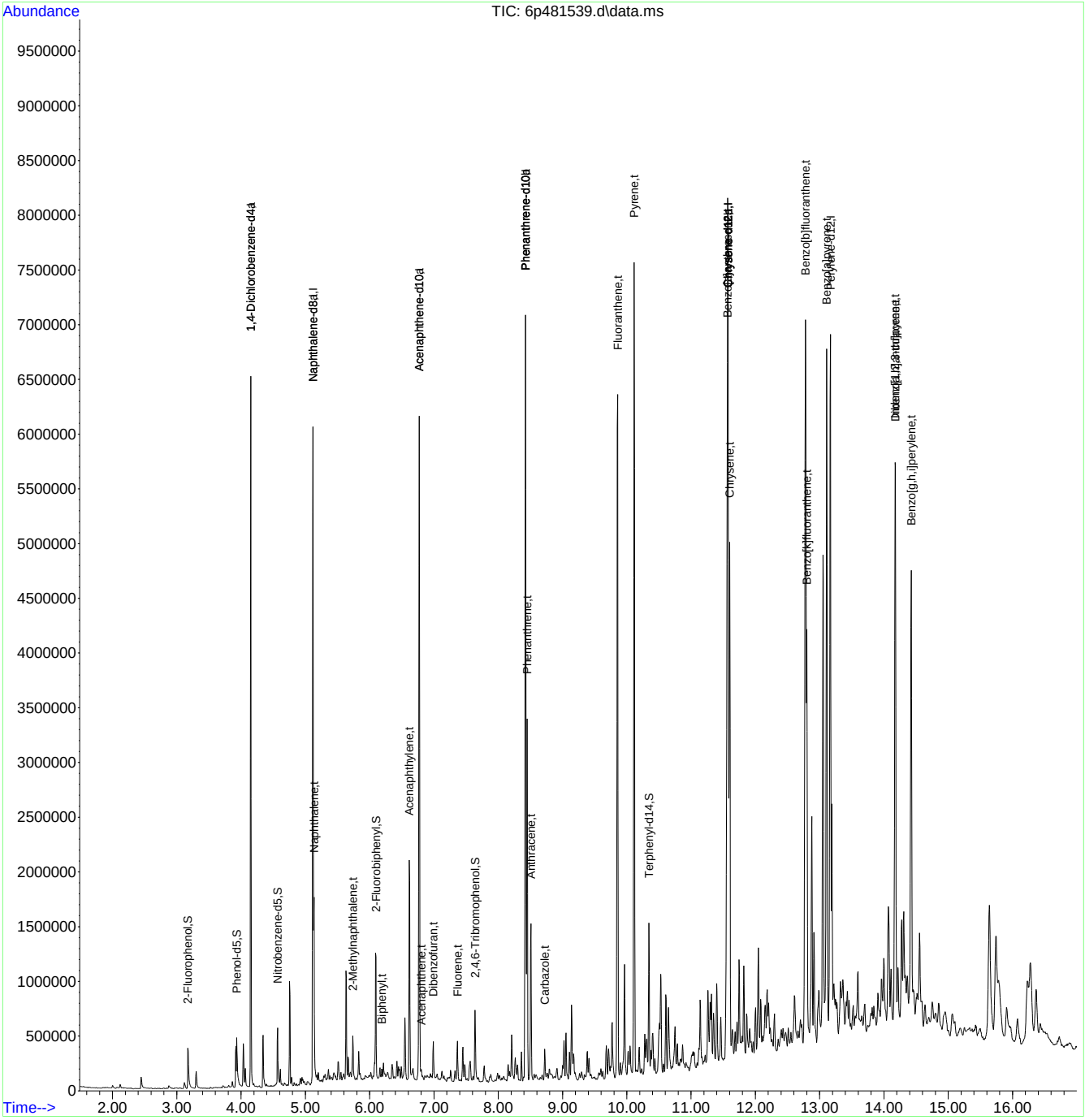
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.150	152	694979	40.00	ppm	0.00
24) Naphthalene-d8	5.119	136	2273743	40.00	ppm	0.00
47) Acenaphthene-d10	6.771	164	1184941	40.00	ppm	0.00
69) Phenanthrene-d10	8.424	188	2480280	40.00	ppm	0.00
83) Chrysene-d12	11.574	240	2272803	40.00	ppm	0.00
91) Perylene-d12	13.168	264	2334253	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.150	152	694979	40.00	ppm	0.00
103) Acenaphthene-d10a	6.771	164	1184941	40.00	ppm	0.00
105) Phenanthrene-d10a	8.424	188	2480280	40.00	ppm	0.00
109) Chrysene-d12a	11.574	240	2272803	40.00	ppm	0.00
111) Naphthalene-d8a	5.119	136	2273743	40.00	ppm	0.00
113) Phenanthrene-d10b	8.424	188	2480280	40.00	ppm	0.00
115) Chrysene-d12b	11.574	240	2272803	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.172	112	140124	6.89	ppm	0.00
Spiked Amount 50.000			Recovery =	13.78%		
8) Phenol-d5	3.931	99	182956	7.37	ppm	0.00
Spiked Amount 50.000			Recovery =	14.74%		
25) Nitrobenzene-d5	4.568	82	165822	8.76	ppm	0.00
Spiked Amount 50.000			Recovery =	17.52%		
51) 2-Fluorobiphenyl	6.097	172	344225	8.22	ppm	0.00
Spiked Amount 50.000			Recovery =	16.44%		
73) 2,4,6-Tribromophenol	7.643	330	57989	7.27	ppm	0.00
Spiked Amount 50.000			Recovery =	14.54%		
85) Terphenyl-d14	10.344	244	418359	7.90	ppm	0.00
Spiked Amount 50.000			Recovery =	15.80%		
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	5.135	128	527481	8.91	ppm	99
44) 2-Methylnaphthalene	5.739	141	81074	2.42	ppm	97
53) Biphenyl	6.188	154	23942	0.53	ppm	96
56) Acenaphthylene	6.616	152	866233	16.06	ppm	100
59) Acenaphthene	6.803	153	16531	0.46	ppm	98
62) Dibenzofuran	6.991	168	117722	2.36	ppm	98
66) Fluorene	7.365	166	107013	2.64	ppm	98
77) Phenanthrene	8.451	178	1121649	16.84	ppm	99
78) Anthracene	8.510	178	566046	8.48	ppm	98
79) Carbazole	8.724	167	114438	1.81	ppm	98
81) Fluoranthene	9.857	202	2639822	36.49	ppm	97
84) Pyrene	10.114	202	2582513	34.11	ppm	99
87) Benzo[a]anthracene	11.564	228	1715439	23.70	ppm	98
89) Chrysene	11.601	228	1601659	22.56	ppm	98
93) Benzo[b]fluoranthene	12.778	252	3317217m	46.53	ppm	
94) Benzo[k]fluoranthene	12.799	252	909271m	14.41	ppm	
95) Benzo[a]pyrene	13.109	252	2204096	37.63	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.174	276	2017301	25.79	ppm	97
98) Dibenz[a,h]anthracene	14.179	278	538364m	7.77	ppm	
100) Benzo[g,h,i]perylene	14.425	276	1829356	29.99	ppm	97

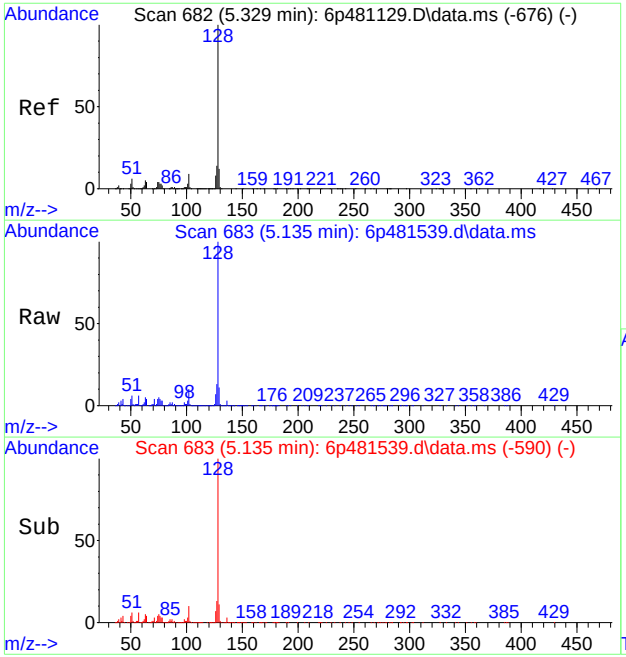
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481539.d
Acq On : 1 May 2019 6:37 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,5
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:52:03 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

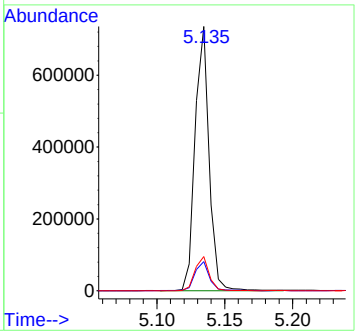


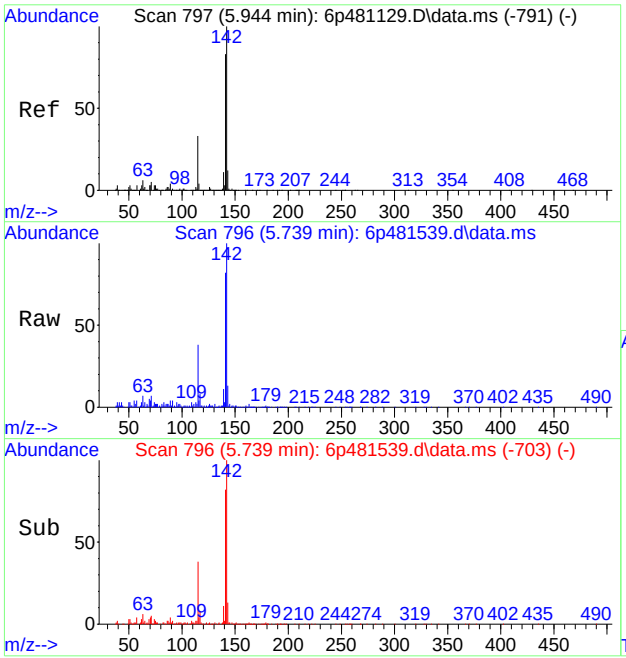


#38
Naphthalene
Concen: 8.91 ppm
RT: 5.135 min Scan# 683
Delta R.T. 0.000 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:128 Resp: 527481

Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	41.4
127	12.9	0.0	42.9

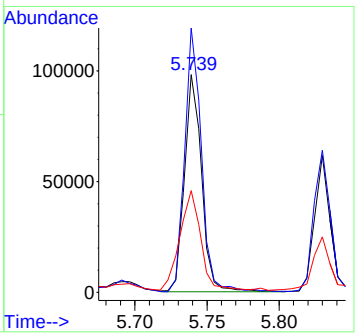


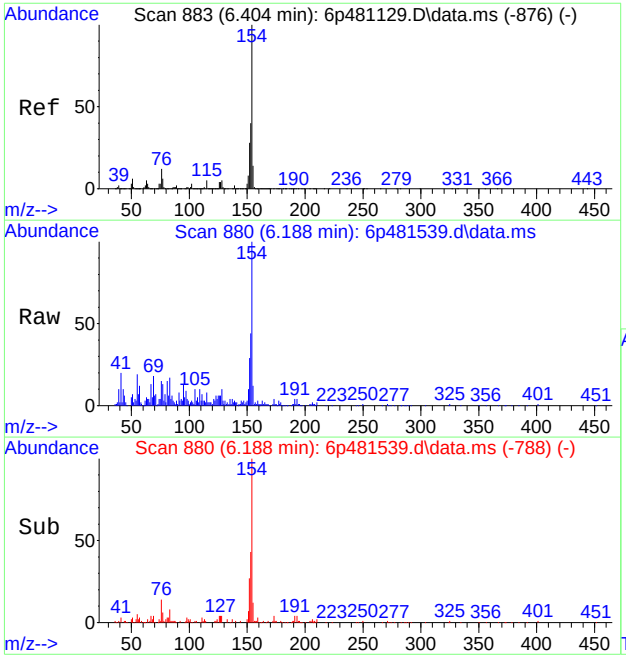


#44
2-Methylnaphthalene
Concen: 2.42 ppm
RT: 5.739 min Scan# 796
Delta R.T. 0.000 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:141 Resp: 81074

Ion	Ratio	Lower	Upper
141	100		
142	121.4	89.0	149.0
115	45.8	13.5	73.5

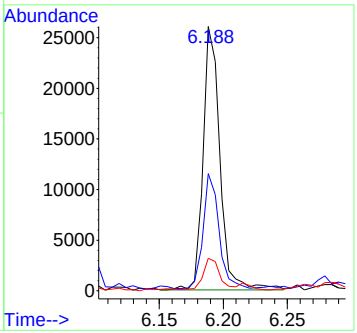


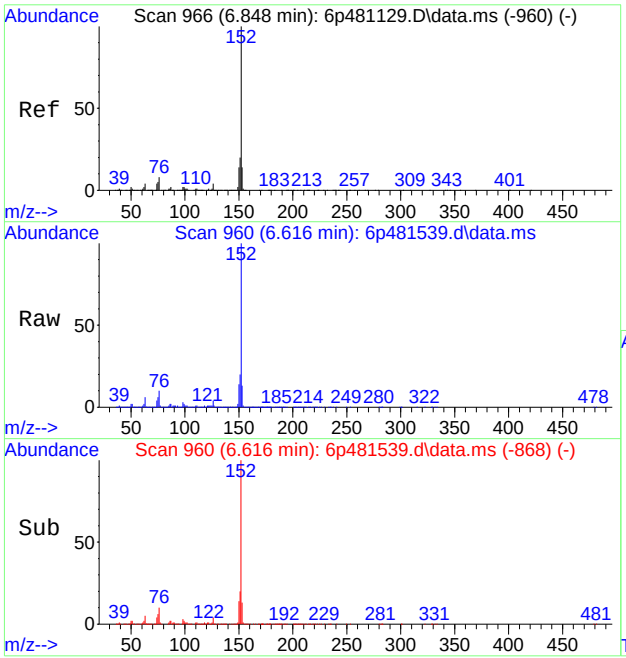


#53
Biphenyl
Concen: 0.53 ppm
RT: 6.188 min Scan# 880
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:154 Resp: 23942

Ion	Ratio	Lower	Upper
154	100		
153	42.8	9.8	69.8
155	11.8	0.0	42.7

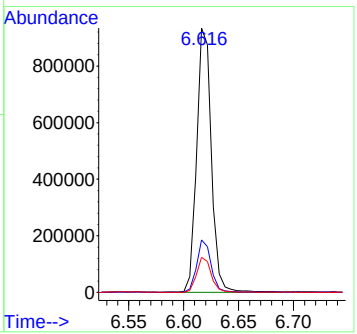


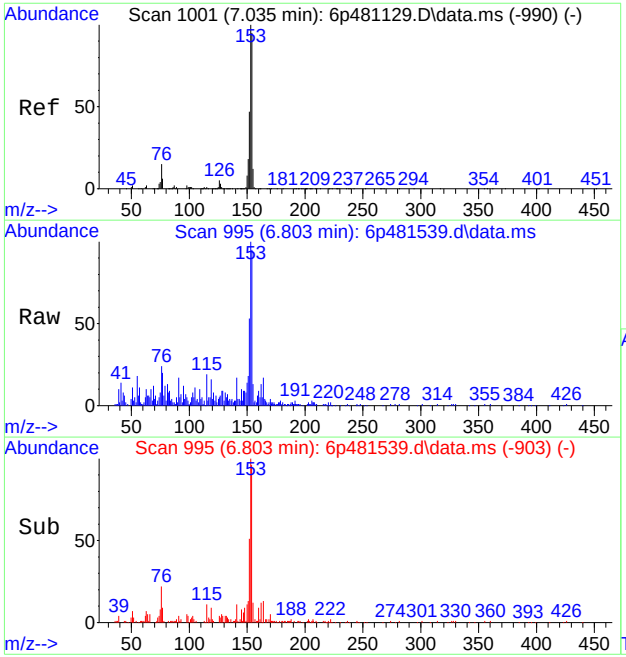


#56
Acenaphthylene
Concen: 16.06 ppm
RT: 6.616 min Scan# 960
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:152 Resp: 866233

Ion	Ratio	Lower	Upper
152	100		
151	19.8	0.0	49.9
153	13.2	0.0	43.2

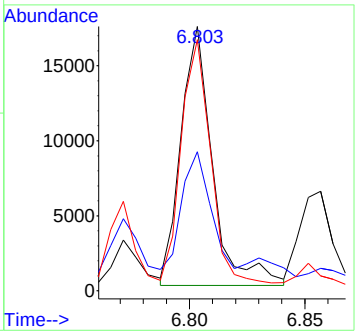


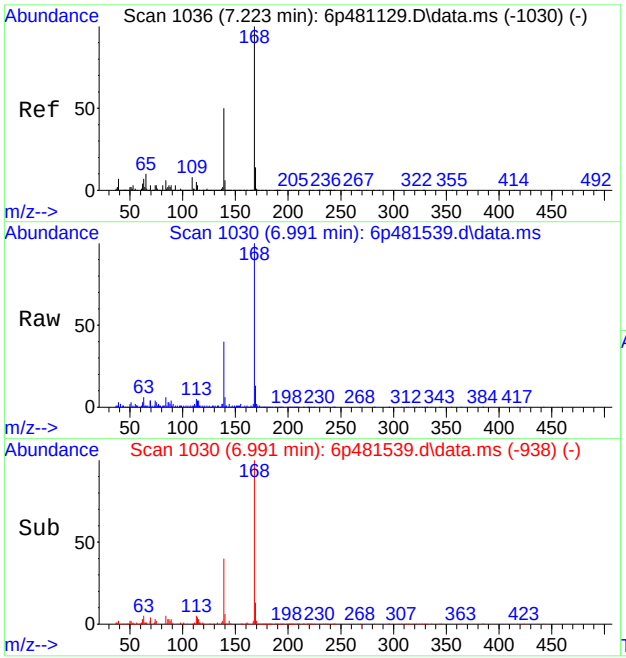


#59
Acenaphthene
Concen: 0.46 ppm
RT: 6.803 min Scan# 995
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:153 Resp: 16531

Ion	Ratio	Lower	Upper
153	100		
152	47.1	17.3	77.3
154	97.4	65.0	125.0

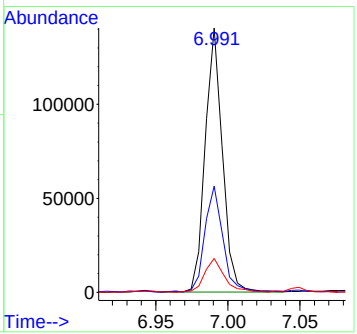


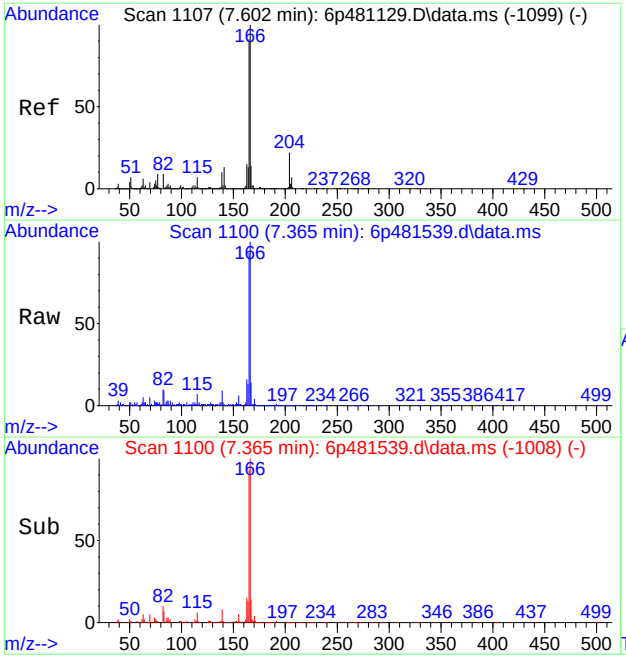


#62
Dibenzofuran
Concen: 2.36 ppm
RT: 6.991 min Scan# 1030
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:168 Resp: 117722

Ion	Ratio	Lower	Upper
168	100		
139	40.0	8.6	68.6
169	12.5	0.0	43.1

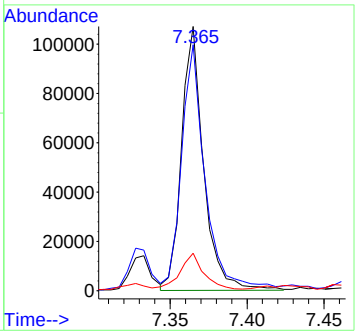


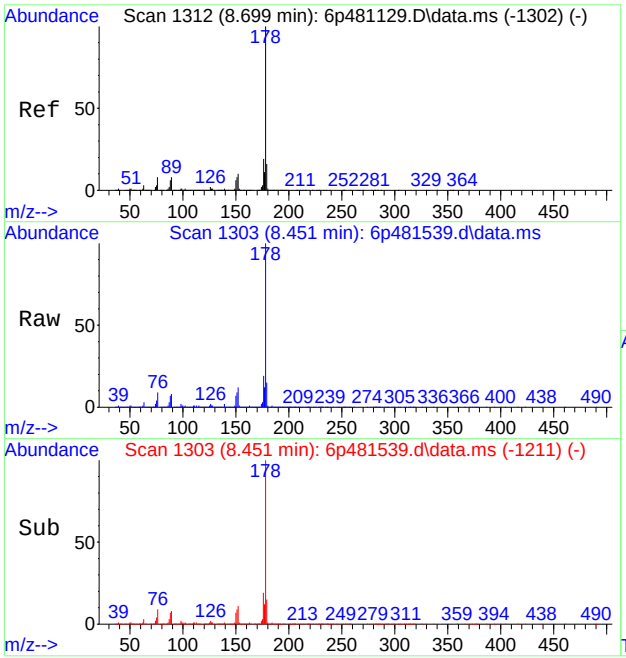


#66
Fluorene
Concen: 2.64 ppm
RT: 7.365 min Scan# 1100
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:166 Resp: 107013

Ion	Ratio	Lower	Upper
166	100		
165	92.1	60.7	120.7
167	12.5	0.0	43.4

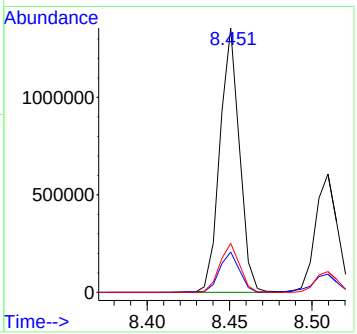


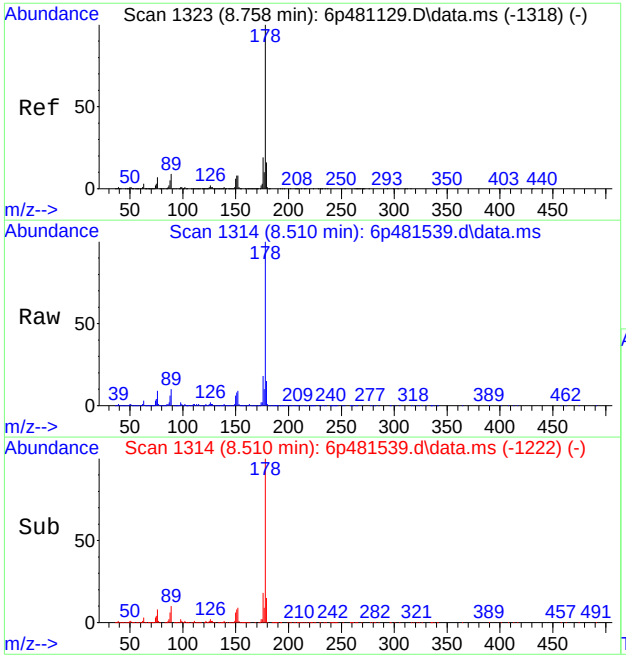


#77
Phenanthrene
Concen: 16.84 ppm
RT: 8.451 min Scan# 1303
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:178 Resp: 1121649

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	45.7
176	18.6	0.0	48.7

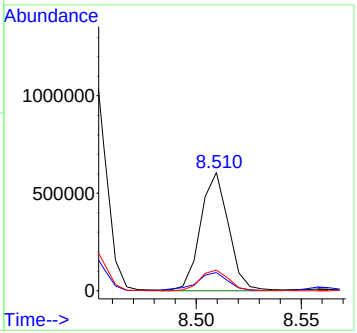


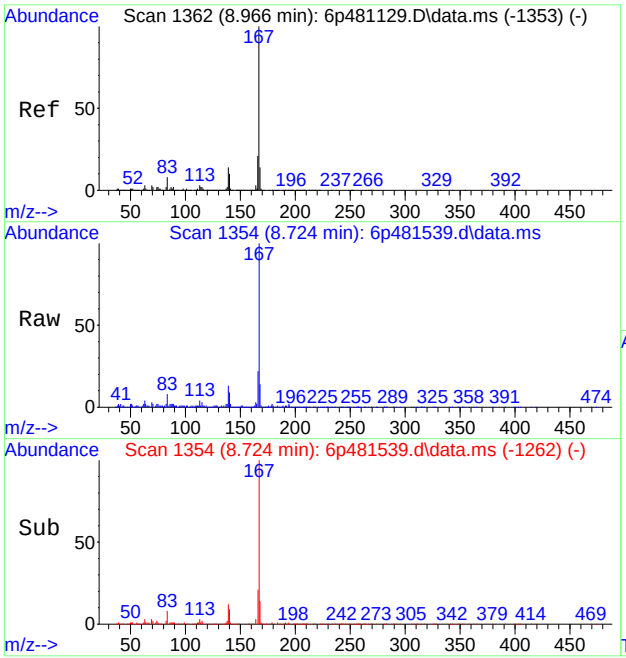


#78
Anthracene
Concen: 8.48 ppm
RT: 8.510 min Scan# 1314
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:178 Resp: 566046

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	45.8
176	17.6	0.0	48.8

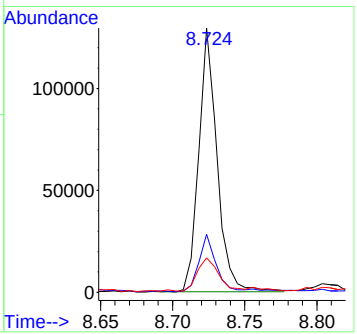


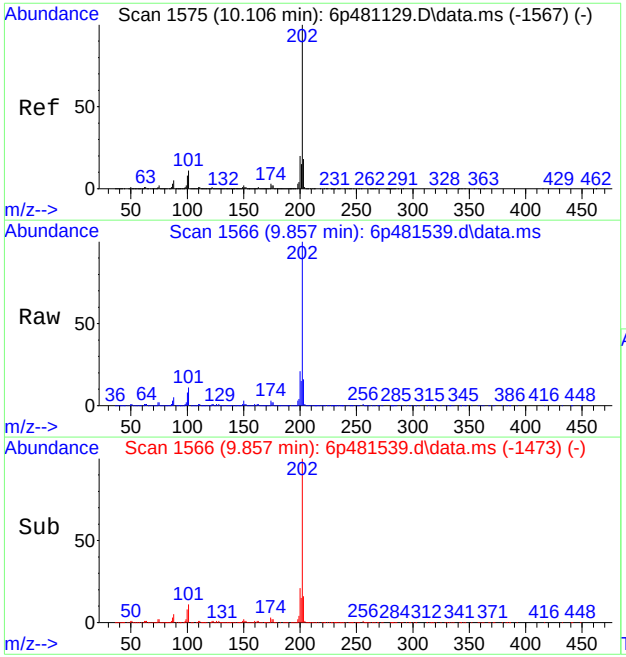


#79
Carbazole
Concen: 1.81 ppm
RT: 8.724 min Scan# 1354
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:167 Resp: 114438

Ion	Ratio	Lower	Upper
167	100		
166	21.4	0.0	50.5
139	12.6	0.0	43.5

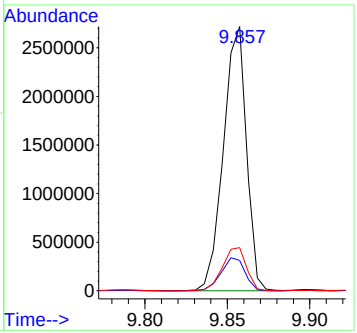


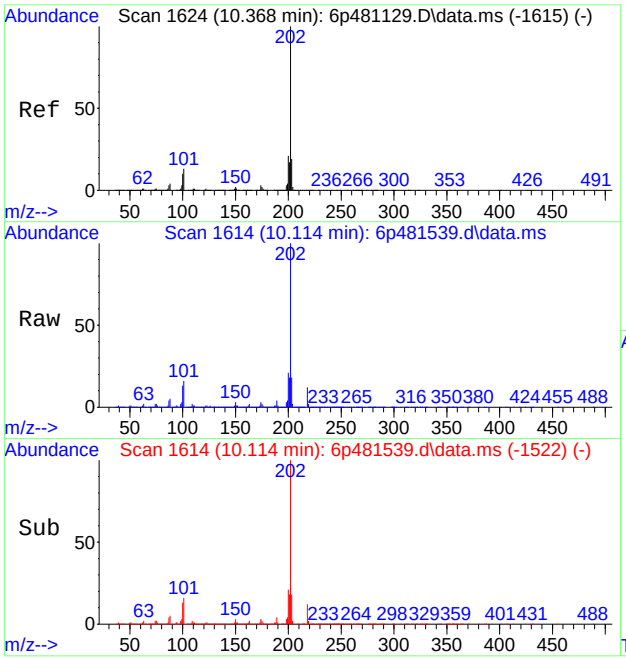


#81
Fluoranthene
Concen: 36.49 ppm
RT: 9.857 min Scan# 1566
Delta R.T. 0.000 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:202 Resp: 2639822

Ion	Ratio	Lower	Upper
202	100		
101	11.5	0.0	43.4
203	16.3	0.0	47.3

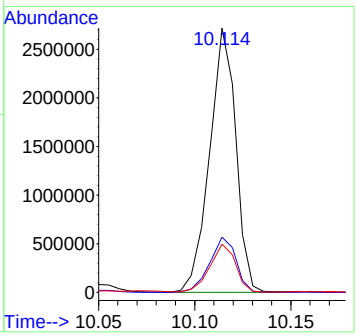


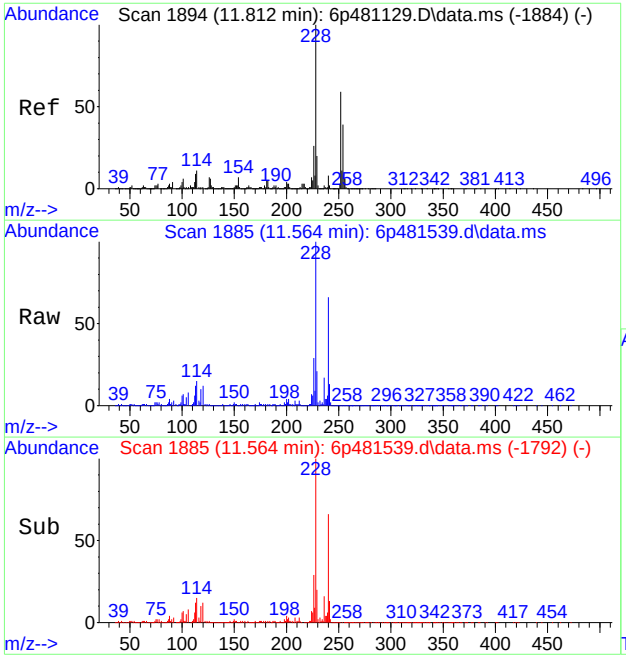


#84
Pyrene
Concen: 34.11 ppm
RT: 10.114 min Scan# 1614
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:202 Resp: 2582513

Ion	Ratio	Lower	Upper
202	100		
200	20.9	0.0	50.7
203	18.0	0.0	48.3

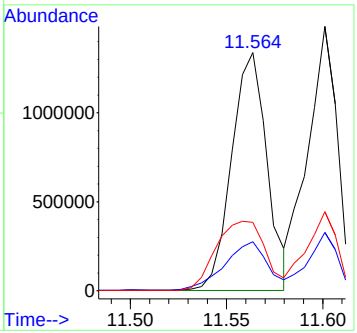


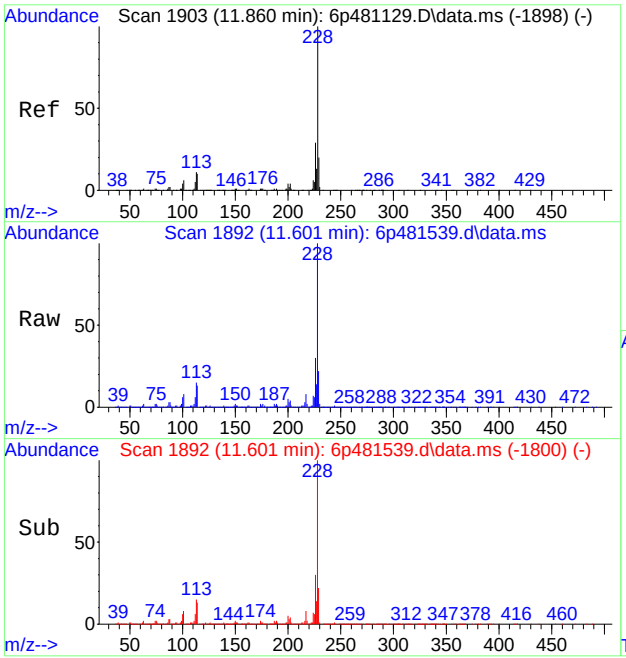


#87
Benzo[a]anthracene
Concen: 23.70 ppm
RT: 11.564 min Scan# 1885
Delta R.T. 0.000 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:228 Resp: 1715439

Ion	Ratio	Lower	Upper
228	100		
229	20.0	0.0	49.7
226	28.4	0.0	56.5

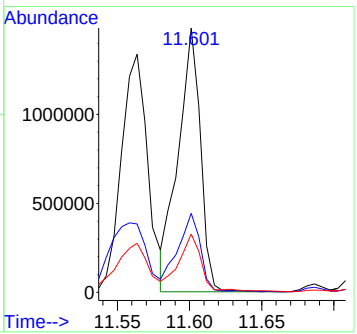


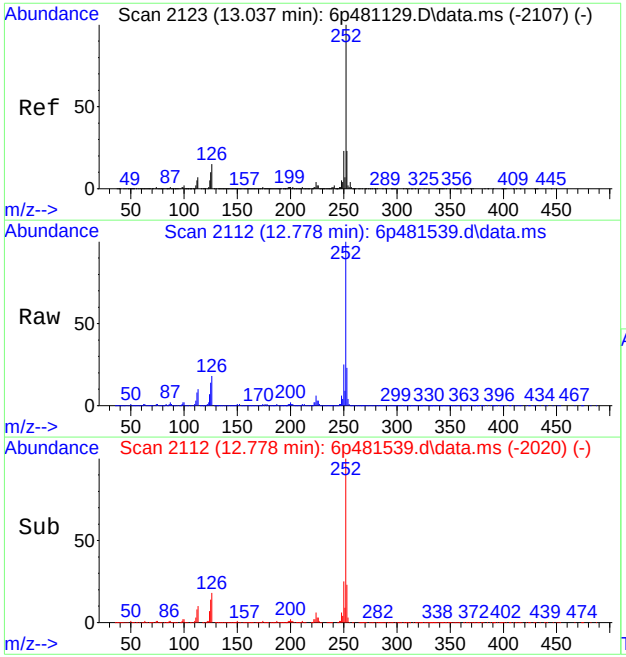


#89
Chrysene
Concen: 22.56 ppm
RT: 11.601 min Scan# 1892
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:228 Resp: 1601659

Ion	Ratio	Lower	Upper
228	100		
226	29.8	0.0	59.1
229	21.5	0.0	50.0

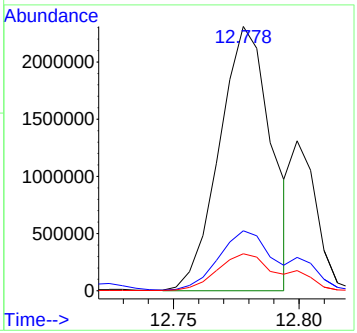


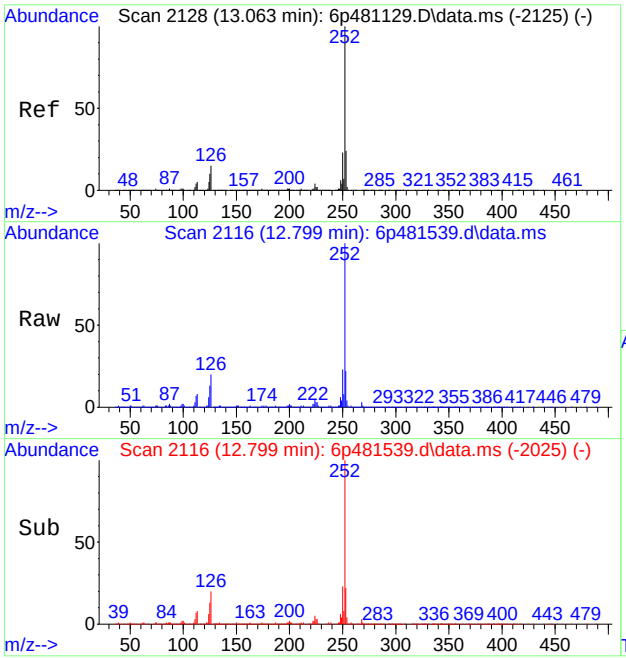


#93
Benzo[b]fluoranthene
Concen: 46.53 ppm m
RT: 12.778 min Scan# 2112
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:252 Resp: 3317217

Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	51.8
125	14.0	0.0	41.9

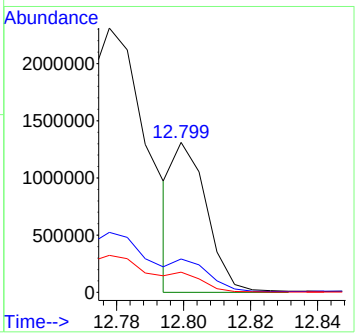


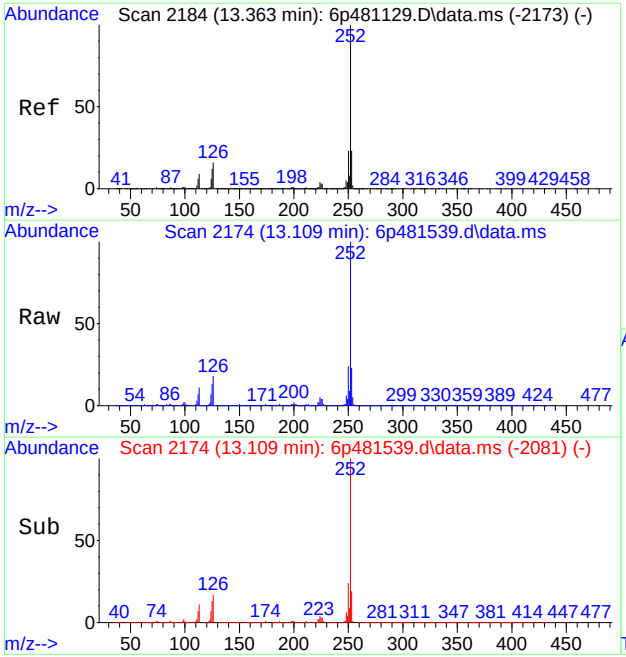


#94
Benzo[k]fluoranthene
Concen: 14.41 ppm m
RT: 12.799 min Scan# 2116
Delta R.T. -0.011 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:252 Resp: 909271

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.0
125	13.5	0.0	41.7

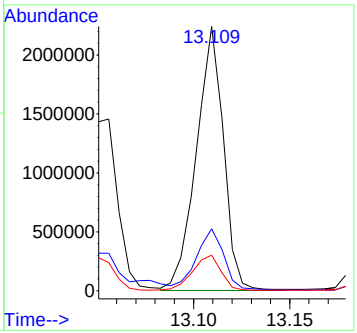


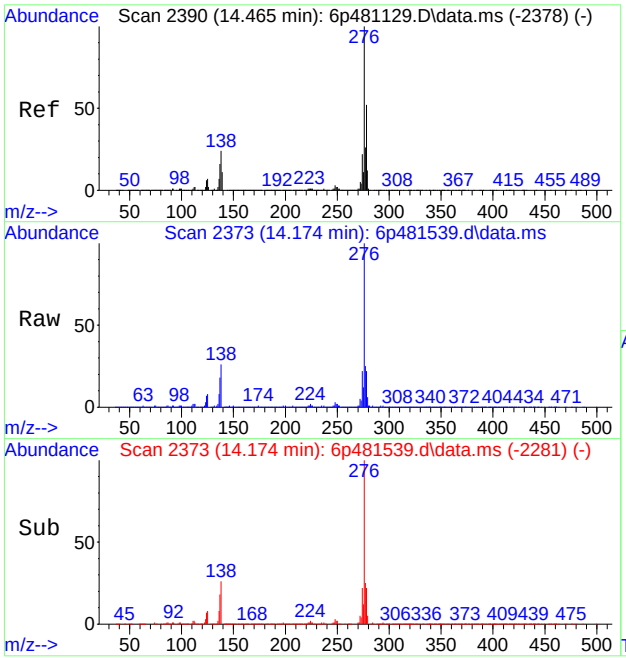


#95
Benzo[a]pyrene
Concen: 37.63 ppm
RT: 13.109 min Scan# 2174
Delta R.T. 0.000 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:252 Resp: 2204096

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.7
125	13.3	0.0	44.2

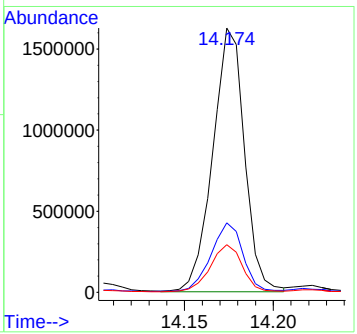


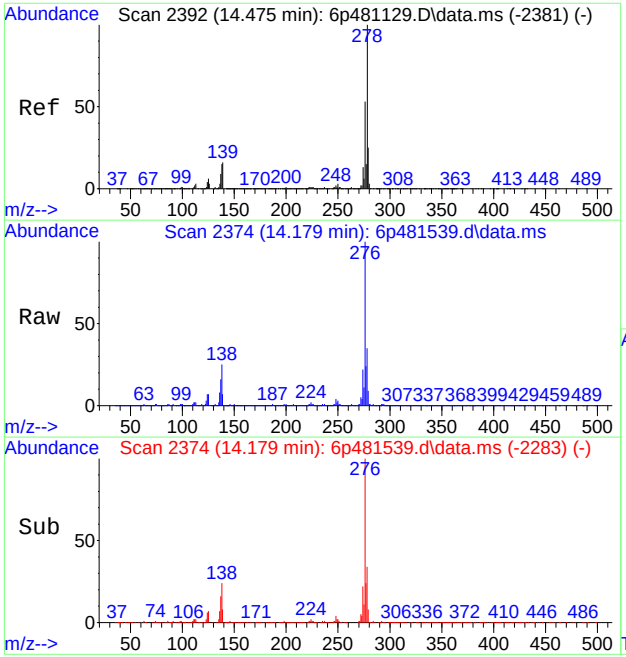


#96
Indeno[1,2,3-cd]pyrene
Concen: 25.79 ppm
RT: 14.174 min Scan# 2373
Delta R.T. -0.005 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:276 Resp: 2017301

Ion	Ratio	Lower	Upper
276	100		
138	26.0	0.0	58.2
137	17.8	0.0	48.2

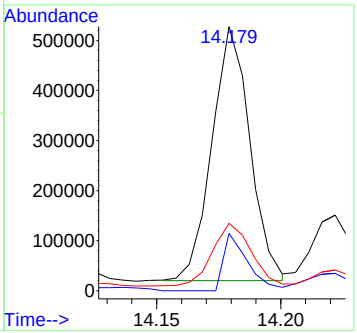


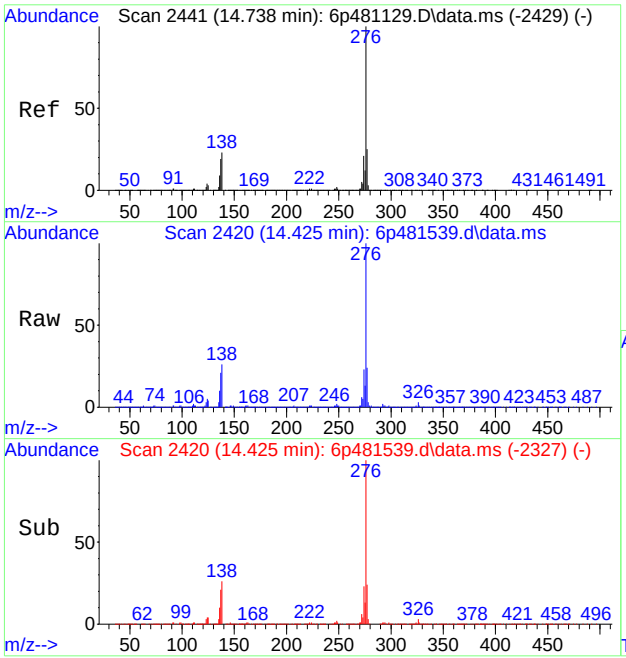


#98
Dibenz[a,h]anthracene
Concen: 7.77 ppm m
RT: 14.179 min Scan# 2374
Delta R.T. -0.011 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:278 Resp: 538364

Ion	Ratio	Lower	Upper
278	100		
139	21.7	0.0	49.7
279	25.6	0.0	54.3

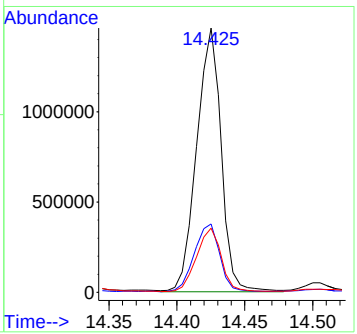




#100
Benzo[g,h,i]perylene
Concen: 29.99 ppm
RT: 14.425 min Scan# 2420
Delta R.T. 0.000 min
Lab File: 6p481539.d
Acq: 1 May 2019 6:37 pm

Tgt Ion:276 Resp: 1829356

Ion	Ratio	Lower	Upper
276	100		
138	25.7	0.0	58.0
277	24.1	0.0	54.6



Manual Integration Approval Summary

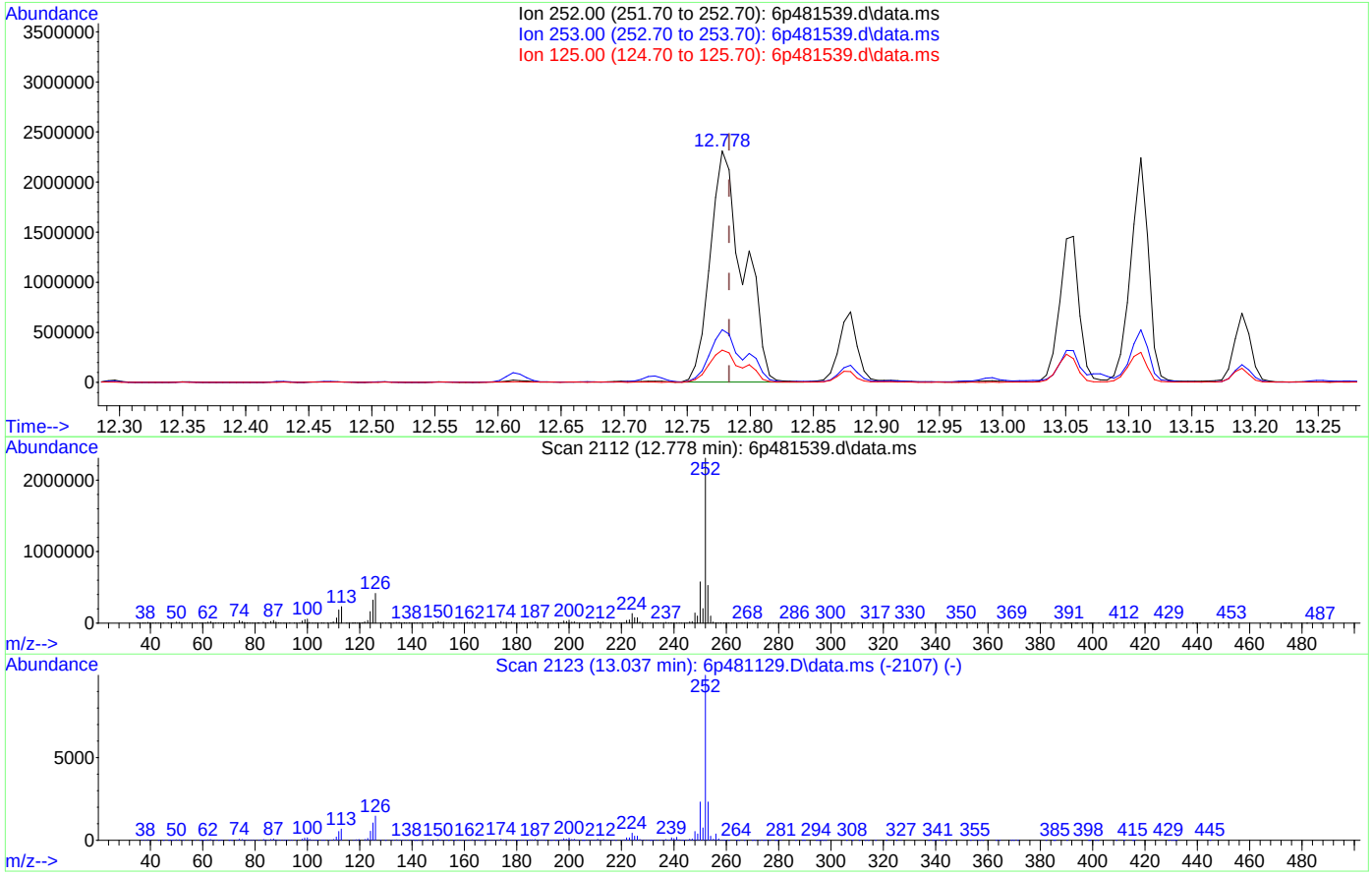
Sample Number:	JC86837-10	**Method:**	SW846 8270D
Lab FileID:	6P481539.D	**Analyst approved:**	05/02/19 03:25 Michelle Co
Injection Time:	05/01/19 18:37	**Supervisor approved:**	05/07/19 11:19 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		12.78	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		12.80	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.18	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481539.d
Acq On : 1 May 2019 6:37 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,5
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:31:03 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481539.d\data.ms

(93) Benzo[b]fluoranthene (t)

12.778min (-0.005) 59.18ppm

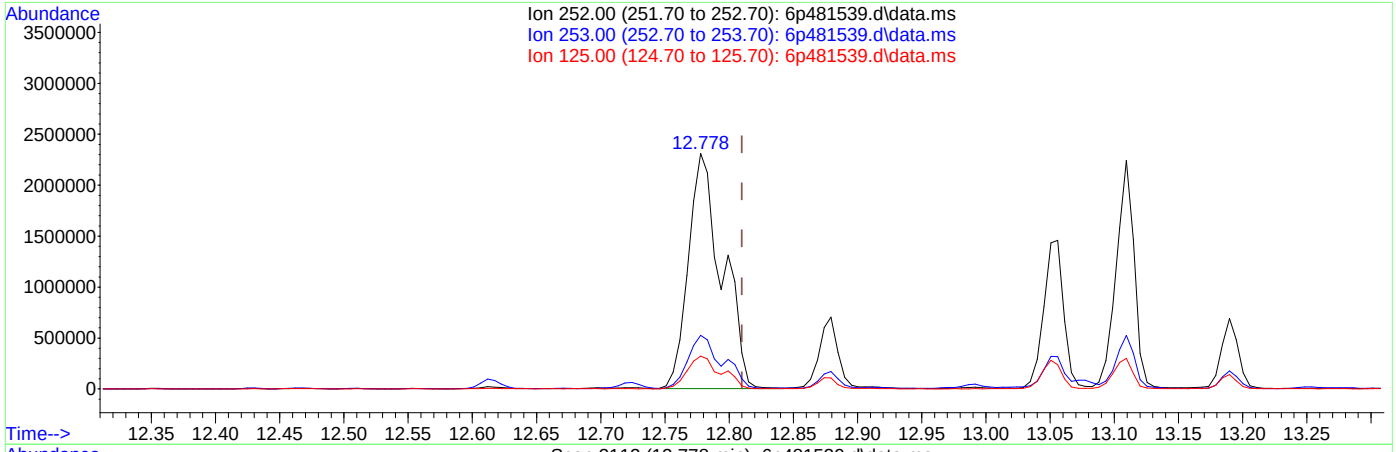
response 4219090

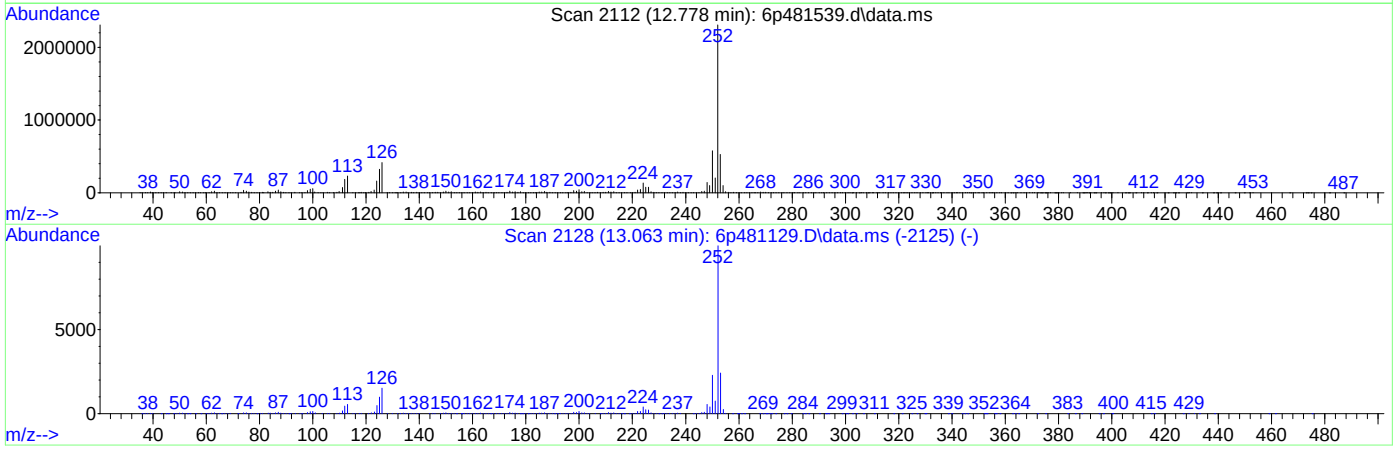
Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.36
125.00	11.90	13.87
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481539.d
Acq On : 1 May 2019 6:37 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,5
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:31:03 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration





TIC: 6p481539.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.778min (-0.032) 66.85ppm

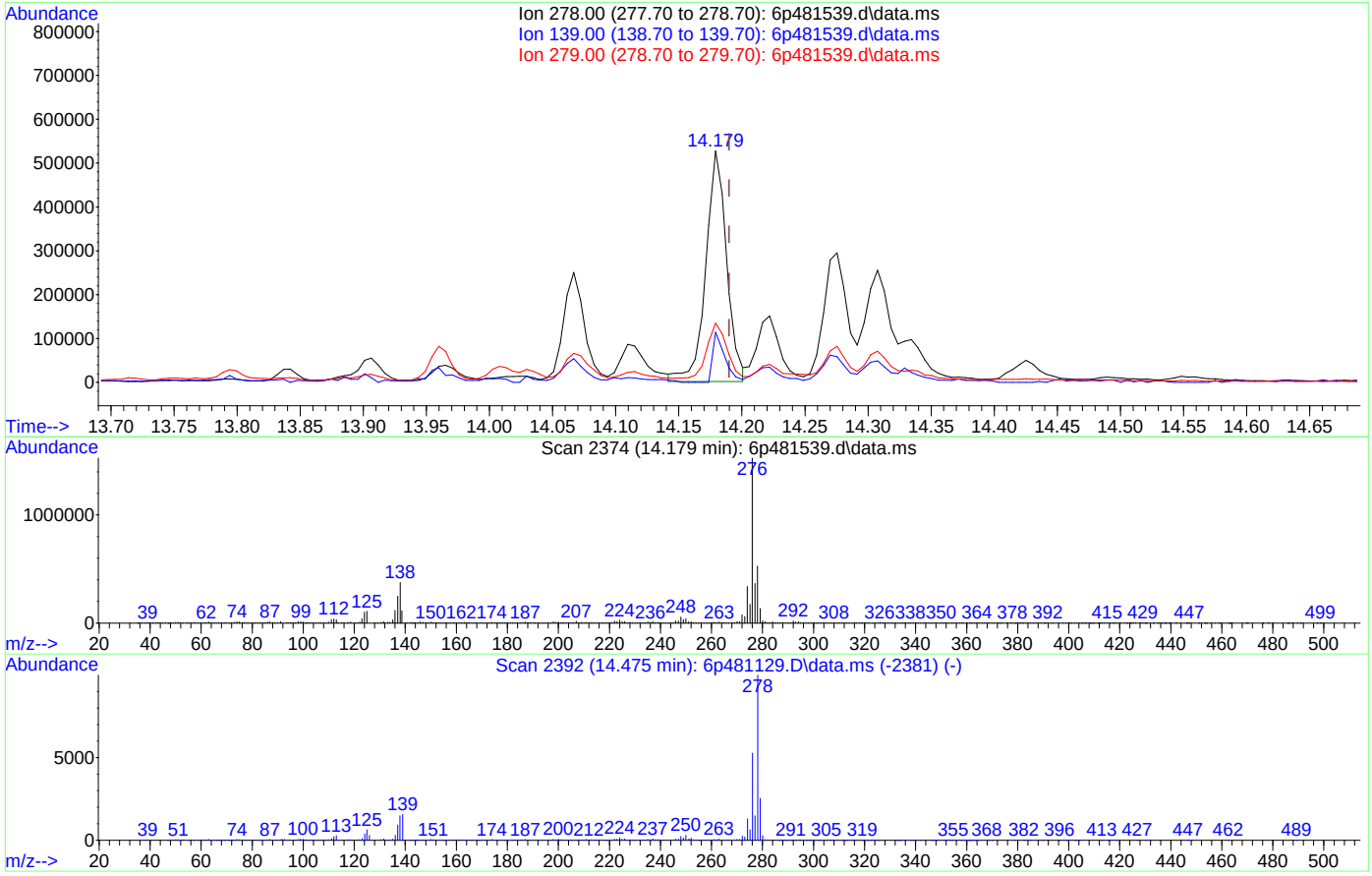
response 4219206

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.36
125.00	11.70	13.87
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481539.d
Acq On : 1 May 2019 6:37 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,5
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:31:03 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481539.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.179min (-0.011) 8.68ppm

response 601875

Ion	Exp%	Act%
278.00	100	100
139.00	19.70	21.41
279.00	24.30	24.65
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/07/19 11:19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 03:14:43 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.156	152	604411	40.00	ppm	0.00
24) Naphthalene-d8	5.118	136	2242988	40.00	ppm	0.00
47) Acenaphthene-d10	6.777	164	1159704	40.00	ppm	0.00
69) Phenanthrene-d10	8.435	188	1935576	40.00	ppm	0.00
83) Chrysene-d12	11.596	240	1857099	40.00	ppm	0.02
91) Perylene-d12	13.195	264	2030814	40.00	ppm	0.03
101) 1,4-Dichlorobenzene-d4a	4.156	152	604411	40.00	ppm	0.00
103) Acenaphthene-d10a	6.777	164	1159704	40.00	ppm	0.00
105) Phenanthrene-d10a	8.435	188	1935576	40.00	ppm	0.00
109) Chrysene-d12a	11.596	240	1857099	40.00	ppm	0.02
111) Naphthalene-d8a	5.118	136	2242988	40.00	ppm	0.00
113) Phenanthrene-d10b	8.435	188	1935576	40.00	ppm	0.00
115) Chrysene-d12b	11.596	240	1857099	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.177	112	690992	39.08	ppm	0.01
Spiked Amount 50.000			Recovery =	78.16%		
8) Phenol-d5	3.931	99	868028	40.21	ppm	0.00
Spiked Amount 50.000			Recovery =	80.42%		
25) Nitrobenzene-d5	4.568	82	874073	46.83	ppm	0.00
Spiked Amount 50.000			Recovery =	93.66%		
51) 2-Fluorobiphenyl	6.097	172	1724429	42.09	ppm	0.00
Spiked Amount 50.000			Recovery =	84.18%		
73) 2,4,6-Tribromophenol	7.648	330	245724	39.45	ppm	0.00
Spiked Amount 50.000			Recovery =	78.90%		
85) Terphenyl-d14	10.355	244	1691231	39.09	ppm	0.00
Spiked Amount 50.000			Recovery =	78.18%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
9) Phenol	3.942	94	34132	1.30	ppm	# 32
18) Acetophenone	4.461	105	23643m	0.84	ppm	
19) 2-Methylphenol	4.380	108	6959	0.39	ppm	71
21) 3&4-Methylphenol	4.503	108	26302	1.41	ppm	82
38) Naphthalene	5.134	128	2270921	38.88	ppm	99
44) 2-Methylnaphthalene	5.744	141	390546	11.82	ppm	99
53) Biphenyl	6.194	154	118438	2.67	ppm	96
56) Acenaphthylene	6.627	152	4382014	83.03	ppm	99
59) Acenaphthene	6.809	153	112398	3.21	ppm	99
62) Dibenzofuran	6.996	168	499573	10.24	ppm	94
66) Fluorene	7.370	166	469681	11.86	ppm	99
77) Phenanthrene	8.461	178	4431237	85.27	ppm	100
78) Anthracene	8.520	178	3053566	58.59	ppm	99
79) Carbazole	8.734	167	461989	9.36	ppm	98
81) Fluoranthene	9.879	202	10977204	194.42	ppm	96
84) Pyrene	10.141	202	10000630	161.65	ppm	98
87) Benzo[a]anthracene	11.585	228	7167975	121.18	ppm	96
89) Chrysene	11.633	228	7000437	120.68	ppm	97
93) Benzo[b]fluoranthene	12.820	252	15557167m	250.81	ppm	
94) Benzo[k]fluoranthene	12.842	252	3856900m	70.24	ppm	
95) Benzo[a]pyrene	13.152	252	10509642	206.23	ppm	95
96) Indeno[1,2,3-cd]pyrene	14.227	276	10538058	154.87	ppm	91
98) Dibenz[a,h]anthracene	14.227	278	3222803m	53.45	ppm	
100) Benzo[g,h,i]perylene	14.484	276	9024488	170.07	ppm	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 03:14:43 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
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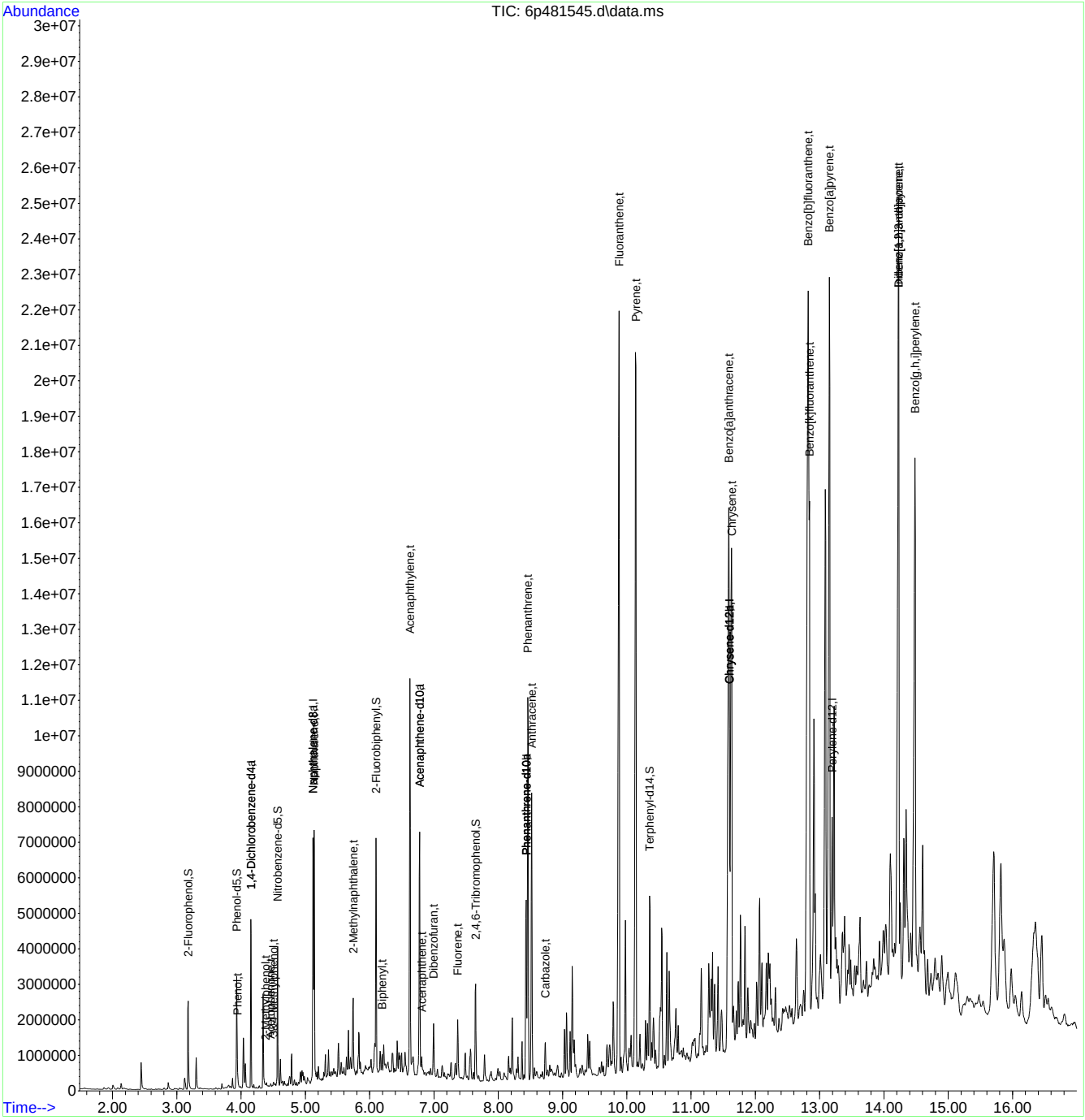
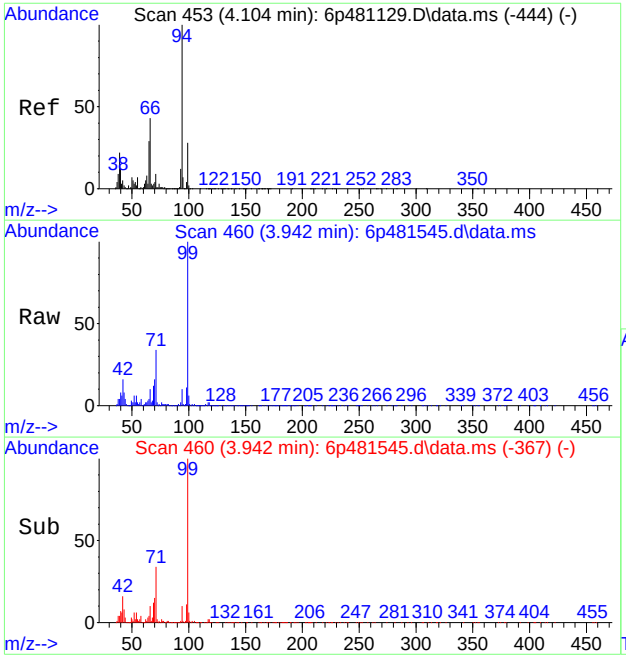
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

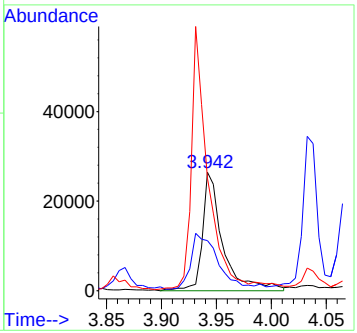


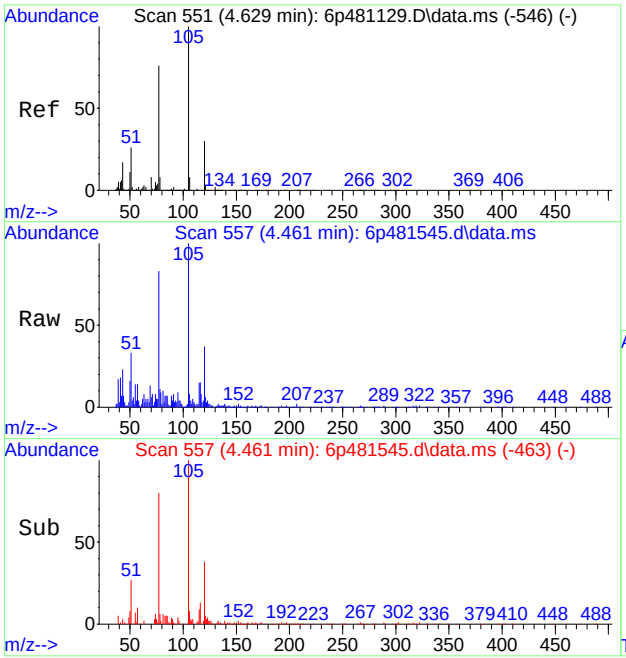


#9
Phenol
Concen: 1.30 ppm
RT: 3.942 min Scan# 460
Delta R.T. -0.000 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion: 94 Resp: 34132

Ion	Ratio	Lower	Upper
94	100		
65	38.2	0.0	56.2
66	93.5	5.1	65.1#

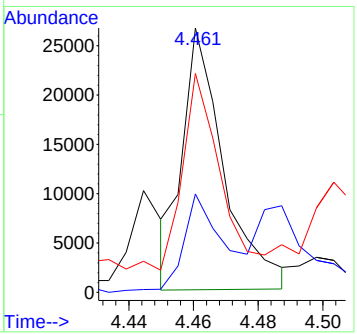


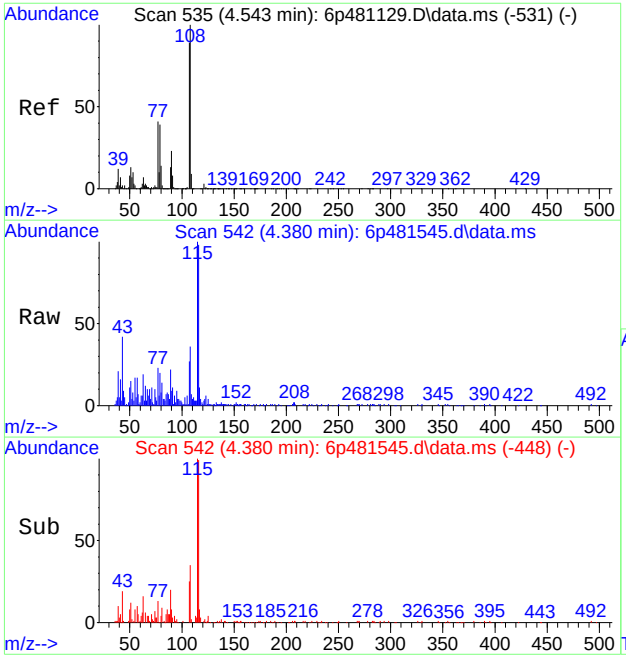


#18
Acetophenone
Concen: 0.84 ppm m
RT: 4.461 min Scan# 557
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:105 Resp: 23643

Ion	Ratio	Lower	Upper
105	100		
120	37.2	0.0	58.3
77	82.8	49.0	109.0

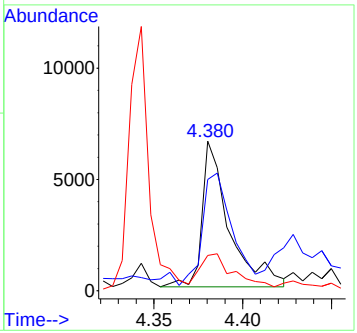


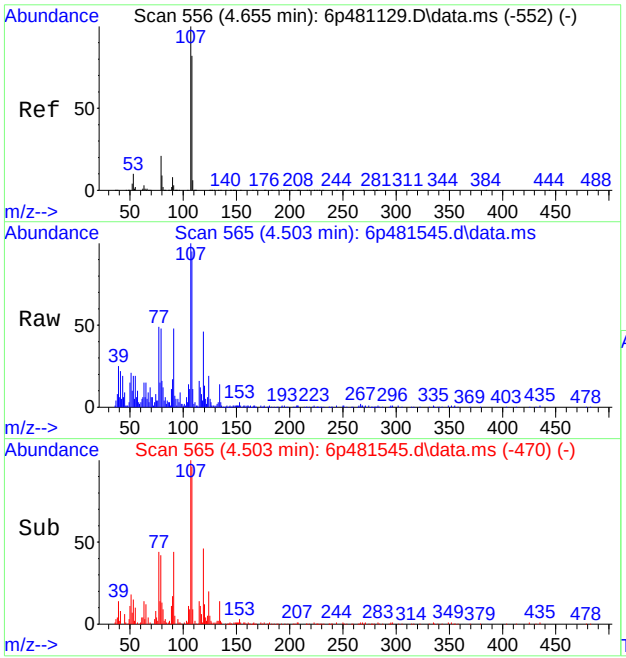


#19
2-Methylphenol
Concen: 0.39 ppm
RT: 4.380 min Scan# 542
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:108 Resp: 6959

Ion	Ratio	Lower	Upper
108	100		
107	59.4	58.1	118.1
90	13.1	0.0	53.9

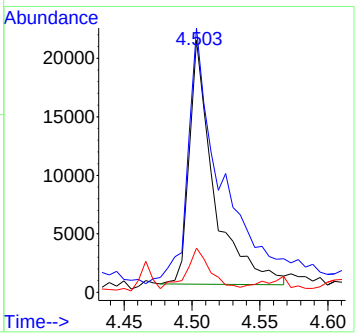


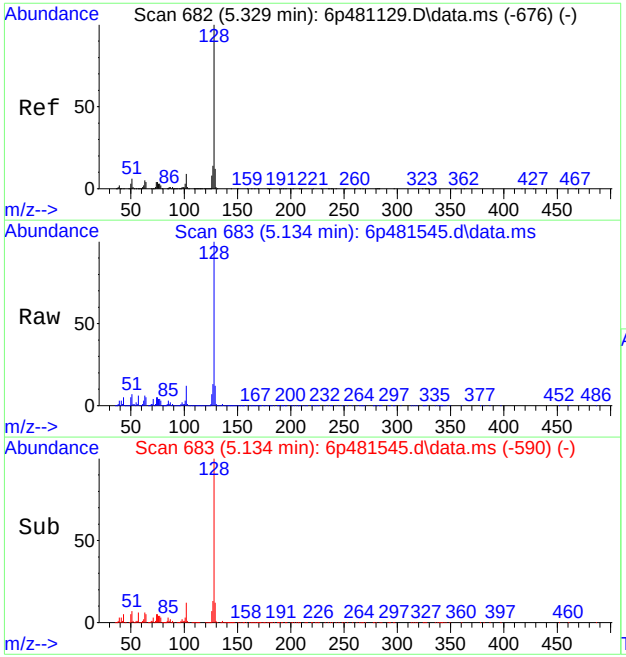


#21
3&4-Methylphenol
Concen: 1.41 ppm
RT: 4.503 min Scan# 565
Delta R.T. 0.011 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:108 Resp: 26302

Ion	Ratio	Lower	Upper
108	100		
107	100.2	90.4	150.4
90	14.4	0.0	40.0

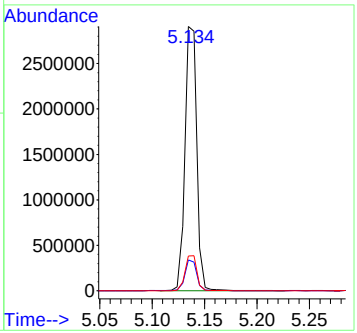


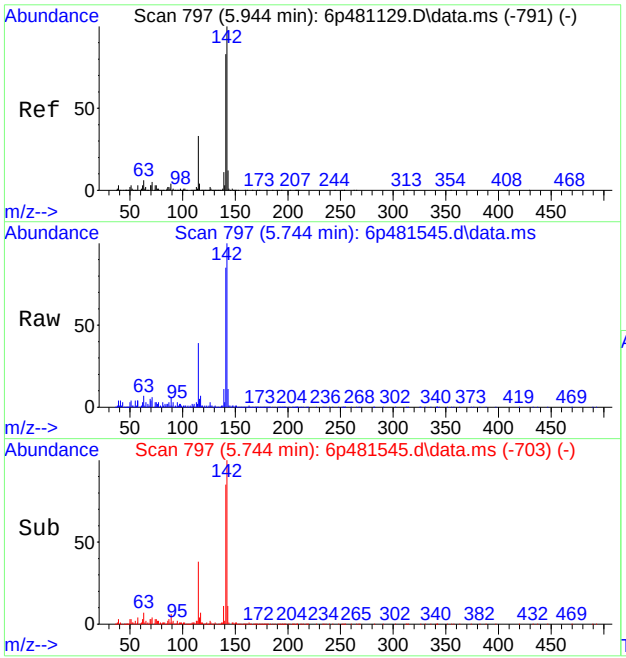


#38
Naphthalene
Concen: 38.88 ppm
RT: 5.134 min Scan# 683
Delta R.T. -0.000 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:128 Resp: 2270921

Ion	Ratio	Lower	Upper
128	100		
129	11.7	0.0	41.4
127	13.2	0.0	42.9

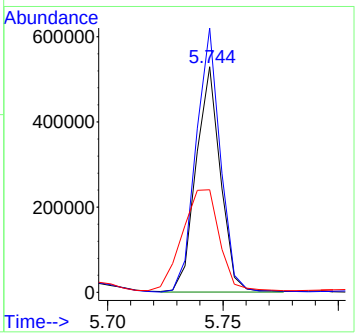


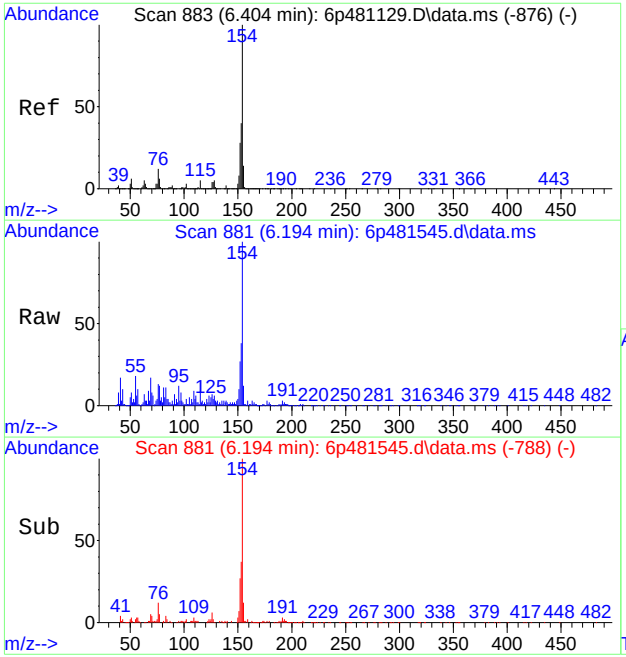


#44
2-Methylnaphthalene
Concen: 11.82 ppm
RT: 5.744 min Scan# 797
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:141 Resp: 390546

Ion	Ratio	Lower	Upper
141	100		
142	117.2	89.0	149.0
115	44.0	13.5	73.5

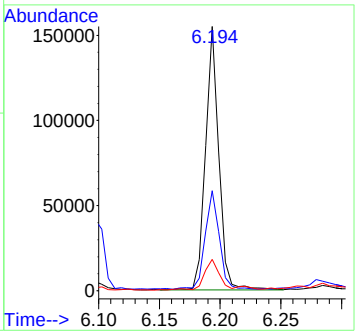


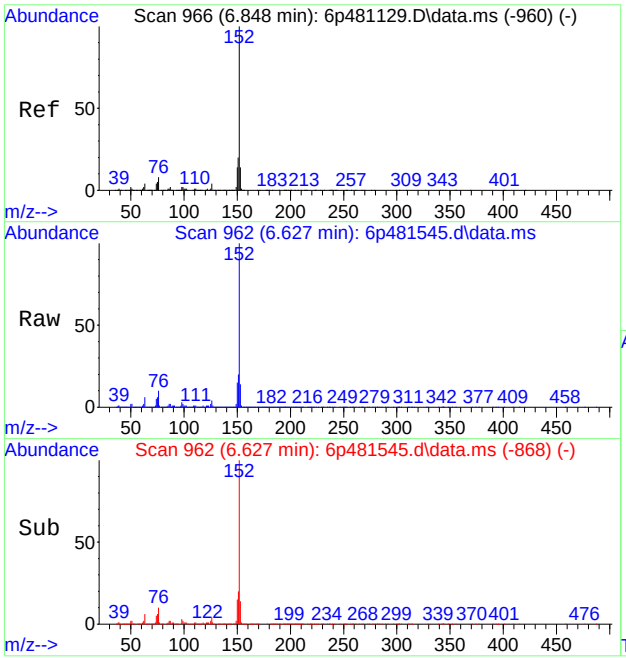


#53
Biphenyl
Concen: 2.67 ppm
RT: 6.194 min Scan# 881
Delta R.T. -0.000 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:154 Resp: 118438

Ion	Ratio	Lower	Upper
154	100		
153	37.0	9.8	69.8
155	11.2	0.0	42.7

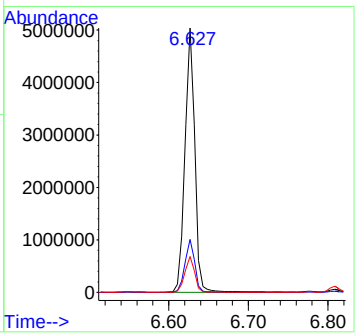


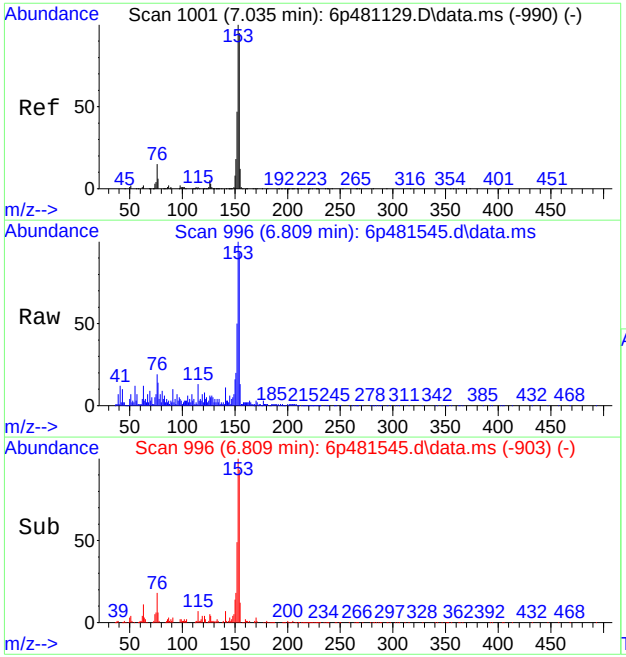


#56
Acenaphthylene
Concen: 83.03 ppm
RT: 6.627 min Scan# 962
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:152 Resp: 4382014

Ion	Ratio	Lower	Upper
152	100		
151	20.0	0.0	49.9
153	13.6	0.0	43.2

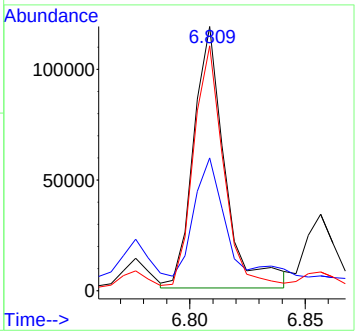


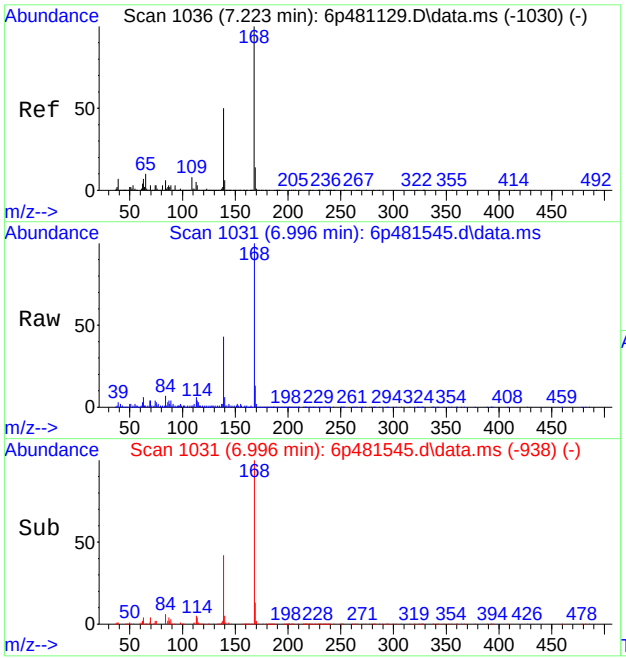


#59
Acenaphthene
Concen: 3.21 ppm
RT: 6.809 min Scan# 996
Delta R.T. -0.000 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:153 Resp: 112398

Ion	Ratio	Lower	Upper
153	100		
152	45.1	17.3	77.3
154	95.1	65.0	125.0

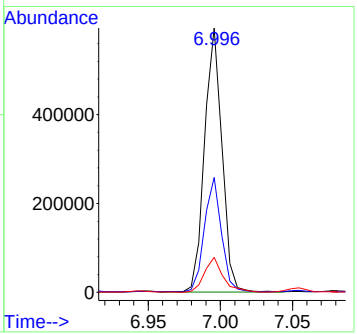


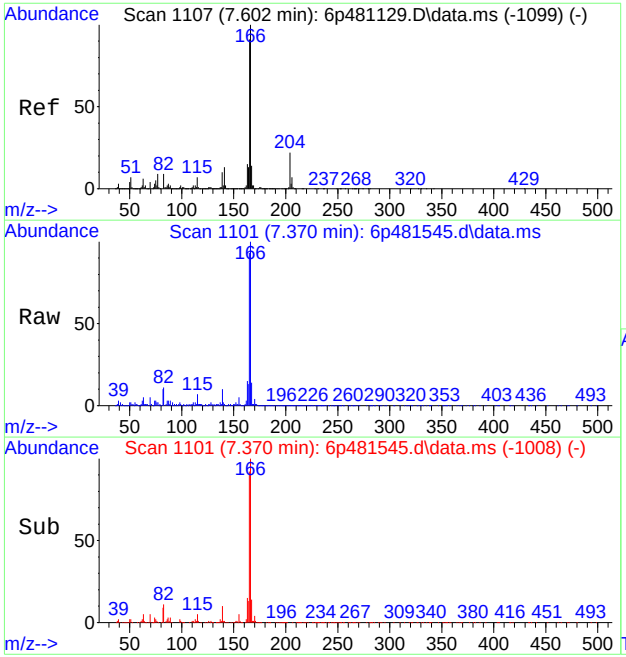


#62
Dibenzofuran
Concen: 10.24 ppm
RT: 6.996 min Scan# 1031
Delta R.T. -0.000 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:168 Resp: 499573

Ion	Ratio	Lower	Upper
168	100		
139	43.3	8.6	68.6
169	13.0	0.0	43.1

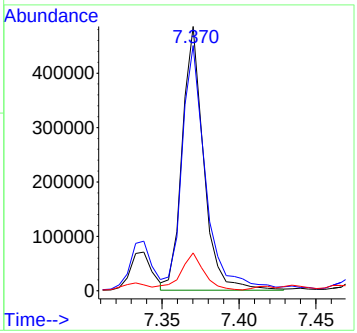


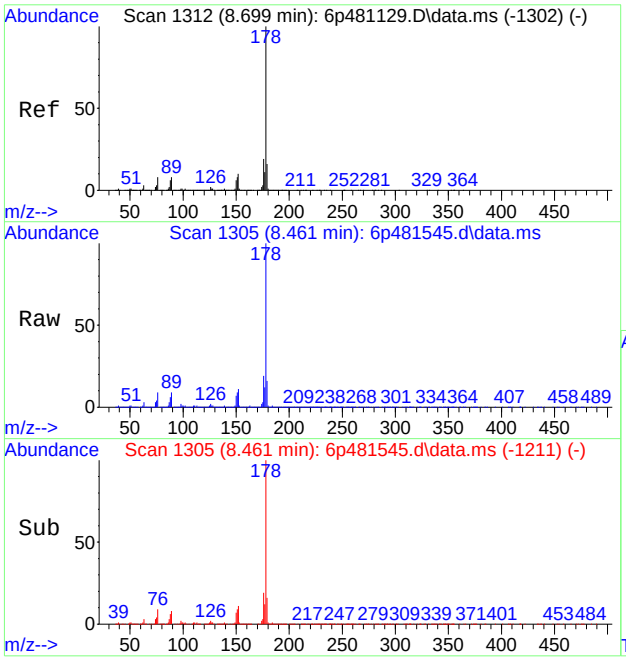


#66
Fluorene
Concen: 11.86 ppm
RT: 7.370 min Scan# 1101
Delta R.T. -0.000 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:166 Resp: 469681

Ion	Ratio	Lower	Upper
166	100		
165	91.5	60.7	120.7
167	12.8	0.0	43.4

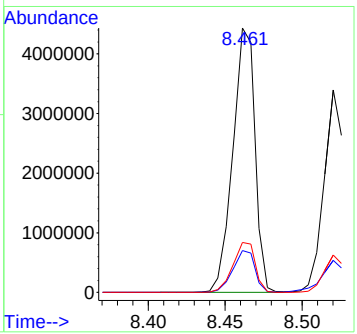


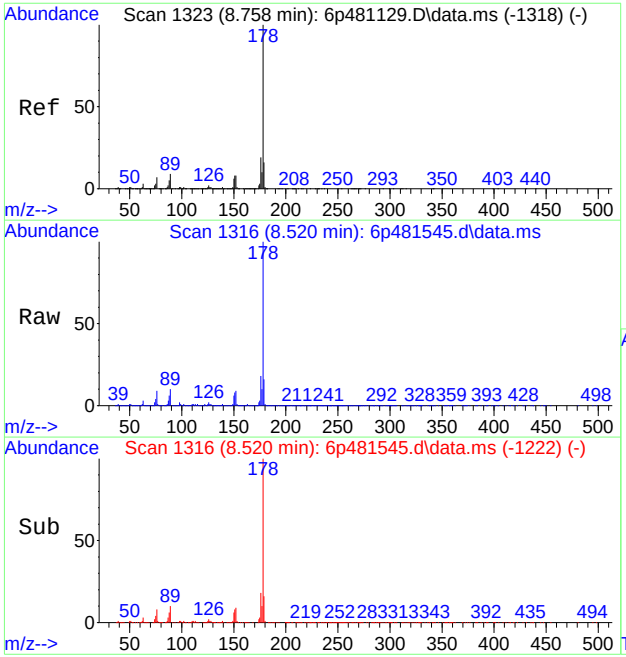


#77
Phenanthrene
Concen: 85.27 ppm
RT: 8.461 min Scan# 1305
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:178 Resp: 4431237

Ion	Ratio	Lower	Upper
178	100		
179	15.7	0.0	45.7
176	18.9	0.0	48.7

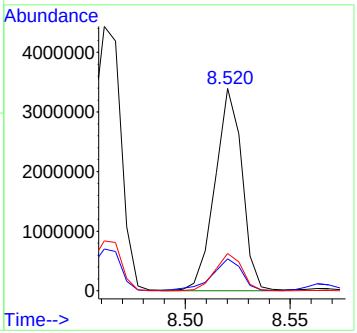


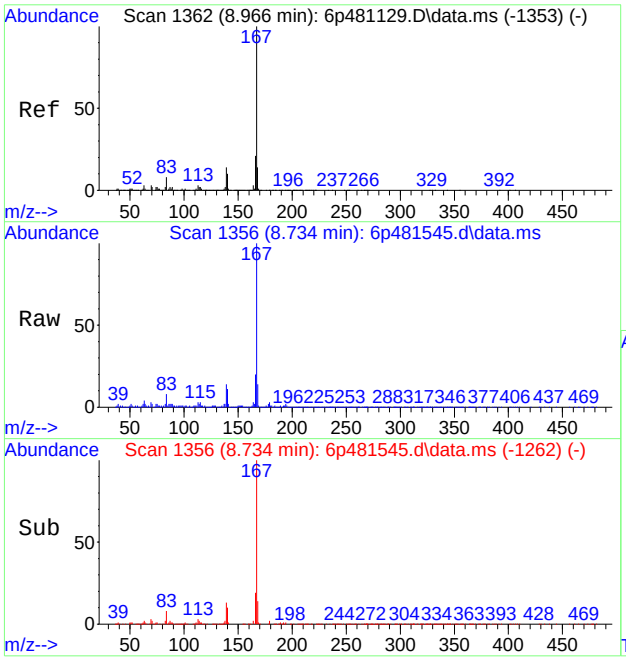


#78
Anthracene
Concen: 58.59 ppm
RT: 8.520 min Scan# 1316
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:178 Resp: 3053566

Ion	Ratio	Lower	Upper
178	100		
179	15.8	0.0	45.8
176	18.4	0.0	48.8

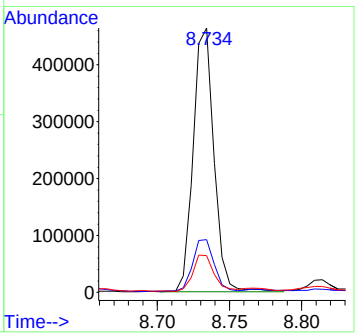


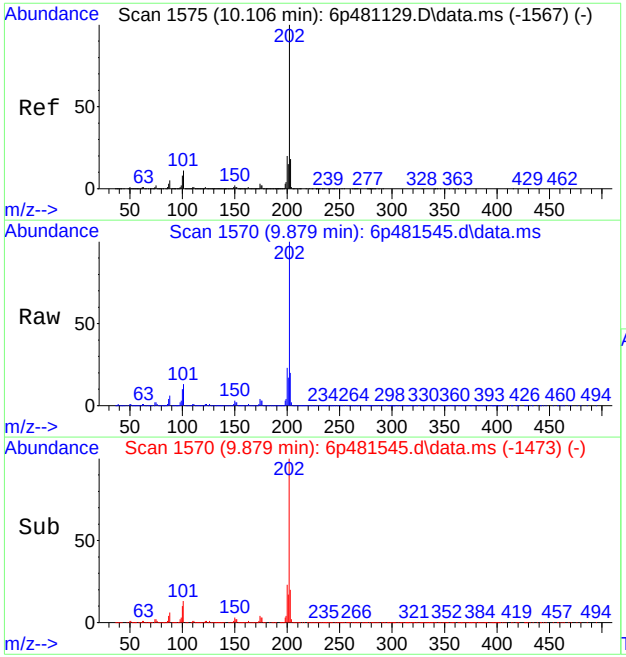


#79
Carbazole
Concen: 9.36 ppm
RT: 8.734 min Scan# 1356
Delta R.T. 0.005 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:167 Resp: 461989

Ion	Ratio	Lower	Upper
167	100		
166	19.5	0.0	50.5
139	13.2	0.0	43.5

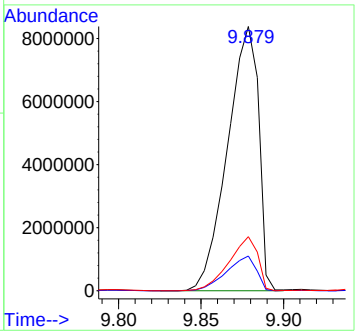


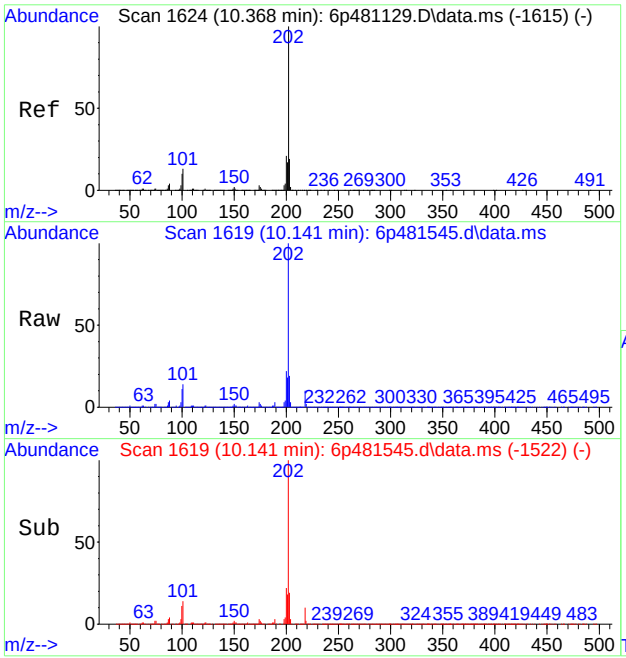


#81
Fluoranthene
Concen: 194.42 ppm
RT: 9.879 min Scan# 1570
Delta R.T. 0.021 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:202 Resp:10977204

Ion	Ratio	Lower	Upper
202	100		
101	13.2	0.0	43.4
203	20.4	0.0	47.3

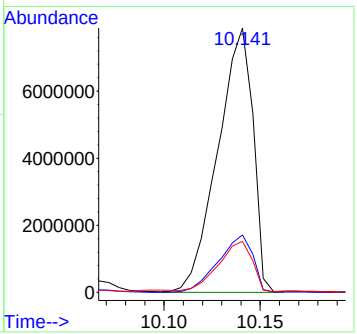


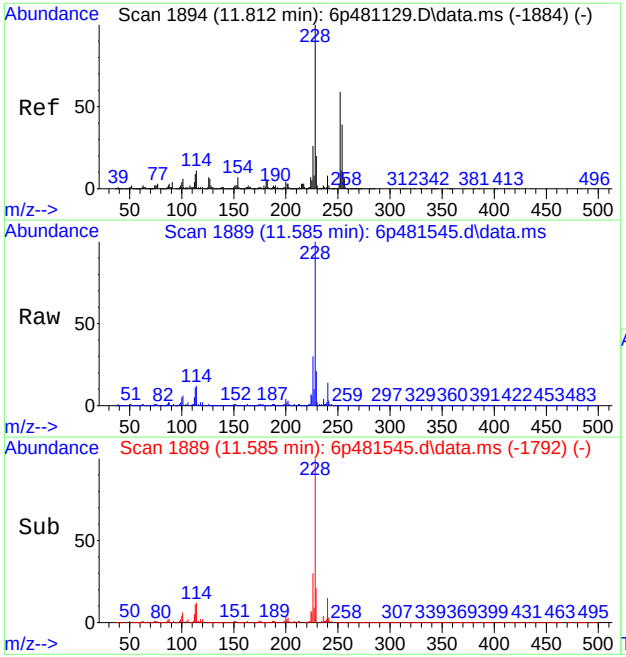


#84
Pyrene
Concen: 161.65 ppm
RT: 10.141 min Scan# 1619
Delta R.T. 0.021 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:202 Resp:10000630

Ion	Ratio	Lower	Upper
202	100		
200	21.7	0.0	50.7
203	18.8	0.0	48.3

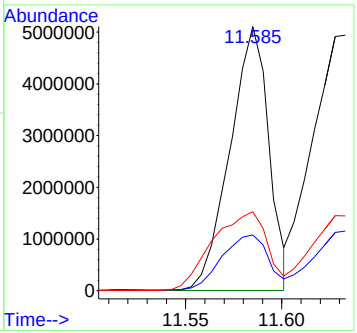


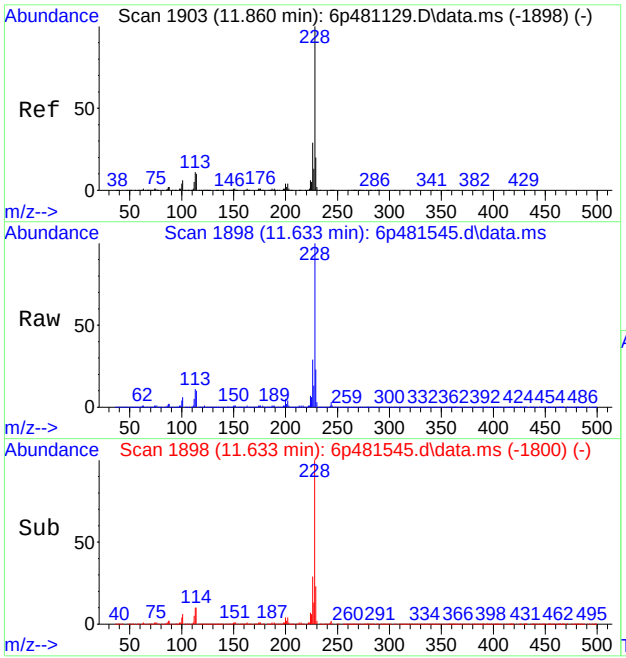


#87
Benzo[a]anthracene
Concen: 121.18 ppm
RT: 11.585 min Scan# 1889
Delta R.T. 0.021 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:228 Resp: 7167975

Ion	Ratio	Lower	Upper
228	100		
229	20.4	0.0	49.7
226	29.6	0.0	56.5

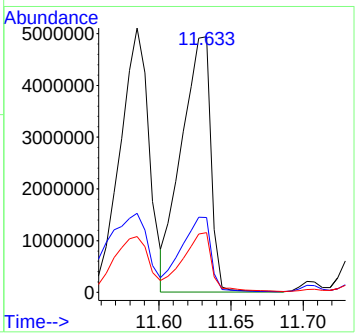


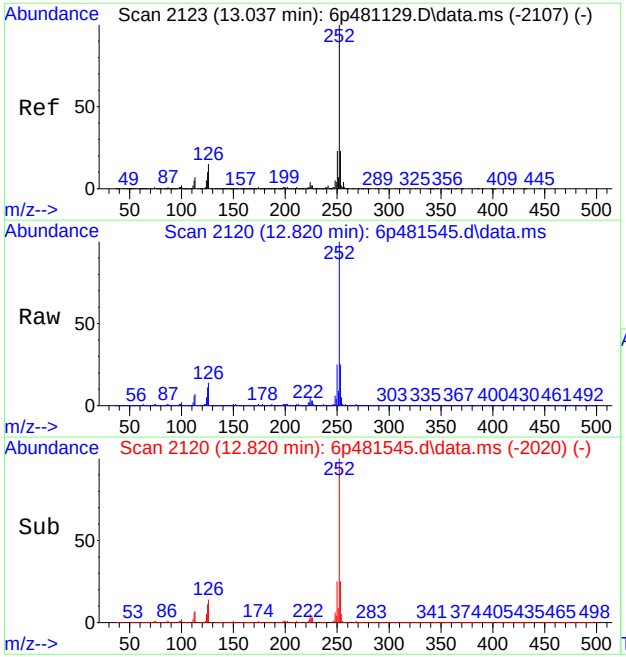


#89
Chrysene
Concen: 120.68 ppm
RT: 11.633 min Scan# 1898
Delta R.T. 0.027 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:228 Resp: 7000437

Ion	Ratio	Lower	Upper
228	100		
226	28.7	0.0	59.1
229	22.9	0.0	50.0

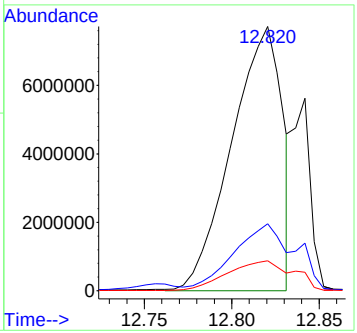


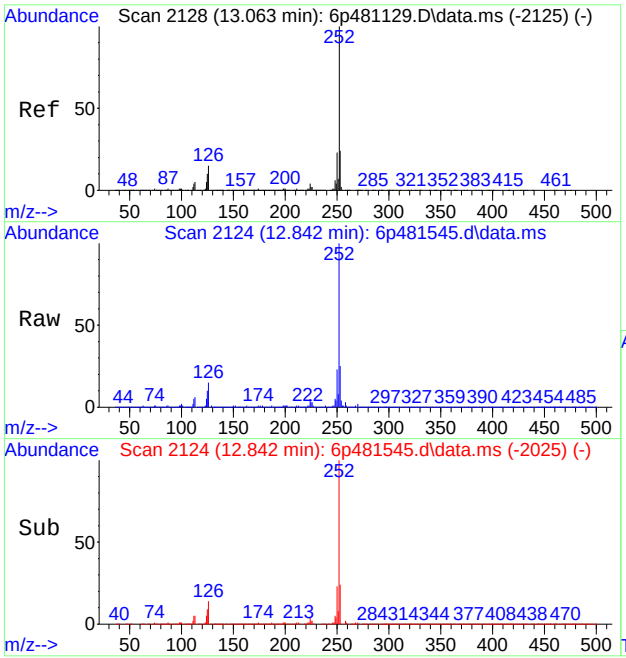


#93
Benzo[b]fluoranthene
Concen: 250.81 ppm m
RT: 12.820 min Scan# 2120
Delta R.T. 0.037 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:252 Resp:15557167

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.8
125	11.3	0.0	41.9

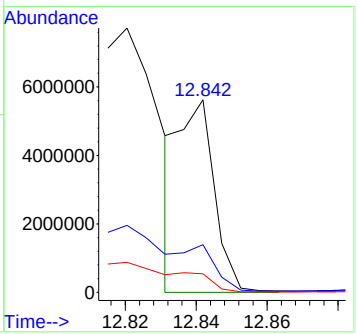


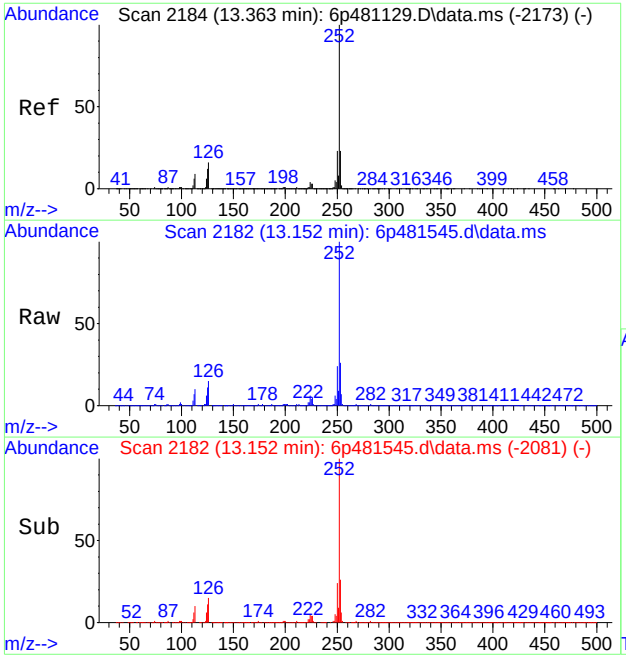


#94
Benzo[k]fluoranthene
Concen: 70.24 ppm m
RT: 12.842 min Scan# 2124
Delta R.T. 0.032 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:252 Resp: 3856900

Ion	Ratio	Lower	Upper
252	100		
253	24.8	0.0	52.0
125	9.6	0.0	41.7

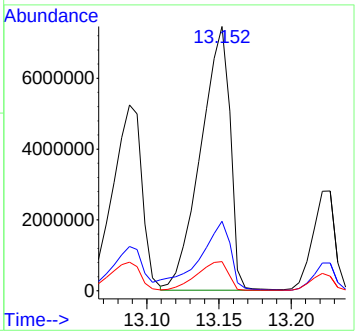


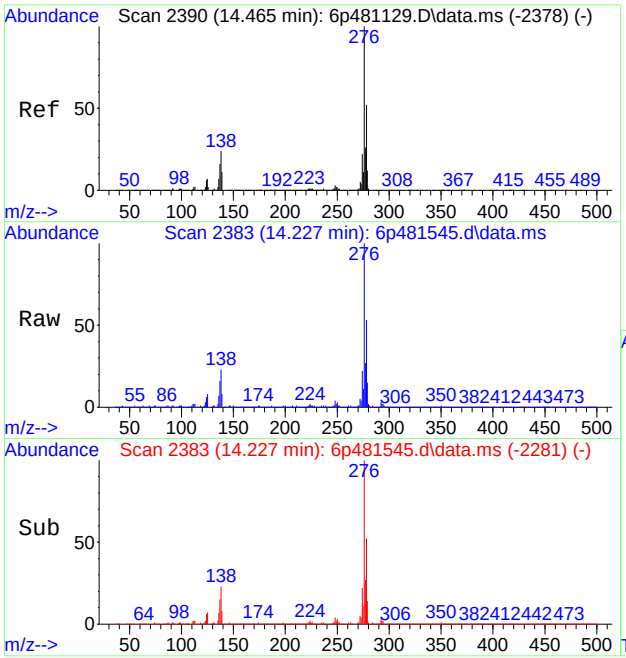


#95
Benzo[a]pyrene
Concen: 206.23 ppm
RT: 13.152 min Scan# 2182
Delta R.T. 0.043 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:252 Resp:10509642

Ion	Ratio	Lower	Upper
252	100		
253	24.3	0.0	52.7
125	10.9	0.0	44.2

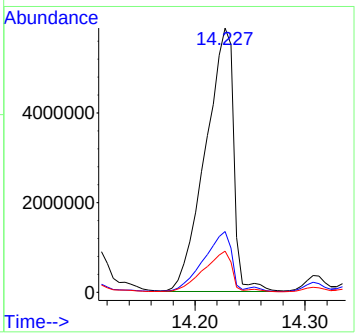


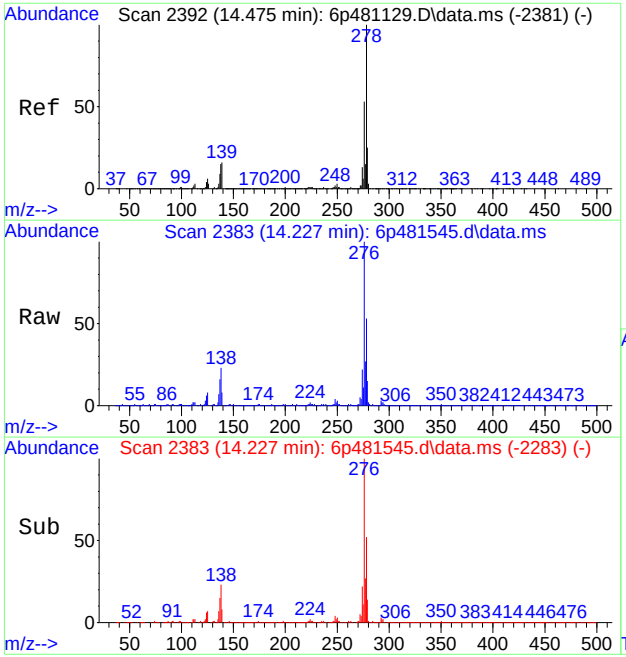


#96
Indeno[1,2,3-cd]pyrene
Concen: 154.87 ppm
RT: 14.227 min Scan# 2383
Delta R.T. 0.048 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:276 Resp:10538058

Ion	Ratio	Lower	Upper
276	100		
138	22.8	0.0	58.2
137	15.4	0.0	48.2

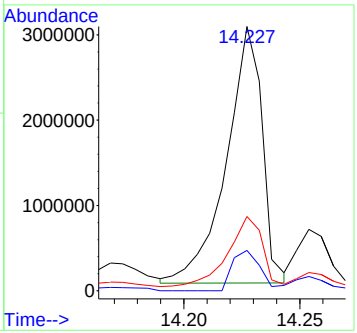


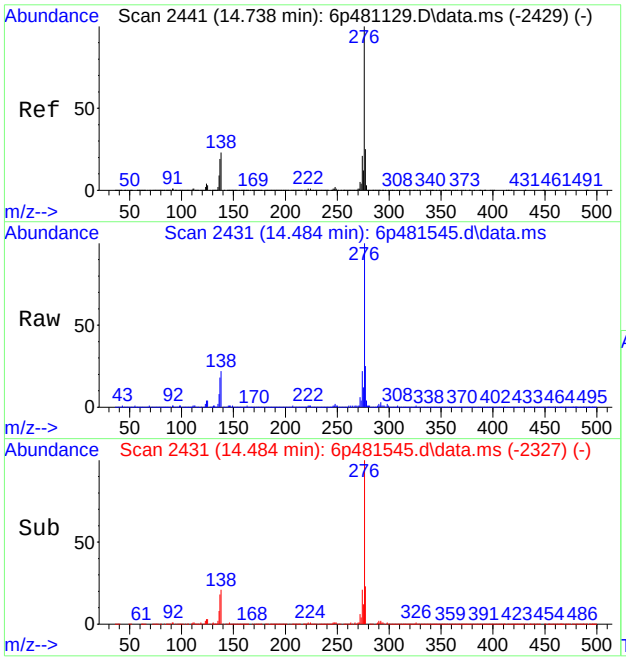


#98
Dibenz[a,h]anthracene
Concen: 53.45 ppm m
RT: 14.227 min Scan# 2383
Delta R.T. 0.037 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:278 Resp: 3222803

Ion	Ratio	Lower	Upper
278	100		
139	15.3	0.0	49.7
279	28.1	0.0	54.3

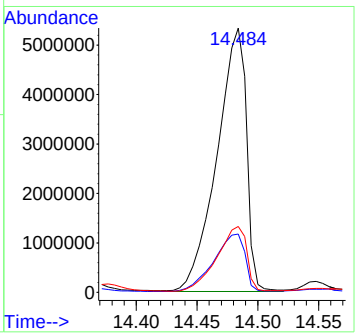




#100
Benzo[g,h,i]perylene
Concen: 170.07 ppm
RT: 14.484 min Scan# 2431
Delta R.T. 0.059 min
Lab File: 6p481545.d
Acq: 1 May 2019 9:02 pm

Tgt Ion:276 Resp: 9024488

Ion	Ratio	Lower	Upper
276	100		
138	21.8	0.0	58.0
277	24.6	0.0	54.6



Manual Integration Approval Summary

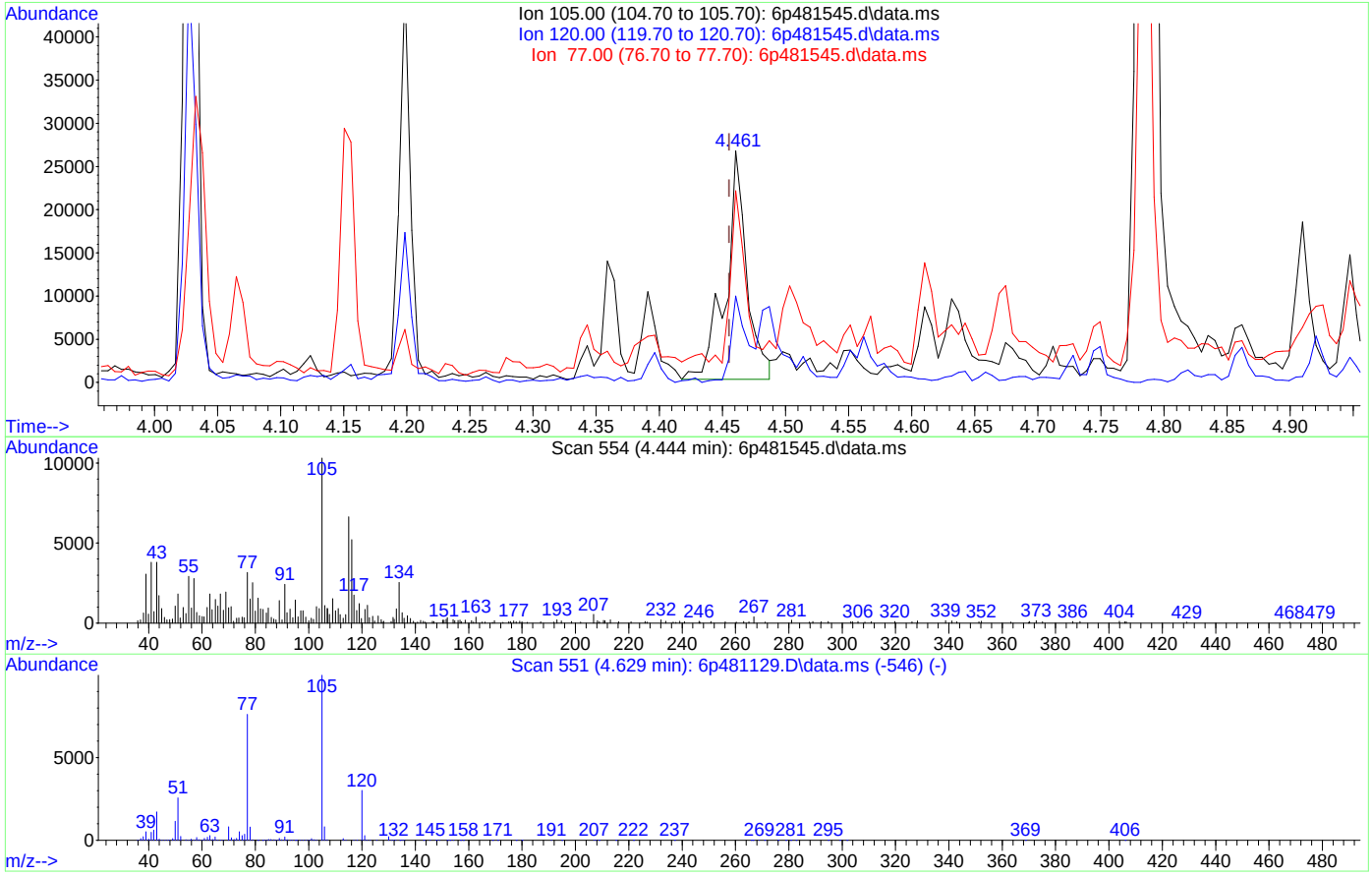
Sample Number: JC86837-10
Lab FileID: 6P481545.D
Injection Time: 05/01/19 21:02
Method: SW846 8270D
Analyst approved: 05/02/19 03:25 Michelle Co
Supervisor approved: 05/07/19 11:19 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetophenone	98-86-2		4.46	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		12.82	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		12.84	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.23	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:31:48 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481545.d\data.ms

(18) Acetophenone (t)

4.461min (+0.005) 1.10ppm

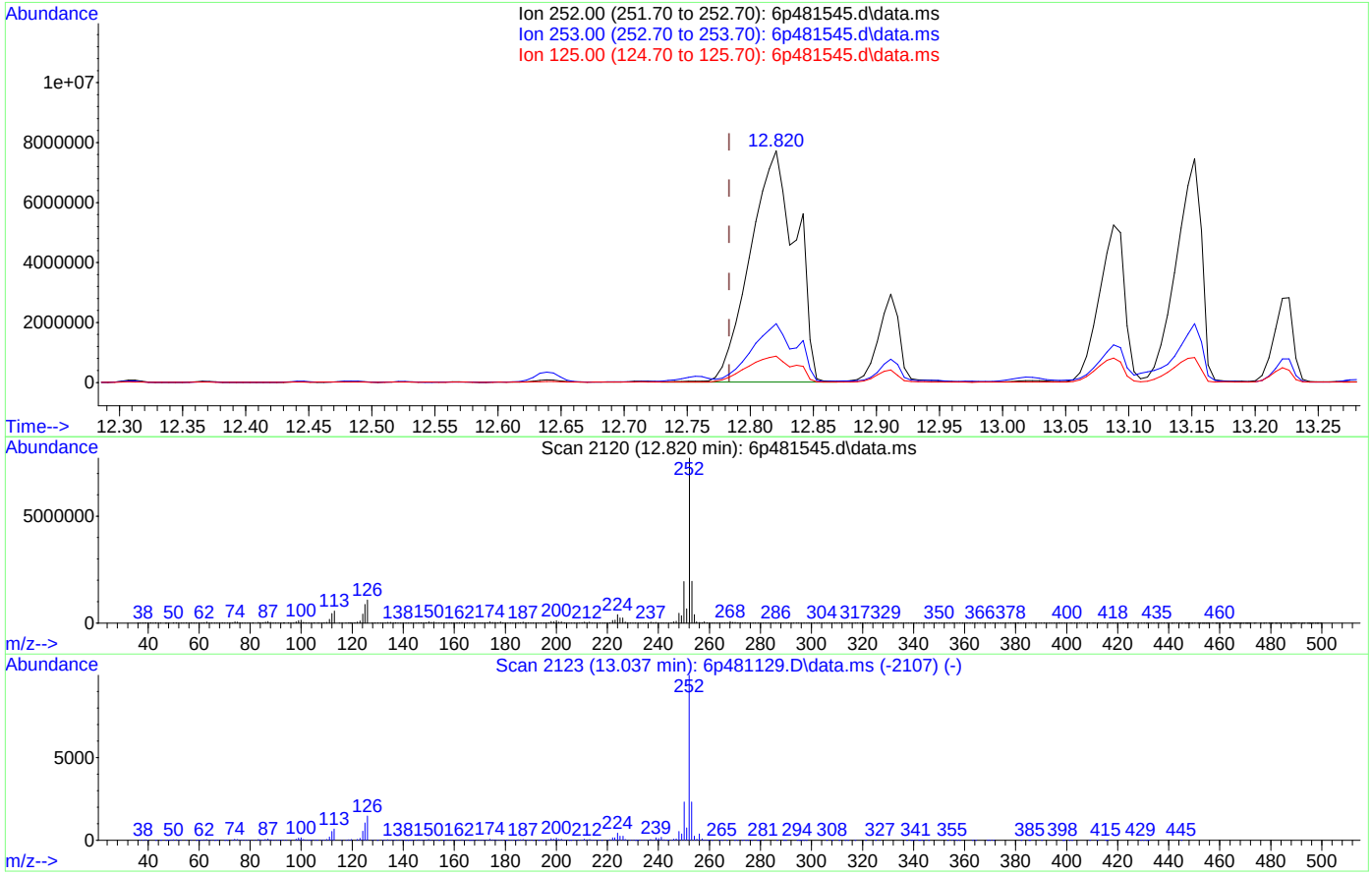
response 30909

Ion	Exp%	Act%
105.00	100	100
120.00	28.30	21.66
77.00	79.00	73.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:31:48 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481545.d\data.ms

(93) Benzo[b]fluoranthene (t)

12.820min (+0.037) 312.87ppm

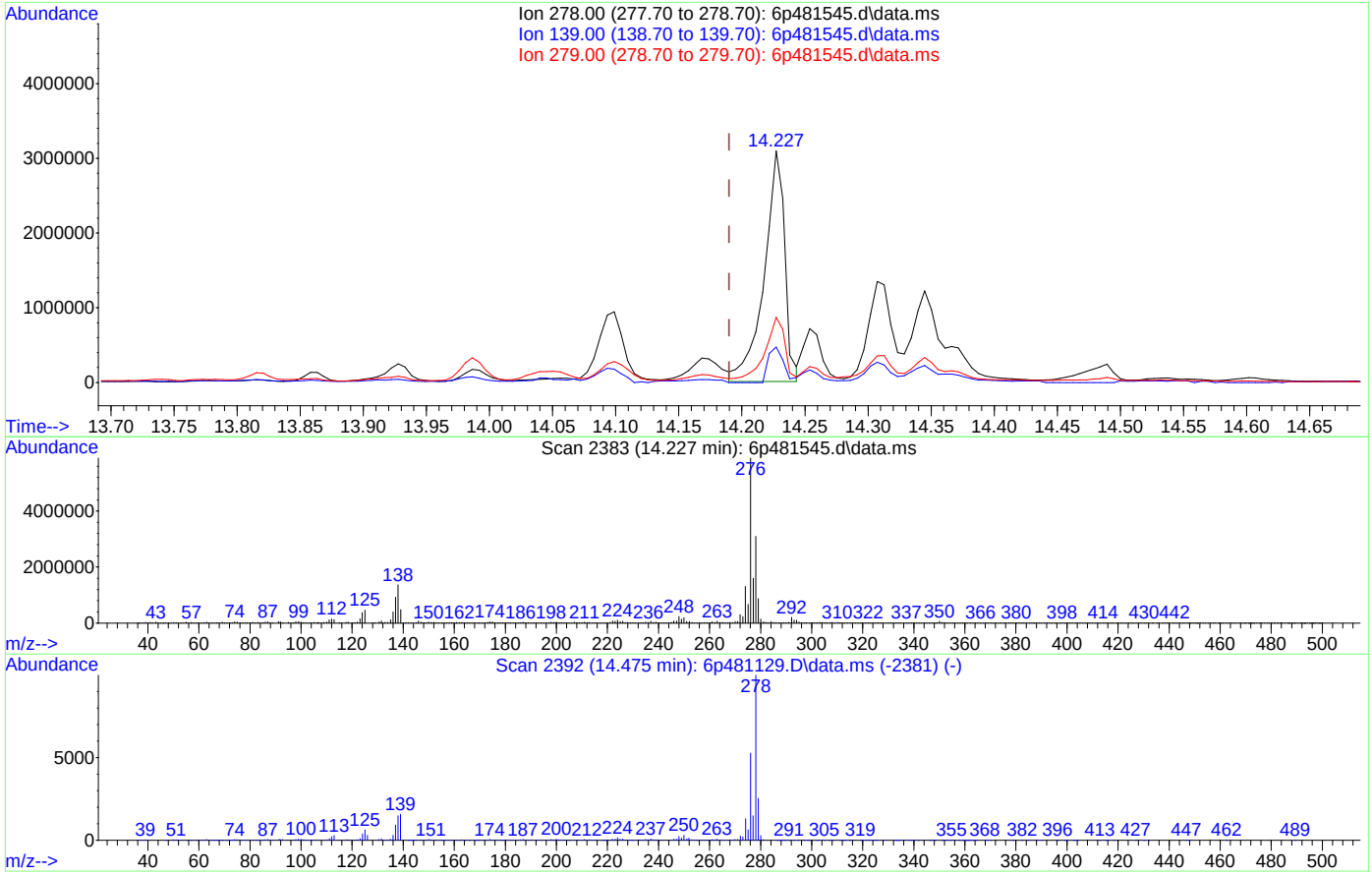
response 19406510

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	24.96
125.00	11.90	11.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:31:48 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481545.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.227min (+0.037) 57.69ppm

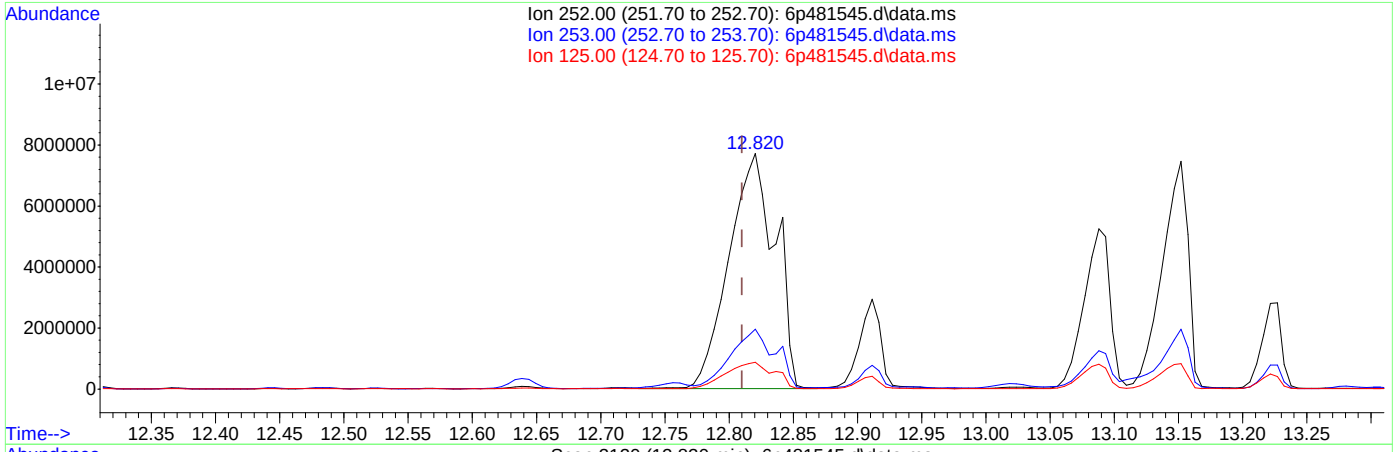
response 3478810

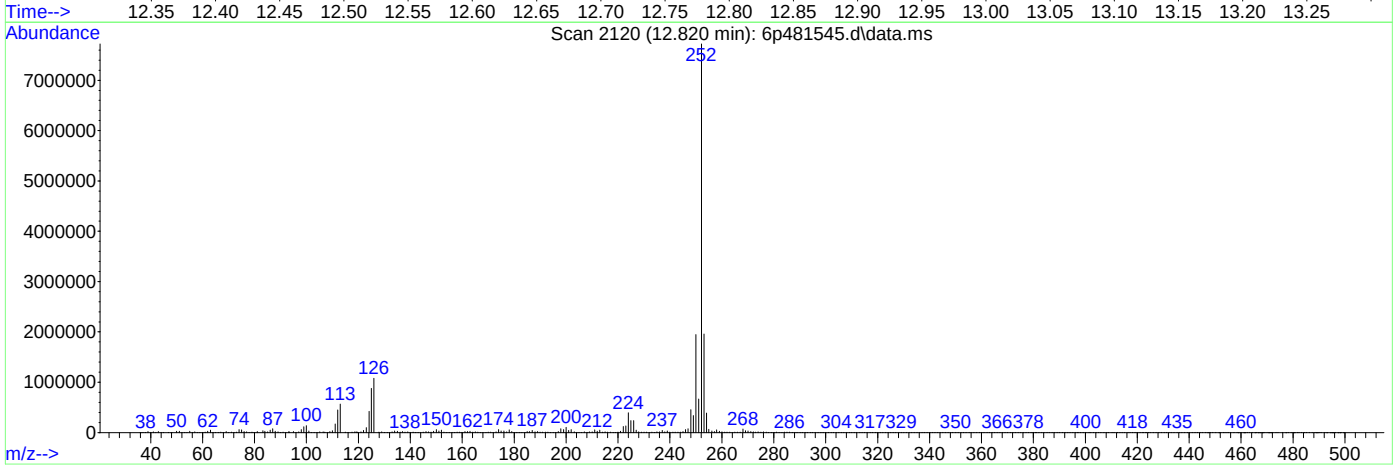
Ion	Exp%	Act%
278.00	100	100
139.00	19.70	15.13
279.00	24.30	27.69
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : X:\data validator\michellc\e6p2578\
Data File : 6p481545.d
Acq On : 1 May 2019 9:02 pm
Operator : angelar
Sample : jc86837-10 Inst : MS6P
Misc : op20035,e6p2578,30.7,,,1,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 03:33:42 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration





TIC: 6p481545.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.820min (+0.011) 353.64ppm

response 19418641

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	24.96
125.00	11.70	11.22
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/06/19 17:58

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481476.d
Acq On : 29 Apr 2019 7:12 pm
Operator : angelar
Sample : jc86837-11 Inst : MS6P
Misc : op20035,e6p2576,31.0,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 05:18:06 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

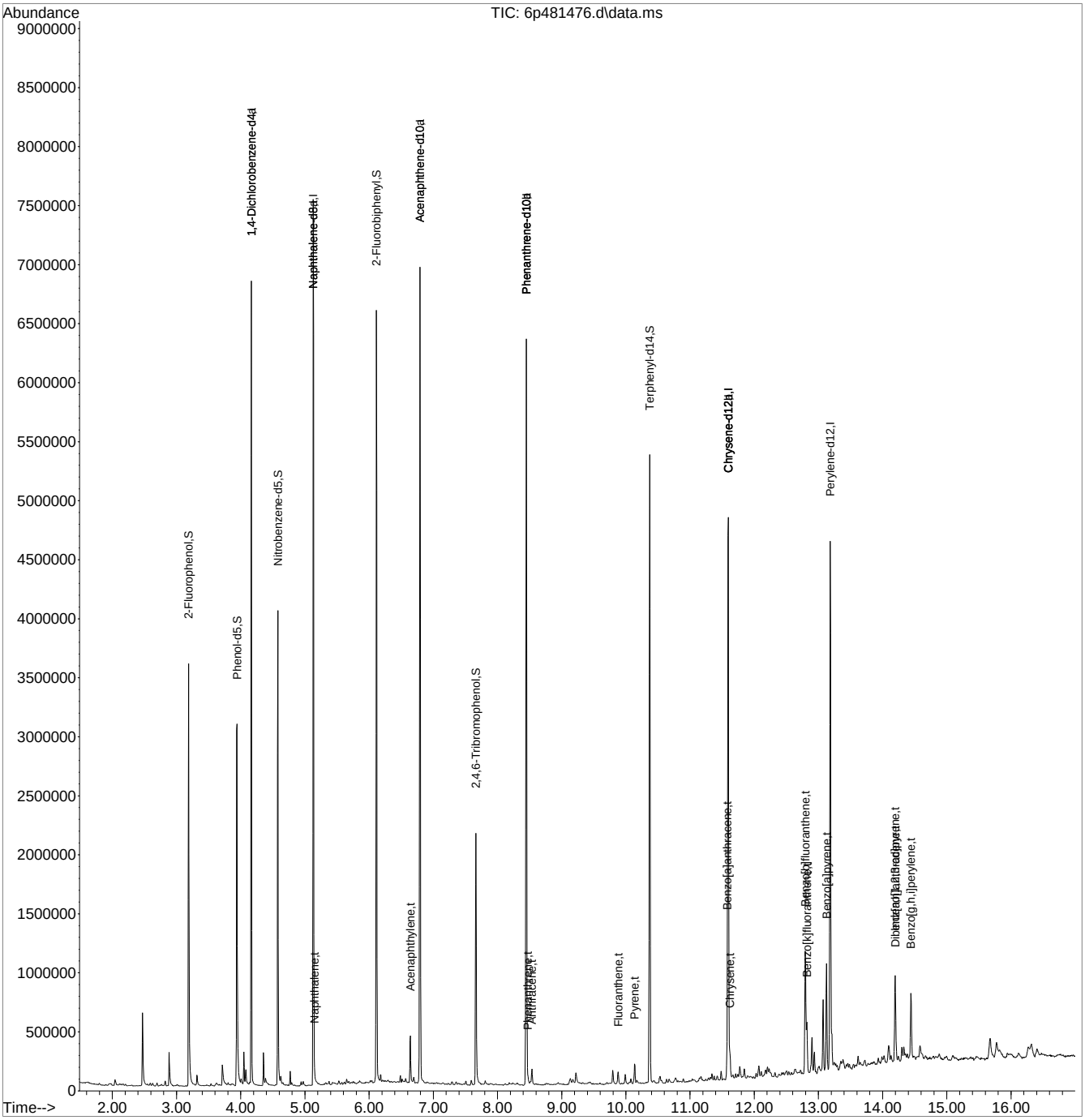
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.167	152	748802	40.00	ppm	0.00
24) Naphthalene-d8	5.129	136	2666309	40.00	ppm	-0.01
47) Acenaphthene-d10	6.793	164	1328069	40.00	ppm	-0.01
69) Phenanthrene-d10	8.451	188	2205611	40.00	ppm	-0.01
83) Chrysene-d12	11.596	240	1660044	40.00	ppm	-0.02
91) Perylene-d12	13.184	264	1531807	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.167	152	748802	40.00	ppm	0.00
103) Acenaphthene-d10a	6.793	164	1328069	40.00	ppm	-0.01
105) Phenanthrene-d10a	8.451	188	2205611	40.00	ppm	-0.01
109) Chrysene-d12a	11.596	240	1660044	40.00	ppm	-0.02
111) Naphthalene-d8a	5.129	136	2666309	40.00	ppm	-0.01
113) Phenanthrene-d10b	8.451	188	2205611	40.00	ppm	-0.01
115) Chrysene-d12b	11.596	240	1660044	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.188	112	828307	37.81	ppm	0.00
Spiked Amount 50.000			Recovery =	75.62%		
8) Phenol-d5	3.942	99	1003270	37.51	ppm	0.00
Spiked Amount 50.000			Recovery =	75.02%		
25) Nitrobenzene-d5	4.578	82	982636	44.28	ppm	0.00
Spiked Amount 50.000			Recovery =	88.56%		
51) 2-Fluorobiphenyl	6.113	172	1739575	37.08	ppm	-0.01
Spiked Amount 50.000			Recovery =	74.16%		
73) 2,4,6-Tribromophenol	7.665	330	227238	32.02	ppm	-0.01
Spiked Amount 50.000			Recovery =	64.04%		
85) Terphenyl-d14	10.371	244	1641487	42.44	ppm	-0.01
Spiked Amount 50.000			Recovery =	84.88%		
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	5.151	128	25072	0.36	ppm	99
56) Acenaphthylene	6.643	152	169585	2.81	ppm	99
77) Phenanthrene	8.472	178	12688	0.21	ppm	95
78) Anthracene	8.536	178	53131	0.89	ppm	97
81) Fluoranthene	9.879	202	29217	0.45	ppm	93
84) Pyrene	10.136	202	67994	1.23	ppm	98
87) Benzo[a]anthracene	11.580	228	61185m	1.16	ppm	
89) Chrysene	11.623	228	107411	2.07	ppm	99
93) Benzo[b]fluoranthene	12.794	252	447024m	9.55	ppm	
94) Benzo[k]fluoranthene	12.821	252	146634m	3.54	ppm	
95) Benzo[a]pyrene	13.126	252	325050	8.46	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.195	276	287886	5.61	ppm	97
98) Dibenz[a,h]anthracene	14.201	278	72586m	1.60	ppm	
100) Benzo[g,h,i]perylene	14.441	276	252442	6.31	ppm	96

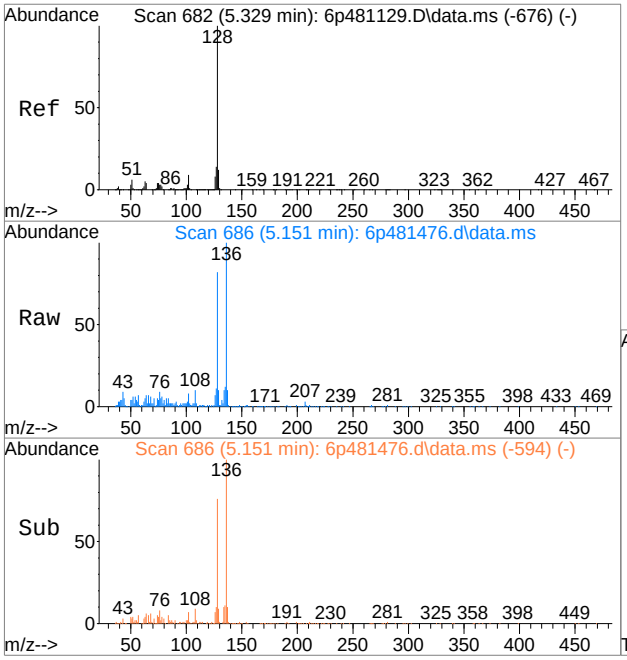
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481476.d
Acq On : 29 Apr 2019 7:12 pm
Operator : angelar
Sample : jc86837-11 Inst : MS6P
Misc : op20035,e6p2576,31.0,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 05:18:06 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

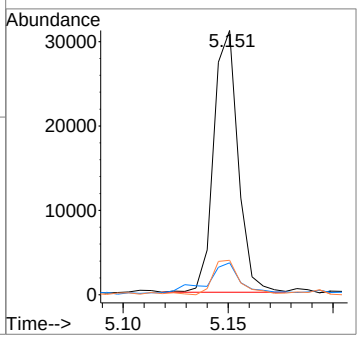


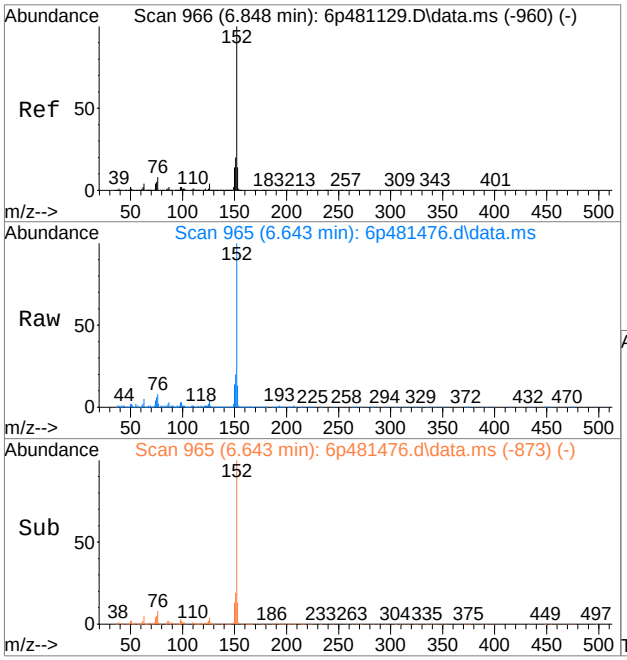


#38
Naphthalene
Concen: 0.36 ppm
RT: 5.151 min Scan# 686
Delta R.T. -0.005 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:128 Resp: 25072

Ion	Ratio	Lower	Upper
128	100		
129	11.3	0.0	40.9
127	12.6	0.0	42.6

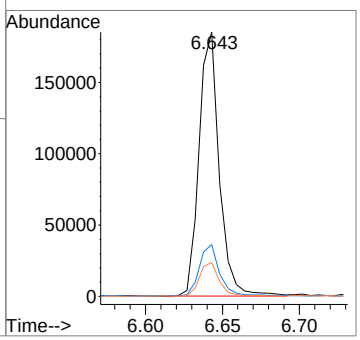


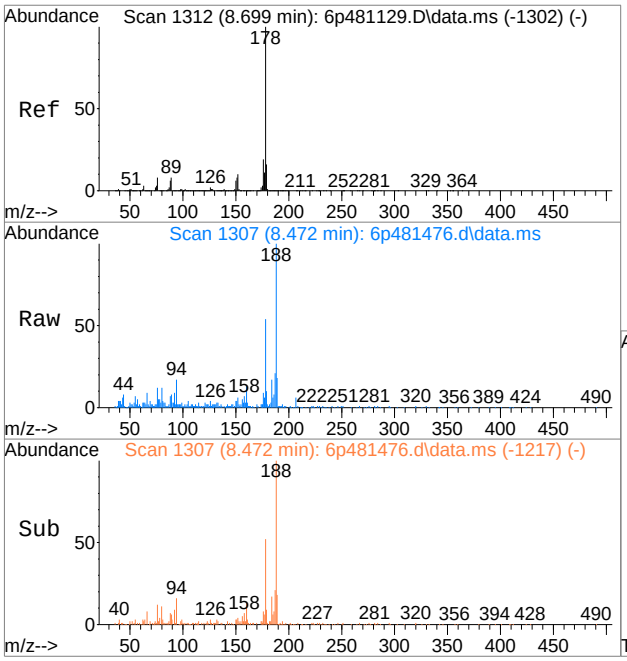


#56
Acenaphthylene
Concen: 2.81 ppm
RT: 6.643 min Scan# 965
Delta R.T. -0.005 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:152 Resp: 169585

Ion	Ratio	Lower	Upper
152	100		
151	19.4	0.0	49.7
153	12.7	0.0	43.5

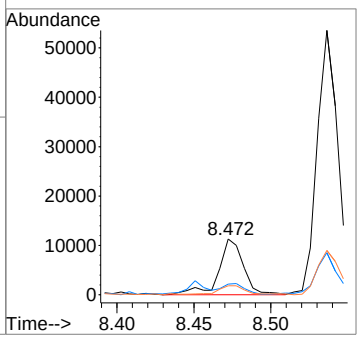


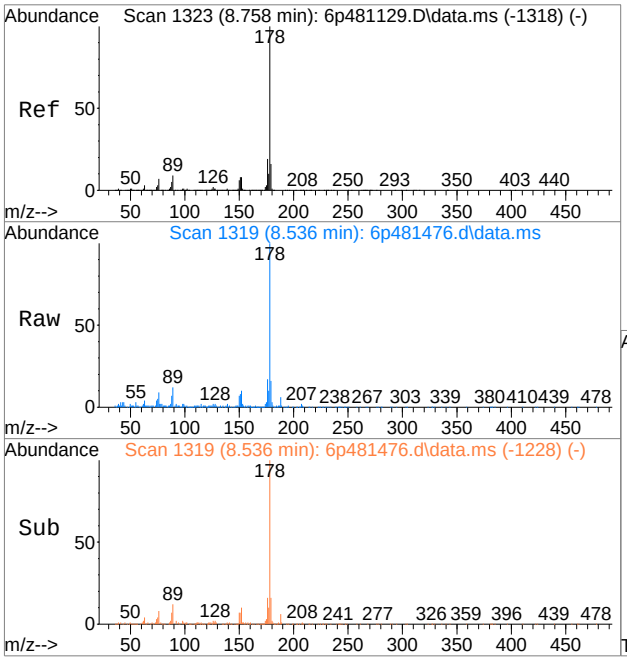


#77
Phenanthrene
Concen: 0.21 ppm
RT: 8.472 min Scan# 1307
Delta R.T. -0.016 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:178 Resp: 12688

Ion	Ratio	Lower	Upper
178	100		
179	15.5	0.0	46.0
176	15.5	0.0	49.2

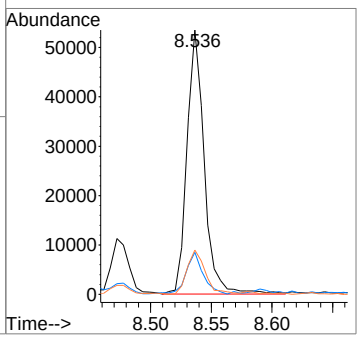


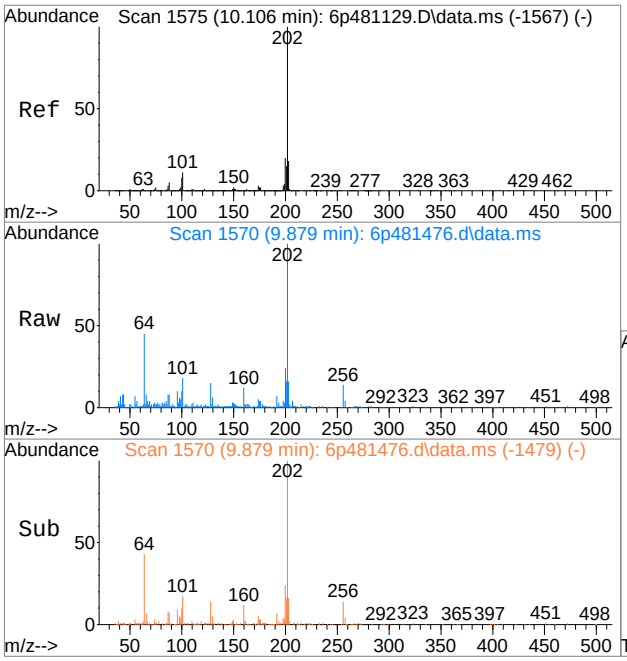


#78
Anthracene
Concen: 0.89 ppm
RT: 8.536 min Scan# 1319
Delta R.T. -0.011 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:178 Resp: 53131

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	45.3
176	16.4	0.0	48.5

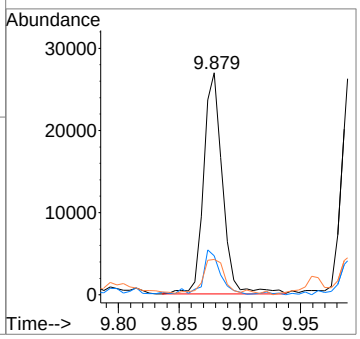


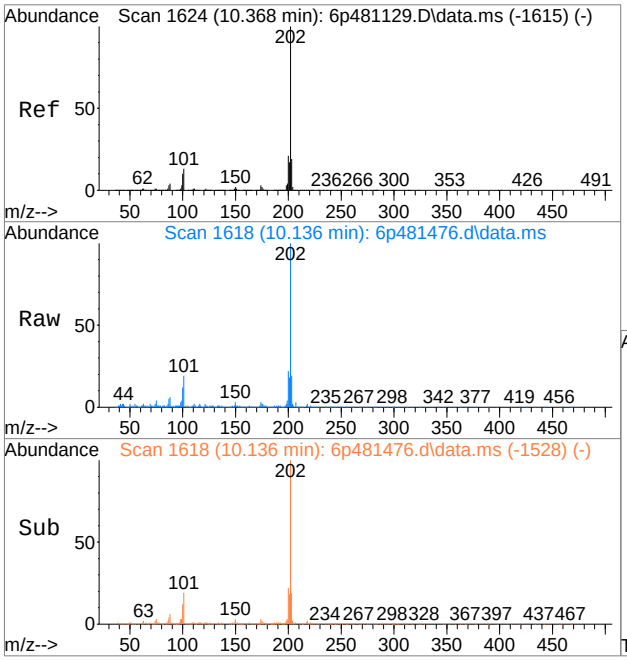


#81
Fluoranthene
Concen: 0.45 ppm
RT: 9.879 min Scan# 1570
Delta R.T. -0.011 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:202 Resp: 29217

Ion	Ratio	Lower	Upper
202	100		
101	17.0	0.0	43.8
203	14.8	0.0	47.8

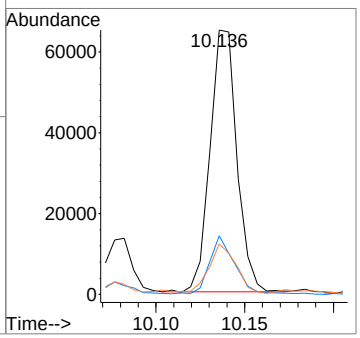


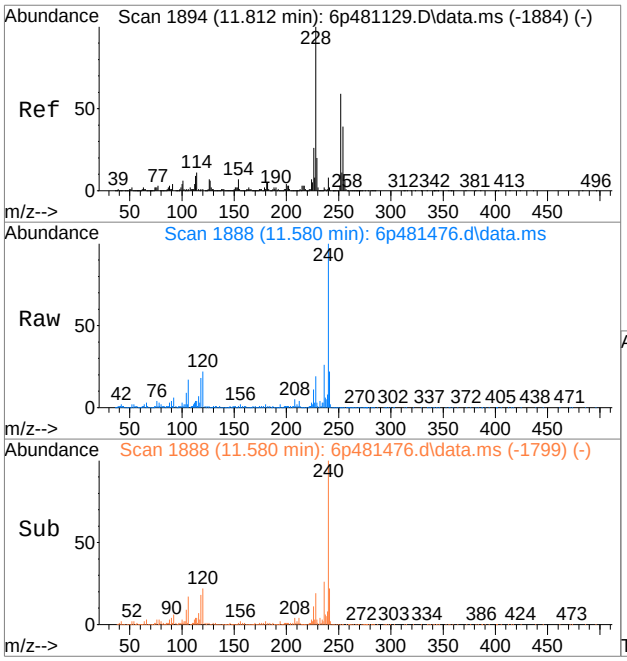


#84
Pyrene
Concen: 1.23 ppm
RT: 10.136 min Scan# 1618
Delta R.T. -0.016 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:202 Resp: 67994

Ion	Ratio	Lower	Upper
202	100		
200	21.8	0.0	51.0
203	17.3	0.0	48.7

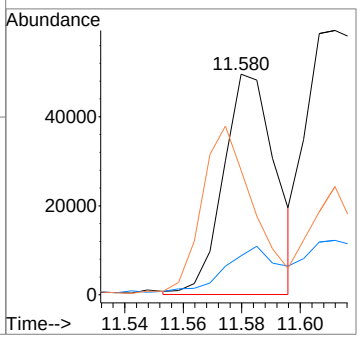


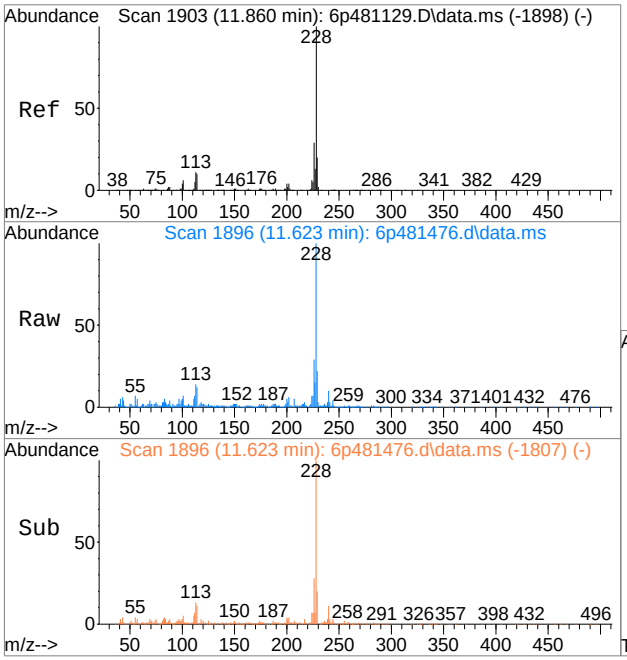


#87
Benzo[a]anthracene
Concen: 1.16 ppm m
RT: 11.580 min Scan# 1888
Delta R.T. -0.021 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:228 Resp: 61185

Ion	Ratio	Lower	Upper
228	100		
229	17.7	0.0	49.8
226	56.4	0.0	57.3

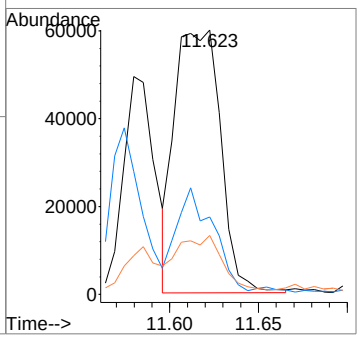


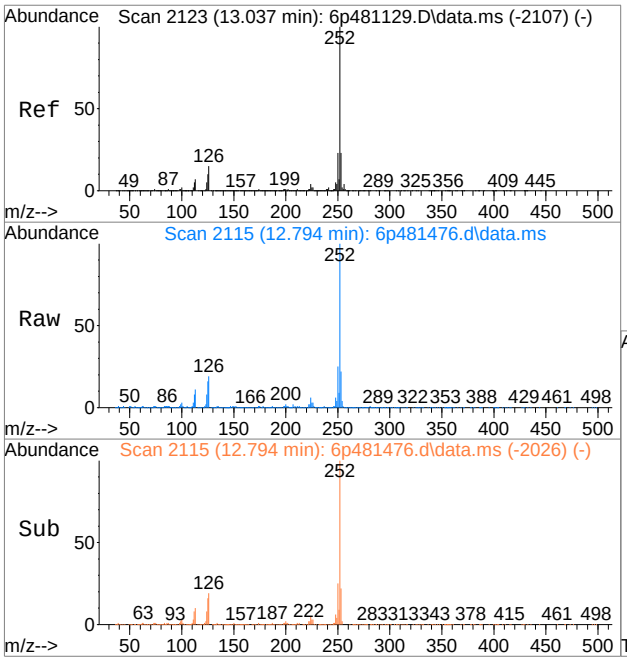


#89
Chrysene
Concen: 2.07 ppm
RT: 11.623 min Scan# 1896
Delta R.T. -0.021 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:228 Resp: 107411

Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.0	59.1
229	18.9	0.0	49.2

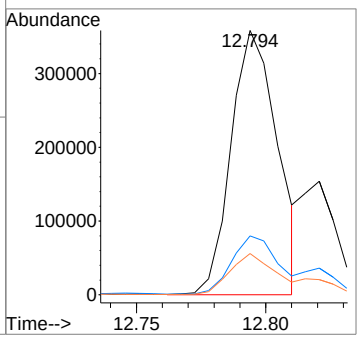


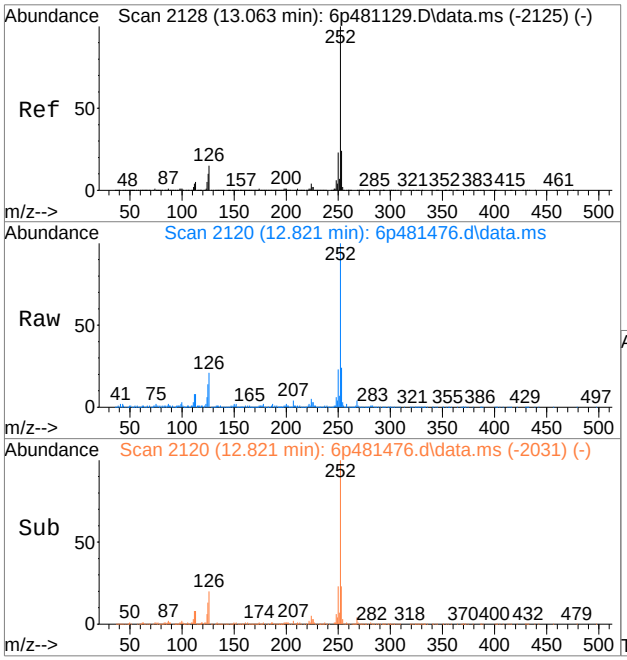


#93
Benzo[b]fluoranthene
Concen: 9.55 ppm m
RT: 12.794 min Scan# 2115
Delta R.T. -0.021 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:252 Resp: 447024

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	53.5
125	15.6	0.0	43.4

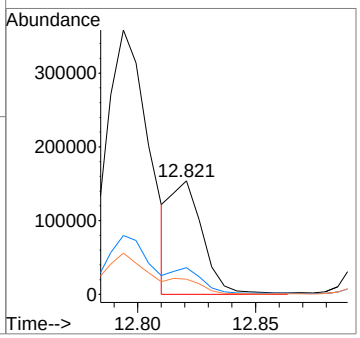


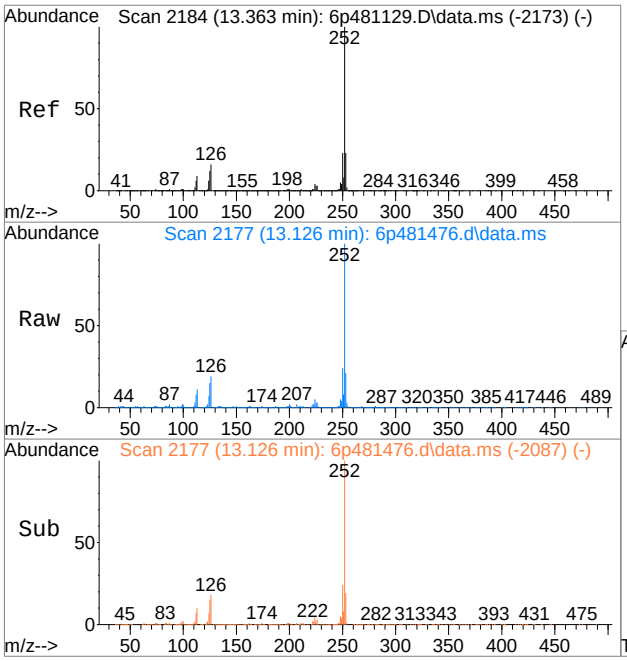


#94
Benzo[k]fluoranthene
Concen: 3.54 ppm m
RT: 12.821 min Scan# 2120
Delta R.T. -0.021 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:252 Resp: 146634

Ion	Ratio	Lower	Upper
252	100		
253	23.5	0.0	51.6
125	13.5	0.0	42.6

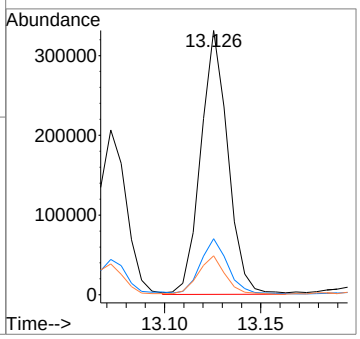


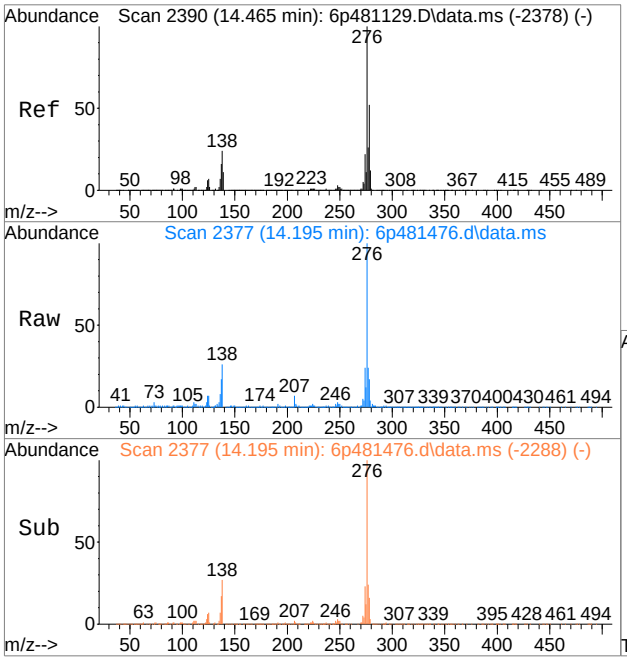


#95
Benzo[a]pyrene
Concen: 8.46 ppm
RT: 13.126 min Scan# 2177
Delta R.T. -0.016 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:252 Resp: 325050

Ion	Ratio	Lower	Upper
252	100		
253	20.6	0.0	51.9
125	14.5	0.0	44.5

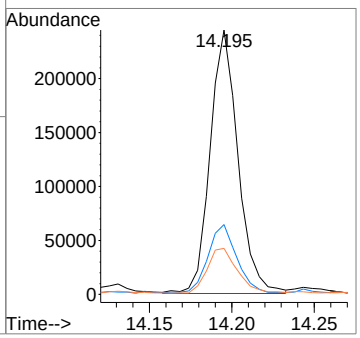


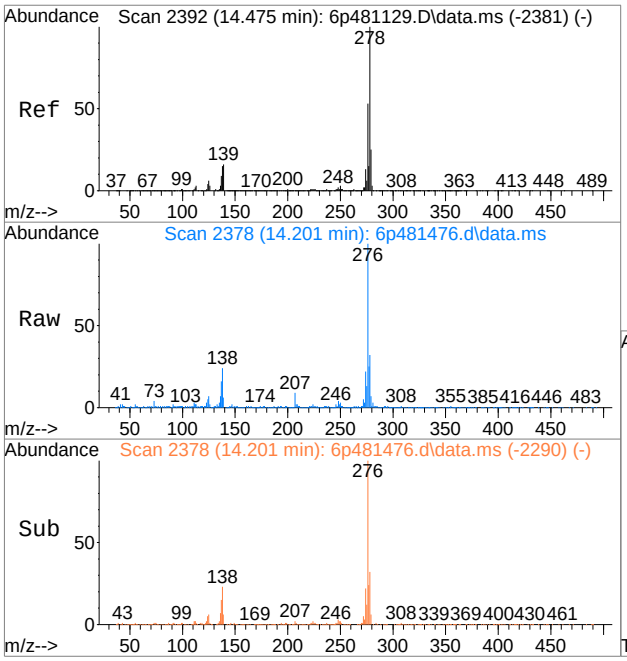


#96
Indeno[1,2,3-cd]pyrene
Concen: 5.61 ppm
RT: 14.195 min Scan# 2377
Delta R.T. -0.021 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:276 Resp: 287886

Ion	Ratio	Lower	Upper
276	100		
138	26.1	0.0	57.4
137	17.0	0.0	48.8

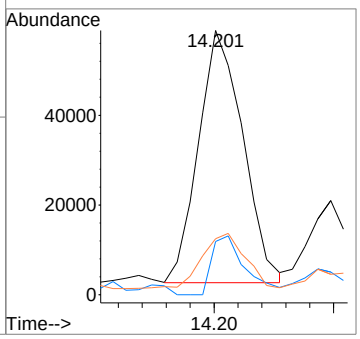


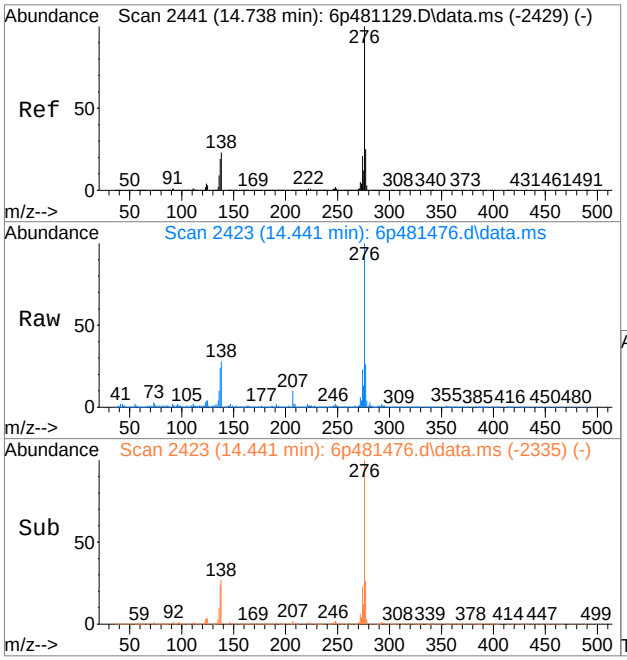


#98
Dibenz[a,h]anthracene
Concen: 1.60 ppm m
RT: 14.201 min Scan# 2378
Delta R.T. -0.027 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:278 Resp: 72586

Ion	Ratio	Lower	Upper
278	100		
139	20.2	0.0	49.5
279	21.2	0.0	54.7

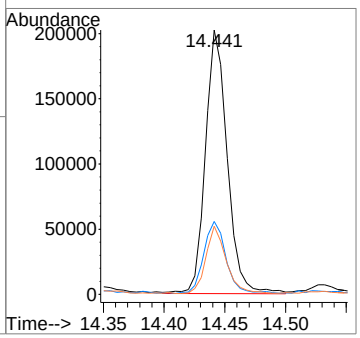




#100
Benzo[g,h,i]perylene
Concen: 6.31 ppm
RT: 14.441 min Scan# 2423
Delta R.T. -0.027 min
Lab File: 6p481476.d
Acq: 29 Apr 2019 7:12 pm

Tgt Ion:276 Resp: 252442

Ion	Ratio	Lower	Upper
276	100		
138	27.2	0.0	54.9
277	25.4	0.0	53.3



Manual Integration Approval Summary

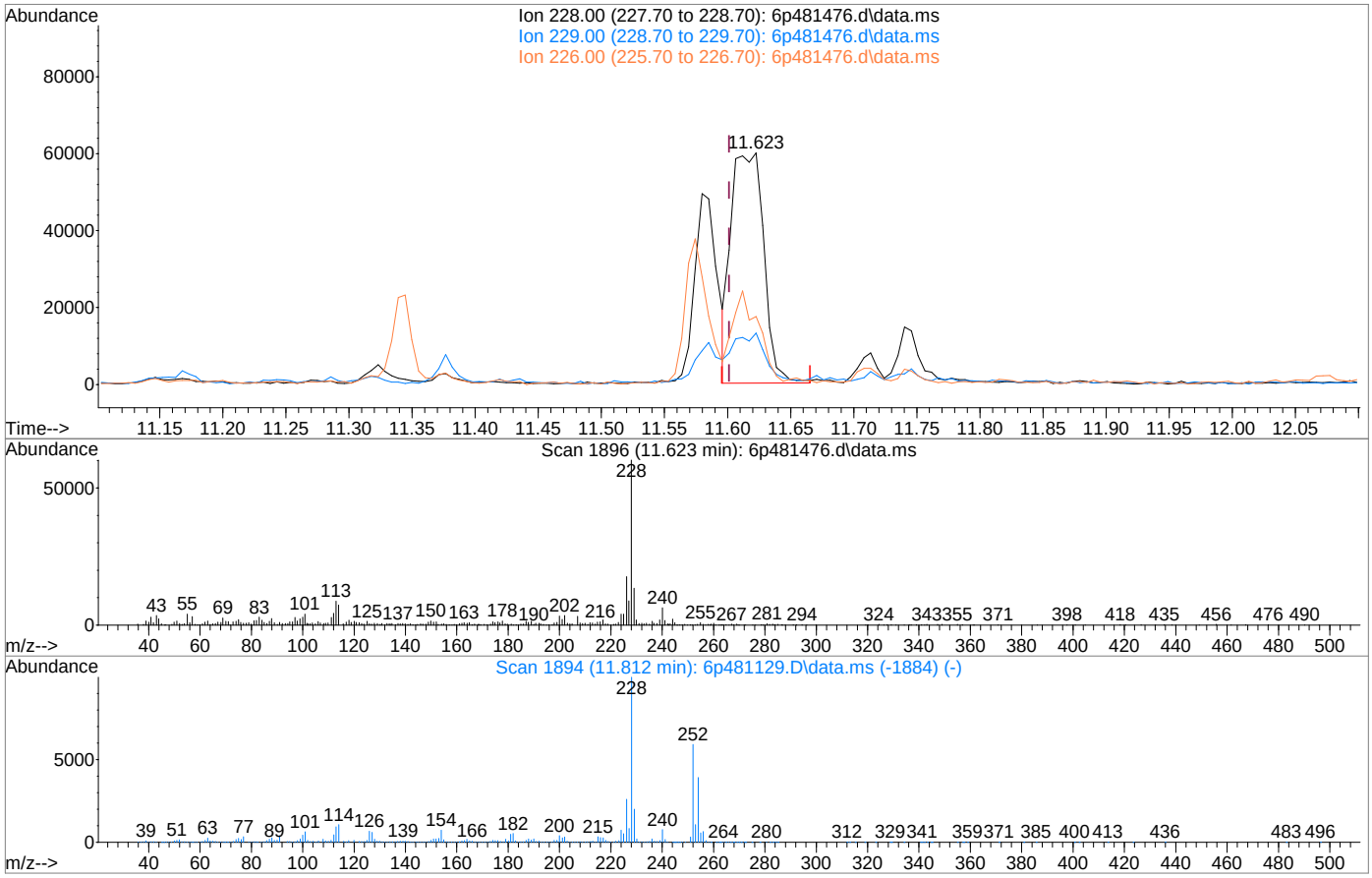
Sample Number: JC86837-11
Lab FileID: 6P481476.D
Injection Time: 04/29/19 19:12
Method: SW846 8270D
Analyst approved: 05/06/19 17:51 Kristi Schollenberger
Supervisor approved: 05/06/19 17:58 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(a)anthracene	56-55-3		11.58	Overlapping peak
Benzo(b)fluoranthene	205-99-2		12.79	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.82	Overlapping peak
Dibenzo(a,h)anthracene	53-70-3		14.20	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481476.d
Acq On : 29 Apr 2019 7:12 pm
Operator : angelar
Sample : jc86837-11 Inst : MS6P
Misc : op20035,e6p2576,31.0,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:20:34 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481476.d\data.ms

(87) Benzo[a]anthracene (t)

11.623min (+0.021) 2.03ppm

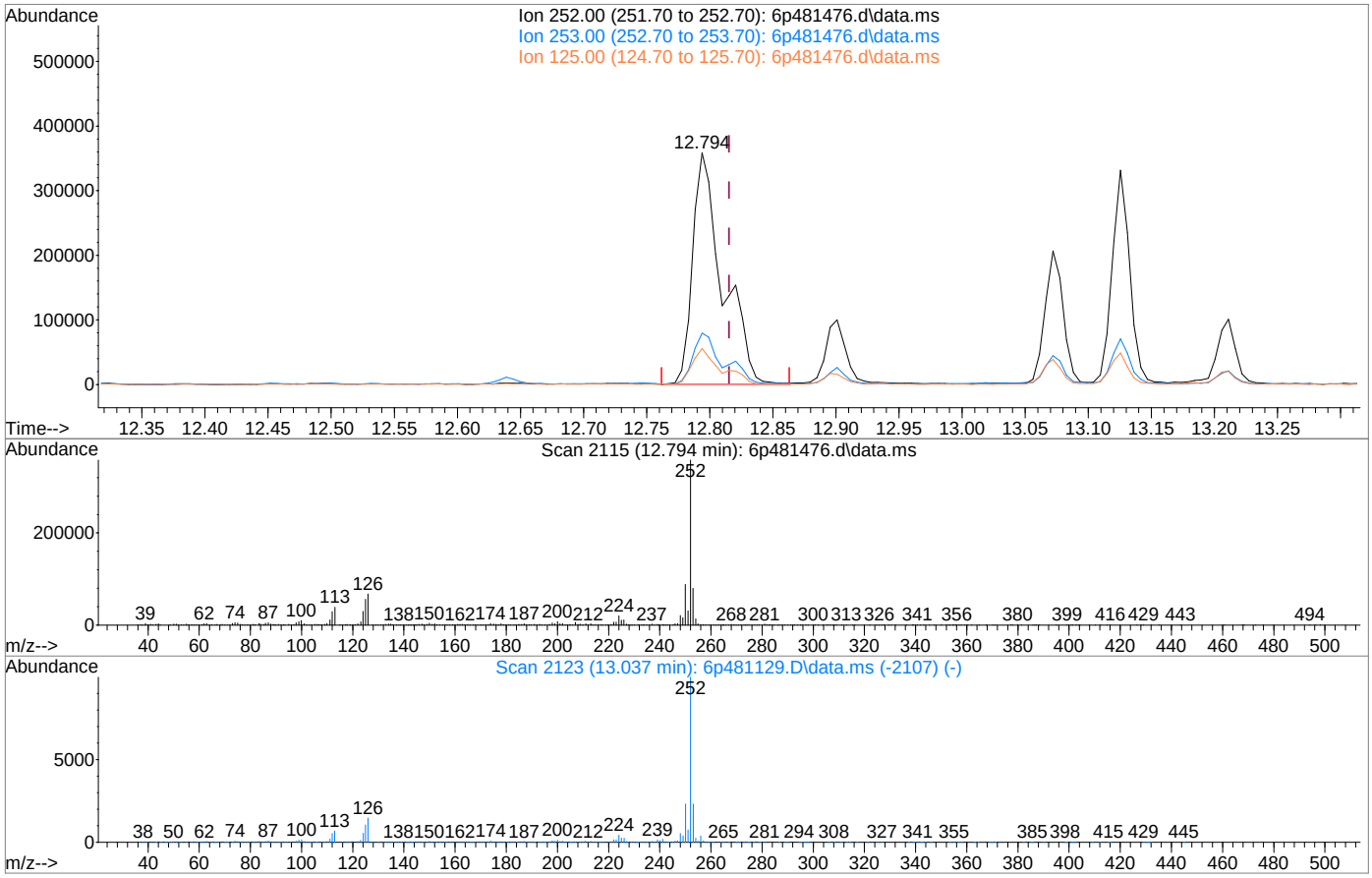
response 107413

Ion	Exp%	Act%
228.00	100	100
229.00	19.80	18.89
226.00	27.30	28.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481476.d
Acq On : 29 Apr 2019 7:12 pm
Operator : angelar
Sample : jc86837-11 Inst : MS6P
Misc : op20035,e6p2576,31.0,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:20:34 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481476.d\data.ms

(93) Benzo[b]fluoranthene (t)

12.794min (-0.021) 12.64ppm

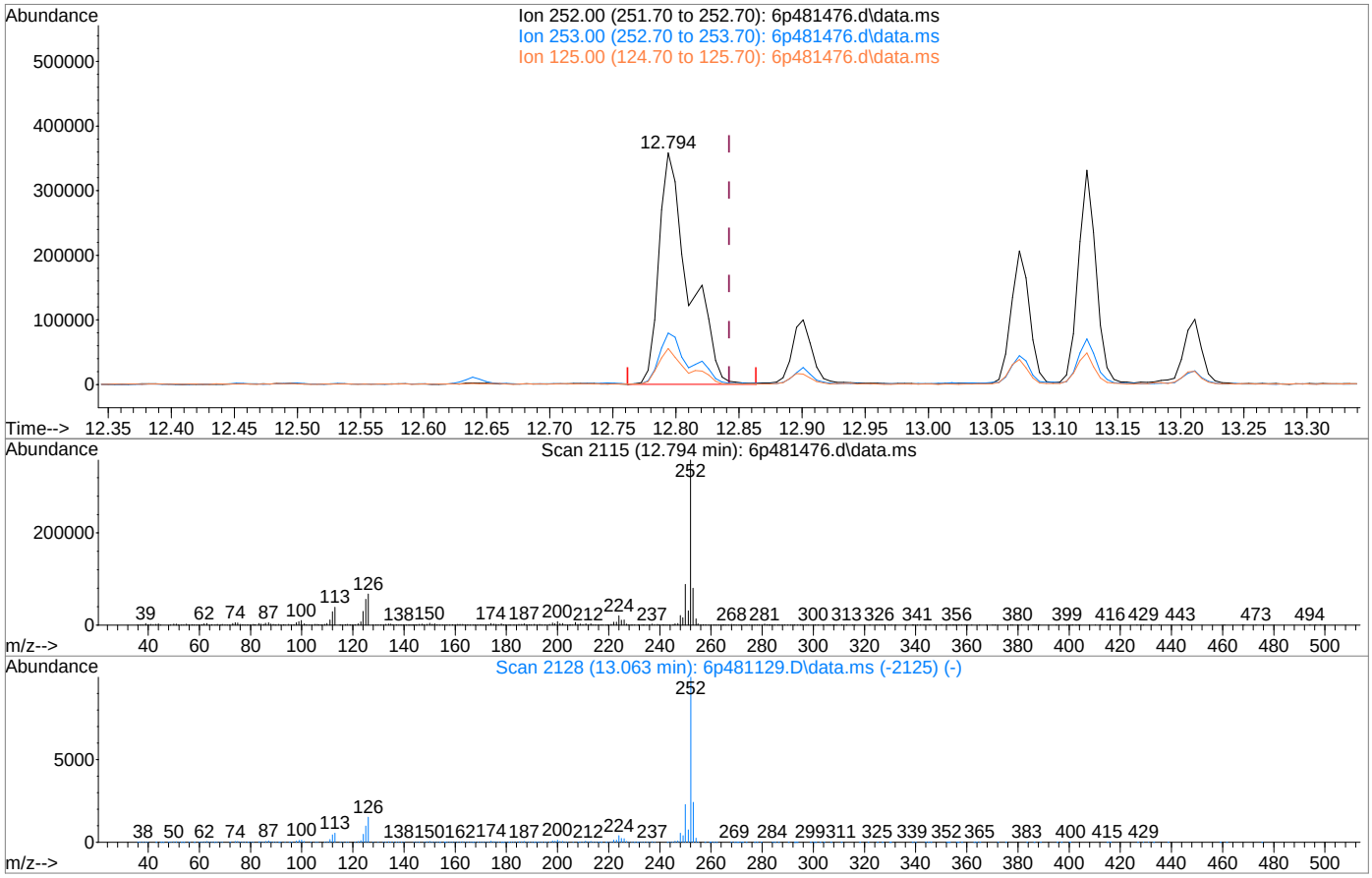
response 591375

Ion	Exp%	Act%
252.00	100	100
253.00	23.50	21.97
125.00	13.40	15.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481476.d
Acq On : 29 Apr 2019 7:12 pm
Operator : angelar
Sample : jc86837-11 Inst : MS6P
Misc : op20035,e6p2576,31.0,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:20:34 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481476.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.794min (-0.048) 14.29ppm

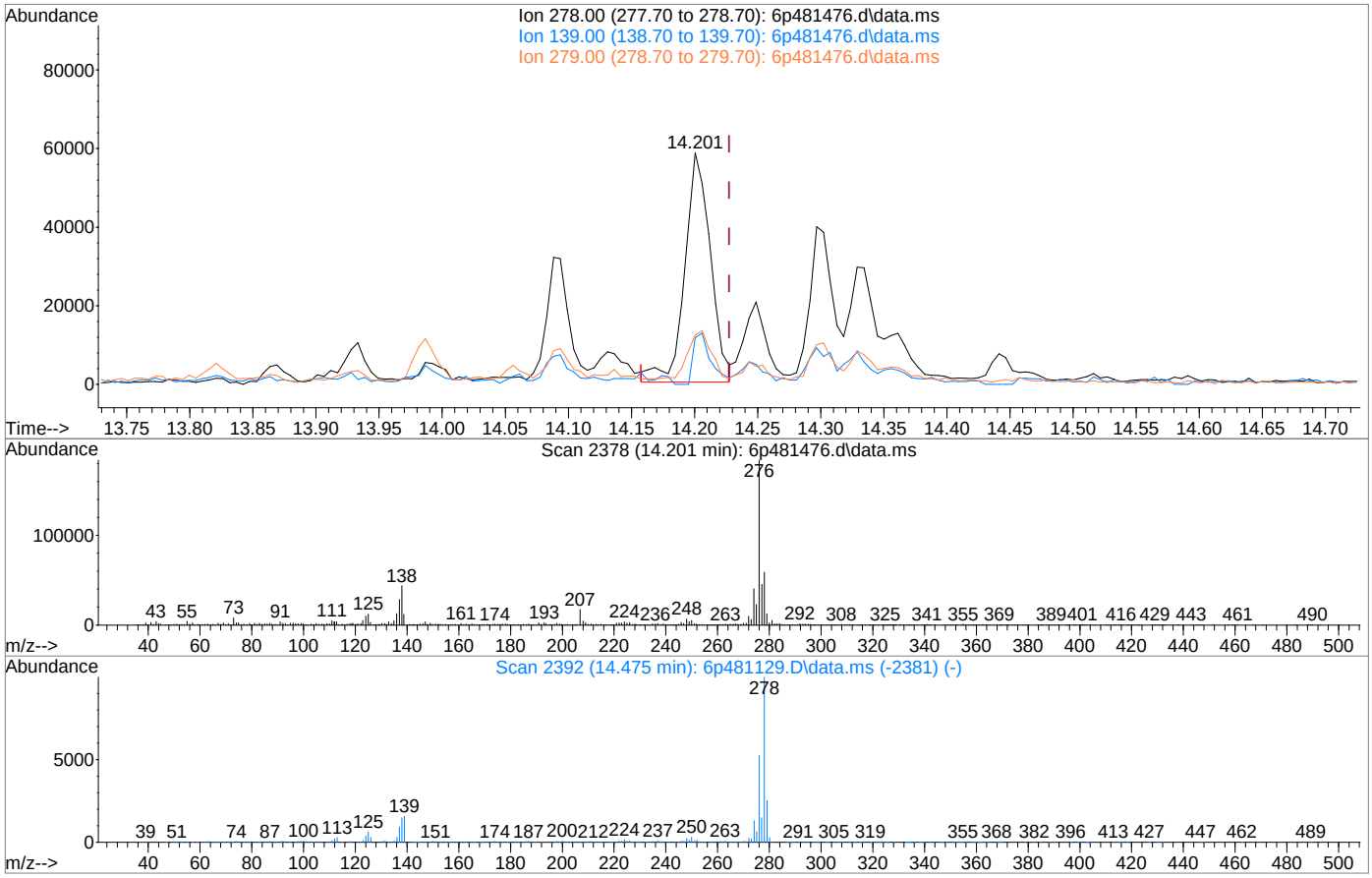
response 591674

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	21.97
125.00	12.60	15.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481476.d
Acq On : 29 Apr 2019 7:12 pm
Operator : angelar
Sample : jc86837-11 Inst : MS6P
Misc : op20035,e6p2576,31.0,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:20:34 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481476.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.201min (-0.027) 1.82ppm

response 82561

Ion	Exp%	Act%
278.00	100	100
139.00	19.50	17.46
279.00	24.70	20.12
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/06/19 18:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481481.d
Acq On : 29 Apr 2019 9:14 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 05:41:50 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

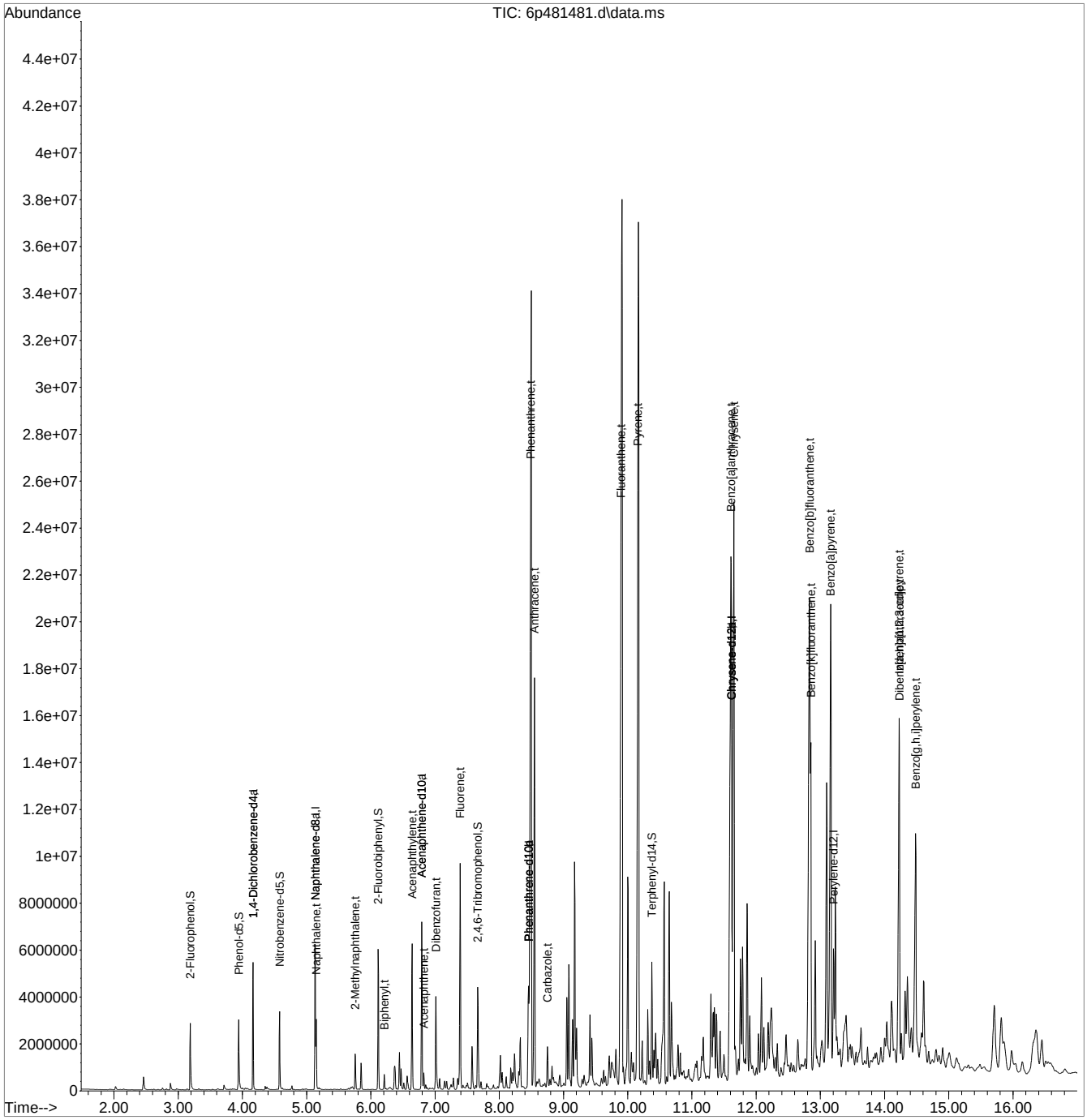
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.166	152	640327	40.00	ppm	0.00
24) Naphthalene-d8	5.135	136	2349432	40.00	ppm	0.00
47) Acenaphthene-d10	6.793	164	1217213	40.00	ppm	-0.01
69) Phenanthrene-d10	8.456	188	2048075	40.00	ppm	0.00
83) Chrysene-d12	11.617	240	1929829	40.00	ppm	0.00
91) Perylene-d12	13.206	264	1645733	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.166	152	640327	40.00	ppm	0.00
103) Acenaphthene-d10a	6.793	164	1217213	40.00	ppm	-0.01
105) Phenanthrene-d10a	8.456	188	2048075	40.00	ppm	0.00
109) Chrysene-d12a	11.617	240	1929829	40.00	ppm	0.00
111) Naphthalene-d8a	5.135	136	2349432	40.00	ppm	0.00
113) Phenanthrene-d10b	8.456	188	2048075	40.00	ppm	0.00
115) Chrysene-d12b	11.617	240	1929829	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.188	112	687178	36.69	ppm	0.00
Spiked Amount 50.000			Recovery =	73.38%		
8) Phenol-d5	3.942	99	878910	38.43	ppm	0.00
Spiked Amount 50.000			Recovery =	76.86%		
25) Nitrobenzene-d5	4.578	82	820083	41.94	ppm	0.00
Spiked Amount 50.000			Recovery =	83.88%		
51) 2-Fluorobiphenyl	6.113	172	1553114	36.12	ppm	-0.01
Spiked Amount 50.000			Recovery =	72.24%		
73) 2,4,6-Tribromophenol	7.664	330	231907	35.19	ppm	-0.01
Spiked Amount 50.000			Recovery =	70.38%		
85) Terphenyl-d14	10.376	244	1426275	31.72	ppm	0.00
Spiked Amount 50.000			Recovery =	63.44%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
38) Naphthalene	5.151	128	1040949	17.01	ppm	100
44) 2-Methylnaphthalene	5.755	141	336810	9.73	ppm	95
53) Biphenyl	6.210	154	181092	3.89	ppm	99
56) Acenaphthylene	6.643	152	2417188	43.63	ppm	100
59) Acenaphthene	6.825	153	146009	3.97	ppm	98
62) Dibenzofuran	7.012	168	1374750	26.85	ppm	93
66) Fluorene	7.392	166	2576679	61.98	ppm	99
77) Phenanthrene	8.488	178	14045232	255.42	ppm	89
78) Anthracene	8.547	178	6670449	120.95	ppm	98
79) Carbazole	8.750	167	651047	12.47	ppm	98
81) Fluoranthene	9.895	202	18884779m	316.10	ppm	
84) Pyrene	10.157	202	15839001	246.37	ppm	93
87) Benzo[a]anthracene	11.606	228	11727619	190.79	ppm	93
89) Chrysene	11.655	228	9786694	162.36	ppm	91
93) Benzo[b]fluoranthene	12.831	252	13262981m	263.85	ppm	
94) Benzo[k]fluoranthene	12.853	252	3702649m	83.21	ppm	
95) Benzo[a]pyrene	13.158	252	8779496	212.59	ppm	96
96) Indeno[1,2,3-cd]pyrene	14.227	276	6182101	112.11	ppm	97
98) Dibenz[a,h]anthracene	14.233	278	1922669	39.35	ppm	91
100) Benzo[g,h,i]perylene	14.484	276	5215030	121.28	ppm	98

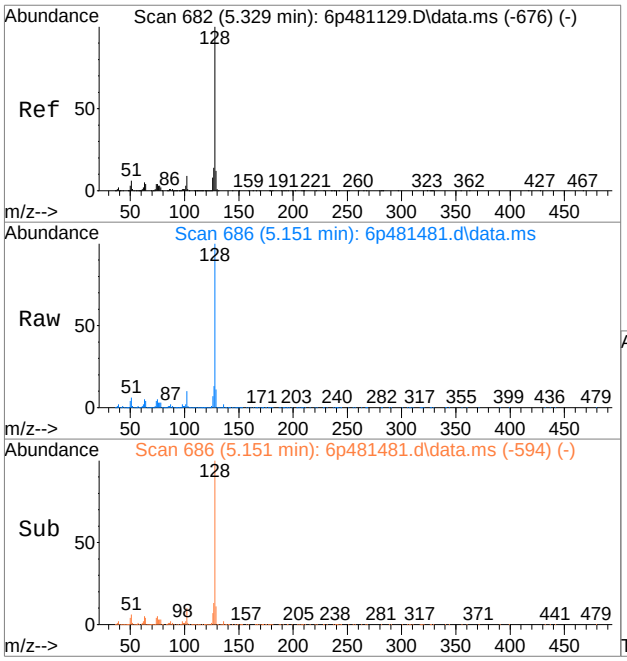
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481481.d
Acq On : 29 Apr 2019 9:14 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 05:41:50 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

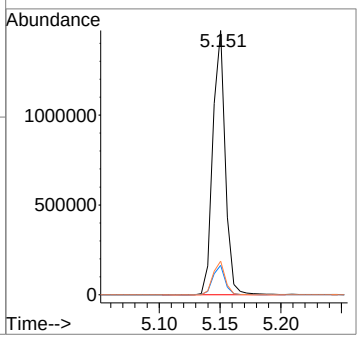


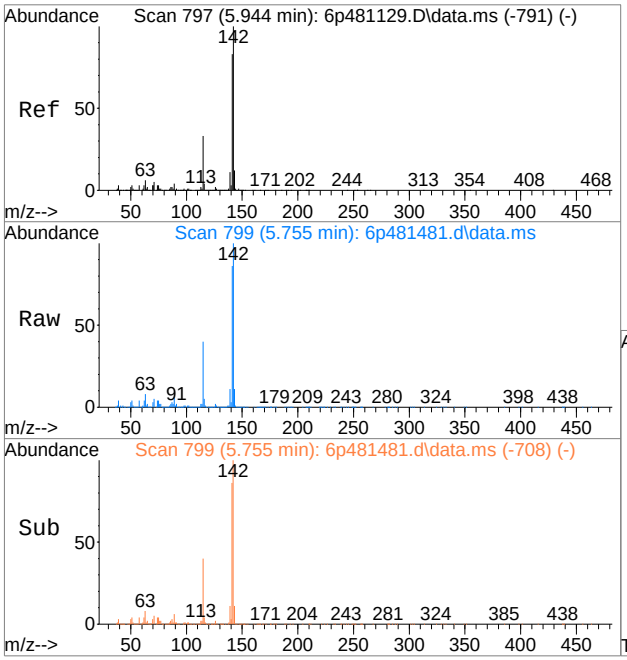


#38
Naphthalene
Concen: 17.01 ppm
RT: 5.151 min Scan# 686
Delta R.T. -0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:128 Resp: 1040949

Ion	Ratio	Lower	Upper
128	100		
129	11.2	0.0	40.9
127	12.7	0.0	42.6

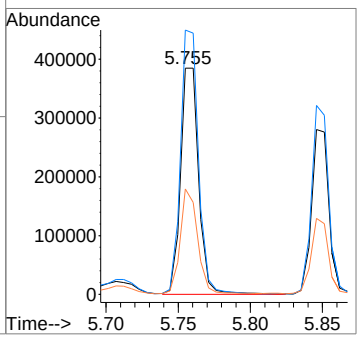


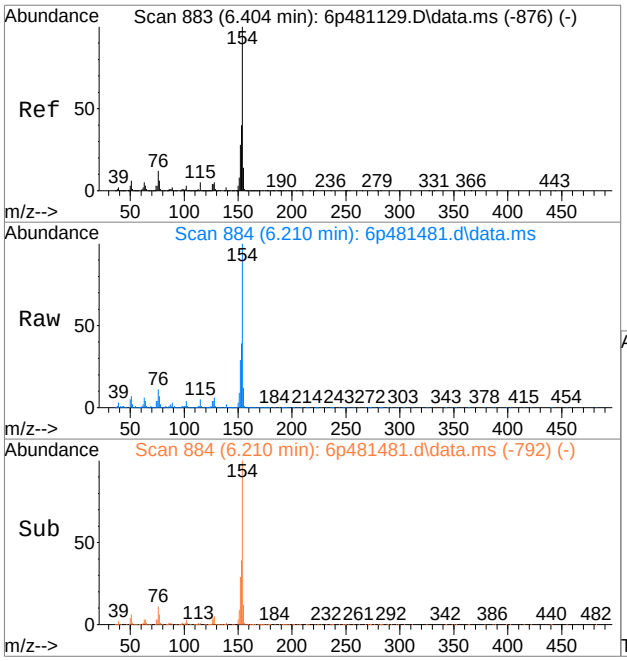


#44
2-Methylnaphthalene
Concen: 9.73 ppm
RT: 5.755 min Scan# 799
Delta R.T. -0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:141 Resp: 336810

Ion	Ratio	Lower	Upper
141	100		
142	116.9	89.8	149.8
115	46.5	9.1	69.1

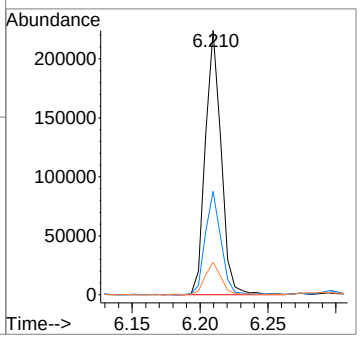


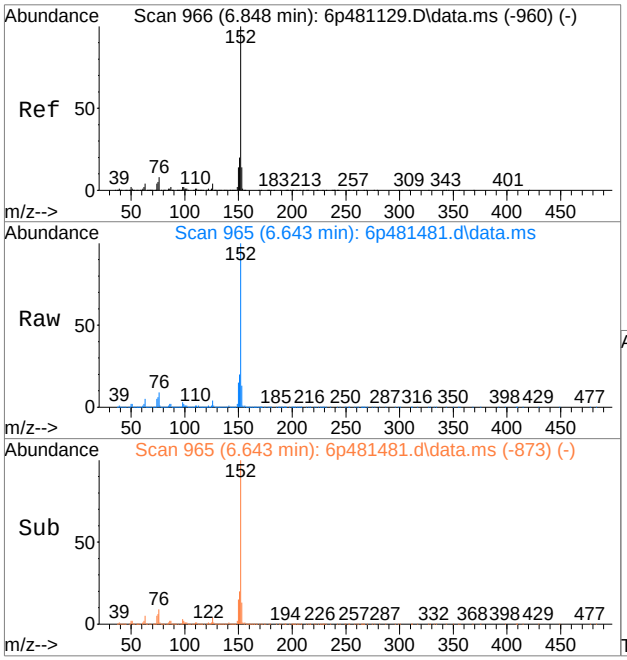


#53
Biphenyl
Concen: 3.89 ppm
RT: 6.210 min Scan# 884
Delta R.T. -0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:154 Resp: 181092

Ion	Ratio	Lower	Upper
154	100		
153	38.9	8.6	68.6
155	12.2	0.0	43.0

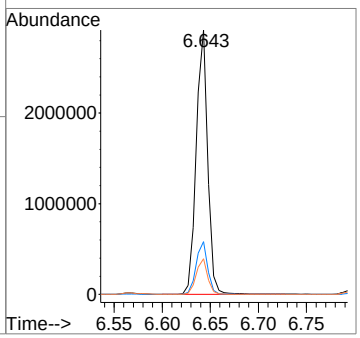


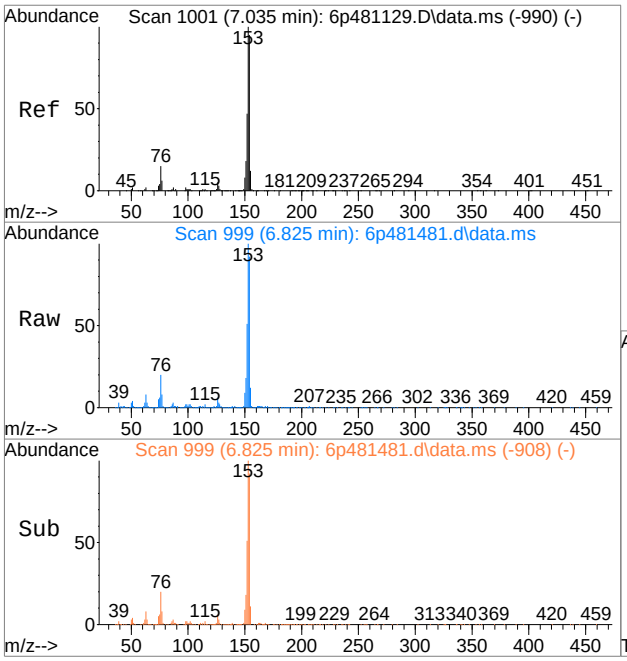


#56
Acenaphthylene
Concen: 43.63 ppm
RT: 6.643 min Scan# 965
Delta R.T. -0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:152 Resp: 2417188

Ion	Ratio	Lower	Upper
152	100		
151	19.9	0.0	49.7
153	13.4	0.0	43.5

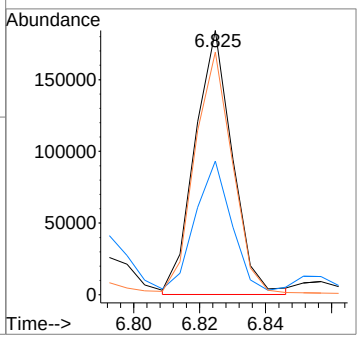


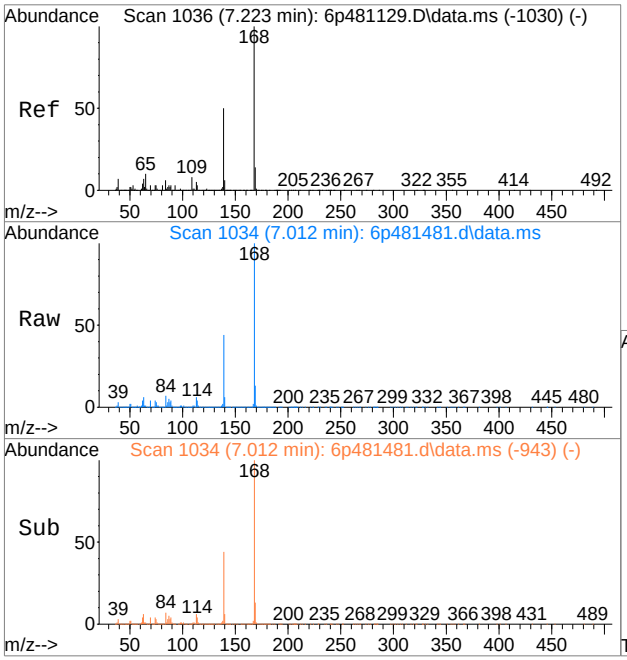


#59
Acenaphthene
Concen: 3.97 ppm
RT: 6.825 min Scan# 999
Delta R.T. -0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:153 Resp: 146009

Ion	Ratio	Lower	Upper
153	100		
152	49.1	18.0	78.0
154	92.7	65.4	125.4

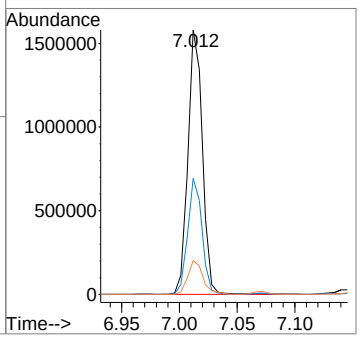


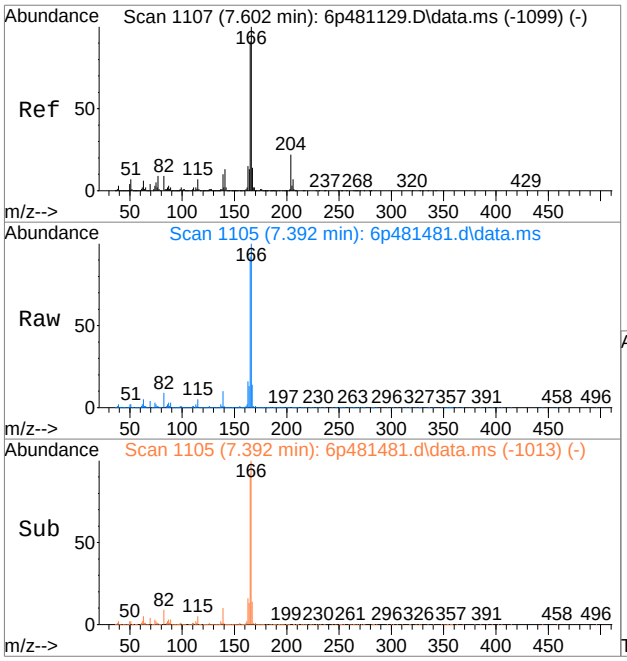


#62
Dibenzofuran
Concen: 26.85 ppm
RT: 7.012 min Scan# 1034
Delta R.T. -0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:168 Resp: 1374750

Ion	Ratio	Lower	Upper
168	100		
139	43.9	8.2	68.2
169	12.8	0.0	42.9

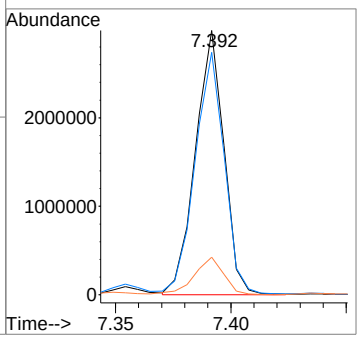


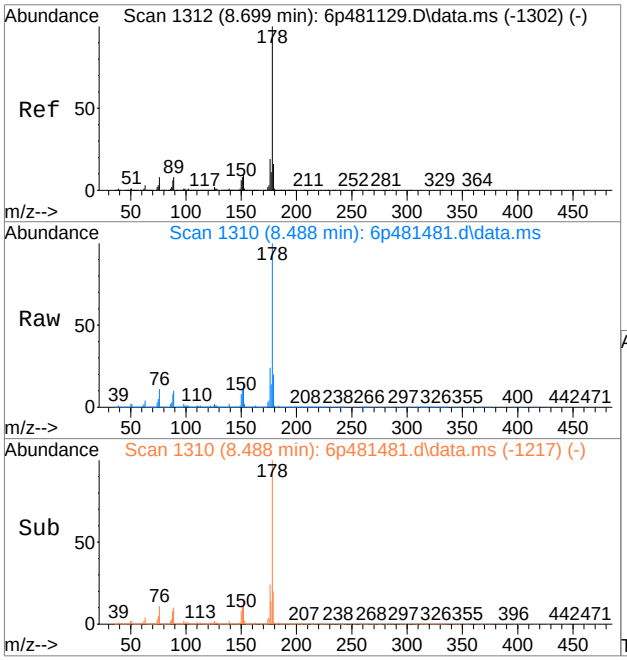


#66
Fluorene
Concen: 61.98 ppm
RT: 7.392 min Scan# 1105
Delta R.T. -0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:166 Resp: 2576679

Ion	Ratio	Lower	Upper
166	100		
165	91.2	62.0	122.0
167	13.8	0.0	43.3

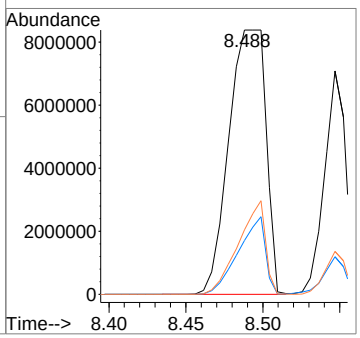


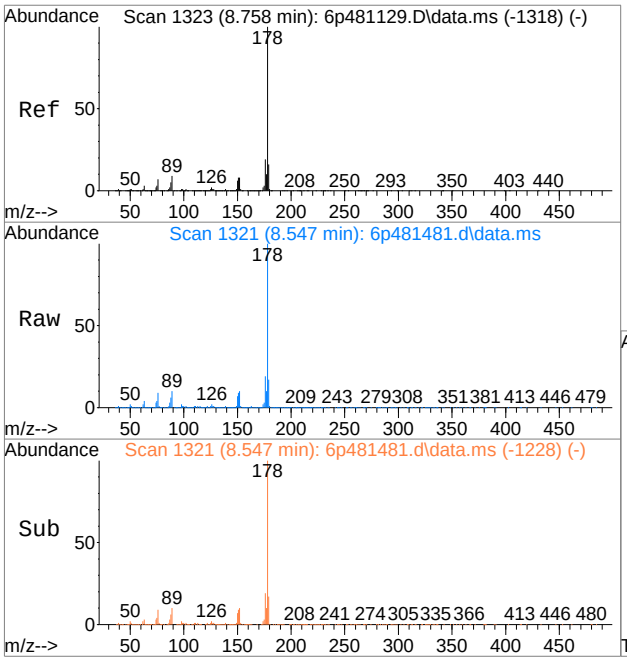


#77
Phenanthrene
Concen: 255.42 ppm
RT: 8.488 min Scan# 1310
Delta R.T. -0.000 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:178 Resp:14045232

Ion	Ratio	Lower	Upper
178	100		
179	20.4	0.0	46.0
176	24.4	0.0	49.2

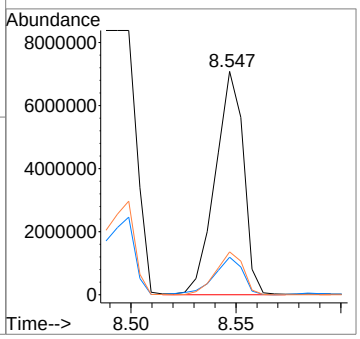


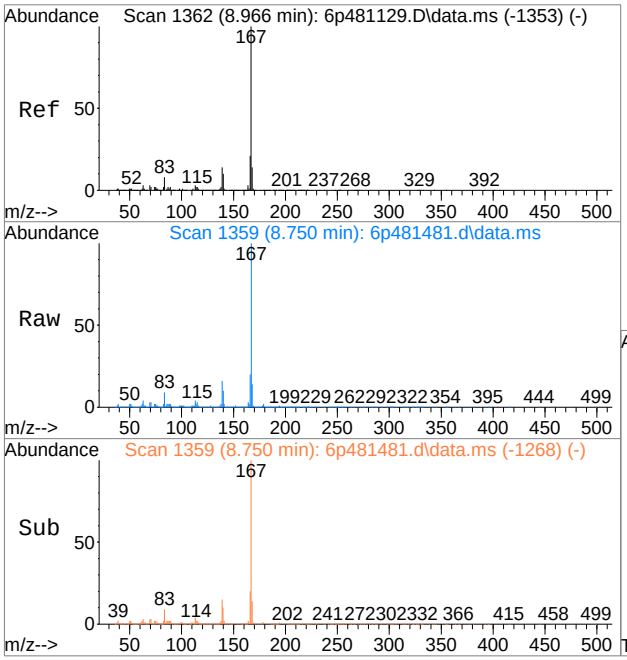


#78
Anthracene
Concen: 120.95 ppm
RT: 8.547 min Scan# 1321
Delta R.T. -0.000 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:178 Resp: 6670449

Ion	Ratio	Lower	Upper
178	100		
179	16.8	0.0	45.3
176	19.2	0.0	48.5

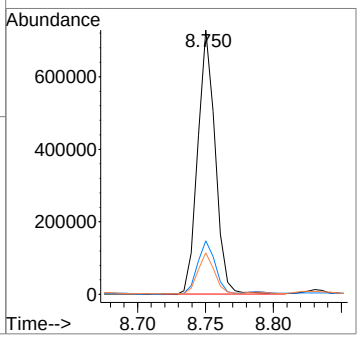


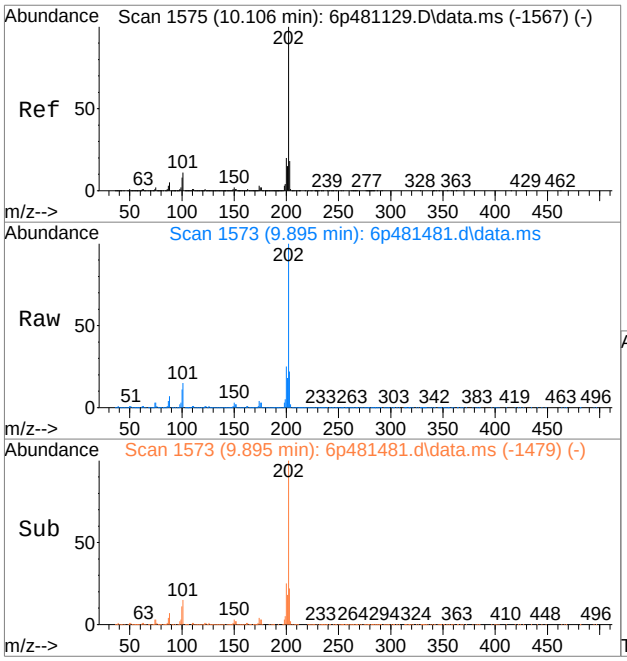


#79
Carbazole
Concen: 12.47 ppm
RT: 8.750 min Scan# 1359
Delta R.T. -0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:167 Resp: 651047

Ion	Ratio	Lower	Upper
167	100		
166	20.1	0.0	50.4
139	15.5	0.0	43.6

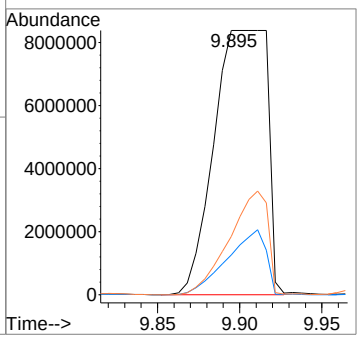


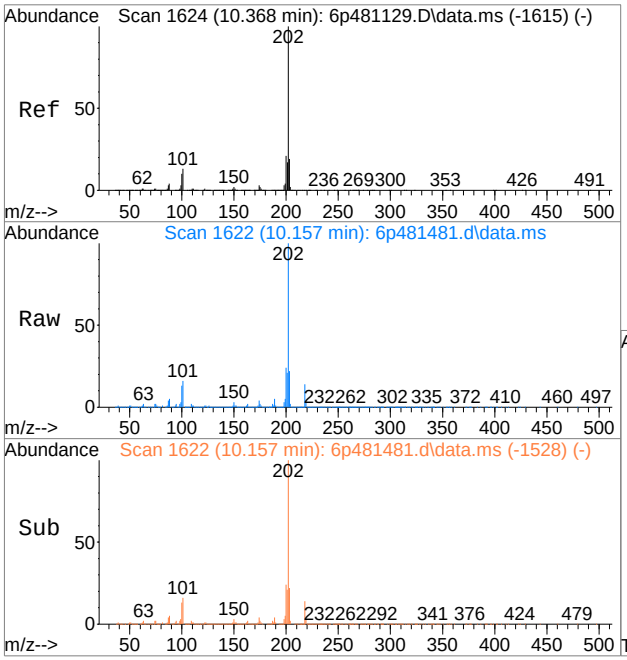


#81
Fluoranthene
Concen: 316.10 ppm m
RT: 9.895 min Scan# 1573
Delta R.T. 0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:202 Resp:18884779

Ion	Ratio	Lower	Upper
202	100		
101	15.1	0.0	43.8
203	22.1	0.0	47.8

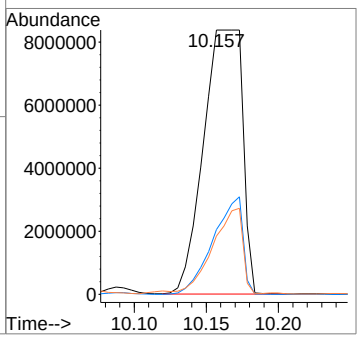


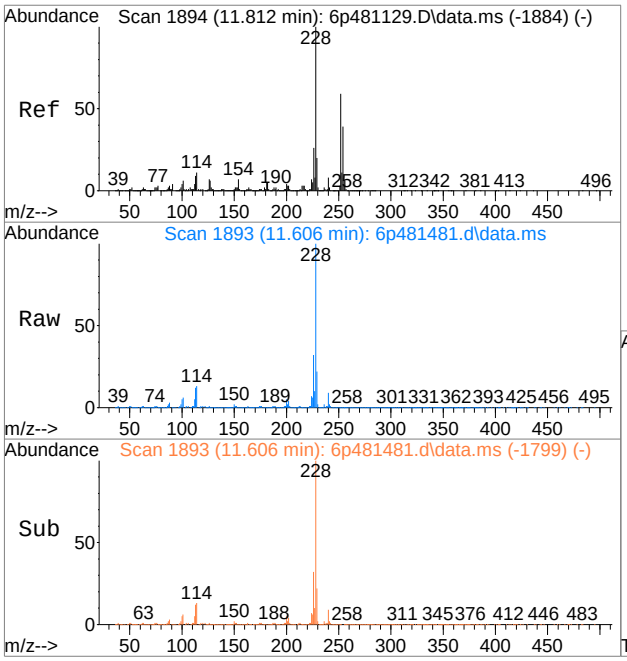


#84
Pyrene
Concen: 246.37 ppm
RT: 10.157 min Scan# 1622
Delta R.T. 0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:202 Resp:15839001

Ion	Ratio	Lower	Upper
202	100		
200	24.5	0.0	51.0
203	21.3	0.0	48.7

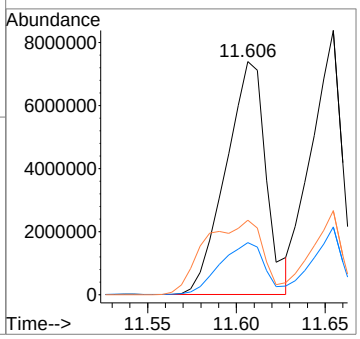


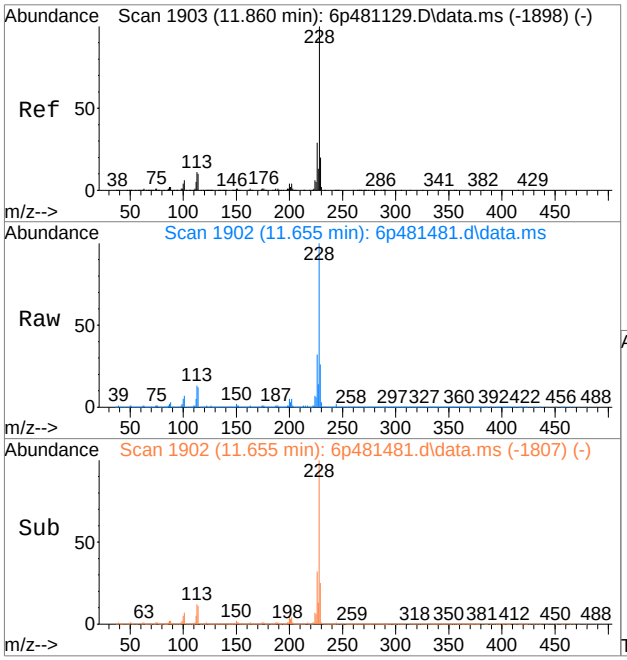


#87
Benzo[a]anthracene
Concen: 190.79 ppm
RT: 11.606 min Scan# 1893
Delta R.T. 0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:228 Resp:11727619

Ion	Ratio	Lower	Upper
228	100		
229	22.2	0.0	49.8
226	31.8	0.0	57.3

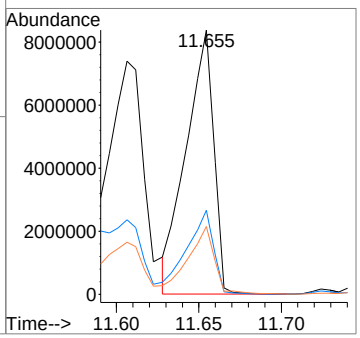


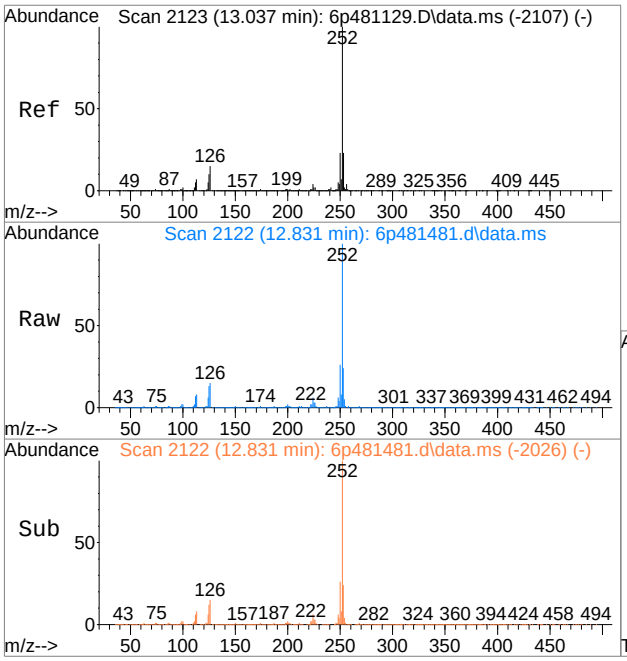


#89
Chrysene
Concen: 162.36 ppm
RT: 11.655 min Scan# 1902
Delta R.T. 0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:228 Resp: 9786694

Ion	Ratio	Lower	Upper
228	100		
226	31.7	0.0	59.1
229	25.8	0.0	49.2

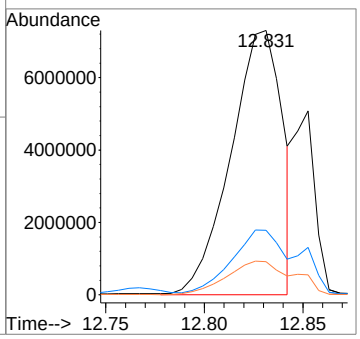


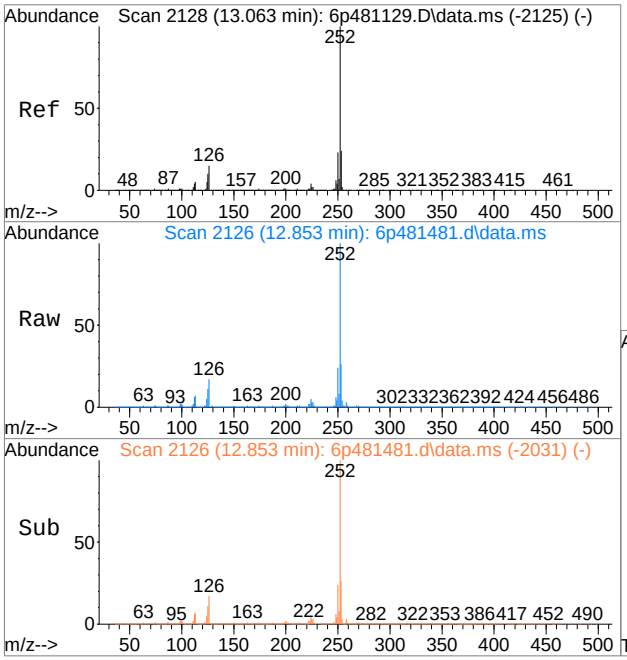


#93
Benzo[b]fluoranthene
Concen: 263.85 ppm m
RT: 12.831 min Scan# 2122
Delta R.T. 0.016 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:252 Resp:13262981

Ion	Ratio	Lower	Upper
252	100		
253	24.4	0.0	53.5
125	12.6	0.0	43.4

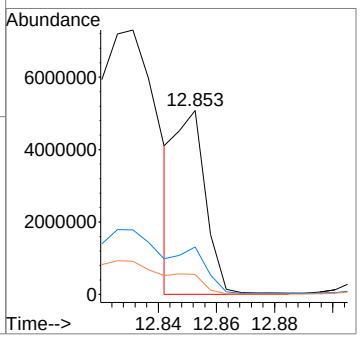


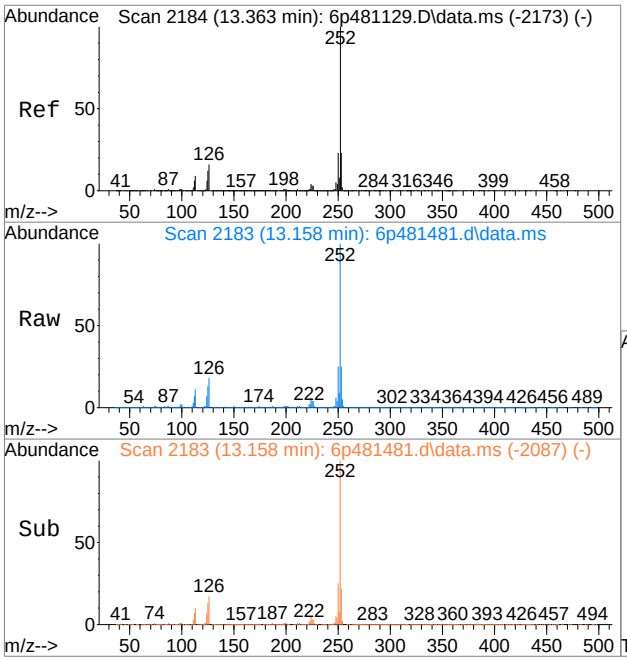


#94
Benzo[k]fluoranthene
Concen: 83.21 ppm m
RT: 12.853 min Scan# 2126
Delta R.T. 0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:252 Resp: 3702649

Ion	Ratio	Lower	Upper
252	100		
253	25.8	0.0	51.6
125	10.8	0.0	42.6

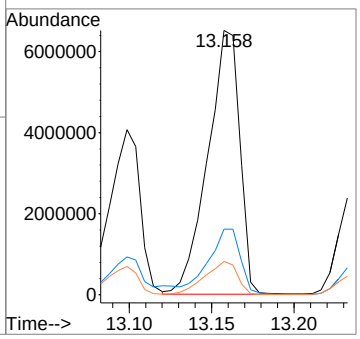


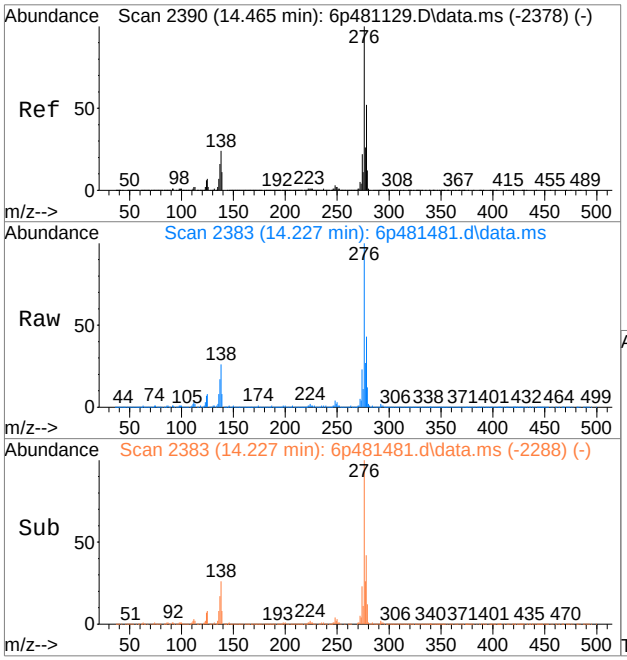


#95
Benzo[a]pyrene
Concen: 212.59 ppm
RT: 13.158 min Scan# 2183
Delta R.T. 0.016 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:252 Resp: 8779496

Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	51.9
125	12.6	0.0	44.5

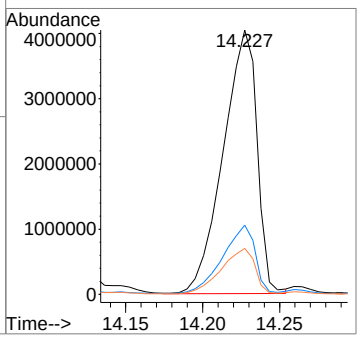


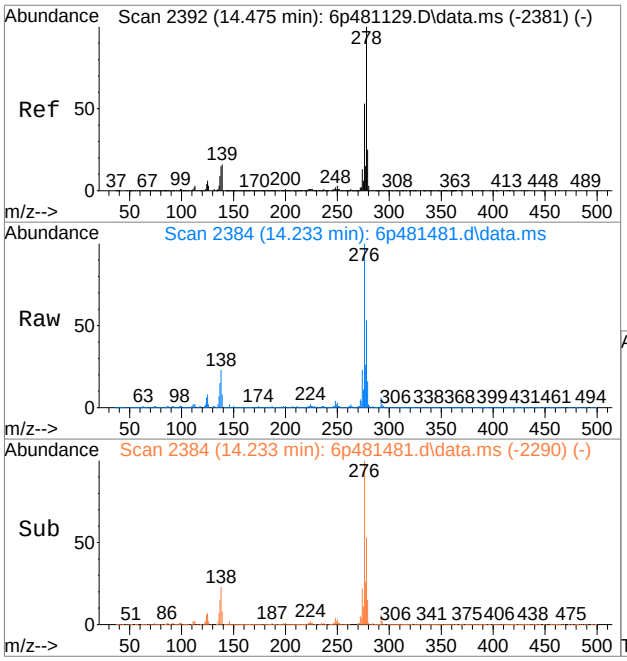


#96
Indeno[1,2,3-cd]pyrene
Concen: 112.11 ppm
RT: 14.227 min Scan# 2383
Delta R.T. 0.011 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:276 Resp: 6182101

Ion	Ratio	Lower	Upper
276	100		
138	25.7	0.0	57.4
137	17.2	0.0	48.8

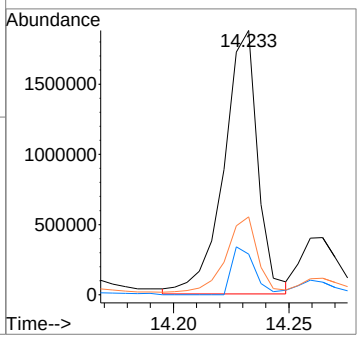


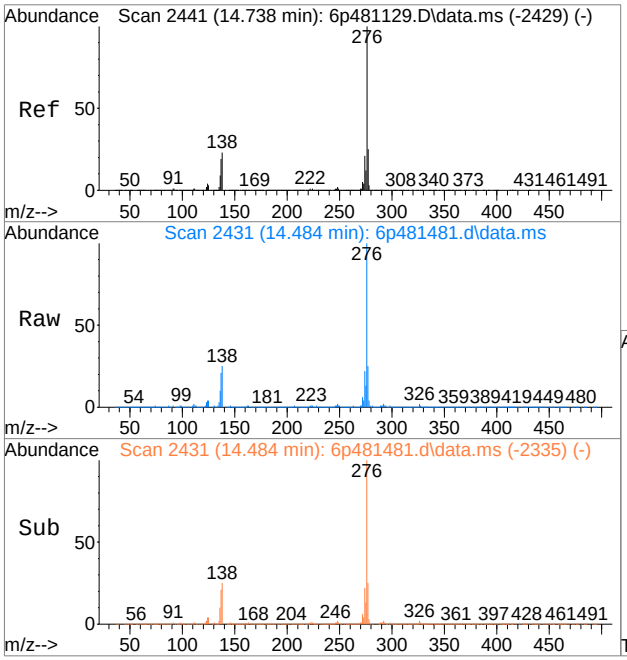


#98
Dibenz[a,h]anthracene
Concen: 39.35 ppm
RT: 14.233 min Scan# 2384
Delta R.T. 0.005 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:278 Resp: 1922669

Ion	Ratio	Lower	Upper
278	100		
139	15.0	0.0	49.5
279	29.1	0.0	54.7

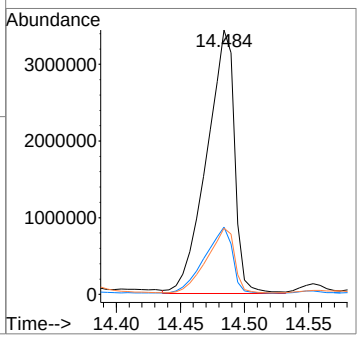




#100
Benzo[g,h,i]perylene
Concen: 121.28 ppm
RT: 14.484 min Scan# 2431
Delta R.T. 0.016 min
Lab File: 6p481481.d
Acq: 29 Apr 2019 9:14 pm

Tgt Ion:276 Resp: 5215030

Ion	Ratio	Lower	Upper
276	100		
138	25.2	0.0	54.9
277	24.7	0.0	53.3



Manual Integration Approval Summary

Sample Number: JC86837-12
Lab FileID: 6P481481.D
Injection Time: 04/29/19 21:14

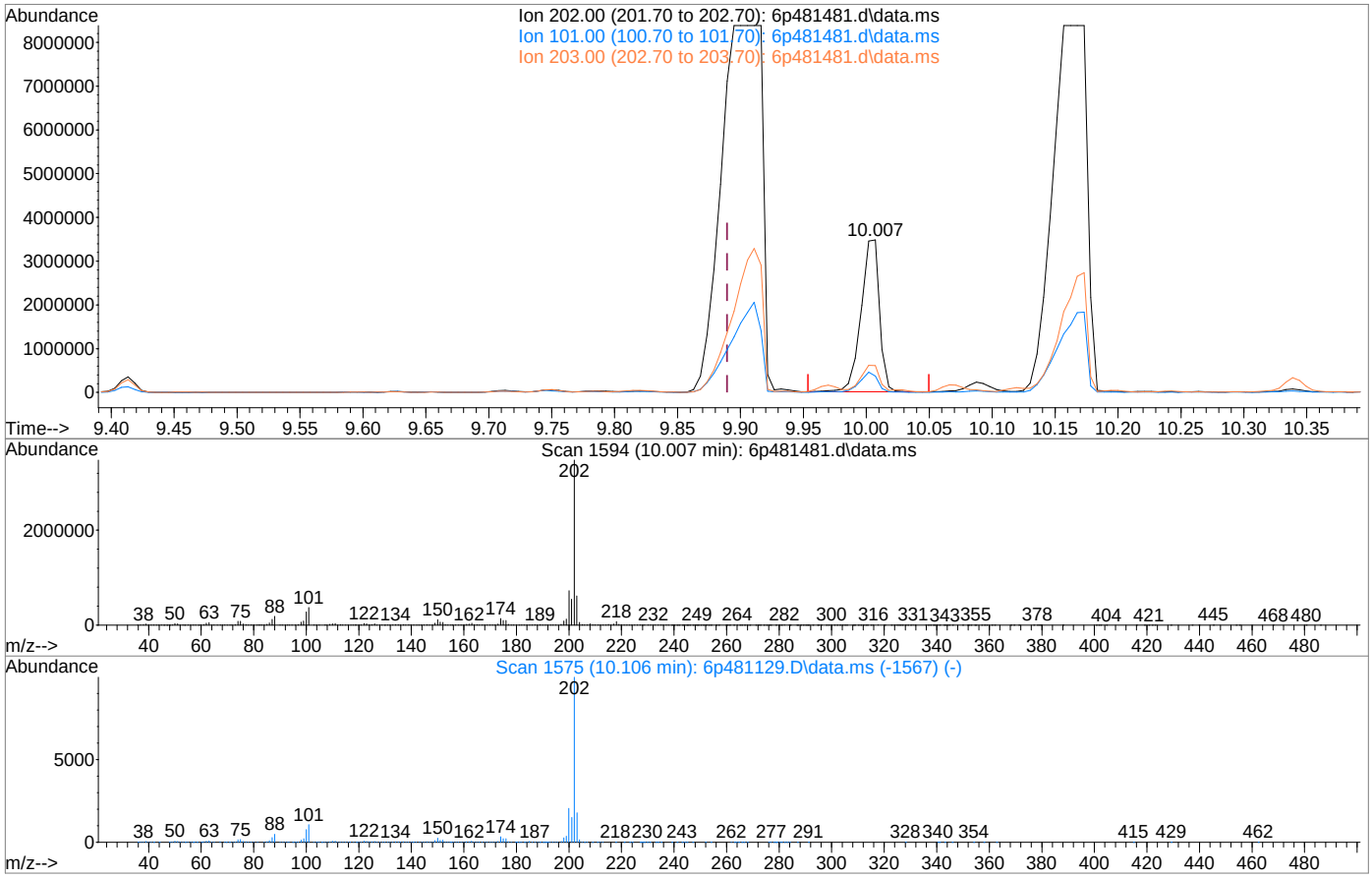
Method: SW846 8270D
Analyst approved: 05/06/19 17:51 Kristi Schollenberger
Supervisor approved: 05/06/19 18:34 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Fluoranthene	206-44-0		9.89	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		12.83	Overlapping peak
Benzo(k)fluoranthene	207-08-9		12.85	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481481.d
Acq On : 29 Apr 2019 9:14 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:21:21 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481481.d\data.ms

(81) Fluoranthene (t)

10.007min (+0.118) 59.73ppm

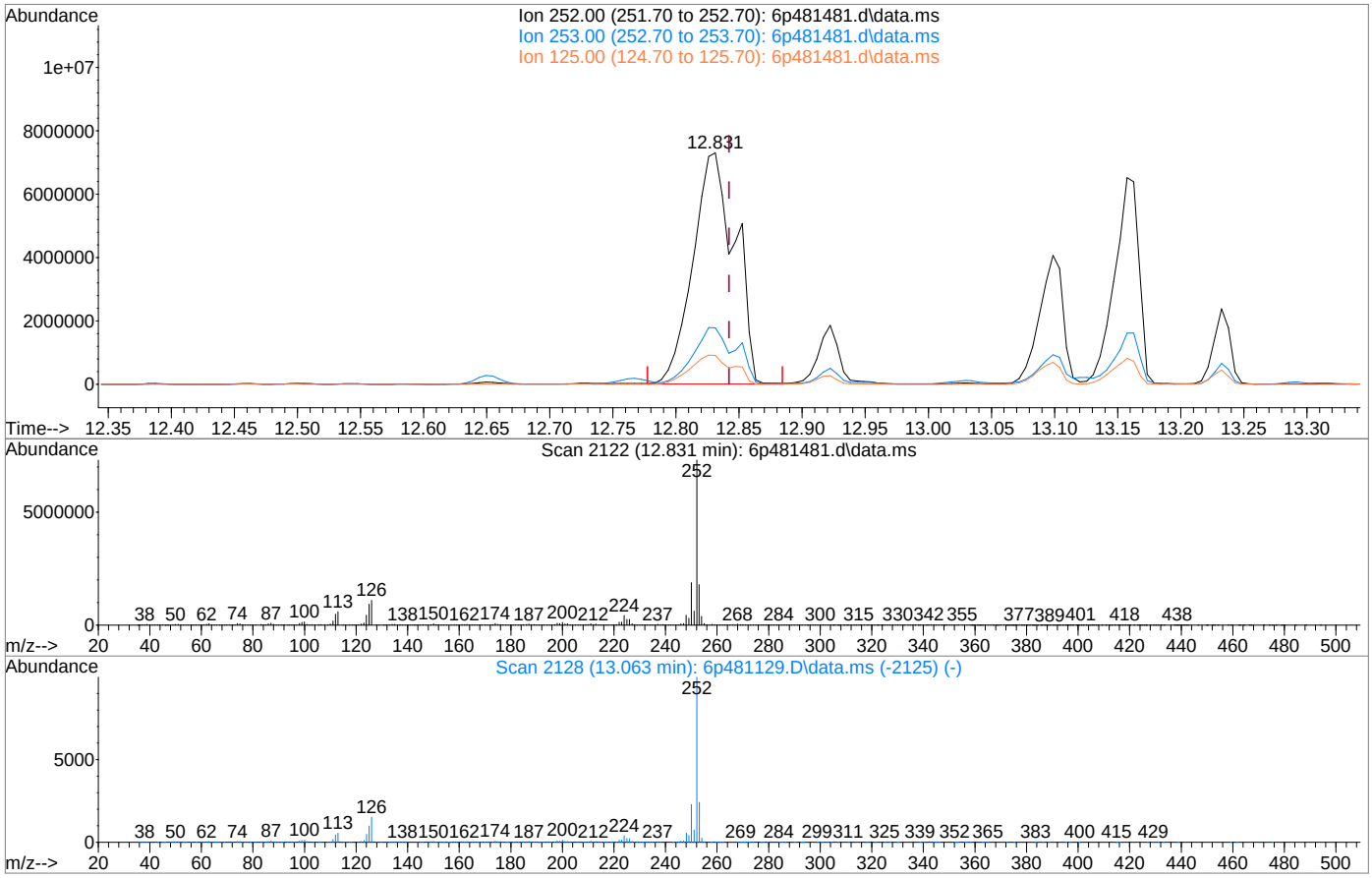
response 3568447

Ion	Exp%	Act%
202.00	100	100
101.00	13.80	10.55
203.00	17.80	17.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481481.d
Acq On : 29 Apr 2019 9:14 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:21:21 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481481.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.831min (-0.011) 380.03ppm

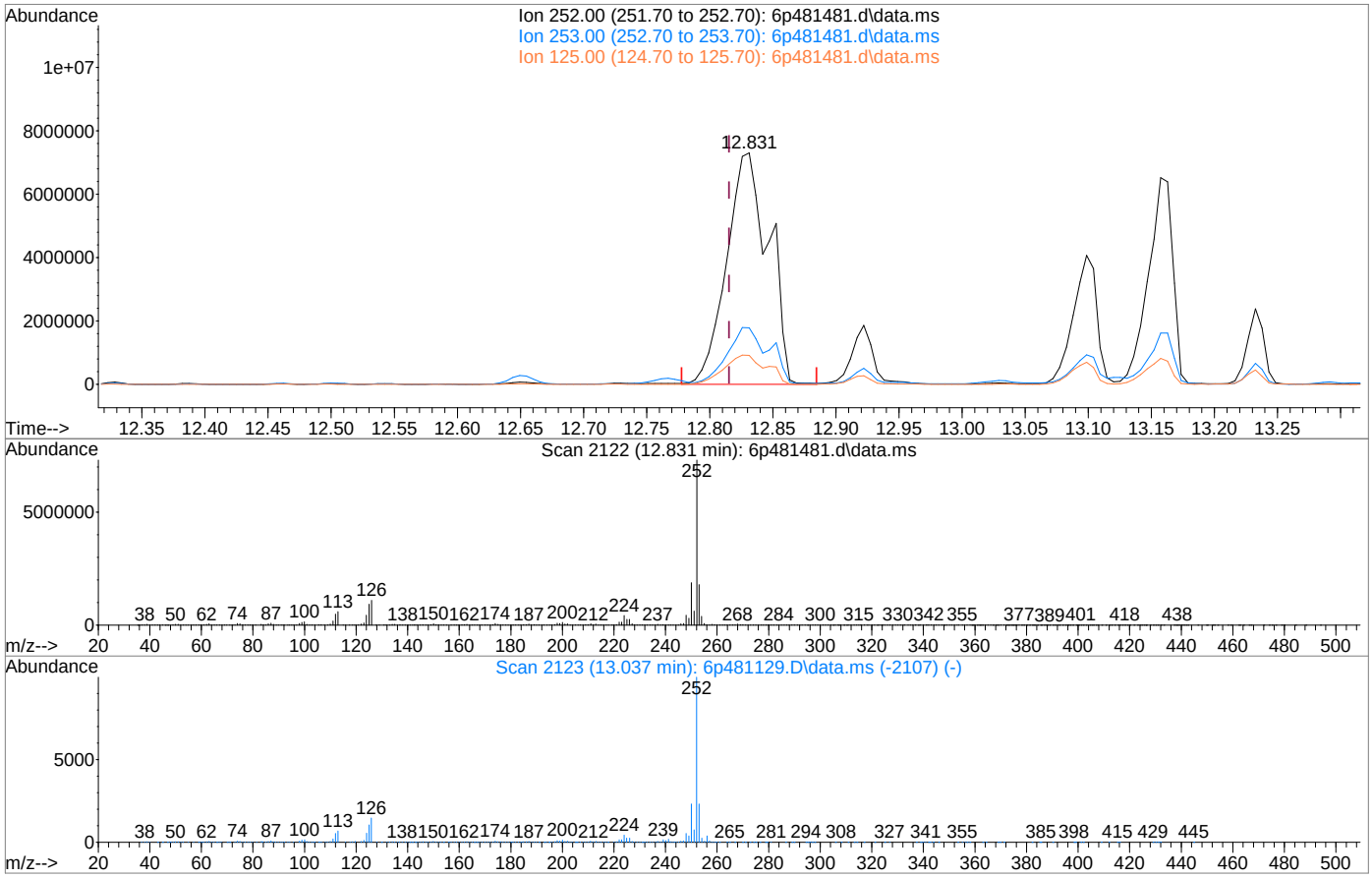
response 16910949

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	23.50
125.00	12.60	12.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481481.d
Acq On : 29 Apr 2019 9:14 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:21:21 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481481.d\data.ms

(93) Benzo[b]fluoranthene (t)

12.831min (+0.016) 336.85ppm

response 16932058

Ion	Exp%	Act%
252.00	100	100
253.00	23.50	23.50
125.00	13.40	12.52
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nancy Ma
05/06/19 18:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481536.d
Acq On : 1 May 2019 5:25 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2578,31.2,,,1,10
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:40:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

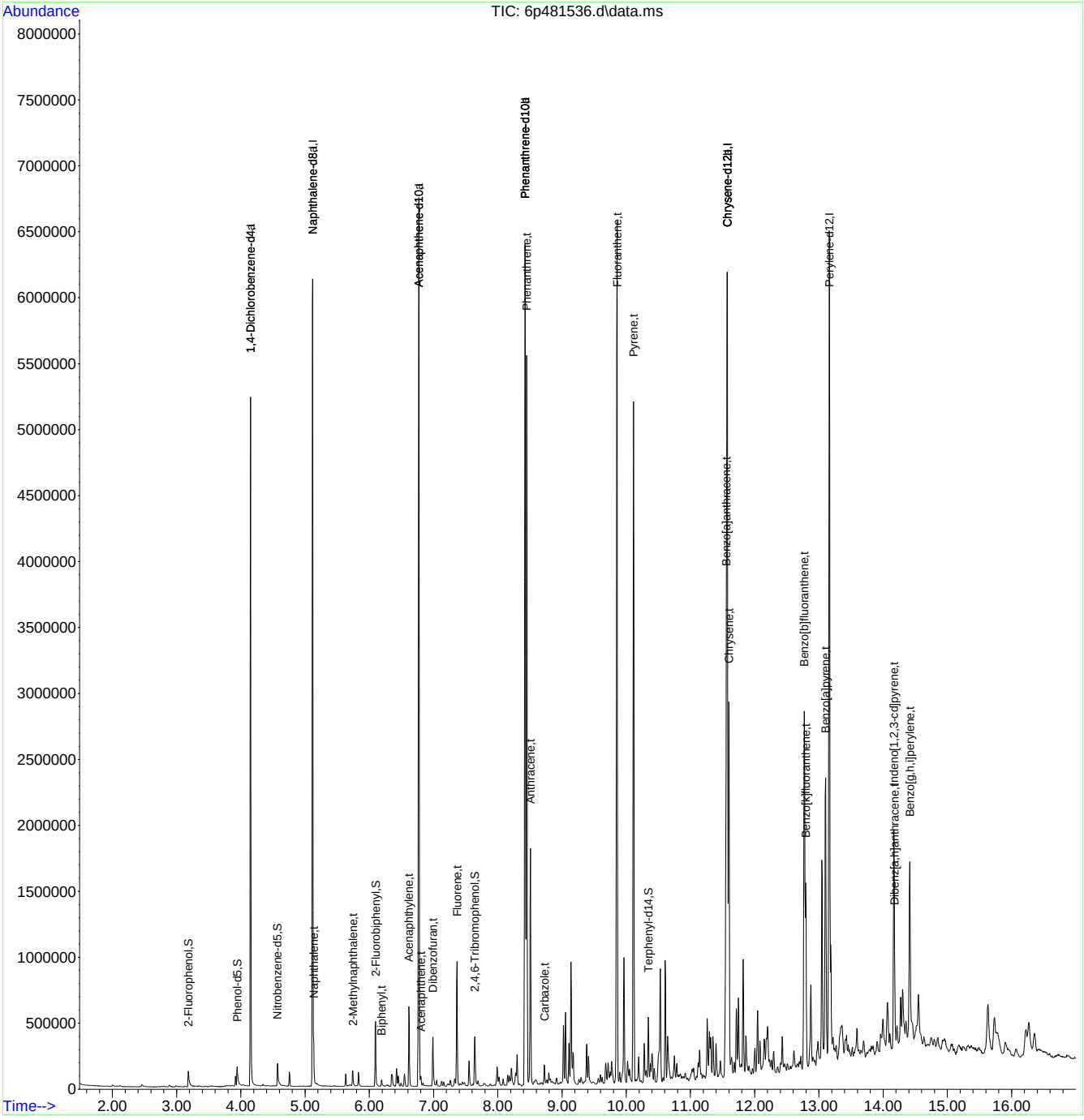
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.150	152	622510	40.00	ppm	0.00
24) Naphthalene-d8	5.119	136	2332382	40.00	ppm	0.00
47) Acenaphthene-d10	6.771	164	1303063	40.00	ppm	0.00
69) Phenanthrene-d10	8.424	188	2366747	40.00	ppm	0.00
83) Chrysene-d12	11.574	240	2039789	40.00	ppm	0.00
91) Perylene-d12	13.163	264	2345305	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.150	152	622510	40.00	ppm	0.00
103) Acenaphthene-d10a	6.771	164	1303063	40.00	ppm	0.00
105) Phenanthrene-d10a	8.424	188	2366747	40.00	ppm	0.00
109) Chrysene-d12a	11.574	240	2039789	40.00	ppm	0.00
111) Naphthalene-d8a	5.119	136	2332382	40.00	ppm	0.00
113) Phenanthrene-d10b	8.424	188	2366747	40.00	ppm	0.00
115) Chrysene-d12b	11.574	240	2039789	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.182	112	53520	2.94	ppm	0.02
Spiked Amount 50.000			Recovery =	5.88%		
8) Phenol-d5	3.942	99	75173	3.38	ppm	0.01
Spiked Amount 50.000			Recovery =	6.76%		
25) Nitrobenzene-d5	4.568	82	72702	3.75	ppm	0.00
Spiked Amount 50.000			Recovery =	7.50%		
51) 2-Fluorobiphenyl	6.097	172	152192	3.31	ppm	0.00
Spiked Amount 50.000			Recovery =	6.62%		
73) 2,4,6-Tribromophenol	7.643	330	24433	3.21	ppm	0.00
Spiked Amount 50.000			Recovery =	6.42%		
85) Terphenyl-d14	10.344	244	165727	3.49	ppm	0.00
Spiked Amount 50.000			Recovery =	6.98%		
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	5.135	128	98048	1.61	ppm	99
44) 2-Methylnaphthalene	5.744	141	31801	0.93	ppm	95
53) Biphenyl	6.188	154	17334	0.35	ppm	92
56) Acenaphthylene	6.616	152	245249	4.14	ppm	98
59) Acenaphthene	6.803	153	15543	0.39	ppm	96
62) Dibenzofuran	6.991	168	141939	2.59	ppm	96
66) Fluorene	7.365	166	259397	5.83	ppm	98
77) Phenanthrene	8.451	178	1941883	30.56	ppm	99
78) Anthracene	8.510	178	685375	10.75	ppm	99
79) Carbazole	8.729	167	69702	1.16	ppm	97
81) Fluoranthene	9.857	202	2694030	39.02	ppm	97
84) Pyrene	10.114	202	1944544	28.62	ppm	99
87) Benzo[a]anthracene	11.558	228	1148505	17.68	ppm	94
89) Chrysene	11.601	228	1002951	15.74	ppm	98
93) Benzo[b]fluoranthene	12.773	252	1334191m	18.63	ppm	
94) Benzo[k]fluoranthene	12.794	252	406475m	6.41	ppm	
95) Benzo[a]pyrene	13.104	252	884725	15.03	ppm	97
96) Indeno[1,2,3-cd]pyrene	14.168	276	638645	8.13	ppm	96
98) Dibenz[a,h]anthracene	14.179	278	164078m	2.36	ppm	
100) Benzo[g,h,i]perylene	14.415	276	599174	9.78	ppm	99

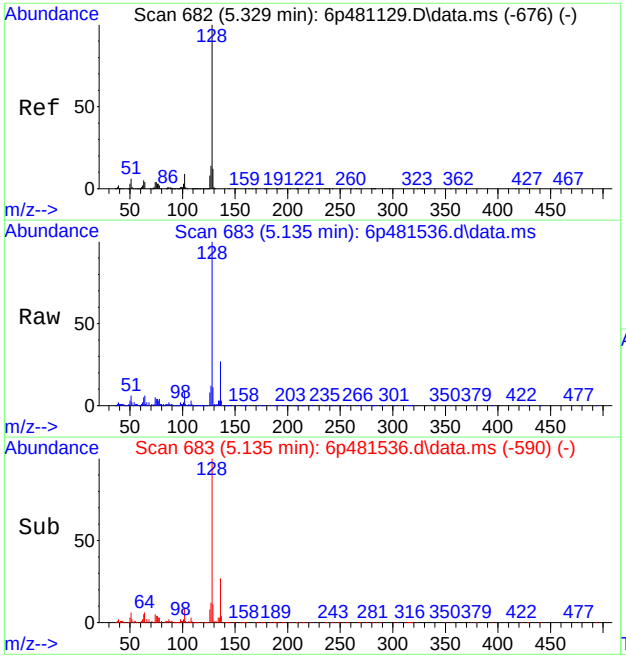
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481536.d
Acq On : 1 May 2019 5:25 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2578,31.2,,,1,10
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:40:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration

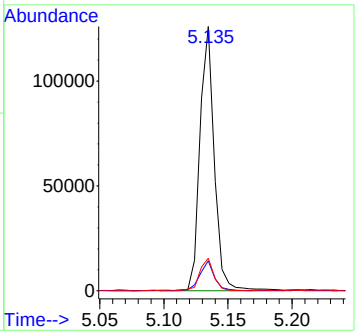


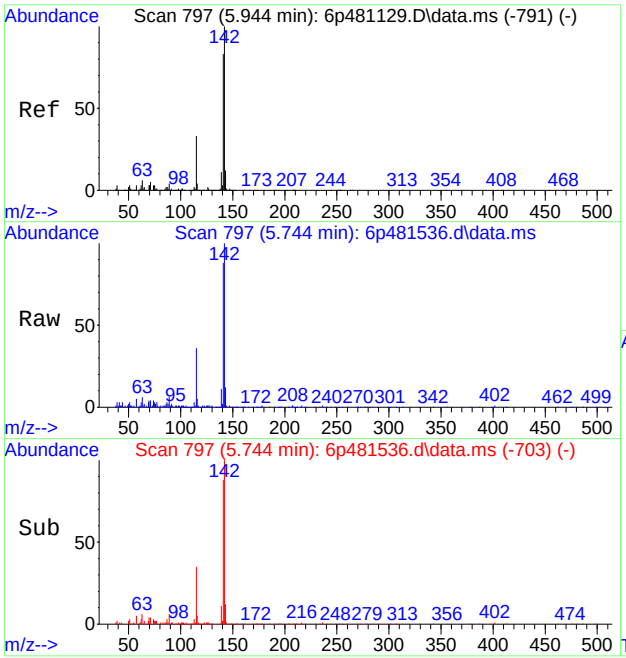


#38
Naphthalene
Concen: 1.61 ppm
RT: 5.135 min Scan# 683
Delta R.T. 0.000 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:128 Resp: 98048

Ion	Ratio	Lower	Upper
128	100		
129	11.3	0.0	41.4
127	12.3	0.0	42.9

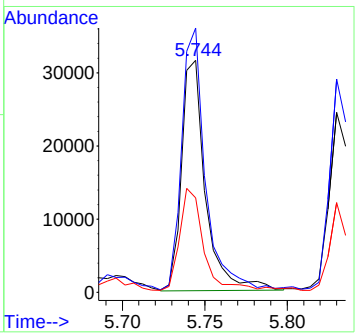


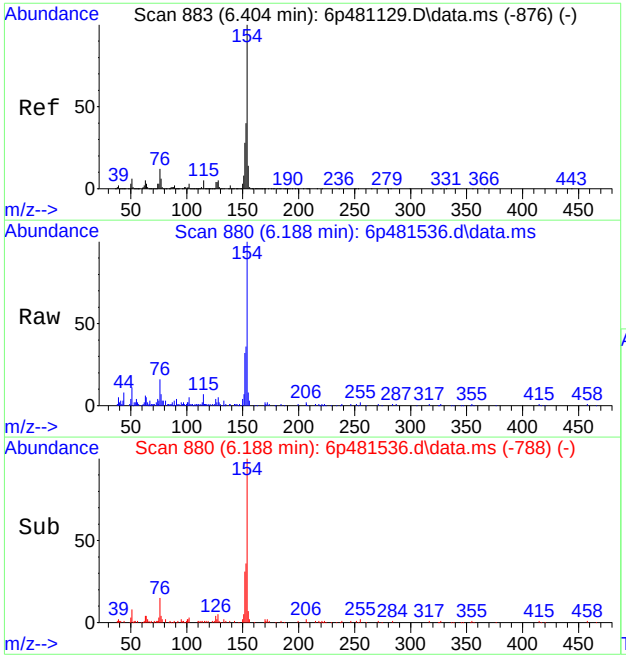


#44
2-Methylnaphthalene
Concen: 0.93 ppm
RT: 5.744 min Scan# 797
Delta R.T. 0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:141 Resp: 31801

Ion	Ratio	Lower	Upper
141	100		
142	113.8	89.0	149.0
115	40.0	13.5	73.5

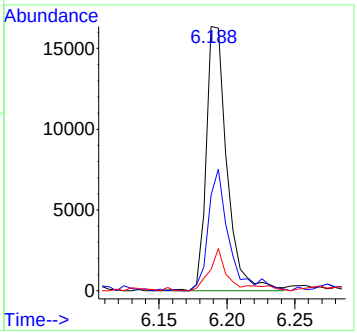


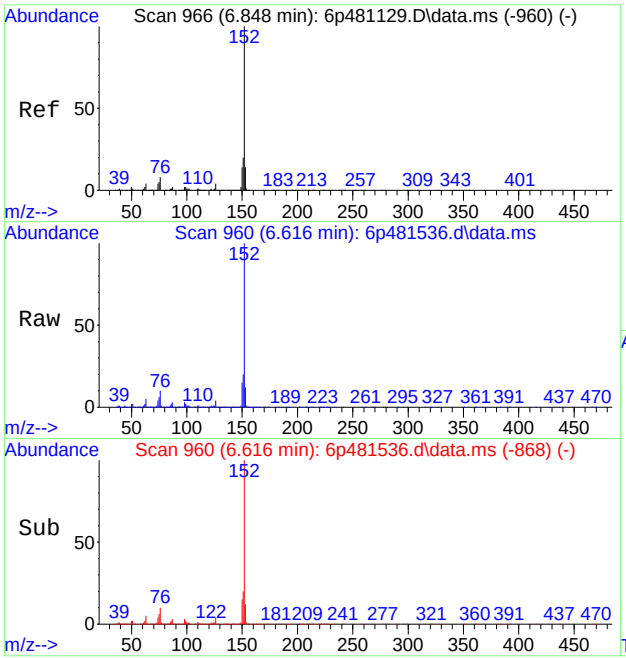


#53
Biphenyl
Concen: 0.35 ppm
RT: 6.188 min Scan# 880
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:154 Resp: 17334

Ion	Ratio	Lower	Upper
154	100		
153	35.8	9.8	69.8
155	7.9	0.0	42.7

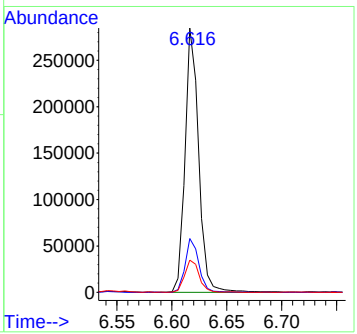


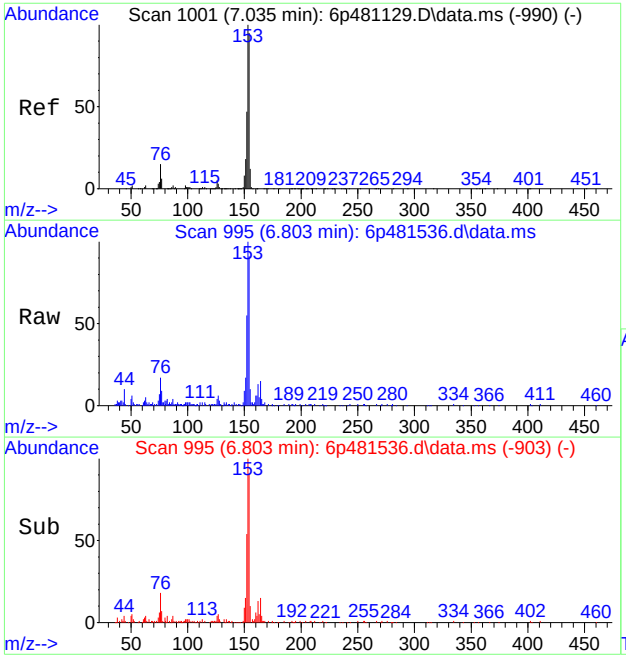


#56
Acenaphthylene
Concen: 4.14 ppm
RT: 6.616 min Scan# 960
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:152 Resp: 245249

Ion	Ratio	Lower	Upper
152	100		
151	20.4	0.0	49.9
153	12.1	0.0	43.2

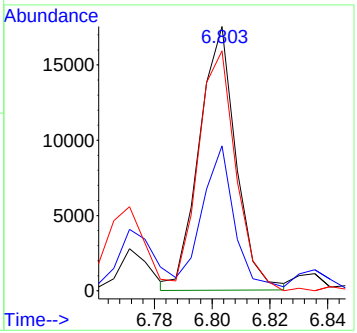


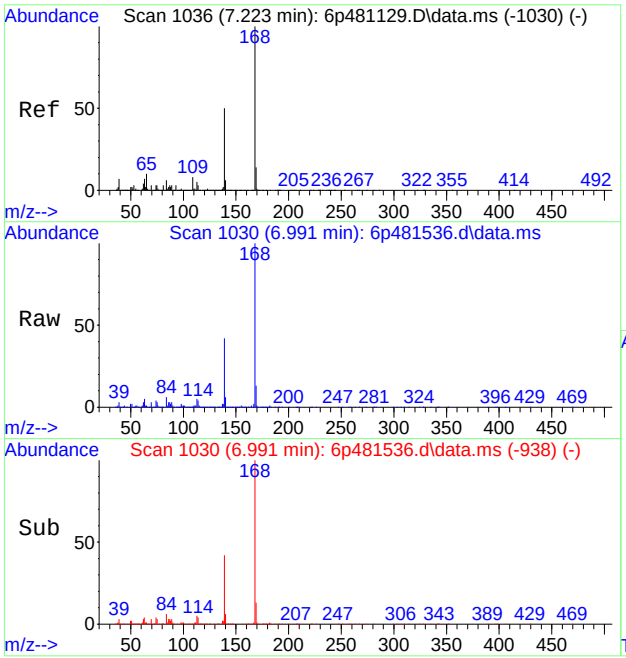


#59
Acenaphthene
Concen: 0.39 ppm
RT: 6.803 min Scan# 995
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:153 Resp: 15543

Ion	Ratio	Lower	Upper
153	100		
152	51.1	17.3	77.3
154	91.4	65.0	125.0

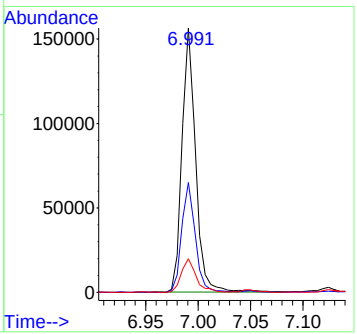


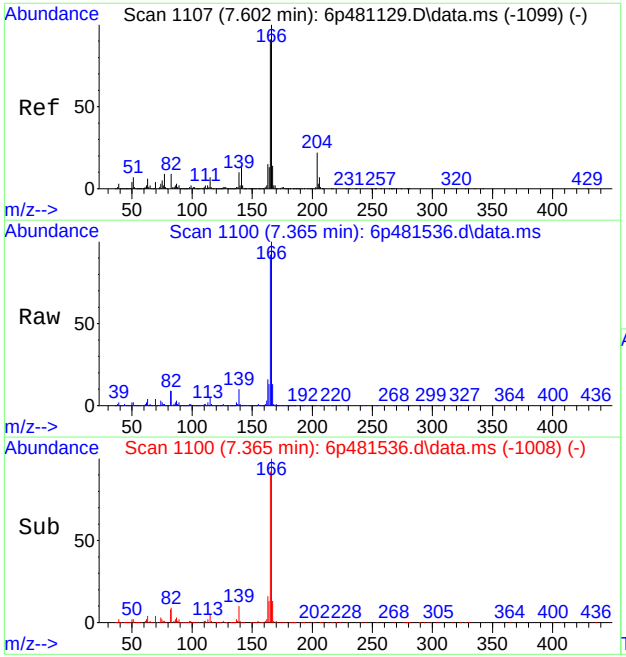


#62
Dibenzofuran
Concen: 2.59 ppm
RT: 6.991 min Scan# 1030
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:168 Resp: 141939

Ion	Ratio	Lower	Upper
168	100		
139	41.6	8.6	68.6
169	12.7	0.0	43.1

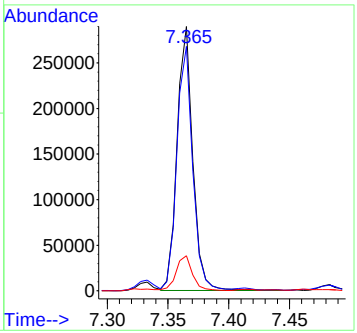


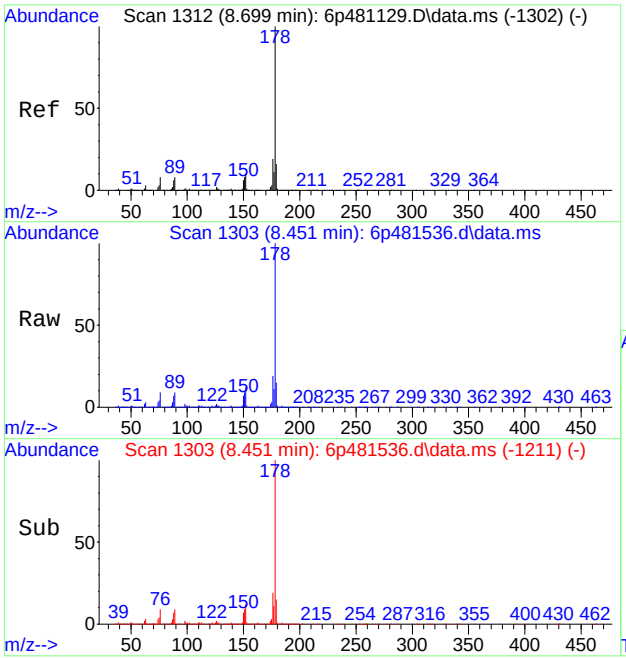


#66
Fluorene
Concen: 5.83 ppm
RT: 7.365 min Scan# 1100
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:166 Resp: 259397

Ion	Ratio	Lower	Upper
166	100		
165	92.3	60.7	120.7
167	13.0	0.0	43.4

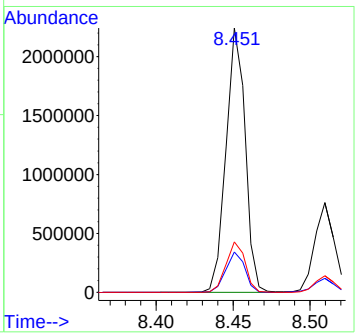


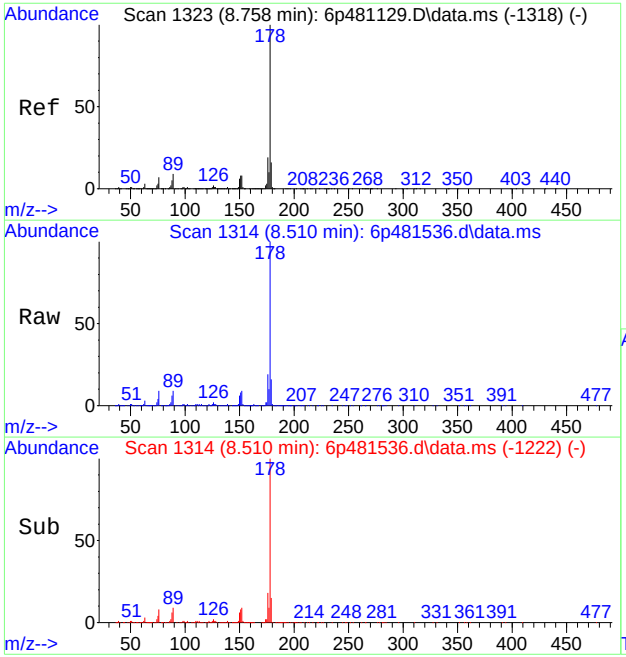


#77
Phenanthrene
Concen: 30.56 ppm
RT: 8.451 min Scan# 1303
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:178 Resp: 1941883

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	45.7
176	19.1	0.0	48.7

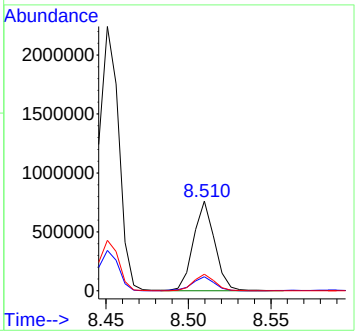


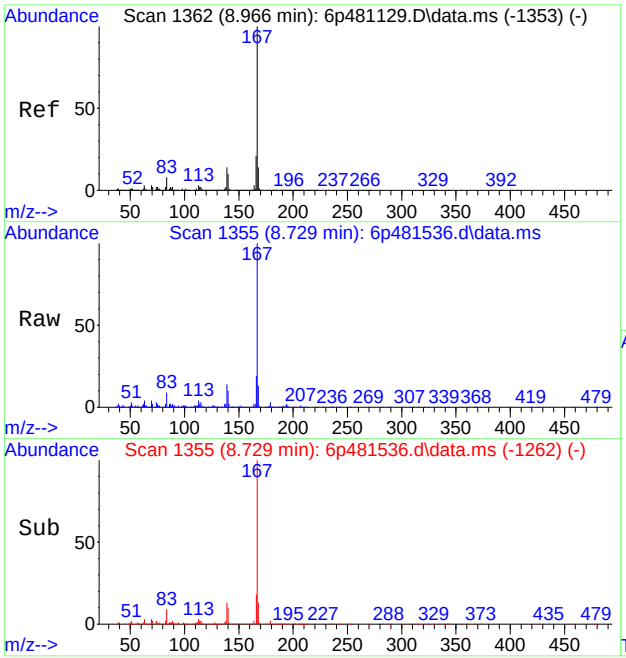


#78
Anthracene
Concen: 10.75 ppm
RT: 8.510 min Scan# 1314
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:178 Resp: 685375

Ion	Ratio	Lower	Upper
178	100		
179	15.3	0.0	45.8
176	18.6	0.0	48.8

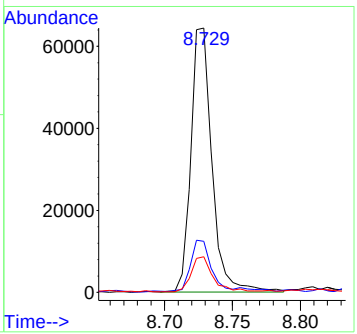


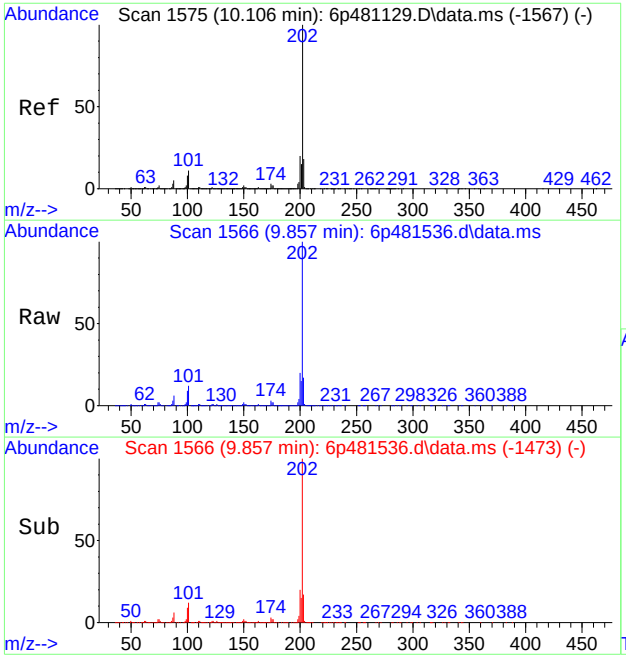


#79
Carbazole
Concen: 1.16 ppm
RT: 8.729 min Scan# 1355
Delta R.T. 0.000 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:167 Resp: 69702

Ion	Ratio	Lower	Upper
167	100		
166	18.7	0.0	50.5
139	13.2	0.0	43.5

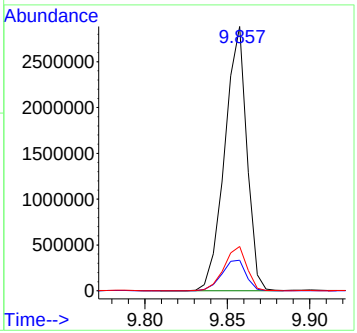


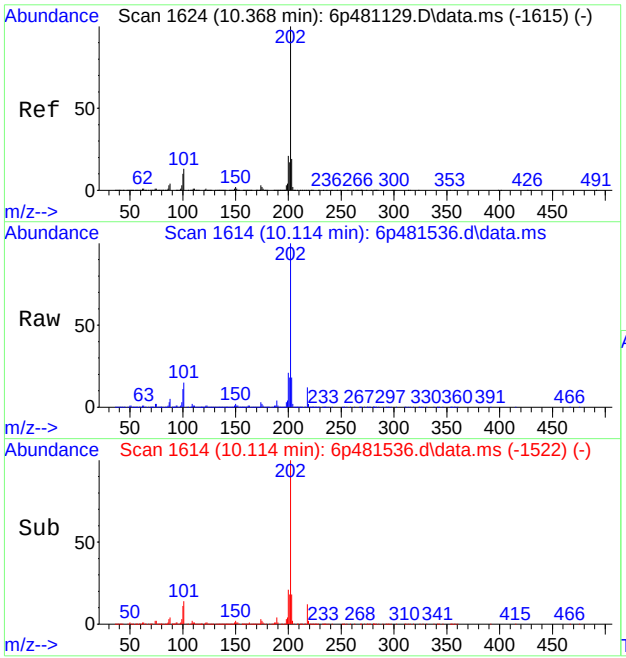


#81
Fluoranthene
Concen: 39.02 ppm
RT: 9.857 min Scan# 1566
Delta R.T. 0.000 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:202 Resp: 2694030

Ion	Ratio	Lower	Upper
202	100		
101	11.5	0.0	43.4
203	16.8	0.0	47.3

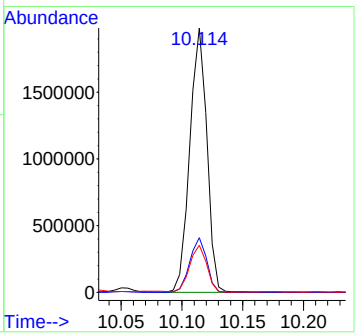


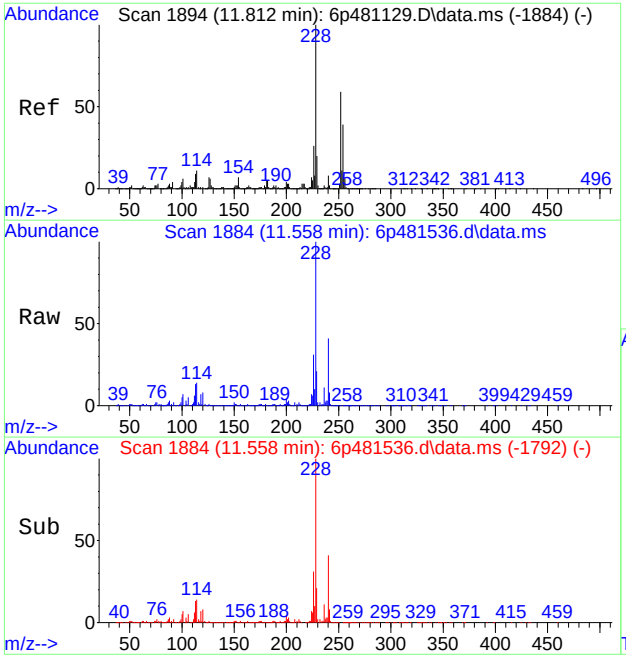


#84
Pyrene
Concen: 28.62 ppm
RT: 10.114 min Scan# 1614
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:202 Resp: 1944544

Ion	Ratio	Lower	Upper
202	100		
200	20.6	0.0	50.7
203	17.5	0.0	48.3

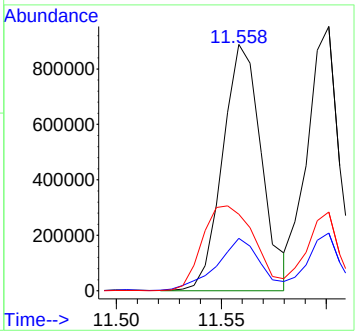


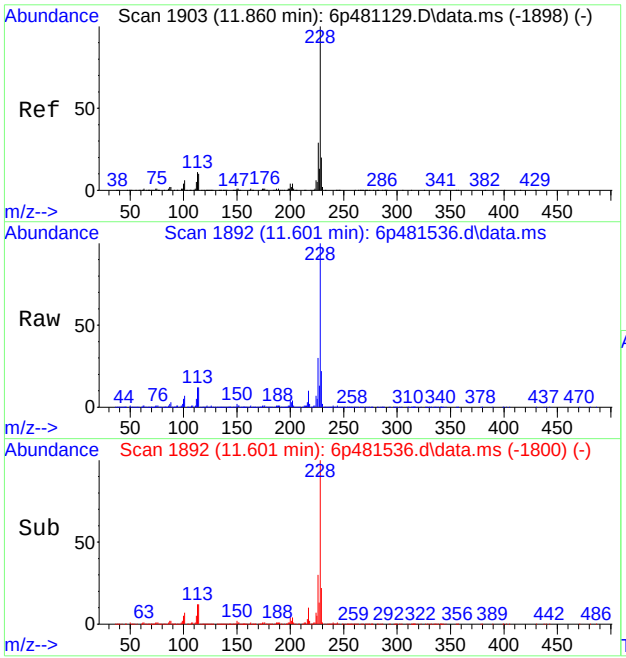


#87
Benzo[a]anthracene
Concen: 17.68 ppm
RT: 11.558 min Scan# 1884
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:228 Resp: 1148505

Ion	Ratio	Lower	Upper
228	100		
229	20.9	0.0	49.7
226	31.0	0.0	56.5

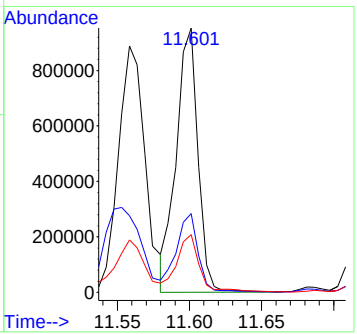


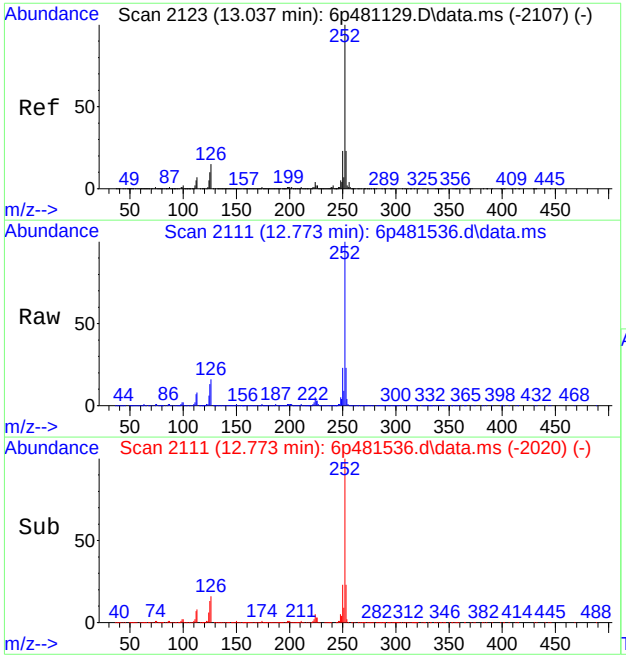


#89
Chrysene
Concen: 15.74 ppm
RT: 11.601 min Scan# 1892
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:228 Resp: 1002951

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	59.1
229	21.5	0.0	50.0

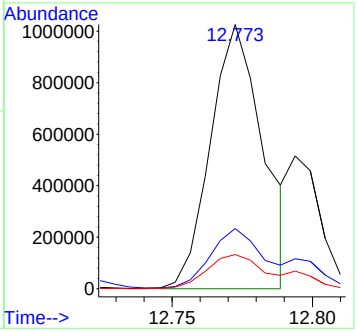


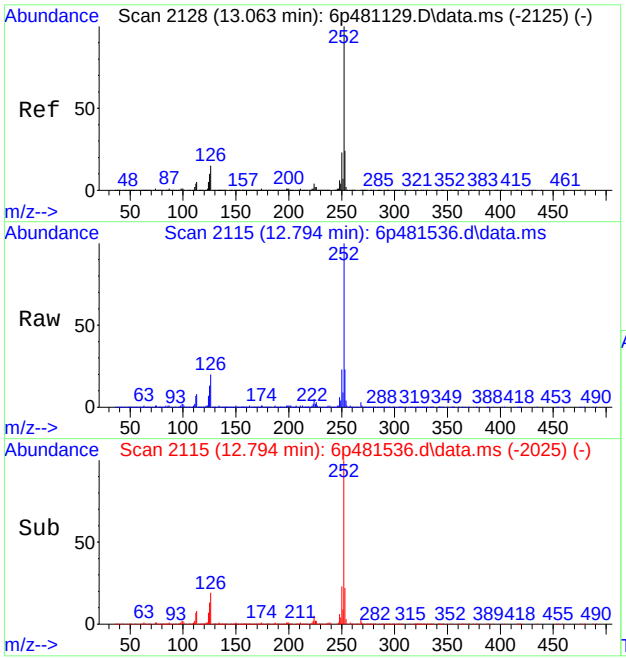


#93
Benzo[b]fluoranthene
Concen: 18.63 ppm m
RT: 12.773 min Scan# 2111
Delta R.T. -0.011 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:252 Resp: 1334191

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.8
125	12.9	0.0	41.9

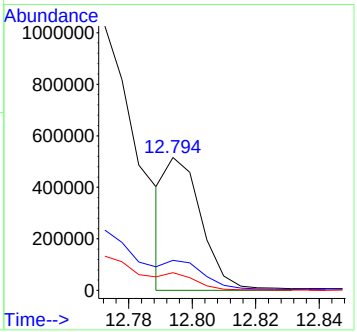


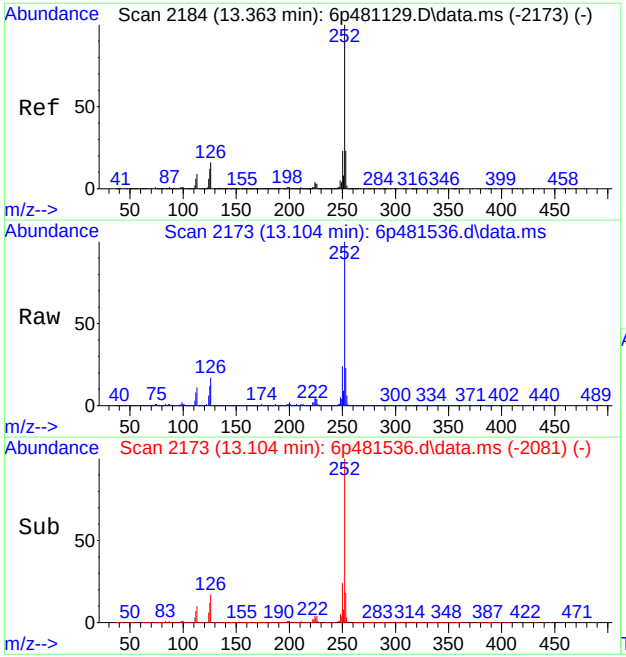


#94
Benzo[k]fluoranthene
Concen: 6.41 ppm m
RT: 12.794 min Scan# 2115
Delta R.T. -0.016 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:252 Resp: 406475

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	52.0
125	13.4	0.0	41.7

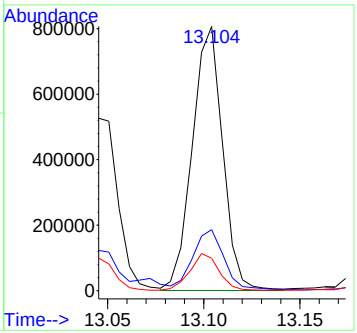


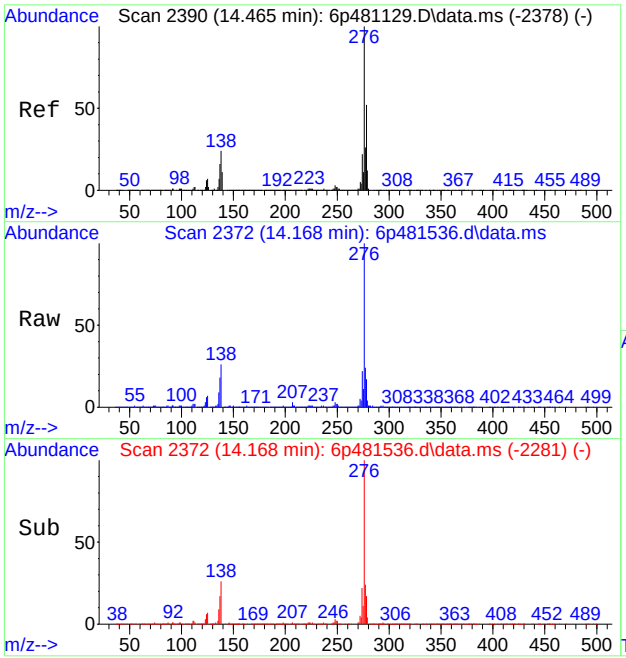


#95
Benzo[a]pyrene
Concen: 15.03 ppm
RT: 13.104 min Scan# 2173
Delta R.T. -0.005 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:252 Resp: 884725

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	52.7
125	12.2	0.0	44.2

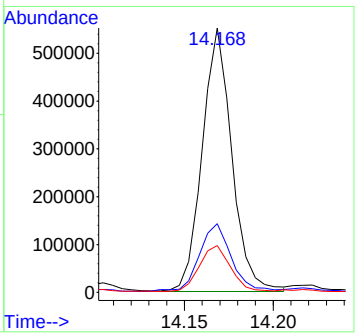


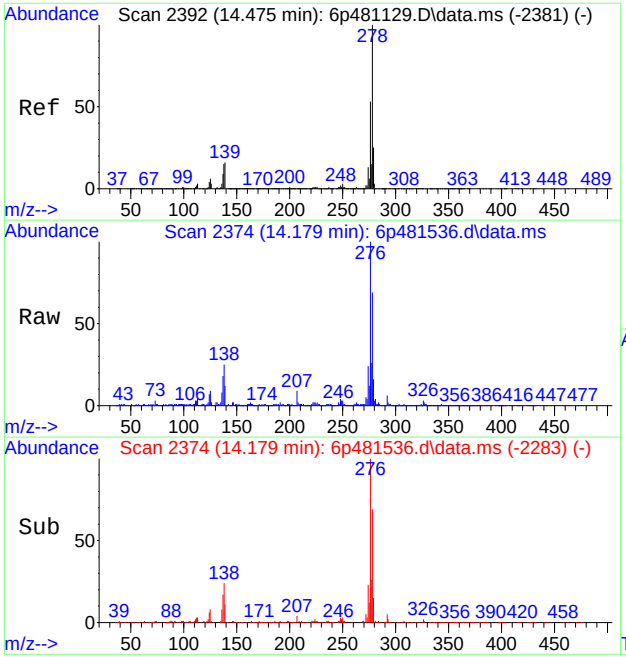


#96
Indeno[1,2,3-cd]pyrene
Concen: 8.13 ppm
RT: 14.168 min Scan# 2372
Delta R.T. -0.011 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:276 Resp: 638645

Ion	Ratio	Lower	Upper
276	100		
138	25.3	0.0	58.2
137	17.0	0.0	48.2

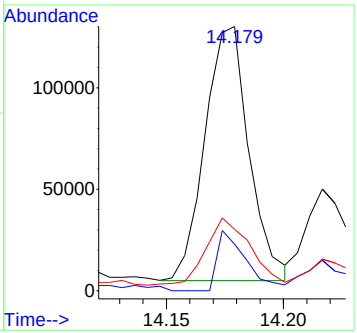


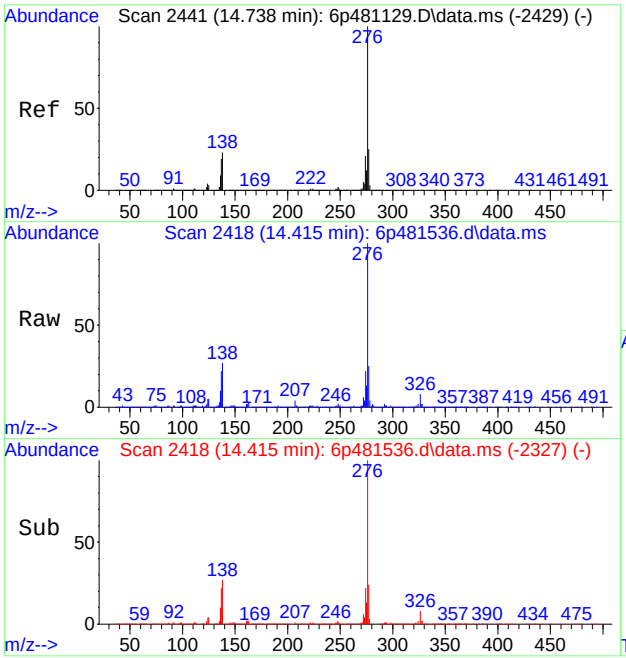


#98
Dibenz[a,h]anthracene
Concen: 2.36 ppm m
RT: 14.179 min Scan# 2374
Delta R.T. -0.011 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:278 Resp: 164078

Ion	Ratio	Lower	Upper
278	100		
139	17.6	0.0	49.7
279	23.2	0.0	54.3

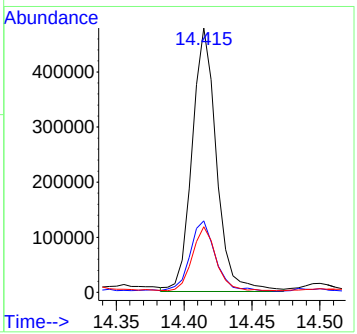




#100
Benzo[g,h,i]perylene
Concen: 9.78 ppm
RT: 14.415 min Scan# 2418
Delta R.T. -0.011 min
Lab File: 6p481536.d
Acq: 1 May 2019 5:25 pm

Tgt Ion:276 Resp: 599174

Ion	Ratio	Lower	Upper
276	100		
138	26.7	0.0	58.0
277	24.5	0.0	54.6



Manual Integration Approval Summary

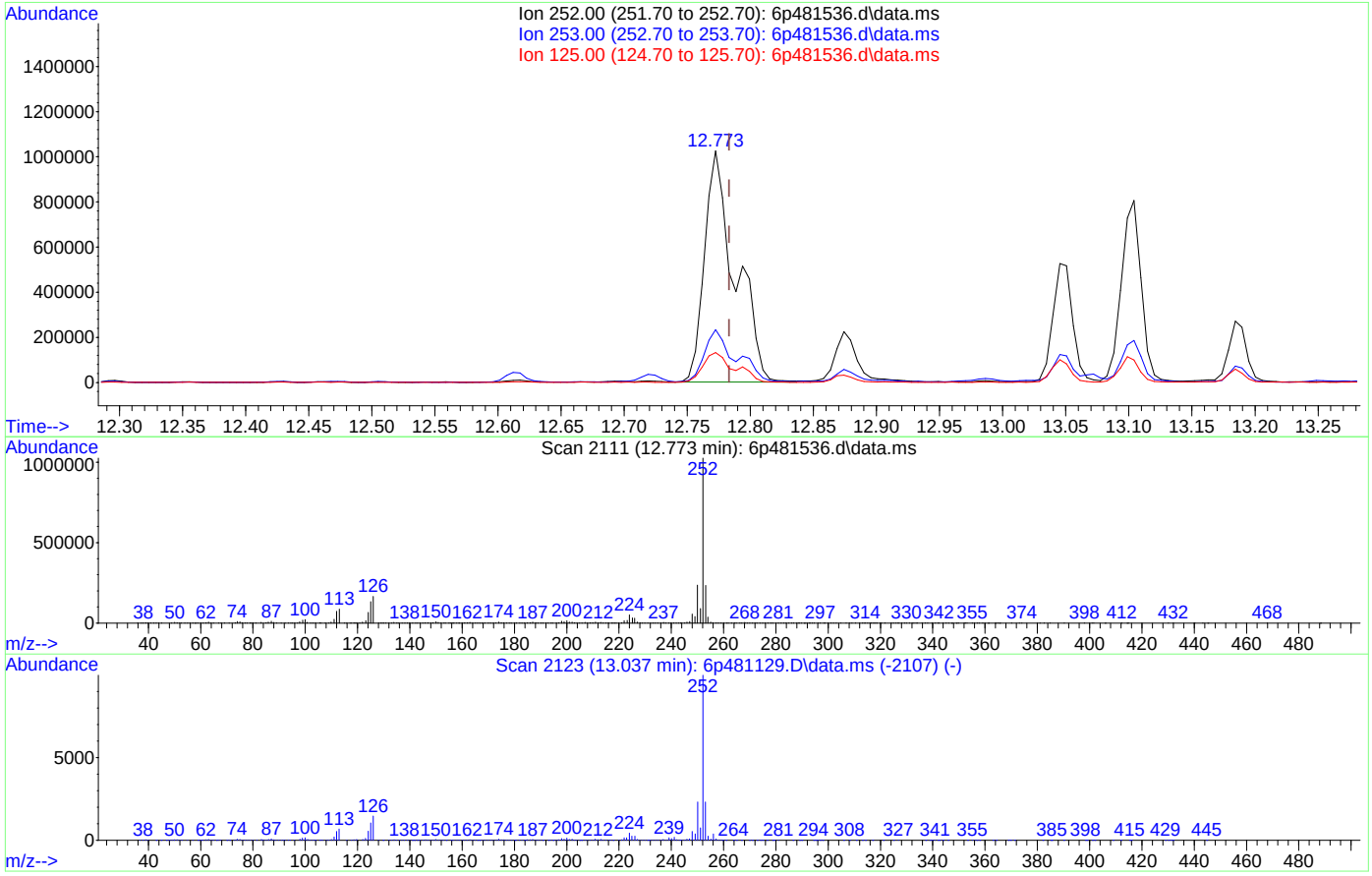
Sample Number:	JC86837-12	**Method:**	SW846 8270D
Lab FileID:	6P481536.D	**Analyst approved:**	05/02/19 03:25 Michelle Co
Injection Time:	05/01/19 17:25	**Supervisor approved:**	05/06/19 18:34 Nancy Ma

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		12.77	Poor instrument integration
Benzo(k)fluoranthene	207-08-9		12.79	Poor instrument integration
Dibenzo(a,h)anthracene	53-70-3		14.18	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481536.d
Acq On : 1 May 2019 5:25 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2578,31.2,,,1,10
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:30:42 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481536.d\data.ms

(93) Benzo[b]fluoranthene (t)

12.773min (-0.011) 24.25ppm

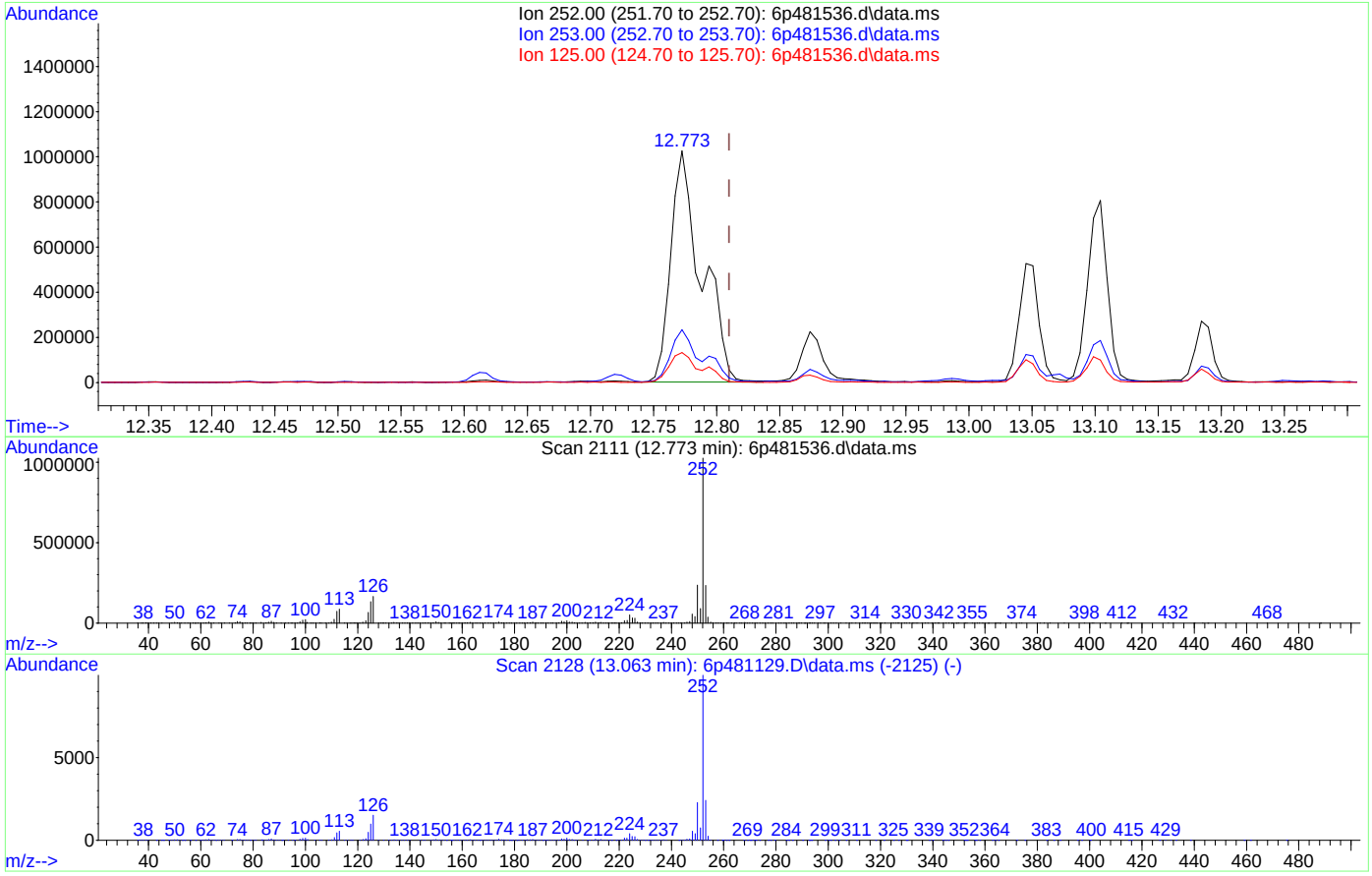
response 1737266

Ion	Exp%	Act%
252.00	100	100
253.00	21.80	22.47
125.00	11.90	12.94
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481536.d
Acq On : 1 May 2019 5:25 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2578,31.2,,,1,10
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:30:42 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481536.d\data.ms

(94) Benzo[k]fluoranthene (t)

12.773min (-0.037) 27.40ppm

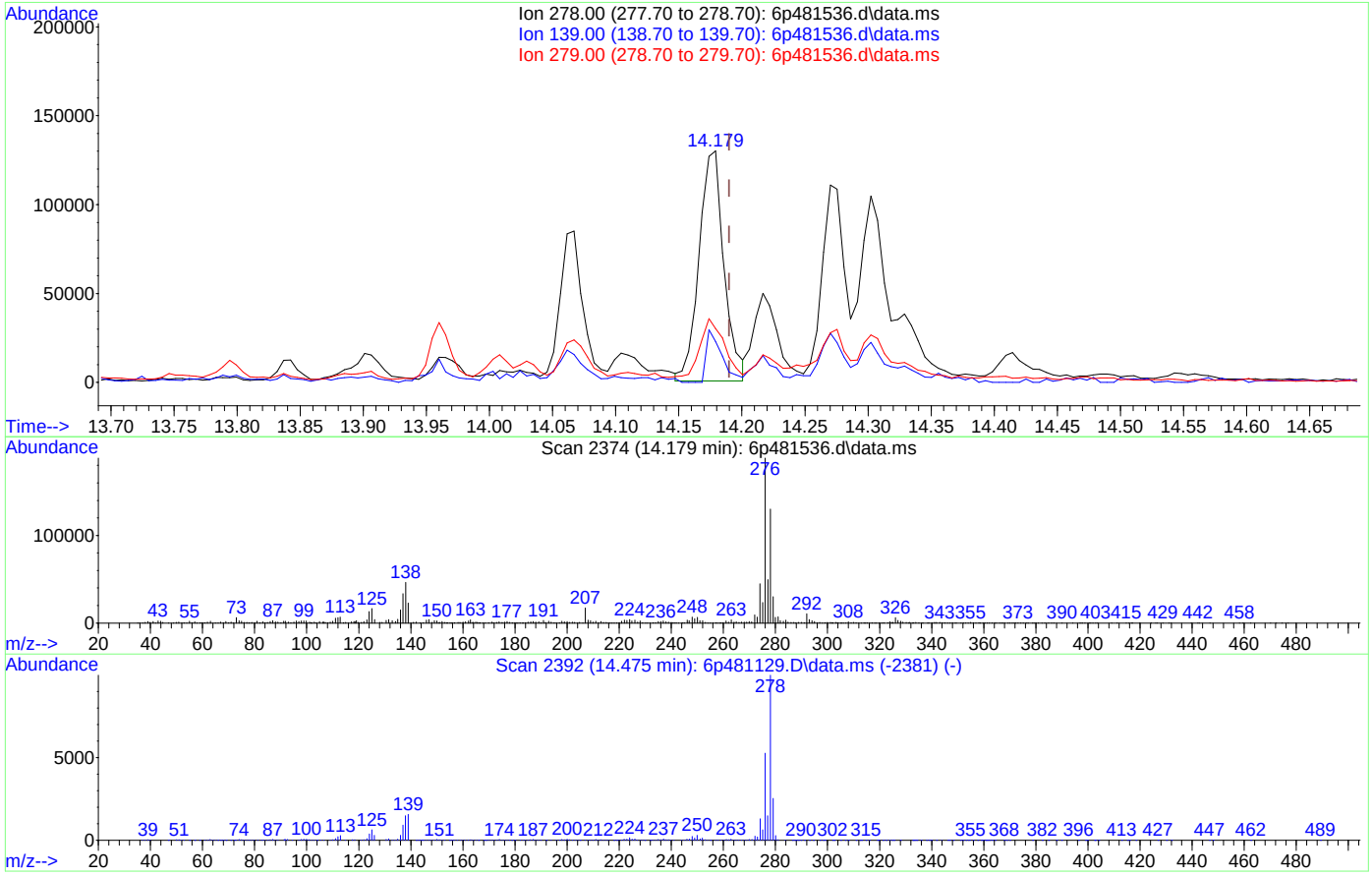
response 1737266

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.47
125.00	11.70	12.94
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\michellc\e6p2578\
Data File : 6p481536.d
Acq On : 1 May 2019 5:25 pm
Operator : angelar
Sample : jc86837-12 Inst : MS6P
Misc : op20035,e6p2578,31.2,,,1,10
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: May 02 02:30:42 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Thu May 02 02:29:57 2019
Response via : Initial Calibration



TIC: 6p481536.d\data.ms

(98) Dibenz[a,h]anthracene (t)

14.179min (-0.011) 2.55ppm

response 177304

Ion	Exp%	Act%
278.00	100	100
139.00	19.70	16.42
279.00	24.30	21.78
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481457.D
Acq On : 29 Apr 2019 10:49 am
Operator : angelar
Sample : op20035-mb1
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 29 12:50:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration

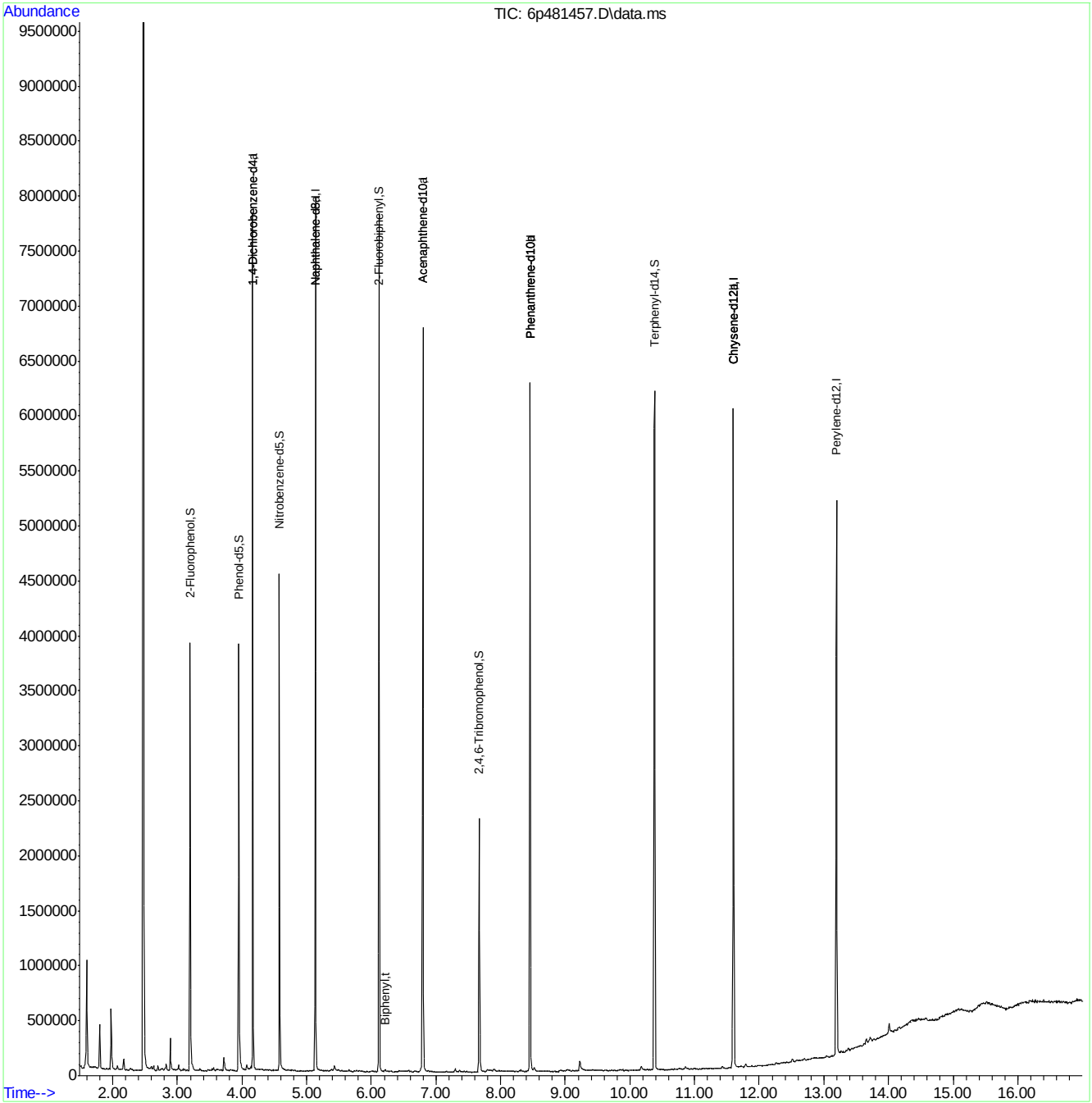
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.166	152	816755	40.00	ppm	-0.16
24) Naphthalene-d8	5.135	136	2680266	40.00	ppm	-0.18
47) Acenaphthene-d10	6.798	164	1415328	40.00	ppm	-0.20
69) Phenanthrene-d10	8.456	188	2298360	40.00	ppm	-0.21
83) Chrysene-d12	11.601	240	2013837	40.00	ppm	-0.23
91) Perylene-d12	13.195	264	1792094	40.00	ppm	-0.23
101) 1,4-Dichlorobenzene-d4a	4.166	152	816755	40.00	ppm	-0.16
103) Acenaphthene-d10a	6.798	164	1415328	40.00	ppm	-0.19
105) Phenanthrene-d10a	8.456	188	2298360	40.00	ppm	-0.21
109) Chrysene-d12a	11.601	240	2013837	40.00	ppm	-0.18
111) Naphthalene-d8a	5.135	136	2680266	40.00	ppm	-0.17
113) Phenanthrene-d10b	8.456	188	2298360	40.00	ppm	-0.21
115) Chrysene-d12b	11.601	240	2013837	40.00	ppm	-0.22
System Monitoring Compounds						
5) 2-Fluorophenol	3.193	112	959213	40.15	ppm	-0.16
Spiked Amount 50.000			Recovery = 80.30%			
8) Phenol-d5	3.947	99	1122172	38.47	ppm	-0.15
Spiked Amount 50.000			Recovery = 76.94%			
25) Nitrobenzene-d5	4.578	82	1059473	47.50	ppm	-0.16
Spiked Amount 50.000			Recovery = 95.00%			
51) 2-Fluorobiphenyl	6.119	172	2046364	40.93	ppm	-0.19
Spiked Amount 50.000			Recovery = 81.86%			
73) 2,4,6-Tribromophenol	7.670	330	294778	39.86	ppm	-0.21
Spiked Amount 50.000			Recovery = 79.72%			
85) Terphenyl-d14	10.382	244	2095389	44.66	ppm	-0.21
Spiked Amount 50.000			Recovery = 89.32%			
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
53) Biphenyl	6.215	154	6025	0.11	ppm	95

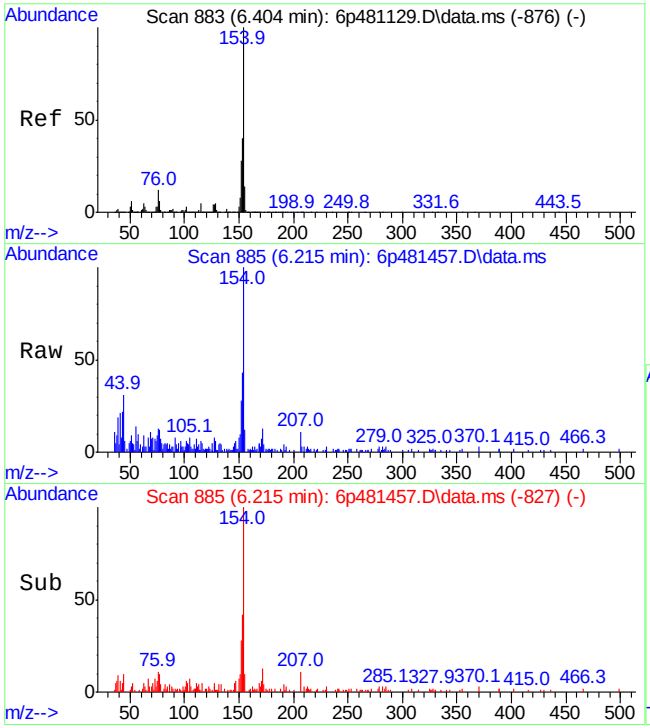
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481457.D
Acq On : 29 Apr 2019 10:49 am
Operator : angelar
Sample : op20035-mb1
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 29 12:50:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration

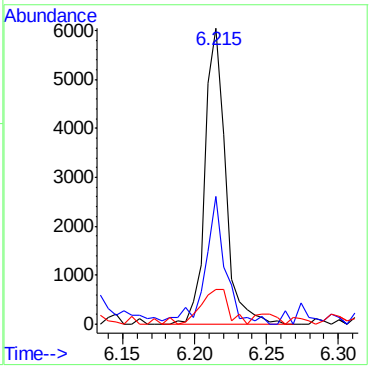




#53
Biphenyl
Concen: 0.11 ppm
RT: 6.215 min Scan# 885
Delta R.T. -0.189 min
Lab File: 6p481457.D
Acq: 29 Apr 2019 10:49 am

Tgt Ion:154 Resp: 6025

Ion	Ratio	Lower	Upper
154	100		
153	42.6	10.2	70.2
155	10.7	0.0	43.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153896.D
Acq On : 30 Apr 2019 10:43 am
Operator : christc2
Sample : op20021-mb1
Misc : op20021,em6576,30.0,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 30 12:16:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 08:49:12 2019
Response via : Initial Calibration

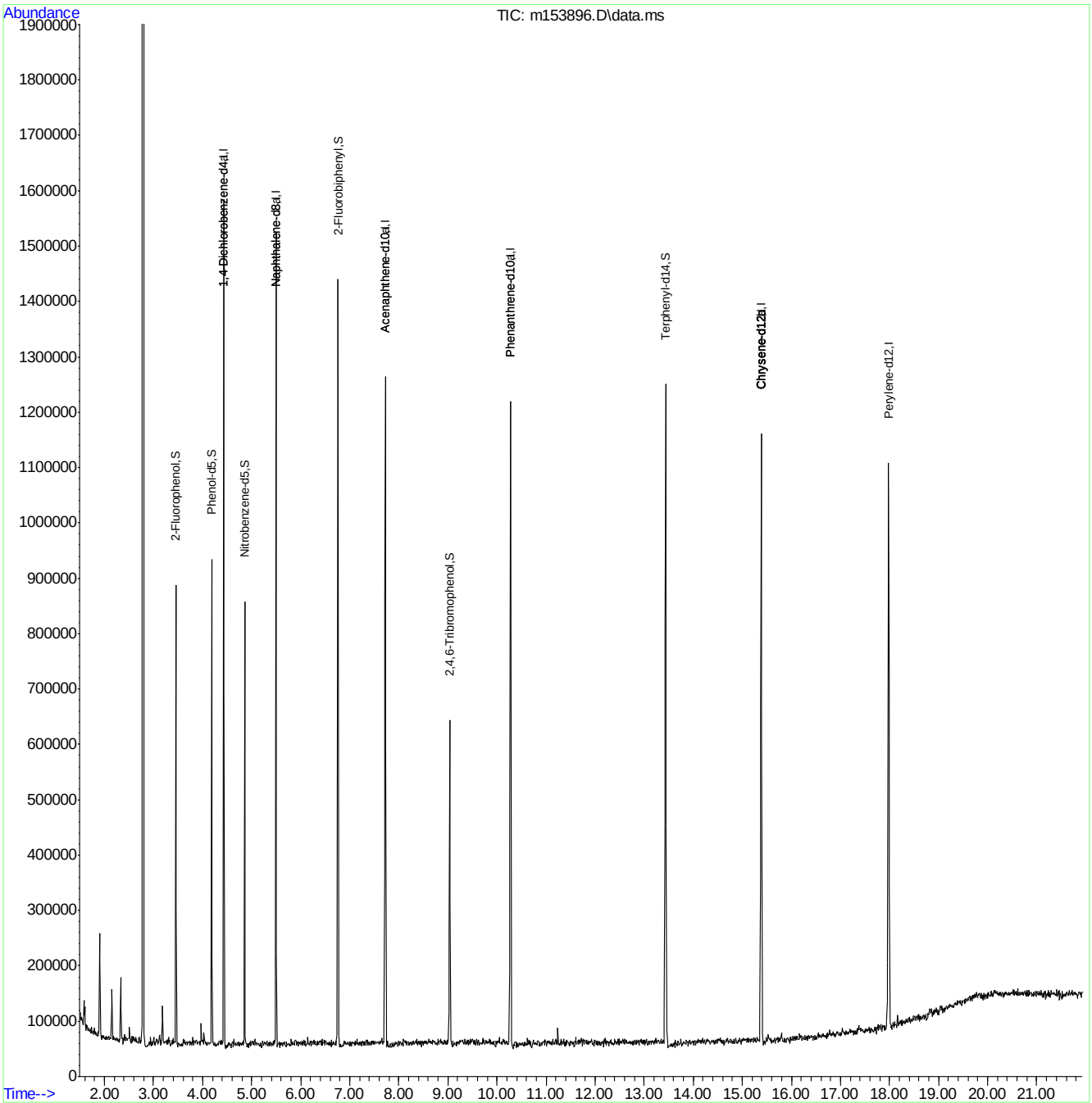
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.431	152	176316	40.00	ppm	-0.01
24) Naphthalene-d8	5.493	136	568956	40.00	ppm	-0.01
47) Acenaphthene-d10	7.721	164	322426	40.00	ppm	-0.02
69) Phenanthrene-d10	10.274	188	641802	40.00	ppm	-0.03
83) Chrysene-d12	15.385	240	626548	40.00	ppm	-0.07
91) Perylene-d12	17.981	264	607164	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.431	152	176316	40.00	ppm	-0.01
103) Acenaphthene-d10a	7.721	164	322426	40.00	ppm	-0.02
106) Chrysene-d12a	15.385	240	626548	40.00	ppm	-0.07
108) Chrysene-d12b	15.385	240	626548	40.00	ppm	-0.07
110) Phenanthrene-d10a	10.274	188	641802	40.00	ppm	-0.03
113) Naphthalene-d8a	5.493	136	568956	40.00	ppm	-0.01
115) Chrysene-d12c	15.385	240	626548	40.00	ppm	-0.07
System Monitoring Compounds						
5) 2-Fluorophenol	3.458	112	206668	29.98	ppm	-0.03
Spiked Amount 50.000			Recovery =	59.96%		
8) Phenol-d5	4.185	99	263833	30.99	ppm	0.00
Spiked Amount 50.000			Recovery =	61.98%		
25) Nitrobenzene-d5	4.858	82	223854	36.88	ppm	0.00
Spiked Amount 50.000			Recovery =	73.76%		
51) 2-Fluorobiphenyl	6.759	172	491163	40.97	ppm	-0.02
Spiked Amount 50.000			Recovery =	81.94%		
73) 2,4,6-Tribromophenol	9.034	330	111307	51.55	ppm	-0.05
Spiked Amount 50.000			Recovery =	103.10%		
85) Terphenyl-d14	13.436	244	667990	39.54	ppm	-0.07
Spiked Amount 50.000			Recovery =	79.08%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153896.D
Acq On : 30 Apr 2019 10:43 am
Operator : christc2
Sample : op20021-mb1
Misc : op20021,em6576,30.0,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 30 12:16:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 08:49:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481458.D
Acq On : 29 Apr 2019 11:13 am
Operator : angelar
Sample : op20035-bs1
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 29 12:52:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.166	152	718695	40.00	ppm	-0.16
24) Naphthalene-d8	5.140	136	2893398	40.00	ppm	-0.17
47) Acenaphthene-d10	6.798	164	1505449	40.00	ppm	-0.20
69) Phenanthrene-d10	8.461	188	2573215	40.00	ppm	-0.21
83) Chrysene-d12	11.606	240	2142531	40.00	ppm	-0.22
91) Perylene-d12	13.200	264	1864932	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4a	4.166	152	718695	40.00	ppm	0.00
103) Acenaphthene-d10a	6.798	164	1505449	40.00	ppm	-0.19
105) Phenanthrene-d10a	8.461	188	2573215	40.00	ppm	-0.21
109) Chrysene-d12a	11.606	240	2142531	40.00	ppm	-0.18
111) Naphthalene-d8a	5.140	136	2893398	40.00	ppm	-0.17
113) Phenanthrene-d10b	8.461	188	2573215	40.00	ppm	-0.21
115) Chrysene-d12b	11.606	240	2142531	40.00	ppm	-0.22
System Monitoring Compounds						
5) 2-Fluorophenol	3.193	112	974701	46.36	ppm	-0.16
Spiked Amount 50.000			Recovery = 92.72%			
8) Phenol-d5	3.947	99	1123114	43.75	ppm	-0.15
Spiked Amount 50.000			Recovery = 87.50%			
25) Nitrobenzene-d5	4.584	82	1150423	47.78	ppm	-0.16
Spiked Amount 50.000			Recovery = 95.56%			
51) 2-Fluorobiphenyl	6.124	172	2300553	43.26	ppm	-0.18
Spiked Amount 50.000			Recovery = 86.52%			
73) 2,4,6-Tribromophenol	7.675	330	360550	43.54	ppm	-0.20
Spiked Amount 50.000			Recovery = 87.08%			
85) Terphenyl-d14	10.382	244	2309500	46.27	ppm	-0.21
Spiked Amount 50.000			Recovery = 92.54%			
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.610	88	244871	25.88	ppm	98
3) Pyridine	1.909	79	783678	36.42	ppm	97
4) N-Nitrosodimethylamine	1.883	74	558947	44.56	ppm	94
6) Indene	4.354	116	1655030	42.47	ppm	99
7) Cumene	3.562	105	2134514	38.23	ppm	99
9) Phenol	3.958	94	1217379	38.86	ppm	87
10) Aniline	3.931	93	1088219	38.92	ppm	96
11) bis(2-Chloroethyl)ether	3.985	93	909823	41.91	ppm	96
12) 2-Chlorophenol	4.022	128	1057289	42.55	ppm	95
13) Decane	4.065	43	677635	35.53	ppm	99
14) 1,3-Dichlorobenzene	4.124	146	1082294	38.21	ppm	99
15) 1,4-Dichlorobenzene	4.182	146	1121162	38.67	ppm	99
16) Benzyl alcohol	4.289	108	666346	49.37	ppm	94
17) 1,2-Dichlorobenzene	4.289	146	1062023	39.88	ppm	100
18) Acetophenone	4.471	105	1528247	45.76	ppm	98
19) 2-Methylphenol	4.391	108	895737	42.47	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.380	121	341886	44.17	ppm	98
21) 3&4-Methylphenol	4.503	108	1094054	49.34	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481458.D
Acq On : 29 Apr 2019 11:13 am
Operator : angelar
Sample : op20035-bs1
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 29 12:52:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.482	70	723593	48.43	ppm		94
23) Hexachloroethane	4.535	201	376901	37.25	ppm		96
26) Nitrobenzene	4.594	77	1134611	46.31	ppm		92
27) Quinoline	5.450	129	2235585	42.59	ppm		98
28) Isophorone	4.782	82	2017903	48.20	ppm		98
29) 2-Nitrophenol	4.840	139	650115	45.38	ppm		69
30) 2,4-Dimethylphenol	4.899	107	1174226	53.70	ppm		99
31) Benzoic acid	5.049	105	1038595	47.01	ppm		96
32) bis(2-Chloroethoxy)met...	4.958	93	1211518	46.05	ppm		99
33) 2,4-Dichlorophenol	5.044	162	934421	43.23	ppm		95
34) 2,6-Dichlorophenol	5.220	162	934583	43.65	ppm		96
36) 1,2,4-Trichlorobenzene	5.097	180	947131	38.27	ppm		98
38) Naphthalene	5.156	128	3335631	44.27	ppm		99
39) 4-Chloroaniline	5.215	127	824830	27.18	ppm		97
40) 2,3-Dichloroaniline	6.038	161	963763	35.14	ppm		97
41) Caprolactam	5.546	55	389021	42.05	ppm		98
42) Hexachlorobutadiene	5.263	225	537158	38.14	ppm		98
43) 4-Chloro-3-methylphenol	5.675	107	986613	44.47	ppm	#	24
44) 2-Methylnaphthalene	5.766	141	1905511	44.71	ppm		98
45) 1-Methylnaphthalene	5.857	141	1912886	40.17	ppm		99
46) Dimethylnaphthalene	6.375	156	1904149	37.59	ppm		97
48) Hexachlorocyclopentadiene	5.915	237	796280	78.23	ppm		98
49) 2,4,6-Trichlorophenol	6.054	196	632739	45.06	ppm		98
50) 2,4,5-Trichlorophenol	6.103	196	647054	43.31	ppm		99
52) 2-Chloronaphthalene	6.231	162	1927763	43.42	ppm		94
53) Biphenyl	6.215	154	2652806	46.07	ppm		100
54) 2-Nitroaniline	6.354	65	605740	52.49	ppm		91
55) Dimethylphthalate	6.547	163	2281568	44.24	ppm		99
56) Acenaphthylene	6.648	152	3192280	46.59	ppm		99
57) 2,6-Dinitrotoluene	6.611	165	519512	44.56	ppm		96
58) 3-Nitroaniline	6.787	138	412322	32.52	ppm		99
59) Acenaphthene	6.835	153	2002006	44.02	ppm		96
60) 2,4-Dinitrophenol	6.916	184	447478	57.41	ppm		89
61) 4-Nitrophenol	7.033	109	285522	43.94	ppm	#	1
62) Dibenzofuran	7.023	168	2846249	44.94	ppm		88
63) 2,4-Dinitrotoluene	7.049	165	711246	43.92	ppm		83
64) 2,3,4,6-Tetrachlorophenol	7.183	232	478975	39.18	ppm		96
65) Diethylphthalate	7.317	149	2245440	44.17	ppm		97
66) Fluorene	7.397	166	2311587	44.96	ppm		100
67) 4-Chlorophenyl-phenyle...	7.413	204	1011087	38.79	ppm		96
68) 4-Nitroaniline	7.461	138	550698	41.02	ppm		92
70) 4,6-Dinitro-2-methylph...	7.509	198	349726	35.19	ppm		85
71) n-Nitrosodiphenylamine	7.552	169	1595247	44.87	ppm		95
72) 1,2-Diphenylhydrazine	7.590	77	2153718	53.51	ppm		96
74) 4-Bromophenyl-phenylether	7.959	248	574862	41.57	ppm		89
75) Hexachlorobenzene	8.028	284	659140	40.58	ppm		92
76) Pentachlorophenol	8.280	266	432748	42.71	ppm		98
77) Phenanthrene	8.488	178	3040409	44.01	ppm		99
78) Anthracene	8.547	178	3108689	44.86	ppm		99
79) Carbazole	8.761	167	2975005	45.36	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481458.D
Acq On : 29 Apr 2019 11:13 am
Operator : angelar
Sample : op20035-bs1
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 29 12:52:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration

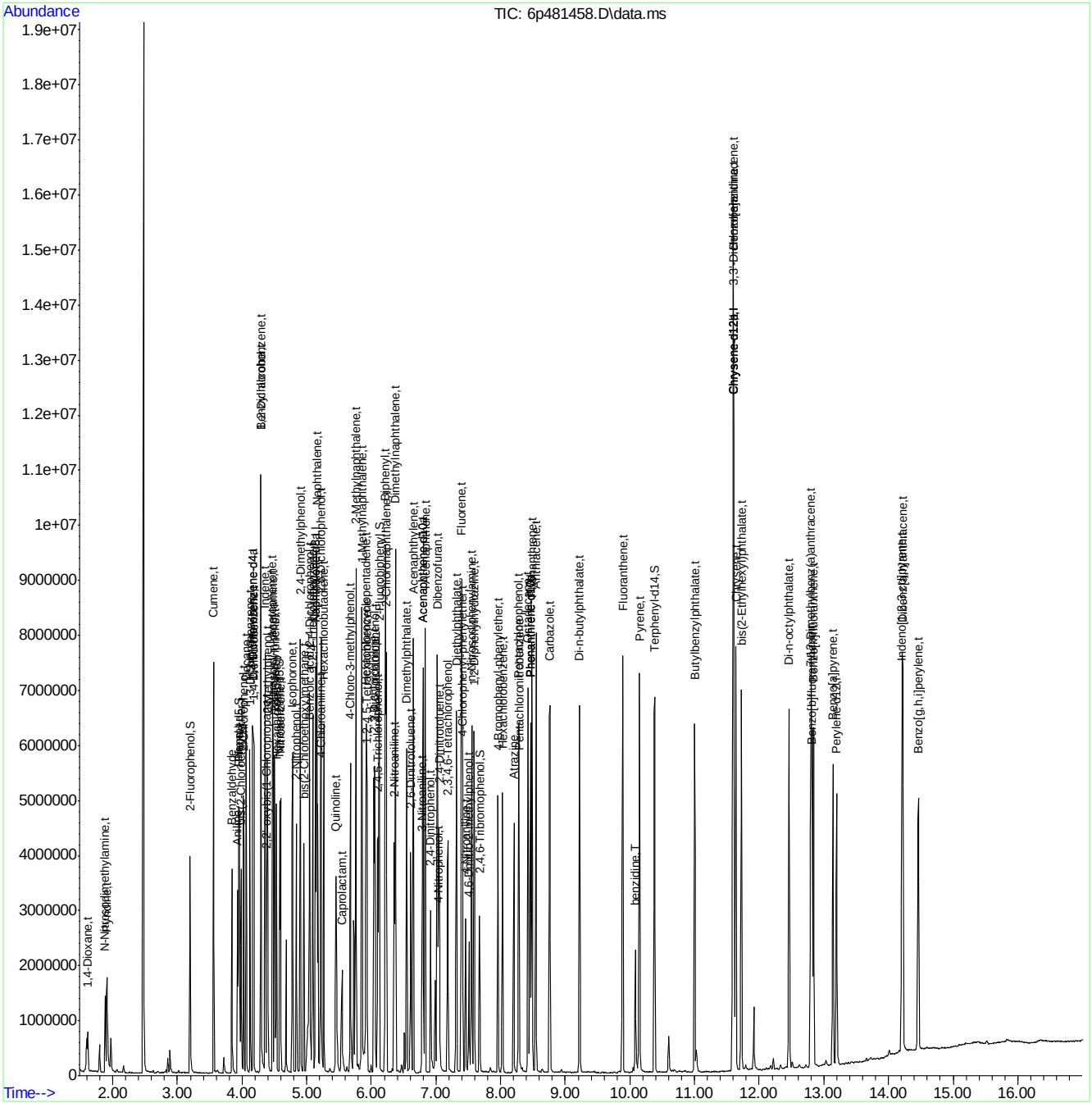
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) Di-n-butylphthalate	9.221	149	3621476	47.27	ppm	99
81) Fluoranthene	9.889	202	3048826	40.62	ppm	97
82) Octadecane	8.424	57	1170312	50.55	ppm	99
84) Pyrene	10.152	202	3130320	43.86	ppm	99
86) Butylbenzylphthalate	11.002	149	1568567	50.99	ppm	92
87) Benzo[a]anthracene	11.596	228	2661423	39.00	ppm	98
88) 3,3'-Dichlorobenzidine	11.601	252	1858560	72.49	ppm	98
89) Chrysene	11.638	228	2505357	37.44	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.724	149	2092949	49.21	ppm	97
92) Di-n-octylphthalate	12.462	149	3434474	61.82	ppm	99
93) Benzo[b]fluoranthene	12.815	252	2561350	44.97	ppm	98
94) Benzo[k]fluoranthene	12.842	252	2225651	44.14	ppm	97
95) Benzo[a]pyrene	13.141	252	2108172	45.05	ppm	97
96) Indeno[1,2,3-cd]pyrene	14.211	276	2683952	42.95	ppm	93
98) Dibenz[a,h]anthracene	14.222	278	2312572	41.76	ppm	94
99) 7,12-Dimethylbenz(a)an...	12.799	256	1106060	41.67	ppm	97
100) Benzo[g,h,i]perylene	14.463	276	2125884	43.63	ppm	96
102) Benzaldehyde	3.840	105	559039	31.34	ppm	96
104) 1,2,4,5-Tetrachloroben...	5.931	216	818774	40.75	ppm	98
108) Atrazine	8.205	215	291476	38.80	ppm	92
110) benzidine	10.082	184	960564	21.79	ppm	99
114) Pentachloronitrobenzene	8.285	295	119906	38.07	ppm	93

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481458.D
Acq On : 29 Apr 2019 11:13 am
Operator : angelar
Sample : op20035-bs1
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 29 12:52:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration



JC86837

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481459.D
Acq On : 29 Apr 2019 11:37 am
Operator : angelar
Sample : op20035-bsd
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 29 12:54:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.166	152	799091	40.00	ppm	-0.16
24) Naphthalene-d8	5.134	136	2633965	40.00	ppm	-0.18
47) Acenaphthene-d10	6.798	164	1513334	40.00	ppm	-0.20
69) Phenanthrene-d10	8.456	188	2478219	40.00	ppm	-0.21
83) Chrysene-d12	11.606	240	2013028	40.00	ppm	-0.22
91) Perylene-d12	13.195	264	1728897	40.00	ppm	-0.23
101) 1,4-Dichlorobenzene-d4a	4.166	152	799091	40.00	ppm	0.00
103) Acenaphthene-d10a	6.798	164	1513334	40.00	ppm	-0.19
105) Phenanthrene-d10a	8.456	188	2478219	40.00	ppm	-0.21
109) Chrysene-d12a	11.606	240	2013028	40.00	ppm	-0.18
111) Naphthalene-d8a	5.134	136	2633965	40.00	ppm	-0.17
113) Phenanthrene-d10b	8.456	188	2478219	40.00	ppm	-0.21
115) Chrysene-d12b	11.606	240	2013028	40.00	ppm	-0.22
System Monitoring Compounds						
5) 2-Fluorophenol	3.193	112	853409	36.51	ppm	-0.16
Spiked Amount 50.000			Recovery = 73.02%			
8) Phenol-d5	3.947	99	1028834	36.05	ppm	-0.15
Spiked Amount 50.000			Recovery = 72.10%			
25) Nitrobenzene-d5	4.584	82	879229	40.11	ppm	-0.16
Spiked Amount 50.000			Recovery = 80.22%			
51) 2-Fluorobiphenyl	6.119	172	1935937	36.21	ppm	-0.19
Spiked Amount 50.000			Recovery = 72.42%			
73) 2,4,6-Tribromophenol	7.670	330	288563	36.19	ppm	-0.21
Spiked Amount 50.000			Recovery = 72.38%			
85) Terphenyl-d14	10.376	244	1837901	39.19	ppm	-0.22
Spiked Amount 50.000			Recovery = 78.38%			
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.615	88	250629	23.82	ppm	97
3) Pyridine	1.915	79	749277	31.31	ppm	97
4) N-Nitrosodimethylamine	1.888	74	495313	35.52	ppm	98
6) Indene	4.354	116	1563884	36.09	ppm	100
7) Cumene	3.562	105	1961436	31.60	ppm	99
9) Phenol	3.958	94	1084897	31.14	ppm	84
10) Aniline	3.931	93	955828	30.75	ppm	97
11) bis(2-Chloroethyl)ether	3.985	93	784185	32.49	ppm	96
12) 2-Chlorophenol	4.022	128	1023354	37.04	ppm	95
13) Decane	4.065	43	715245	33.73	ppm	99
14) 1,3-Dichlorobenzene	4.124	146	1021012	32.42	ppm	100
15) 1,4-Dichlorobenzene	4.182	146	1061633	32.93	ppm	99
16) Benzyl alcohol	4.289	108	579424	38.61	ppm	94
17) 1,2-Dichlorobenzene	4.289	146	948102	32.02	ppm	99
18) Acetophenone	4.471	105	1190963	32.07	ppm	97
19) 2-Methylphenol	4.391	108	798115	34.04	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.380	121	316591	36.78	ppm	98
21) 3&4-Methylphenol	4.503	108	841515	34.13	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481459.D
Acq On : 29 Apr 2019 11:37 am
Operator : angelar
Sample : op20035-bsd
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 29 12:54:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.482	70	540292	32.52	ppm		97
23) Hexachloroethane	4.535	201	306805	27.27	ppm		96
26) Nitrobenzene	4.594	77	853359	38.26	ppm		93
27) Quinoline	5.450	129	1737118	36.35	ppm		98
28) Isophorone	4.781	82	1504945	39.49	ppm		97
29) 2-Nitrophenol	4.840	139	518914	39.79	ppm	#	69
30) 2,4-Dimethylphenol	4.899	107	888330	44.63	ppm		98
31) Benzoic acid	5.038	105	780653	38.81	ppm		97
32) bis(2-Chloroethoxy)met...	4.953	93	920353	38.43	ppm		96
33) 2,4-Dichlorophenol	5.044	162	723814	36.78	ppm		98
34) 2,6-Dichlorophenol	5.220	162	772061	39.61	ppm		98
36) 1,2,4-Trichlorobenzene	5.097	180	758423	33.67	ppm		98
38) Naphthalene	5.156	128	2602891	37.94	ppm		99
39) 4-Chloroaniline	5.215	127	677707	24.53	ppm		98
40) 2,3-Dichloroaniline	6.038	161	832770	33.35	ppm		96
41) Caprolactam	5.541	55	302504	35.92	ppm		97
42) Hexachlorobutadiene	5.263	225	445492	34.75	ppm		99
43) 4-Chloro-3-methylphenol	5.675	107	854753	42.32	ppm	#	25
44) 2-Methylnaphthalene	5.766	141	1610992	41.52	ppm		98
45) 1-Methylnaphthalene	5.851	141	1672463	38.58	ppm		97
46) Dimethylnaphthalene	6.375	156	1626036	35.26	ppm		97
48) Hexachlorocyclopentadiene	5.915	237	661636	66.23	ppm		99
49) 2,4,6-Trichlorophenol	6.054	196	517703	36.67	ppm		99
50) 2,4,5-Trichlorophenol	6.097	196	540560	36.00	ppm		98
52) 2-Chloronaphthalene	6.231	162	1613241	36.15	ppm		95
53) Biphenyl	6.215	154	2274048	39.28	ppm		98
54) 2-Nitroaniline	6.354	65	514706	44.37	ppm		91
55) Dimethylphthalate	6.547	163	1891009	36.48	ppm		98
56) Acenaphthylene	6.648	152	2718150	39.47	ppm		99
57) 2,6-Dinitrotoluene	6.605	165	438198	37.39	ppm		84
58) 3-Nitroaniline	6.782	138	383600	30.10	ppm		88
59) Acenaphthene	6.830	153	1717452	37.56	ppm		99
60) 2,4-Dinitrophenol	6.916	184	365396	47.53	ppm		85
61) 4-Nitrophenol	7.033	109	244017	37.36	ppm	#	1
62) Dibenzofuran	7.023	168	2414696	37.93	ppm		87
63) 2,4-Dinitrotoluene	7.049	165	585695	35.98	ppm		98
64) 2,3,4,6-Tetrachlorophenol	7.178	232	398505	32.43	ppm		89
65) Diethylphthalate	7.311	149	1900512	37.19	ppm		96
66) Fluorene	7.397	166	1952969	37.79	ppm		99
67) 4-Chlorophenyl-phenyle...	7.408	204	852586	32.54	ppm		89
68) 4-Nitroaniline	7.456	138	449074	33.27	ppm		90
70) 4,6-Dinitro-2-methylph...	7.509	198	280677	29.33	ppm		90
71) n-Nitrosodiphenylamine	7.552	169	1322726	38.63	ppm		98
72) 1,2-Diphenylhydrazine	7.590	77	1876709	48.41	ppm		96
74) 4-Bromophenyl-phenylether	7.959	248	463973	34.84	ppm		87
75) Hexachlorobenzene	8.028	284	535070	34.20	ppm		96
76) Pentachlorophenol	8.274	266	341534	35.64	ppm		99
77) Phenanthrene	8.483	178	2484978	37.35	ppm		99
78) Anthracene	8.542	178	2601772	38.99	ppm		99
79) Carbazole	8.755	167	2456686	38.89	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481459.D
Acq On : 29 Apr 2019 11:37 am
Operator : angelar
Sample : op20035-bsd
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 29 12:54:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration

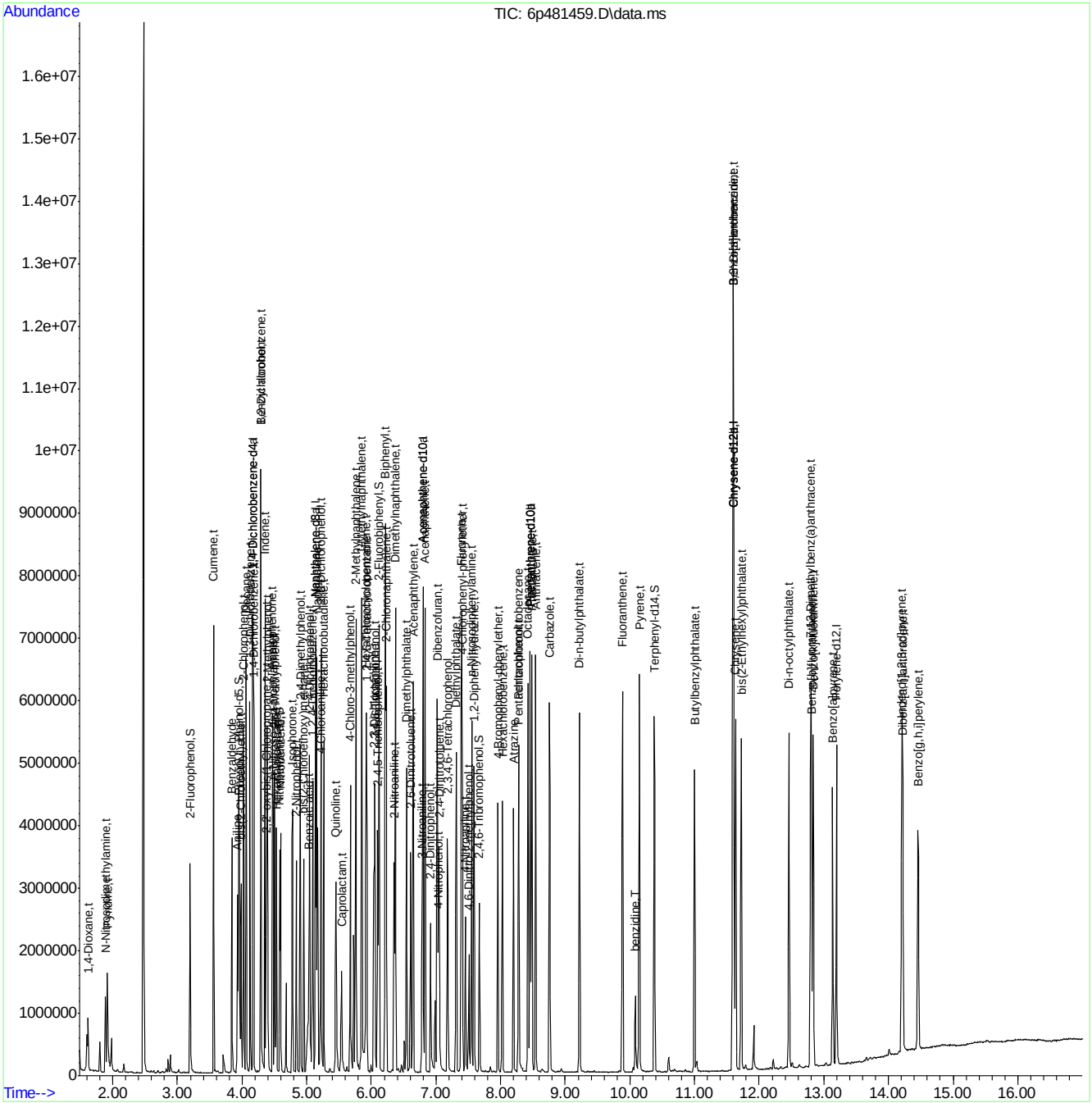
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) Di-n-butylphthalate	9.221	149	3006360	40.75	ppm	99
81) Fluoranthene	9.884	202	2435706	33.69	ppm	96
82) Octadecane	8.424	57	1057527	47.43	ppm	99
84) Pyrene	10.146	202	2508610	37.41	ppm	99
86) Butylbenzylphthalate	11.002	149	1255647	43.44	ppm	92
87) Benzo[a]anthracene	11.596	228	2149377	33.52	ppm	98
88) 3,3'-Dichlorobenzidine	11.596	252	1519119	63.06	ppm	98
89) Chrysene	11.633	228	1991036	31.67	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.724	149	1702725	42.61	ppm	96
92) Di-n-octylphthalate	12.462	149	2812210	54.61	ppm	99
93) Benzo[b]fluoranthene	12.810	252	1951526	36.96	ppm	97
94) Benzo[k]fluoranthene	12.837	252	1835933	39.27	ppm	96
95) Benzo[a]pyrene	13.136	252	1663860	38.35	ppm	95
96) Indeno[1,2,3-cd]pyrene	14.206	276	2070006	35.73	ppm	93
98) Dibenz[a,h]anthracene	14.222	278	1761841	34.32	ppm	96
99) 7,12-Dimethylbenz(a)an...	12.799	256	891701	36.60	ppm	95
100) Benzo[g,h,i]perylene	14.457	276	1631428	36.11	ppm	93
102) Benzaldehyde	3.840	105	542472	27.35	ppm	97
104) 1,2,4,5-Tetrachloroben...	5.926	216	674964	33.41	ppm	100
108) Atrazine	8.199	215	247722	34.34	ppm	83
110) benzidine	10.082	184	517634	12.50	ppm	100
114) Pentachloronitrobenzene	8.279	295	94620	31.20	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481459.D
Acq On : 29 Apr 2019 11:37 am
Operator : angelar
Sample : op20035-bsd
Misc : op20035,e6p2576,30.0,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 29 12:54:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:57:07 2019
QLast Update : Mon Apr 29 10:57:07 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153897.D
Acq On : 30 Apr 2019 11:12 am
Operator : christc2
Sample : op20021-bs1
Misc : op20021,em6576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 30 12:18:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.431	152	153579	40.00	ppm	-0.01
24) Naphthalene-d8	5.494	136	490747	40.00	ppm	-0.01
47) Acenaphthene-d10	7.721	164	276307	40.00	ppm	-0.02
69) Phenanthrene-d10	10.279	188	585850	40.00	ppm	-0.03
83) Chrysene-d12	15.391	240	577462	40.00	ppm	-0.07
91) Perylene-d12	17.986	264	576931	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.431	152	153579	40.00	ppm	-0.01
103) Acenaphthene-d10a	7.721	164	276307	40.00	ppm	-0.02
106) Chrysene-d12a	15.391	240	577462	40.00	ppm	-0.07
108) Chrysene-d12b	15.391	240	577388	40.00	ppm	-0.07
110) Phenanthrene-d10a	10.279	188	585850	40.00	ppm	-0.03
113) Naphthalene-d8a	5.494	136	490747	40.00	ppm	-0.01
115) Chrysene-d12c	15.391	240	577462	40.00	ppm	-0.07
System Monitoring Compounds						
5) 2-Fluorophenol	3.459	112	172188	28.68	ppm	-0.03
Spiked Amount 50.000			Recovery = 57.36%			
8) Phenol-d5	4.185	99	215348	29.04	ppm	0.00
Spiked Amount 50.000			Recovery = 58.08%			
25) Nitrobenzene-d5	4.858	82	169922	32.46	ppm	0.00
Spiked Amount 50.000			Recovery = 64.92%			
51) 2-Fluorobiphenyl	6.759	172	377816	36.78	ppm	-0.02
Spiked Amount 50.000			Recovery = 73.56%			
73) 2,4,6-Tribromophenol	9.040	330	100737	51.11	ppm	-0.04
Spiked Amount 50.000			Recovery = 102.22%			
85) Terphenyl-d14	13.436	244	578217	37.13	ppm	-0.07
Spiked Amount 50.000			Recovery = 74.26%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.926	88	43910	14.45	ppm	97
3) Pyridine	2.273	79	126084	17.23	ppm	99
4) N-Nitrosodimethylamine	2.230	42	67213	25.83	ppm	92
6) Indene	4.623	116	276325	34.03	ppm	96
7) Cumene	3.838	105	359589	25.06	ppm	99
9) Phenol	4.196	94	233135	29.92	ppm	91
10) Aniline	4.190	93	213707	27.38	ppm	53
11) bis(2-Chloroethyl)ether	4.238	93	155750	28.90	ppm	94
12) 2-Chlorophenol	4.281	128	177527	33.16	ppm	98
13) Decane	4.324	43	109238	26.72	ppm	89
14) 1,3-Dichlorobenzene	4.388	146	187449	30.14	ppm	98
15) 1,4-Dichlorobenzene	4.441	146	188986	33.47	ppm	98
16) Benzyl alcohol	4.543	108	112930	35.80	ppm	93
17) 1,2-Dichlorobenzene	4.559	146	175760	31.45	ppm	96
18) Acetophenone	4.741	105	223936	31.69	ppm	94
19) 2-Methylphenol	4.634	108	150866	33.48	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153897.D
Acq On : 30 Apr 2019 11:12 am
Operator : christc2
Sample : op20021-bs1
Misc : op20021,em6576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 30 12:18:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.639	121	46787	33.58	ppm	94
21) 3&4-Methylphenol	4.751	108	158443	34.96	ppm	91
22) n-Nitroso-di-n-propyla...	4.741	70	111517	31.64	ppm	91
23) Hexachloroethane	4.821	201	75472	31.64	ppm	97
26) Nitrobenzene	4.874	77	163285	32.12	ppm	92
27) Quinoline	5.867	129	327992	35.28	ppm	95
28) Isophorone	5.072	82	313018	33.01	ppm	97
29) 2-Nitrophenol	5.146	139	99442	42.29	ppm	87
30) 2,4-Dimethylphenol	5.195	107	164615	42.28	ppm	93
31) Benzoic acid	5.307	105	156424	50.54	ppm	94
32) bis(2-Chloroethoxy)met...	5.269	93	189507	32.94	ppm	99
33) 2,4-Dichlorophenol	5.371	162	157556	38.59	ppm	93
34) 2,6-Dichlorophenol	5.584	162	144955	39.17	ppm	95
36) 1,2,4-Trichlorobenzene	5.446	180	172392	34.55	ppm	98
38) Naphthalene	5.515	128	446395	37.15	ppm	99
39) 4-Chloroaniline	5.574	127	131018	24.61	ppm	99
40) 2,3-Dichloroaniline	6.637	161	180468	34.67	ppm	97
41) Caprolactam	5.953	55	65134	34.48	ppm	97
42) Hexachlorobutadiene	5.654	225	105935	35.62	ppm	99
43) 4-Chloro-3-methylphenol	6.124	107	147557	34.92	ppm	91
44) 2-Methylnaphthalene	6.279	141	281011	36.88	ppm	98
45) 1-Methylnaphthalene	6.396	142	328402	33.90	ppm	95
46) Dimethylnaphthalene	7.112	156	299667	35.53	ppm	96
48) Hexachlorocyclopentadiene	6.487	237	244890	91.14	ppm	98
49) 2,4,6-Trichlorophenol	6.653	196	132734	44.37	ppm	96
50) 2,4,5-Trichlorophenol	6.701	196	139840	43.56	ppm	94
52) 2-Chloronaphthalene	6.904	162	308947	36.35	ppm	98
53) Biphenyl	6.893	154	407397	36.70	ppm	100
54) 2-Nitroaniline	7.064	65	90885	39.65	ppm	96
55) Dimethylphthalate	7.363	163	383838	36.96	ppm	99
56) Acenaphthylene	7.502	152	503911	37.76	ppm	97
57) 2,6-Dinitrotoluene	7.432	165	90170	46.36	ppm	97
58) 3-Nitroaniline	7.683	138	83190	34.69	ppm	87
59) Acenaphthene	7.774	153	309990	38.36	ppm	95
60) 2,4-Dinitrophenol	7.860	184	119453	105.36	ppm	98
61) 4-Nitrophenol	8.025	109	49203	36.95	ppm	88
62) Dibenzofuran	8.052	168	469652	38.87	ppm	93
63) 2,4-Dinitrotoluene	8.073	165	113008	41.31	ppm	86
64) 2,3,4,6-Tetrachlorophenol	8.282	232	124797	43.41	ppm	95
65) Diethylphthalate	8.527	149	378216	37.69	ppm	100
66) Fluorene	8.618	166	391930	39.09	ppm	98
67) 4-Chlorophenyl-phenyle...	8.661	204	197092	37.85	ppm	93
68) 4-Nitroaniline	8.693	138	96837	45.31	ppm	82
70) 4,6-Dinitro-2-methylph...	8.762	198	84410	46.04	ppm	89
71) n-Nitrosodiphenylamine	8.875	169	289375	37.16	ppm	99
72) 1,2-Diphenylhydrazine	8.933	77	359828	33.69	ppm	97
74) 4-Bromophenyl-phenylether	9.515	248	145079	36.27	ppm	97
75) Hexachlorobenzene	9.596	284	175403	39.48	ppm	93
76) Pentachlorophenol	9.980	266	132761	53.65	ppm	98
77) Phenanthrene	10.322	178	578136	39.80	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153897.D
Acq On : 30 Apr 2019 11:12 am
Operator : christc2
Sample : op20021-bs1
Misc : op20021,em6576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 30 12:18:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration

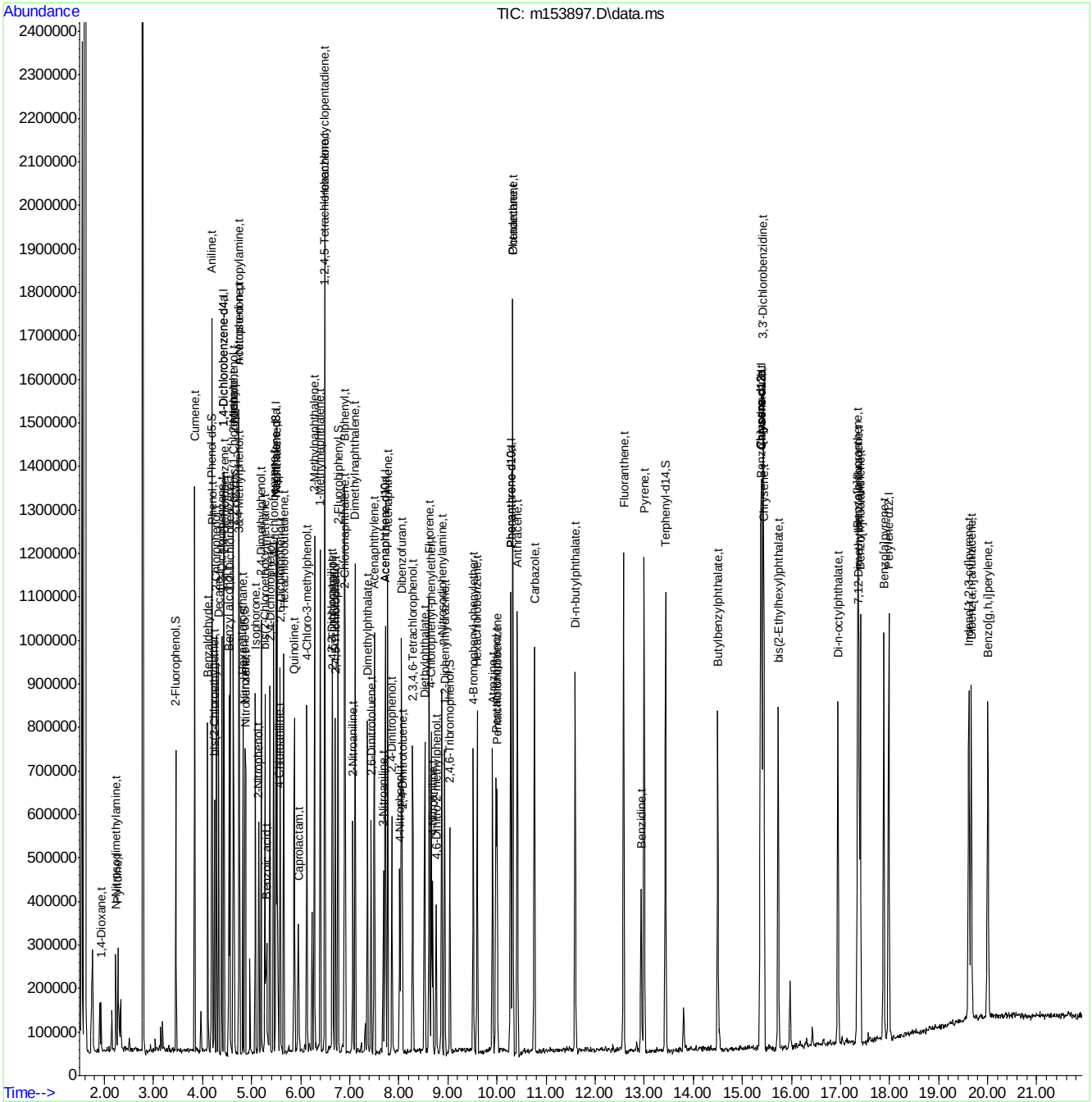
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.413	178	567421	37.08	ppm	99
79) Carbazole	10.765	167	567765	38.60	ppm	98
80) Di-n-butylphthalate	11.593	149	675750	38.14	ppm	99
81) Fluoranthene	12.581	202	699790	36.44	ppm	97
82) Octadecane	10.322	57	169613	36.07	ppm	96
84) Pyrene	12.998	202	705977	33.39	ppm	99
86) Butylbenzylphthalate	14.499	149	300325	34.58	ppm	96
87) Benzo[a]anthracene	15.375	228	663256	33.55	ppm	96
88) 3,3'-Dichlorobenzidine	15.423	252	487144	72.95	ppm	98
89) Chrysene	15.439	228	570009	32.43	ppm	99
90) bis(2-Ethylhexyl)phtha...	15.732	149	383979	33.30	ppm	98
92) Di-n-octylphthalate	16.950	149	665567	34.72	ppm	99
93) Benzo[b]fluoranthene	17.351	252	677844	37.29	ppm	99
94) Benzo[k]fluoranthene	17.404	252	596643	34.49	ppm	98
95) Benzo[a]pyrene	17.885	252	591387	37.07	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.621	276	533663	33.61	ppm	99
98) Dibenz[a,h]anthracene	19.669	278	529552	36.01	ppm	96
99) 7,12-Dimethylbenz(a)an...	17.372	256	286004	41.04	ppm	93
100) Benzo[g,h,i]perylene	20.005	276	544937	36.01	ppm	98
102) Benzaldehyde	4.105	105	105669	24.52	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.492	216	179505	38.04	ppm	98
105) Atrazine	9.911	215	68140	52.65	ppm	91
107) Benzidine	12.939	184	240391	22.05	ppm	95
112) Pentachloronitrobenzene	10.001	295	30024	43.46	ppm	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153897.D
Acq On : 30 Apr 2019 11:12 am
Operator : christc2
Sample : op20021-bs1
Misc : op20021,em6576,30.0,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 30 12:18:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/06/19 13:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481463.d
Acq On : 29 Apr 2019 1:14 pm
Operator : angelar
Sample : op20035-ms Inst : MS6P
Misc : op20035,e6p2576,30.1,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.166	152	797566	40.00	ppm	0.00
24) Naphthalene-d8	5.135	136	2742394	40.00	ppm	0.00
47) Acenaphthene-d10	6.803	164	1393509	40.00	ppm	0.00
69) Phenanthrene-d10	8.461	188	2221926	40.00	ppm	0.00
83) Chrysene-d12	11.606	240	1771535	40.00	ppm	0.00
91) Perylene-d12	13.195	264	1564614	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.166	152	797566	40.00	ppm	0.00
103) Acenaphthene-d10a	6.803	164	1393509	40.00	ppm	0.00
105) Phenanthrene-d10a	8.461	188	2221926	40.00	ppm	0.00
109) Chrysene-d12a	11.606	240	1771535	40.00	ppm	0.00
111) Naphthalene-d8a	5.135	136	2742394	40.00	ppm	0.00
113) Phenanthrene-d10b	8.461	188	2221926	40.00	ppm	0.00
115) Chrysene-d12b	11.606	240	1771535	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.193	112	886588	38.00	ppm	0.00
Spiked Amount 50.000			Recovery =	76.00%		
8) Phenol-d5	3.947	99	1081925	37.98	ppm	0.00
Spiked Amount 50.000			Recovery =	75.96%		
25) Nitrobenzene-d5	4.584	82	968402	42.43	ppm	0.00
Spiked Amount 50.000			Recovery =	84.86%		
51) 2-Fluorobiphenyl	6.124	172	1910511	38.81	ppm	0.00
Spiked Amount 50.000			Recovery =	77.62%		
73) 2,4,6-Tribromophenol	7.675	330	282471	39.51	ppm	0.00
Spiked Amount 50.000			Recovery =	79.02%		
85) Terphenyl-d14	10.382	244	1624613	39.36	ppm	0.00
Spiked Amount 50.000			Recovery =	78.72%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.615	88	222713	21.21	ppm	99
3) Pyridine	1.909	79	720967	30.19	ppm	97
4) N-Nitrosodimethylamine	1.883	74	452968	32.54	ppm	95
6) Indene	4.354	116	1698487	39.28	ppm	98
7) Cumene	3.562	105	2052161	33.12	ppm	98
9) Phenol	3.958	94	900456	25.90	ppm	100
10) Aniline	3.931	93	1157203	37.29	ppm	86
11) bis(2-Chloroethyl)ether	3.985	93	885038	36.74	ppm	98
12) 2-Chlorophenol	4.022	128	757155	27.46	ppm	98
13) Decane	4.065	43	664927	31.42	ppm	98
14) 1,3-Dichlorobenzene	4.124	146	1009885	32.13	ppm	98
15) 1,4-Dichlorobenzene	4.182	146	1043276	32.42	ppm	98
16) Benzyl alcohol	4.289	108	636583	42.50	ppm	96
17) 1,2-Dichlorobenzene	4.289	146	975825	33.02	ppm	98
18) Acetophenone	4.471	105	1280682	34.55	ppm	99
19) 2-Methylphenol	4.391	108	681162	29.10	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.380	121	341570	39.76	ppm	94
21) 3&4-Methylphenol	4.503	108	707090	28.73	ppm	97
22) n-Nitroso-di-n-propyla...	4.482	70	627658	37.85	ppm	97
23) Hexachloroethane	4.535	201	313773	27.94	ppm	96
26) Nitrobenzene	4.594	77	961888	41.42	ppm	98
27) Quinoline	5.445	129	1885950	37.90	ppm	98
28) Isophorone	4.776	82	1713182	43.17	ppm	94
29) 2-Nitrophenol	4.840	139	406288	29.92	ppm	89
30) 2,4-Dimethylphenol	4.899	107	781645	37.71	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481463.d
Acq On : 29 Apr 2019 1:14 pm
Operator : angelar
Sample : op20035-ms Inst : MS6P
Misc : op20035,e6p2576,30.1,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.017	105	287128m	13.71	ppm		
32) bis(2-Chloroethoxy)met...	4.953	93	1025274	41.12	ppm		98
33) 2,4-Dichlorophenol	5.049	162	603787	29.47	ppm		98
34) 2,6-Dichlorophenol	5.220	162	607153	29.92	ppm		99
36) 1,2,4-Trichlorobenzene	5.097	180	790812	33.72	ppm		100
38) Naphthalene	5.156	128	3340665	46.77	ppm		99
39) 4-Chloroaniline	5.215	127	852650	29.64	ppm		98
40) 2,3-Dichloroaniline	6.038	161	877351	33.75	ppm		99
41) Caprolactam	5.530	55	384895	43.90	ppm		84
42) Hexachlorobutadiene	5.263	225	447094	33.50	ppm		98
43) 4-Chloro-3-methylphenol	5.675	107	663076	31.53	ppm		100
44) 2-Methylnaphthalene	5.766	141	1687097	41.76	ppm		99
45) 1-Methylnaphthalene	5.857	141	1651823	36.60	ppm		99
46) Dimethylnaphthalene	6.375	156	1660853	34.59	ppm		99
48) Hexachlorocyclopentadiene	5.915	237	453050	51.43	ppm		99
49) 2,4,6-Trichlorophenol	6.054	196	400637	30.82	ppm		98
50) 2,4,5-Trichlorophenol	6.103	196	415536	30.05	ppm		96
52) 2-Chloronaphthalene	6.231	162	1610739	39.19	ppm		98
53) Biphenyl	6.220	154	2268450	42.56	ppm		99
54) 2-Nitroaniline	6.354	65	554013	51.86	ppm		87
55) Dimethylphthalate	6.547	163	1939583	40.63	ppm		99
56) Acenaphthylene	6.648	152	2720912	42.90	ppm		100
57) 2,6-Dinitrotoluene	6.611	165	441737	40.93	ppm		99
58) 3-Nitroaniline	6.787	138	451198	38.44	ppm		98
59) Acenaphthene	6.835	153	1753300	41.64	ppm		98
60) 2,4-Dinitrophenol	6.921	184	97771	16.96	ppm		86
61) 4-Nitrophenol	7.039	109	216681	36.02	ppm		98
62) Dibenzofuran	7.023	168	2415387	41.20	ppm		97
63) 2,4-Dinitrotoluene	7.049	165	609810	40.68	ppm		100
64) 2,3,4,6-Tetrachlorophenol	7.183	232	278368	24.60	ppm		93
65) Diethylphthalate	7.317	149	1880509	39.96	ppm		98
66) Fluorene	7.397	166	1965320	41.29	ppm		99
67) 4-Chlorophenyl-phenyle...	7.413	204	839040	34.78	ppm		98
68) 4-Nitroaniline	7.461	138	470043	37.82	ppm		97
70) 4,6-Dinitro-2-methylph...	7.515	198	64577	7.53	ppm	#	91
71) n-Nitrosodiphenylamine	7.552	169	1523503	49.63	ppm		91
72) 1,2-Diphenylhydrazine	7.590	77	1876613	53.99	ppm		99
74) 4-Bromophenyl-phenylether	7.964	248	450548	37.74	ppm		98
75) Hexachlorobenzene	8.033	284	506801	36.13	ppm		91
76) Pentachlorophenol	8.285	266	201748	24.62	ppm		98
77) Phenanthrene	8.488	178	2453857	41.13	ppm		99
78) Anthracene	8.547	178	2495547	41.71	ppm		98
79) Carbazole	8.761	167	2416530	42.67	ppm		100
80) Di-n-butylphthalate	9.226	149	2926502	44.24	ppm		99
81) Fluoranthene	9.889	202	2431086	37.51	ppm		100
82) Octadecane	8.429	57	1008263	50.43	ppm		99
84) Pyrene	10.152	202	2423568	41.07	ppm		99
86) Butylbenzylphthalate	11.002	149	1224802	48.15	ppm		99
87) Benzo[a]anthracene	11.596	228	2035784	36.08	ppm		99
88) 3,3'-Dichlorobenzidine	11.601	252	1604257	75.68	ppm		98
89) Chrysene	11.638	228	1789729	32.34	ppm		99
90) bis(2-Ethylhexyl)phtha...	11.724	149	1655290	47.07	ppm		99
92) Di-n-octylphthalate	12.462	149	2757015	59.15	ppm		99
93) Benzo[b]fluoranthene	12.810	252	1824289	38.17	ppm		97
94) Benzo[k]fluoranthene	12.837	252	1599074	37.80	ppm		100
95) Benzo[a]pyrene	13.136	252	1486615	37.86	ppm		99
96) Indeno[1,2,3-cd]pyrene	14.211	276	1876664	35.80	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481463.d
Acq On : 29 Apr 2019 1:14 pm
Operator : angelar
Sample : op20035-ms Inst : MS6P
Misc : op20035,e6p2576,30.1,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

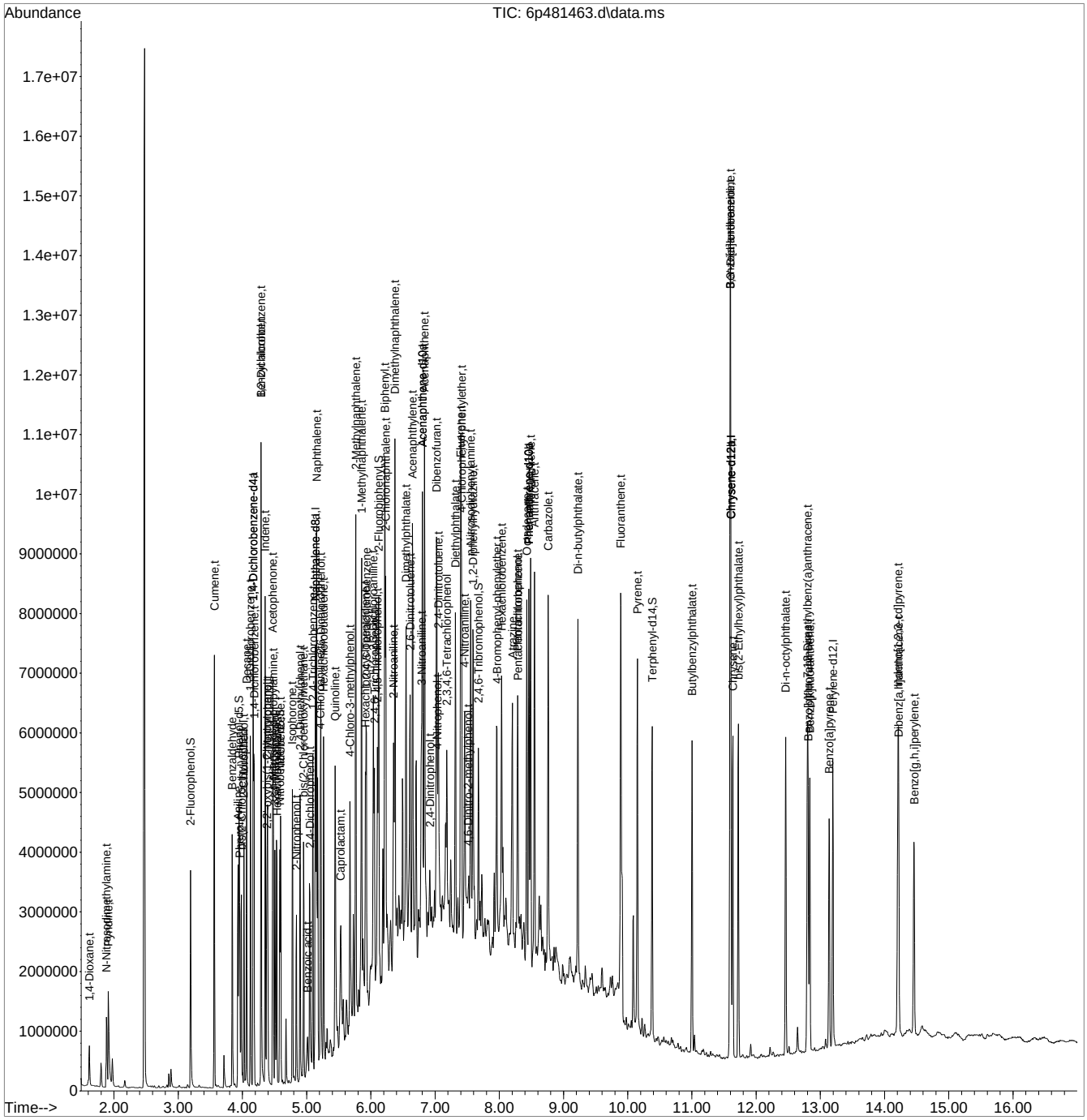
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.222	278	1598392	34.41	ppm	98
99) 7,12-Dimethylbenz(a)an...	12.799	256	716198	32.81	ppm	99
100) Benzo[g,h,i]perylene	14.463	276	1474763	36.07	ppm	99
102) Benzaldehyde	3.840	105	607976	30.71	ppm	96
104) 1,2,4,5-Tetrachloroben...	5.931	216	671216	36.09	ppm	98
108) Atrazine	8.205	215	236804	36.55	ppm	80
114) Pentachloronitrobenzene	8.290	295	95109	34.97	ppm	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481463.d
Acq On : 29 Apr 2019 1:14 pm
Operator : angelar
Sample : op20035-ms Inst : MS6P
Misc : op20035,e6p2576,30.1,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:00 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



Manual Integration Approval Summary

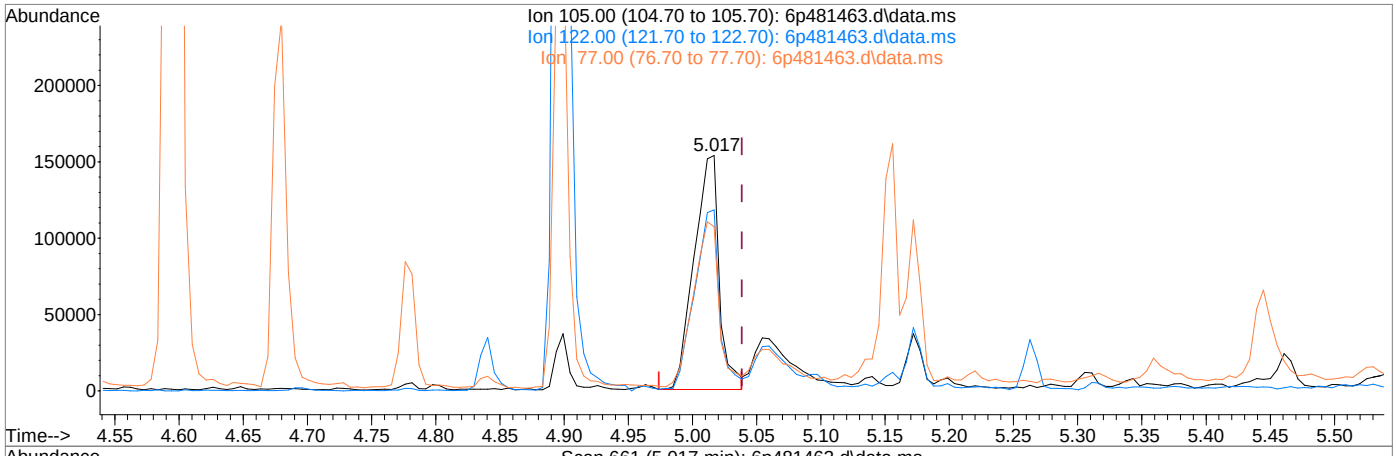
Sample Number:	OP20035-MS	**Method:**	SW846 8270D
Lab FileID:	6P481463.D	**Analyst approved:**	05/06/19 12:49 Kristi Schollenberger
Injection Time:	04/29/19 13:14	**Supervisor approved:**	05/06/19 13:03 Kristi Schollenberger

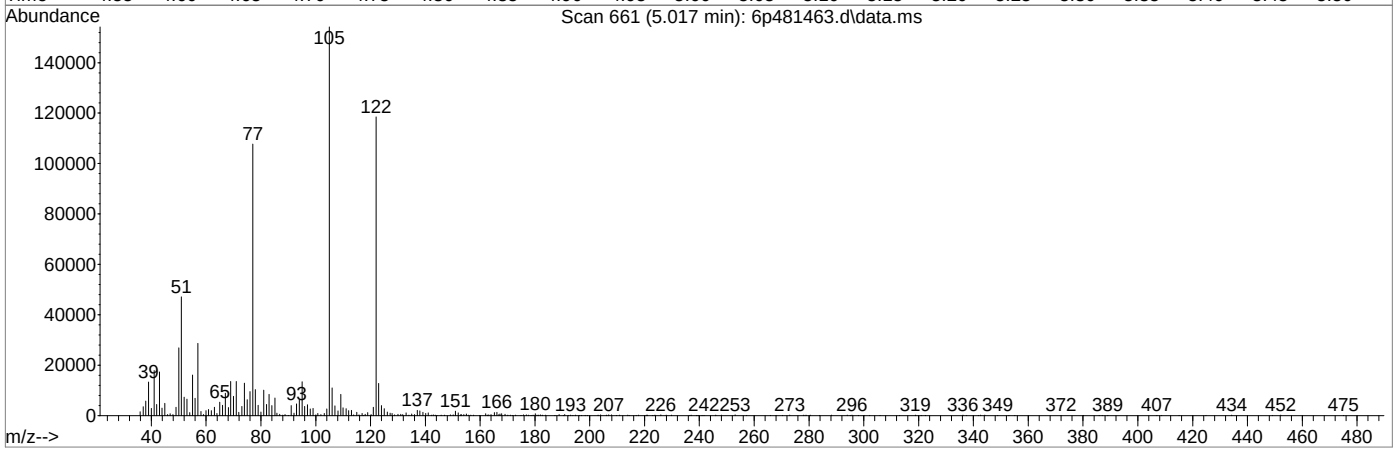
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.02	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481463.d
Acq On : 29 Apr 2019 1:14 pm
Operator : angelar
Sample : op20035-ms Inst : MS6P
Misc : op20035,e6p2576,30.1,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:24:21 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration





TIC: 6p481463.d\data.ms

(31) Benzoic acid (t)

5.017min (-0.022) 9.98ppm

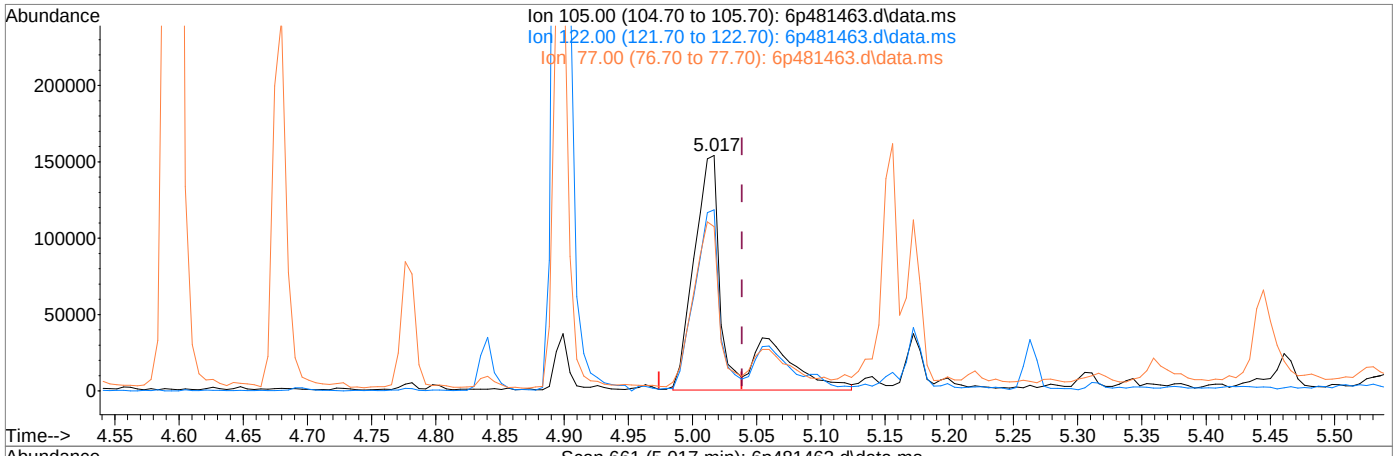
response 209082

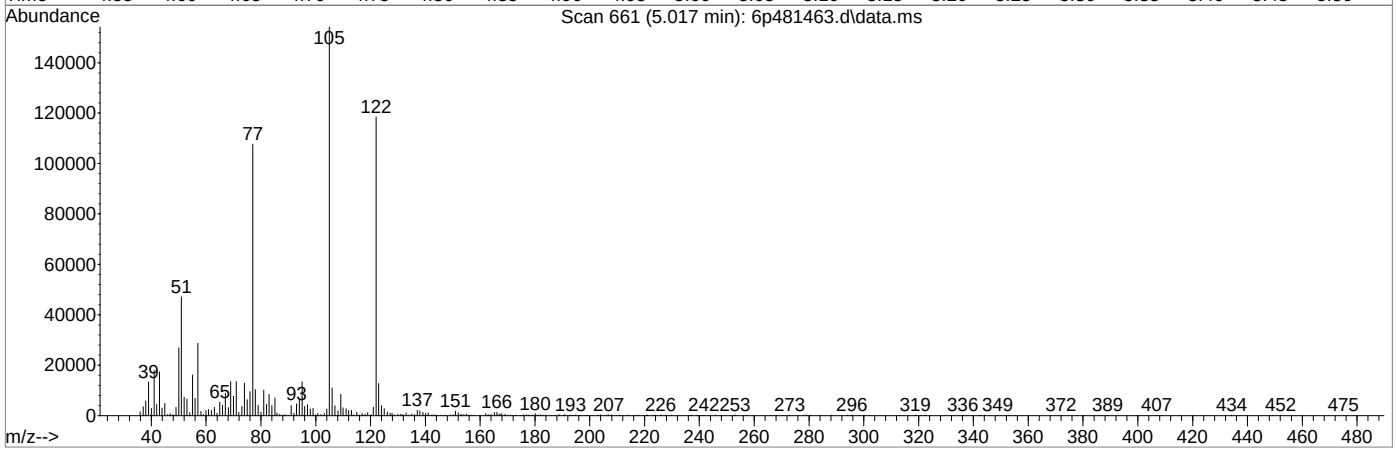
Ion	Exp%	Act%
105.00	100	100
122.00	81.40	76.48
77.00	68.50	67.98
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481463.d
Acq On : 29 Apr 2019 1:14 pm
Operator : angelar
Sample : op20035-ms Inst : MS6P
Misc : op20035,e6p2576,30.1,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:24:21 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration





TIC: 6p481463.d\data.ms

(31) Benzoic acid (t)

5.017min (-0.022) 13.71ppm m

response 287128

Ion	Exp%	Act%
105.00	100	100
122.00	81.40	76.85
77.00	68.50	69.81
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Kristi Schollenberger 05/06/19 13:03

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:46 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.167	152	790320	40.00	ppm	0.00
24) Naphthalene-d8	5.135	136	2750145	40.00	ppm	0.00
47) Acenaphthene-d10	6.798	164	1329256	40.00	ppm	0.00
69) Phenanthrene-d10	8.462	188	2226346	40.00	ppm	0.00
83) Chrysene-d12	11.607	240	1785185	40.00	ppm	0.00
91) Perylene-d12	13.195	264	1687844	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.167	152	790320	40.00	ppm	0.00
103) Acenaphthene-d10a	6.798	164	1329256	40.00	ppm	0.00
105) Phenanthrene-d10a	8.462	188	2226346	40.00	ppm	0.00
109) Chrysene-d12a	11.607	240	1785185	40.00	ppm	0.00
111) Naphthalene-d8a	5.135	136	2750145	40.00	ppm	0.00
113) Phenanthrene-d10b	8.462	188	2226346	40.00	ppm	0.00
115) Chrysene-d12b	11.607	240	1785185	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.193	112	859145	37.16	ppm	0.00
Spiked Amount 50.000			Recovery =	74.32%		
8) Phenol-d5	3.947	99	1032963	36.59	ppm	0.00
Spiked Amount 50.000			Recovery =	73.18%		
25) Nitrobenzene-d5	4.584	82	932760	40.75	ppm	0.00
Spiked Amount 50.000			Recovery =	81.50%		
51) 2-Fluorobiphenyl	6.119	172	1819429	38.74	ppm	0.00
Spiked Amount 50.000			Recovery =	77.48%		
73) 2,4,6-Tribromophenol	7.675	330	277840	38.78	ppm	0.00
Spiked Amount 50.000			Recovery =	77.56%		
85) Terphenyl-d14	10.382	244	1627394	39.13	ppm	0.00
Spiked Amount 50.000			Recovery =	78.26%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.615	88	226894	21.81	ppm	95
3) Pyridine	1.909	79	710749	30.03	ppm	99
4) N-Nitrosodimethylamine	1.883	74	471402	34.18	ppm	98
6) Indene	4.354	116	1638996	38.25	ppm	98
7) Cumene	3.562	105	2051741	33.42	ppm	100
9) Phenol	3.958	94	1135683	32.96	ppm	98
10) Aniline	3.931	93	1171621	38.11	ppm	86
11) bis(2-Chloroethyl)ether	3.985	93	867123	36.32	ppm	97
12) 2-Chlorophenol	4.022	128	965232	35.33	ppm	98
13) Decane	4.065	43	653361	31.15	ppm	98
14) 1,3-Dichlorobenzene	4.124	146	993179	31.88	ppm	98
15) 1,4-Dichlorobenzene	4.183	146	1046576	32.82	ppm	99
16) Benzyl alcohol	4.290	108	615998	41.51	ppm	97
17) 1,2-Dichlorobenzene	4.290	146	958458	32.73	ppm	98
18) Acetophenone	4.471	105	1236514	33.67	ppm	97
19) 2-Methylphenol	4.391	108	855373	36.88	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.381	121	334087	39.25	ppm	94
21) 3&4-Methylphenol	4.504	108	900382	36.92	ppm	99
22) n-Nitroso-di-n-propyla...	4.482	70	603738	36.74	ppm	96
23) Hexachloroethane	4.536	201	304377	27.36	ppm	96
26) Nitrobenzene	4.594	77	935903	40.19	ppm	97
27) Quinoline	5.445	129	1784707	35.77	ppm	99
28) Isophorone	4.782	82	1692692	42.54	ppm	100
29) 2-Nitrophenol	4.841	139	522665	38.39	ppm	88
30) 2,4-Dimethylphenol	4.899	107	978365	47.07	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:46 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.012	105	238469m	11.36	ppm		
32) bis(2-Chloroethoxy)met...	4.953	93	1011894	40.47	ppm		99
33) 2,4-Dichlorophenol	5.044	162	756374	36.81	ppm		97
34) 2,6-Dichlorophenol	5.220	162	763690	37.53	ppm		99
36) 1,2,4-Trichlorobenzene	5.097	180	775419	32.97	ppm		98
38) Naphthalene	5.156	128	3077014	42.96	ppm		99
39) 4-Chloroaniline	5.215	127	834921	28.94	ppm		98
40) 2,3-Dichloroaniline	6.039	161	833906	31.99	ppm		99
41) Caprolactam	5.530	55	366387	41.67	ppm		91
42) Hexachlorobutadiene	5.263	225	434899	32.49	ppm		97
43) 4-Chloro-3-methylphenol	5.675	107	832206	39.46	ppm		99
44) 2-Methylnaphthalene	5.766	141	1597950	39.44	ppm		99
45) 1-Methylnaphthalene	5.857	141	1559261	34.45	ppm		99
46) Dimethylnaphthalene	6.376	156	1521750	31.60	ppm		100
48) Hexachlorocyclopentadiene	5.916	237	471203	55.32	ppm		98
49) 2,4,6-Trichlorophenol	6.055	196	509179	41.07	ppm		99
50) 2,4,5-Trichlorophenol	6.103	196	528444	40.06	ppm		98
52) 2-Chloronaphthalene	6.231	162	1530540	39.04	ppm		98
53) Biphenyl	6.215	154	2132784	41.94	ppm		98
54) 2-Nitroaniline	6.354	65	488594	47.95	ppm		96
55) Dimethylphthalate	6.547	163	1839517	40.40	ppm		99
56) Acenaphthylene	6.648	152	2552052	42.19	ppm		99
57) 2,6-Dinitrotoluene	6.611	165	423172	41.10	ppm		93
58) 3-Nitroaniline	6.782	138	420169	37.53	ppm		97
59) Acenaphthene	6.836	153	1619057	40.32	ppm		99
60) 2,4-Dinitrophenol	6.921	184	101549	18.07	ppm		95
61) 4-Nitrophenol	7.033	109	260125	45.34	ppm	#	84
62) Dibenzofuran	7.023	168	2260465	40.42	ppm		99
63) 2,4-Dinitrotoluene	7.050	165	591603	41.37	ppm		93
64) 2,3,4,6-Tetrachlorophenol	7.183	232	378971	35.11	ppm		98
65) Diethylphthalate	7.317	149	1882673	41.94	ppm		97
66) Fluorene	7.397	166	1863410	41.05	ppm		100
67) 4-Chlorophenyl-phenyle...	7.413	204	797808	34.67	ppm		97
68) 4-Nitroaniline	7.456	138	446311	37.65	ppm		99
70) 4,6-Dinitro-2-methylph...	7.509	198	105338m	12.25	ppm		
71) n-Nitrosodiphenylamine	7.552	169	1522683	49.50	ppm		94
72) 1,2-Diphenylhydrazine	7.590	77	1661992	47.72	ppm		94
74) 4-Bromophenyl-phenylether	7.959	248	447159	37.38	ppm		98
75) Hexachlorobenzene	8.034	284	508075	36.15	ppm		99
76) Pentachlorophenol	8.280	266	303229	35.27	ppm		97
77) Phenanthrene	8.488	178	2391798	40.01	ppm		99
78) Anthracene	8.547	178	2481726	41.40	ppm		98
79) Carbazole	8.761	167	2322876	40.93	ppm		100
80) Di-n-butylphthalate	9.221	149	2800086	42.24	ppm		99
81) Fluoranthene	9.890	202	2495229	38.42	ppm		98
82) Octadecane	8.424	57	909161	45.39	ppm		98
84) Pyrene	10.152	202	2477503	41.66	ppm		98
86) Butylbenzylphthalate	11.002	149	1255818	48.99	ppm		100
87) Benzo[a]anthracene	11.596	228	2086789	36.70	ppm		99
88) 3,3'-Dichlorobenzidine	11.601	252	1647938	77.14	ppm		98
89) Chrysene	11.639	228	1893270	33.95	ppm		99
90) bis(2-Ethylhexyl)phtha...	11.724	149	1675992	47.30	ppm		98
92) Di-n-octylphthalate	12.462	149	2764729	54.99	ppm		99
93) Benzo[b]fluoranthene	12.810	252	2018102	39.15	ppm		97
94) Benzo[k]fluoranthene	12.837	252	1817335	39.82	ppm		97
95) Benzo[a]pyrene	13.136	252	1747789	41.27	ppm		100
96) Indeno[1,2,3-cd]pyrene	14.211	276	2253464	39.85	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:46 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration

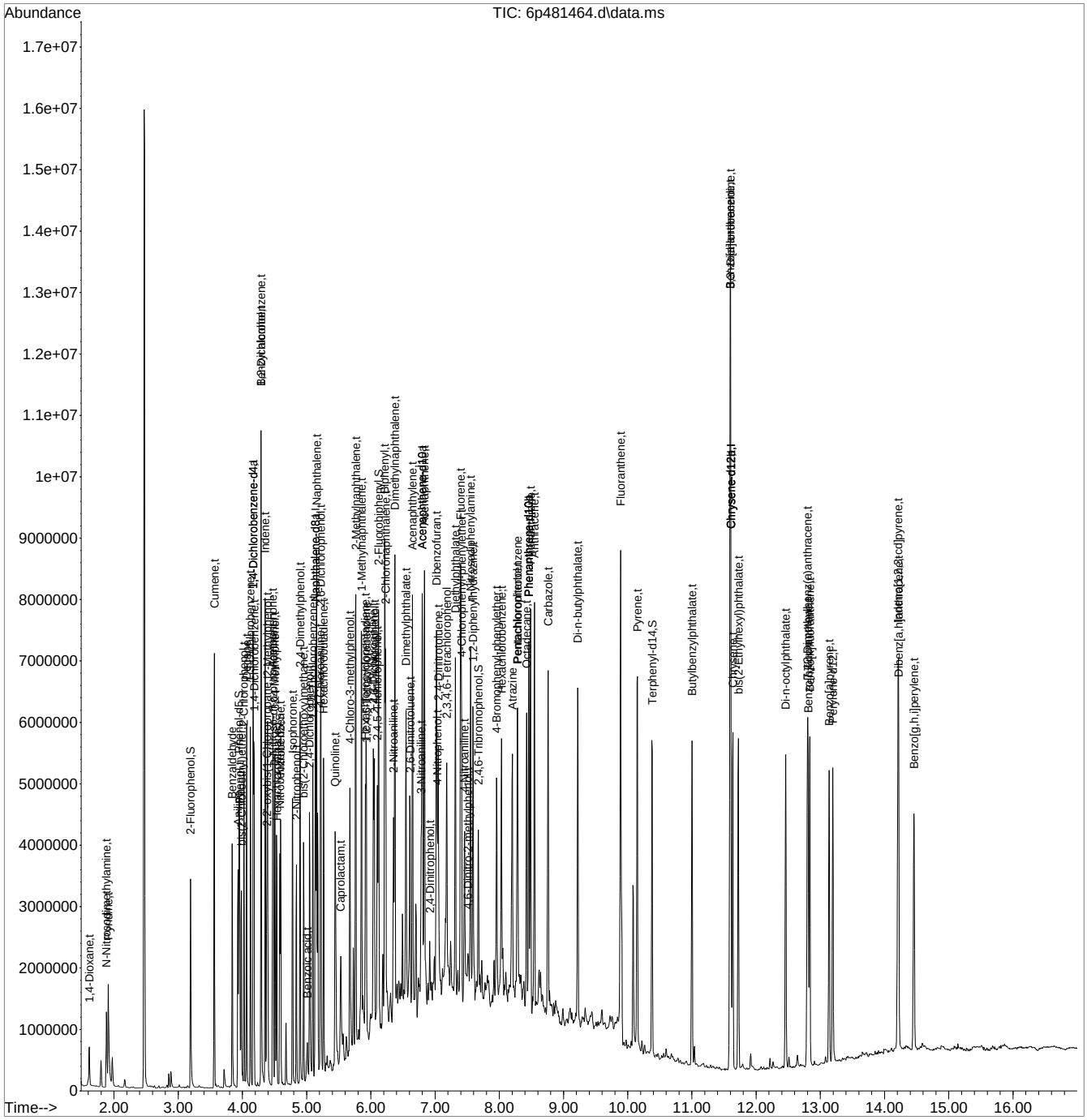
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) Dibenz[a,h]anthracene	14.222	278	1886944	37.65	ppm	97
99) 7,12-Dimethylbenz(a)an...	12.799	256	768051	32.63	ppm	99
100) Benzo[g,h,i]perylene	14.457	276	1858429	42.14	ppm	97
102) Benzaldehyde	3.840	105	565210	28.82	ppm	94
104) 1,2,4,5-Tetrachloroben...	5.932	216	657914	37.08	ppm	97
108) Atrazine	8.205	215	228620	35.25	ppm	87
114) Pentachloronitrobenzene	8.285	295	93755	34.41	ppm	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:28:46 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



Manual Integration Approval Summary

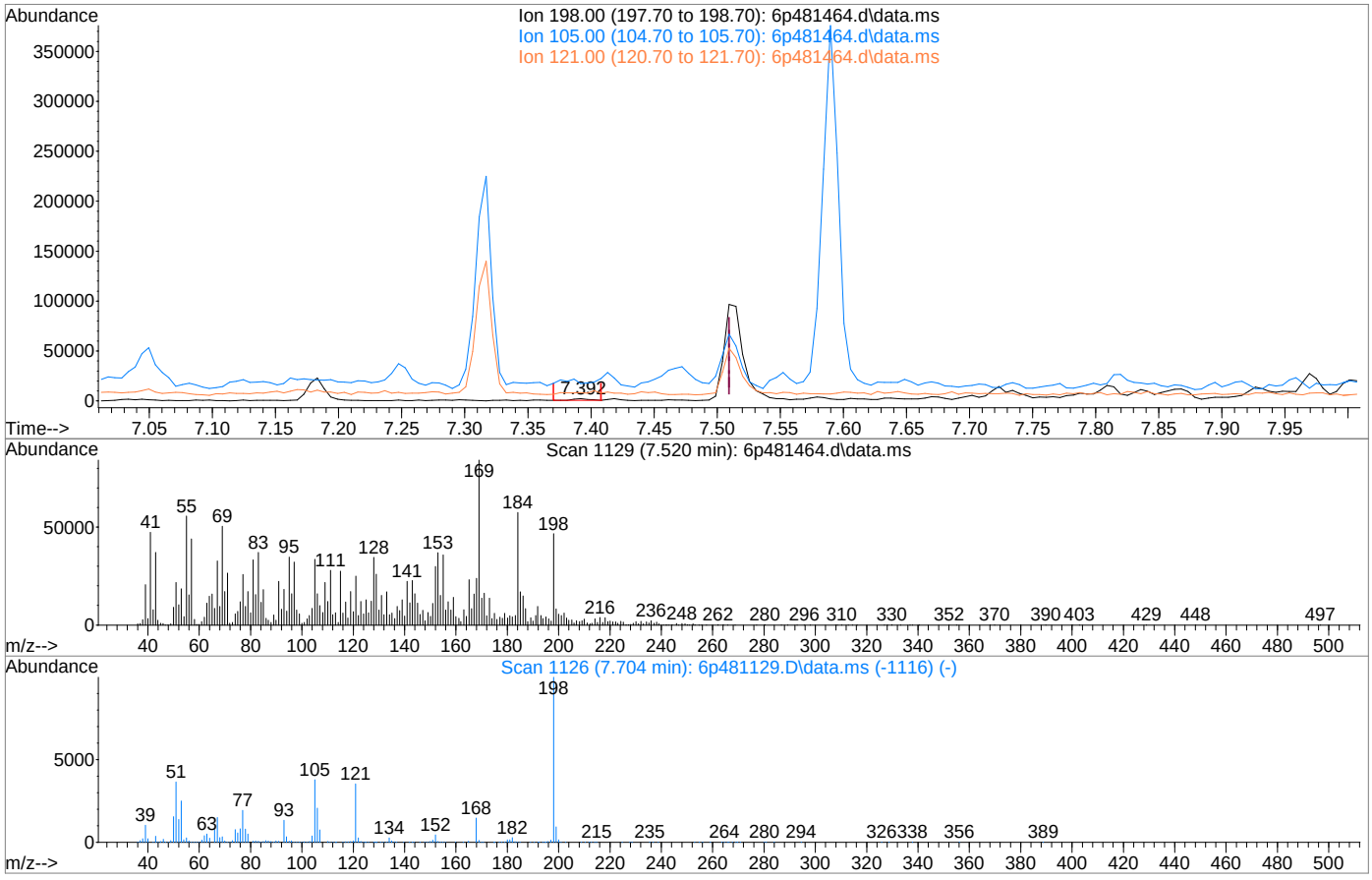
Sample Number:	OP20035-MSD	**Method:**	SW846 8270D
Lab FileID:	6P481464.D	**Analyst approved:**	05/06/19 12:49 Kristi Schollenberger
Injection Time:	04/29/19 13:38	**Supervisor approved:**	05/06/19 13:03 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.01	Split peak
4,6-Dinitro-o-cresol	534-52-1		7.51	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:24:54 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481464.d\data.ms

(70) 4,6-Dinitro-2-methylphenol (t)

7.392min (-0.118) 0.19ppm

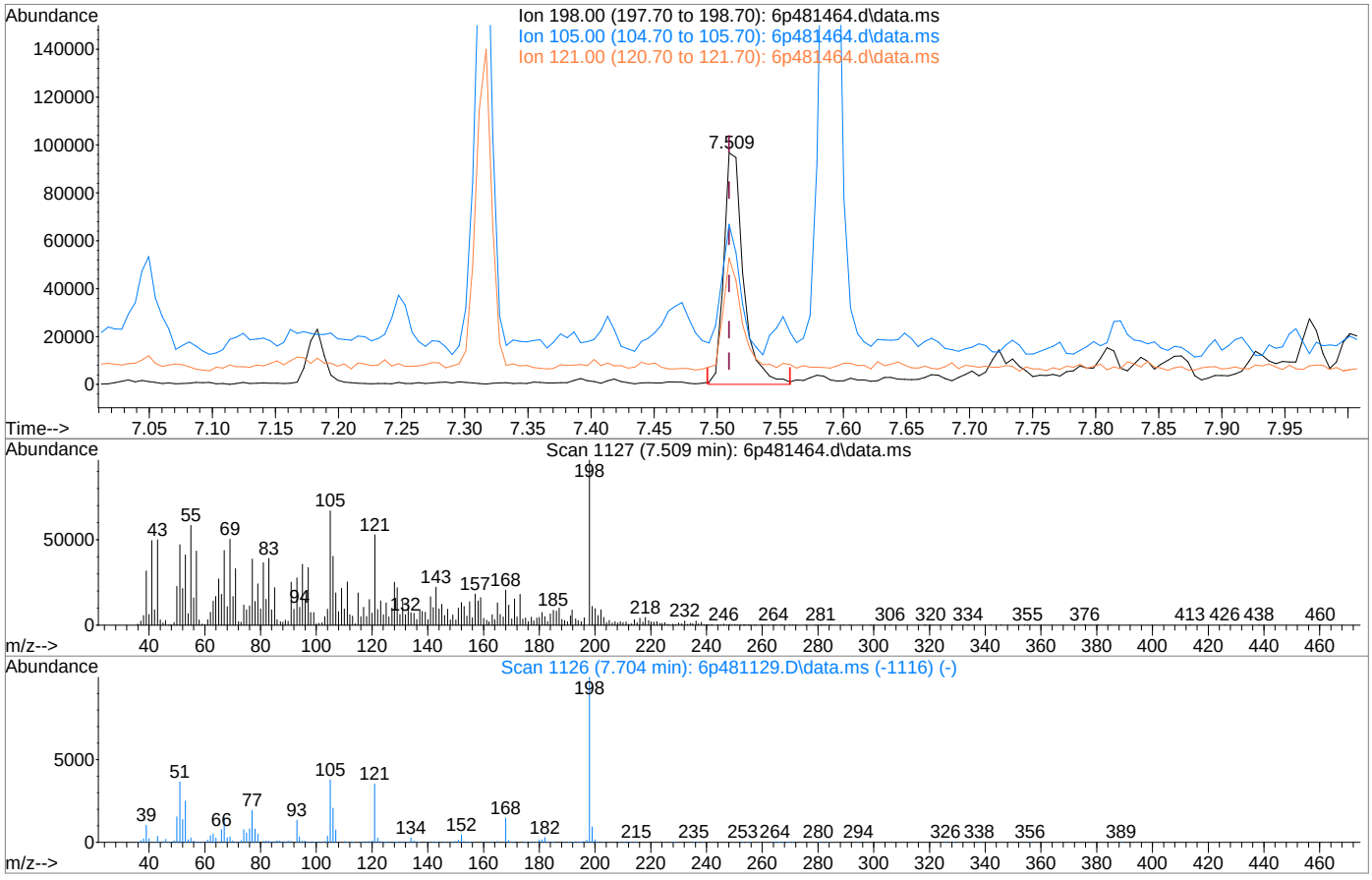
response 1609

Ion	Exp%	Act%
198.00	100	100
105.00	0.00	0.00
121.00	46.30	53.71
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:24:54 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration



TIC: 6p481464.d\data.ms

(70) 4,6-Dinitro-2-methylphenol (t)

7.509min (+0.000) 12.25ppm m

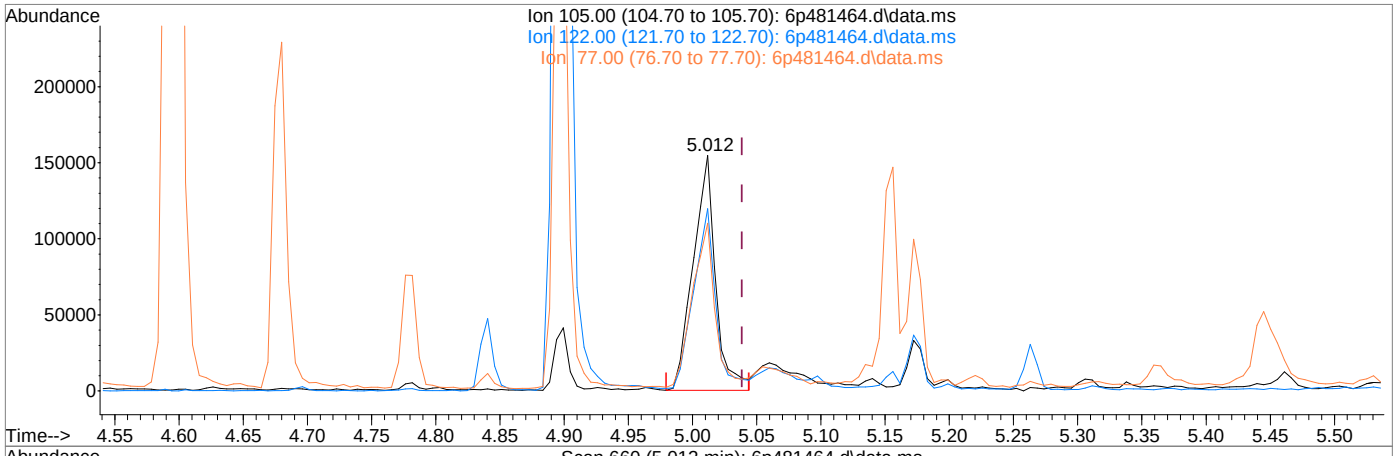
response 105338

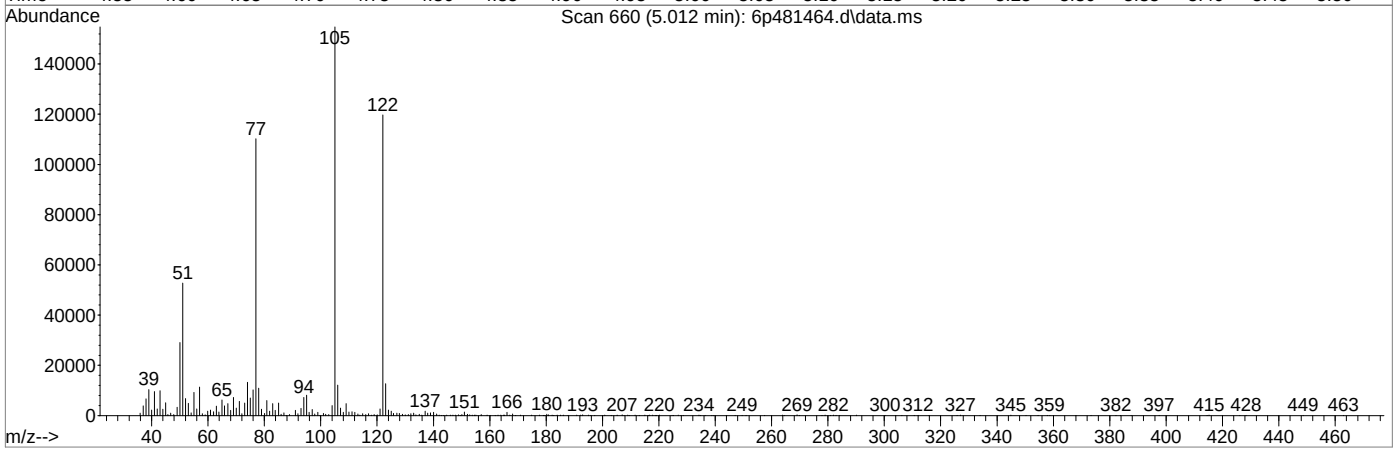
Ion	Exp%	Act%
198.00	100	100
105.00	0.00	69.20#
121.00	46.30	54.63
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:26:35 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration





TIC: 6p481464.d\data.ms

(31) Benzoic acid (t)

5.012min (-0.027) 8.94ppm

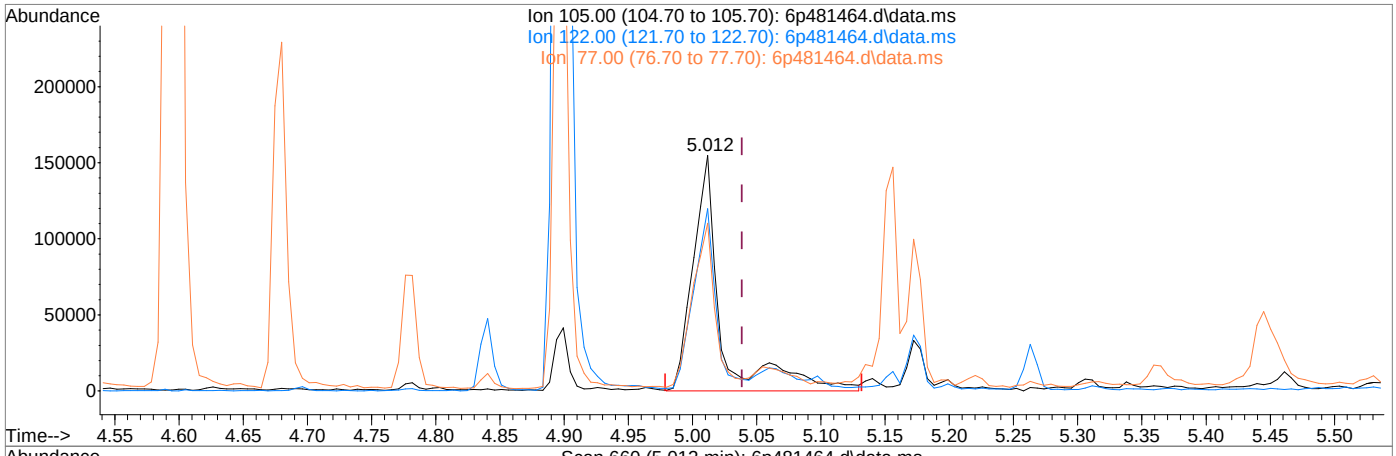
response 187686

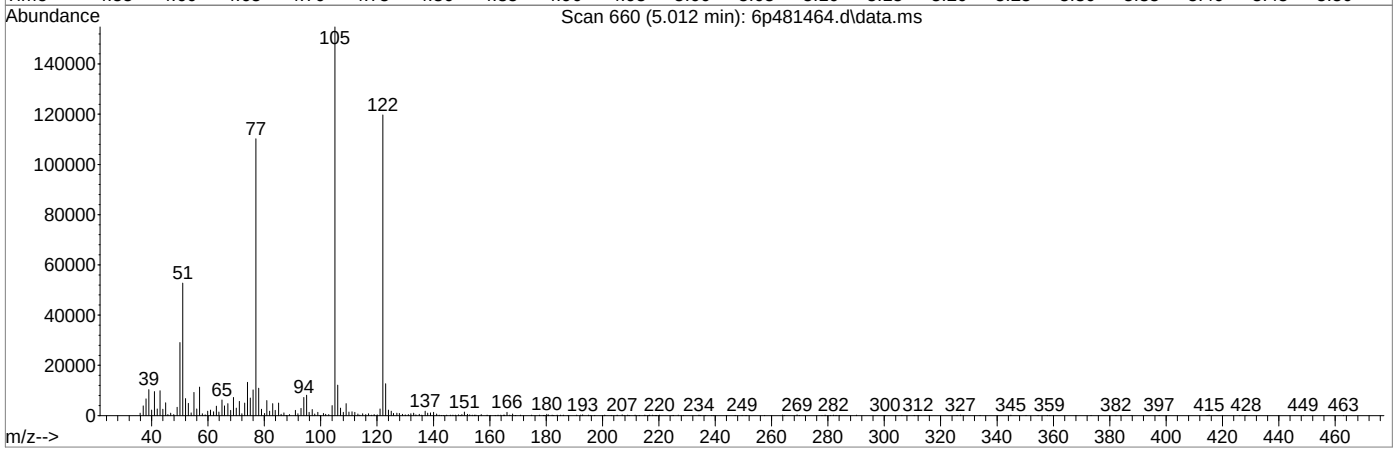
Ion	Exp%	Act%
105.00	100	100
122.00	81.40	76.47
77.00	68.50	69.45
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jonkm\e6p2576\
Data File : 6p481464.d
Acq On : 29 Apr 2019 1:38 pm
Operator : angelar
Sample : op20035-msd Inst : MS6P
Misc : op20035,e6p2576,31.2,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Results File: M6P2562.RES
Quant Time: Apr 30 04:26:35 2019
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Apr 17 09:00:59 2019
QLast Update : Tue Apr 30 04:17:34 2019
Response via : Initial Calibration





TIC: 6p481464.d\data.ms

(31) Benzoic acid (t)

5.012min (-0.027) 11.36ppm m

response 238469

Ion	Exp%	Act%
105.00	100	100
122.00	81.40	77.33
77.00	68.50	71.22
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153905.D
Acq On : 30 Apr 2019 3:00 pm
Operator : christc2
Sample : op20021-ms
Misc : op20021,em6576,30.6,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 30 15:54:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:53:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.431	152	148457	40.00	ppm	0.00
24) Naphthalene-d8	5.494	136	480907	40.00	ppm	0.00
47) Acenaphthene-d10	7.721	164	272486	40.00	ppm	-0.02
69) Phenanthrene-d10	10.280	188	574657	40.00	ppm	-0.03
83) Chrysene-d12	15.391	240	547268	40.00	ppm	-0.07
91) Perylene-d12	17.987	264	560509	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.431	152	148457	40.00	ppm	0.00
103) Acenaphthene-d10a	7.721	164	272486	40.00	ppm	-0.02
106) Chrysene-d12a	15.391	240	547268	40.00	ppm	-0.07
108) Chrysene-d12b	15.391	240	546897	40.00	ppm	-0.07
110) Phenanthrene-d10a	10.280	188	574657	40.00	ppm	-0.03
113) Naphthalene-d8a	5.494	136	480907	40.00	ppm	0.00
115) Chrysene-d12c	15.391	240	547268	40.00	ppm	-0.07
System Monitoring Compounds						
5) 2-Fluorophenol	3.459	112	145041	24.99	ppm	-0.03
Spiked Amount 50.000			Recovery = 49.98%			
8) Phenol-d5	4.185	99	179807	25.08	ppm	0.00
Spiked Amount 50.000			Recovery = 50.16%			
25) Nitrobenzene-d5	4.858	82	145533	28.37	ppm	0.00
Spiked Amount 50.000			Recovery = 56.74%			
51) 2-Fluorobiphenyl	6.760	172	329020	32.48	ppm	-0.02
Spiked Amount 50.000			Recovery = 64.96%			
73) 2,4,6-Tribromophenol	9.040	330	81962	42.40	ppm	-0.04
Spiked Amount 50.000			Recovery = 84.80%			
85) Terphenyl-d14	13.436	244	479015	32.46	ppm	-0.07
Spiked Amount 50.000			Recovery = 64.92%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.926	88	37226	12.67	ppm	99
3) Pyridine	2.273	79	108531	15.34	ppm	96
4) N-Nitrosodimethylamine	2.231	42	58814	23.38	ppm	91
6) Indene	4.623	116	233486	29.75	ppm	94
7) Cumene	3.838	105	311465	22.46	ppm	98
9) Phenol	4.191	94	148833	19.76	ppm	63
10) Aniline	4.191	93	169204	22.42	ppm	50
11) bis(2-Chloroethyl)ether	4.239	93	132464	25.42	ppm	93
12) 2-Chlorophenol	4.282	128	113603	21.95	ppm	100
13) Decane	4.324	43	94658	23.95	ppm	91
14) 1,3-Dichlorobenzene	4.388	146	159807	26.59	ppm	98
15) 1,4-Dichlorobenzene	4.442	146	157178	28.79	ppm	98
16) Benzyl alcohol	4.538	108	102876	33.74	ppm	99
17) 1,2-Dichlorobenzene	4.559	146	148926	27.57	ppm	96
18) Acetophenone	4.736	105	188163	27.55	ppm	97
19) 2-Methylphenol	4.634	108	96779	22.22	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153905.D
Acq On : 30 Apr 2019 3:00 pm
Operator : christc2
Sample : op20021-ms
Misc : op20021,em6576,30.6,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 30 15:54:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:53:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.639	121	42004	31.18	ppm	93
21) 3&4-Methylphenol	4.752	108	104505	23.86	ppm	94
22) n-Nitroso-di-n-propyla...	4.741	70	99723	29.27	ppm	95
23) Hexachloroethane	4.821	201	66244	28.73	ppm	94
26) Nitrobenzene	4.874	77	142371	28.58	ppm	93
27) Quinoline	5.862	129	277317	30.44	ppm	94
28) Isophorone	5.072	82	268871	28.93	ppm	99
29) 2-Nitrophenol	5.141	139	63062	27.37	ppm	94
30) 2,4-Dimethylphenol	5.195	107	103711	27.18	ppm	92
31) Benzoic acid	5.270	105	22068	7.28	ppm	87
32) bis(2-Chloroethoxy)met...	5.270	93	164845	29.24	ppm	98
33) 2,4-Dichlorophenol	5.371	162	102448	25.61	ppm	94
34) 2,6-Dichlorophenol	5.585	162	94216	25.98	ppm	98
36) 1,2,4-Trichlorobenzene	5.446	180	149444	30.56	ppm	96
38) Naphthalene	5.515	128	384635	32.67	ppm	97
39) 4-Chloroaniline	5.574	127	126911	24.32	ppm	97
40) 2,3-Dichloroaniline	6.637	161	158833	31.14	ppm	97
41) Caprolactam	5.932	55	53861	29.10	ppm	97
42) Hexachlorobutadiene	5.654	225	90385	31.01	ppm	100
43) 4-Chloro-3-methylphenol	6.124	107	96931	23.41	ppm	93
44) 2-Methylnaphthalene	6.279	141	259018	34.69	ppm	94
45) 1-Methylnaphthalene	6.397	142	279642	29.46	ppm	96
46) Dimethylnaphthalene	7.112	156	259881	31.45	ppm	98
48) Hexachlorocyclopentadiene	6.487	237	174346	65.80	ppm	99
49) 2,4,6-Trichlorophenol	6.648	196	83896	28.44	ppm	96
50) 2,4,5-Trichlorophenol	6.701	196	90756	28.67	ppm	97
52) 2-Chloronaphthalene	6.904	162	267136	31.87	ppm	97
53) Biphenyl	6.893	154	353425	32.29	ppm	98
54) 2-Nitroaniline	7.064	65	81000	35.83	ppm	96
55) Dimethylphthalate	7.358	163	330679	32.29	ppm	99
56) Acenaphthylene	7.502	152	437207	33.22	ppm	97
57) 2,6-Dinitrotoluene	7.433	165	74738	38.97	ppm	97
58) 3-Nitroaniline	7.684	138	80893	34.20	ppm	84
59) Acenaphthene	7.775	153	270396	33.93	ppm	98
60) 2,4-Dinitrophenol	7.855	184	20928	23.97	ppm	93
61) 4-Nitrophenol	8.020	109	31596	24.06	ppm	85
62) Dibenzofuran	8.052	168	439832	36.91	ppm	94
63) 2,4-Dinitrotoluene	8.068	165	94920	35.09	ppm	80
64) 2,3,4,6-Tetrachlorophenol	8.282	232	78419	27.66	ppm	95
65) Diethylphthalate	8.522	149	321929	32.53	ppm	100
66) Fluorene	8.618	166	337919	34.17	ppm	97
67) 4-Chlorophenyl-phenyle...	8.661	204	173439	33.77	ppm	94
68) 4-Nitroaniline	8.688	138	84556	40.12	ppm	88
70) 4,6-Dinitro-2-methylph...	8.757	198	17226	11.51	ppm	99
71) n-Nitrosodiphenylamine	8.875	169	252826	33.10	ppm	99
72) 1,2-Diphenylhydrazine	8.928	77	316511	30.21	ppm	98
74) 4-Bromophenyl-phenylether	9.516	248	123731	31.53	ppm	98
75) Hexachlorobenzene	9.596	284	147476	33.84	ppm	95
76) Pentachlorophenol	9.980	266	74168	30.56	ppm	95
77) Phenanthrene	10.322	178	491864	34.52	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153905.D
Acq On : 30 Apr 2019 3:00 pm
Operator : christc2
Sample : op20021-ms
Misc : op20021,em6576,30.6,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 30 15:54:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:53:40 2019
Response via : Initial Calibration

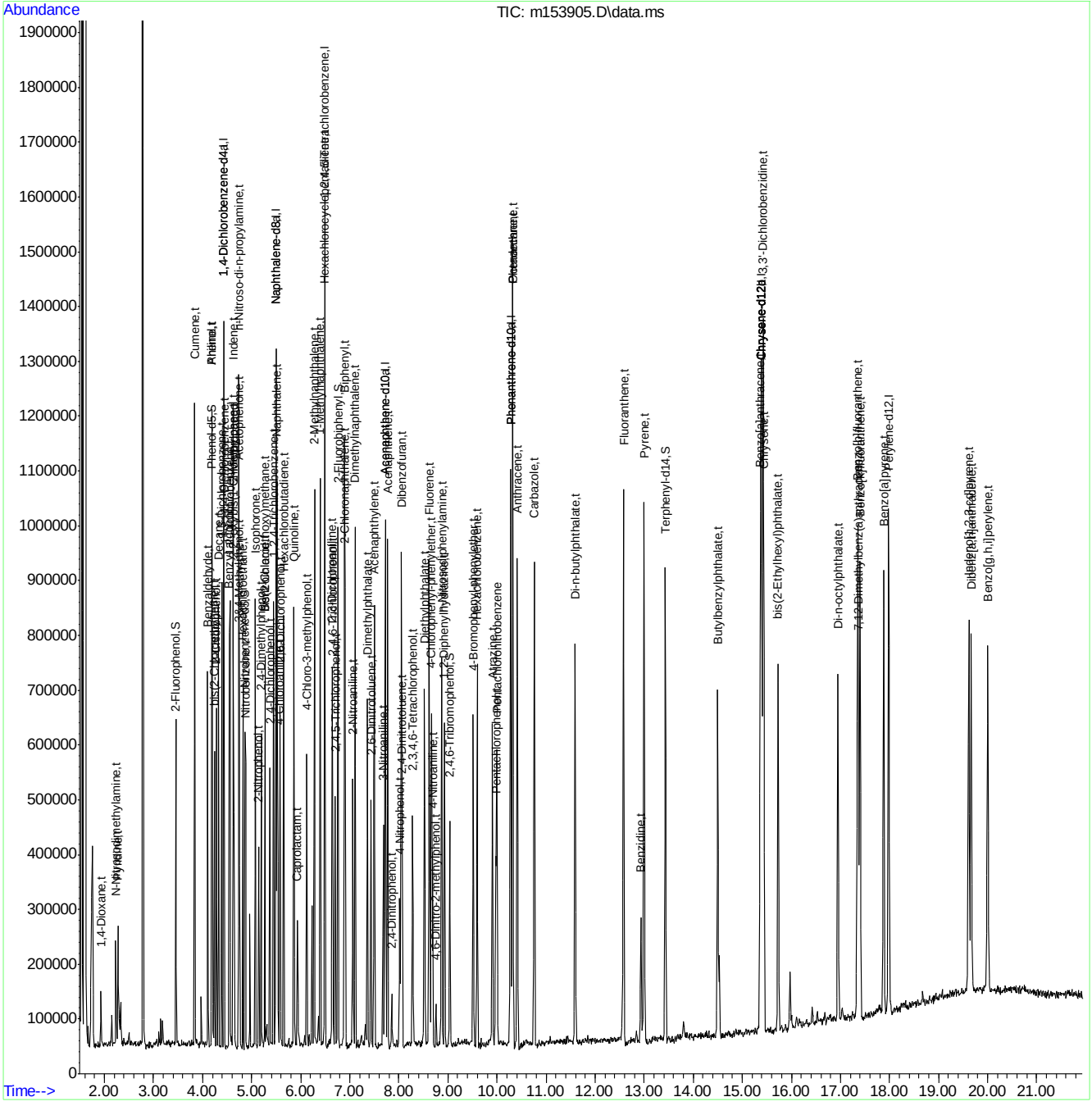
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.413	178	490141	32.66	ppm	99
79) Carbazole	10.760	167	506964	35.14	ppm	98
80) Di-n-butylphthalate	11.593	149	570236	32.81	ppm	98
81) Fluoranthene	12.582	202	596784	31.69	ppm	97
82) Octadecane	10.322	57	147480	31.97	ppm	96
84) Pyrene	12.998	202	617709	30.83	ppm	98
86) Butylbenzylphthalate	14.499	149	253139	30.76	ppm	98
87) Benzo[a]anthracene	15.370	228	559223	29.84	ppm	98
88) 3,3'-Dichlorobenzidine	15.423	252	401271	63.40	ppm	97
89) Chrysene	15.439	228	482846	28.99	ppm	99
90) bis(2-Ethylhexyl)phtha...	15.727	149	324173	29.86	ppm	98
92) Di-n-octylphthalate	16.951	149	551512	29.73	ppm	99
93) Benzo[b]fluoranthene	17.351	252	560715	31.75	ppm	99
94) Benzo[k]fluoranthene	17.399	252	503059	29.93	ppm	98
95) Benzo[a]pyrene	17.885	252	502206	32.40	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.616	276	455897	29.55	ppm	98
98) Dibenz[a,h]anthracene	19.664	278	446428	31.25	ppm	98
99) 7,12-Dimethylbenz(a)an...	17.367	256	140411	20.74	ppm	95
100) Benzo[g,h,i]perylene	20.006	276	471659	32.08	ppm	96
102) Benzaldehyde	4.105	105	96277	23.11	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.493	216	154425	33.18	ppm	98
105) Atrazine	9.911	215	56417	44.20	ppm	98
107) Benzidine	12.934	184	137594	13.32	ppm	95
112) Pentachloronitrobenzene	10.002	295	27059	39.93	ppm	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153905.D
Acq On : 30 Apr 2019 3:00 pm
Operator : christc2
Sample : op20021-ms
Misc : op20021,em6576,30.6,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 30 15:54:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:53:40 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153906.D
Acq On : 30 Apr 2019 3:29 pm
Operator : christc2
Sample : op20021-msd
Misc : op20021,em6576,30.4,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 30 15:57:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:56:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.430	152	151707	40.00	ppm	-0.01
24) Naphthalene-d8	5.498	136	482110	40.00	ppm	0.00
47) Acenaphthene-d10	7.726	164	271649	40.00	ppm	-0.01
69) Phenanthrene-d10	10.279	188	575245	40.00	ppm	-0.03
83) Chrysene-d12	15.390	240	567814	40.00	ppm	-0.07
91) Perylene-d12	17.986	264	567441	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.430	152	151707	40.00	ppm	-0.01
103) Acenaphthene-d10a	7.726	164	271649	40.00	ppm	-0.01
106) Chrysene-d12a	15.390	240	567814	40.00	ppm	-0.07
108) Chrysene-d12b	15.390	240	567781	40.00	ppm	-0.07
110) Phenanthrene-d10a	10.279	188	575245	40.00	ppm	-0.03
113) Naphthalene-d8a	5.498	136	482110	40.00	ppm	0.00
115) Chrysene-d12c	15.390	240	567814	40.00	ppm	-0.07
System Monitoring Compounds						
5) 2-Fluorophenol	3.458	112	159100	26.83	ppm	-0.03
Spiked Amount 50.000			Recovery = 53.66%			
8) Phenol-d5	4.184	99	197053	26.90	ppm	0.00
Spiked Amount 50.000			Recovery = 53.80%			
25) Nitrobenzene-d5	4.857	82	156289	30.39	ppm	0.00
Spiked Amount 50.000			Recovery = 60.78%			
51) 2-Fluorobiphenyl	6.759	172	355841	35.23	ppm	-0.02
Spiked Amount 50.000			Recovery = 70.46%			
73) 2,4,6-Tribromophenol	9.040	330	88956	45.97	ppm	-0.04
Spiked Amount 50.000			Recovery = 91.94%			
85) Terphenyl-d14	13.435	244	531550	34.71	ppm	-0.07
Spiked Amount 50.000			Recovery = 69.42%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.925	88	39261	13.08	ppm	98
3) Pyridine	2.272	79	122116	16.90	ppm	94
4) N-Nitrosodimethylamine	2.230	42	58042	22.58	ppm	94
6) Indene	4.622	116	248364	30.96	ppm	97
7) Cumene	3.837	105	320907	22.64	ppm	99
9) Phenol	4.195	94	181794	23.62	ppm	87
10) Aniline	4.190	93	187352	24.30	ppm	53
11) bis(2-Chloroethyl)ether	4.238	93	139988	26.29	ppm	93
12) 2-Chlorophenol	4.281	128	139015	26.29	ppm	97
13) Decane	4.323	43	98972	24.51	ppm	89
14) 1,3-Dichlorobenzene	4.393	146	168282	27.40	ppm	95
15) 1,4-Dichlorobenzene	4.446	146	170418	30.55	ppm	95
16) Benzyl alcohol	4.542	108	104358	33.49	ppm	91
17) 1,2-Dichlorobenzene	4.558	146	158096	28.64	ppm	95
18) Acetophenone	4.740	105	195903	28.07	ppm	97
19) 2-Methylphenol	4.633	108	119615	26.87	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153906.D
Acq On : 30 Apr 2019 3:29 pm
Operator : christc2
Sample : op20021-msd
Misc : op20021,em6576,30.4,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 30 15:57:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:56:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.638	121	43024	31.26	ppm	94
21) 3&4-Methylphenol	4.751	108	126920	28.35	ppm	92
22) n-Nitroso-di-n-propyla...	4.740	70	105584	30.33	ppm	90
23) Hexachloroethane	4.820	201	66014	28.01	ppm	98
26) Nitrobenzene	4.873	77	145962	29.23	ppm	94
27) Quinoline	5.862	129	298661	32.70	ppm	94
28) Isophorone	5.071	82	282107	30.28	ppm	98
29) 2-Nitrophenol	5.146	139	74751	32.36	ppm	93
30) 2,4-Dimethylphenol	5.194	107	129634	33.89	ppm	90
31) Benzoic acid	5.274	105	32637	10.73	ppm	92
32) bis(2-Chloroethoxy)met...	5.269	93	172457	30.51	ppm	98
33) 2,4-Dichlorophenol	5.370	162	128232	31.97	ppm	95
34) 2,6-Dichlorophenol	5.584	162	119520	32.87	ppm	92
36) 1,2,4-Trichlorobenzene	5.445	180	155211	31.66	ppm	97
38) Naphthalene	5.514	128	404217	34.24	ppm	98
39) 4-Chloroaniline	5.578	127	138467	26.47	ppm	97
40) 2,3-Dichloroaniline	6.636	161	170570	33.36	ppm	96
41) Caprolactam	5.942	55	60354	32.52	ppm	94
42) Hexachlorobutadiene	5.653	225	95006	32.52	ppm	99
43) 4-Chloro-3-methylphenol	6.123	107	119303	28.74	ppm	90
44) 2-Methylnaphthalene	6.278	141	262568	35.08	ppm	95
45) 1-Methylnaphthalene	6.396	142	298802	31.40	ppm	97
46) Dimethylnaphthalene	7.111	156	276843	33.42	ppm	96
48) Hexachlorocyclopentadiene	6.486	237	183699	69.54	ppm	95
49) 2,4,6-Trichlorophenol	6.652	196	104672	35.59	ppm	98
50) 2,4,5-Trichlorophenol	6.700	196	111385	35.29	ppm	92
52) 2-Chloronaphthalene	6.903	162	286660	34.30	ppm	98
53) Biphenyl	6.892	154	380002	34.82	ppm	98
54) 2-Nitroaniline	7.063	65	84559	37.52	ppm	95
55) Dimethylphthalate	7.362	163	349352	34.22	ppm	98
56) Acenaphthylene	7.501	152	466016	35.52	ppm	99
57) 2,6-Dinitrotoluene	7.432	165	79491	41.57	ppm	95
58) 3-Nitroaniline	7.683	138	82053	34.80	ppm	89
59) Acenaphthene	7.774	153	290842	36.61	ppm	100
60) 2,4-Dinitrophenol	7.854	184	34431	35.15	ppm	100
61) 4-Nitrophenol	8.019	109	37513	28.66	ppm	99
62) Dibenzofuran	8.051	168	441698	37.18	ppm	91
63) 2,4-Dinitrotoluene	8.073	165	100955	37.47	ppm	80
64) 2,3,4,6-Tetrachlorophenol	8.281	232	99708	35.28	ppm	95
65) Diethylphthalate	8.527	149	343459	34.81	ppm	99
66) Fluorene	8.618	166	355724	36.08	ppm	99
67) 4-Chlorophenyl-phenyle...	8.660	204	180482	35.25	ppm	94
68) 4-Nitroaniline	8.687	138	87153	41.48	ppm	88
70) 4,6-Dinitro-2-methylph...	8.756	198	27626	16.77	ppm	96
71) n-Nitrosodiphenylamine	8.874	169	261133	34.15	ppm	97
72) 1,2-Diphenylhydrazine	8.933	77	327543	31.23	ppm	96
74) 4-Bromophenyl-phenylether	9.515	248	134198	34.17	ppm	96
75) Hexachlorobenzene	9.595	284	155545	35.66	ppm	96
76) Pentachlorophenol	9.980	266	96624	39.77	ppm	98
77) Phenanthrene	10.321	178	518472	36.35	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153906.D
Acq On : 30 Apr 2019 3:29 pm
Operator : christc2
Sample : op20021-msd
Misc : op20021,em6576,30.4,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 30 15:57:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:56:21 2019
Response via : Initial Calibration

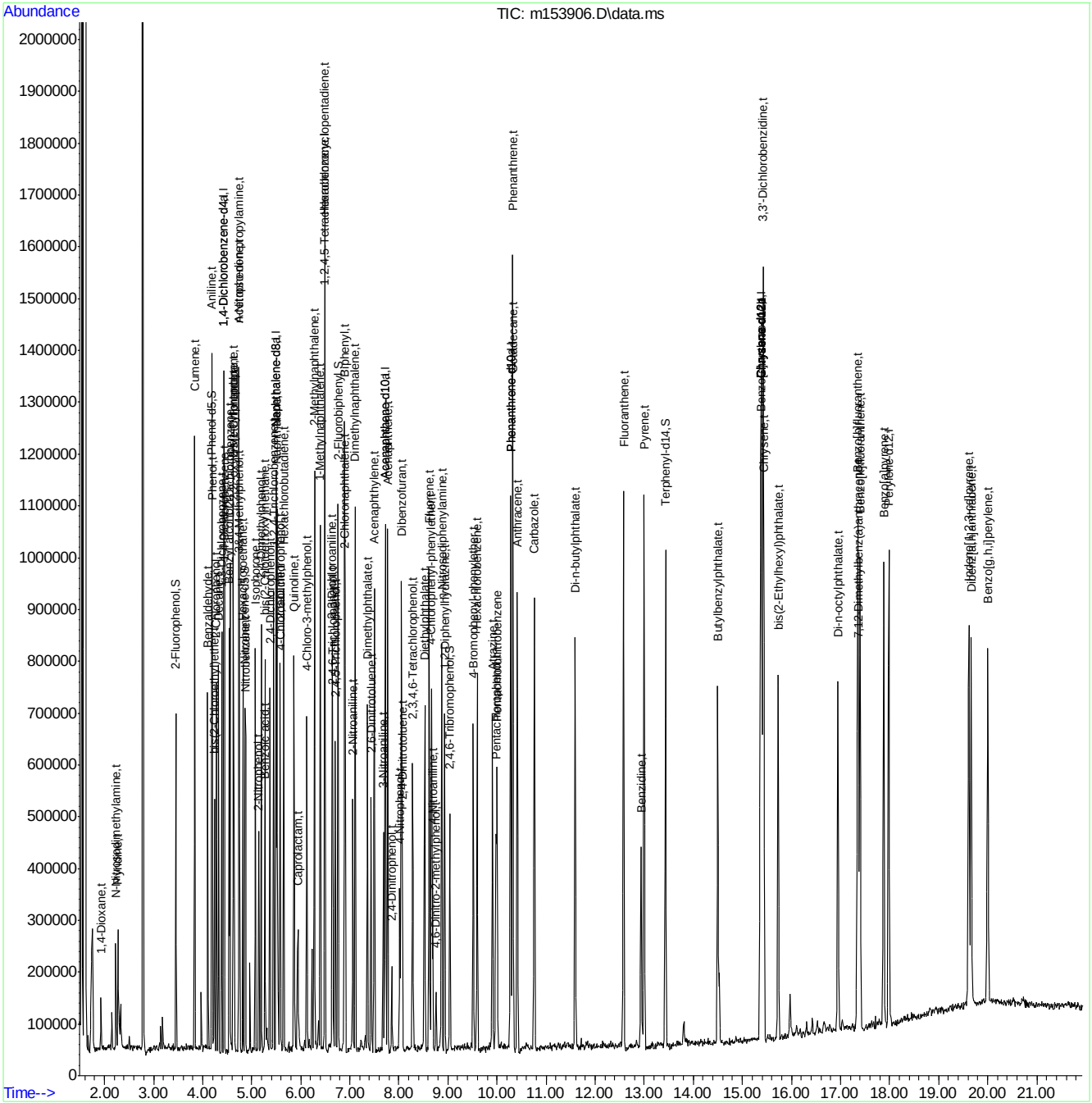
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.412	178	514742	34.26	ppm	99
79) Carbazole	10.759	167	511249	35.40	ppm	98
80) Di-n-butylphthalate	11.593	149	609043	35.01	ppm	99
81) Fluoranthene	12.581	202	641192	34.01	ppm	95
82) Octadecane	10.327	57	157637	34.14	ppm	96
84) Pyrene	12.997	202	640495	30.81	ppm	100
86) Butylbenzylphthalate	14.498	149	264563	30.98	ppm	98
87) Benzo[a]anthracene	15.374	228	588981	30.30	ppm	99
88) 3,3'-Dichlorobenzidine	15.422	252	462372	70.41	ppm	99
89) Chrysene	15.438	228	508196	29.41	ppm	100
90) bis(2-Ethylhexyl)phtha...	15.732	149	345310	30.61	ppm	99
92) Di-n-octylphthalate	16.950	149	587335	31.23	ppm	98
93) Benzo[b]fluoranthene	17.350	252	589666	32.98	ppm	99
94) Benzo[k]fluoranthene	17.398	252	552578	32.47	ppm	98
95) Benzo[a]pyrene	17.884	252	538769	34.33	ppm	99
96) Indeno[1,2,3-cd]pyrene	19.615	276	501183	32.09	ppm	97
98) Dibenz[a,h]anthracene	19.663	278	483665	33.44	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.366	256	155342	22.66	ppm	94
100) Benzo[g,h,i]perylene	20.005	276	510557	34.31	ppm	99
102) Benzaldehyde	4.104	105	100790	23.68	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.492	216	167699	36.14	ppm	99
105) Atrazine	9.910	215	60034	47.18	ppm	98
107) Benzidine	12.938	184	242788	22.65	ppm	94
112) Pentachloronitrobenzene	10.001	295	27110	39.97	ppm	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153906.D
Acq On : 30 Apr 2019 3:29 pm
Operator : christc2
Sample : op20021-msd
Misc : op20021,em6576,30.4,,,1,1
ALS Vial : 15 Sample Multiplier: 1

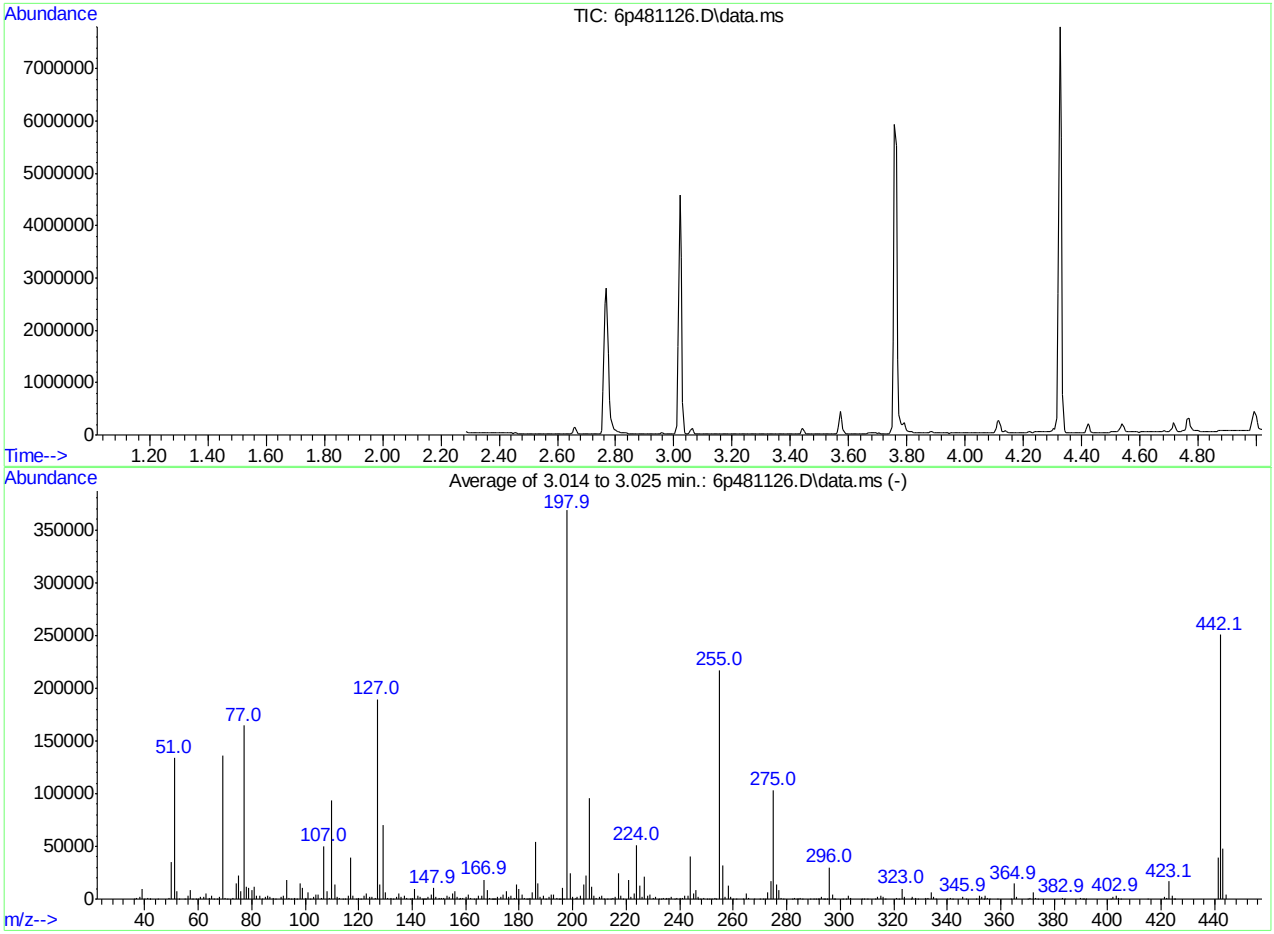
Quant Time: Apr 30 15:57:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 15:56:21 2019
Response via : Initial Calibration



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

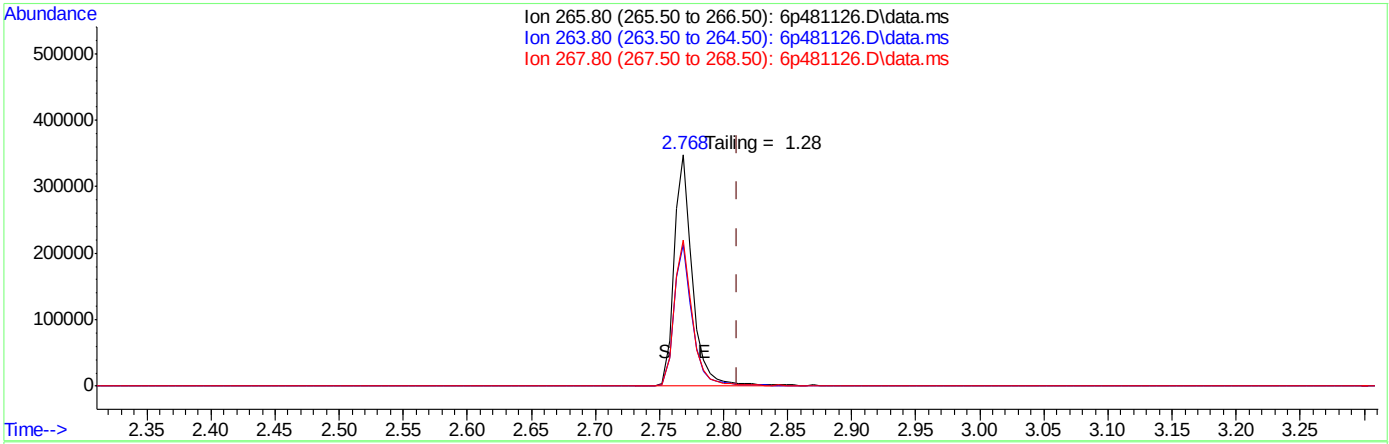
Average of 3.014 to 3.025 min.: 6p481126.D\data.ms
dftpp
Modified:subtracted

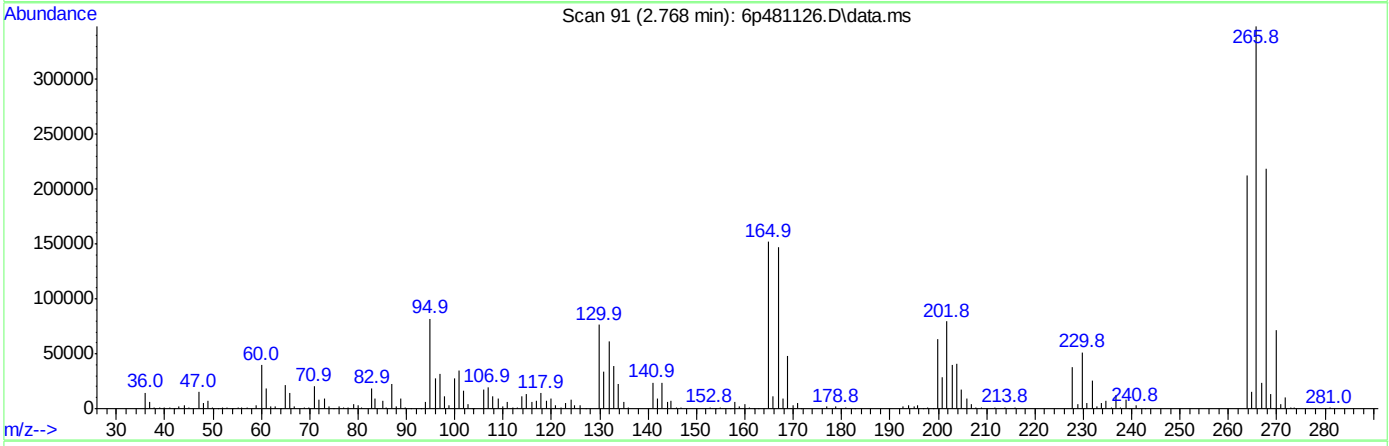
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
389.90	706	422.00	1455				
390.60	138	423.05	16779				
391.05	478	424.10	3728				
391.90	347	424.80	143				
401.00	310	425.10	374				
401.95	2390	441.10	39477				
402.95	2852	442.05	250821				
404.00	986	443.00	48343				
404.90	116	444.05	4468				
414.80	116						
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

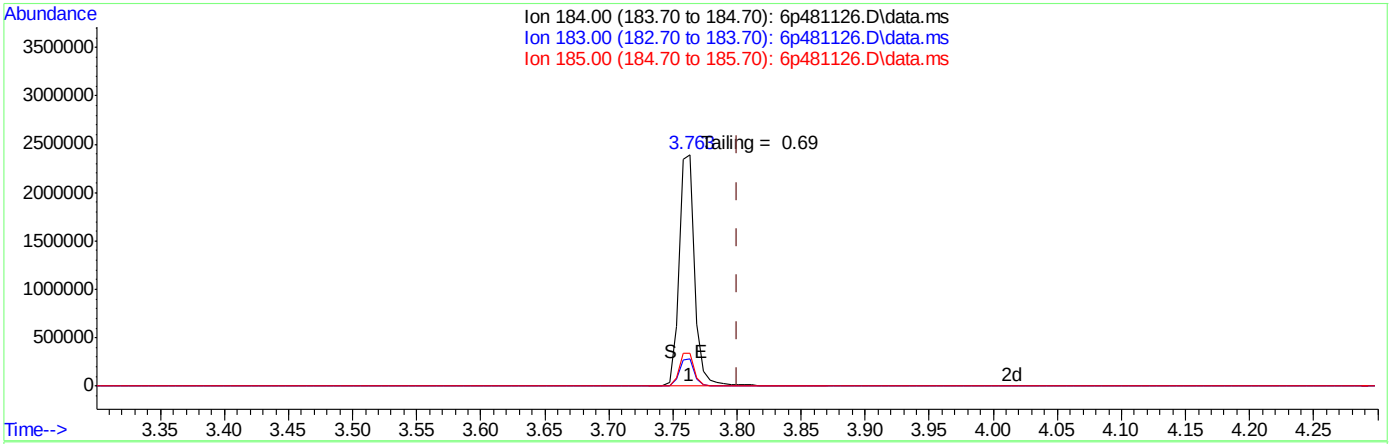
response 356010

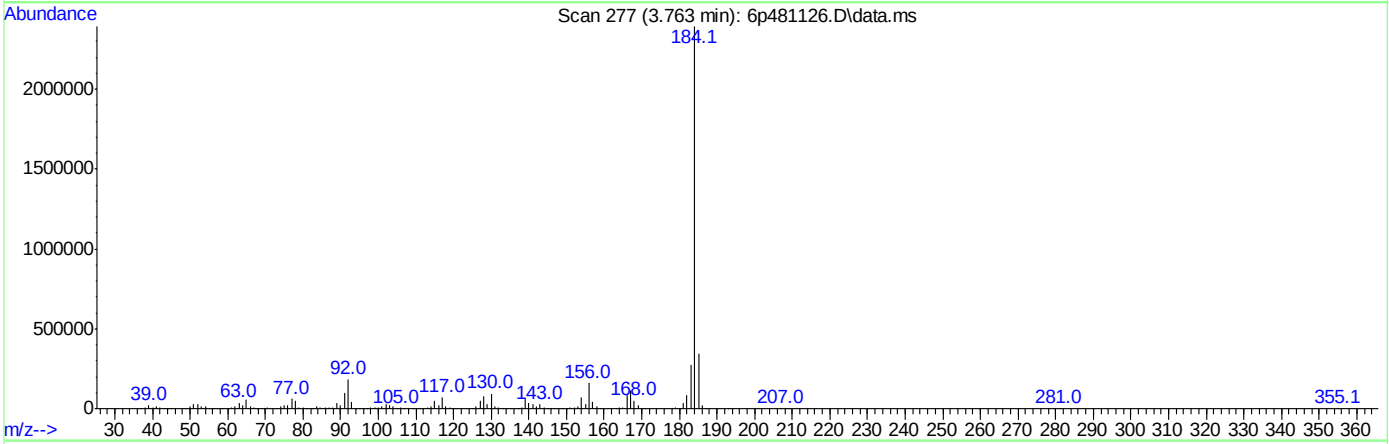
Ion	Exp%	Act%
265.80	100	100
263.80	60.10	61.11
267.80	65.70	62.85
0.00	0.00	0.00

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





TIC: 6p481126.D\data.ms

(2) Benzidine (t)

3.763min (-0.037) 0.00ng

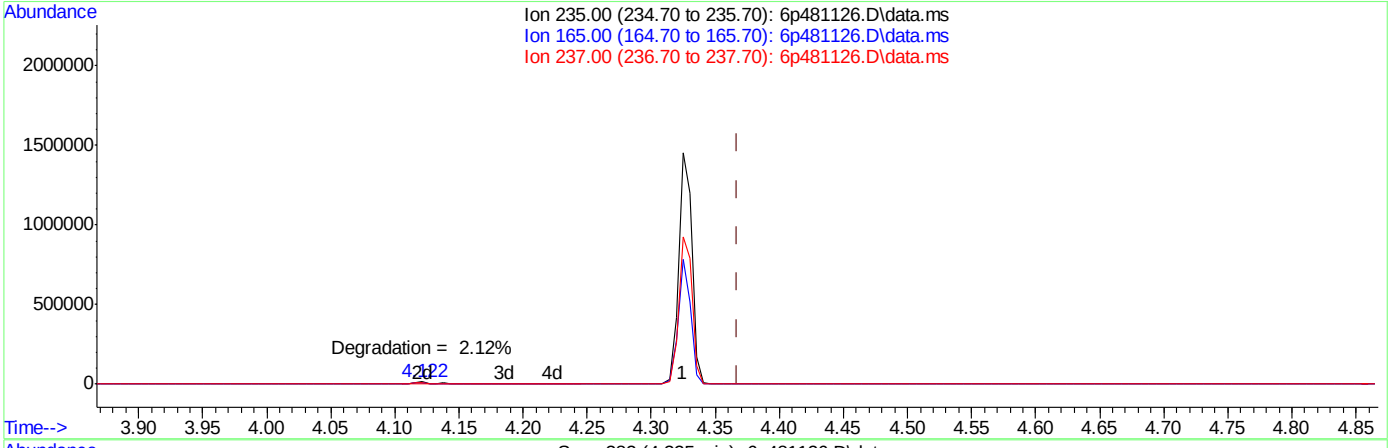
response 2079722

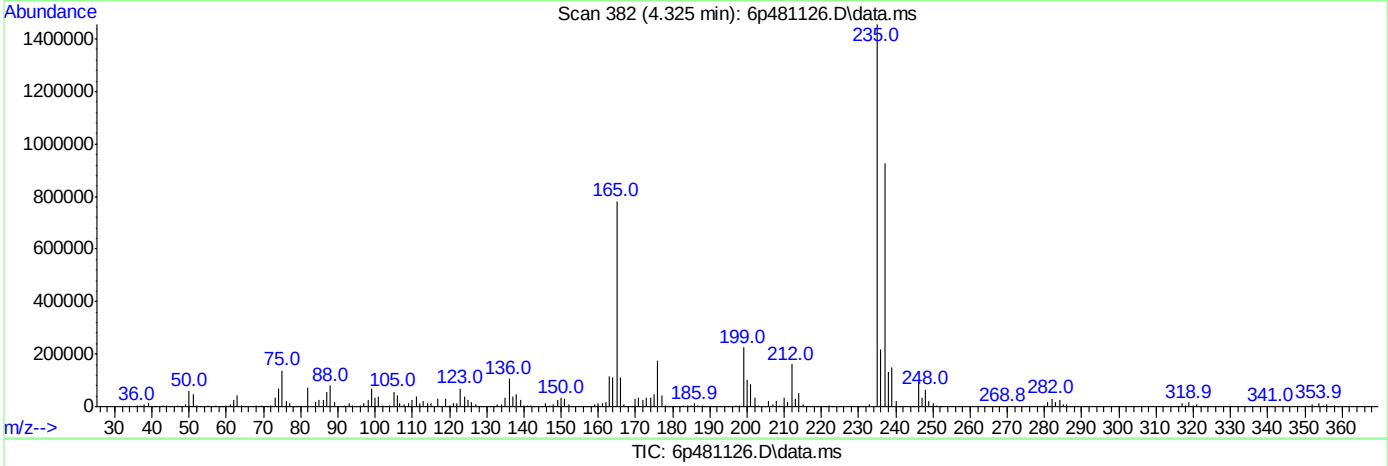
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	11.58
185.00	14.10	14.28
0.00	0.00	0.00

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

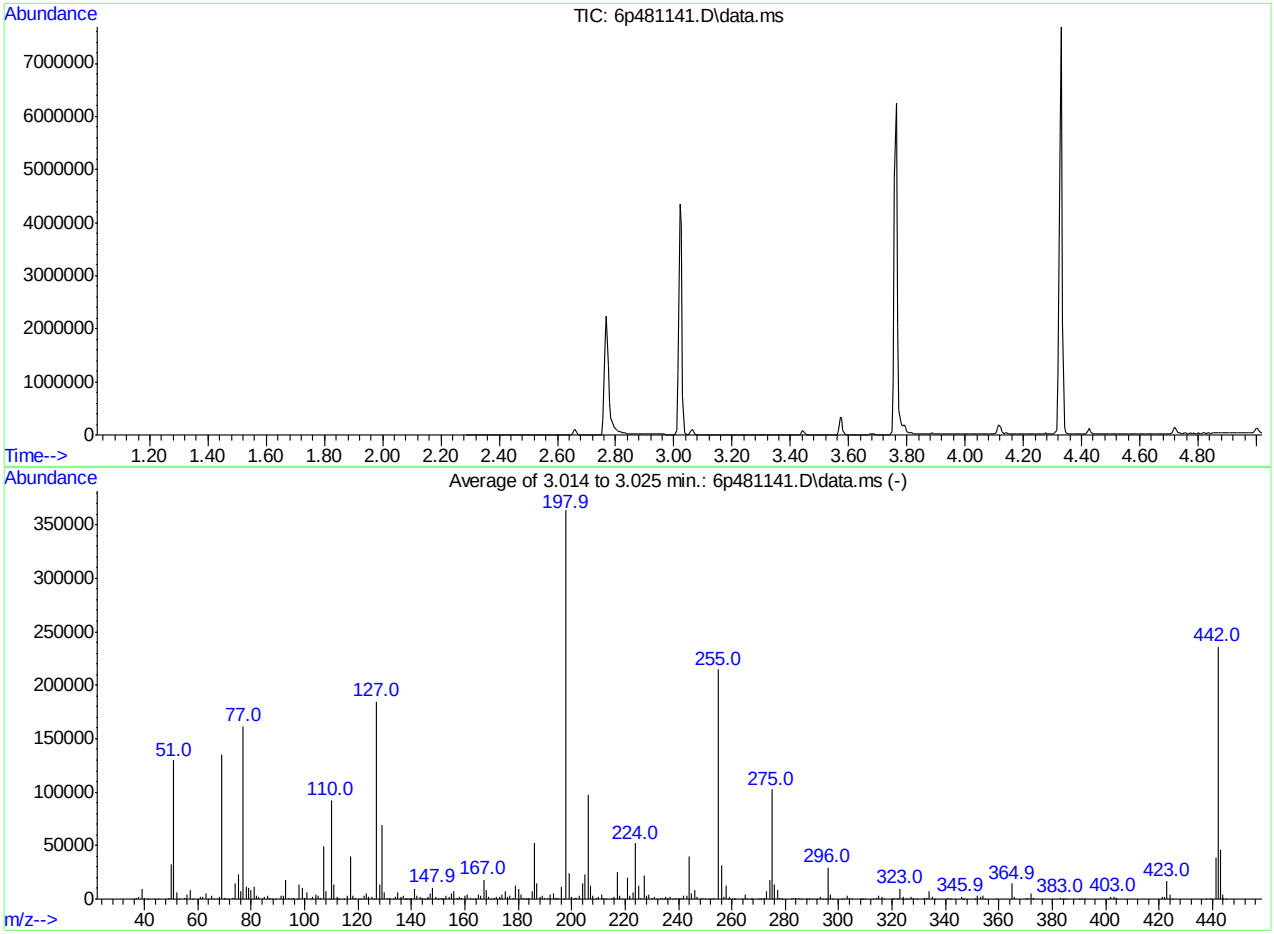
response 1056559

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

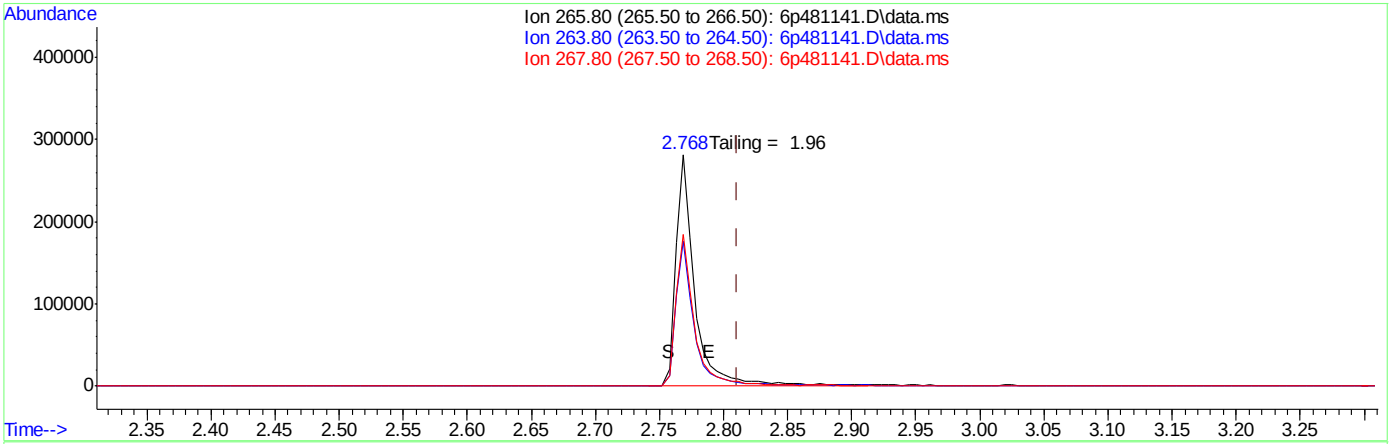
Average of 3.014 to 3.025 min.: 6p481141.D\data.ms
dftpp
Modified:subtracted

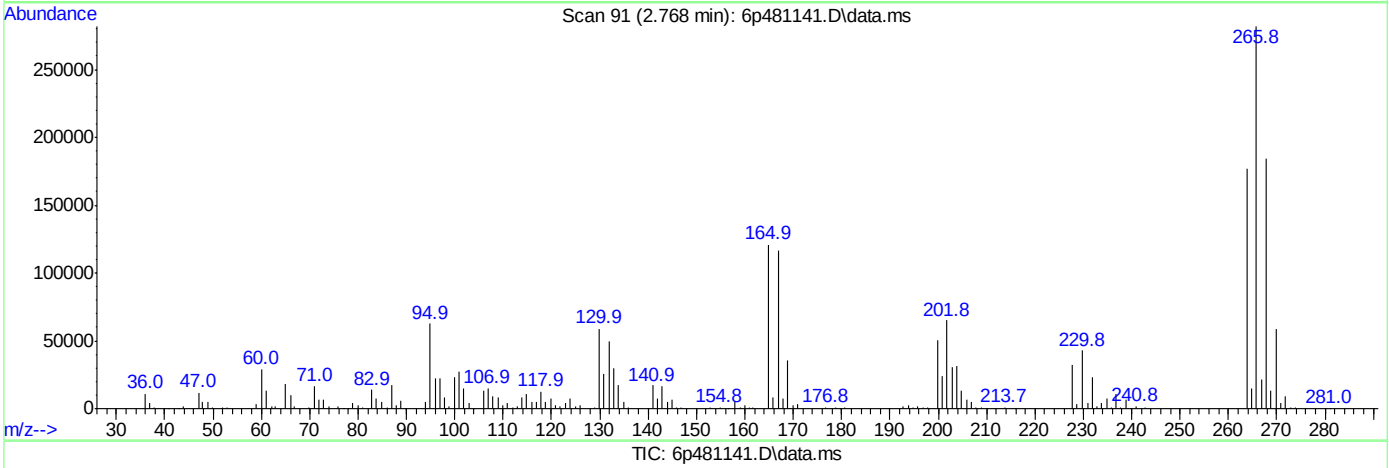
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
372.00	5216	402.00	1797	441.10	39268		
372.70	247	403.00	2568	442.00	236114		
373.05	1086	403.80	408	443.00	45838		
383.00	1275	404.00	765	443.80	153		
383.80	218	421.00	2245	444.00	3803		
384.10	142	422.00	2426	444.90	250		
384.90	106	423.00	16992				
390.00	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

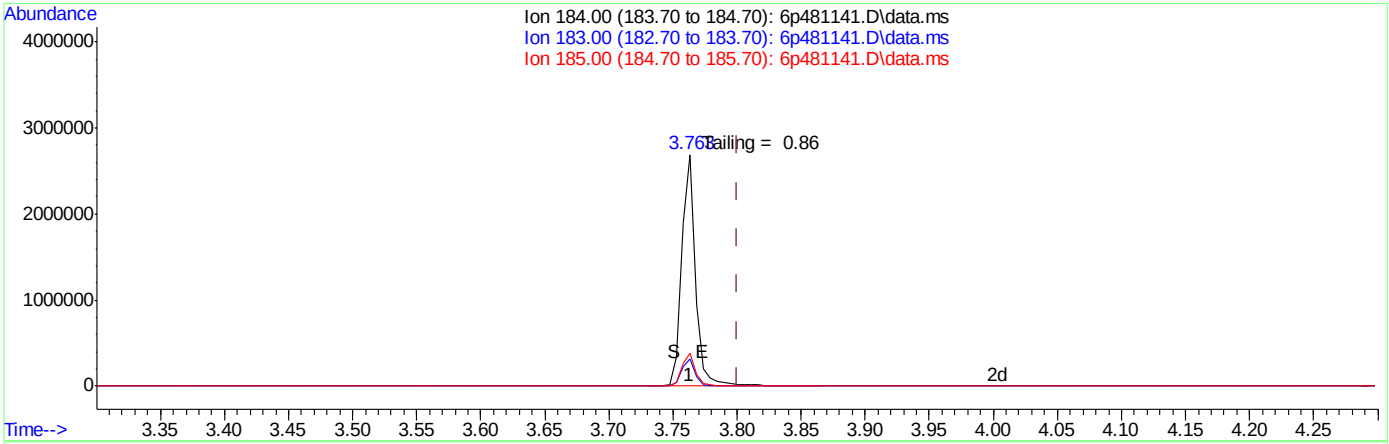
response 300355

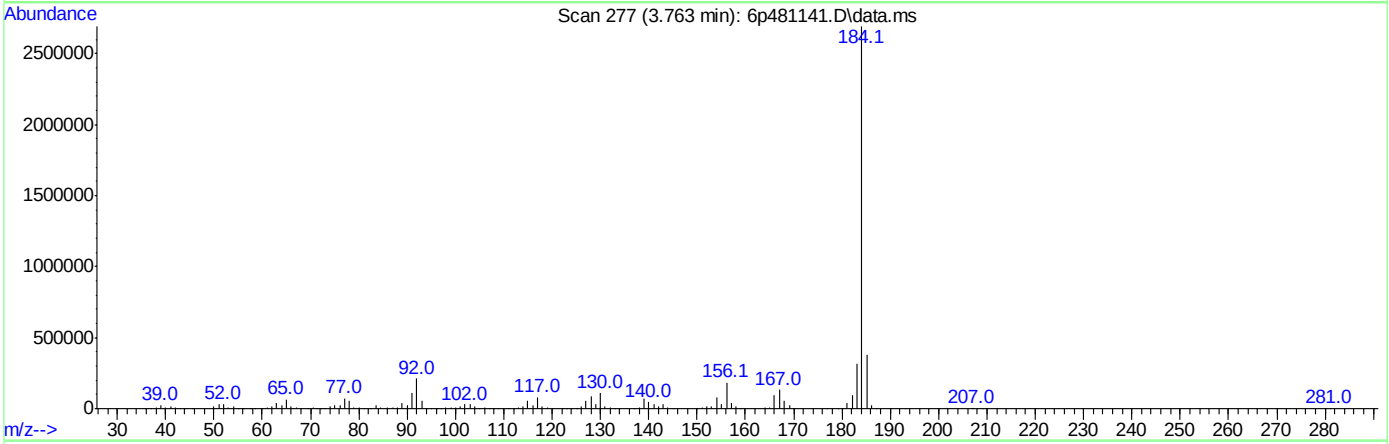
Ion	Exp%	Act%
265.80	100	100
263.80	60.10	62.72
267.80	65.70	65.50
0.00	0.00	0.00

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





TIC: 6p481141.D\data.ms

(2) Benzidine (t)

3.763min (-0.037) 0.00ng

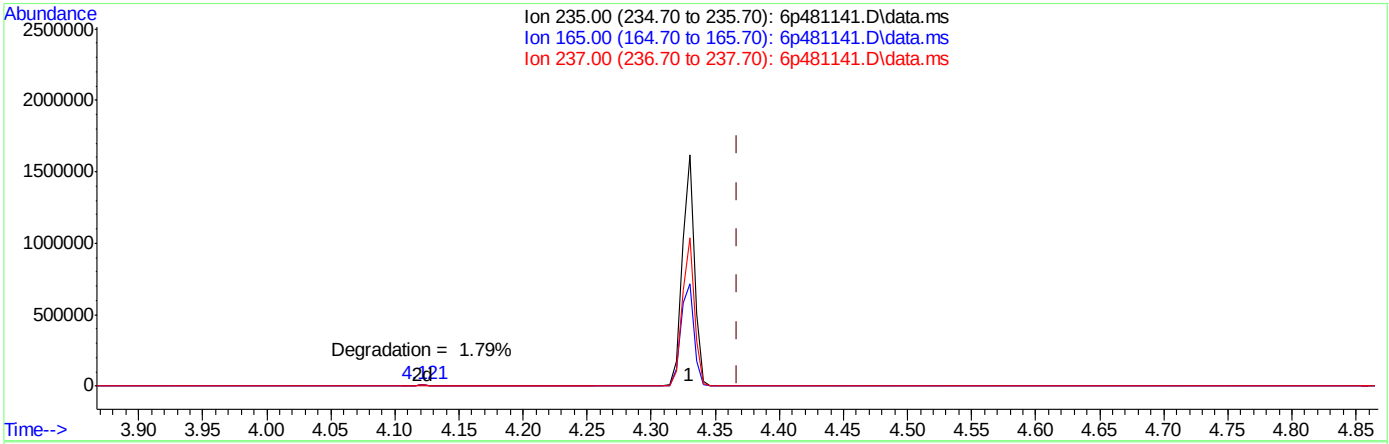
response 2078030

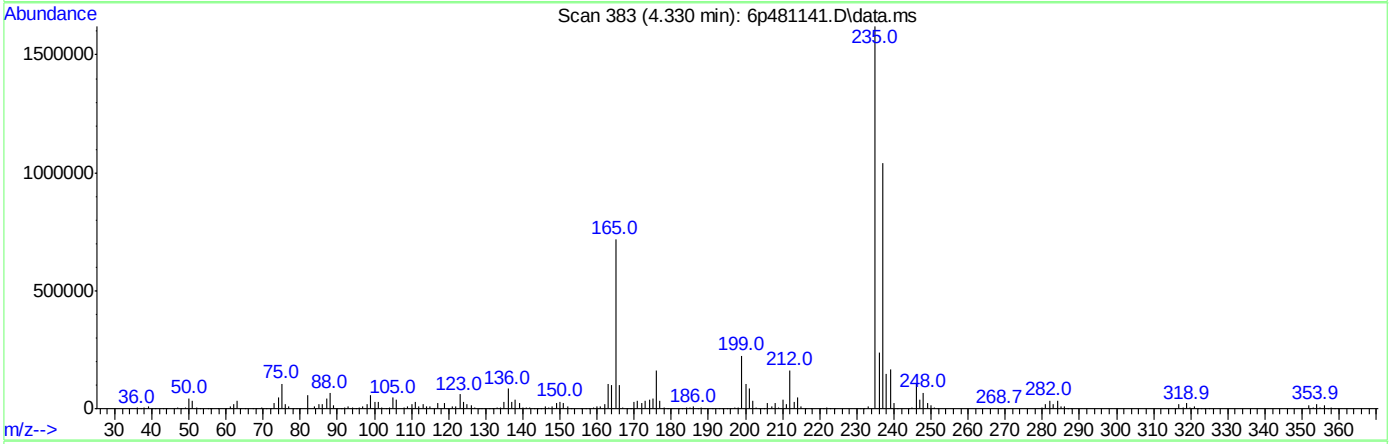
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	11.79
185.00	14.10	14.11
0.00	0.00	0.00

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

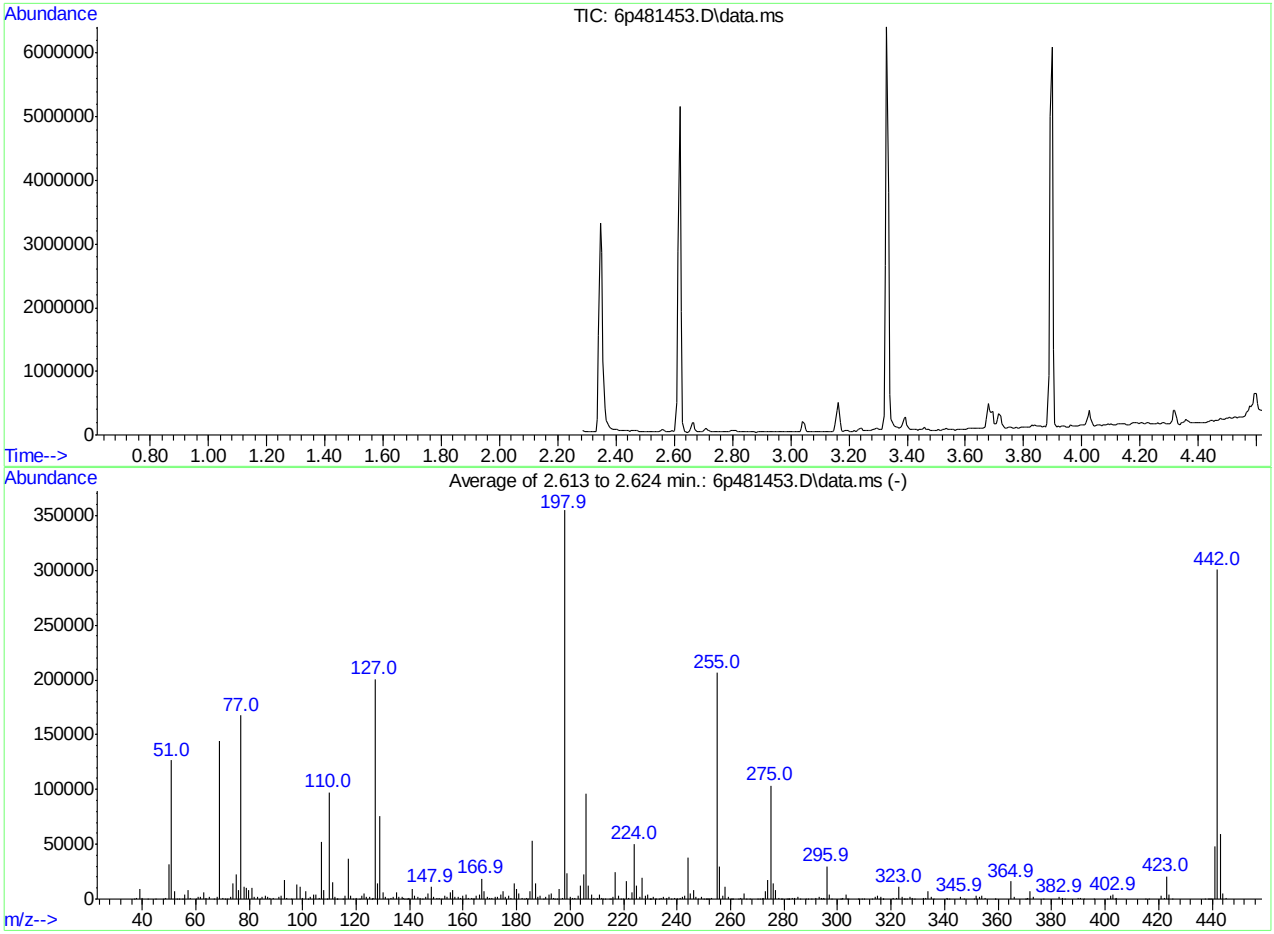
response 1083814

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\E6P2576\6p481453.D Vial: 1
Acq On : 29 Apr 2019 9:24 am Operator: angelar
Sample : dftpp Inst : MS6P
Misc : op17006,e6p2576,1000,,,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 62, 63, 64; Background Corrected with Scan 57

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.7	126492	PASS
68	69	0.00	2	1.7	2388	PASS
69	198	0.00	100	40.7	144439	PASS
70	69	0.00	2	0.6	800	PASS
127	198	40	60	56.7	200960	PASS
197	198	0.00	1	0.3	898	PASS
198	198	100	100	100.0	354624	PASS
199	198	5	9	6.6	23322	PASS
275	198	10	30	29.1	103341	PASS
365	198	1	100	4.6	16148	PASS
441	443	0.10	100	81.2	48077	PASS
442	198	40	100	84.7	300498	PASS
443	442	17	23	19.7	59197	PASS

6p481453.D DFTPP6P.M Mon Apr 29 10:49:53 2019 ACLIMS

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.85	375	52.95	306	64.95	2358	77.00	167751
38.00	1507	53.95	303	66.90	157	78.00	11685
38.95	9195	55.00	77	68.00	2388	79.00	10479
39.95	863	55.90	3617	68.95	144439	79.95	8084
41.95	25	57.00	7855	69.95	800	81.00	10641
44.90	177	57.90	623	70.95	142	82.00	2262
48.00	113	59.90	254	71.90	111	82.95	2483
48.95	683	61.00	2048	73.00	1613	83.90	159
50.00	31905	61.90	2155	74.00	13962	84.95	1573
51.00	126492	63.00	5727	74.95	22816	85.90	3607
52.00	6893	63.90	985	76.00	7714	86.95	1642

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.90	633	101.85	342	112.70	152	123.95	2374
88.95	558	102.90	2411	112.95	456	124.85	1973
90.95	2381	103.95	4307	115.00	213	125.80	284
92.00	2930	104.90	4256	116.00	3212	126.10	970
93.00	17458	106.00	1437	116.90	36407	127.00	200960
93.90	973	106.95	52123	117.90	3339	127.90	14853
95.85	539	107.90	7859	118.95	446	128.95	75473
97.90	13460	108.95	518	119.95	1064	129.90	6343
98.95	10861	109.95	97387	121.05	480	131.00	2045
99.95	615	111.00	15391	121.90	3544	131.75	329
100.95	6967	111.95	1934	122.95	5537	132.90	672

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
133.90	1853	142.90	2202	154.00	2359	164.00	146
134.95	5678	144.00	580	155.00	5722	164.90	3280
135.90	2297	144.85	48	156.00	8184	166.00	3677
137.00	2503	145.90	1685	157.00	1673	166.90	18572
137.70	571	146.90	4846	157.95	2049	167.95	6983
138.00	242	147.95	10887	158.90	1393	169.00	1954
138.90	387	148.90	2031	159.95	3137	169.95	690
139.10	169	150.00	1032	160.90	4463	170.90	1081
139.90	1166	150.95	979	161.90	1396	171.95	2164
140.90	9367	151.90	399	163.00	706	172.95	2317
141.95	3134	152.90	3561	163.70	461	174.00	3747

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.95	7440	184.95	6820	195.00	466	206.00	96306
175.90	2267	186.00	53114	196.00	9561	206.95	12830
176.95	3018	187.00	14846	197.00	898	207.90	3835
177.90	1080	188.00	1777	197.90	354624	208.85	1126
178.90	14152	188.90	3091	198.90	23322	209.90	1567
180.00	9542	189.90	393	199.95	1859	210.20	354
180.95	4827	190.95	1837	201.05	1201	211.00	3897
181.90	644	191.90	4337	201.55	1116	211.70	620
182.90	473	192.95	4714	203.00	3056	212.10	134
183.80	1348	193.75	919	203.95	12274	212.90	136
184.00	301	194.05	443	205.00	22860	214.75	501

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
215.00	462	225.90	1638	233.90	1226	244.00	38258
216.00	2255	226.90	19378	234.85	1960	244.95	5120
216.90	24438	228.00	3421	235.90	1240	245.95	8191
217.95	3036	228.95	4435	237.00	2029	246.85	1707

219.05	327	229.60	146	237.90	258	247.90	408
219.65	457	229.80	108	238.95	1124	248.90	2019
221.00	16443	230.05	374	239.80	509	249.90	262
221.90	718	231.00	2046	240.00	309	250.70	118
223.00	5712	231.80	123	241.00	1534	251.00	414
224.00	50413	232.00	197	242.00	2477	251.40	152
224.95	12830	232.95	478	242.95	2749	252.00	346

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
252.95	1161	264.90	5432	276.95	8355	285.85	286
255.00	206442	265.85	497	277.95	1413	287.90	126
255.95	29381	266.95	300	278.90	125	288.90	151
256.90	2660	269.85	422	279.10	221	290.10	207
257.90	11448	270.85	480	280.90	364	292.00	616
258.95	1929	271.60	190	281.20	140	292.95	2035
259.90	342	272.05	824	281.70	261	293.90	588
260.60	160	272.90	6965	281.95	283	294.10	112
260.80	129	273.90	17820	282.95	1141	294.60	183
263.00	148	275.00	103341	283.90	565	294.90	646
263.90	643	275.95	14116	285.00	1632	295.90	29994

Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.95	4366	310.05	256	324.05	2210	336.00	125
297.80	113	312.80	246	324.80	105	340.80	158
300.90	378	313.90	1642	325.00	227	340.95	1448
301.50	127	314.90	3374	325.90	118	341.80	207
301.95	602	315.80	248	326.85	2194	345.85	2313
303.00	3874	316.00	1861	327.90	943	346.95	256
303.75	402	316.80	123	328.75	296	350.95	287
304.00	480	317.00	323	331.95	749	351.80	475
307.65	434	320.95	1015	332.85	1013	351.95	2920
307.95	399	321.85	673	333.95	7115	352.95	2530
308.90	357	323.00	11104	335.00	1878	353.95	3487

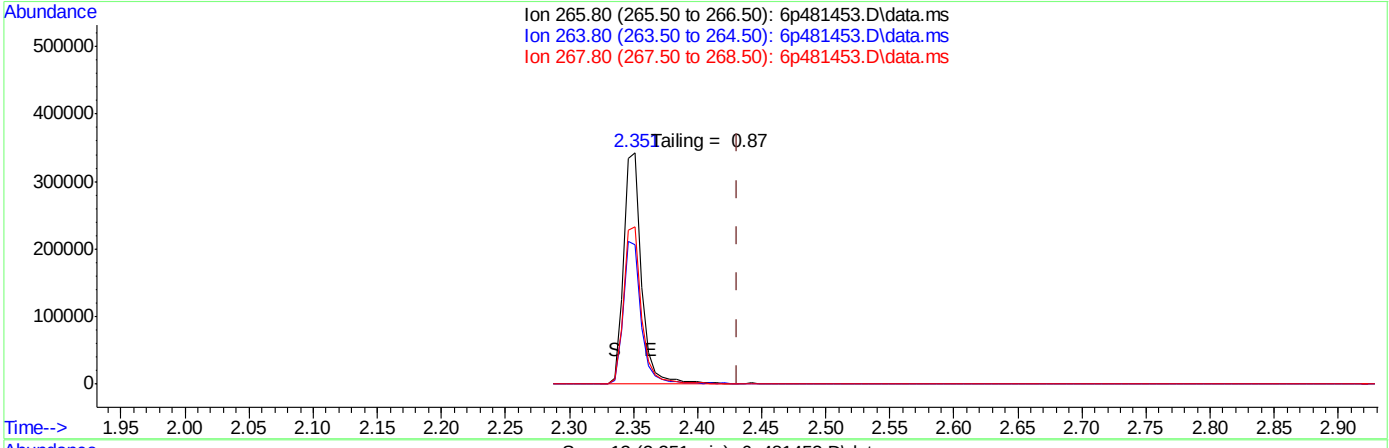
Average of 2.613 to 2.624 min.: 6p481453.D\data.ms
dftpp
Modified:subtracted

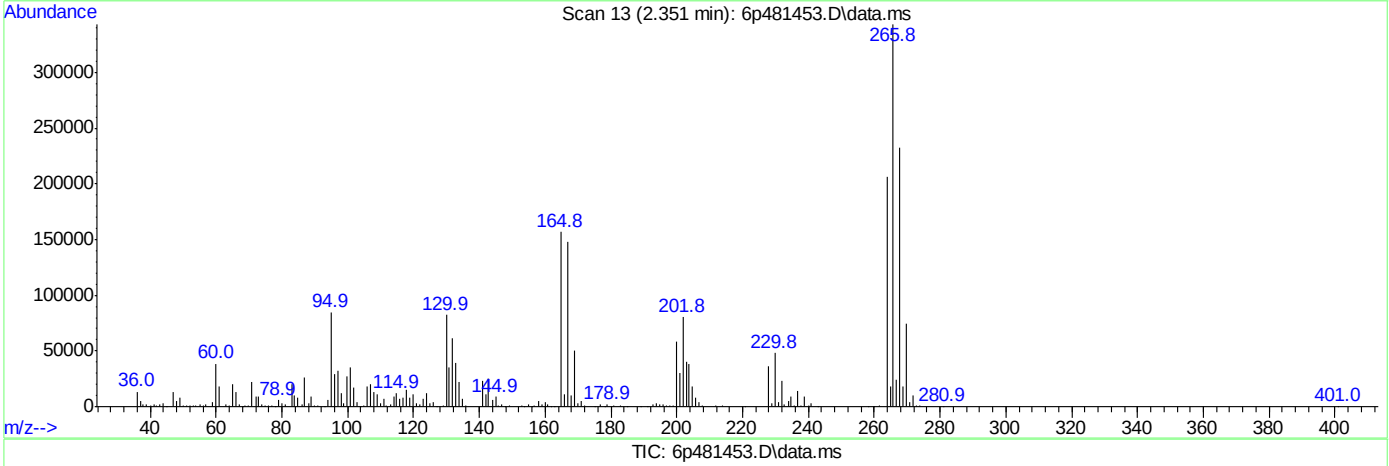
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
354.95	773	382.90	1814	403.95	955	439.10	120
358.80	173	383.85	660	414.90	159	439.50	187
359.00	218	384.95	215	416.10	128	439.80	141
364.90	16148	389.95	1150	420.95	2836	441.00	48077
365.95	2582	390.95	559	422.05	1487	442.00	300498
370.00	322	391.95	428	423.00	20685	443.00	59197
370.50	171	395.90	101	423.60	355	444.00	5192
370.85	1101	400.95	423	423.95	4043	445.05	547
371.95	6856	401.95	2597	424.95	364		
373.00	1604	402.95	3784	437.30	130		
377.00	105	403.70	223	438.70	211		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481453.D
Acq On : 29 Apr 2019 9:24 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 29 09:30:39 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: 6p481453.D\data.ms

(1) Pentachlorophenol (t)

2.351min (-0.080) 0.00ng

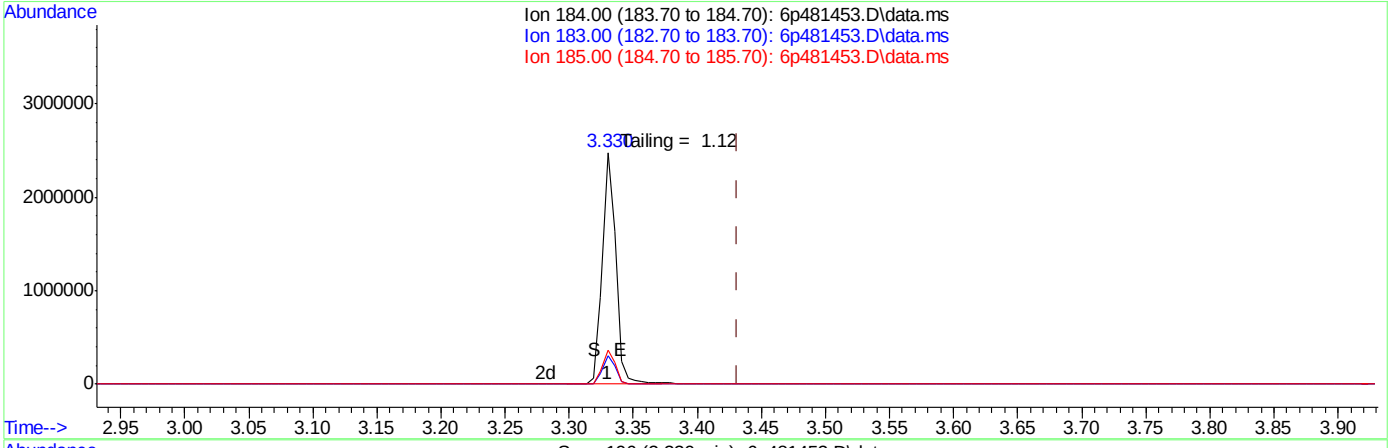
response 345083

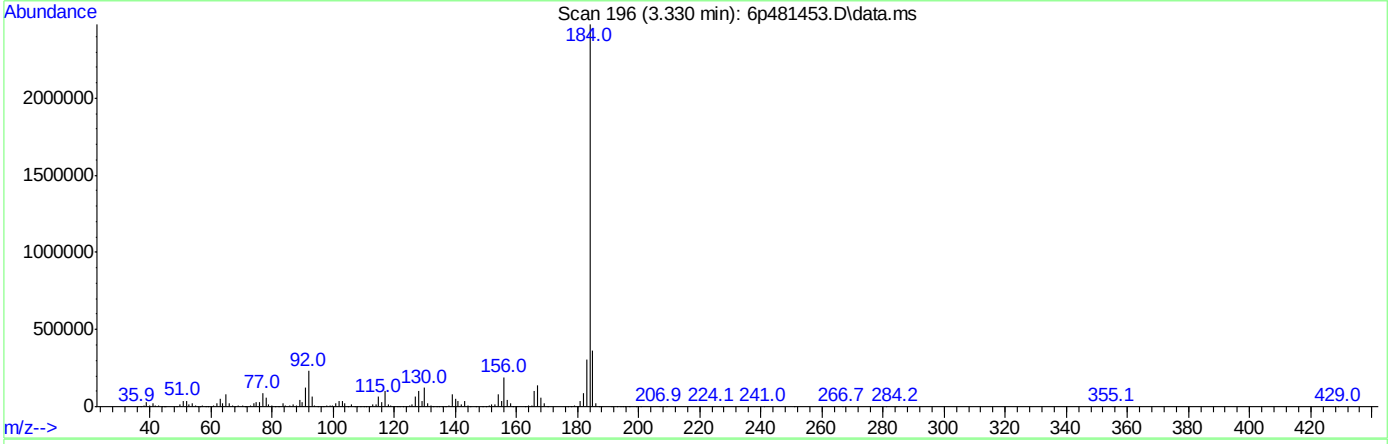
Ion	Exp%	Act%
265.80	100	100
263.80	63.30	60.14
267.80	63.40	67.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481453.D
Acq On : 29 Apr 2019 9:24 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 29 09:30:39 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: 6p481453.D\data.ms

(2) Benzidine (t)

3.330min (-0.101) 0.00ng

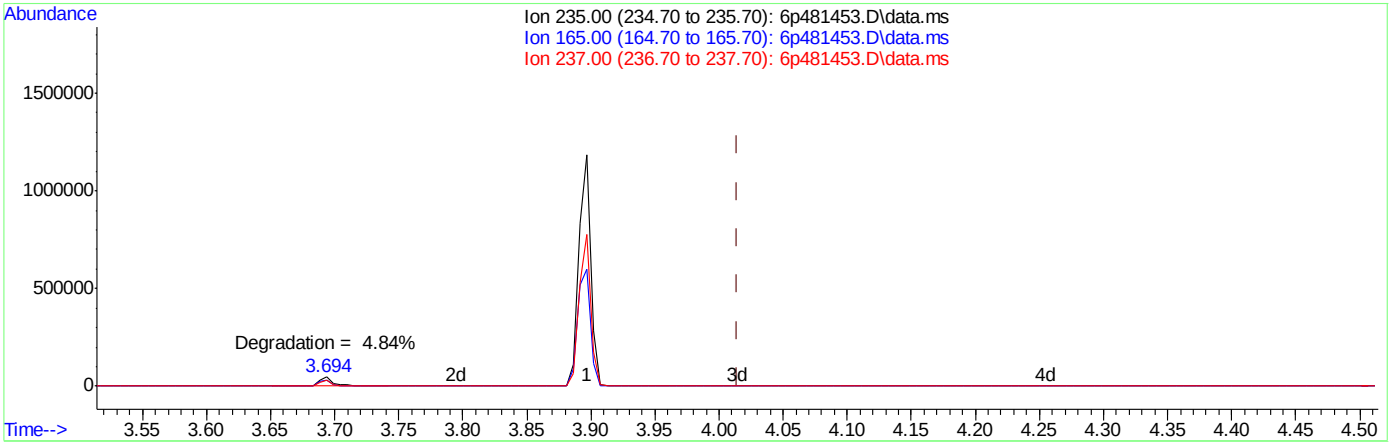
response 1821816

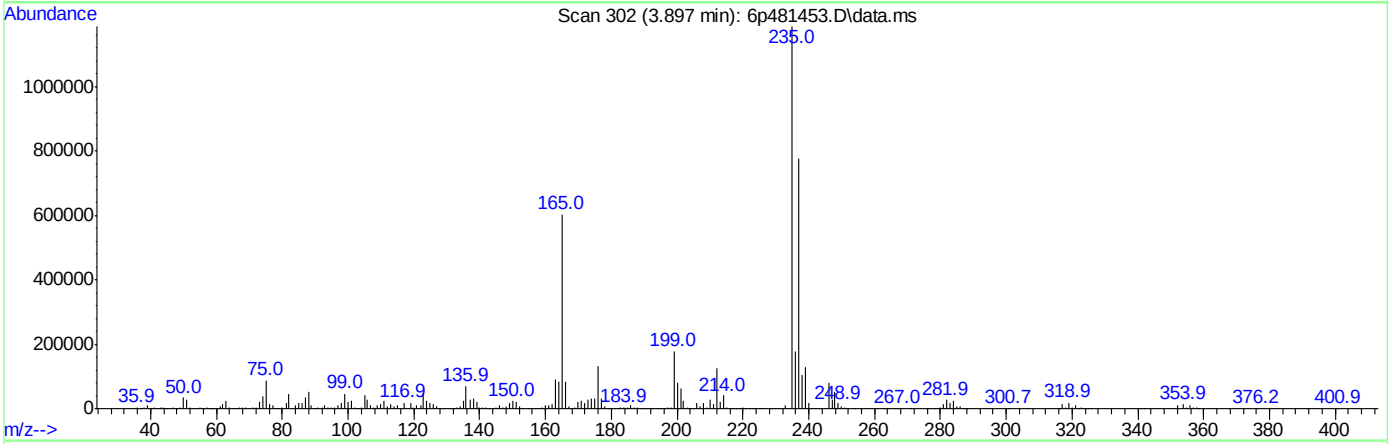
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	12.22
185.00	14.60	14.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481453.D
Acq On : 29 Apr 2019 9:24 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 29 09:30:39 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: 6p481453.D\data.ms

(3) PP-DDT (t)

3.897min (-0.118) 0.00ng

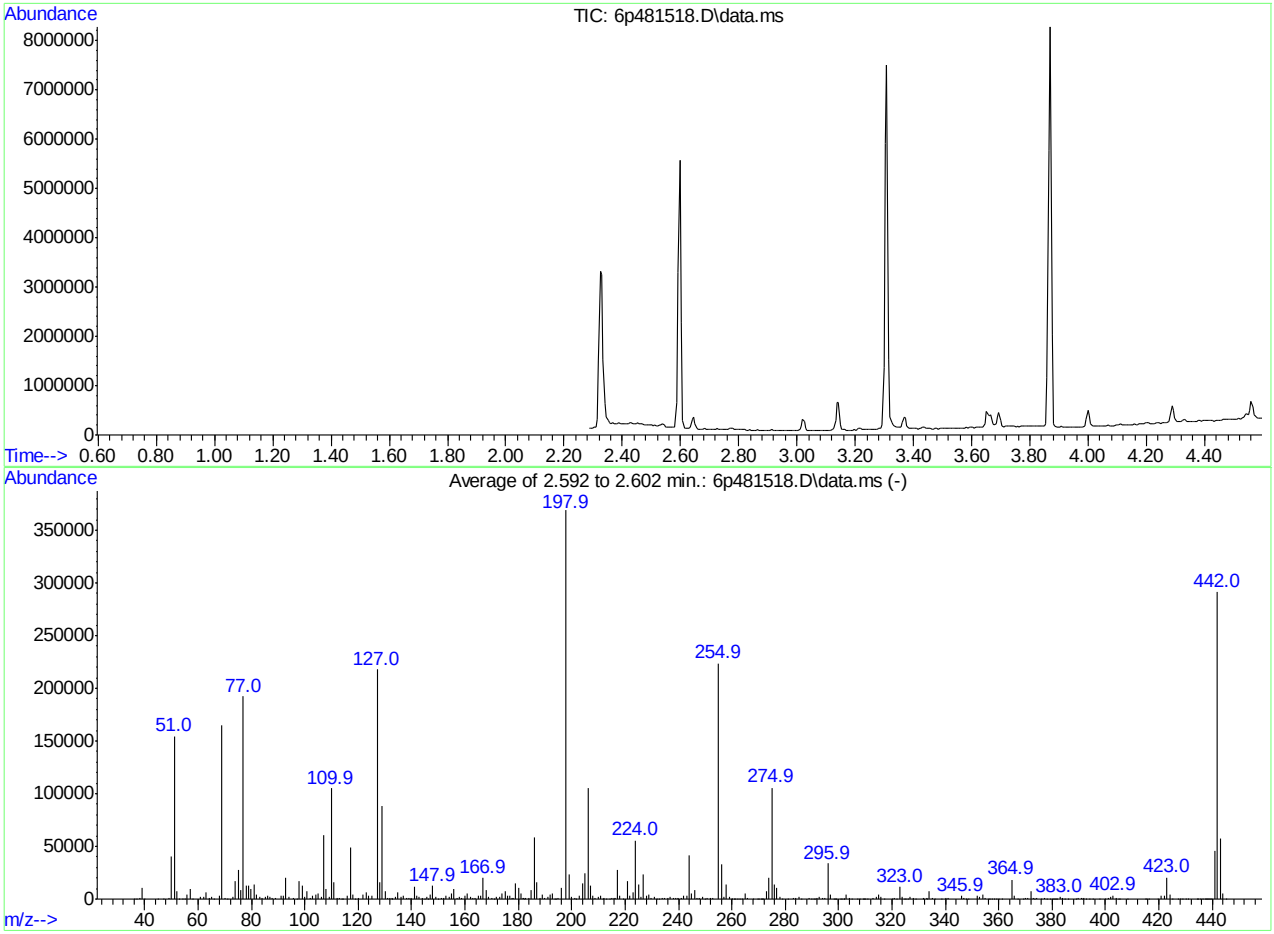
response 780164

Ion	Exp%	Act%
235.00	100	100
165.00	48.50	54.89
237.00	63.10	64.08
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E6P2578\6p481518.D Vial: 1
Acq On : 1 May 2019 9:13 am Operator: angelar
Sample : dftpp Inst : MS6P
Misc : op17006,e6p2578,1000,,,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 58, 59, 60; Background Corrected with Scan 53

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.0	154742	PASS
68	69	0.00	2	1.7	2739	PASS
69	198	0.00	100	44.7	164761	PASS
70	69	0.00	2	0.4	696	PASS
127	198	40	60	59.1	217861	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	368768	PASS
199	198	5	9	6.4	23456	PASS
275	198	10	30	28.6	105477	PASS
365	198	1	100	5.0	18388	PASS
441	443	0.10	100	78.5	45421	PASS
442	198	40	100	79.0	291376	PASS
443	442	17	23	19.9	57853	PASS

6p481518.D DFTPP6P.M Wed May 01 15:48:30 2019 ACLIMS

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.85	200	53.00	1	65.95	344	78.95	12409
36.95	335	54.05	13	68.00	2739	79.90	9920
37.95	1609	54.95	486	68.95	164761	80.95	13879
39.00	10741	55.95	4349	69.95	696	82.00	4056
39.95	342	56.95	9538	71.00	188	82.90	2123
44.85	309	58.00	336	73.00	1771	83.90	715
46.90	125	60.95	1992	74.00	17228	85.00	2148
48.90	882	62.00	2454	75.00	27702	85.90	3164
50.00	40372	62.95	5941	76.00	8832	86.95	1653
51.00	154742	64.00	1062	77.00	192334	87.90	818
52.00	7769	65.00	2690	77.95	13063	88.85	611

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.00	2736	102.95	2840	113.80	156	127.00	217861
91.90	3713	103.95	4470	114.15	410	127.95	16007
92.90	20685	104.95	5051	115.95	3534	129.00	87973
93.90	1691	106.00	1740	116.95	49054	129.95	7105
95.90	837	107.00	60195	117.95	3962	130.90	1306
97.00	220	108.00	9700	118.95	331	131.90	699
97.95	17050	108.95	1753	120.00	930	132.50	355
98.95	12522	109.90	105113	121.85	4140	132.80	629
99.90	1636	110.95	16279	122.90	6489	133.90	2394
100.90	7564	112.00	1525	123.90	2754	134.95	6660
101.95	604	112.95	736	124.90	2930	135.90	2663

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.00	3306	146.95	4815	157.90	2534	168.95	2129
137.95	1400	147.90	12442	158.90	1497	169.85	780
139.00	685	148.90	1930	159.90	3078	170.90	415
139.95	1406	149.70	452	160.90	5337	171.90	2521
140.90	11323	151.00	1318	161.90	1818	173.00	2005
141.95	3538	152.05	798	163.05	683	173.95	5828
142.90	2368	152.90	3087	163.95	888	175.00	7663
143.95	831	153.90	2629	164.95	3685	175.90	2706
144.95	387	154.95	5789	166.00	3030	176.85	3199
145.85	2176	155.95	9978	166.90	20086	177.75	719
146.10	309	156.90	1270	167.95	8142	178.00	731

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
178.90	15181	188.00	1537	198.85	23456	209.90	1881
180.00	10477	188.90	4670	199.90	2400	210.90	3638
180.90	5031	190.00	838	201.25	860	211.60	381
181.70	955	190.85	1654	201.55	300	211.95	767
182.00	663	191.95	4716	202.90	3246	212.95	565
182.40	214	192.90	5212	203.95	15326	214.15	279
182.75	670	193.70	524	204.95	24722	214.90	1073
183.85	1074	194.00	575	206.00	105754	215.80	1612
184.95	9071	195.00	1056	207.00	12656	216.10	603
186.00	58068	195.95	10681	207.90	3729	216.90	27256
187.00	15560	197.90	368768	208.90	928	217.90	3649

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
219.05	446	230.95	1914	241.00	1583	251.95	893
221.00	16542	231.95	527	241.90	2941	253.00	1248
221.75	2812	232.85	259	243.00	3559	254.95	223552
223.00	6315	233.90	1506	243.95	41258	256.00	32560

224.00	55360	234.85	1384	244.95	4904	256.90	2602
225.00	14171	235.90	1124	245.90	8724	257.90	14043
226.00	1866	237.00	2098	246.95	1583	258.90	1952
226.90	23588	237.90	612	247.85	664	259.75	317
227.95	2974	238.90	1283	248.90	1848	260.00	304
228.95	4782	239.60	113	249.80	525	260.75	236
229.90	846	239.95	718	250.90	617	261.00	219

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
262.10	102	272.95	7091	285.85	439	298.00	276
262.90	29	274.00	20474	288.90	783	298.80	102
263.85	472	274.95	105477	289.95	404	299.10	117
264.95	5787	275.95	14063	290.70	178	300.80	113
265.90	1363	276.95	10186	291.20	110	301.05	389
267.75	196	278.00	1962	292.00	678	301.90	569
269.60	137	278.95	460	292.85	2081	302.10	292
269.90	216	280.95	317	294.00	782	303.00	3978
270.90	407	282.95	1561	294.85	624	304.05	930
271.10	374	283.95	800	295.90	34005	305.00	221
271.90	542	284.95	1768	296.95	4564	307.00	174

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
308.00	285	321.05	1195	331.95	584	347.90	305
308.95	242	321.80	184	332.85	828	348.75	207
309.70	131	323.00	11335	333.10	282	351.95	3394
310.00	359	324.00	1933	333.95	7334	352.90	2698
310.70	136	324.80	112	334.95	1563	354.00	3922
313.00	644	325.00	140	335.95	396	354.95	1206
314.05	1871	325.95	407	338.40	114	355.95	310
314.95	4101	326.85	2288	340.05	648	356.60	119
316.00	2567	327.95	1327	340.90	980	357.20	131
317.00	486	328.70	117	345.95	2826	358.10	134
320.10	117	331.75	550	346.95	761	358.95	574

Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
360.10	111	374.10	971	383.90	650	397.80	239
361.05	417	376.05	153	384.90	146	399.90	124
364.95	18388	377.10	606	386.00	142	401.00	664
365.95	2710	378.00	251	389.05	221	402.00	2518
367.05	28	379.10	57	389.85	837	402.95	3392
369.10	123	380.00	156	390.90	675	403.95	1296
369.95	842	380.60	133	391.60	106	404.85	272
370.95	1249	380.90	183	392.00	598	405.10	168
371.95	7810	381.15	226	392.70	106	408.10	206
372.95	1519	381.90	179	393.80	113	414.95	214
373.50	115	383.00	2098	395.15	283	415.30	110

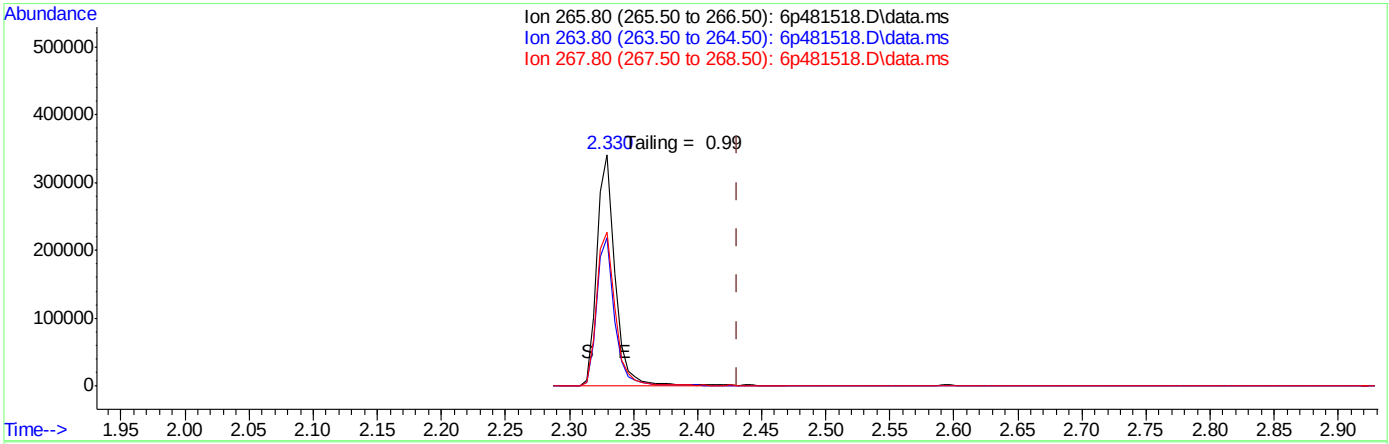
Average of 2.592 to 2.602 min.: 6p481518.D\data.ms
dftpp
Modified:subtracted

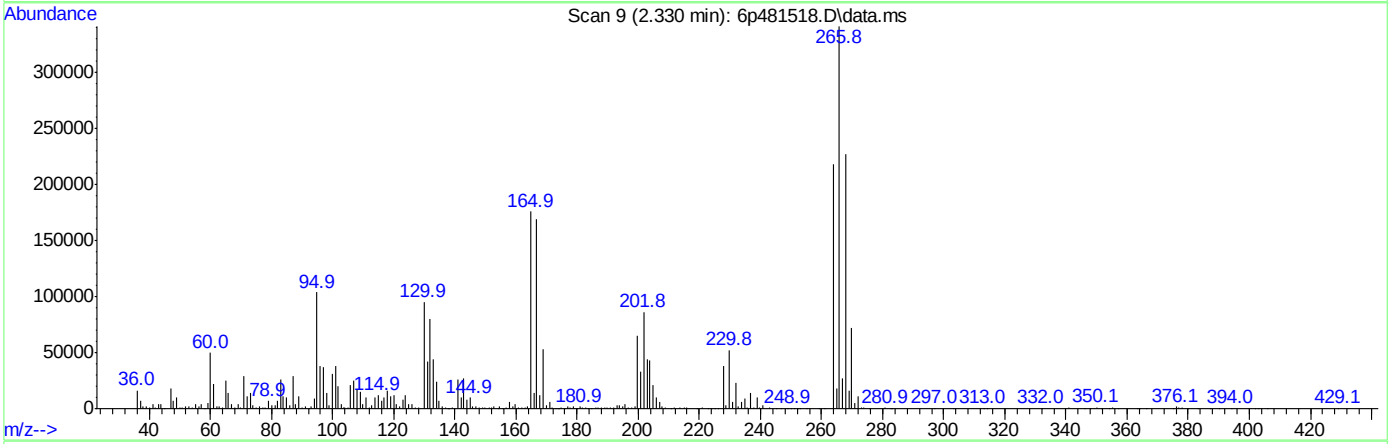
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
416.20	108	431.00	135	439.60	115		
419.50	114	434.30	135	441.00	45421		
420.95	3291	434.90	161	442.00	291376		
422.00	2843	435.70	126	443.00	57853		
423.00	20426	436.35	254	443.95	5237		
424.00	3793	437.10	243	445.05	315		
424.90	262	437.75	288				
427.20	112	438.10	114				
428.10	161	438.30	133				
429.00	122	438.95	368				
429.90	111	439.40	143				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481518.D
Acq On : 1 May 2019 9:13 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 09:19:55 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: 6p481518.D\data.ms

(1) Pentachlorophenol (t)

2.330min (-0.102) 0.00ng

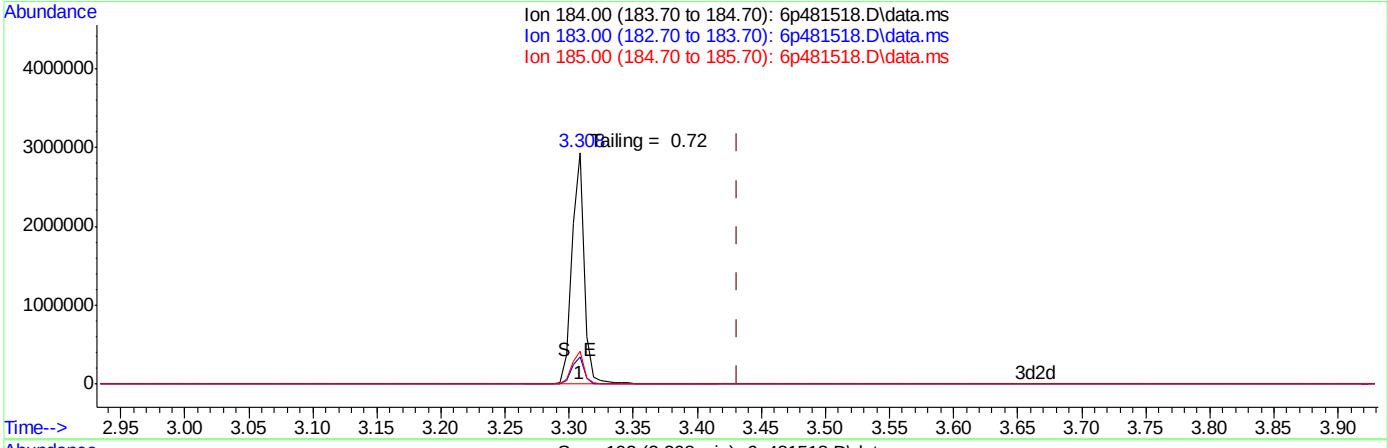
response 340023

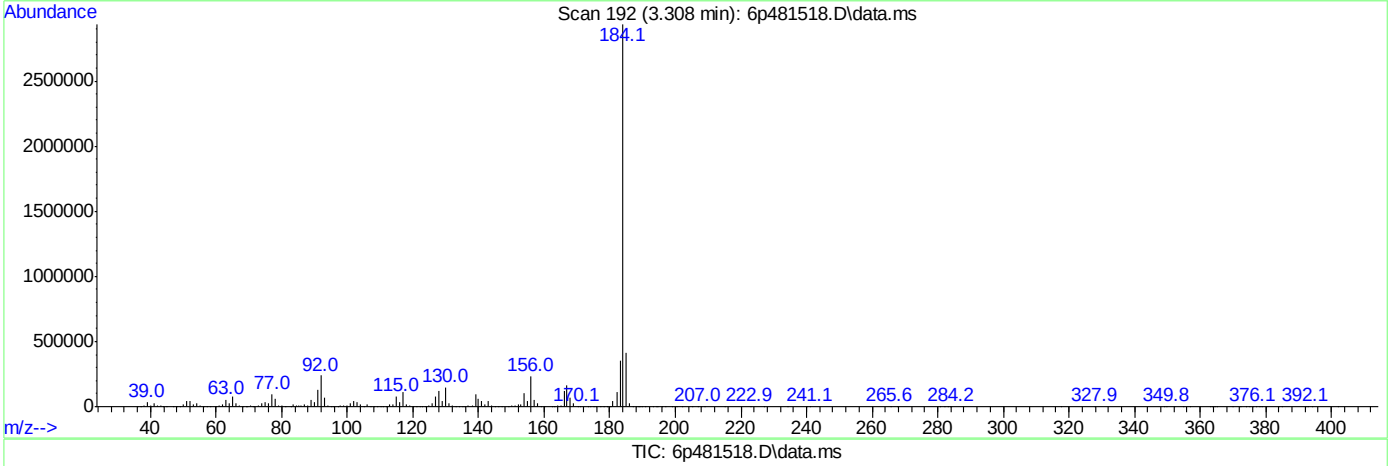
Ion	Exp%	Act%
265.80	100	100
263.80	63.30	64.00
267.80	63.40	66.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481518.D
Acq On : 1 May 2019 9:13 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 09:19:55 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: 6p481518.D\data.ms

(2) Benzidine (t)

3.308min (-0.123) 0.00ng

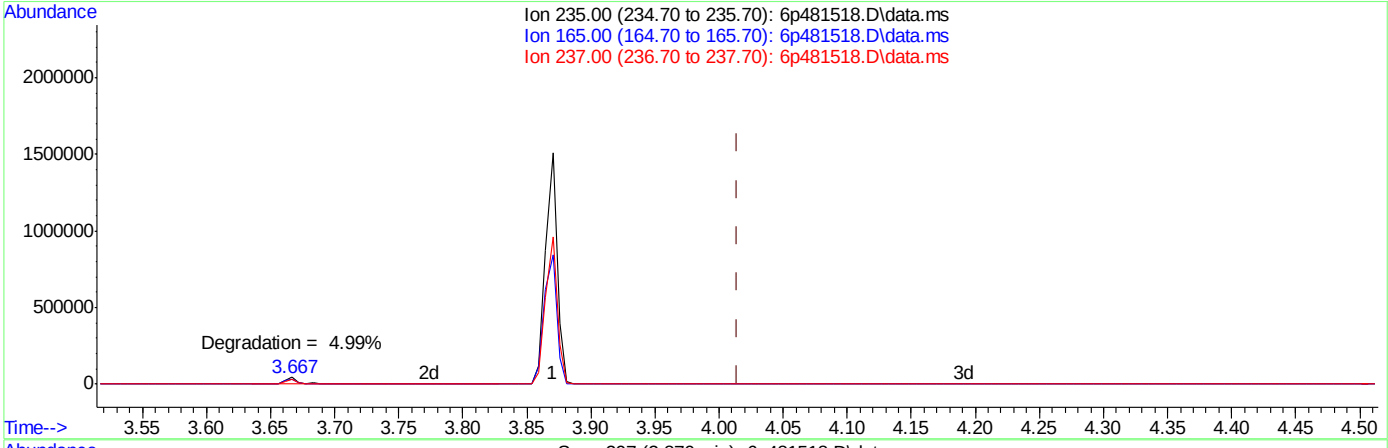
response 2031951

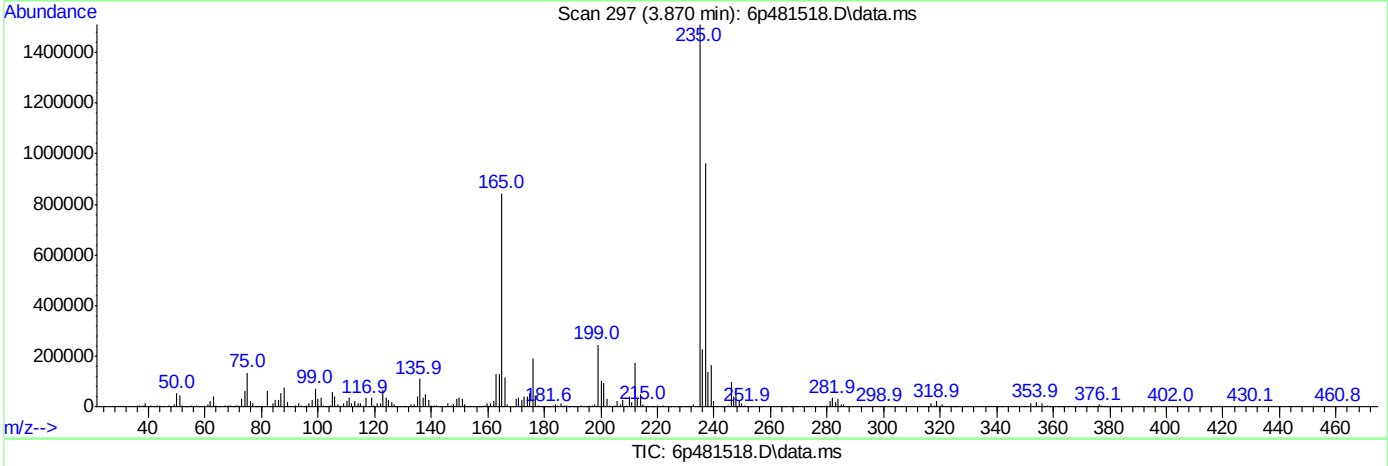
Ion	Exp%	Act%
184.00	100	100
183.00	11.70	11.90
185.00	14.60	14.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481518.D
Acq On : 1 May 2019 9:13 am
Operator : angelar
Sample : dftpp
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 09:19:55 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: 6p481518.D\data.ms

(3) PP-DDT (t)

3.870min (-0.144) 0.00ng

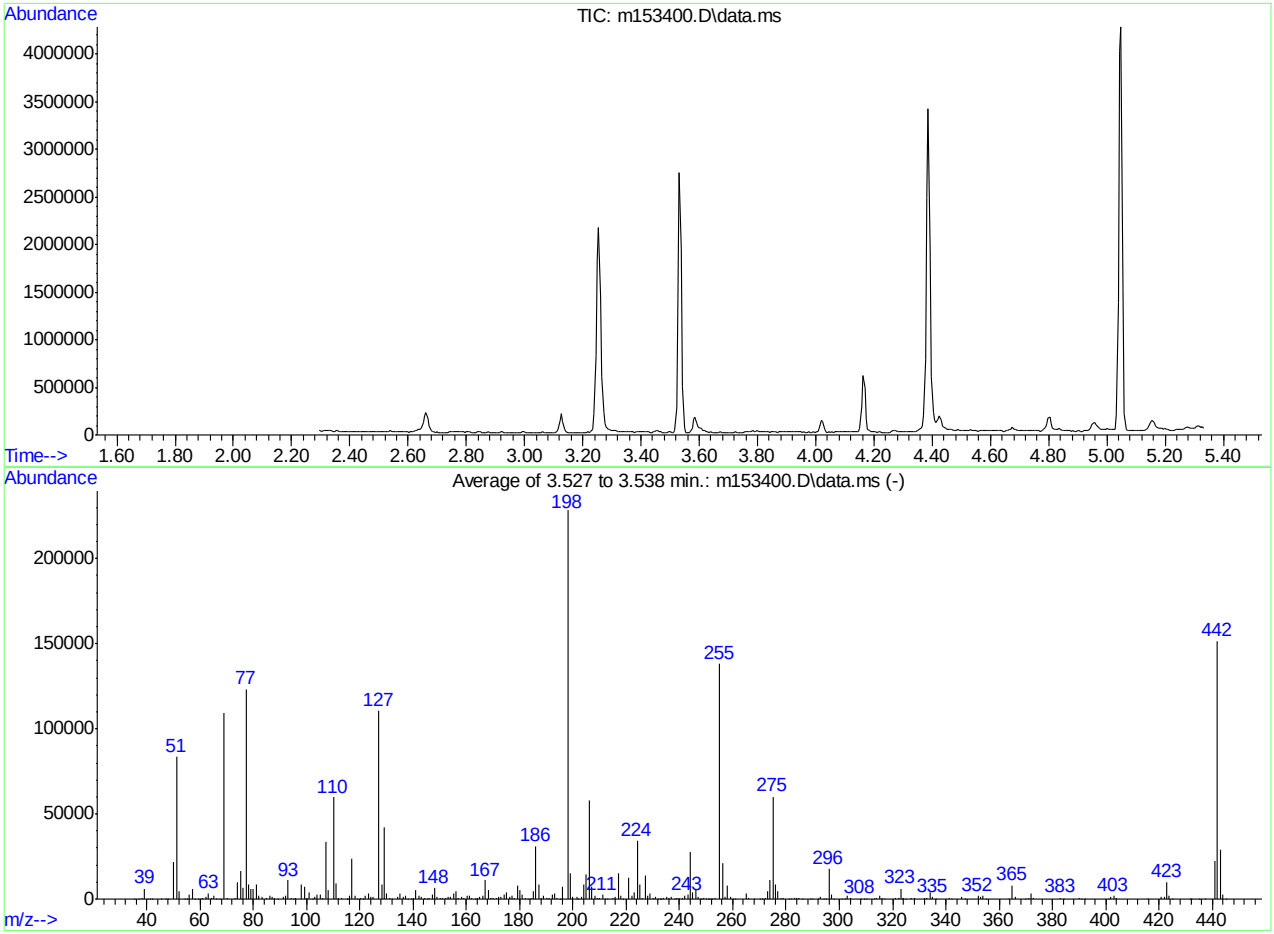
response 940100

Ion	Exp%	Act%
235.00	100	100
165.00	48.50	60.09
237.00	63.10	64.25
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6556\m153400.D Vial: 1
Acq On : 12 Apr 2019 4:58 pm Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6556,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 232, 233, 234; Background Corrected with Scan 227

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.5	83353	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.9	109417	PASS
70	69	0.00	2	0.5	587	PASS
127	198	40	60	48.3	110333	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	228245	PASS
199	198	5	9	6.7	15342	PASS
275	198	10	30	26.3	60088	PASS
365	198	1	100	3.5	7944	PASS
441	443	0.10	100	76.7	22441	PASS
442	198	40	100	66.4	151640	PASS
443	442	17	23	19.3	29258	PASS

m153400.D DFTPPM.M Mon Apr 15 10:09:48 2019

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.05	145	51.10	83353	63.10	3596	77.15	123209
37.10	209	52.15	4307	64.10	625	78.15	8467
38.05	897	54.05	87	65.15	2129	79.05	6159
39.15	6253	55.15	232	66.15	73	80.05	5853
40.10	195	56.05	2688	67.25	67	81.05	8537
41.10	120	57.10	5718	69.05	109417	82.05	2132
42.10	208	58.05	177	70.10	587	83.05	1534
45.15	195	59.10	164	73.15	628	85.10	720
47.05	84	60.25	76	74.15	10167	86.00	2187
48.05	35	61.10	999	75.05	16325	87.10	1201
50.10	21429	62.10	1285	76.15	6286	88.00	403

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.90	187	102.05	27	115.15	89	125.05	1325
91.05	1664	103.05	1155	115.35	80	127.05	110333
92.05	2036	104.05	2618	116.10	1891	128.05	8651
93.05	11119	105.05	2668	117.05	24037	129.05	42210
94.10	847	106.05	577	118.05	1706	130.05	3478
95.05	66	107.05	33346	119.05	243	131.05	599
96.05	472	108.05	5277	120.05	485	132.10	350
98.05	8449	110.05	59730	121.05	83	134.00	1116
99.05	7050	111.05	9373	122.05	1973	135.05	3321
100.05	488	112.00	1011	123.05	3147	136.10	1328
101.00	4263	113.10	394	124.05	1393	137.10	1798

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
138.10	290	149.05	1241	160.05	1874	171.00	474
139.00	164	150.10	368	161.00	2310	172.00	1168
140.05	637	151.10	927	162.10	764	173.05	1392
141.05	5052	152.05	420	163.05	306	174.05	2424
142.05	1814	153.05	1518	164.00	402	175.05	4285
143.05	1255	154.05	1495	165.00	1548	176.05	1345
144.05	426	155.05	3367	166.05	1862	177.05	2049
145.10	258	156.05	4406	167.00	10980	178.05	797
146.00	993	157.00	731	168.05	5142	179.00	8027
147.05	2537	158.05	1066	169.05	828	180.05	5622
148.05	6361	159.05	821	170.10	369	181.05	2868

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
182.00	648	193.05	3156	205.05	14674	217.00	15393
182.85	239	194.05	685	206.05	58202	218.05	2071
184.10	798	195.10	323	207.05	7007	218.95	243
185.05	4312	196.05	7412	208.05	2262	221.05	12676
186.05	31280	198.05	228245	209.05	834	222.05	1753
187.05	8815	199.05	15342	210.05	550	223.05	3874
188.05	825	200.00	1360	211.05	2390	224.05	34048
189.05	1776	201.50	1132	212.15	132	225.05	8703
190.10	440	202.05	125	213.05	114	226.05	787
191.00	857	203.00	1463	215.00	687	227.05	13699
192.05	2666	204.05	8600	216.00	1389	228.00	1864

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
229.00	3009	239.00	645	249.00	980	259.00	1289
230.00	543	240.00	459	250.00	238	260.05	243
231.05	1290	241.00	798	250.90	214	261.05	247
231.95	88	242.05	1723	251.15	124	265.05	3210

232.85	67	243.05	2595	251.85	192	265.90	369
233.05	224	244.05	27525	252.05	175	267.95	218
234.05	941	245.05	3763	253.10	830	269.90	199
235.05	1105	246.00	5027	255.05	138016	271.00	331
235.95	727	247.00	1057	256.05	20895	272.10	371
237.00	1179	247.85	74	257.00	1533	273.00	4347
237.95	151	248.10	315	258.05	7770	274.05	11288

Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
275.05	60088	288.95	243	303.00	2082	322.10	448
276.05	8382	289.95	90	304.05	497	323.05	5936
277.00	4694	292.00	274	308.00	262	323.75	151
278.05	974	293.00	1257	309.05	87	324.10	877
278.95	369	294.00	282	310.05	107	324.75	67
281.00	108	294.95	260	313.05	167	326.95	998
282.05	150	296.05	17684	314.05	770	328.00	485
283.05	650	297.00	2329	315.00	2071	332.05	479
284.05	377	297.95	152	315.95	997	333.00	704
285.05	933	300.95	176	316.95	103	334.00	4003
285.95	106	302.10	273	321.00	603	335.05	1055

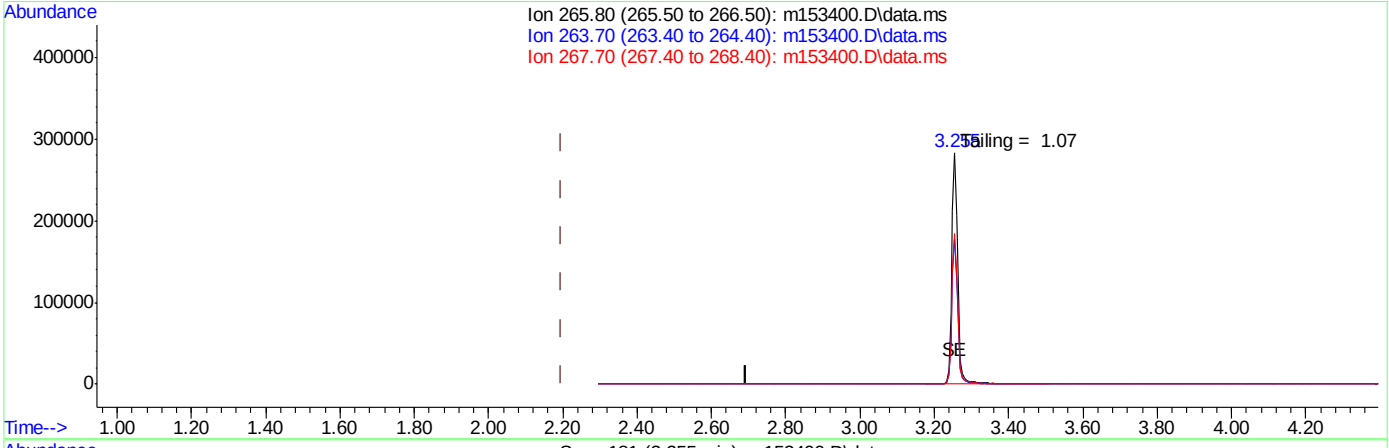
Average of 3.527 to 3.538 min.: m153400.D\data.ms
DFTPP
Modified:subtracted

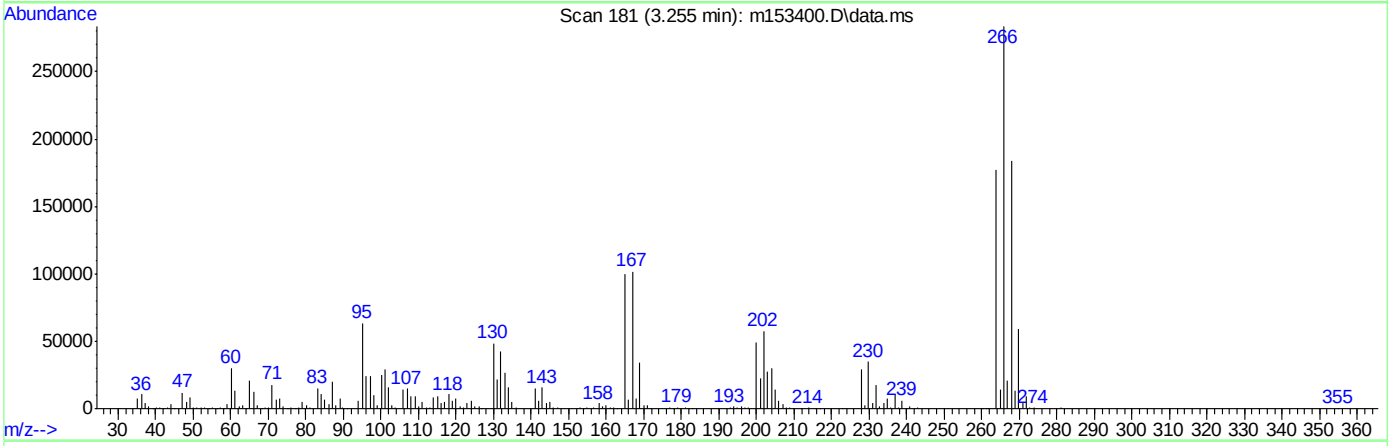
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
336.00	158	366.00	1213	402.00	1403	435.15	76
341.05	758	369.95	83	403.00	1720	437.35	68
342.05	113	370.95	450	404.05	694	441.05	22441
345.90	1329	372.05	3189	415.85	75	442.05	151640
347.00	309	373.00	932	421.00	1660	443.05	29258
352.05	1697	383.05	897	422.05	1409	444.05	2810
353.05	1382	384.05	131	423.05	10152	445.05	96
354.05	1721	390.05	411	423.95	1897		
355.10	287	390.95	241	425.10	175		
363.75	104	392.05	178	431.65	69		
364.95	7944	400.95	239	432.05	120		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153400.D
Acq On : 12 Apr 2019 4:58 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 12 17:03:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153400.D\data.ms

(1) Pentachlorophenol (MC)

3.255min (+1.059) 0.00ppm m

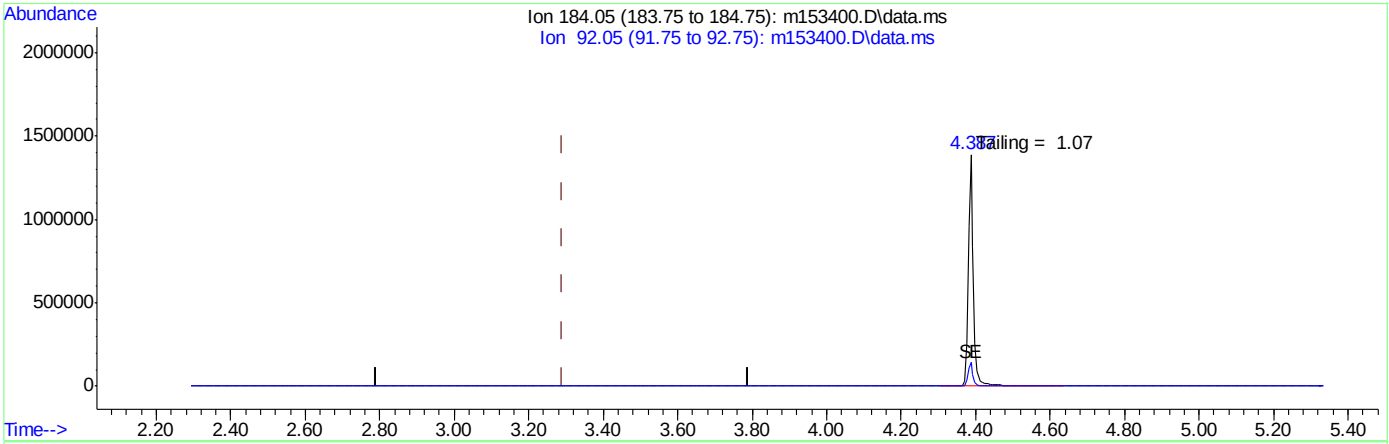
response 314549

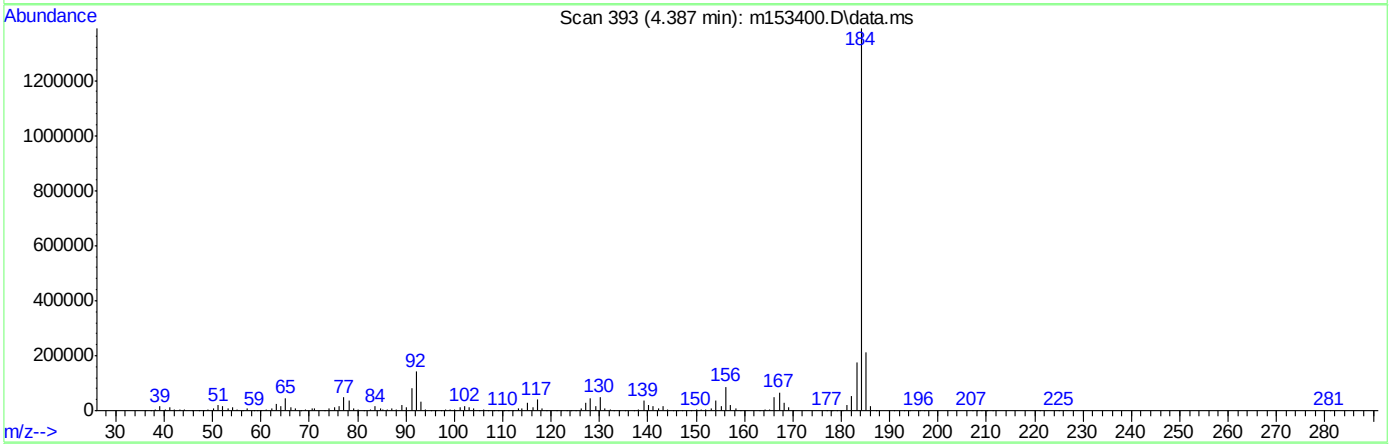
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	62.39
267.70	67.90	64.91
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153400.D
Acq On : 12 Apr 2019 4:58 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 12 17:03:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153400.D\data.ms

(2) Benzidine (M)

4.387min (+1.096) 0.00ppm m

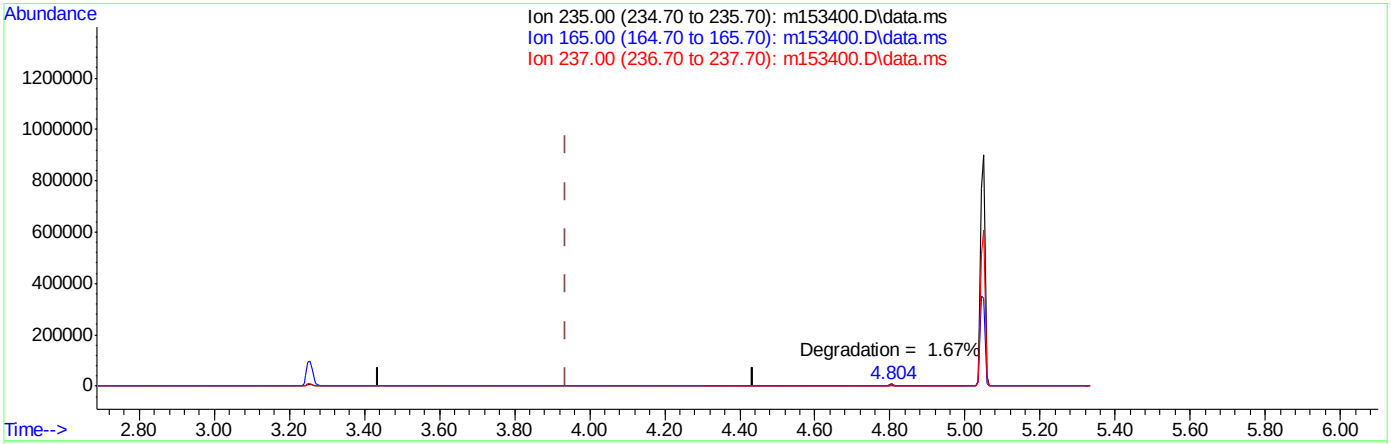
response 1290999

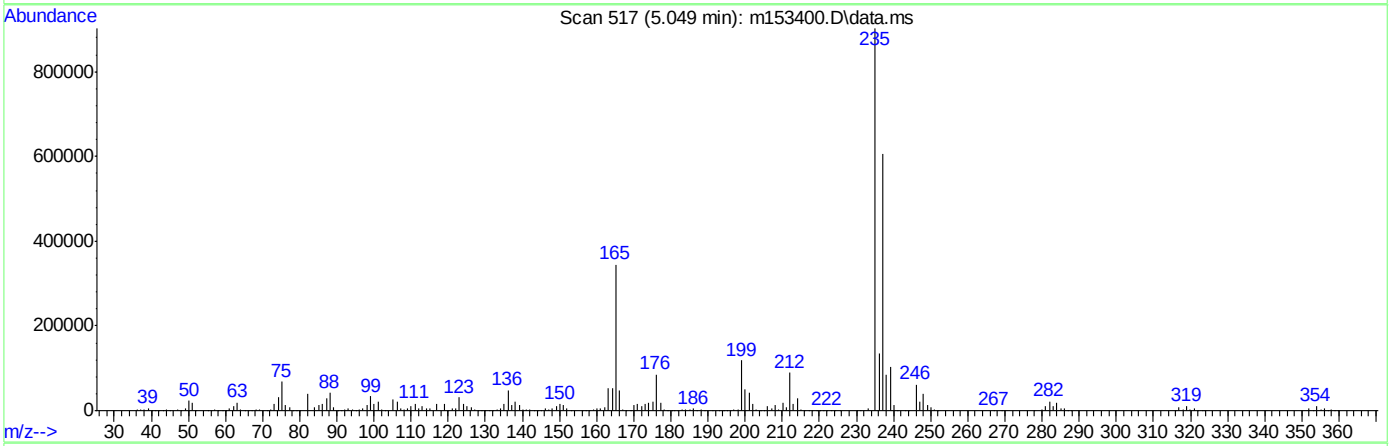
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	10.16#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153400.D
Acq On : 12 Apr 2019 4:58 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 12 17:03:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153400.D\data.ms

(3) PP-DDT (MC)

5.049min (+1.112) 0.00ppm m

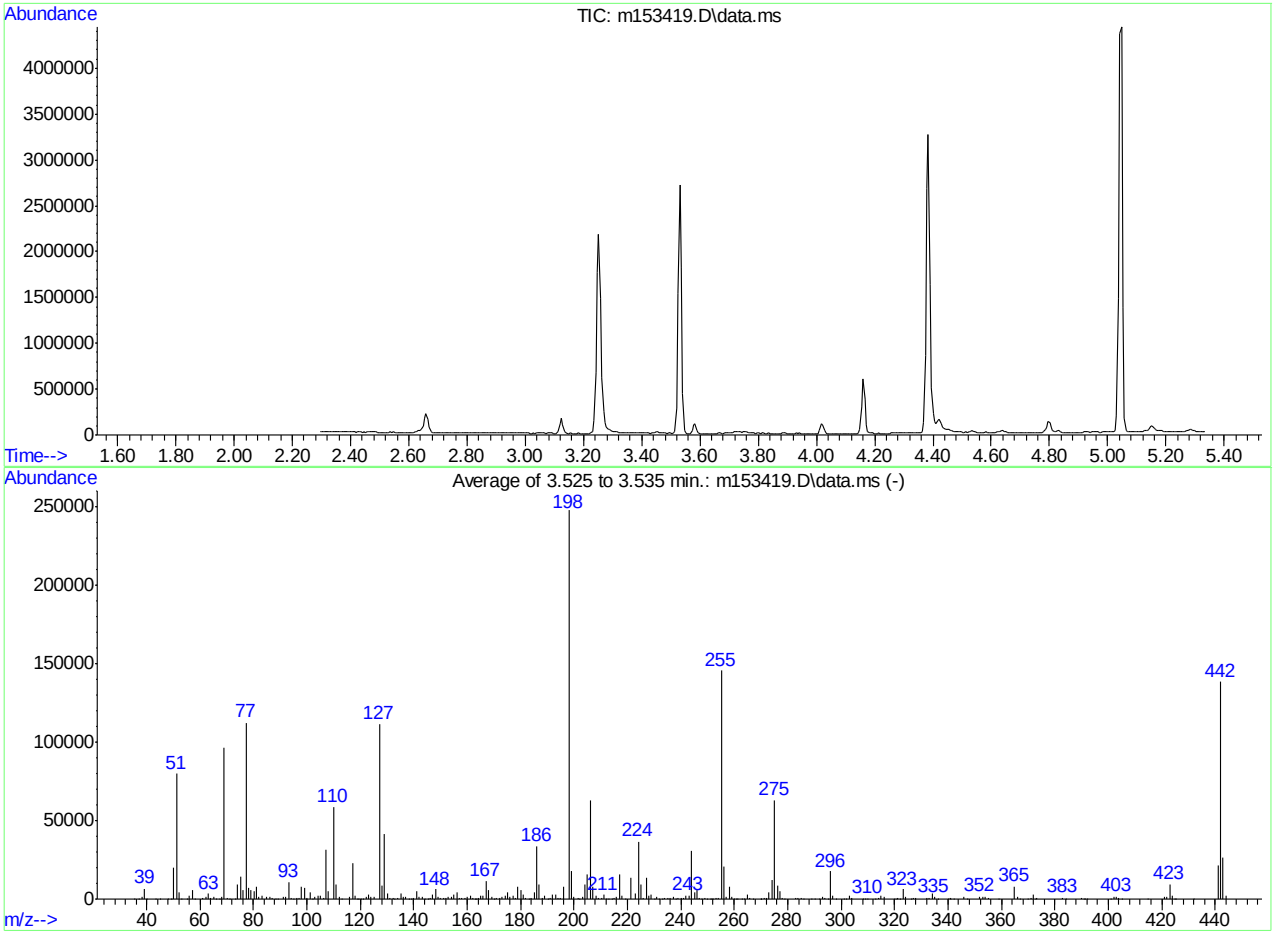
response 741987

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	38.16#
237.00	66.90	67.26
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6557\m153419.D Vial: 1
Acq On : 13 Apr 2019 1:19 am Operator: chriss2
Sample : DFTPP Inst : MSM
Misc : op17006,em6557,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 231, 232, 233; Background Corrected with Scan 226

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.2	79824	PASS
68	69	0.00	2	1.4	1315	PASS
69	198	0.00	100	39.1	96837	PASS
70	69	0.00	2	0.5	513	PASS
127	198	40	60	45.1	111752	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	247893	PASS
199	198	5	9	7.1	17598	PASS
275	198	10	30	25.5	63149	PASS
365	198	1	100	3.3	8195	PASS
441	443	0.10	100	80.5	21483	PASS
442	198	40	100	55.9	138565	PASS
443	442	17	23	19.3	26703	PASS

m153419.D DFTPPM.M Mon Apr 15 12:14:59 2019

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.15	193	52.15	3977	66.10	158	78.15	7432
37.10	285	53.15	174	67.25	81	79.05	5986
38.15	1157	55.10	229	68.10	1315	80.05	5150
39.15	6629	56.05	2387	69.05	96837	81.05	7646
40.05	302	57.05	5636	70.15	513	82.05	1465
43.15	41	58.05	272	71.10	275	83.05	1816
45.10	188	61.10	897	73.05	271	85.05	1363
48.05	123	62.05	1289	74.05	9374	86.05	1470
49.05	372	63.15	3298	75.05	14679	87.05	967
50.15	20225	64.05	433	76.15	5453	88.05	194
51.10	79824	65.15	1755	77.15	112440	88.95	101

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.05	1589	102.00	165	116.05	1615	127.05	111752
92.10	1670	103.05	1321	117.05	22864	128.05	8605
93.05	10868	104.05	2167	118.05	1829	129.05	41613
94.05	858	105.10	2382	119.00	274	130.05	3279
95.05	15	106.10	449	119.25	84	131.05	755
96.10	493	107.05	31480	120.10	350	132.10	394
97.10	401	108.05	5240	121.05	68	132.85	67
98.05	7546	110.05	58845	122.05	1741	134.05	928
99.05	7176	111.05	9347	123.05	2726	135.05	3606
100.05	675	112.05	1202	124.05	1425	136.05	1312
101.05	4091	113.05	338	125.05	1144	137.05	1632

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
138.00	376	149.05	1486	160.05	1663	170.10	259
139.05	117	150.05	389	161.05	2307	171.00	473
140.00	436	151.10	907	162.05	767	172.00	1035
141.05	4895	152.00	461	162.95	75	173.05	1224
142.05	1553	153.00	1813	163.15	95	174.05	2357
143.00	1396	154.10	1209	164.00	405	175.05	4039
144.00	251	155.05	3183	165.05	2112	176.05	1252
145.10	253	156.05	4262	166.05	1844	177.05	1888
146.05	799	157.10	766	167.05	11530	178.05	844
147.00	2586	158.05	783	168.05	5833	179.00	8239
148.05	6261	159.00	835	169.05	1199	180.05	5972

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
181.05	2717	192.00	2860	204.05	9075	215.00	640
182.00	495	193.00	2830	205.05	15542	216.00	1593
183.00	307	194.10	804	206.05	62842	217.00	15595
184.05	682	195.00	453	207.05	7890	218.00	2287
185.05	4024	196.05	8130	208.05	2387	219.00	214
186.05	33794	198.05	247893	209.05	794	221.05	13950
187.05	9482	199.00	17598	210.20	686	223.00	3633
188.00	944	200.00	1561	211.05	2578	224.05	36498
189.00	1878	201.50	1082	212.05	329	225.05	9028
190.05	240	201.95	58	213.00	169	226.00	890
191.00	1095	203.00	1718	213.95	78	227.05	13846

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
228.00	2076	239.00	537	249.90	351	259.95	92
229.00	2752	240.00	613	250.90	289	260.85	91
229.90	181	241.00	937	251.65	71	261.15	122
231.05	1253	242.00	2116	252.05	325	262.95	80

231.95	302	243.05	2410	253.00	785	263.85	123
233.05	217	244.05	30928	253.95	384	265.00	3138
234.00	939	245.05	4208	255.05	145861	265.85	570
235.00	927	246.00	5673	256.05	21114	267.05	101
236.00	795	247.00	815	257.00	1676	269.85	195
237.00	1231	247.85	69	258.00	7741	270.05	103
237.95	169	249.00	965	259.00	1212	271.00	391

Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
272.05	493	286.05	123	302.00	223	320.85	90
273.00	4649	288.95	158	303.00	2148	321.00	632
274.05	12184	289.95	239	304.05	481	321.95	118
275.05	63149	291.90	333	308.05	83	323.05	6148
276.05	8481	293.00	1366	309.05	113	324.00	1379
277.00	5064	294.05	406	309.95	123	326.00	141
278.00	869	295.05	381	312.95	77	326.90	909
278.95	177	296.00	17858	314.00	793	328.00	468
283.00	631	297.00	2470	315.00	1942	332.00	627
283.95	416	298.05	124	316.00	1184	333.00	566
285.00	942	300.95	193	320.05	86	334.00	3776

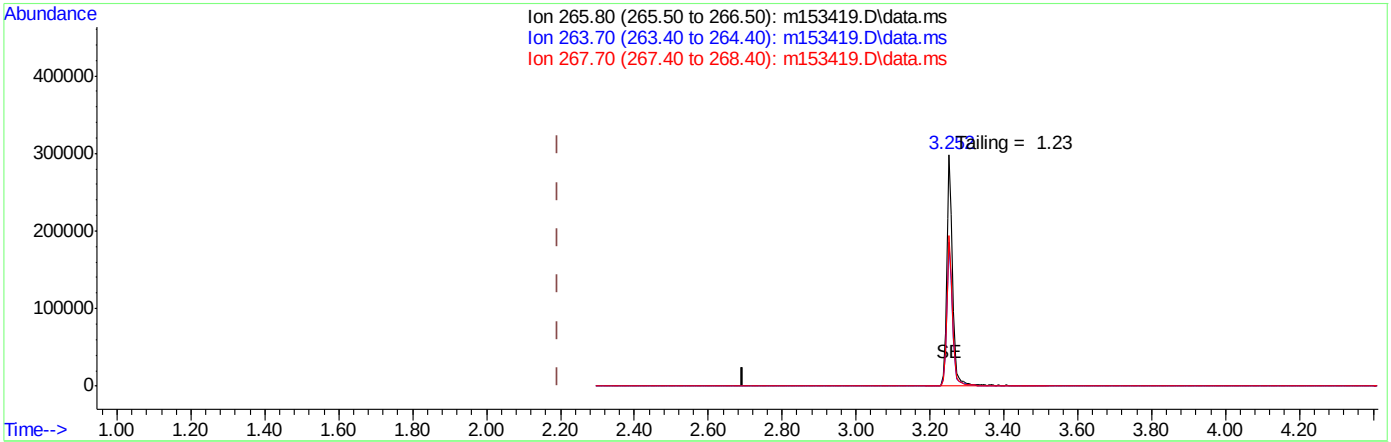
Average of 3.525 to 3.535 min.: m153419.D\data.ms
DFTPP
Modified:subtracted

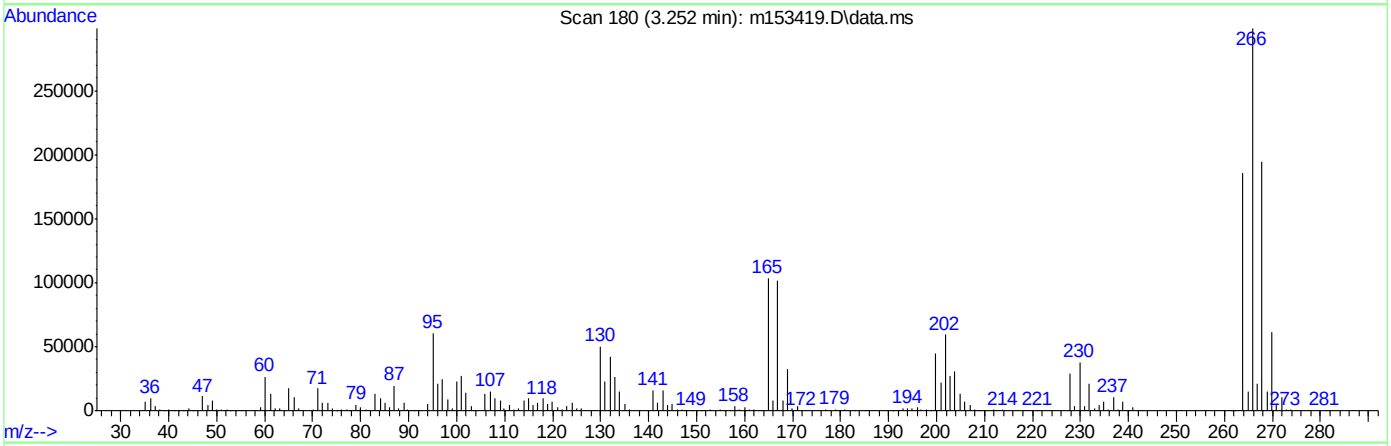
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
335.00	1152	355.00	394	384.05	255	421.00	1512
336.05	67	358.95	86	390.00	555	422.00	1371
340.05	68	364.95	8195	390.85	121	423.05	9346
340.85	180	365.90	1231	391.05	81	424.00	1930
341.05	510	366.95	97	391.90	207	424.95	97
342.05	78	370.00	202	400.95	106	425.15	87
345.95	1174	371.00	446	401.95	1208	432.05	77
347.00	238	372.05	3059	403.00	1644	441.00	21483
351.95	1730	372.85	123	403.90	653	442.05	138565
353.00	1450	373.05	605	404.95	89	443.05	26703
354.05	1729	382.95	754	414.85	75	443.95	2465

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153419.D
Acq On : 13 Apr 2019 1:19 am
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 13 01:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153419.D\data.ms

(1) Pentachlorophenol (MC)

3.252min (+1.057) 0.00ppm m

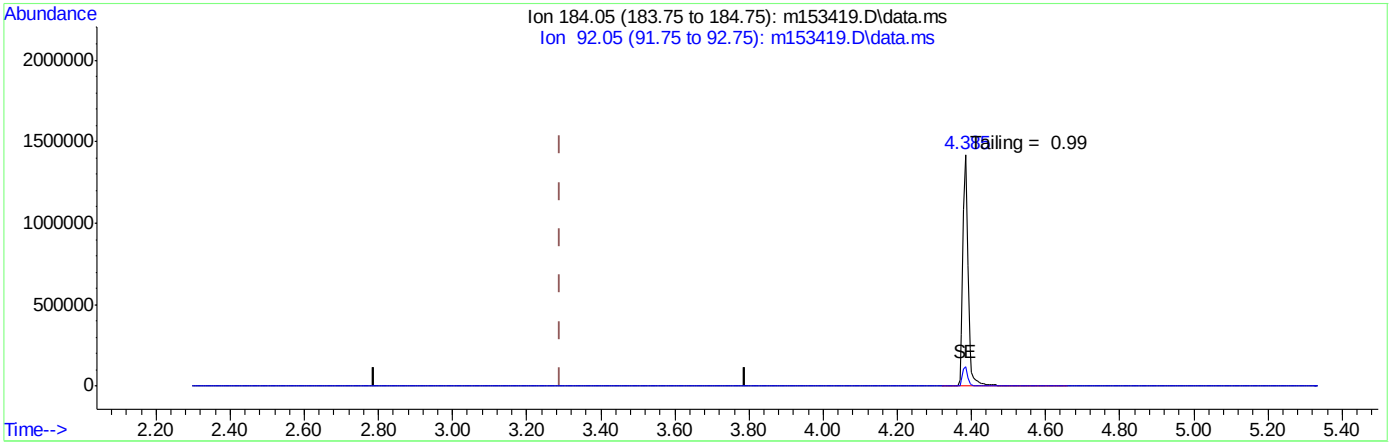
response 330705

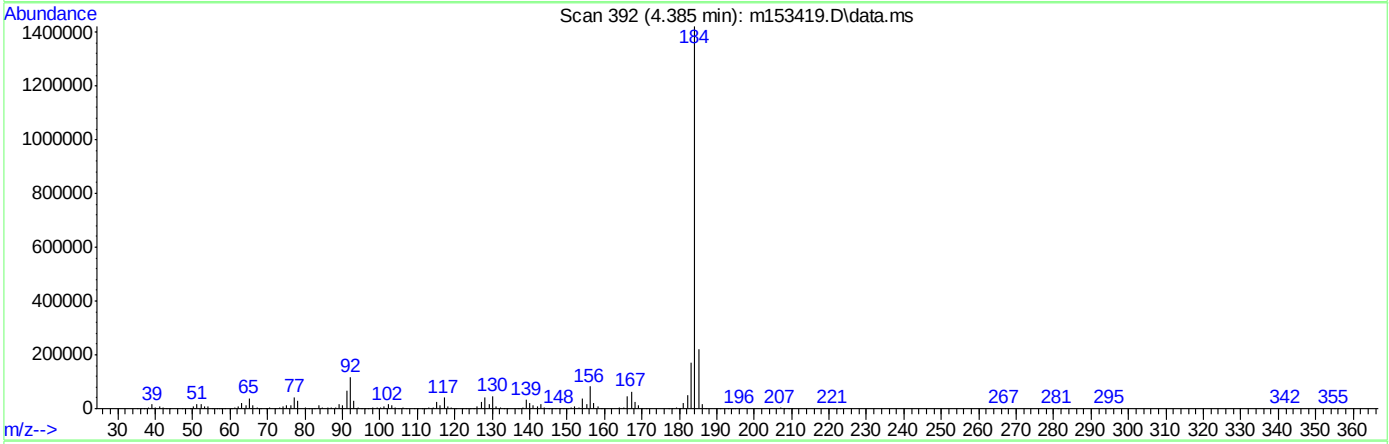
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	62.19
267.70	67.90	65.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153419.D
Acq On : 13 Apr 2019 1:19 am
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 13 01:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153419.D\data.ms

(2) Benzidine (M)

4.385min (+1.094) 0.00ppm m

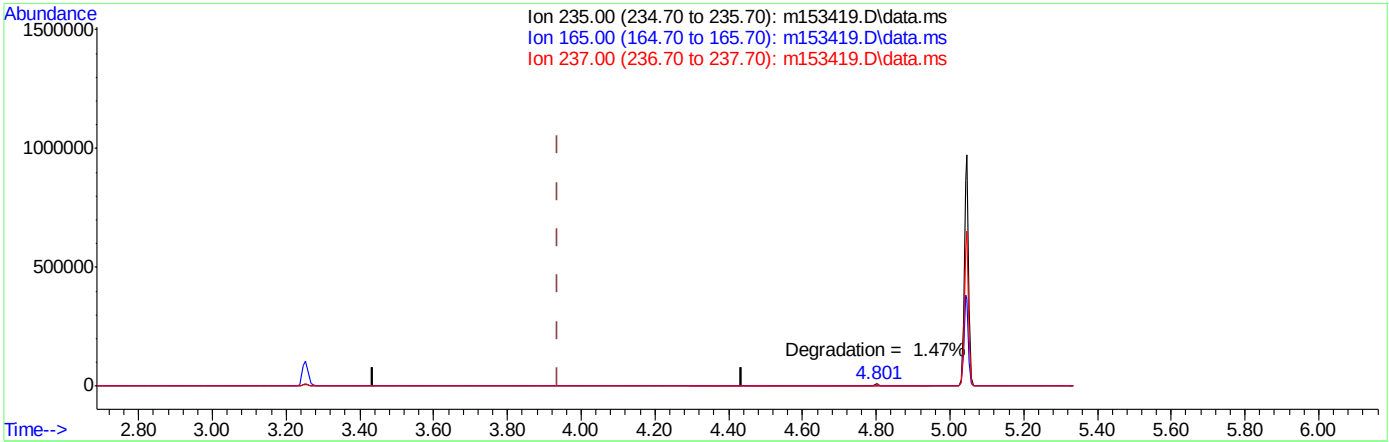
response 1335399

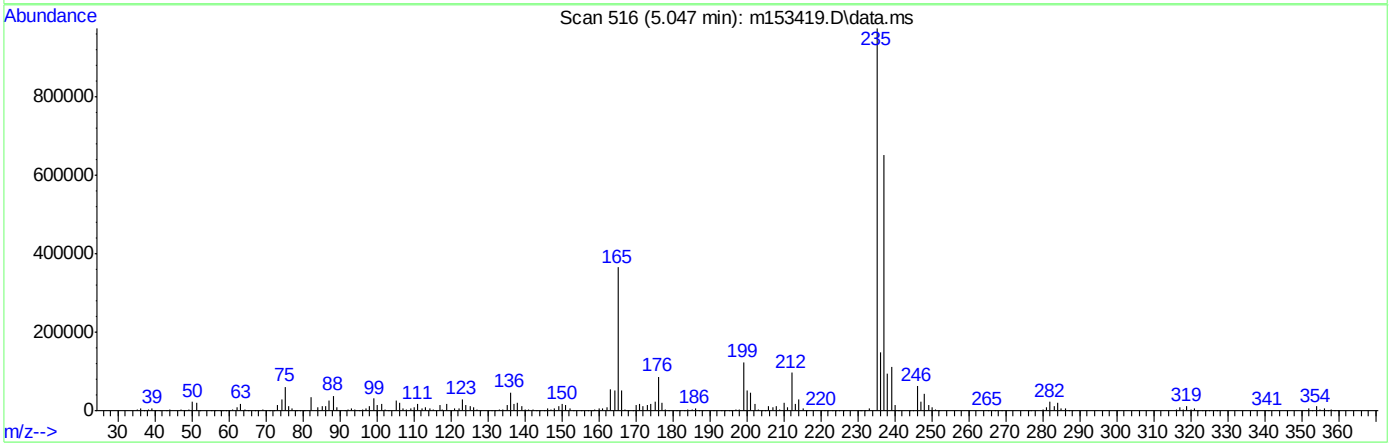
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	8.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153419.D
Acq On : 13 Apr 2019 1:19 am
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 13 01:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153419.D\data.ms

(3) PP-DDT (MC)

5.047min (+1.110) 0.00ppm m

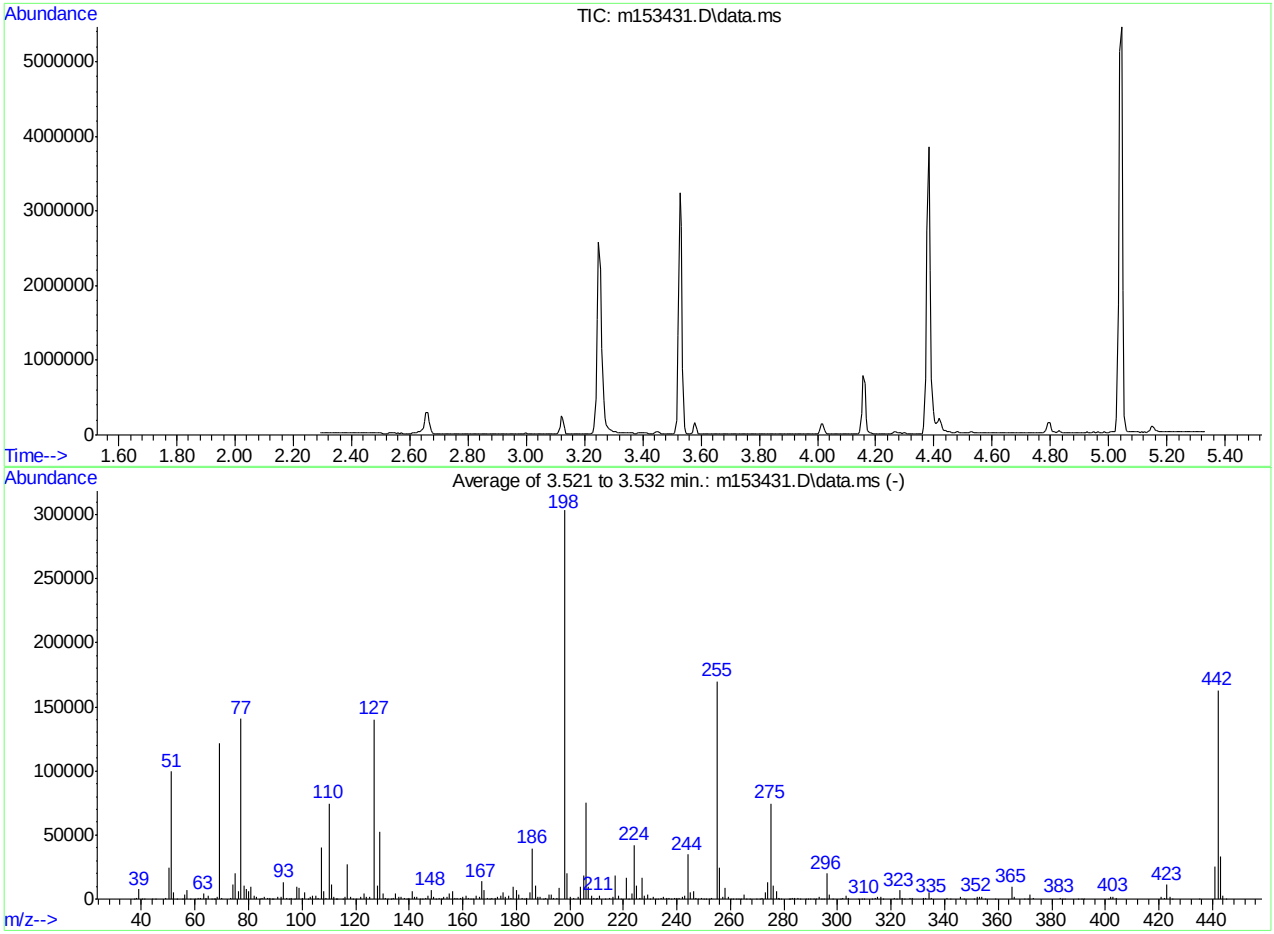
response 800686

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	37.44#
237.00	66.90	66.98
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6557\m153431.D Vial: 1
Acq On : 14 Apr 2019 2:31 pm Operator: chriss2
Sample : DFTPP Inst : MSM
Misc : op17006,em6558,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 231, 232, 233; Background Corrected with Scan 226

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.8	99360	PASS
68	69	0.00	2	1.6	1999	PASS
69	198	0.00	100	40.2	121985	PASS
70	69	0.00	2	0.6	727	PASS
127	198	40	60	46.2	139984	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	303253	PASS
199	198	5	9	6.8	20557	PASS
275	198	10	30	24.5	74381	PASS
365	198	1	100	3.0	9225	PASS
441	443	0.10	100	75.9	24993	PASS
442	198	40	100	53.7	162856	PASS
443	442	17	23	20.2	32909	PASS

m153431.D DFTPPM.M Mon Apr 15 13:13:17 2019

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	398	53.10	338	66.05	86	78.15	10220
38.10	1298	55.10	41	67.00	150	79.05	8132
39.15	7601	56.05	3206	67.25	86	80.05	5980
40.05	259	57.05	6702	68.10	1999	81.05	9416
41.10	70	58.10	434	69.05	121985	82.05	2241
44.10	134	60.05	79	70.10	727	83.05	2172
45.15	227	61.05	1041	73.10	789	84.00	178
49.05	598	62.10	1339	74.10	11176	85.05	1295
50.15	24760	63.10	4206	75.00	19830	86.05	2102
51.15	99360	64.05	688	76.15	6484	87.05	1160
52.15	5234	65.10	2592	77.10	140523	88.05	546

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.95	86	100.00	818	111.05	11776	123.05	4016
89.15	102	101.05	5075	112.00	1463	124.00	1859
91.05	2110	102.00	392	112.85	72	125.05	1764
92.05	2219	103.05	1572	113.05	237	127.05	139984
93.05	13235	104.05	2772	115.05	110	128.05	10446
94.05	1173	105.05	2905	116.05	1991	129.05	52821
95.05	165	106.05	930	117.05	27530	130.05	4377
96.10	596	107.05	40237	118.05	2076	131.00	828
97.10	463	108.05	5953	119.05	421	132.10	360
98.05	9454	109.10	1155	120.05	407	133.00	230
99.05	8770	110.05	74805	122.05	2212	134.00	1235

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
135.05	4115	146.00	1198	156.05	5765	167.05	13822
136.05	1791	147.05	3063	157.05	1179	168.05	6877
137.05	1969	148.05	7280	158.00	1004	169.05	943
138.00	514	149.05	1779	159.00	904	170.05	424
139.00	367	150.05	479	160.00	2028	171.00	603
140.05	507	151.10	858	161.05	3052	172.00	1280
141.05	6023	151.95	226	162.05	974	173.05	1657
142.05	2131	152.15	188	163.00	479	174.05	2911
143.00	1562	153.05	2044	163.95	341	175.05	5440
144.05	418	154.05	1565	165.00	2446	176.05	1799
145.00	362	155.05	4051	166.05	2053	177.05	2334

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	784	189.00	1885	201.45	1330	212.95	241
179.00	9935	190.00	417	203.00	2185	215.00	762
180.05	7300	190.95	798	204.05	10010	216.00	1556
181.00	3493	192.05	3316	205.05	18016	216.95	18422
182.05	614	193.05	3747	206.05	75304	218.00	2536
183.10	213	194.05	732	207.00	10024	219.05	179
184.00	787	195.10	497	208.05	2296	221.05	17058
185.05	4854	196.05	9021	209.00	877	221.95	381
186.05	39656	197.95	303253	209.95	172	223.00	4531
187.05	10866	199.00	20557	210.15	556	224.05	42005
188.05	1366	200.00	1707	211.00	2941	225.05	10171

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
226.05	933	237.05	1286	247.90	232	260.00	284
227.05	16604	237.95	315	249.00	1239	260.95	323
228.00	2741	239.00	714	249.95	174	262.05	69
229.00	3320	240.05	496	251.00	250	262.95	149

229.85	325	240.95	915	252.00	393	263.75	78
231.00	1598	242.05	2157	253.05	819	265.00	3870
232.00	273	243.05	2460	255.05	169738	265.85	100
232.95	215	244.05	34728	256.05	24767	266.95	249
234.00	1021	245.05	5260	256.95	2023	269.85	93
235.05	1490	246.05	6372	257.95	8949	271.00	261
236.00	929	247.00	1017	259.00	1597	271.95	511

Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
273.05	5297	284.00	499	296.05	20103	314.00	907
274.05	13499	285.05	1089	297.00	3199	314.95	2021
275.05	74381	285.95	92	297.95	211	316.00	1387
276.05	10104	288.05	84	300.95	241	317.00	191
277.00	5791	288.95	300	302.00	584	321.00	584
277.85	87	289.90	167	303.05	2502	322.05	308
278.05	842	291.10	164	304.00	552	323.05	6967
279.00	163	292.05	386	307.90	255	324.00	1261
281.85	112	293.00	1470	308.95	166	324.95	179
282.05	114	293.95	271	309.95	305	326.90	1289
283.00	856	294.95	242	312.85	72	328.00	778

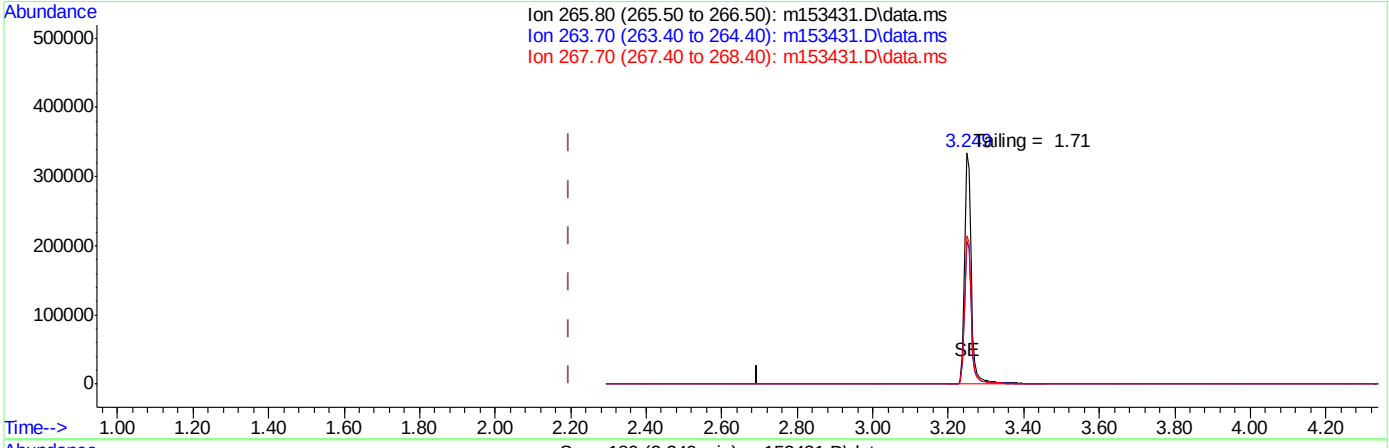
Average of 3.521 to 3.532 min.: m153431.D\data.ms
DFTPP
Modified:subtracted

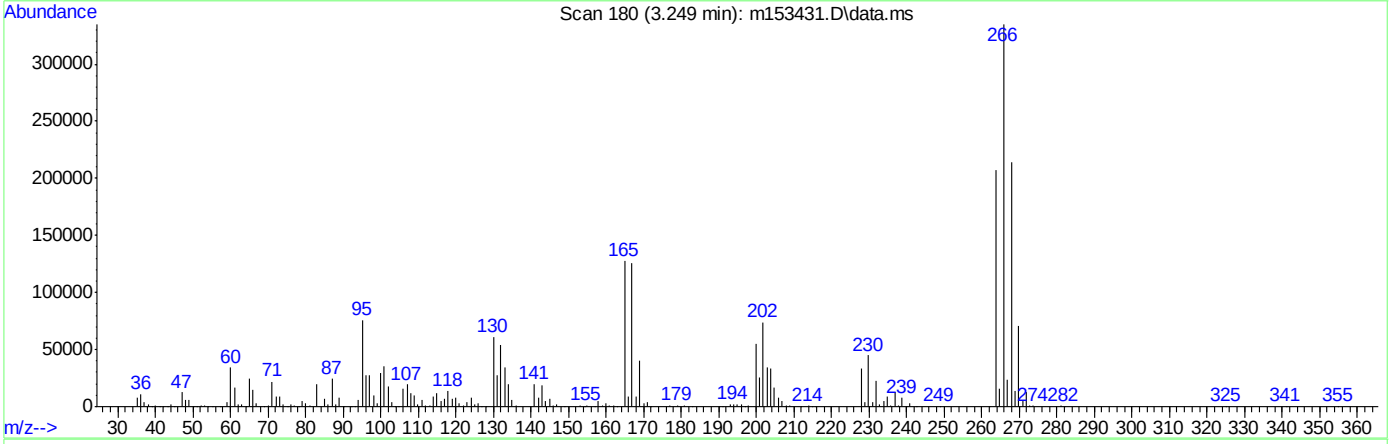
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
332.00	570	354.00	2175	384.95	82	424.00	2183
332.95	610	355.00	476	389.95	444	425.00	272
334.05	5090	358.95	69	391.10	316	435.25	79
335.00	1180	364.95	9225	392.00	205	441.00	24993
341.00	667	365.95	1460	400.95	214	442.05	162856
342.00	238	369.90	168	401.95	1384	443.05	32909
345.95	1447	371.00	384	403.00	2194	444.00	2798
346.95	300	372.00	3641	403.90	684	444.95	195
351.05	80	373.00	883	421.00	1541		
352.05	2071	383.00	892	421.95	1249		
352.95	1486	384.00	238	422.95	11345		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153431.D
Acq On : 14 Apr 2019 2:31 pm
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6558,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 13:08:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153431.D\data.ms

(1) Pentachlorophenol (MC)

3.249min (+1.053) 0.00ppm m

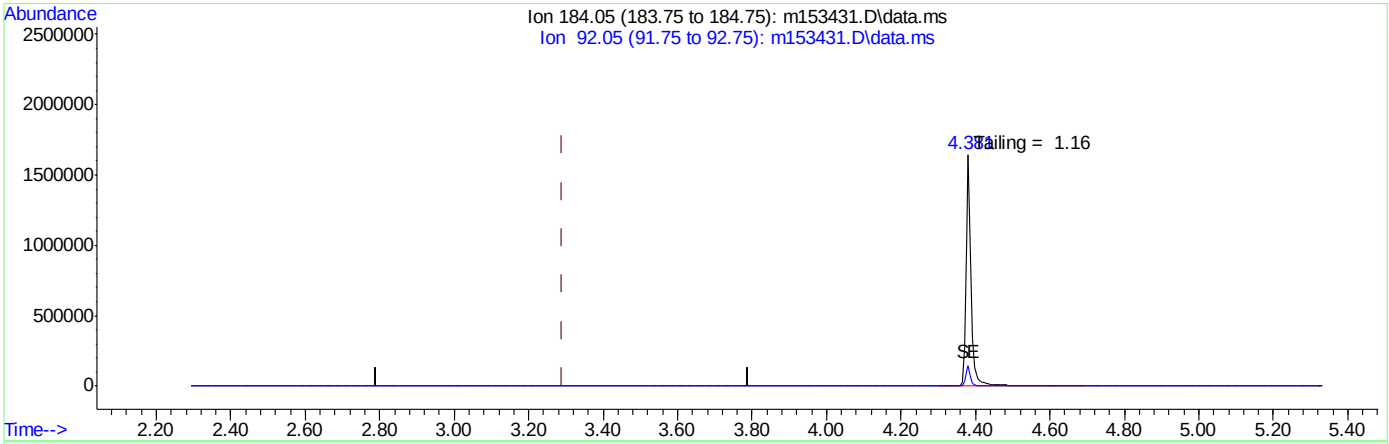
response 394185

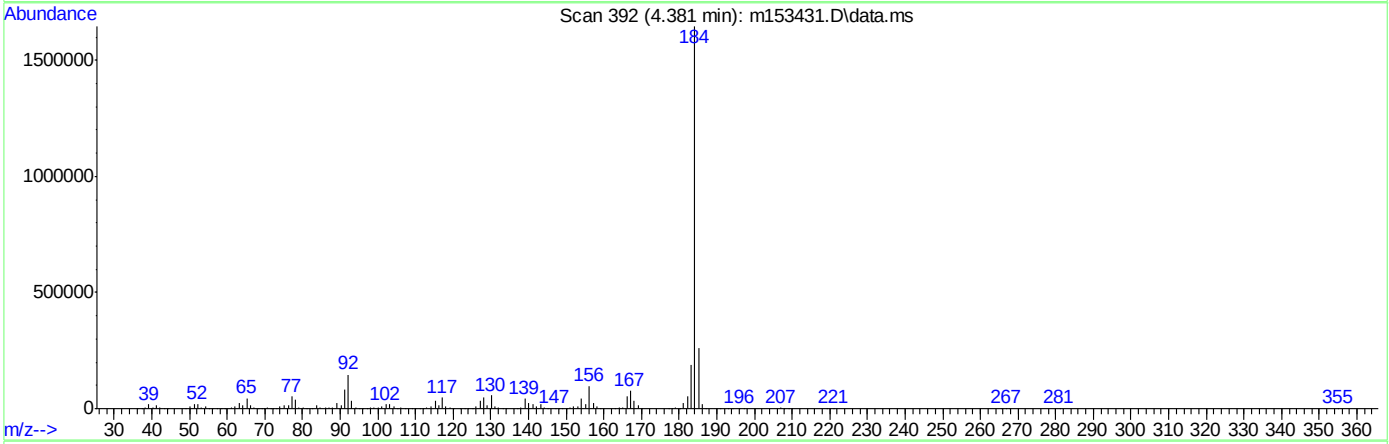
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	61.77
267.70	67.90	63.84
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153431.D
Acq On : 14 Apr 2019 2:31 pm
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6558,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 13:08:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153431.D\data.ms

(2) Benzidine (M)

4.381min (+1.091) 0.00ppm m

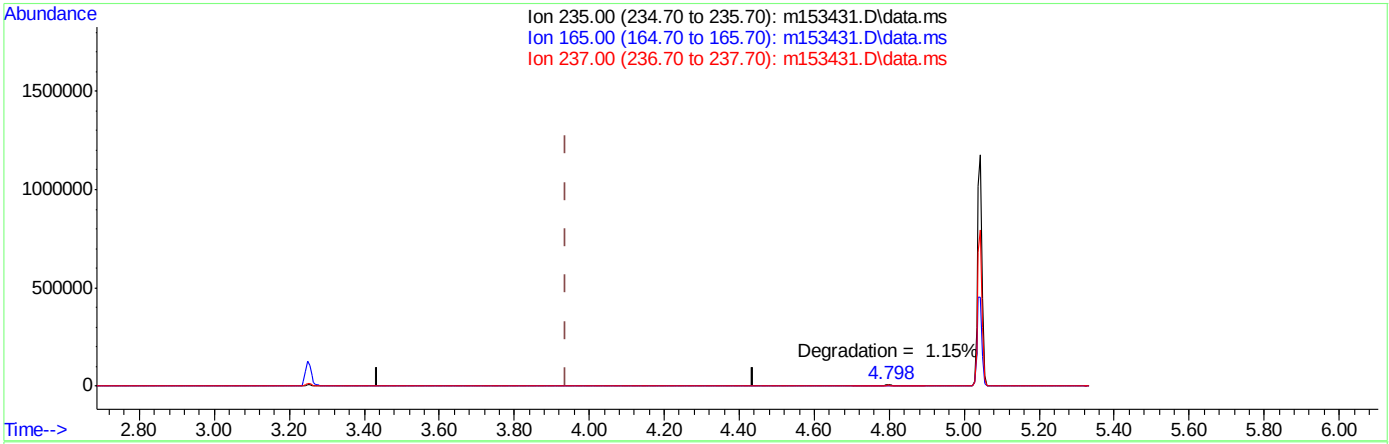
response 1550554

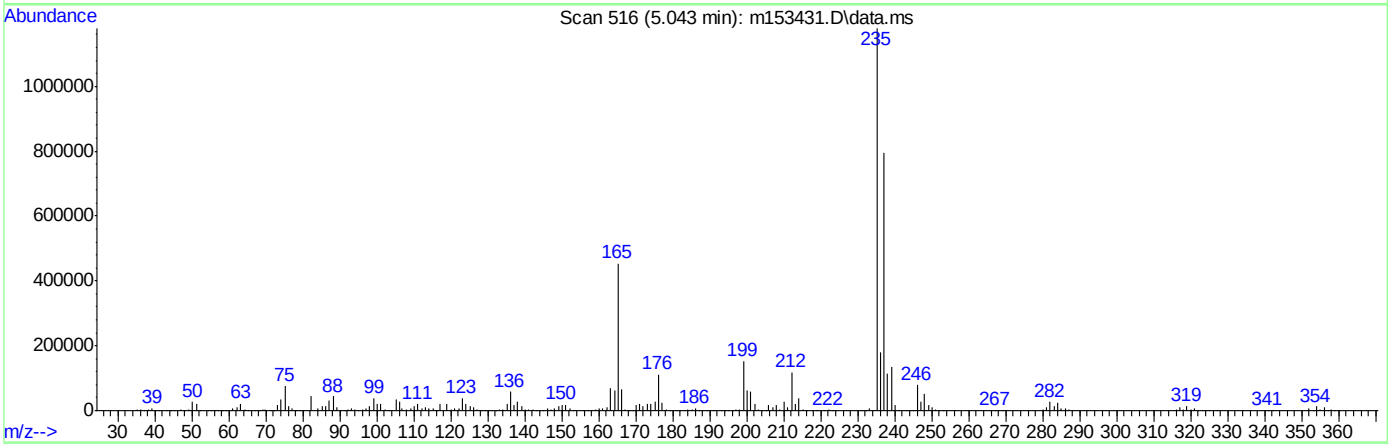
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	8.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153431.D
Acq On : 14 Apr 2019 2:31 pm
Operator : chriss2
Sample : DFTPP
Misc : op17006,em6558,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 13:08:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153431.D\data.ms

(3) PP-DDT (MC)

5.043min (+1.107) 0.00ppm m

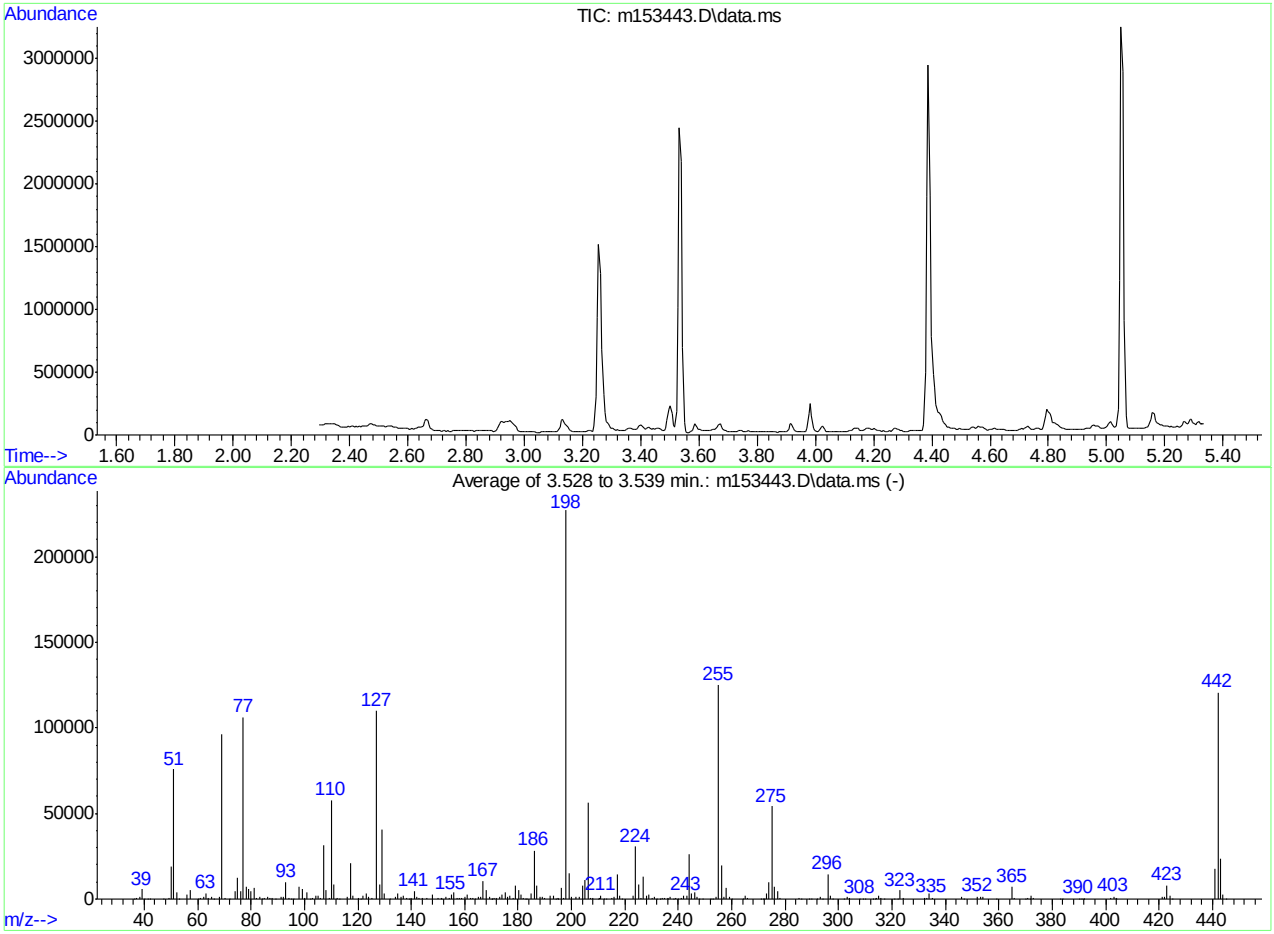
response 970552

Ion	Exp%	Act%
235.00	100	100
165.00	61.30	38.55#
237.00	66.90	67.38
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\DATA\EM6559\m153443.D Vial: 1
Acq On : 15 Apr 2019 1:54 pm Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6559,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018



AutoFind: Scans 232, 233, 234; Background Corrected with Scan 227

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.3	75686	PASS
68	69	0.00	2	1.2	1135	PASS
69	198	0.00	100	42.4	96290	PASS
70	69	0.00	2	0.5	481	PASS
127	198	40	60	48.4	109790	PASS
197	198	0.00	1	0.2	521	PASS
198	198	100	100	100.0	227010	PASS
199	198	5	9	6.8	15330	PASS
275	198	10	30	23.9	54288	PASS
365	198	1	100	3.1	6995	PASS
441	443	0.10	100	73.0	17393	PASS
442	198	40	100	53.2	120749	PASS
443	442	17	23	19.7	23826	PASS

m153443.D DFTPPM.M Mon Apr 15 14:50:53 2019

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	69	52.10	3815	68.10	1135	81.05	6792
37.10	431	53.10	265	69.00	96290	82.10	992
38.15	1103	56.10	2472	70.05	481	83.05	1617
39.15	5667	57.10	5312	72.10	186	84.05	152
40.05	199	60.05	67	74.10	4745	85.10	626
41.15	182	61.05	1005	75.00	12273	86.00	1341
42.10	1	62.10	1104	76.05	4561	87.05	504
47.05	118	63.10	3409	77.10	106422	88.05	378
49.05	517	64.10	524	78.15	7379	89.05	288
50.15	18749	65.15	1468	79.05	6168	91.05	1499
51.10	75686	66.10	319	80.05	4876	92.05	1153

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.05	10066	105.00	1915	118.05	1684	132.00	202
94.10	910	106.10	793	120.00	470	134.05	1090
95.05	37	107.00	31271	121.05	189	135.05	3007
96.05	290	108.05	4938	122.05	1880	136.05	1148
98.05	7369	109.10	353	123.05	3023	137.05	1799
99.05	6043	110.05	57754	124.05	1472	138.10	523
100.10	725	111.05	8673	125.05	920	139.05	302
101.05	4031	112.05	914	127.00	109790	140.05	493
101.95	264	113.05	291	128.05	8253	141.00	4708
103.00	971	116.05	1440	129.05	40373	142.05	1481
104.05	2236	117.05	20778	130.05	3392	143.05	998

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
144.05	355	158.00	847	169.10	1119	179.00	7762
146.00	882	159.00	743	170.00	325	180.05	5345
148.00	2802	160.00	1627	170.35	74	181.05	2540
150.00	368	161.05	2528	171.05	545	182.00	425
151.15	585	162.05	709	172.00	846	182.95	79
151.45	141	163.00	379	173.00	1404	183.15	73
153.00	1552	163.95	182	174.00	2486	185.05	3038
154.00	897	164.95	1645	175.05	4253	186.05	28210
155.05	2806	166.00	1601	176.00	1135	187.05	7784
156.05	4221	167.00	10672	177.05	2077	188.05	1072
157.05	954	168.05	5167	178.00	720	189.05	1629

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
189.95	356	201.50	1126	213.05	109	228.00	1718
192.00	2289	202.95	1177	215.00	592	228.95	2573
193.05	2261	204.05	7771	216.00	1063	230.00	440
193.95	290	205.05	11485	217.00	14279	231.00	1183
194.95	94	206.05	56466	218.00	1698	232.00	299
195.10	364	207.05	980	218.95	155	232.95	266
196.05	6356	208.05	534	223.00	2206	233.95	743
196.85	521	210.00	291	224.00	30559	235.00	842
197.95	227010	210.45	522	225.05	8549	235.85	77
198.95	15330	211.00	2170	226.05	829	236.00	596
200.05	1132	212.00	242	227.00	13004	237.00	1063

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
238.05	81	248.95	138	265.00	1709	285.00	939
239.05	562	252.00	224	265.90	394	285.95	167
240.00	326	252.95	76	271.00	315	289.05	238
241.00	732	254.00	1074	271.85	118	289.95	71

242.05	1789	255.05	124837	272.15	288	291.95	238
243.00	1975	256.00	19407	273.05	3425	293.00	1241
244.05	26131	256.95	1410	274.00	9925	294.00	217
245.05	3408	258.00	6568	275.05	54288	296.00	14475
246.00	4263	258.95	1081	276.05	7532	296.95	1897
247.00	1044	260.00	172	277.00	4730	297.90	203
248.00	246	264.05	133	278.05	747	302.00	219

Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
303.05	1595	321.05	349	353.00	1058	383.90	262
304.00	451	321.95	67	354.00	1410	390.05	302
307.95	255	323.05	5083	359.05	83	390.85	91
308.95	104	324.00	917	364.95	6995	391.65	89
309.95	188	332.00	552	365.95	923	392.00	204
312.90	148	333.00	482	369.95	84	401.90	771
313.85	104	334.05	3301	370.95	393	403.00	1345
314.05	546	335.00	790	371.85	201	403.85	102
314.95	1766	345.95	1066	372.05	2266	404.00	450
316.00	859	347.00	155	372.95	653	421.05	1291
317.00	238	352.05	1581	382.95	185	421.95	1202

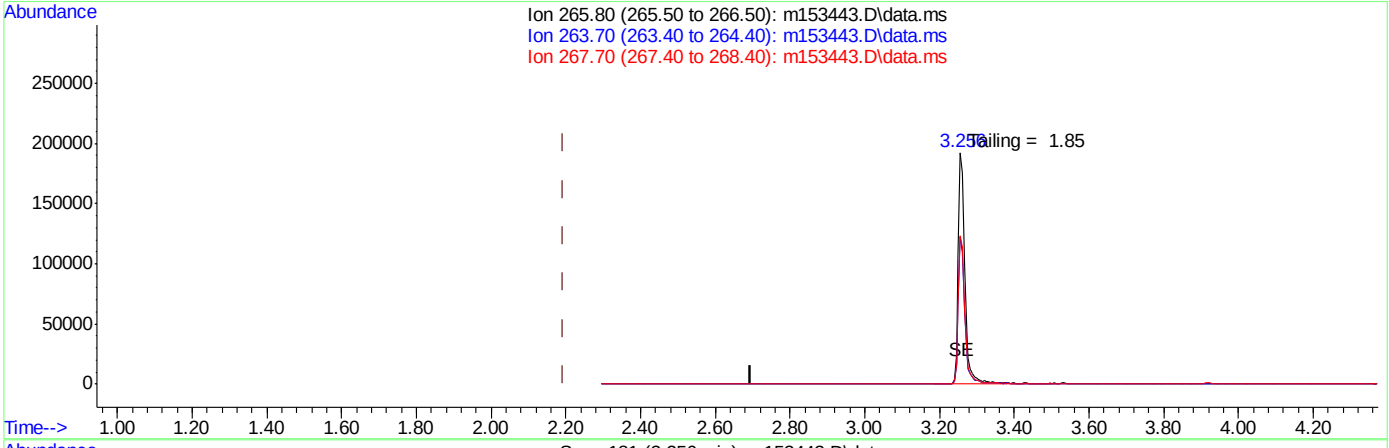
Average of 3.528 to 3.539 min.: m153443.D\data.ms
DFTPP
Modified:subtracted

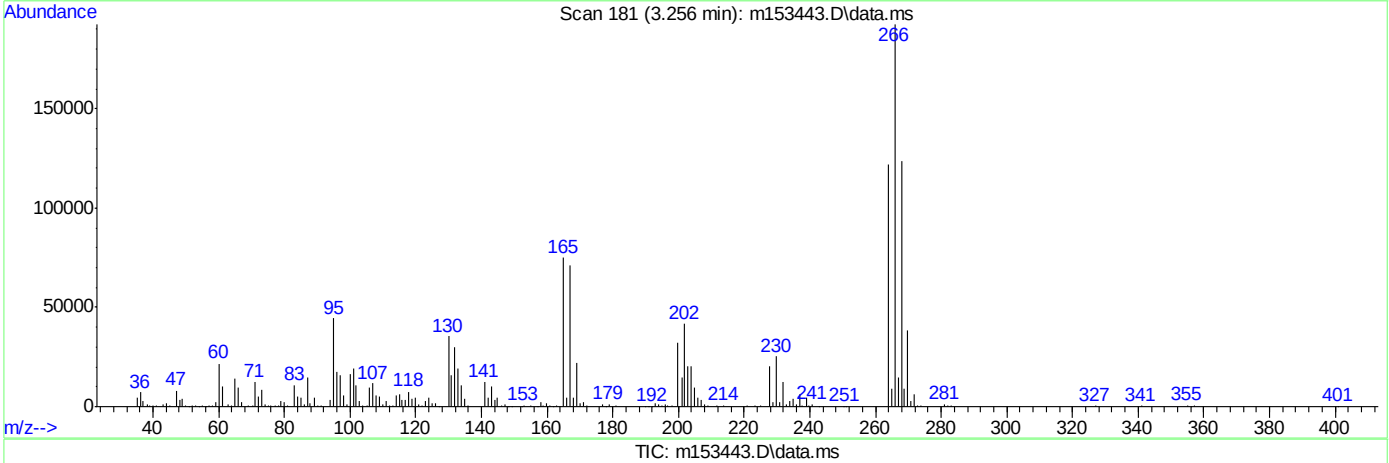
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
422.95	8040						
423.95	1668						
425.00	243						
441.00	17393						
442.05	120749						
443.00	23826						
444.00	2377						
444.95	77						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153443.D
Acq On : 15 Apr 2019 1:54 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 14:00:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153443.D\data.ms

(1) Pentachlorophenol (MC)

3.256min (+1.060) 0.00ppm m

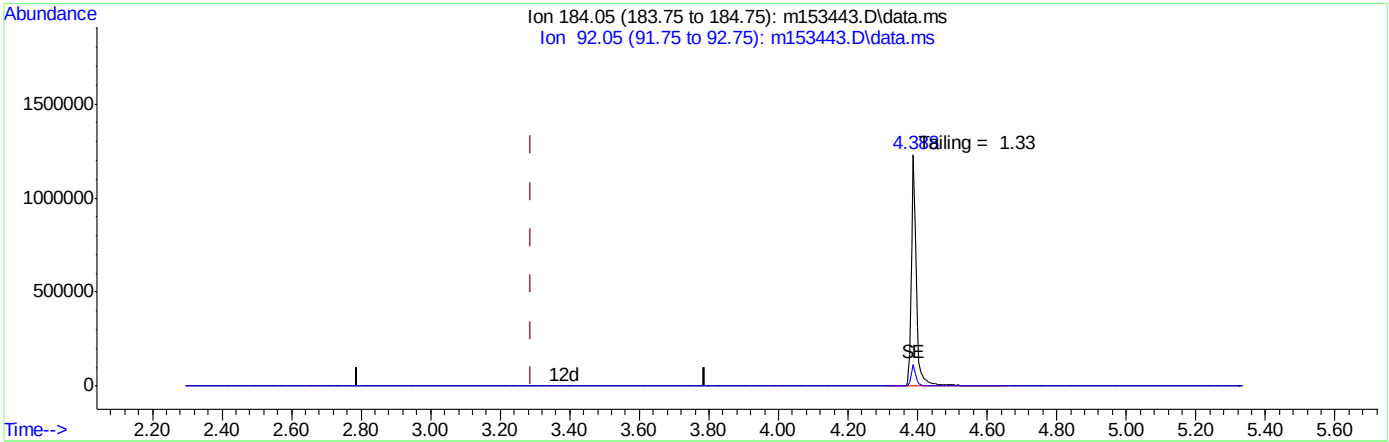
response 233348

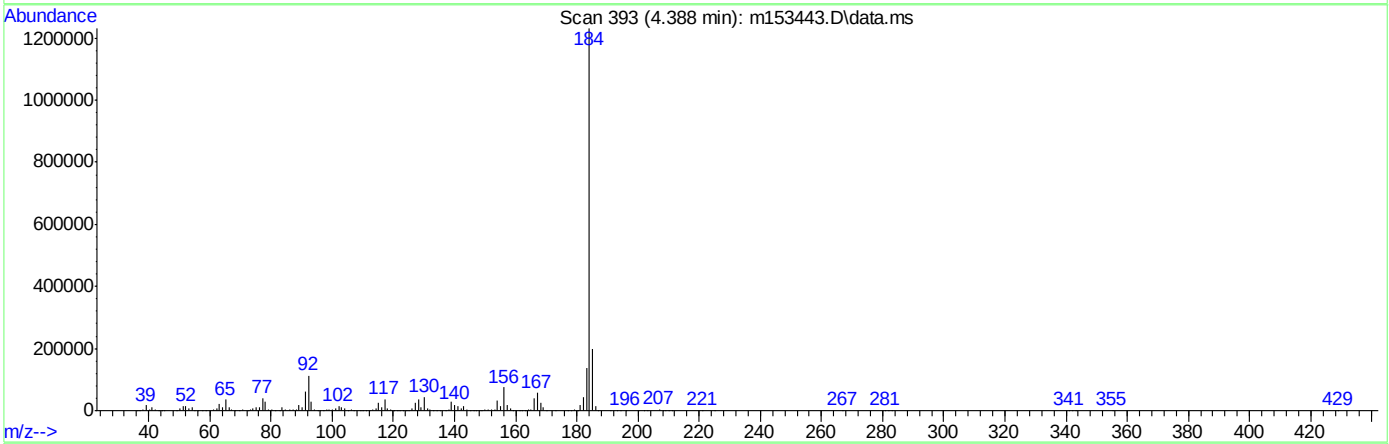
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	63.39
267.70	67.90	64.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153443.D
Acq On : 15 Apr 2019 1:54 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 14:00:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153443.D\data.ms

(2) Benzidine (M)

4.388min (+1.097) 0.00ppm m

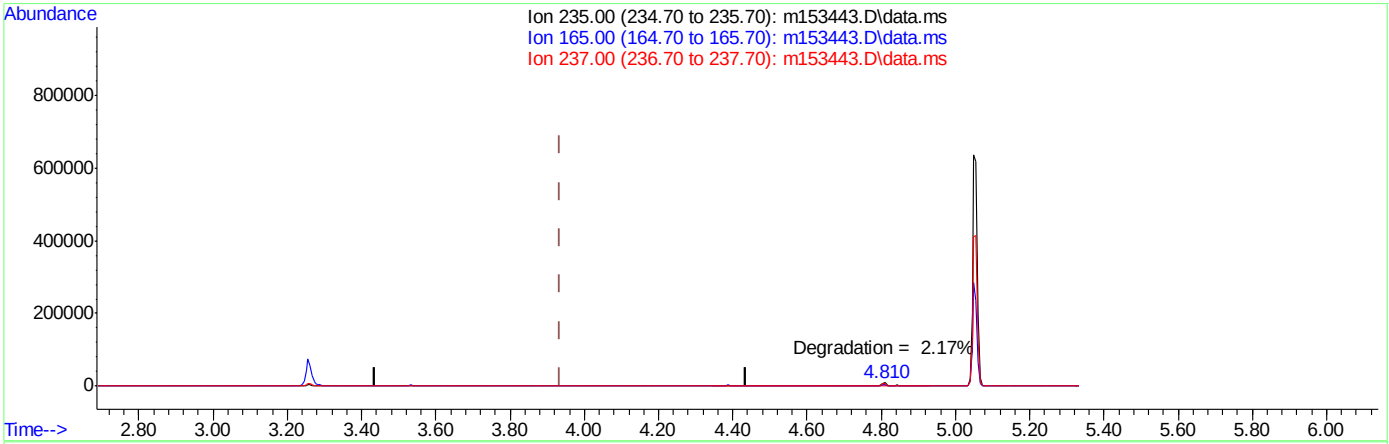
response 1246674

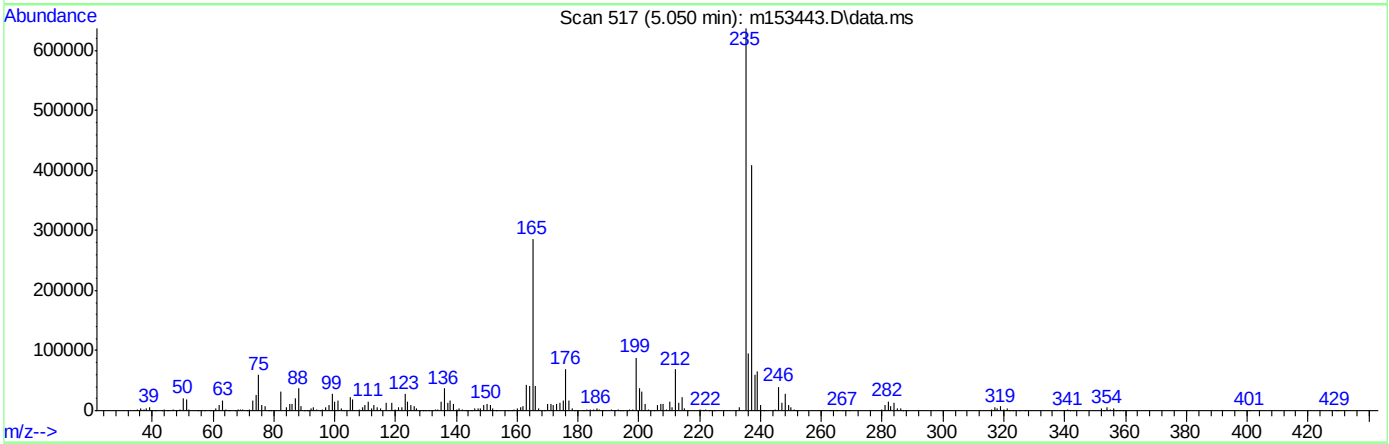
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	9.25#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153443.D
Acq On : 15 Apr 2019 1:54 pm
Operator : christc2
Sample : DFTPP
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 15 14:00:17 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSat Nov 03 03:21:13 2018
QLast Update : Sat Nov 03 03:21:13 2018
Response via : Continuing Cal File:





TIC: m153443.D\data.ms

(3) PP-DDT (MC)

5.050min (+1.113) 0.00ppm m

response 547854

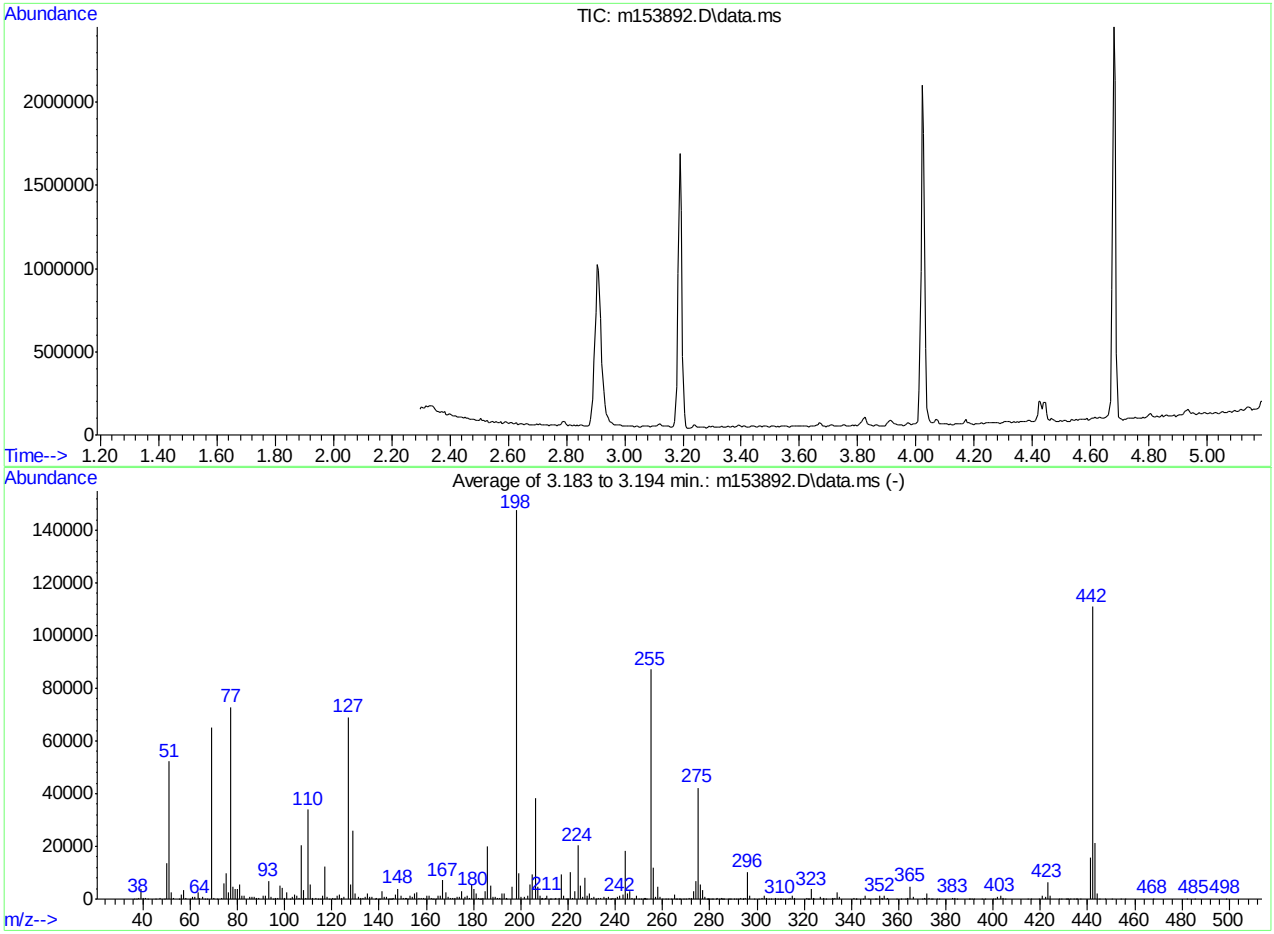
Ion	Exp%	Act%
235.00	100	100
165.00	61.30	44.89
237.00	66.90	64.29
0.00	0.00	0.00

SGS JC86837

DFTPPR

Data File : C:\msdchem\1\DATA\EM6576\m153892.D Vial: 1
Acq On : 30 Apr 2019 9:06 am Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6576,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019



AutoFind: Scans 167, 168, 169; Background Corrected with Scan 162

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.4	52156	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.2	65186	PASS
70	69	0.00	2	0.7	431	PASS
127	198	40	60	46.9	69122	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	147496	PASS
199	198	5	9	6.8	9991	PASS
275	198	10	30	28.7	42296	PASS
365	198	1	100	3.2	4715	PASS
441	443	0.10	100	74.1	15749	PASS
442	198	40	100	75.2	110896	PASS
443	442	17	23	19.2	21255	PASS

m153892.D DFTPPM.M Tue Apr 30 11:57:43 2019

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	110	51.10	52156	64.05	364	77.15	72863
37.15	87	52.15	2394	65.10	977	78.10	4595
38.10	595	53.15	289	66.05	173	79.05	3748
39.15	4046	55.05	208	67.15	85	80.05	3649
40.05	285	56.05	1695	69.05	65186	81.05	5427
41.10	372	57.10	3372	70.05	431	82.10	1087
42.05	110	58.10	289	71.65	67	83.05	1198
45.10	209	60.15	109	73.10	390	85.10	764
47.05	465	61.05	679	74.10	5806	86.05	949
49.10	214	62.10	657	75.05	9953	87.05	882
50.15	13450	63.15	2360	76.15	2756	87.85	238

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
89.10	280	101.05	2641	112.00	479	122.10	1153
91.10	1261	102.05	196	113.05	339	123.05	1603
92.05	1200	103.05	1056	114.05	76	124.05	631
93.05	6850	104.05	1608	115.15	131	125.05	1071
94.10	772	105.05	1476	116.05	1145	127.05	69122
95.05	150	106.05	486	117.05	12179	128.05	5651
96.10	492	107.05	20482	118.05	988	129.05	25997
97.00	442	108.00	3288	119.05	221	130.05	2061
98.10	4957	109.05	339	120.15	253	131.00	727
99.10	4375	110.05	34021	120.95	97	132.05	336
100.05	416	111.05	5375	121.15	94	133.00	326

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.00	1069	144.05	124	152.15	149	162.05	652
135.05	1940	144.65	103	153.05	1136	162.75	190
136.05	721	145.05	164	154.10	828	163.15	115
137.10	1028	145.45	86	155.05	1944	164.00	225
138.25	217	146.00	555	156.05	2717	165.00	1431
138.90	255	147.05	1751	157.00	645	166.00	1102
139.95	163	148.05	3888	158.05	498	167.05	7099
140.15	182	149.05	1126	159.00	337	168.05	2620
141.00	3177	150.05	345	159.25	166	169.00	861
142.00	1010	151.10	555	160.00	1263	170.00	405
143.10	842	151.75	290	161.00	1445	171.10	350

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
171.95	464	182.55	85	192.05	1960	205.05	9345
173.05	838	182.75	74	193.05	2019	206.05	38328
174.00	1003	183.20	213	193.95	120	207.00	4610
175.05	3022	184.00	504	194.10	382	208.05	1256
176.10	892	185.10	2901	196.05	4861	208.75	76
177.05	1388	186.05	19851	198.05	147496	208.85	171
178.05	589	187.05	5069	199.00	9991	209.00	377
179.05	5364	188.10	700	200.10	868	209.85	131
180.05	3812	189.05	733	201.45	724	210.45	287
181.05	1938	190.05	277	203.00	1194	211.00	1426
182.05	335	191.00	641	204.05	5350	212.20	215

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
213.10	219	223.00	2949	234.00	458	244.05	18398
214.25	73	224.05	20328	235.00	717	245.00	2136
215.00	581	225.05	5206	236.10	393	246.00	3051
216.05	530	226.00	668	237.00	670	247.00	594

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
217.00	9368	227.00	8034	237.95	86	248.05	154
218.05	1255	228.10	1449	238.25	91	249.00	1088
219.25	184	229.05	2067	239.05	501	249.85	108
219.45	71	230.05	297	240.05	427	251.00	140
219.85	87	231.00	975	241.10	754	252.05	330
221.05	10299	232.00	194	242.00	1217	252.35	81
221.85	390	232.95	295	243.05	1681	252.65	144

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
252.95	340	265.00	1699	275.05	42296	283.10	427
253.25	143	265.80	214	276.05	5652	283.95	128
255.05	87200	266.15	86	277.05	3259	284.85	120
256.05	12085	267.10	188	278.00	813	285.05	533
257.05	982	267.55	72	278.75	93	285.65	75
258.00	4787	269.05	113	279.25	119	286.05	129
259.00	973	270.05	215	279.55	79	287.85	76
259.85	82	271.05	271	279.85	78	288.15	70
261.30	143	272.05	306	280.65	103	288.75	153
262.15	143	273.05	2989	281.25	156	290.05	70
263.90	47	274.05	6914	282.75	95	291.15	81

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
292.00	212	304.15	428	314.90	1172	331.90	250
293.00	652	305.05	149	316.10	625	332.15	101
293.85	83	306.15	75	321.10	468	333.10	543
294.05	141	308.05	284	321.75	122	334.05	2362
294.90	233	308.95	68	322.05	107	335.05	864
296.00	10372	309.85	121	323.05	3785	340.95	345
297.05	1353	310.25	88	323.85	219	341.95	102
298.85	88	310.95	123	324.05	592	342.15	151
300.55	94	311.95	84	327.00	848	344.85	70
302.10	387	313.15	170	328.05	499	346.00	1125
303.10	1147	314.00	519	328.95	80	347.00	172

Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
349.95	122	363.95	332	376.95	89	401.00	219
350.75	83	365.00	4715	383.00	551	402.00	743
352.05	1196	366.00	841	383.90	241	403.00	1175
352.85	148	370.05	149	384.90	184	404.05	326
353.00	651	370.75	78	389.95	185	404.95	81
354.05	1165	371.10	287	390.15	170	414.85	76
354.75	111	372.00	2060	391.00	224	416.25	88
355.10	357	373.00	541	392.05	195	419.55	66
359.05	71	373.85	67	395.05	100	420.95	1135
360.85	102	374.15	80	396.45	111	422.10	837
362.75	89	376.05	66	400.05	67	423.05	6602

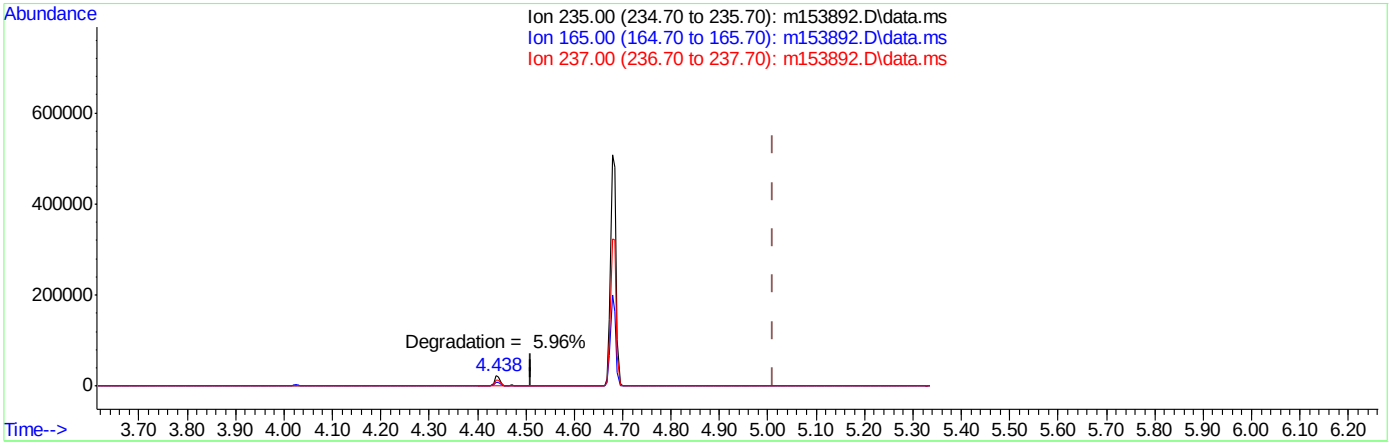
Average of 3.183 to 3.194 min.: m153892.D\data.ms
DFTPP
Modified:subtracted

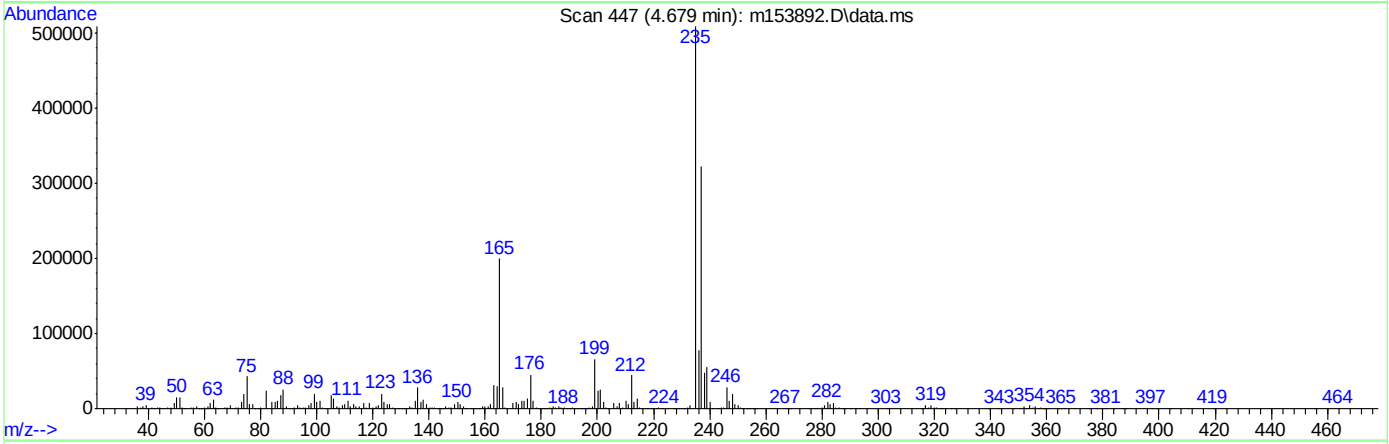
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
424.00	1438	441.00	15749	485.25	99		
427.95	67	442.05	110896	498.45	87		
428.85	87	443.05	21255				
430.55	86	444.00	2027				
431.20	193	445.05	76				
431.85	120	447.35	79				
432.75	96	450.15	71				
434.05	81	454.15	67				
434.85	105	455.85	73				
435.55	67	467.75	83				
436.85	79	482.05	68				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153892.D
Acq On : 30 Apr 2019 9:06 am
Operator : christc2
Sample : DFTPP
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 30 09:12:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019
QLast Update : Wed Apr 17 17:38:06 2019
Response via : Continuing Cal File:





TIC: m153892.D\data.ms

(3) PP-DDT (MC)

4.679min (-0.333) 0.00ppm m

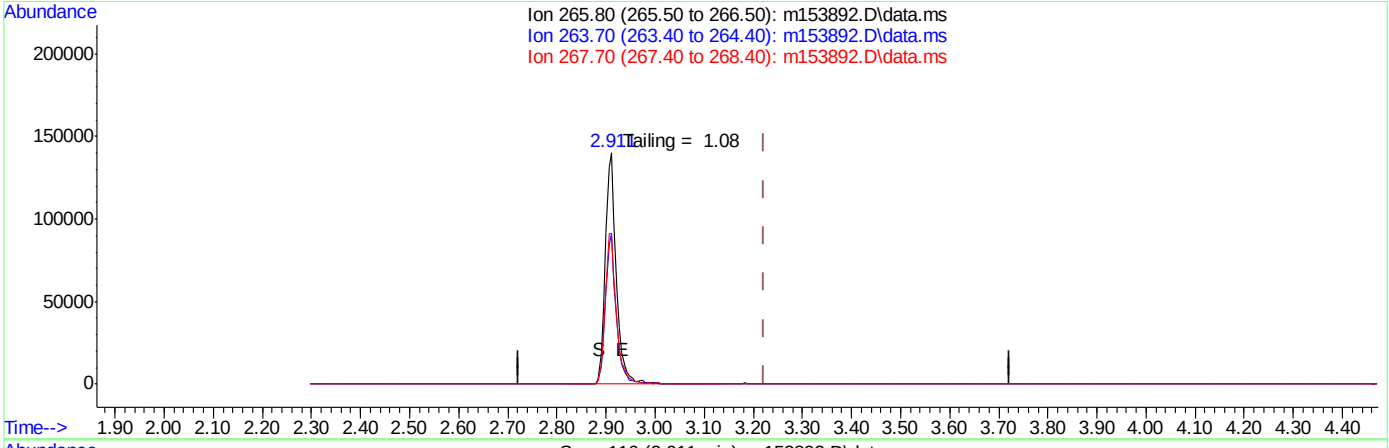
response 406394

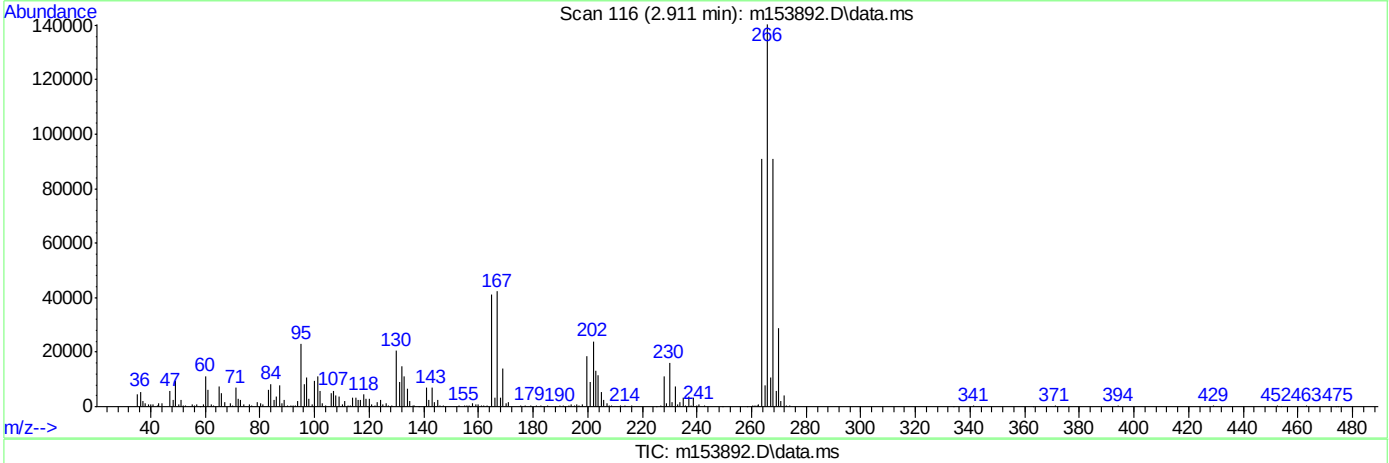
Ion	Exp%	Act%
235.00	100	100
165.00	61.30	39.24#
237.00	66.90	63.36
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153892.D
Acq On : 30 Apr 2019 9:06 am
Operator : christc2
Sample : DFTPP
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 30 09:12:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019
QLast Update : Wed Apr 17 17:38:06 2019
Response via : Continuing Cal File:





TIC: m153892.D\data.ms

(1) Pentachlorophenol (MC)

2.911min (-0.312) 0.00ppm m

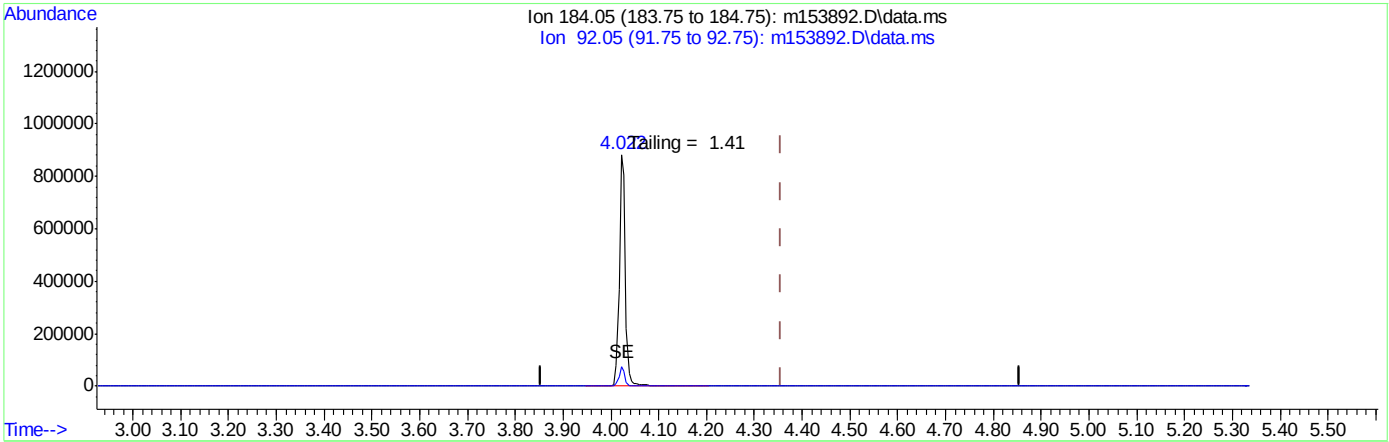
response 219800

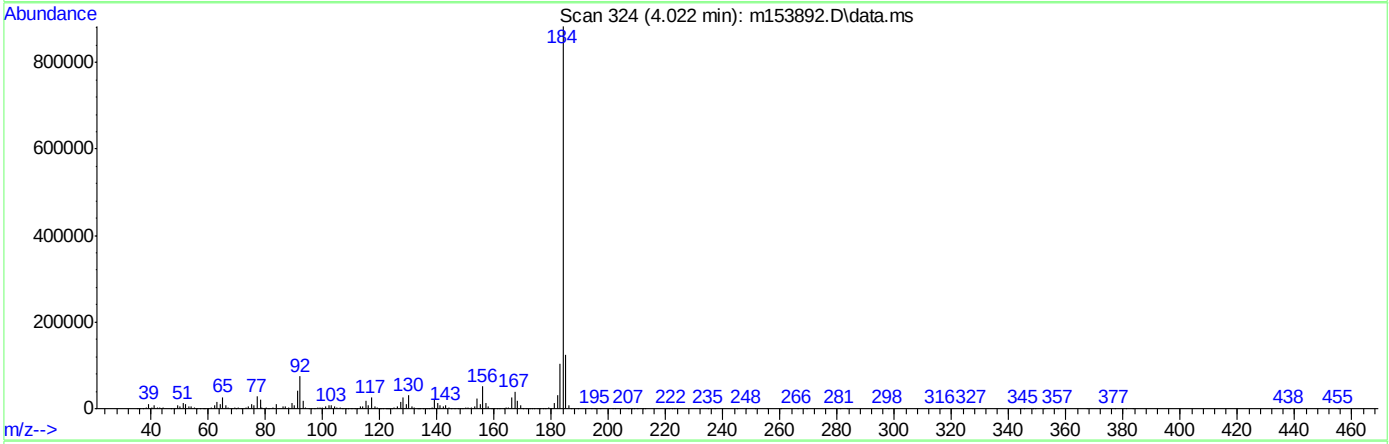
Ion	Exp%	Act%
265.80	100	100
263.70	68.00	64.83
267.70	67.90	64.81
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153892.D
Acq On : 30 Apr 2019 9:06 am
Operator : christc2
Sample : DFTPP
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 30 09:12:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mWed Apr 17 17:38:06 2019
QLast Update : Wed Apr 17 17:38:06 2019
Response via : Continuing Cal File:





TIC: m153892.D\data.ms

(2) Benzidine (M)

4.022min (-0.333) 0.00ppm m

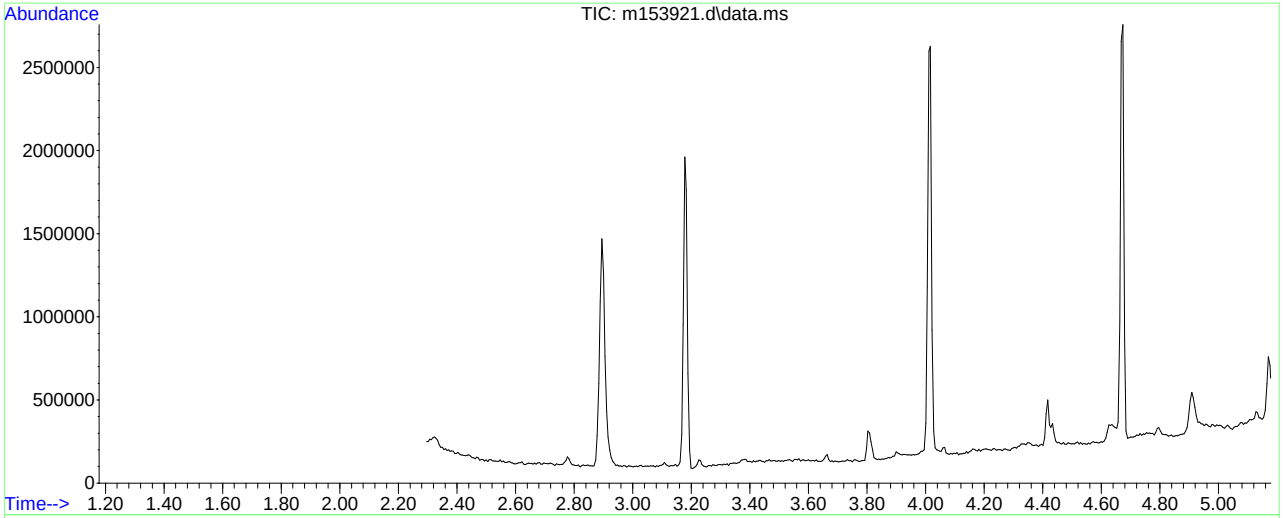
response 802743

Ion	Exp%	Act%
184.05	100	100
92.05	7.00	8.44
0.00	0.00	0.00
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\data\jeryllr\em6577\m153921.d Vial: 1
Acq On : 1 May 2019 7:15 am Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6577,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018



AutoFind: Scans 165, 166, 167; Background Corrected with Scan 159

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.4	57922	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	46.0	77376	PASS
70	69	0.00	2	0.9	712	PASS
127	198	40	60	48.3	81258	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	168173	PASS
199	198	5	9	7.4	12492	PASS
275	198	10	30	26.4	44371	PASS
365	198	1	100	3.2	5450	PASS
441	443	0.10	100	65.9	16175	PASS
442	198	40	100	75.4	126867	PASS
443	442	17	23	19.3	24545	PASS

m153921.d DFTPPM.M Thu May 02 03:04:13 2019

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	833	51.10	57922	63.95	178	75.05	10251
37.00	412	52.10	2674	64.15	248	76.15	5039
38.05	688	53.20	181	65.05	1173	77.10	84707
39.15	4813	54.25	102	66.05	85	78.15	5770
41.10	489	55.10	132	67.05	228	79.10	4398
43.10	58	56.15	1518	69.00	77376	80.00	3882
45.10	53	57.15	4212	70.10	712	81.05	5981
46.25	96	58.00	489	70.95	273	82.05	1382
47.05	167	61.00	620	71.15	41	83.05	679
48.10	304	62.10	1009	73.05	537	84.05	642
50.10	14934	63.10	2947	74.15	6583	85.10	1189

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.00	1363	99.10	5573	112.05	990	125.05	853
87.10	907	100.05	726	113.10	188	127.00	81258
88.05	574	101.05	3285	115.05	36	128.05	6341
91.05	1340	102.05	112	116.05	1271	129.00	28789
92.05	1417	103.00	922	117.00	14731	130.05	2982
93.05	7583	104.05	1847	118.00	1042	131.05	237
94.15	631	105.05	1822	120.10	484	132.00	154
95.05	351	107.05	22803	121.05	111	133.10	174
96.15	758	108.05	3089	122.00	1464	134.10	645
96.75	93	110.05	40779	123.05	2165	135.05	1947
98.05	5105	111.05	7028	124.10	1181	136.05	1003

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.10	1269	146.00	831	155.05	2381	163.75	76
137.75	168	147.05	2277	156.05	2896	164.00	65
138.75	73	148.10	4228	157.00	1395	165.00	1203
139.15	1	149.00	1152	157.95	785	166.05	1408
140.10	499	150.10	222	159.05	650	167.05	7415
141.10	3575	151.10	956	160.05	1080	168.00	3116
142.00	1224	151.65	258	160.75	188	168.75	145
143.05	1084	151.85	171	161.05	1379	169.05	538
144.10	370	152.10	13	161.95	165	170.00	83
144.65	135	153.05	1056	162.10	637	171.20	404
145.00	416	154.05	1374	163.10	131	171.95	866

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
173.05	191	184.10	615	194.65	95	202.45	127
174.10	1596	185.05	2699	195.05	102	203.00	1432
175.10	3003	186.05	21781	195.25	80	204.05	5670
176.10	1246	187.05	6056	196.05	5519	205.00	9781
177.00	1616	188.00	720	198.05	168173	206.05	43178
178.20	699	189.00	1661	199.05	12492	207.00	6088
179.05	6005	190.05	31	200.00	806	208.00	1743
180.05	4339	191.15	673	201.15	95	209.05	733
181.05	1758	192.05	2191	201.35	264	209.95	74
182.00	379	193.05	2183	201.60	558	210.25	590
183.05	449	194.05	424	202.10	292	210.45	424

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.05	1739	220.15	261	229.95	253	238.90	495
211.70	557	221.00	11675	231.05	744	240.10	440
212.05	168	221.85	361	232.25	92	241.00	774
212.35	158	223.00	2947	233.05	90	242.00	1552
212.95	71	224.05	23101	233.25	178	243.05	1396
214.30	178	225.05	5966	234.00	743	244.05	20155
215.10	747	226.10	873	235.15	859	245.05	2339
216.15	1049	227.05	9165	236.15	590	246.00	3365
217.00	10444	227.85	229	237.05	877	247.05	780
218.05	1666	228.05	1103	237.85	69	247.75	108
219.00	286	229.05	2424	238.05	214	248.15	257

Average of 3.173 to 3.183 min.: m153921.d\data.ms

DFTPPM.M Thu May 02 03:03:44 2019 Page: 0

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
249.10	951	258.00	5385	267.65	92	276.05	5367
250.10	259	259.00	886	267.90	233	277.00	3177
251.00	208	259.90	225	269.25	195	277.75	122
251.25	74	260.65	72	269.75	109	278.00	308
252.05	162	261.10	266	270.05	198	278.65	121
252.35	139	262.15	79	271.10	113	279.05	73
253.10	669	263.05	75	271.85	203	280.95	182
253.75	102	263.85	307	272.10	368	282.05	165
255.05	97408	264.15	155	273.00	3469	283.10	696
256.05	14820	265.05	2412	274.00	8481	284.05	304
257.00	747	266.05	333	275.05	44371	285.05	798

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
286.05	111	298.15	204	308.05	306	320.05	72
287.15	98	298.45	81	308.95	82	320.45	83
287.85	76	299.65	71	311.20	237	320.75	98
288.20	165	301.00	7	312.95	568	321.00	409
292.10	140	302.05	395	314.05	708	321.75	86
293.00	1031	303.05	1499	314.85	76	322.05	306
293.90	248	304.05	598	315.00	726	323.05	4092
294.85	175	304.65	72	315.95	494	324.10	1020
295.15	114	305.15	68	317.10	247	325.05	176
296.05	10635	306.75	69	318.15	80	326.05	87
296.95	1659	307.25	84	319.15	335	326.75	157

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
327.05	295	336.15	187	346.85	115	354.05	1178
328.10	832	339.05	181	347.10	269	356.15	101
328.85	128	339.35	85	348.25	76	358.45	82
329.55	92	341.00	640	348.95	99	361.05	90
330.10	402	341.85	189	349.55	88	361.25	91
331.05	59	342.15	311	350.85	118	361.75	86
331.80	395	343.05	68	351.05	174	362.15	87
332.85	81	344.15	403	351.85	183	362.55	95
333.10	491	344.95	254	352.10	1160	363.05	81
334.05	2090	345.15	128	352.95	505	365.00	5450
335.00	511	345.95	1141	353.15	396	365.75	107

Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
366.00	799	377.75	70	391.35	107	404.85	72
366.95	140	382.15	96	392.05	208	405.05	134
367.25	120	382.95	502	392.95	104	414.15	72
369.95	128	384.15	188	398.45	68	417.25	94
370.85	179	384.95	83	400.35	91	420.25	76
371.05	400	385.35	128	401.05	267	421.00	1359
372.05	2206	386.15	106	401.25	69	422.05	1035
373.05	685	389.15	78	402.05	967	423.00	7454
374.25	99	389.85	125	403.05	1383	424.05	1416
375.95	69	390.75	78	403.85	178	426.65	107
377.15	67	390.95	199	404.05	367	427.65	147

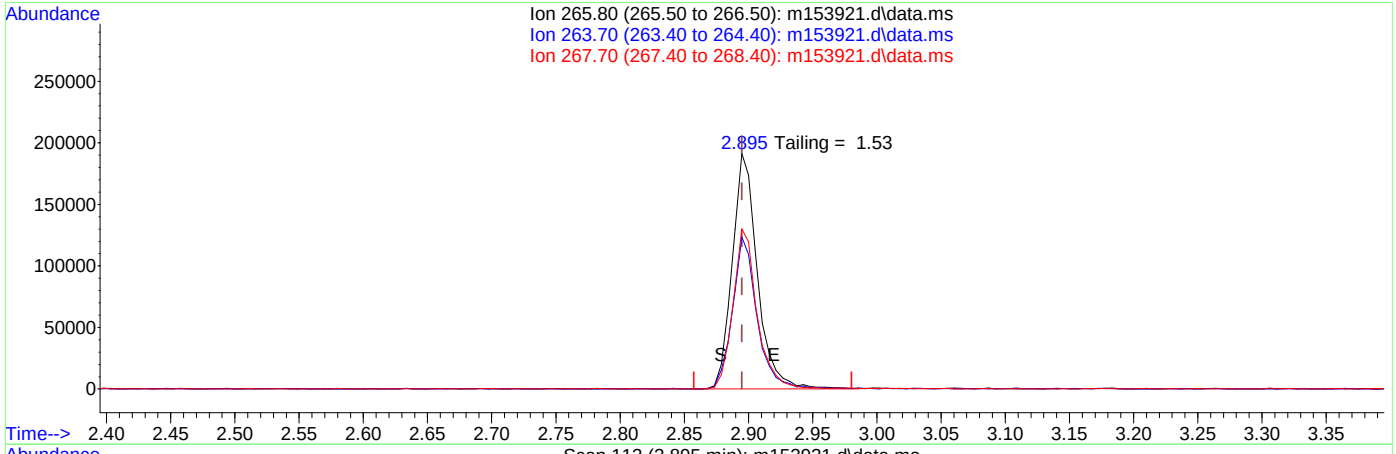
Average of 3.173 to 3.183 min.: m153921.d\data.ms
DFTPP
Modified:subtracted

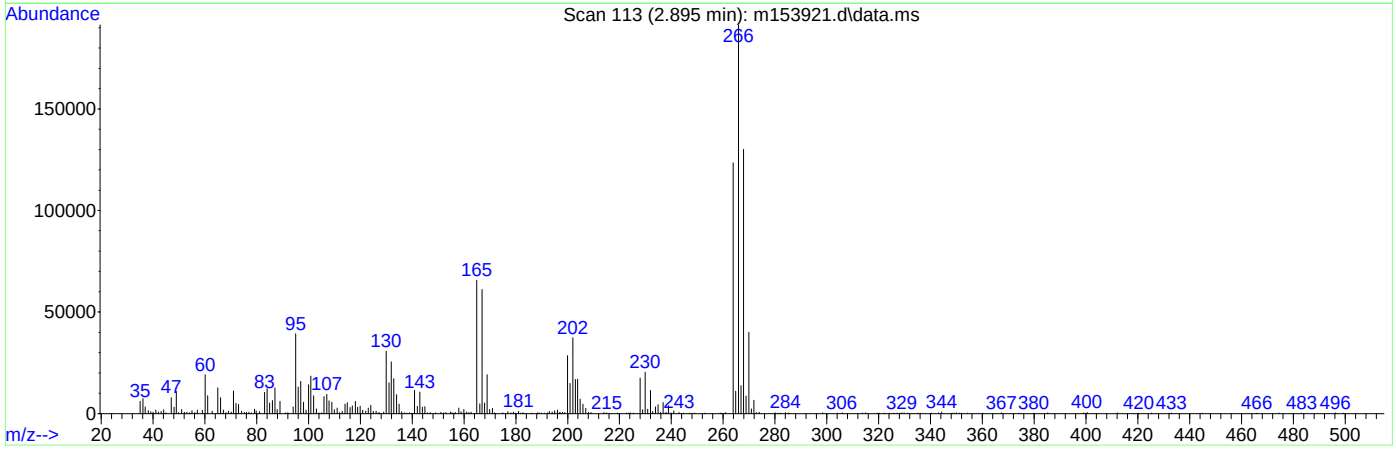
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
428.15	120	434.65	85	446.15	79		
429.25	85	435.25	319	448.15	77		
429.95	68	435.85	70	450.15	68		
430.40	248	439.35	84	460.45	93		
431.65	79	439.85	74	466.25	73		
432.05	83	441.05	16175	472.05	94		
432.55	139	442.05	126867	478.15	84		
433.35	88	443.05	24545				
433.65	85	443.85	288				
434.15	71	444.10	1776				
434.45	93	444.95	147				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153921.d
Acq On : 1 May 2019 7:15 am
Operator : christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: May 02 03:04:56 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Thu May 02 03:04:51 2019
Response via : Initial Calibration





TIC: m153921.d\data.ms

(1) Pentachlorophenol (MC)

2.895min (0.000) 90.06ppm

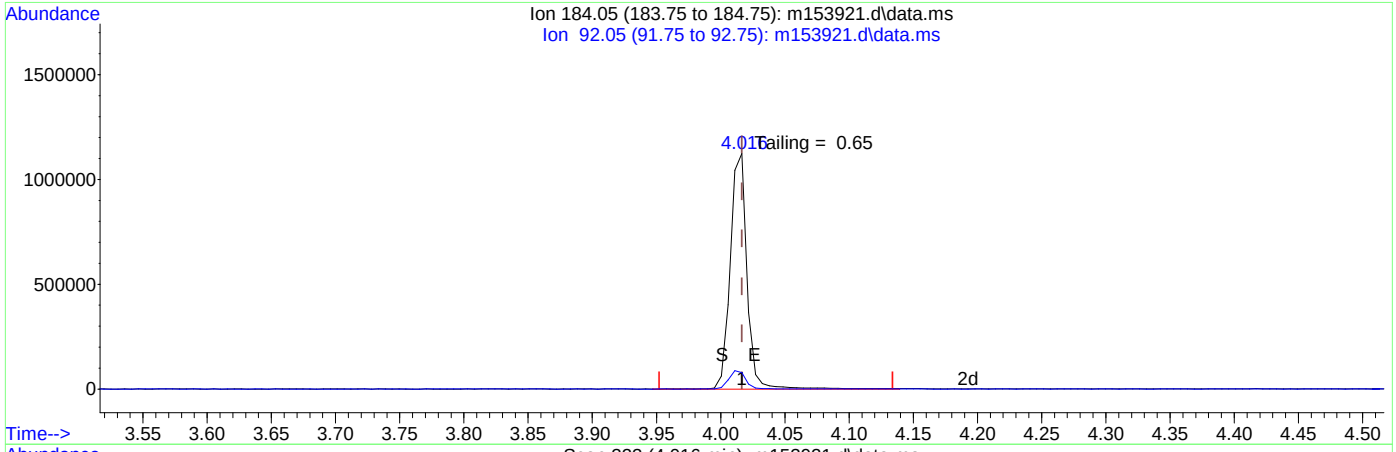
response 262721

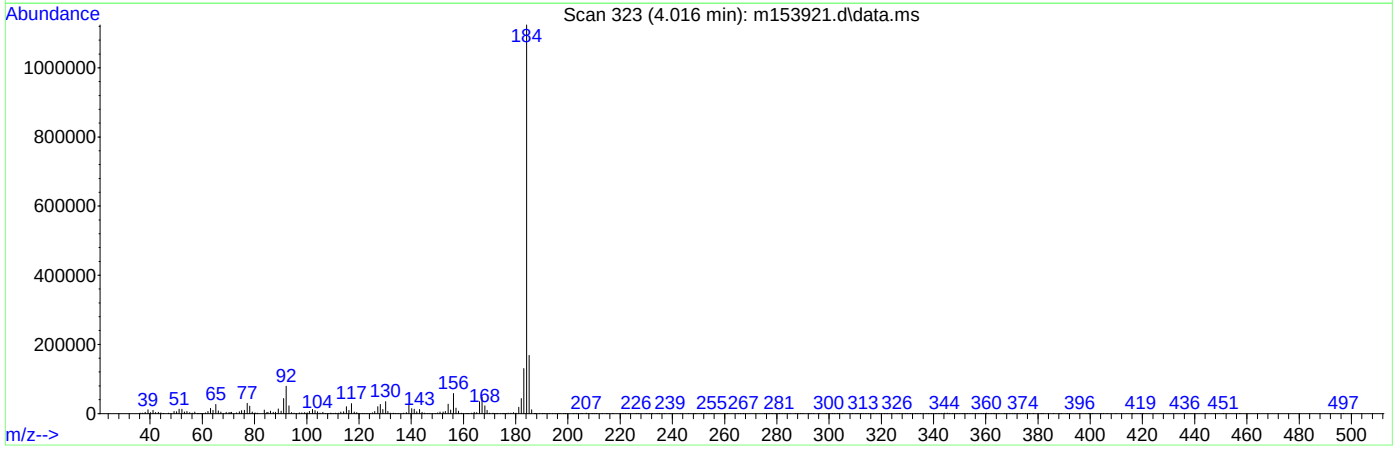
Ion	Exp%	Act%
265.80	100	100
263.70	64.50	64.49
267.70	68.00	67.84
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153921.d
Acq On : 1 May 2019 7:15 am
Operator : christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: May 02 03:04:56 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Thu May 02 03:04:51 2019
Response via : Initial Calibration





TIC: m153921.d\data.ms

(2) Benzidine (M)

4.016min (0.000) 76.84ppm

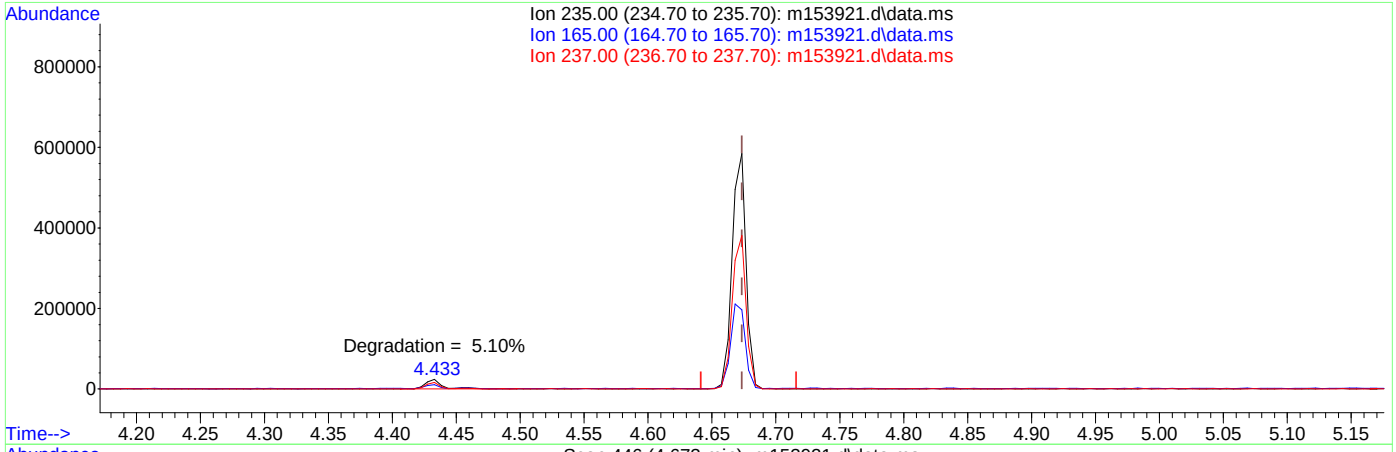
response 1023013

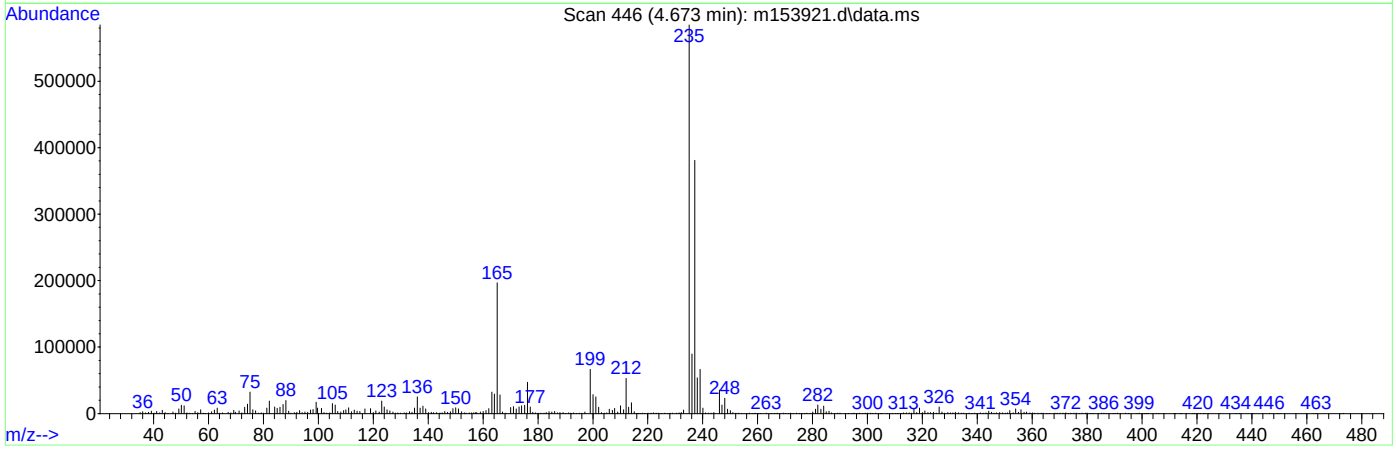
Ion	Exp%	Act%
184.05	100	100
92.05	7.00	6.99
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153921.d
Acq On : 1 May 2019 7:15 am
Operator : christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: May 02 03:04:56 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Thu May 02 03:04:51 2019
Response via : Initial Calibration





TIC: m153921.d\data.ms

(3) PP-DDT (MC)

4.673min (0.000) 77.35ppm

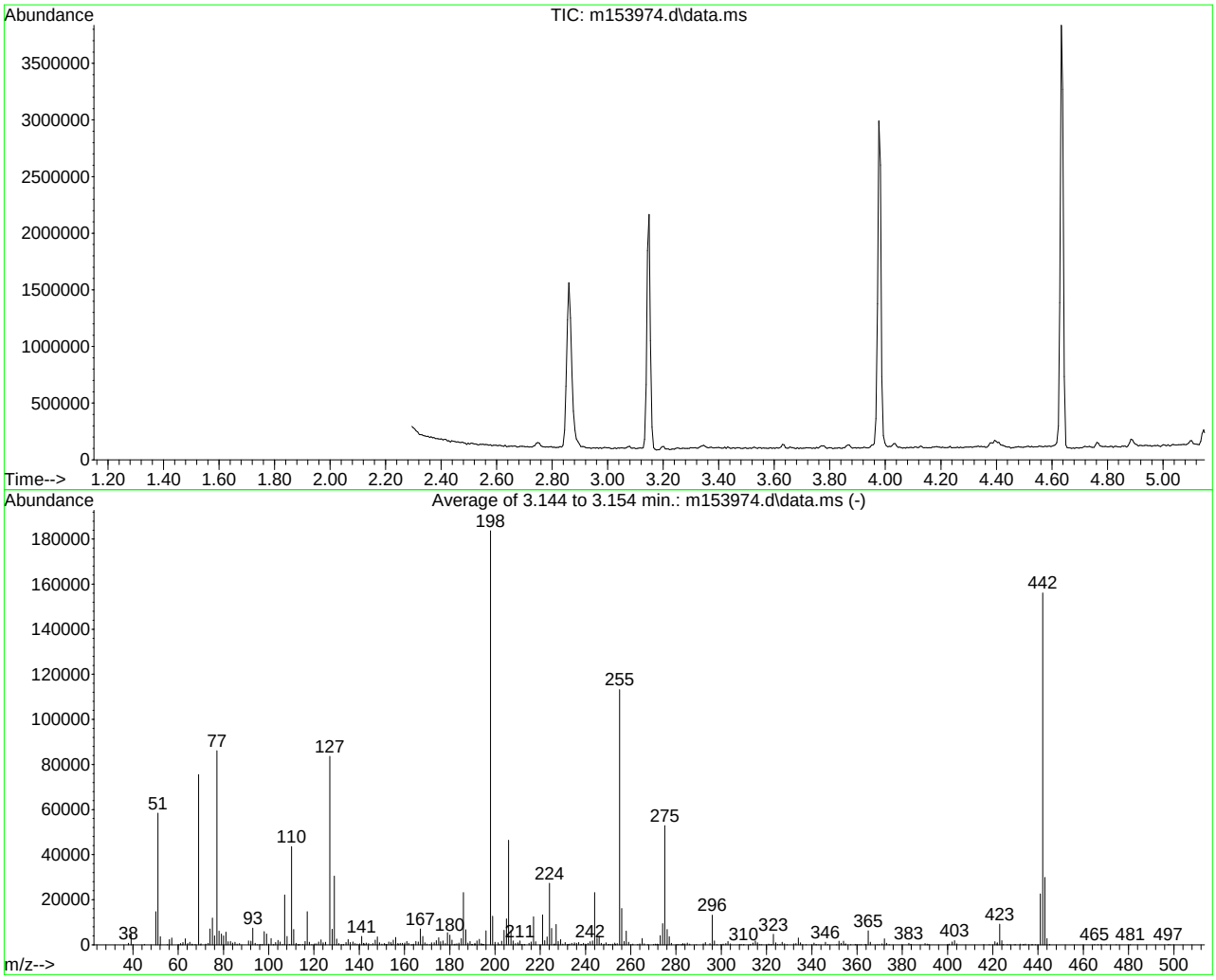
response 444659

Ion	Exp%	Act%
235.00	100	100
165.00	33.60	33.43
237.00	65.20	65.10
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\data\da...meel\em6579\m153974.d Vial: 1
Acq On : 2 May 2019 1:25 pm Operator: christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6579,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018



AutoFind: Scans 160, 161, 162; Background Corrected with Scan 155

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	31.8	58386	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	41.1	75534	PASS
70	69	0.00	2	0.6	434	PASS
127	198	40	60	45.6	83693	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	183659	PASS
199	198	5	9	6.9	12696	PASS
275	198	10	30	28.8	52883	PASS
365	198	1	100	3.4	6160	PASS
441	443	0.10	100	75.8	22633	PASS
442	198	40	100	85.0	156104	PASS
443	442	17	23	19.1	29872	PASS

m153974.d DFTPPM.M Fri May 03 11:46:39 2019

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
38.05	608	61.05	568	70.05	434	82.00	1351
39.15	4627	61.75	89	72.20	264	83.15	1532
40.05	109	62.05	971	73.20	643	84.05	783
45.10	158	63.15	2610	74.10	7045	85.05	1176
50.10	14735	64.15	591	75.15	11840	86.05	244
51.10	58386	65.15	1177	76.10	3957	87.05	587
52.15	3555	66.05	254	77.15	86171	91.05	1727
55.10	111	66.25	95	78.10	6049	92.15	1639
56.05	2320	67.45	172	79.05	4780	93.00	7428
57.10	2963	69.05	75534	80.05	3903	94.05	631
60.35	69	69.75	110	81.05	5592	95.05	13

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.10	228	105.05	1261	115.00	162	127.05	83693
96.95	122	106.05	146	116.10	1463	128.05	6933
97.15	21	107.05	22163	117.05	14626	129.05	30461
98.05	5827	108.10	3672	118.00	1122	130.05	2593
99.05	4771	109.15	146	119.05	54	131.00	567
100.00	246	110.05	43518	120.25	360	132.15	104
101.10	2828	111.05	6764	121.15	430	132.95	218
101.95	68	112.05	634	122.05	1199	133.15	95
102.25	84	112.95	1	123.10	2143	134.10	959
103.05	1009	113.15	99	124.05	890	135.05	2270
104.05	1899	113.85	75	125.10	1155	136.05	996

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.15	1194	146.00	579	154.35	130	163.95	319
138.10	532	147.05	2027	155.10	2029	165.00	1519
139.05	242	148.00	3488	156.05	3204	166.05	1207
140.10	465	149.00	915	157.05	586	167.05	7064
141.05	3704	150.05	259	157.35	265	168.05	3683
141.95	698	151.10	537	158.05	703	169.05	844
142.15	470	151.35	299	159.00	661	169.95	282
142.45	115	152.00	235	160.05	722	171.15	102
143.10	795	152.25	110	161.05	1543	172.00	885
144.10	492	153.00	1285	161.90	641	173.10	886
145.05	27	154.00	973	163.05	1	174.05	1799

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
175.10	3191	185.05	2729	193.05	2405	203.00	1607
176.00	1402	186.05	23172	193.90	447	204.05	6466
177.00	1686	187.05	6686	194.25	294	205.05	11548
178.05	549	188.05	793	194.75	163	206.05	46443
179.05	5352	189.00	1525	195.05	154	207.05	6348
180.05	4334	189.65	173	196.05	6230	208.05	1661
181.00	2122	190.00	238	198.05	183659	209.00	585
181.95	98	190.85	98	199.00	12696	210.10	870
182.25	285	191.10	691	200.05	1105	210.35	310
183.15	361	191.35	159	201.45	848	211.05	1723
184.10	767	192.05	1685	202.05	165	211.65	238

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.95	194	225.05	7226	232.95	304	241.10	671
212.95	198	226.05	252	233.95	678	242.00	1371
213.15	94	226.25	255	234.85	166	243.10	1678
215.00	663	227.00	9074	235.10	861	244.05	23154
216.00	1224	228.00	1541	236.00	673	245.05	3059
217.00	12387	229.05	2282	237.00	1034	246.05	3679
218.00	1306	229.95	335	237.95	117	246.95	648
221.05	13254	231.05	1030	238.25	137	248.10	328
222.00	1819	232.05	140	239.05	686	249.05	835
223.05	3526	232.35	70	240.05	342	250.05	125
224.05	27324	232.65	70	240.25	76	250.35	218

Average of 3.144 to 3.154 min.: m153974.d\data.ms

MZ6761.M Fri May 03 10:45:20 2019

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
251.05	215	260.90	261	273.00	4087	283.55	108
252.00	279	263.05	158	274.05	9439	284.00	466
252.95	795	264.00	432	275.05	52883	285.00	826
253.25	207	265.00	2814	276.05	6795	286.05	258
254.05	586	265.95	433	277.00	3609	289.05	82
255.05	113200	267.55	74	277.95	699	292.10	361
256.00	16134	270.05	147	280.45	67	293.00	989
257.05	1453	270.95	356	281.15	203	295.00	541
258.05	6118	271.55	154	282.05	80	296.05	13200
259.00	1170	271.85	311	282.55	88	297.00	1769
260.15	70	272.15	125	283.00	557	298.15	91

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
299.85	92	314.00	727	324.95	160	341.05	763
300.90	288	315.00	1679	325.95	133	341.85	116
302.05	496	316.00	832	326.95	1090	342.05	93
303.00	1441	317.00	168	328.00	457	343.15	78
304.00	465	317.85	72	329.15	70	346.00	1129
308.10	226	320.95	339	332.05	427	347.05	229
308.85	138	321.25	132	333.05	532	350.95	87
309.85	81	321.95	99	334.05	3062	352.05	1576
310.05	75	322.25	148	335.00	854	353.00	663
312.75	67	323.05	4703	335.95	71	354.00	1651
312.90	189	324.05	855	337.45	74	354.75	88

Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
355.00	362	369.75	99	400.05	75	424.00	1835
357.15	73	371.05	409	400.80	264	424.75	128
359.15	131	372.05	2693	402.00	1241	426.45	184
359.95	69	373.00	674	403.05	1887	427.45	79
360.85	78	374.25	90	404.10	452	429.55	83
361.75	97	382.95	687	416.05	67	430.05	77
363.65	188	383.75	159	418.45	72	432.10	247
363.95	87	384.00	157	420.95	1371	433.35	75
365.00	6160	390.10	496	421.85	412	433.75	77
365.90	1100	390.95	305	422.00	922	434.45	347
368.95	71	391.75	186	423.00	9178	435.95	73

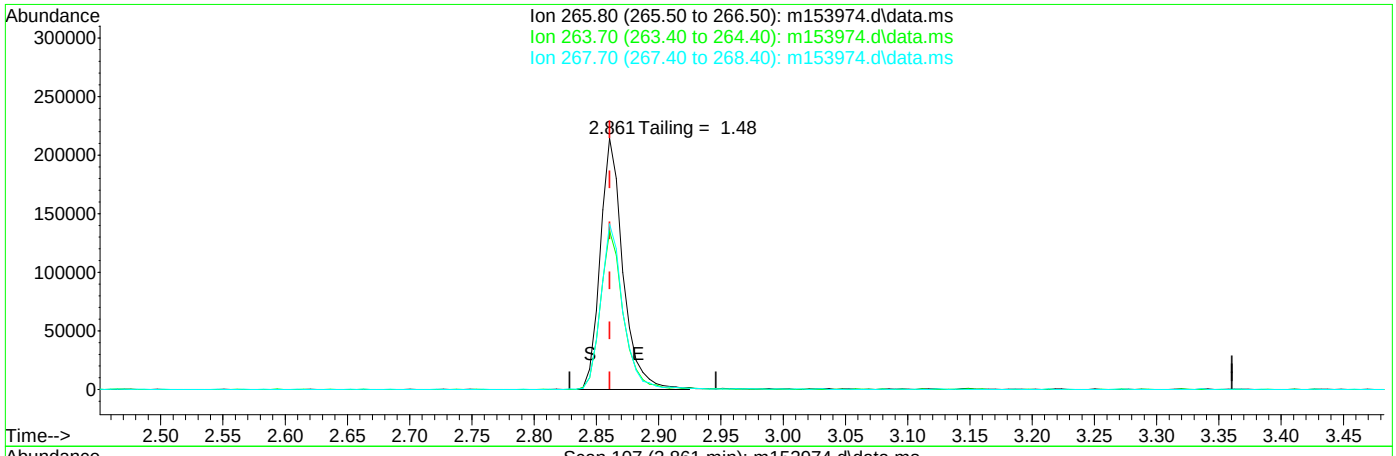
Average of 3.144 to 3.154 min.: m153974.d\data.ms
DFTPP
Modified:subtracted

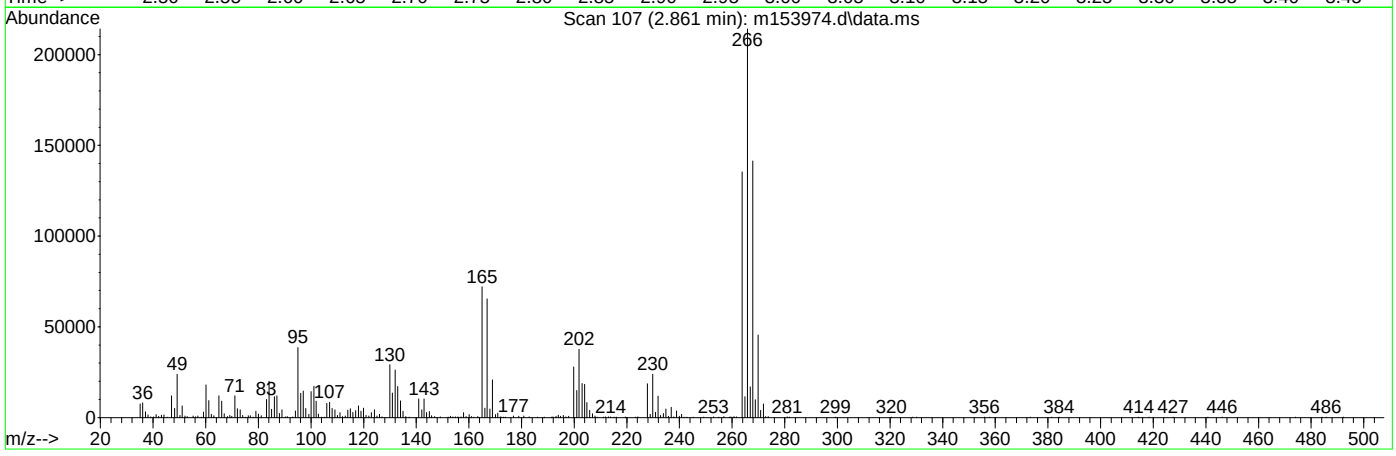
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
437.15	73	470.15	74				
437.55	74	474.55	72				
438.85	91	480.75	85				
441.00	22633	497.45	71				
442.05	156104	498.15	68				
443.05	29872						
444.00	2738						
445.10	222						
464.95	85						
466.45	78						
467.75	85						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153974.d
Acq On : 2 May 2019 1:25 pm
Operator : christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: May 03 11:48:08 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Fri May 03 11:47:41 2019
Response via : Continuing Cal File:





TIC: m153974.d\data.ms

(1) Pentachlorophenol (MC)

2.861min (0.000) 0.00ppm

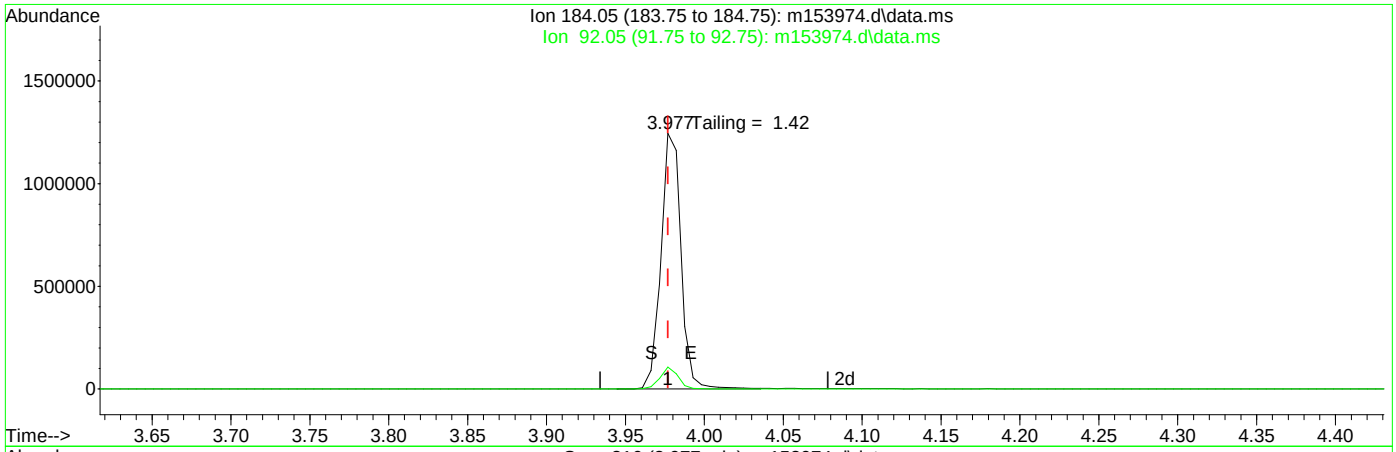
response 273336

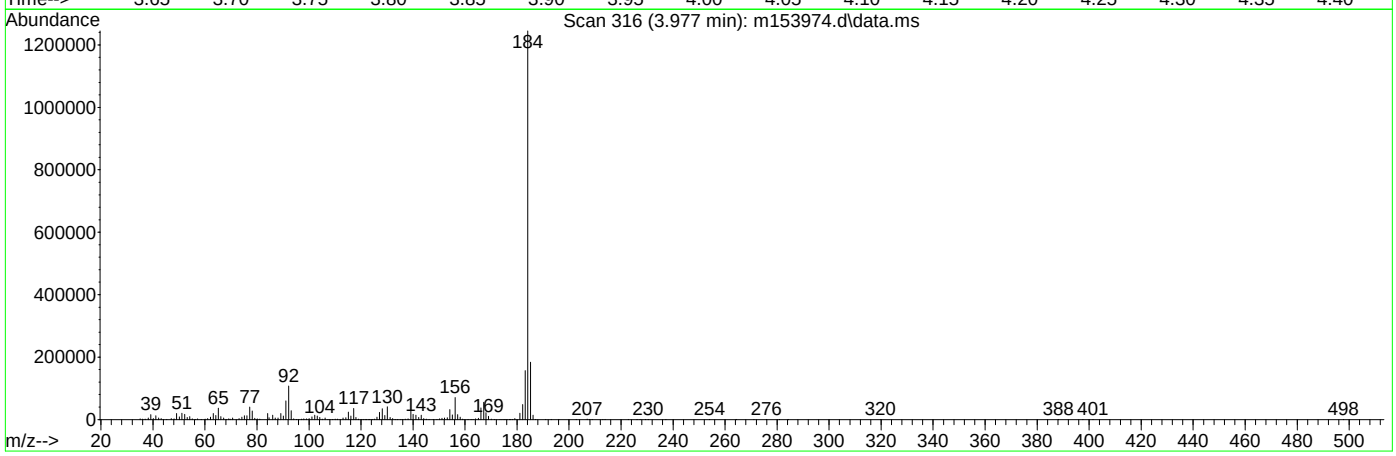
Ion	Exp%	Act%
265.80	100	100
263.70	63.20	63.08
267.70	66.00	65.86
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153974.d
Acq On : 2 May 2019 1:25 pm
Operator : christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: May 03 11:48:08 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Fri May 03 11:47:41 2019
Response via : Continuing Cal File:





(2) Benzidine (M)

3.977min (0.000) 0.00ppm

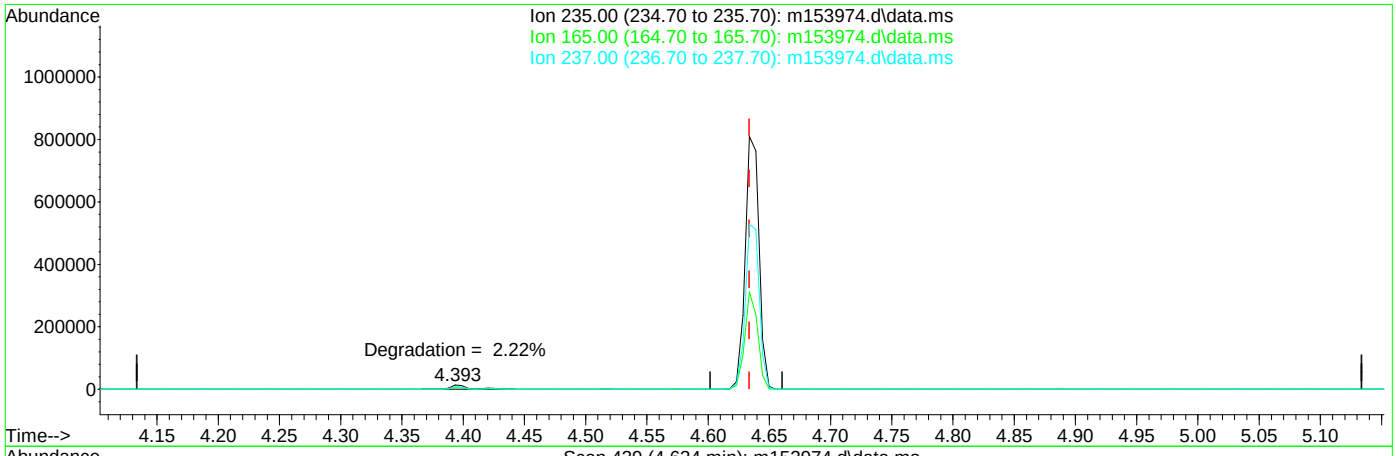
response 1109243

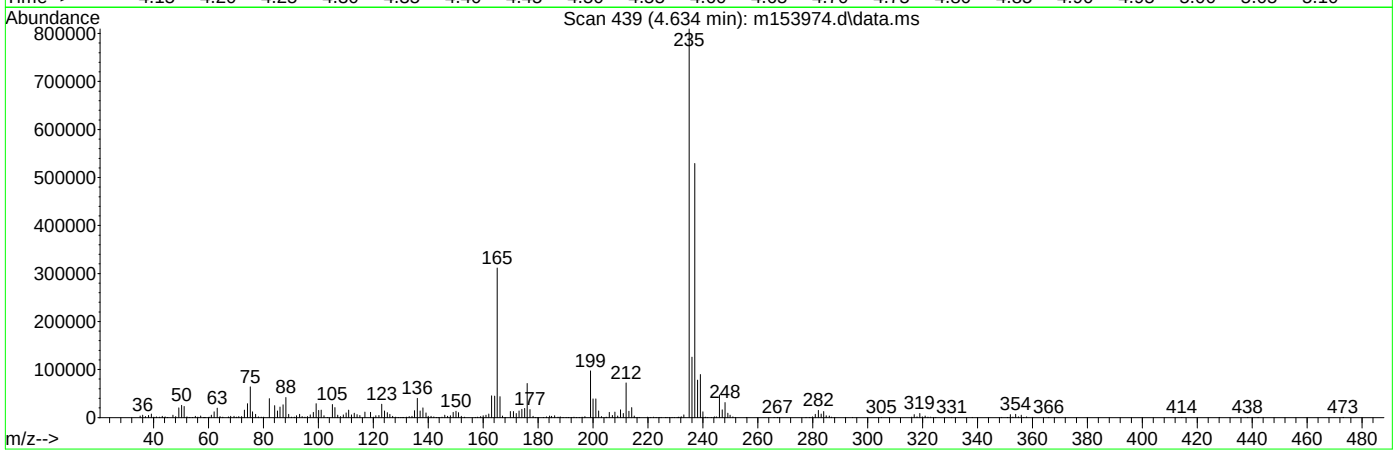
Ion	Exp%	Act%
184.05	100	100
92.05	8.60	8.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153974.d
Acq On : 2 May 2019 1:25 pm
Operator : christc2
Sample : DFTPP Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Results File: DFTPPM.RES
Quant Time: May 03 11:48:08 2019
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Fri May 03 11:47:41 2019
Response via : Continuing Cal File:





TIC: m153974.d\data.ms

(3) PP-DDT (MC)

4.634min (0.000) 0.00ppm

response 642251

Ion	Exp%	Act%
235.00	100	100
165.00	38.50	38.47
237.00	65.30	65.30
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

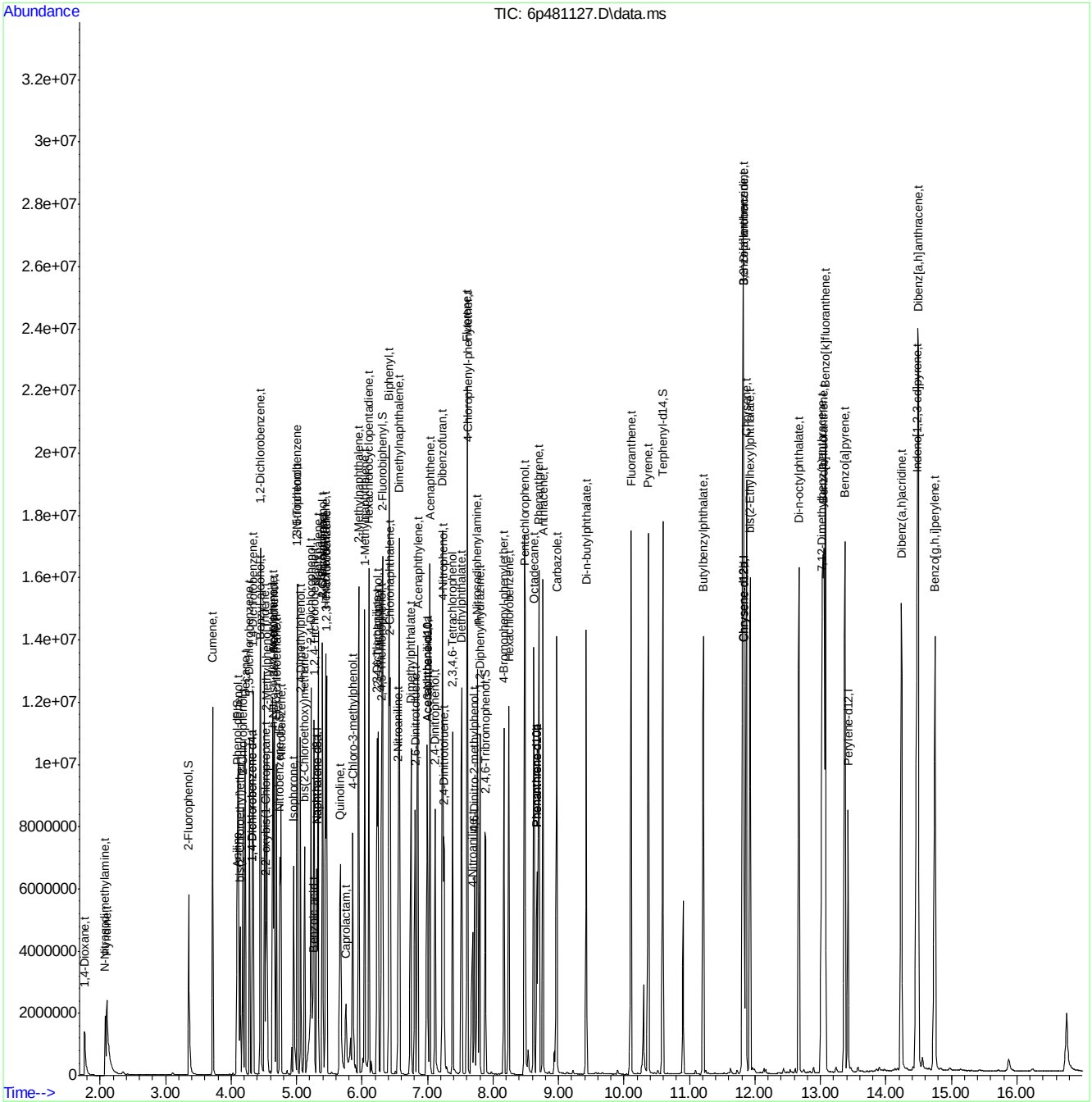
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.763	178	7514799	92.87	ppm	99
79) Carbazole	8.977	167	7070145	90.54	ppm	99
80) Di-n-butylphthalate	9.426	149	8425861	89.61	ppm	99
81) Fluoranthene	10.111	202	8344438	92.33	ppm	97
82) Octadecane	8.624	57	2321579	86.70	ppm	98
84) Pyrene	10.373	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

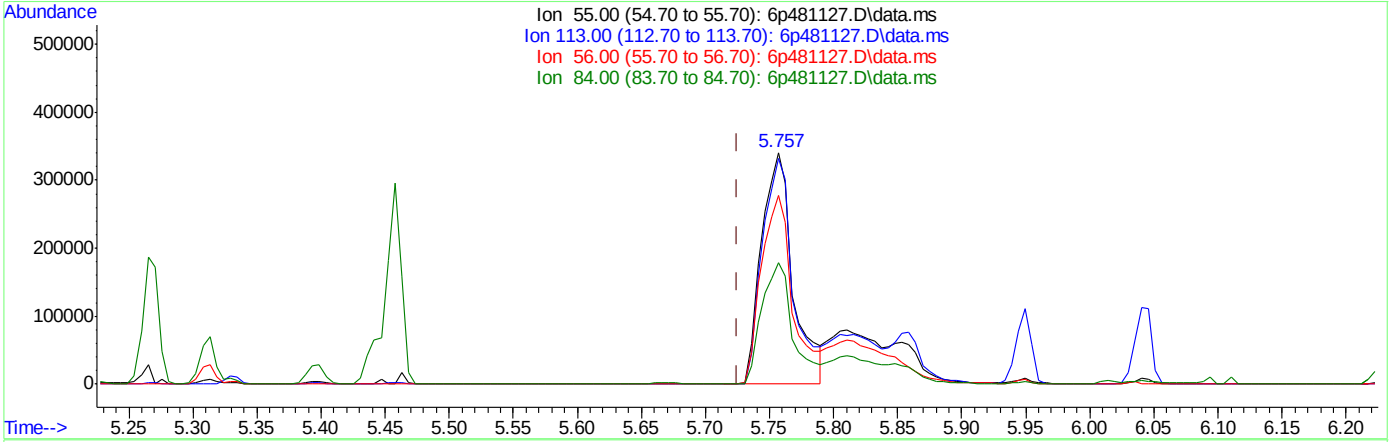
Sample Number:	E6P2562-IC2562	**Method:**	SW846 8270D
Lab FileID:	6P481127.D	**Analyst approved:**	04/16/19 16:37 Ying Li
Injection Time:	04/16/19 09:55	**Supervisor approved:**	04/17/19 13:32 Kristi Schollenberger

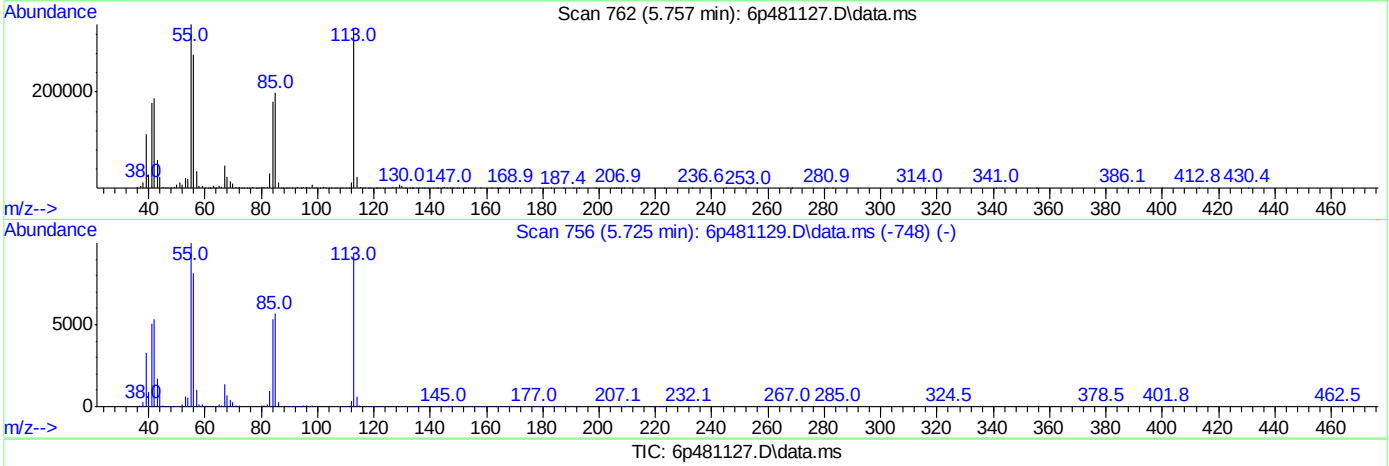
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.76	Split peak

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





TIC: 6p481127.D\data.ms

(41) Caprolactam (t)

5.757min (+0.032) 64.91ppm

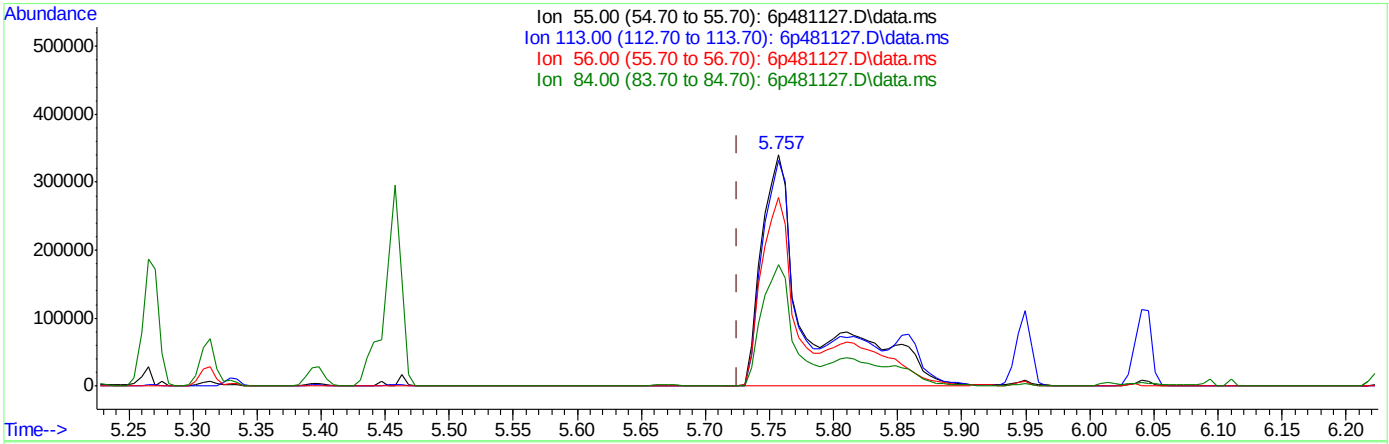
response 588350

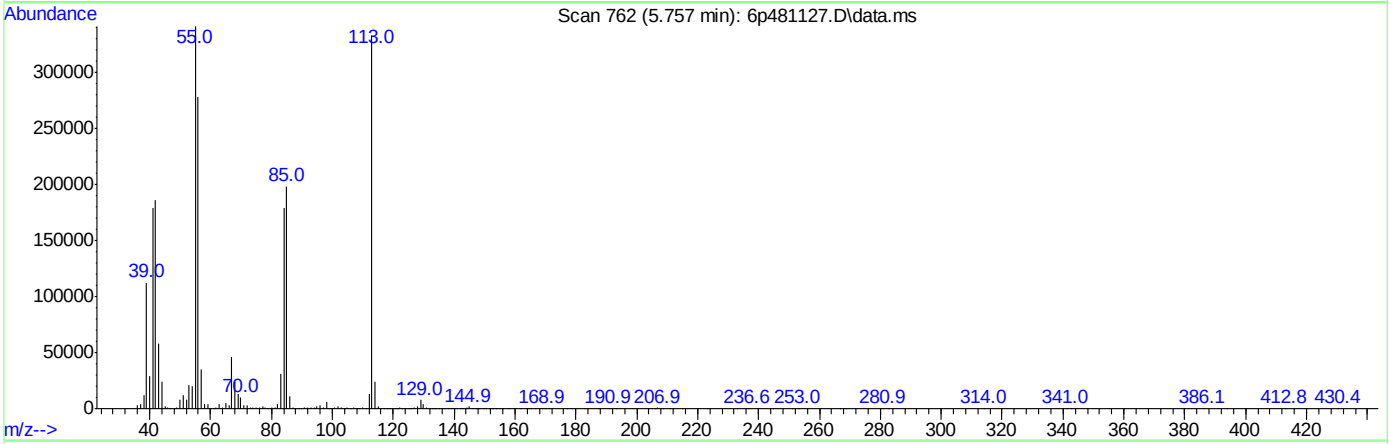
Ion	Exp%	Act%
55.00	100	100
113.00	94.10	97.58
56.00	81.20	81.22
84.00	53.30	52.74

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

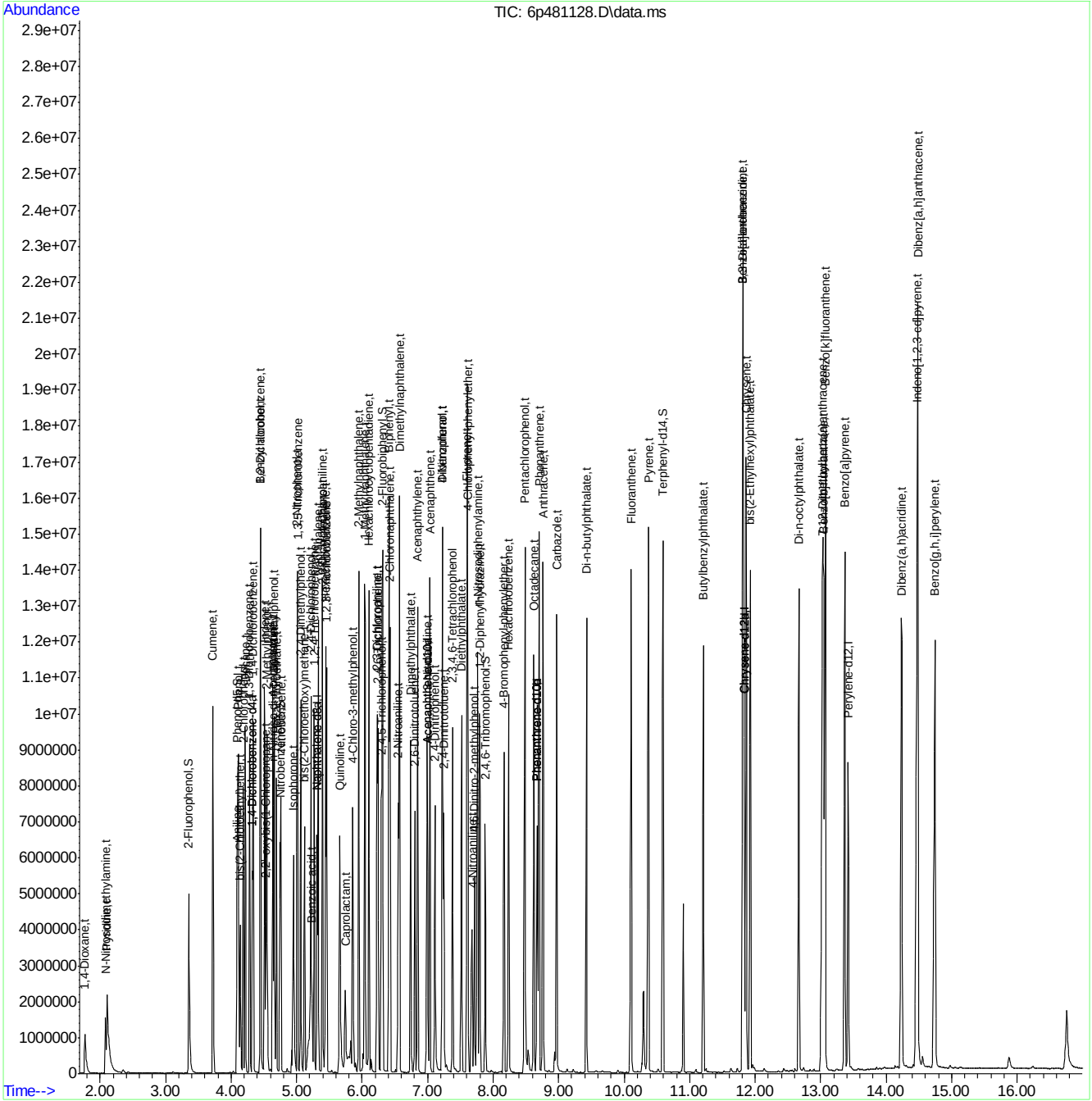
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.763	178	6251958	76.98	ppm	100
79) Carbazole	8.972	167	5965556	76.12	ppm	99
80) Di-n-butylphthalate	9.426	149	7039425	74.59	ppm	100
81) Fluoranthene	10.111	202	6844826	75.46	ppm	99
82) Octadecane	8.624	57	1975430	73.51	ppm	98
84) Pyrene	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

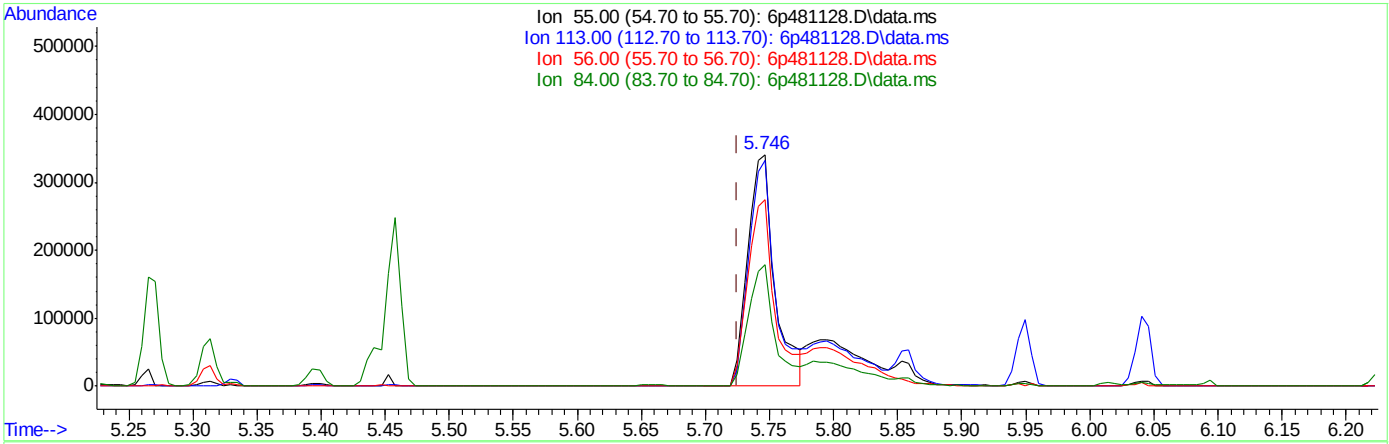
Sample Number:	E6P2562-IC2562	**Method:**	SW846 8270D
Lab FileID:	6P481128.D	**Analyst approved:**	04/16/19 16:37 Ying Li
Injection Time:	04/16/19 10:18	**Supervisor approved:**	04/17/19 13:32 Kristi Schollenberger

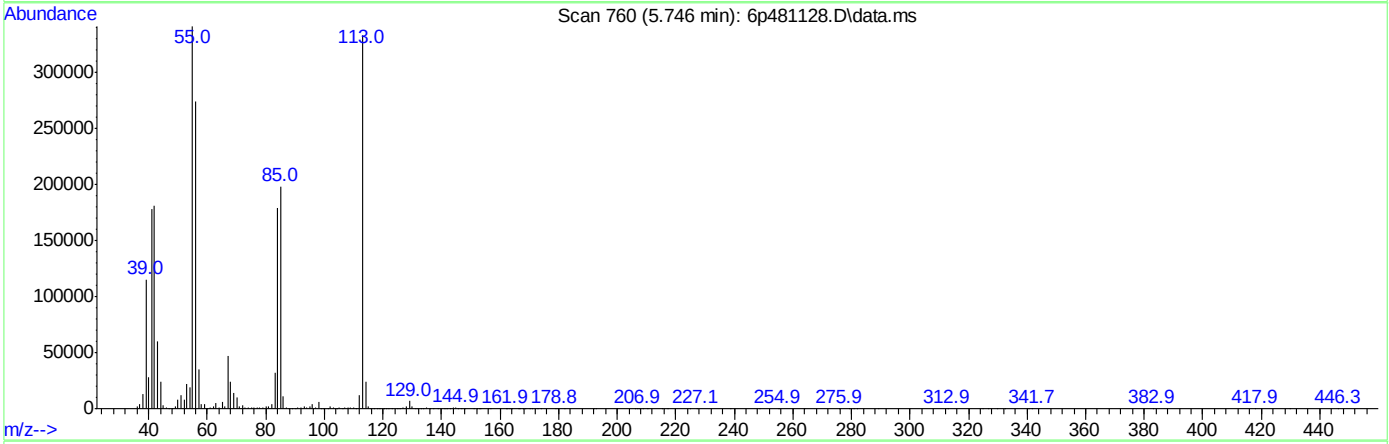
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.75	Split peak

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

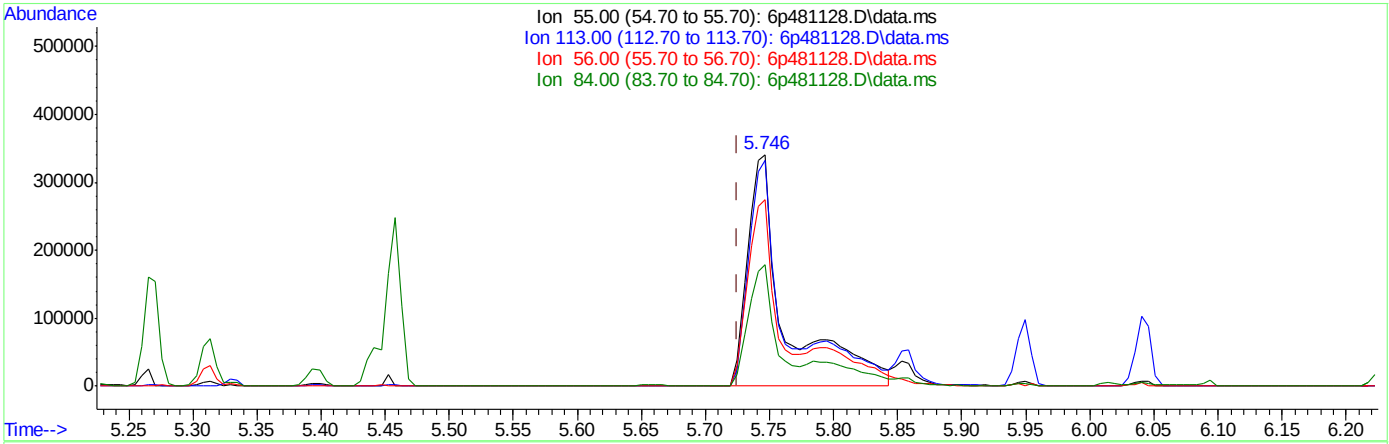
response 502856

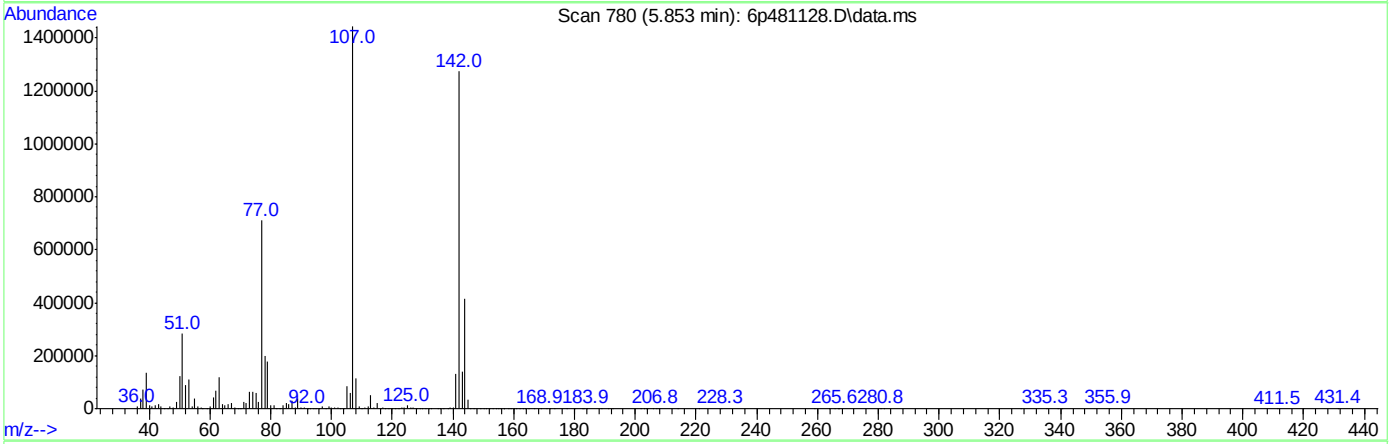
Ion	Exp%	Act%
55.00	100	100
113.00	94.10	97.26
56.00	81.20	80.01
84.00	53.30	52.62

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

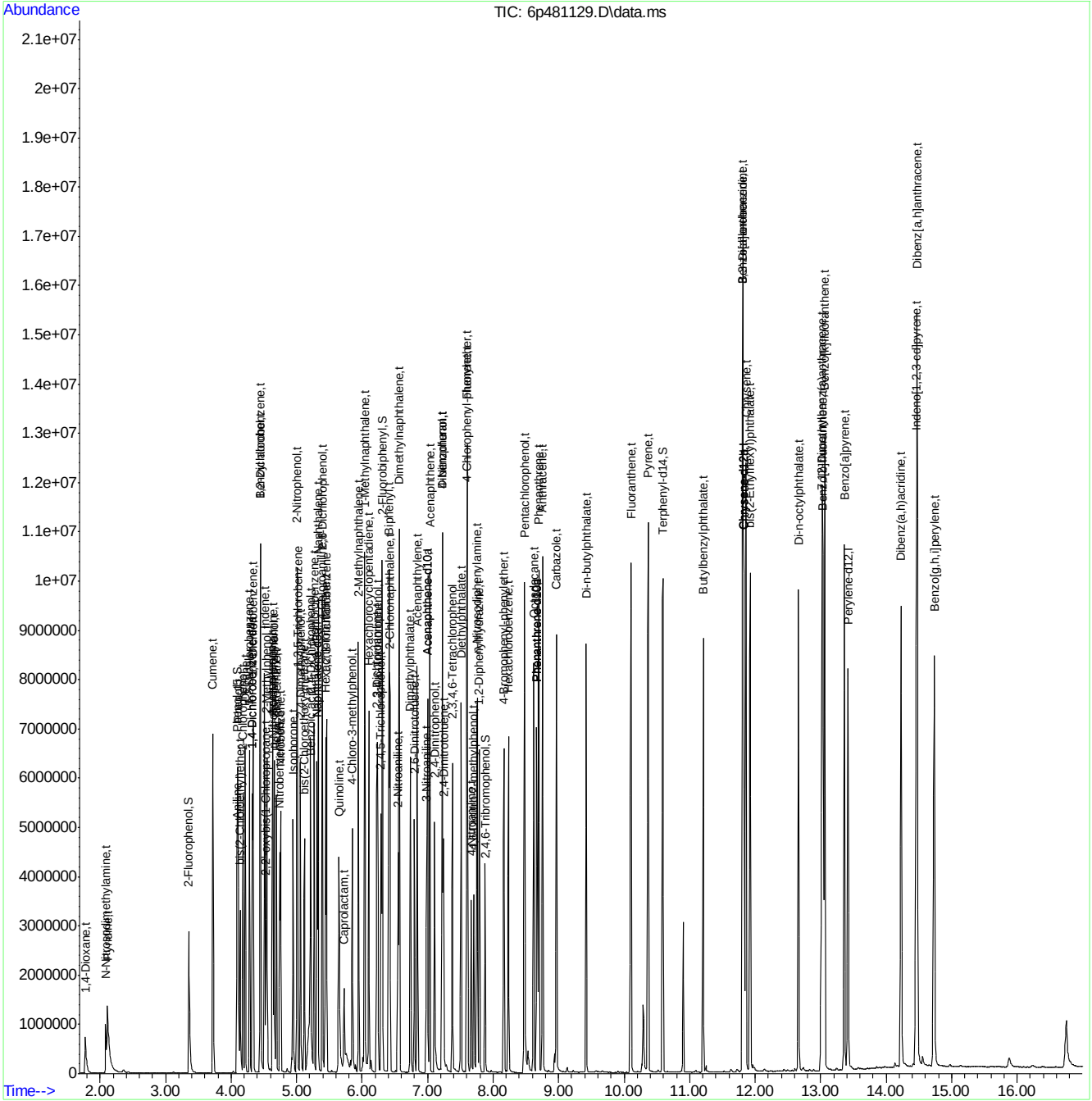
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	8.758	178	4104749	50.00	ppm	100
79)	Carbazole	8.966	167	3961027	50.00	ppm	100
80)	Di-n-butylphthalate	9.421	149	4769895	50.00	ppm	100
81)	Fluoranthene	10.106	202	4584283	50.00	ppm	100
82)	Octadecane	8.619	57	1358263	50.00	ppm	100
84)	Pyrene	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

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

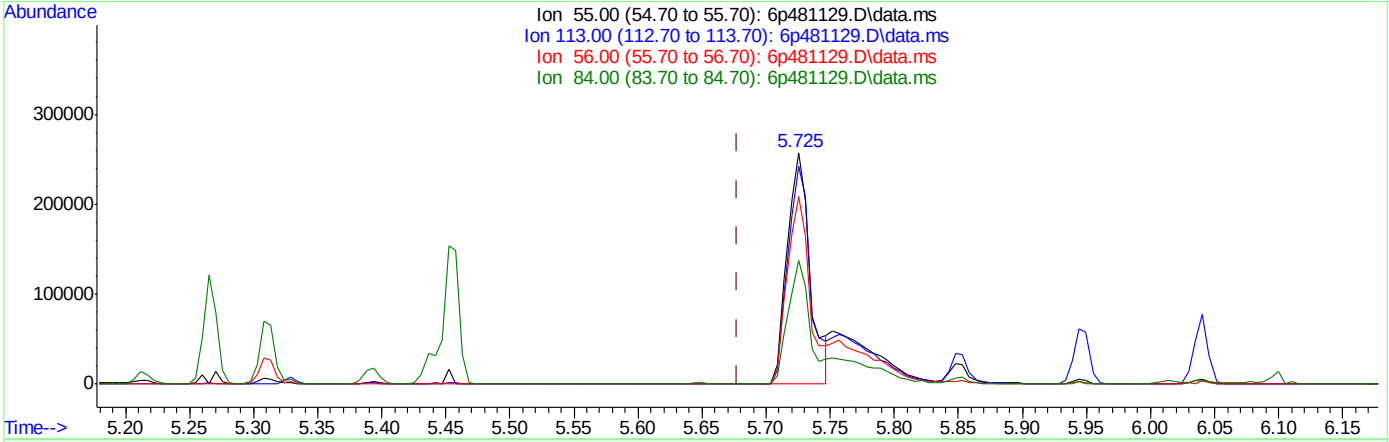
Sample Number:	E6P2562-ICC2562	**Method:**	SW846 8270D
Lab FileID:	6P481129.D	**Analyst approved:**	04/16/19 16:37 Ying Li
Injection Time:	04/16/19 10:42	**Supervisor approved:**	04/17/19 13:32 Kristi Schollenberger

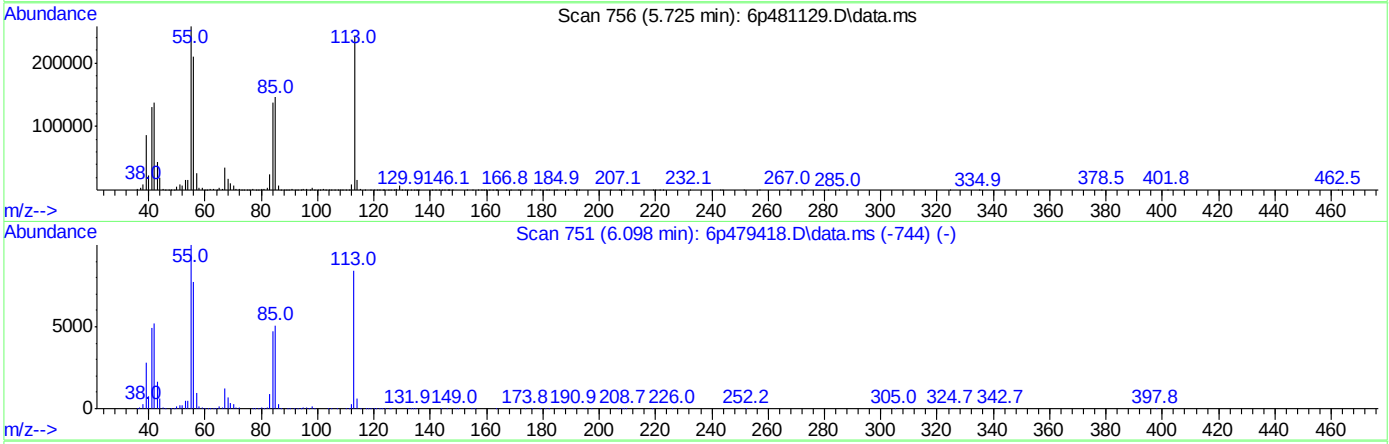
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.73	Split peak

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

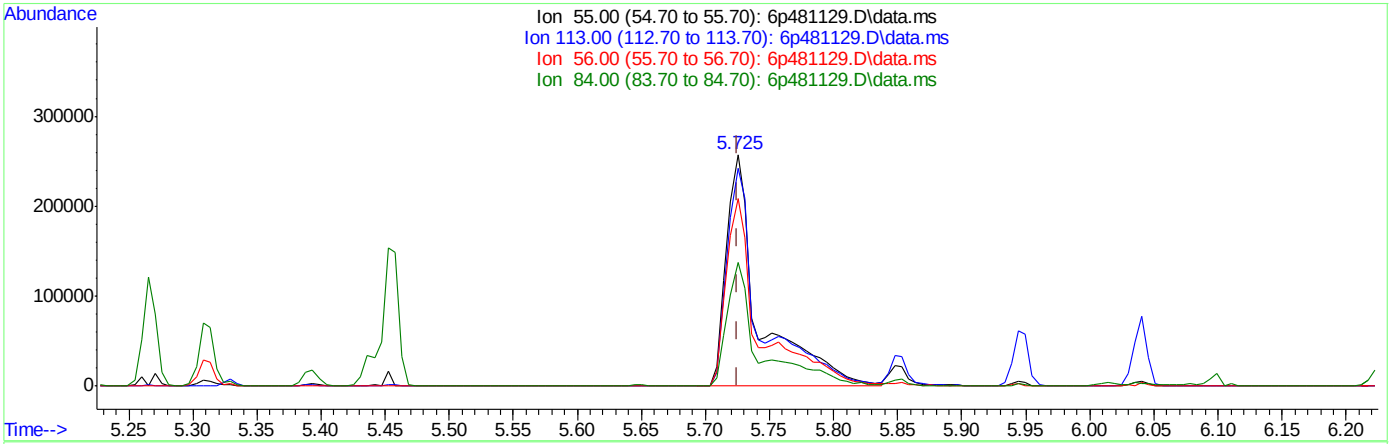
response 315558

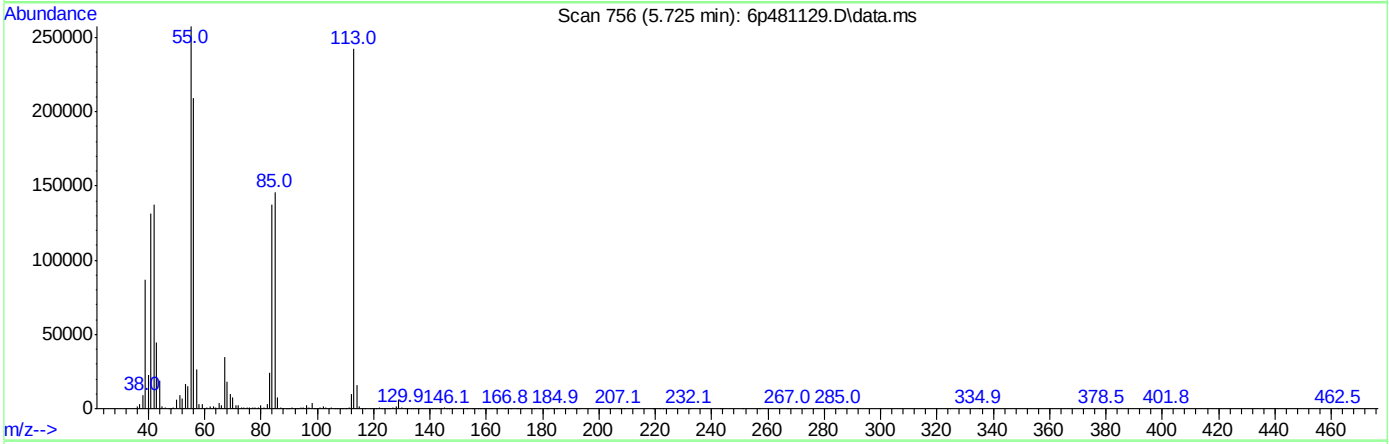
Ion	Exp%	Act%
55.00	100	100
113.00	84.50	94.56
56.00	77.10	81.25
84.00	47.50	53.60

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

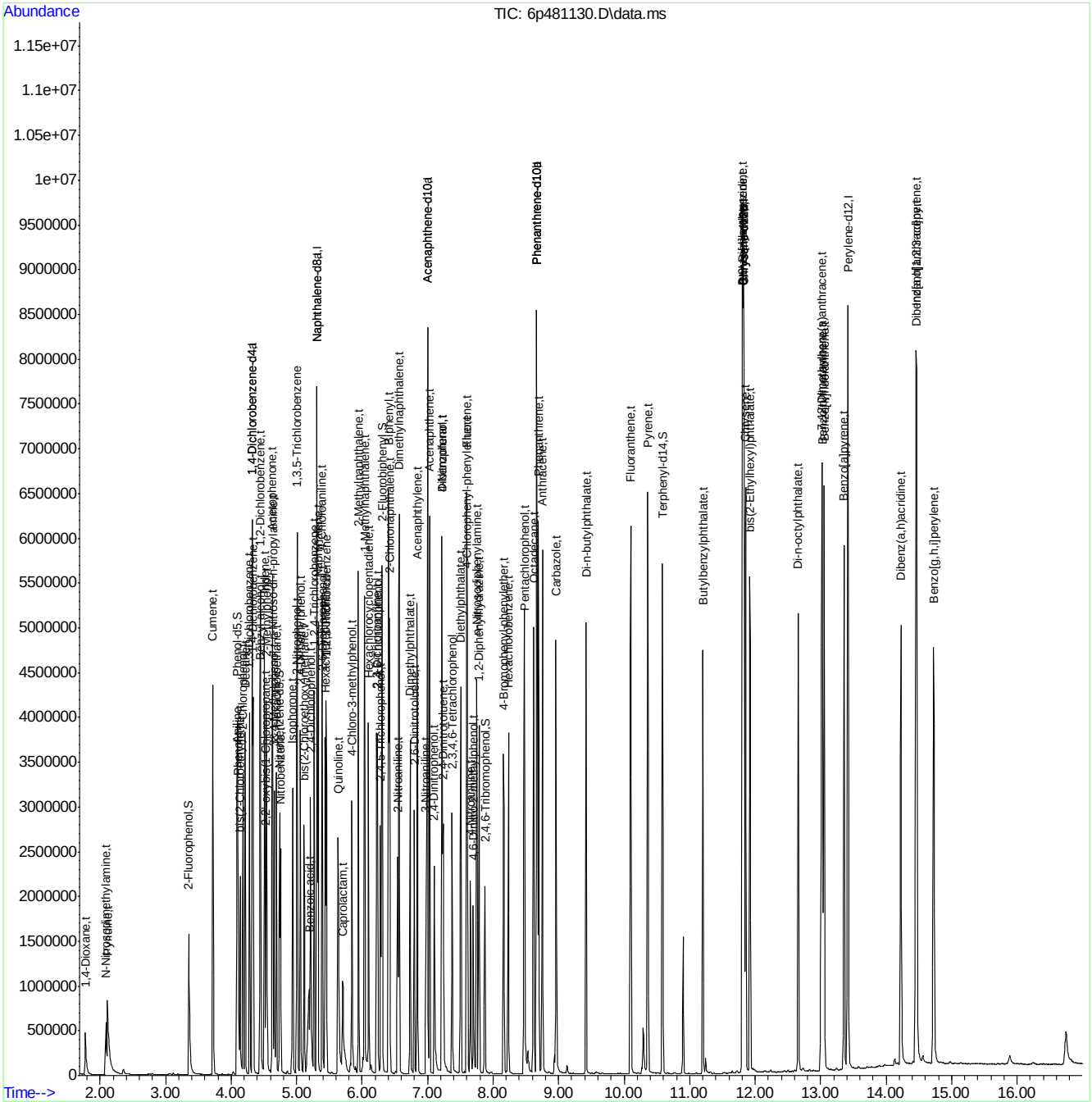
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.752	178	2323190	25.76	ppm	99
79) Carbazole	8.961	167	2195685	25.23	ppm	99
80) Di-n-butylphthalate	9.421	149	2650667	25.29	ppm	98
81) Fluoranthene	10.100	202	2505664	24.88	ppm	99
82) Octadecane	8.619	57	790137	26.47	ppm	99
84) Pyrene	10.362	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

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

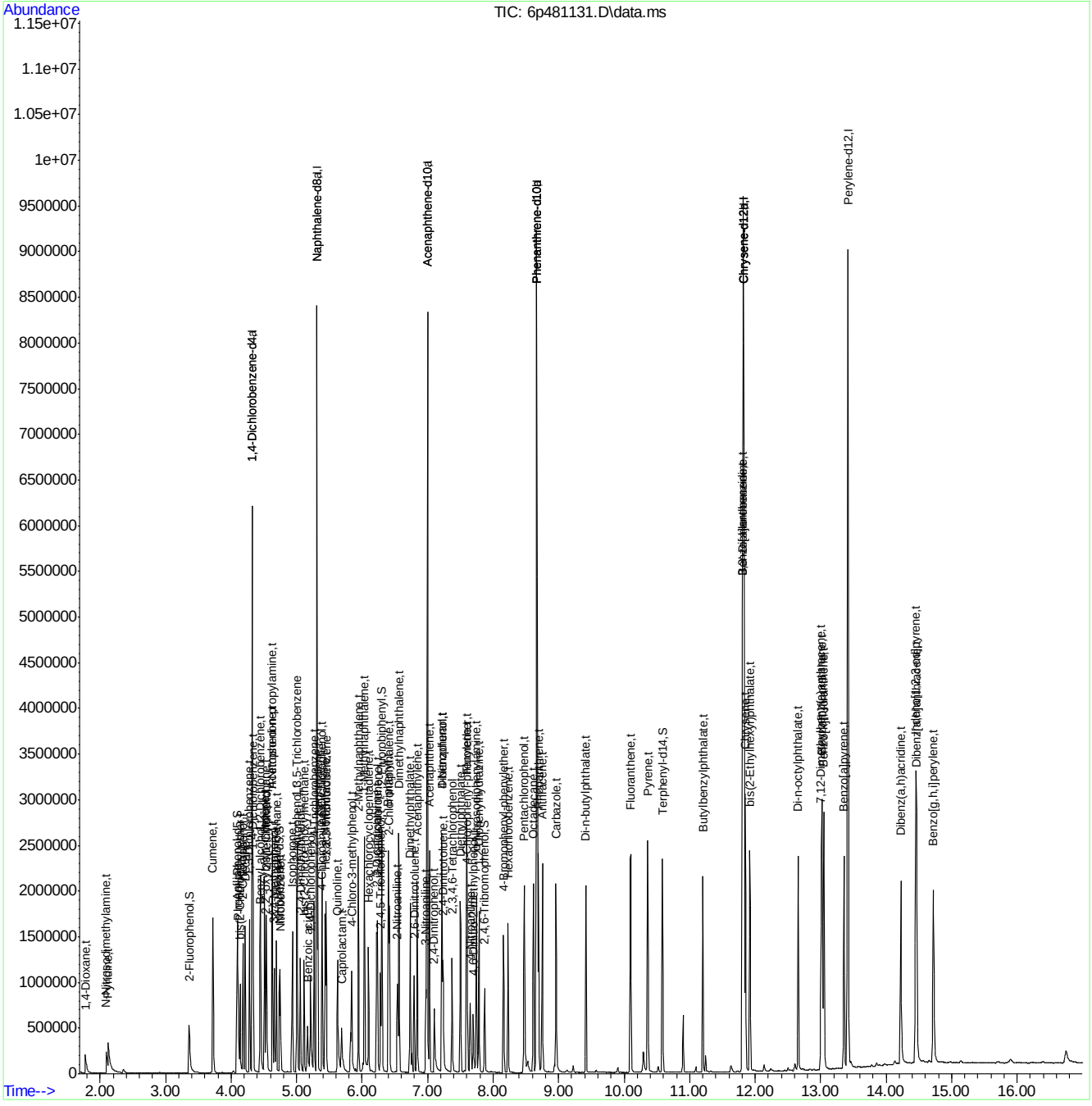
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.752	178	988020	10.50	ppm	98
79) Carbazole	8.961	167	939392	10.35	ppm	99
80) Di-n-butylphthalate	9.416	149	1134753	10.38	ppm	98
81) Fluoranthene	10.100	202	1072732	10.21	ppm	99
82) Octadecane	8.613	57	339764	10.91	ppm	98
84) Pyrene	10.362	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

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

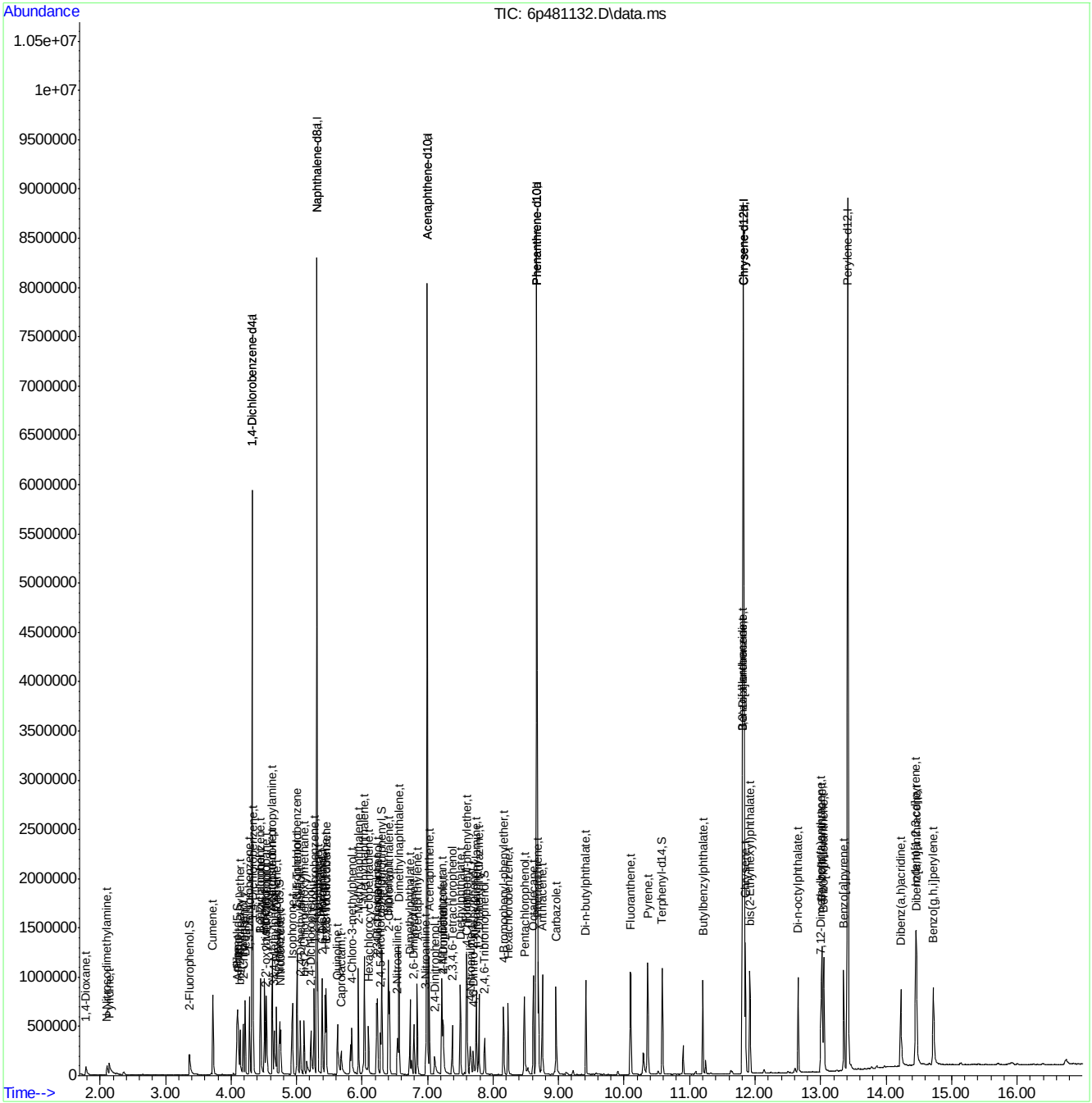
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) Carbazole	8.961	167	428668	4.99	ppm	99
80) Di-n-butylphthalate	9.416	149	500617	4.84	ppm	98
81) Fluoranthene	10.100	202	486038	4.89	ppm	99
82) Octadecane	8.613	57	157053	5.33	ppm	98
84) Pyrene	10.362	202	507717	4.97	ppm	98
86) Butylbenzylphthalate	11.202	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

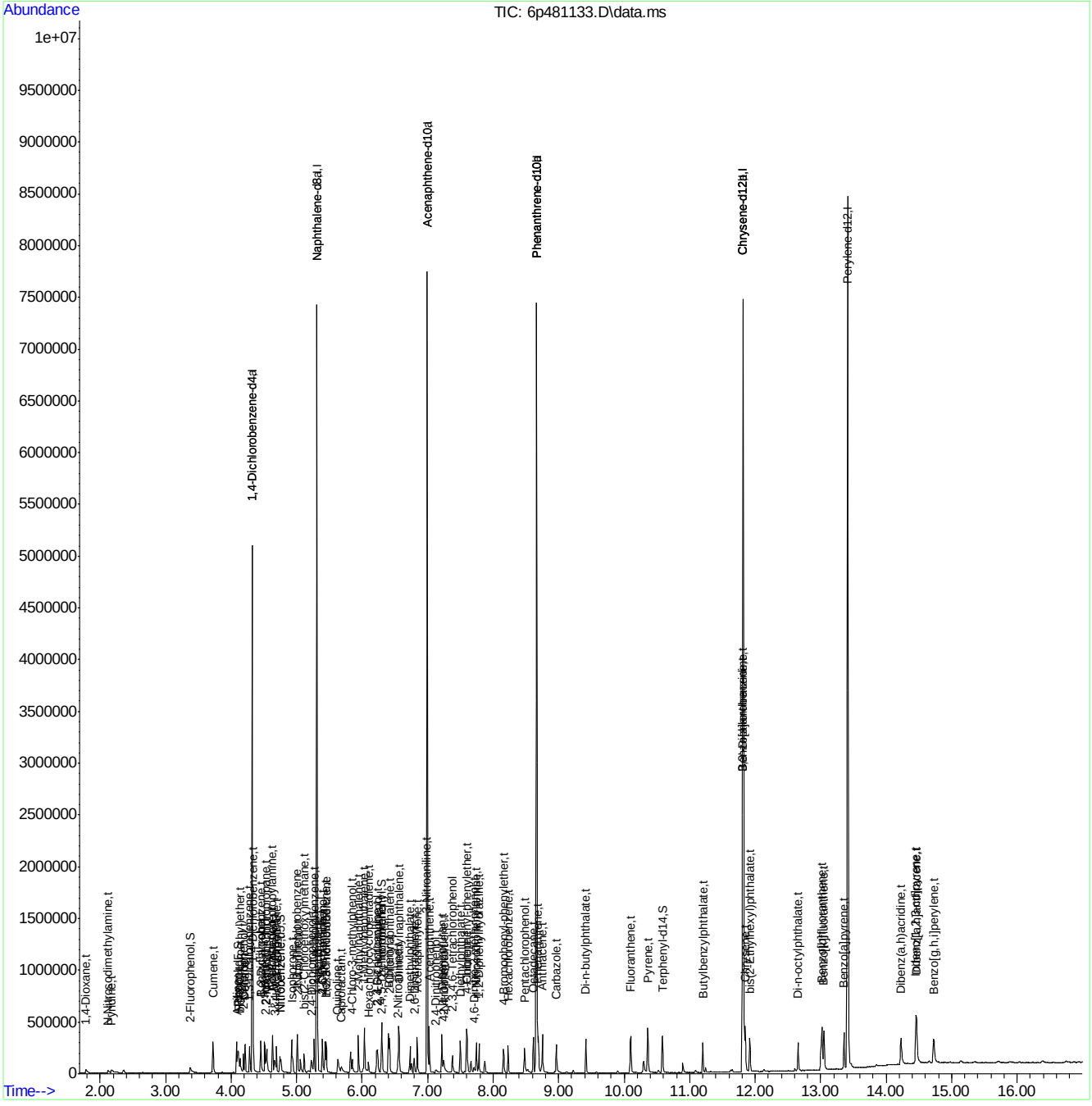
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
81) Fluoranthene	10.100	202	165236	1.84	ppm	98
82) Octadecane	8.613	57	54062	2.03	ppm	97
84) Pyrene	10.362	202	180114	1.96	ppm	99
86) Butylbenzylphthalate	11.202	149	68859	1.61	ppm	96
87) Benzo[a]anthracene	11.807	228	167454	1.87	ppm	99
88) 3,3'-Dichlorobenzidine	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

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

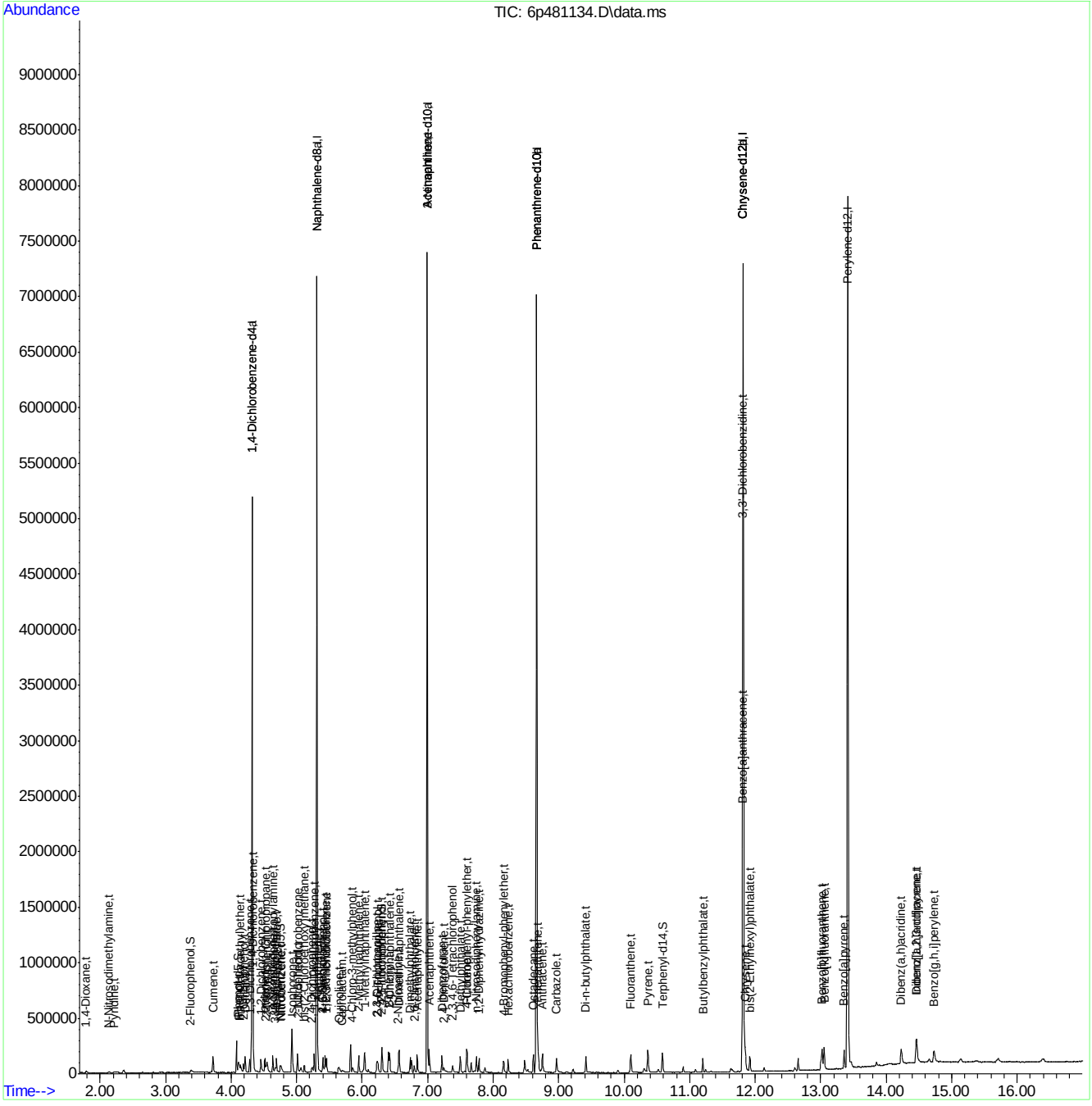
9.6.8

6

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

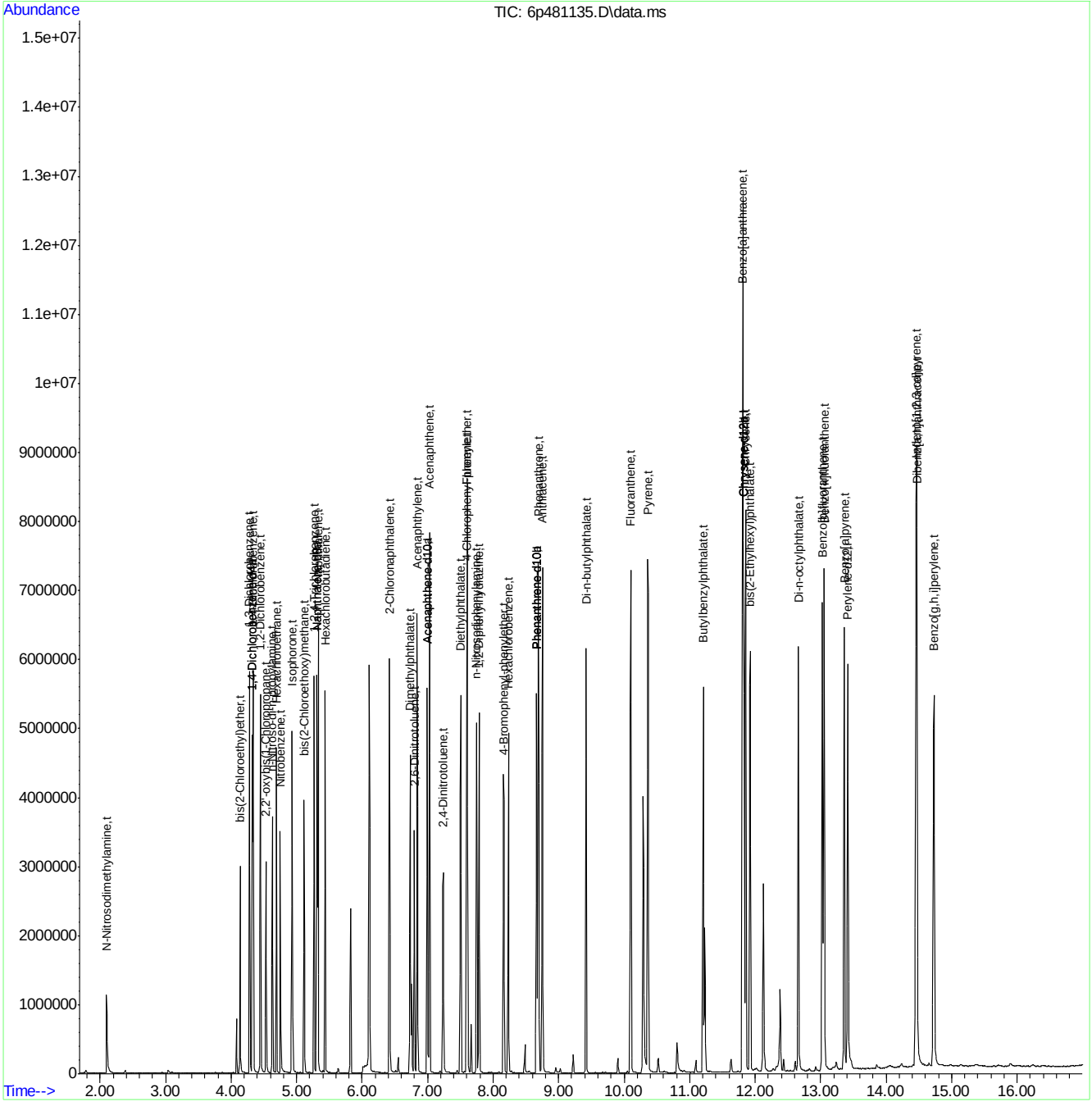
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
59)	Acenaphthene	7.030	153	1766949	45.98	ppm	100
63)	2,4-Dinitrotoluene	7.239	165	626568	45.79	ppm	98
65)	Diethylphthalate	7.506	149	1973162	45.93	ppm	99
66)	Fluorene	7.597	166	2045365	47.08	ppm	99
67)	4-Chlorophenyl-phenyle...	7.608	204	1037651	47.12	ppm	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

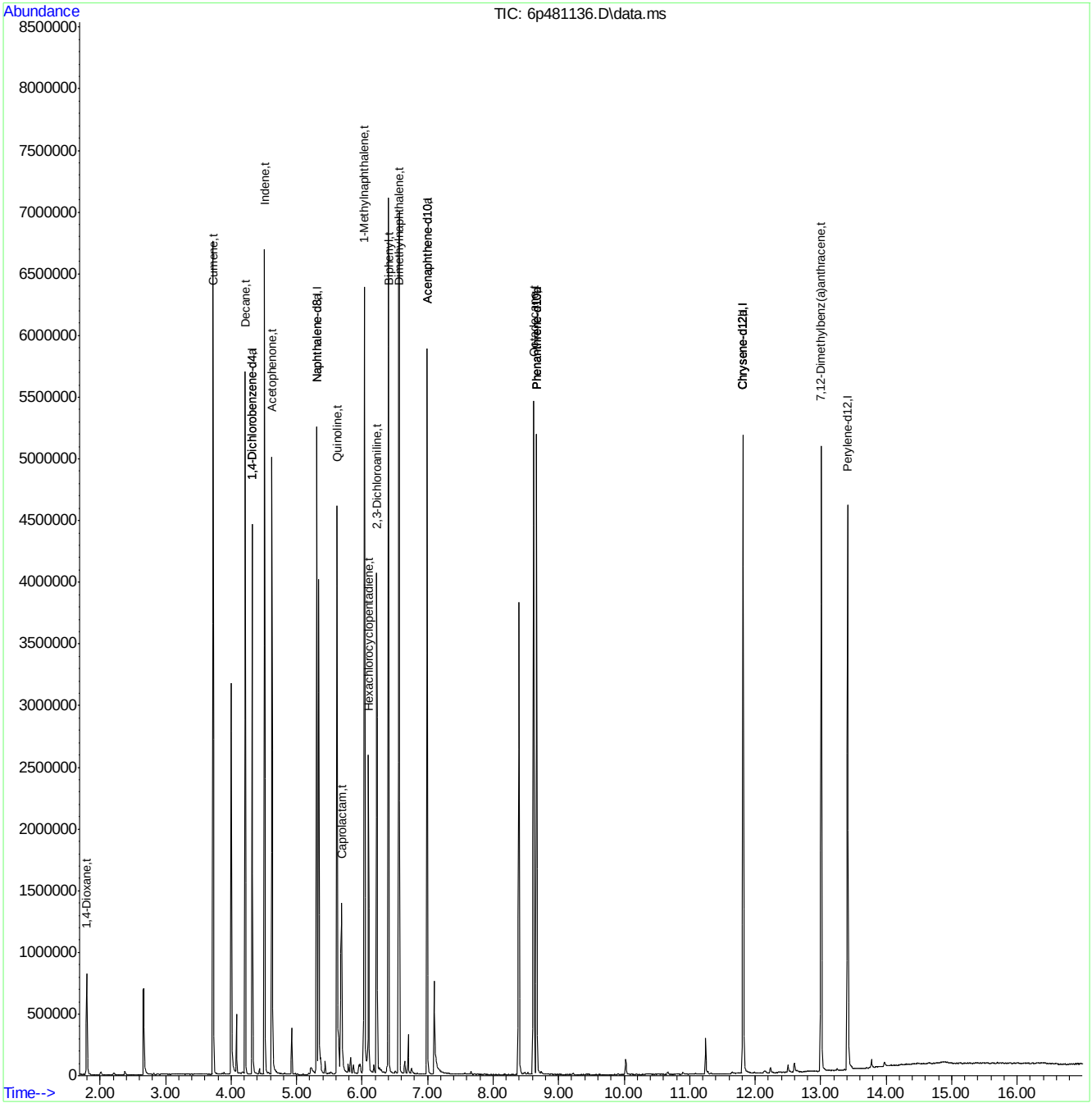
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	520182	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2005705	40.00	ppm	0.00
47) Acenaphthene-d10	6.992	164	1185681	40.00	ppm	0.00
69) Phenanthrene-d10	8.661	188	2067155	40.00	ppm	0.00
83) Chrysene-d12	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



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	

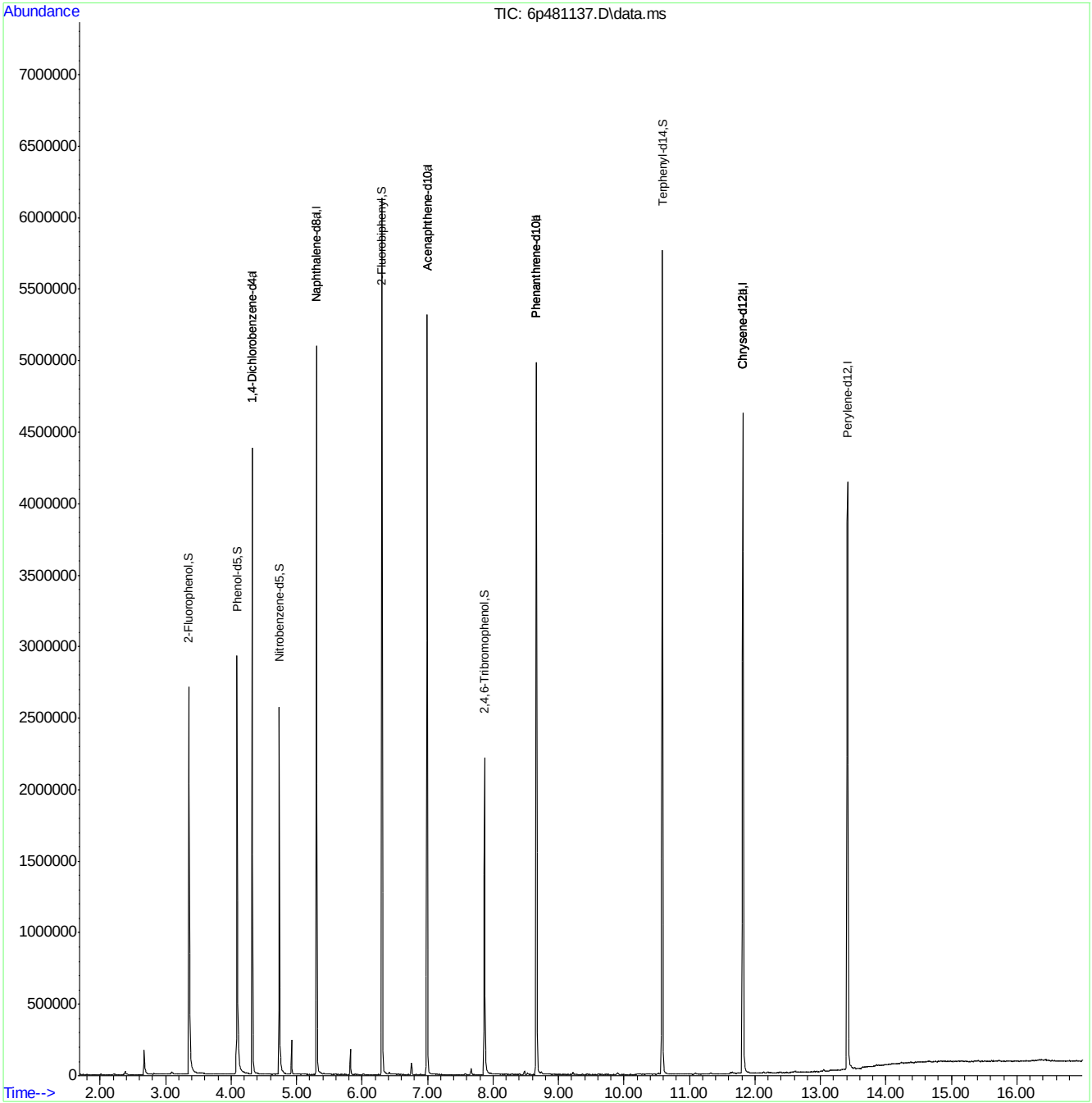
Target Compounds Qvalue

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

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

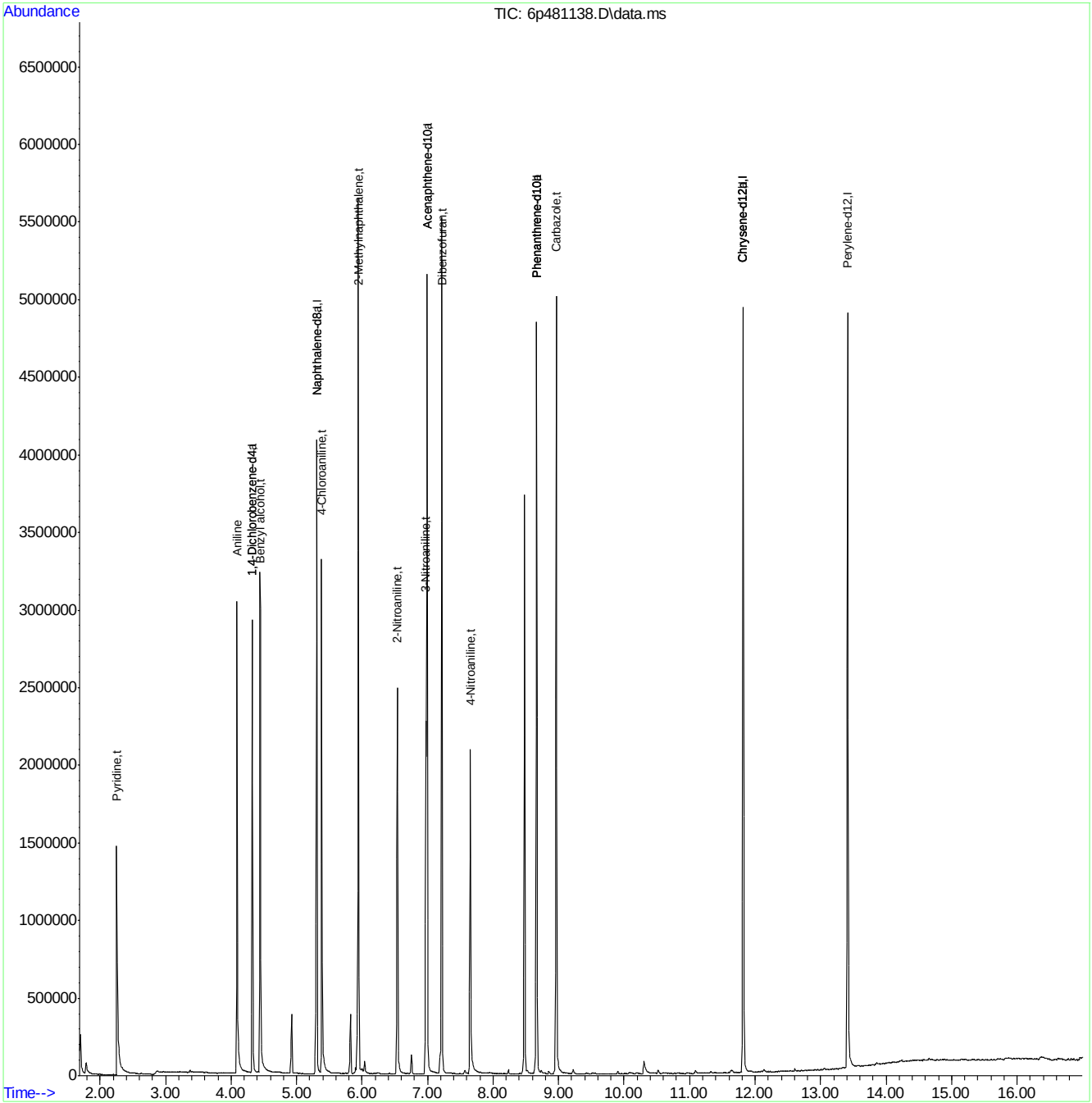
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	448130	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1829213	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1141242	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2027182	40.00	ppm	0.00
83) Chrysene-d12	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

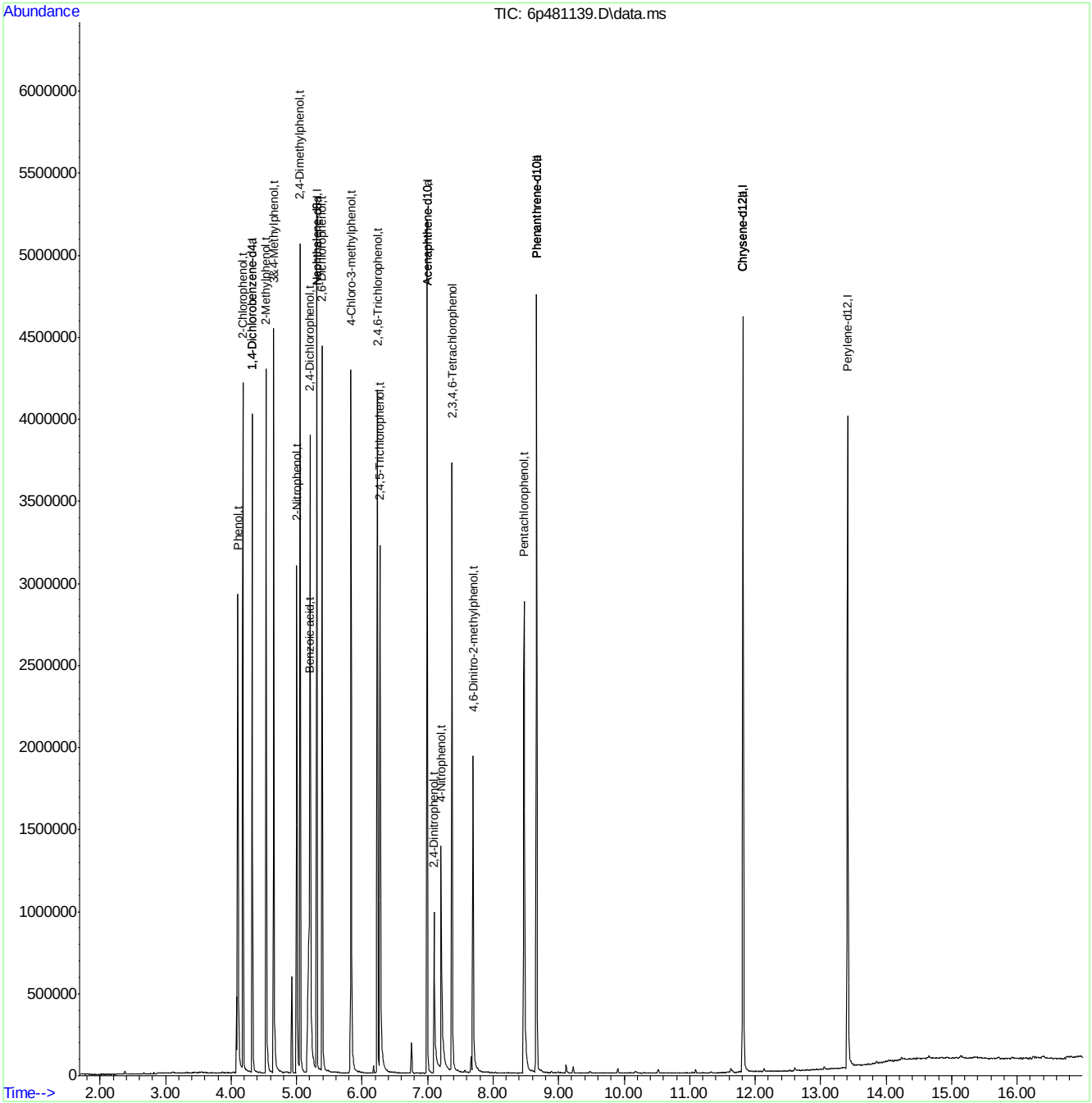
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

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

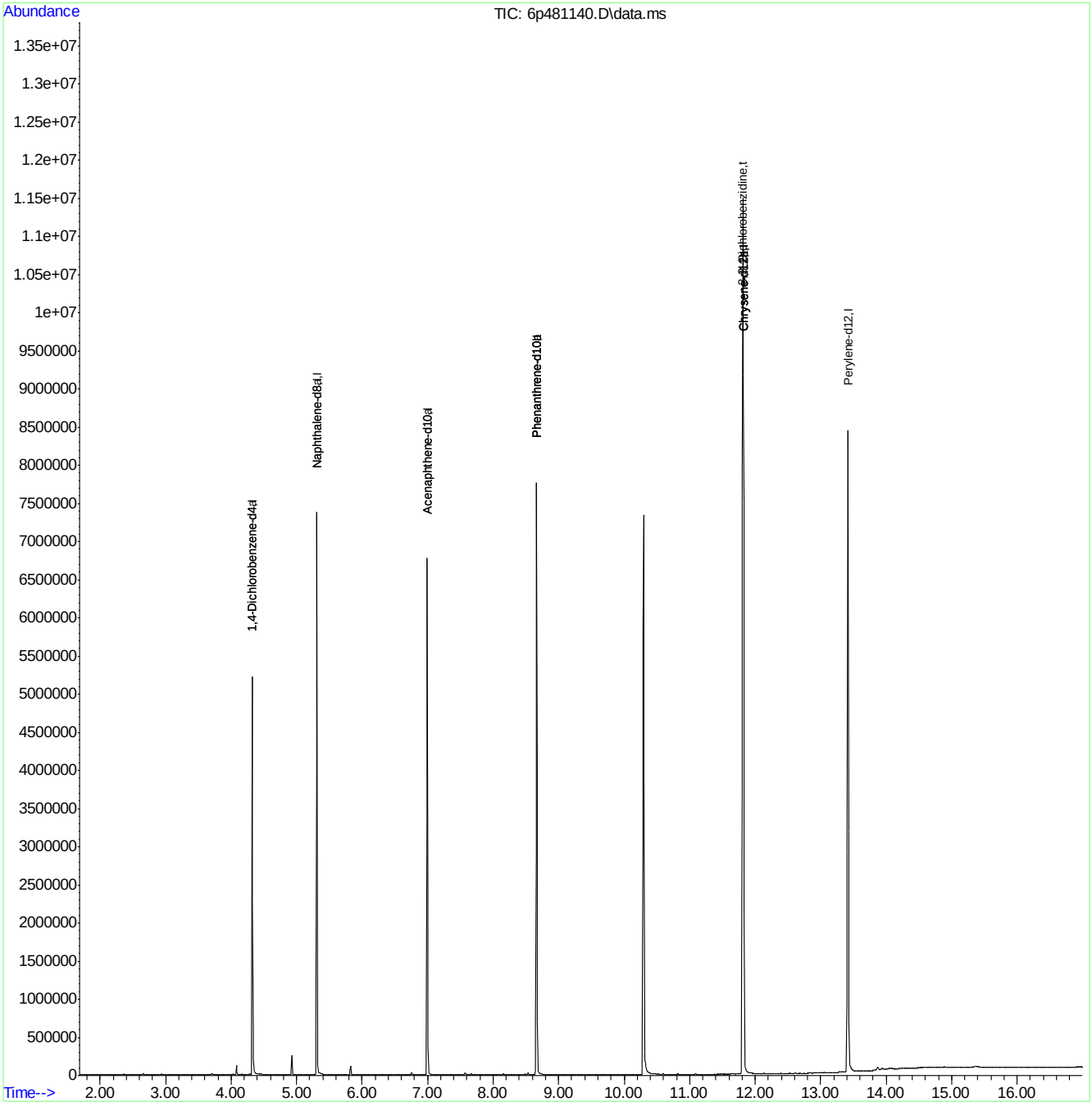
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	682838	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2709058	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1558710	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	3047126	40.00	ppm	0.00
83) Chrysene-d12	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

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

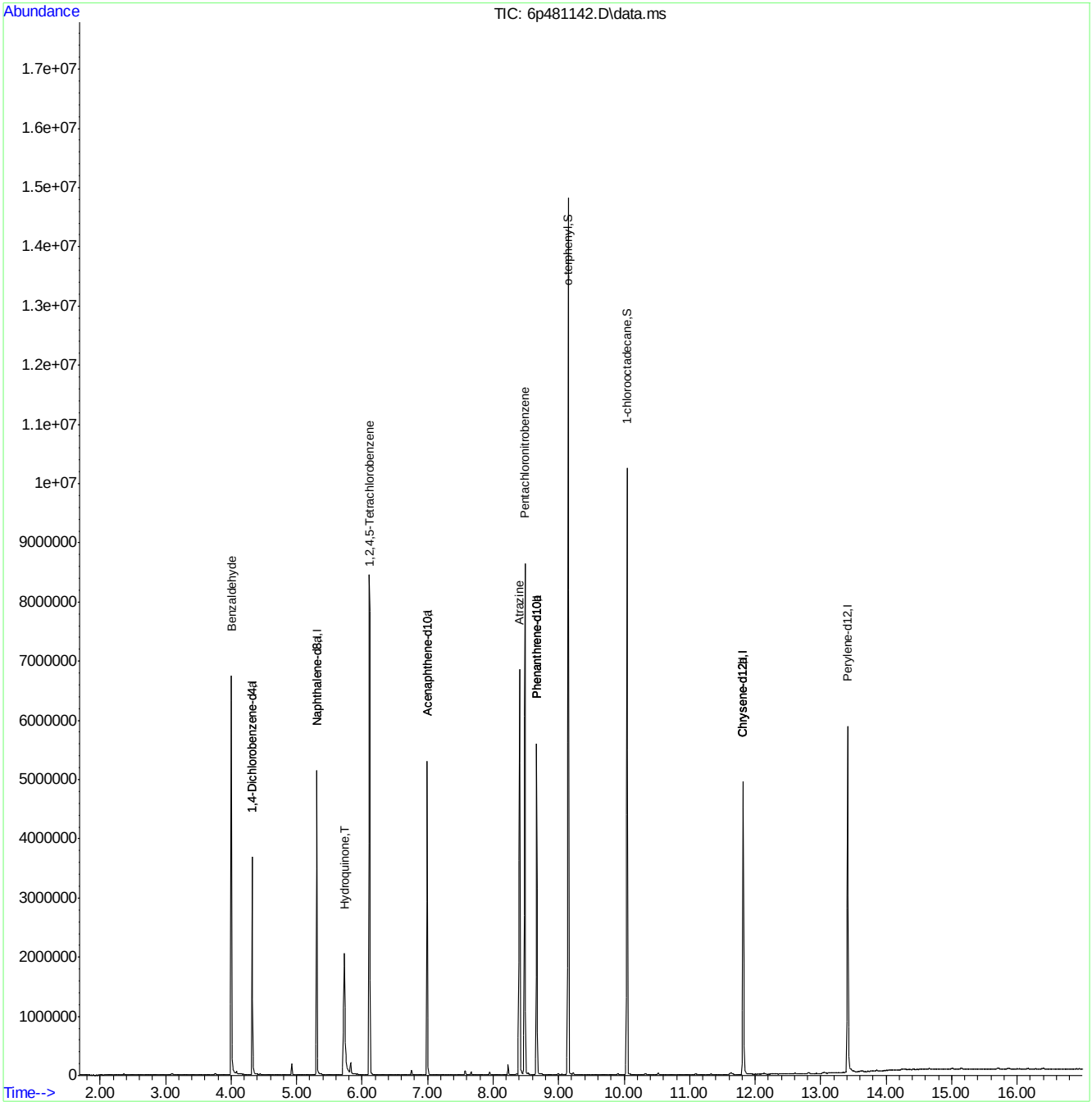
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	469055	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1909884	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1103992	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2094446	40.00	ppm	0.00
83) Chrysene-d12	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

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



SGS JC86837

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

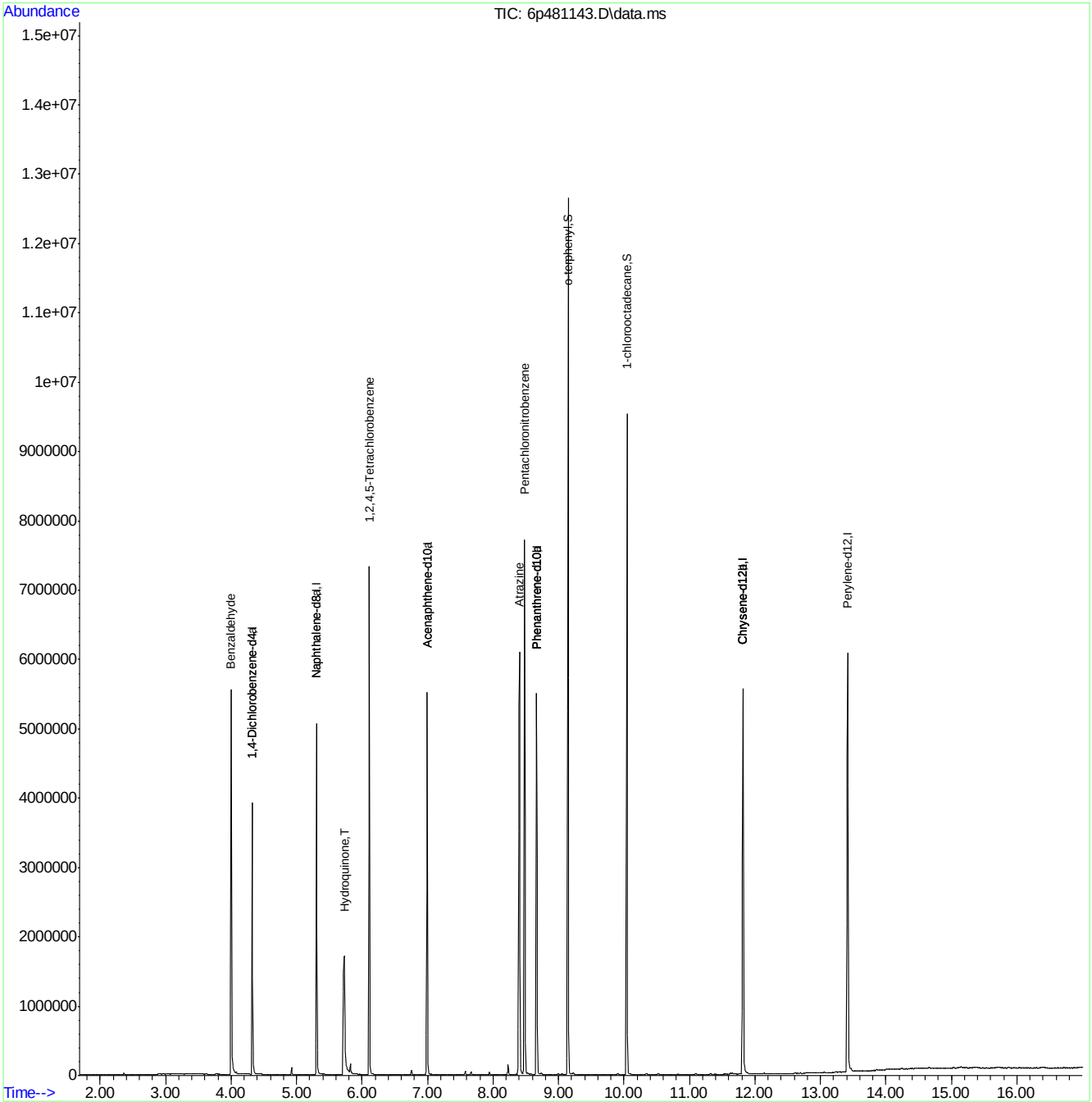
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	494986	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1933033	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1159503	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2079029	40.00	ppm	0.00
83) Chrysene-d12	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



SGS JC86837

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

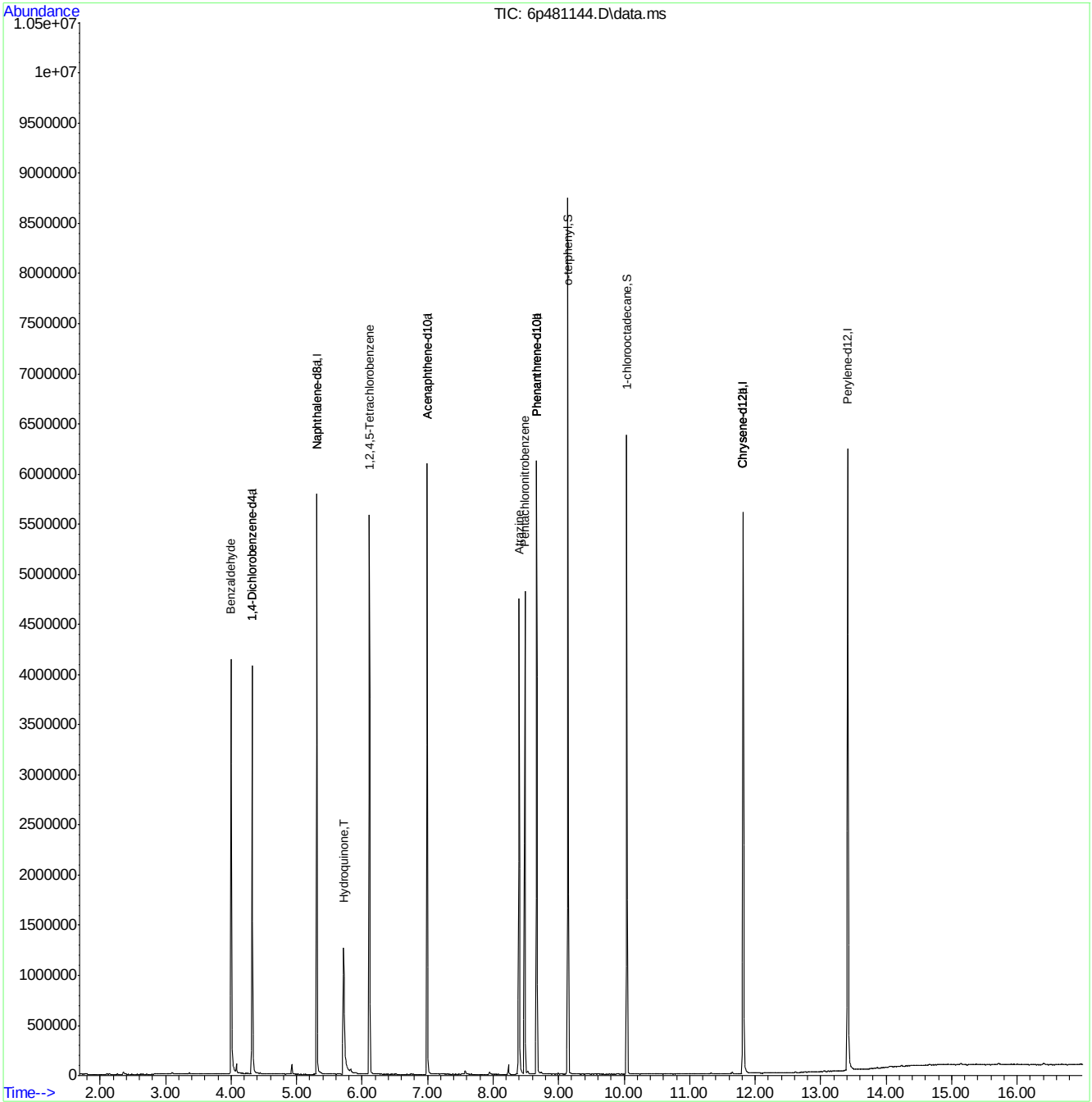
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	533044	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2085894	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1245669	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2303521	40.00	ppm	0.00
83) Chrysene-d12	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

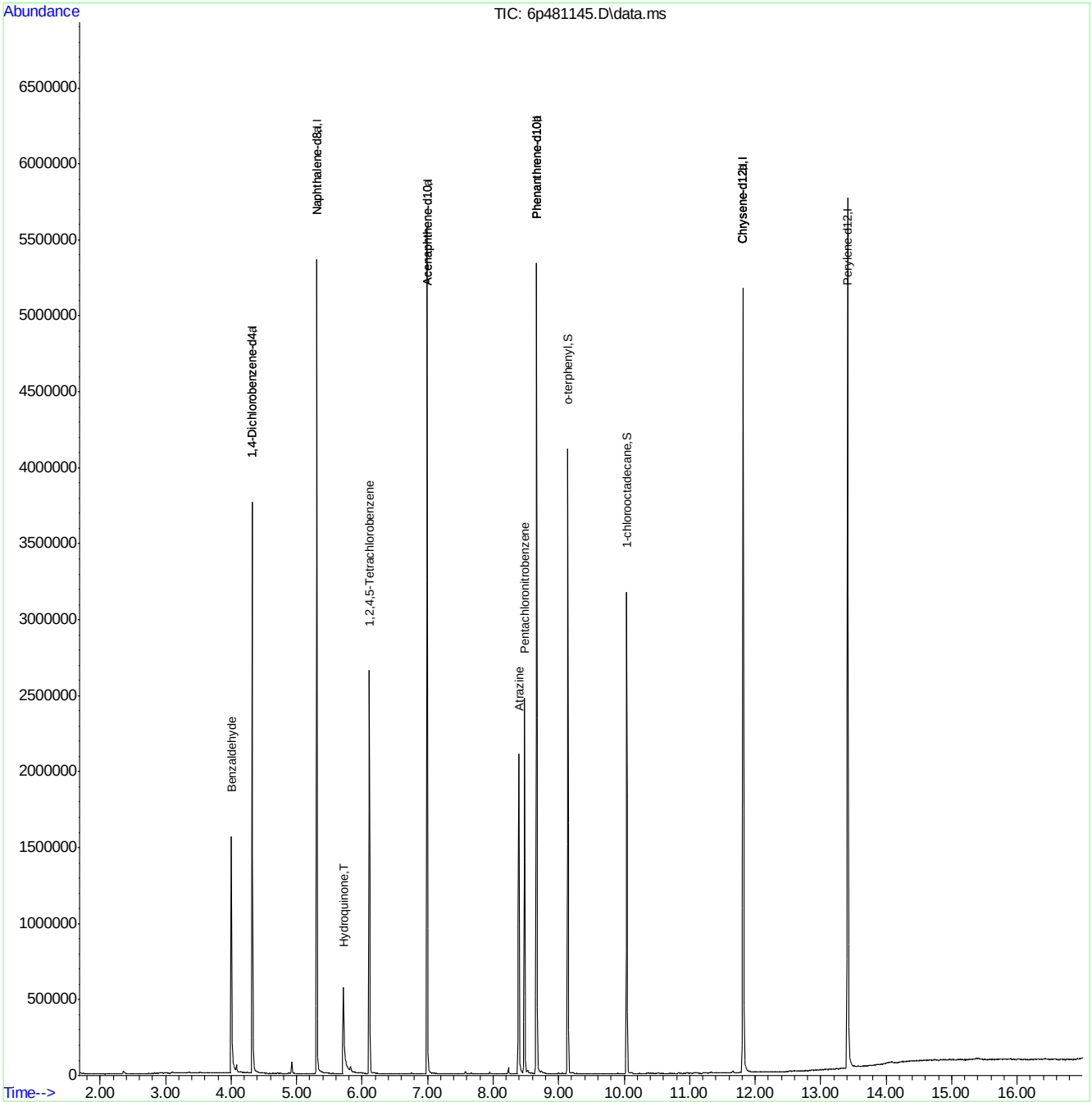
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	495898	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1968505	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1133606	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2062681	40.00	ppm	0.00
83) Chrysene-d12	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

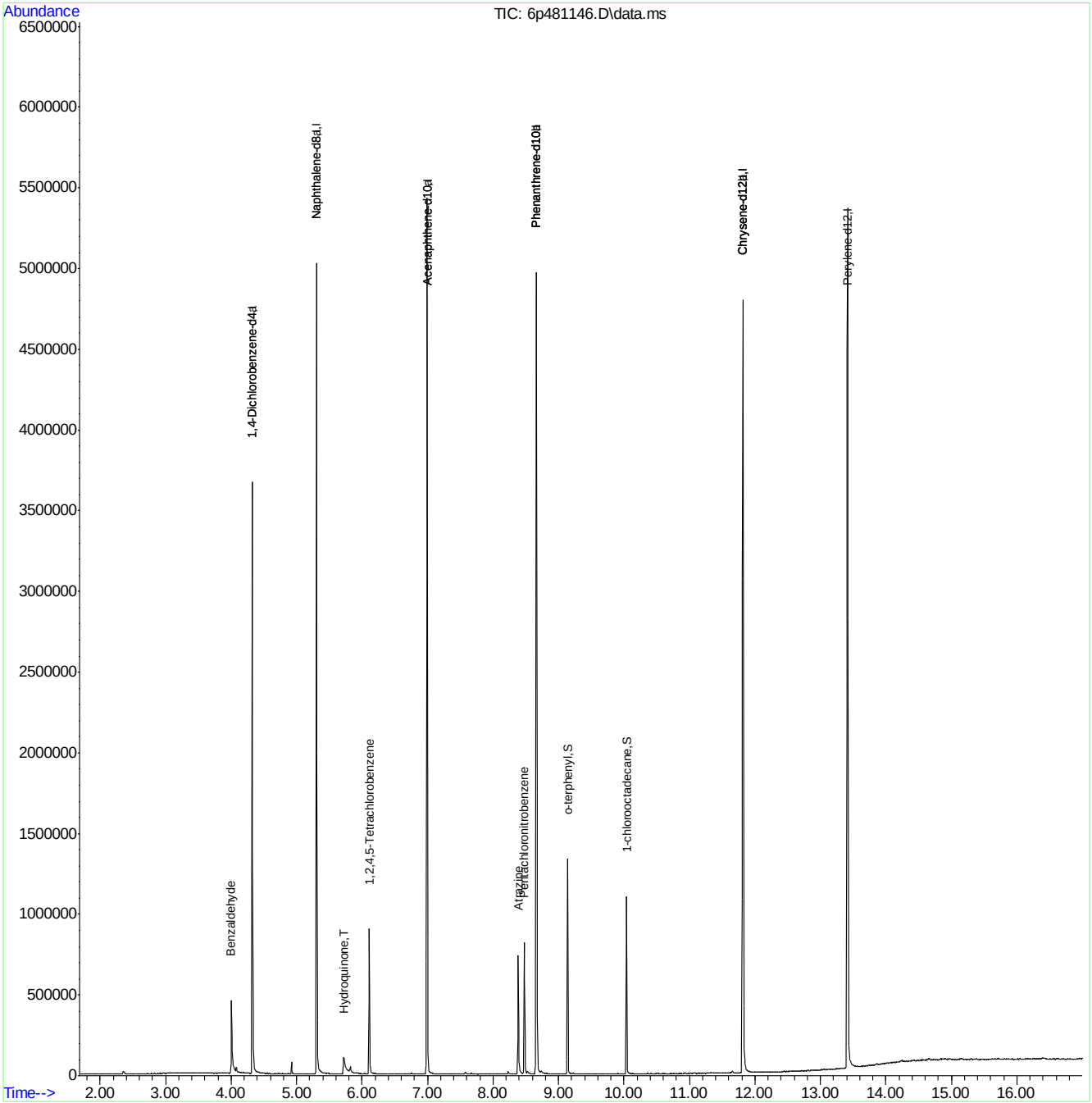
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	469498	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1866839	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1069558	40.00	ppm	0.00
69) Phenanthrene-d10	8.661	188	1942833	40.00	ppm	0.00
83) Chrysene-d12	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

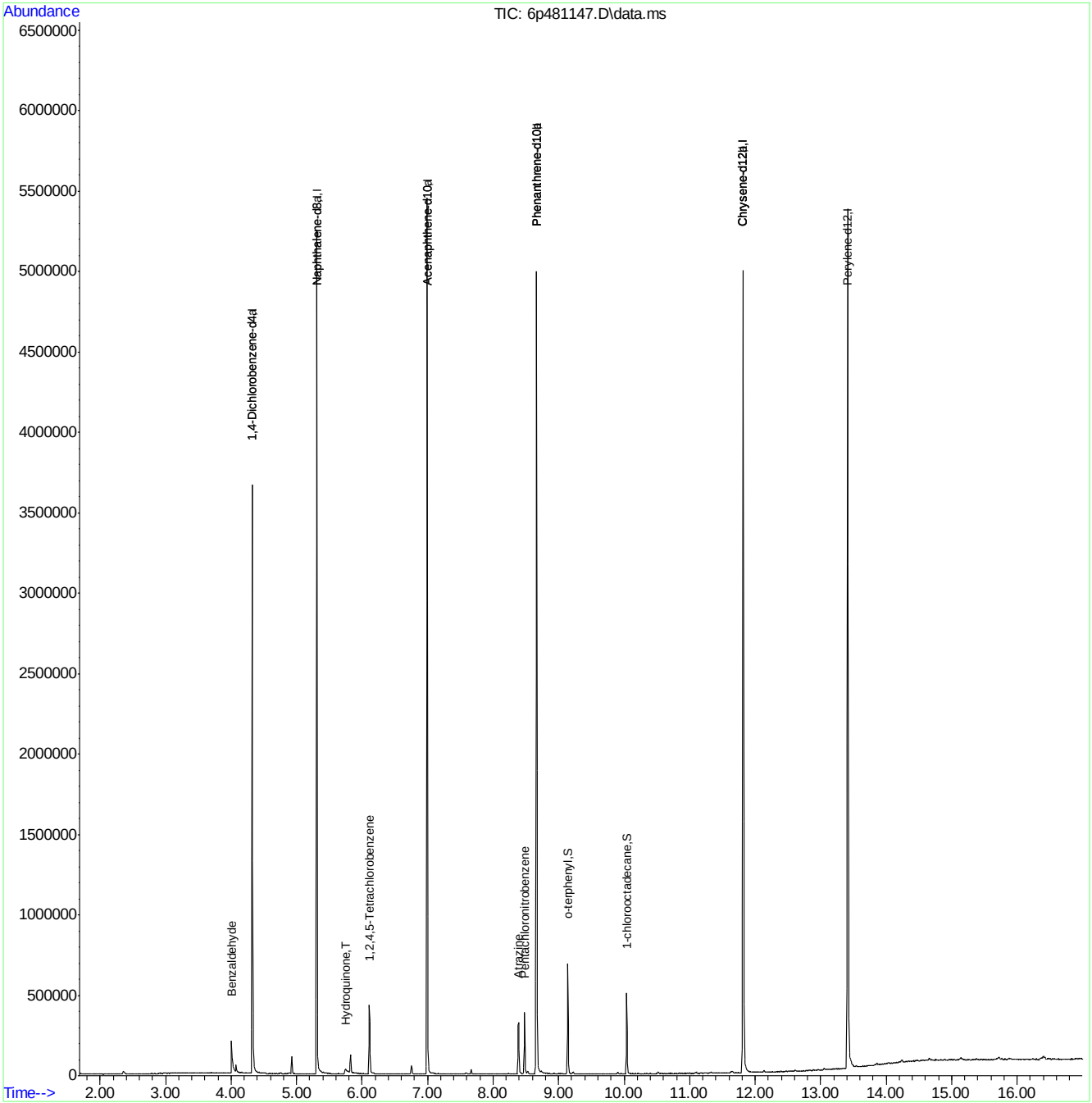
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	490109	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1929031	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1098959	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	1990100	40.00	ppm	0.00
83) Chrysene-d12	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

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

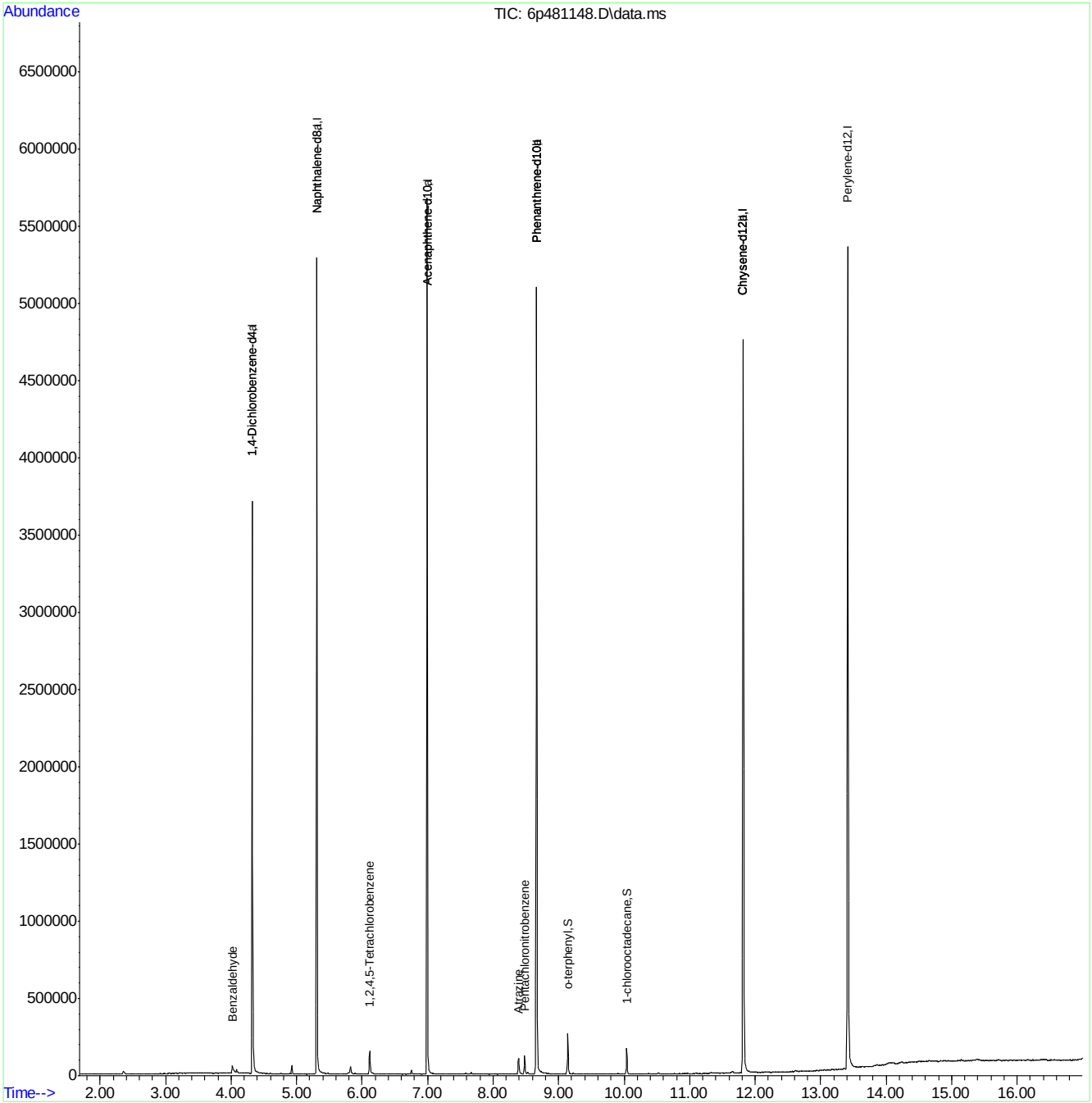
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	492889	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	1937587	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1111339	40.00	ppm	0.00
69) Phenanthrene-d10	8.662	188	1982759	40.00	ppm	0.00
83) Chrysene-d12	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

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



9.6.21
9

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

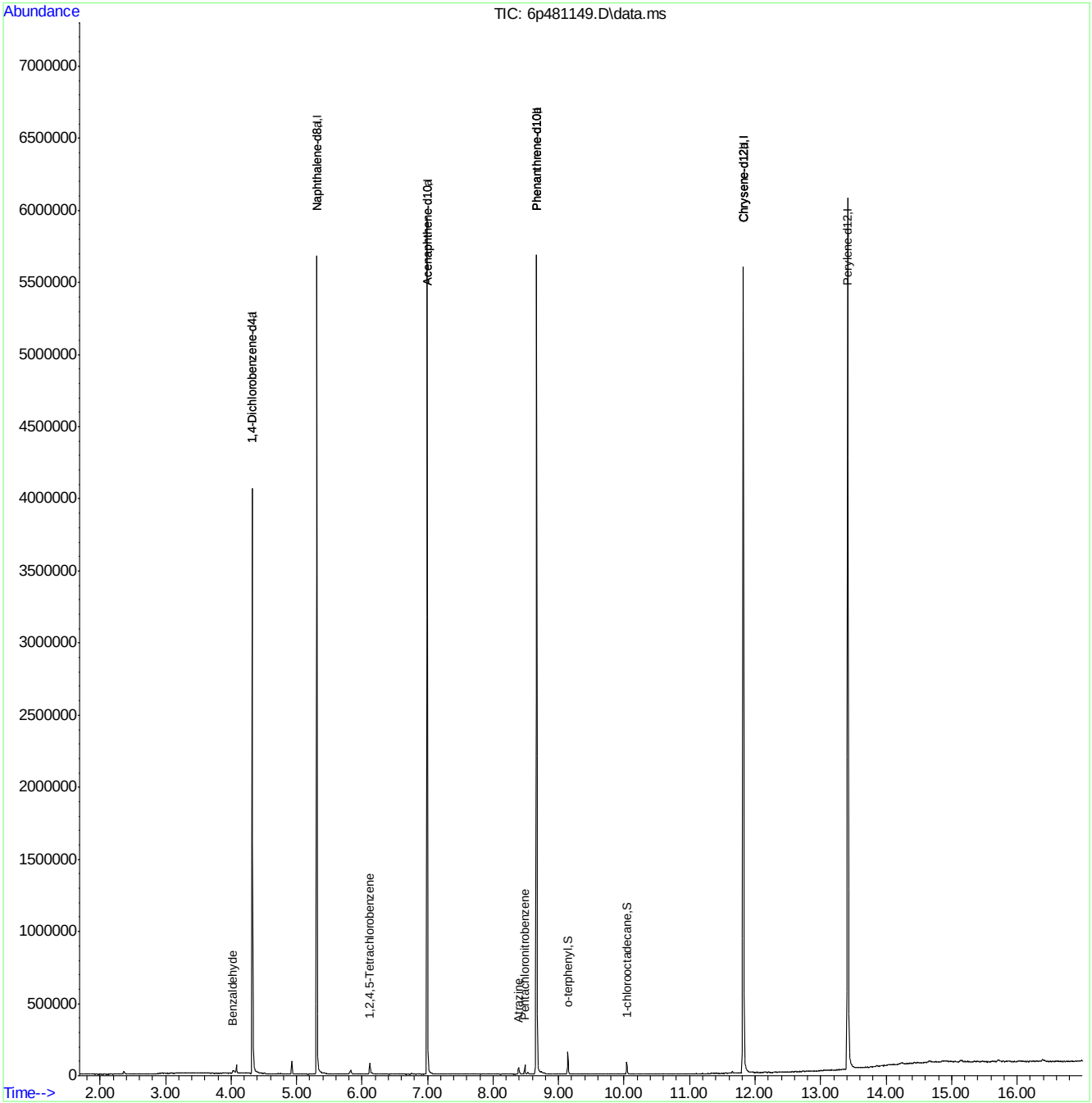
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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



SGS JC86837

Manual Integration Approval Summary

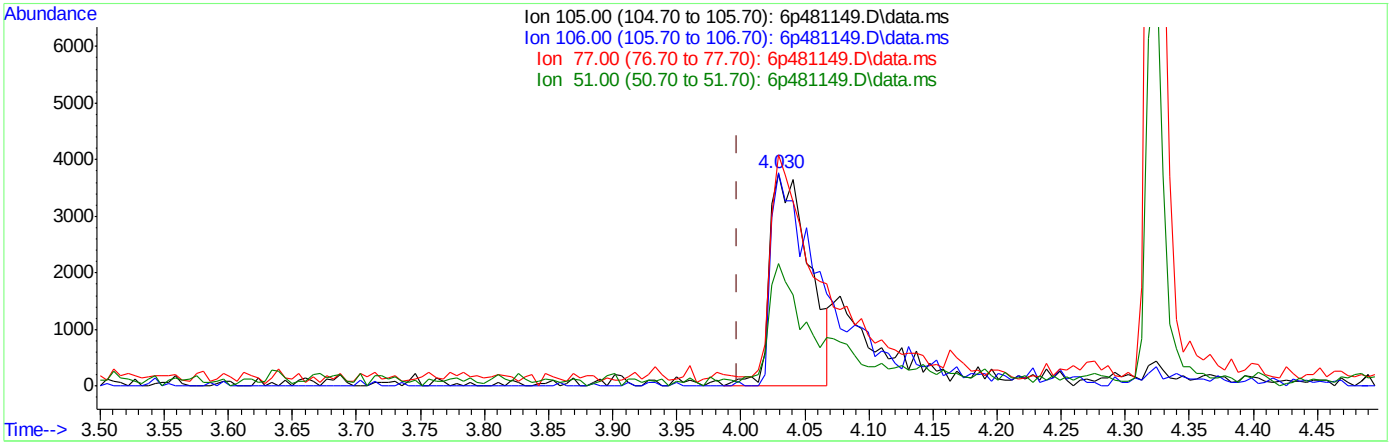
Sample Number:	E6P2563-IC2563	**Method:**	SW846 8270D
Lab FileID:	6P481149.D	**Analyst approved:**	04/17/19 09:11 Ying Li
Injection Time:	04/16/19 18:28	**Supervisor approved:**	04/17/19 13:47 Kristi Schollenberger

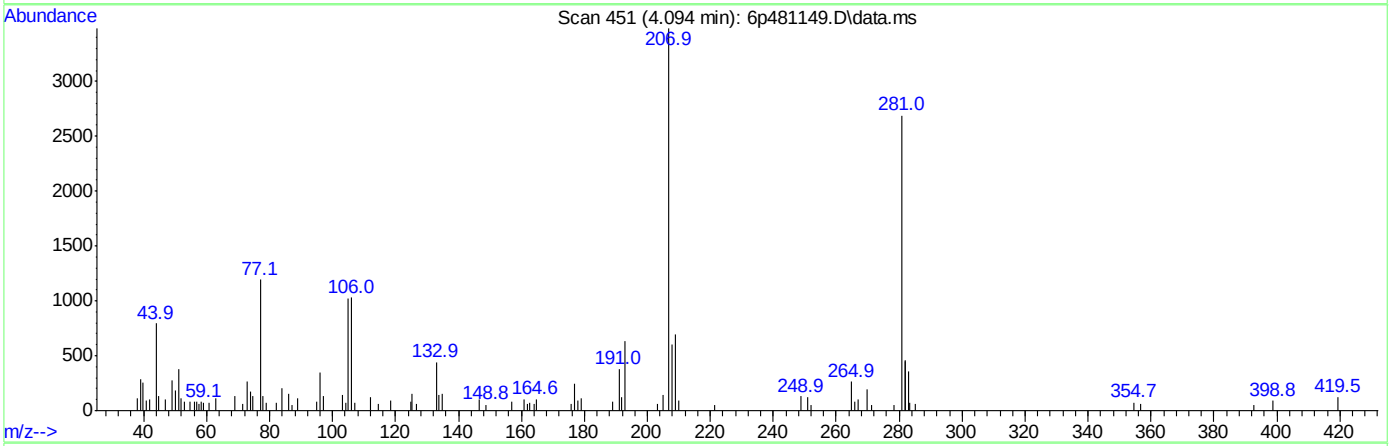
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzaldehyde	100-52-7		4.03	Split peak

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

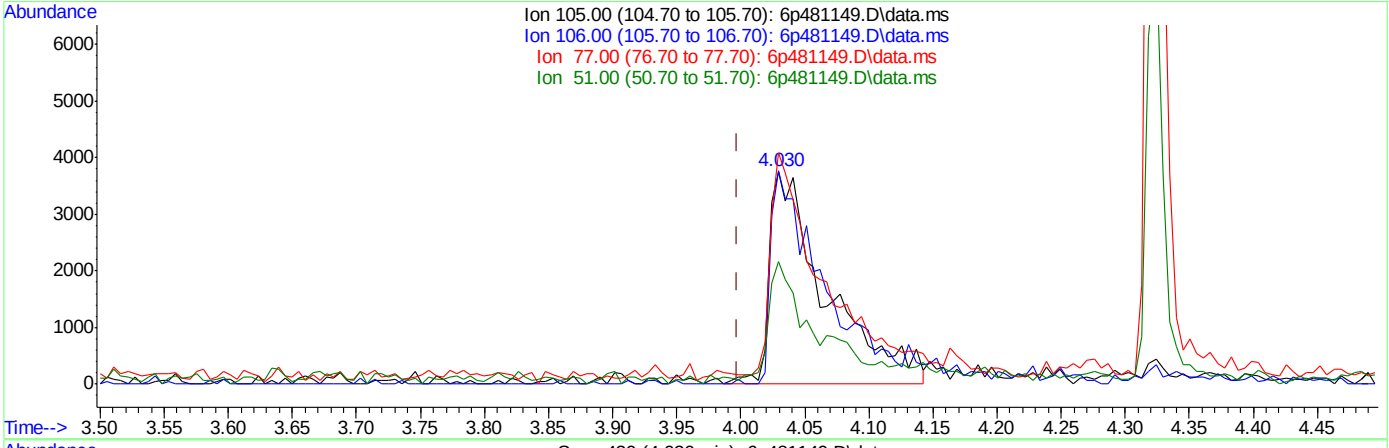
response 7980

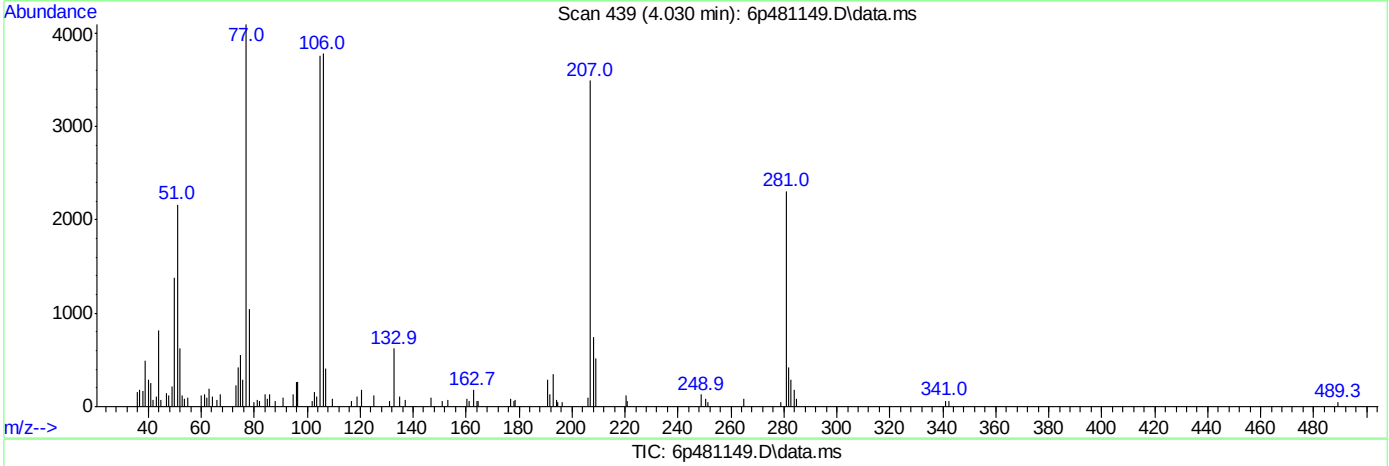
Ion	Exp%	Act%
105.00	100	100
106.00	102.50	96.85
77.00	100.50	100.75
51.00	48.00	54.56

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

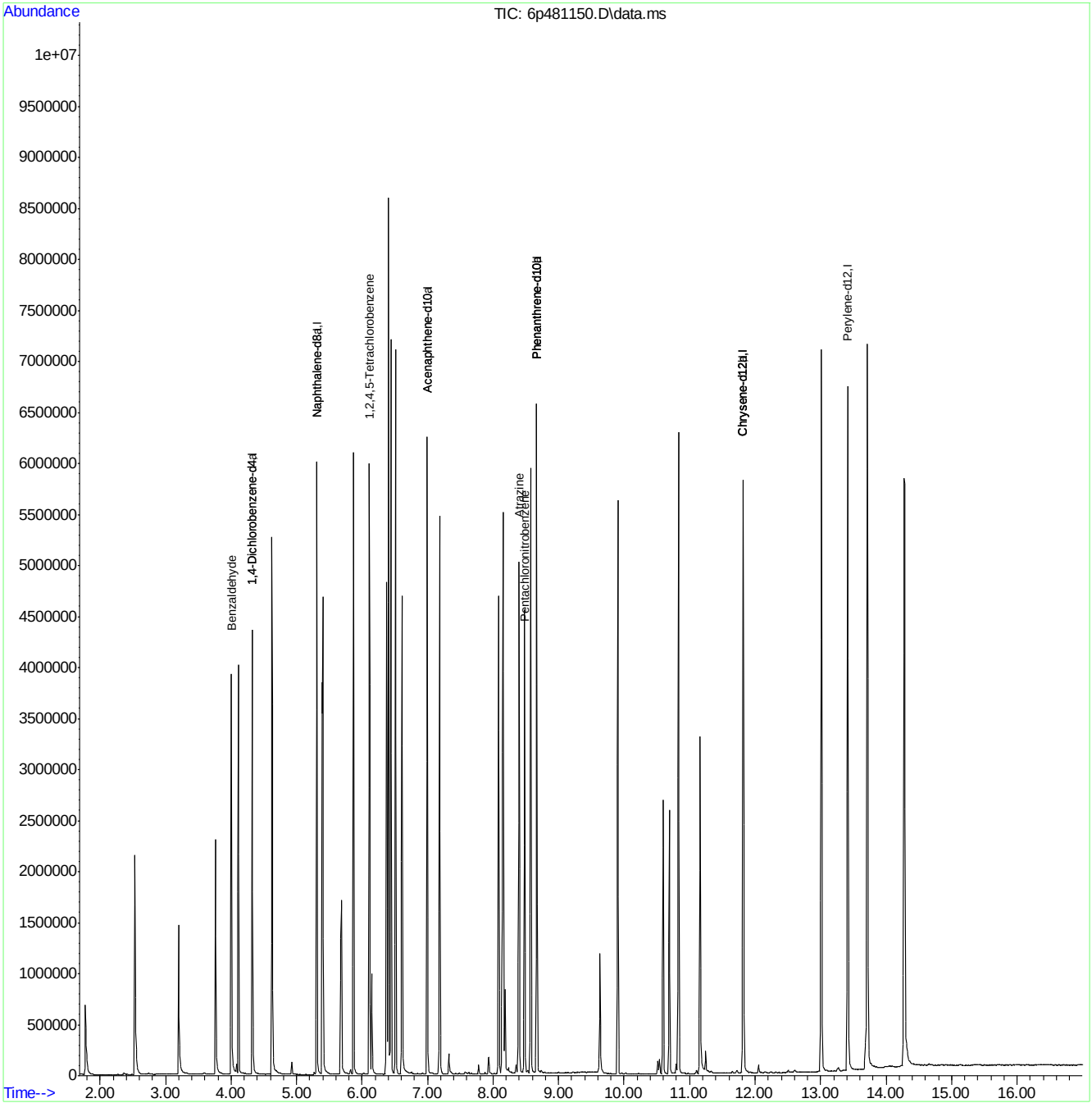
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	547737	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2162604	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1317782	40.00	ppm	0.00
69) Phenanthrene-d10	8.667	188	2463908	40.00	ppm	0.00
83) Chrysene-d12	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

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



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

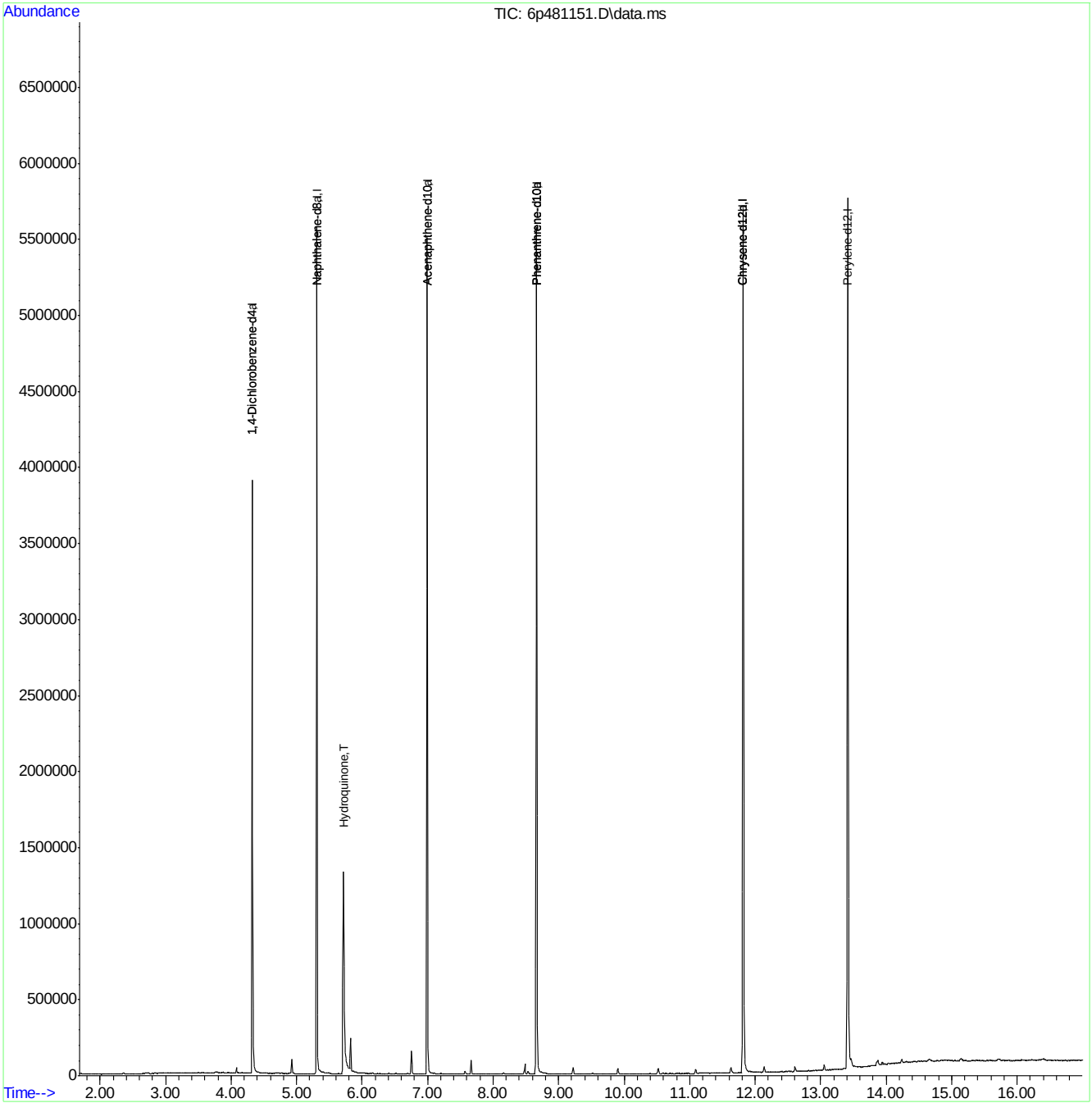
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.324	152	503646	40.00	ppm	0.00
24) Naphthalene-d8	5.308	136	2001178	40.00	ppm	0.00
47) Acenaphthene-d10	6.993	164	1073633	40.00	ppm	0.00
69) Phenanthrene-d10	8.662	188	2140755	40.00	ppm	0.00
83) Chrysene-d12	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

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



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481454.D
Acq On : 29 Apr 2019 9:37 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 29 10:52:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 29 10:51:12 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.167	152	790999	40.00	ppm	-0.16
24) Naphthalene-d8	5.140	136	3054780	40.00	ppm	-0.17
47) Acenaphthene-d10	6.803	164	1837417	40.00	ppm	-0.19
69) Phenanthrene-d10	8.462	188	3016274	40.00	ppm	-0.21
83) Chrysene-d12	11.612	240	2487442	40.00	ppm	-0.22
91) Perylene-d12	13.206	264	2608570	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4a	4.167	152	790999	40.00	ppm	-0.16
103) Acenaphthene-d10a	6.803	164	1837417	40.00	ppm	-0.19
105) Phenanthrene-d10a	8.462	188	3016274	40.00	ppm	-0.21
109) Chrysene-d12a	11.612	240	2487442	40.00	ppm	-0.17
111) Naphthalene-d8a	5.140	136	3054780	40.00	ppm	-0.17
113) Phenanthrene-d10b	8.462	188	3016274	40.00	ppm	-0.21
115) Chrysene-d12b	11.612	240	2487442	40.00	ppm	-0.21
System Monitoring Compounds						
5) 2-Fluorophenol	3.188	112	648663	28.03	ppm	-0.17
Spiked Amount 50.000			Recovery = 56.06%			
8) Phenol-d5	3.947	99	721209	25.53	ppm	-0.15
Spiked Amount 50.000			Recovery = 51.06%			
25) Nitrobenzene-d5	4.584	82	734110	28.88	ppm	-0.16
Spiked Amount 50.000			Recovery = 57.76%			
51) 2-Fluorobiphenyl	6.124	172	1593784	24.55	ppm	-0.18
Spiked Amount 50.000			Recovery = 49.10%			
73) 2,4,6-Tribromophenol	7.675	330	249447	25.70	ppm	-0.20
Spiked Amount 50.000			Recovery = 51.40%			
85) Terphenyl-d14	10.382	244	1528521	26.38	ppm	-0.21
Spiked Amount 50.000			Recovery = 52.76%			
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	1.572	88	269789	25.91	ppm	97
3) Pyridine	1.877	79	613284	25.89	ppm	98
4) N-Nitrosodimethylamine	1.856	74	365878	26.50	ppm	98
6) Indene	4.354	116	1179805	27.51	ppm	100
7) Cumene	3.557	105	1528430	24.88	ppm	98
9) Phenol	3.958	94	795222	23.06	ppm	88
10) Aniline	3.931	93	855678	27.81	ppm	85
11) bis(2-Chloroethyl)ether	3.985	93	663671	27.78	ppm	94
12) 2-Chlorophenol	4.022	128	733677	26.83	ppm	94
13) Decane	4.065	43	575794	27.43	ppm	99
14) 1,3-Dichlorobenzene	4.124	146	812430	26.06	ppm	99
15) 1,4-Dichlorobenzene	4.177	146	811821	25.44	ppm	99
16) Benzyl alcohol	4.290	108	439819	29.61	ppm	95
17) 1,2-Dichlorobenzene	4.290	146	766948	26.16	ppm	99
18) Acetophenone	4.471	105	1009053	27.45	ppm	99
19) 2-Methylphenol	4.391	108	656895	28.30	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.381	121	225549	26.47	ppm	95
21) 3&4-Methylphenol	4.509	108	685665	28.09	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481454.D
Acq On : 29 Apr 2019 9:37 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 29 10:52:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 29 10:51:12 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.482	70	465047	28.28	ppm		97
23) Hexachloroethane	4.536	201	247381	22.21	ppm		96
26) Nitrobenzene	4.594	77	734574	28.40	ppm		93
27) Quinoline	5.456	129	1288428	23.25	ppm		97
28) Isophorone	4.782	82	1242566	28.11	ppm		98
29) 2-Nitrophenol	4.840	139	405327	26.80	ppm		80
30) 2,4-Dimethylphenol	4.899	107	656908	28.45	ppm		98
31) Benzoic acid	5.038	105	566243	24.27	ppm		98
32) bis(2-Chloroethoxy)met...	4.958	93	692523	24.93	ppm		97
33) 2,4-Dichlorophenol	5.049	162	568385	24.91	ppm		99
34) 2,6-Dichlorophenol	5.220	162	547157	24.21	ppm		97
35) 1,3,5-Trichlorobenzene	4.846	180	648337	23.98	ppm		94
36) 1,2,4-Trichlorobenzene	5.097	180	566577	21.69	ppm		98
37) 1,2,3-Trichlorobenzene	5.279	180	564895	21.72	ppm		96
38) Naphthalene	5.156	128	2043552	25.69	ppm		98
39) 4-Chloroaniline	5.215	127	782616	24.42	ppm		99
40) 2,3-Dichloroaniline	6.039	161	678379	23.43	ppm		97
41) Caprolactam	5.530	55	214729	21.99	ppm		98
42) Hexachlorobutadiene	5.268	225	302098	20.32	ppm		100
43) 4-Chloro-3-methylphenol	5.675	107	560932	23.95	ppm		91
44) 2-Methylnaphthalene	5.766	141	1042810	23.17	ppm		99
45) 1-Methylnaphthalene	5.857	141	1182213	23.51	ppm		99
46) Dimethylnaphthalene	6.376	156	1209444	22.61	ppm		97
48) Hexachlorocyclopentadiene	5.916	237	446809	40.51	ppm		97
49) 2,4,6-Trichlorophenol	6.055	196	374115	21.83	ppm		99
50) 2,4,5-Trichlorophenol	6.103	196	400313	21.96	ppm		99
52) 2-Chloronaphthalene	6.231	162	1239171	22.87	ppm		96
53) Biphenyl	6.215	154	1715220	24.40	ppm		98
54) 2-Nitroaniline	6.354	65	345062	24.50	ppm		94
55) Dimethylphthalate	6.547	163	1634894	25.98	ppm		99
56) Acenaphthylene	6.648	152	2306907	27.59	ppm		99
57) 2,6-Dinitrotoluene	6.611	165	385581	27.09	ppm		92
58) 3-Nitroaniline	6.787	138	419239	27.09	ppm		92
59) Acenaphthene	6.836	153	1502968	27.07	ppm		99
60) 2,4-Dinitrophenol	6.921	184	272508	30.95	ppm		86
61) 4-Nitrophenol	7.039	109	225328	28.41	ppm	#	1
62) Dibenzofuran	7.023	168	2016413	26.09	ppm		87
63) 2,4-Dinitrotoluene	7.049	165	526710	26.65	ppm		72
64) 2,3,4,6-Tetrachlorophenol	7.183	232	350668	23.50	ppm		90
65) Diethylphthalate	7.317	149	1653239	26.64	ppm		97
66) Fluorene	7.397	166	1651444	26.32	ppm		99
67) 4-Chlorophenyl-phenyle...	7.413	204	714648	22.47	ppm		90
68) 4-Nitroaniline	7.456	138	356313	21.74	ppm		89
70) 4,6-Dinitro-2-methylph...	7.509	198	230800	19.81	ppm	#	58
71) n-Nitrosodiphenylamine	7.552	169	1134577	27.23	ppm		96
72) 1,2-Diphenylhydrazine	7.590	77	1547068	32.79	ppm		93
74) 4-Bromophenyl-phenylether	7.964	248	411454	25.39	ppm		92
75) Hexachlorobenzene	8.034	284	475843	24.99	ppm		95
76) Pentachlorophenol	8.280	266	563545	47.03	ppm		98
77) Phenanthrene	8.488	178	2246292	27.74	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481454.D
Acq On : 29 Apr 2019 9:37 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 29 10:52:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 29 10:51:12 2019
Response via : Initial Calibration

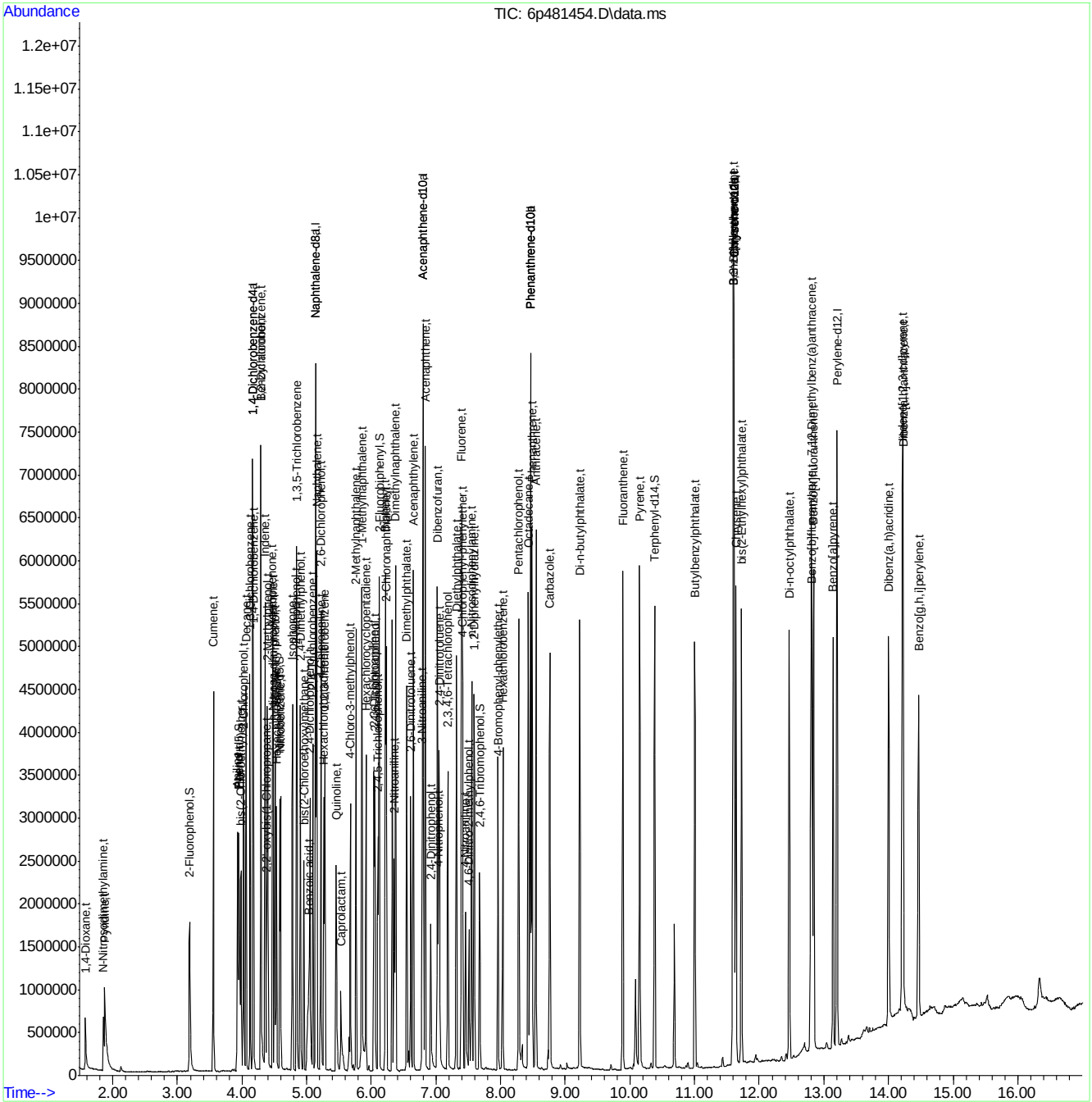
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.547	178	2356228	29.01	ppm	99
79) Carbazole	8.761	167	1942155	25.26	ppm	100
80) Di-n-butylphthalate	9.226	149	2795479	31.13	ppm	98
81) Fluoranthene	9.890	202	2236158	25.42	ppm	97
82) Octadecane	8.429	57	890011	32.79	ppm	99
84) Pyrene	10.152	202	2364210	28.53	ppm	100
86) Butylbenzylphthalate	11.002	149	1219671	34.15	ppm	88
87) Benzo[a]anthracene	11.601	228	2097292	26.47	ppm	98
88) 3,3'-Dichlorobenzidine	11.601	252	756824	25.43	ppm	98
89) Chrysene	11.644	228	1993326	25.66	ppm	99
90) bis(2-Ethylhexyl)phtha...	11.724	149	1679376	34.01	ppm	93
92) Di-n-octylphthalate	12.468	149	2854667	36.74	ppm	99
93) Benzo[b]fluoranthene	12.815	252	2034703	25.54	ppm	97
94) Benzo[k]fluoranthene	12.842	252	1932028	27.39	ppm	95
95) Benzo[a]pyrene	13.142	252	1796700	27.45	ppm	96
96) Indeno[1,2,3-cd]pyrene	14.217	276	2389662	27.34	ppm	93
97) Dibenz(a,h)acridine	14.003	279	1820302	28.36	ppm	98
98) Dibenz[a,h]anthracene	14.227	278	2107336	27.21	ppm	96
99) 7,12-Dimethylbenz(a)an...	12.805	256	964133	27.05	ppm	96
100) Benzo[g,h,i]perylene	14.468	276	1838459	26.97	ppm	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481454.D
Acq On : 29 Apr 2019 9:37 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 29 10:52:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 29 10:51:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481455.D
Acq On : 29 Apr 2019 10:01 am
Operator : angelar
Sample : cc2563-25
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 29 10:56:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:51:12 2019
QLast Update : Mon Apr 29 10:54:56 2019
Response via : Initial Calibration

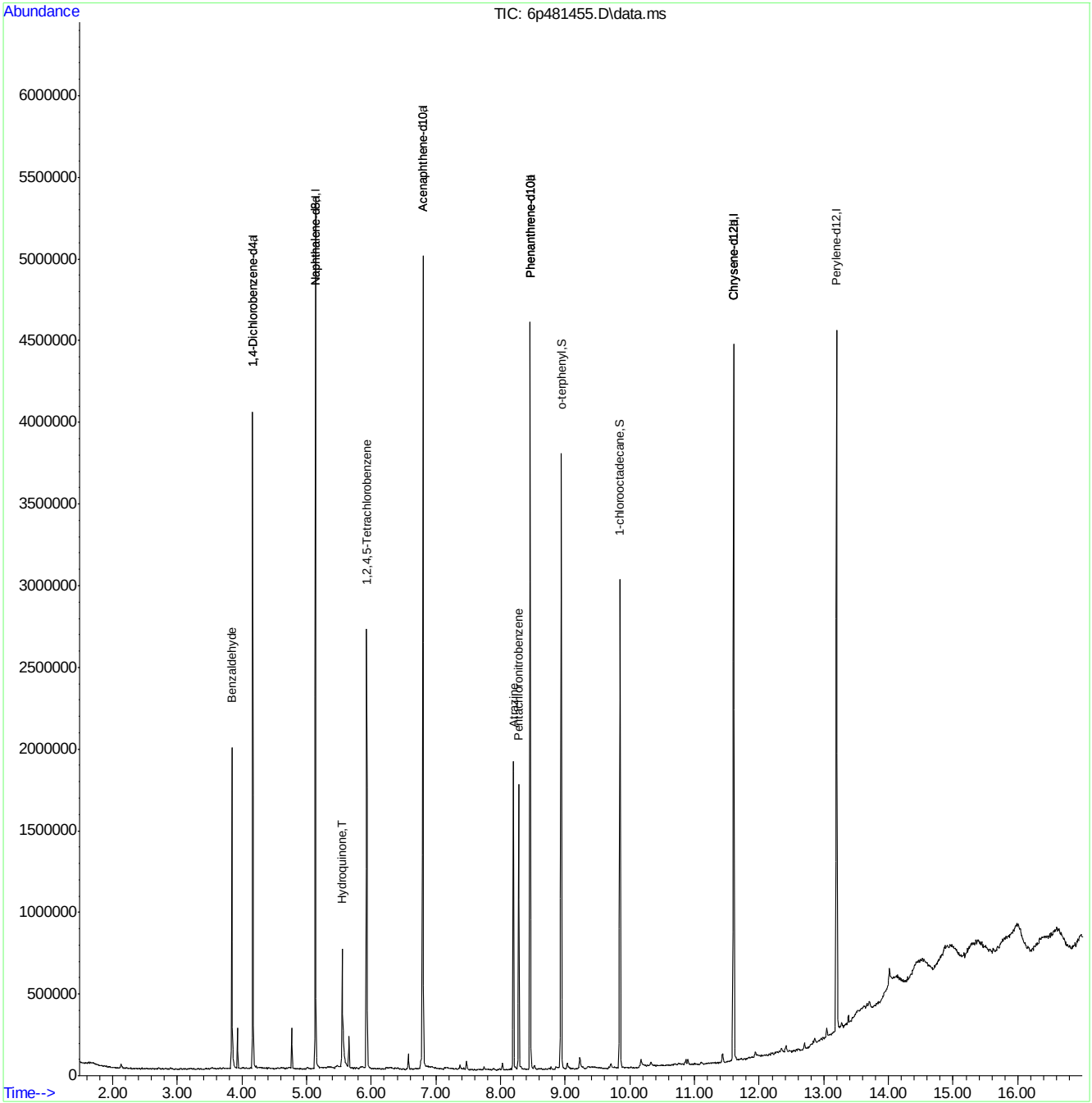
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.167	152	481131	40.00	ppm	-0.16
24) Naphthalene-d8	5.135	136	1848502	40.00	ppm	-0.18
47) Acenaphthene-d10	6.798	164	1041714	40.00	ppm	-0.20
69) Phenanthrene-d10	8.456	188	1691442	40.00	ppm	-0.21
83) Chrysene-d12	11.607	240	1555059	40.00	ppm	-0.22
91) Perylene-d12	13.200	264	1596472	40.00	ppm	-0.22
101) 1,4-Dichlorobenzene-d4a	4.167	152	481131	40.00	ppm	0.00
103) Acenaphthene-d10a	6.798	164	1041714	40.00	ppm	-0.19
105) Phenanthrene-d10a	8.456	188	1691442	40.00	ppm	-0.21
109) Chrysene-d12a	11.607	240	1555059	40.00	ppm	-0.18
111) Naphthalene-d8a	5.135	136	1848502	40.00	ppm	-0.17
113) Phenanthrene-d10b	8.456	188	1691442	40.00	ppm	-0.21
115) Chrysene-d12b	11.607	240	1555059	40.00	ppm	-0.22
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	9.847	57	352962	34.92	ppm	-0.19
107) o-terphenyl	8.938	230	684774	27.75	ppm	-0.21
Target Compounds						Qvalue
102) Benzaldehyde	3.840	105	347021	29.06	ppm	94
104) 1,2,4,5-Tetrachloroben...	5.926	216	362492	26.07	ppm	99
108) Atrazine	8.200	215	128637	26.34	ppm	98
112) Hydroquinone	5.547	110	389089	27.41	ppm	98
114) Pentachloronitrobenzene	8.280	295	52357	25.29	ppm	88

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2576\
Data File : 6p481455.D
Acq On : 29 Apr 2019 10:01 am
Operator : angelar
Sample : cc2563-25
Misc : op17006,e6p2576,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 29 10:56:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 29 10:51:12 2019
QLast Update : Mon Apr 29 10:54:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481519.D
Acq On : 1 May 2019 9:27 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 01 15:50:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.150	152	793046	40.00	ppm	-0.17
24) Naphthalene-d8	5.119	136	3141602	40.00	ppm	-0.19
47) Acenaphthene-d10	6.771	164	1824729	40.00	ppm	-0.23
69) Phenanthrene-d10	8.429	188	3078736	40.00	ppm	-0.24
83) Chrysene-d12	11.580	240	2622506	40.00	ppm	-0.25
91) Perylene-d12	13.168	264	2824895	40.00	ppm	-0.25
101) 1,4-Dichlorobenzene-d4a	4.150	152	793046	40.00	ppm	-0.17
103) Acenaphthene-d10a	6.771	164	1824729	40.00	ppm	-0.22
105) Phenanthrene-d10a	8.429	188	3078736	40.00	ppm	-0.24
109) Chrysene-d12a	11.580	240	2622506	40.00	ppm	-0.21
111) Naphthalene-d8a	5.119	136	3141602	40.00	ppm	-0.19
113) Phenanthrene-d10b	8.429	188	3078736	40.00	ppm	-0.24
115) Chrysene-d12b	11.580	240	2622506	40.00	ppm	-0.24
System Monitoring Compounds						
5) 2-Fluorophenol	3.166	112	662779	28.57	ppm	-0.19
Spiked Amount 50.000			Recovery = 57.14%			
8) Phenol-d5	3.931	99	811484	28.65	ppm	-0.17
Spiked Amount 50.000			Recovery = 57.30%			
25) Nitrobenzene-d5	4.568	82	757851	28.99	ppm	-0.17
Spiked Amount 50.000			Recovery = 57.98%			
51) 2-Fluorobiphenyl	6.097	172	1614378	25.04	ppm	-0.21
Spiked Amount 50.000			Recovery = 50.08%			
73) 2,4,6-Tribromophenol	7.648	330	246606	24.89	ppm	-0.23
Spiked Amount 50.000			Recovery = 49.78%			
85) Terphenyl-d14	10.350	244	1546172	25.31	ppm	-0.24
Spiked Amount 50.000			Recovery = 50.62%			
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	1.556	88	272901	26.14	ppm	98
3) Pyridine	1.856	79	679894	28.63	ppm	95
4) N-Nitrosodimethylamine	1.835	74	384887	27.81	ppm	95
6) Indene	4.338	116	1187748	27.62	ppm	99
7) Cumene	3.541	105	1749713	28.40	ppm	99
9) Phenol	3.942	94	888978	25.71	ppm	90
10) Aniline	3.915	93	1027057	33.29	ppm	96
11) bis(2-Chloroethyl)ether	3.969	93	642687	26.83	ppm	99
12) 2-Chlorophenol	4.006	128	736693	26.87	ppm	96
13) Decane	4.049	43	583900	27.74	ppm	99
14) 1,3-Dichlorobenzene	4.108	146	804042	25.72	ppm	98
15) 1,4-Dichlorobenzene	4.161	146	824760	25.78	ppm	97
16) Benzyl alcohol	4.273	108	436709	29.33	ppm	86
17) 1,2-Dichlorobenzene	4.273	146	778348	26.48	ppm	99
18) Acetophenone	4.455	105	1022615	27.75	ppm	97
19) 2-Methylphenol	4.375	108	669814	28.78	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.364	121	221841	25.97	ppm	88
21) 3&4-Methylphenol	4.493	108	692255	28.29	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481519.D
Acq On : 1 May 2019 9:27 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 01 15:50:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22)	n-Nitroso-di-n-propyla...	4.466	70	471509	28.60	ppm		94
23)	Hexachloroethane	4.519	201	259947	23.28	ppm		99
26)	Nitrobenzene	4.578	77	757526	28.47	ppm		91
27)	Quinoline	5.434	129	1501254	26.34	ppm		98
28)	Isophorone	4.766	82	1289507	28.37	ppm		99
29)	2-Nitrophenol	4.824	139	418210	26.89	ppm		90
30)	2,4-Dimethylphenol	4.883	107	713193	30.04	ppm		99
31)	Benzoic acid	5.017	105	620112	25.85	ppm		96
32)	bis(2-Chloroethoxy)met...	4.937	93	769487	26.94	ppm		98
33)	2,4-Dichlorophenol	5.028	162	606118	25.82	ppm		96
34)	2,6-Dichlorophenol	5.204	162	606996	26.11	ppm		99
35)	1,3,5-Trichlorobenzene	4.830	180	659762	23.72	ppm		96
36)	1,2,4-Trichlorobenzene	5.081	180	636516	23.69	ppm		98
37)	1,2,3-Trichlorobenzene	5.263	180	624475	23.35	ppm		98
38)	Naphthalene	5.135	128	2159953	26.40	ppm		99
39)	4-Chloroaniline	5.199	127	898112	27.25	ppm		99
40)	2,3-Dichloroaniline	6.017	161	735744	24.71	ppm		95
41)	Caprolactam	5.514	55	280275	27.91	ppm		99
42)	Hexachlorobutadiene	5.247	225	350532	22.92	ppm		99
43)	4-Chloro-3-methylphenol	5.653	107	678344	28.16	ppm		87
44)	2-Methylnaphthalene	5.739	141	1195665	25.84	ppm		97
45)	1-Methylnaphthalene	5.830	141	1377760	26.65	ppm		99
46)	Dimethylnaphthalene	6.349	156	1346363	24.48	ppm		95
48)	Hexachlorocyclopentadiene	5.894	237	411447	38.14	ppm		99
49)	2,4,6-Trichlorophenol	6.033	196	408583	24.00	ppm		98
50)	2,4,5-Trichlorophenol	6.076	196	442263	24.43	ppm		97
52)	2-Chloronaphthalene	6.204	162	1354132	25.16	ppm		93
53)	Biphenyl	6.194	154	1855596	26.58	ppm		99
54)	2-Nitroaniline	6.327	65	436258	31.19	ppm	#	81
55)	Dimethylphthalate	6.520	163	1603403	25.65	ppm		99
56)	Acenaphthylene	6.622	152	2260712	27.22	ppm		99
57)	2,6-Dinitrotoluene	6.584	165	371748	26.30	ppm		87
58)	3-Nitroaniline	6.761	138	425059	27.66	ppm		89
59)	Acenaphthene	6.809	153	1479639	26.84	ppm		100
60)	2,4-Dinitrophenol	6.894	184	303022	34.12	ppm		87
61)	4-Nitrophenol	7.012	109	212158	26.94	ppm	#	1
62)	Dibenzofuran	6.996	168	1999443	26.05	ppm		87
63)	2,4-Dinitrotoluene	7.028	165	521480	26.57	ppm		84
64)	2,3,4,6-Tetrachlorophenol	7.156	232	348426	23.51	ppm		94
65)	Diethylphthalate	7.290	149	1613369	26.18	ppm		98
66)	Fluorene	7.370	166	1626953	26.11	ppm		100
67)	4-Chlorophenyl-phenyle...	7.386	204	708637	22.43	ppm		94
68)	4-Nitroaniline	7.435	138	380541	23.39	ppm		94
70)	4,6-Dinitro-2-methylph...	7.488	198	247556	20.82	ppm		92
71)	n-Nitrosodiphenylamine	7.525	169	1142507	26.86	ppm		98
72)	1,2-Diphenylhydrazine	7.563	77	1510088	31.36	ppm		96
74)	4-Bromophenyl-phenylether	7.932	248	411897	24.90	ppm		86
75)	Hexachlorobenzene	8.001	284	472239	24.30	ppm		89
76)	Pentachlorophenol	8.248	266	548258	45.00	ppm		98
77)	Phenanthrene	8.456	178	2233163	27.02	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481519.D
Acq On : 1 May 2019 9:27 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 01 15:50:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration

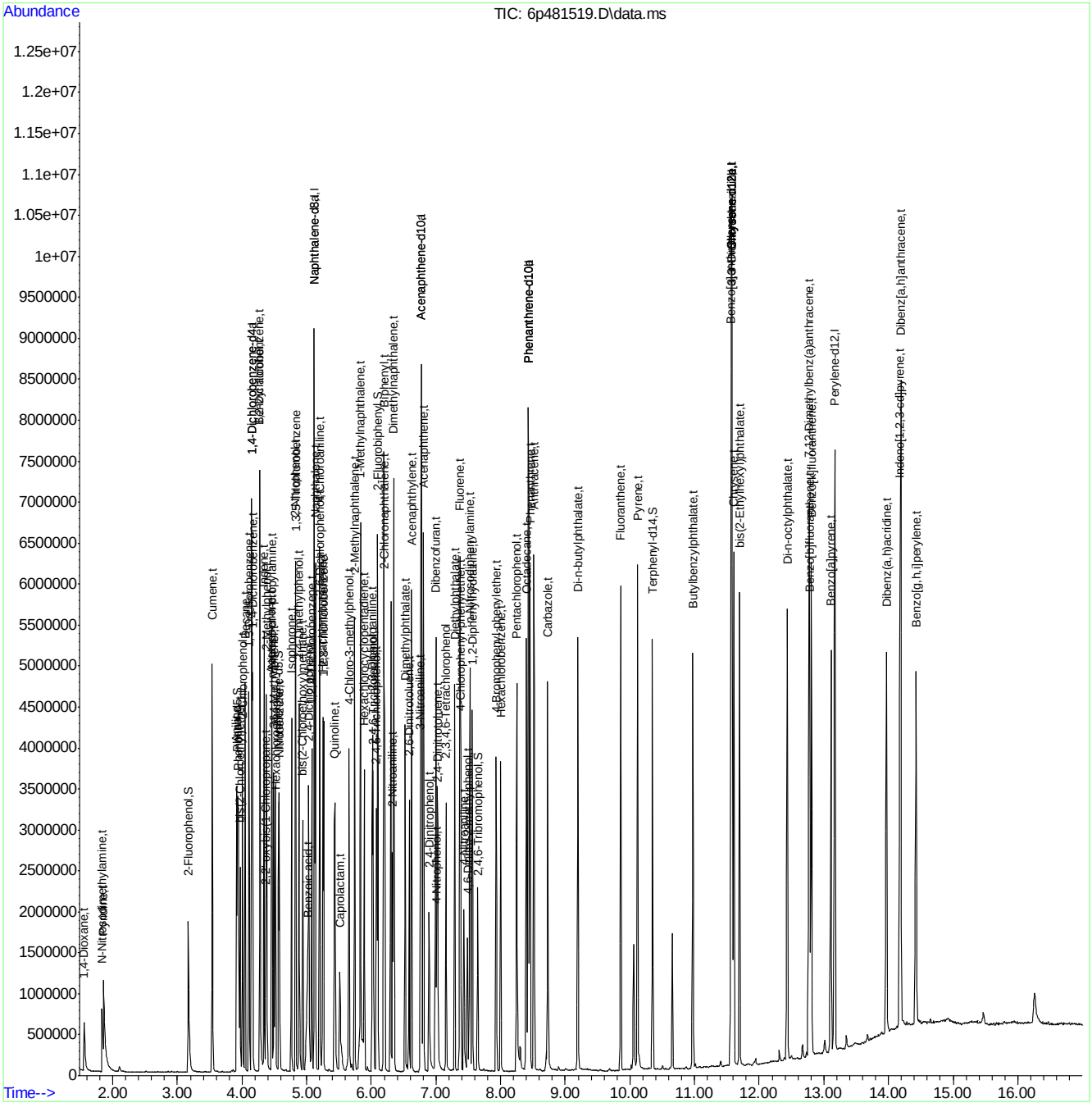
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.515	178	2343820	28.27	ppm	99
79) Carbazole	8.729	167	2058098	26.23	ppm	100
80) Di-n-butylphthalate	9.194	149	2762858	30.14	ppm	99
81) Fluoranthene	9.857	202	2293301	25.54	ppm	97
82) Octadecane	8.397	57	884322	31.92	ppm	98
84) Pyrene	10.120	202	2387661	27.33	ppm	99
86) Butylbenzylphthalate	10.975	149	1255547	33.34	ppm	93
87) Benzo[a]anthracene	11.564	228	2175438	26.04	ppm	99
88) 3,3'-Dichlorobenzidine	11.569	252	805314	25.66	ppm	98
89) Chrysene	11.606	228	2078801	25.38	ppm	100
90) bis(2-Ethylhexyl)phtha...	11.697	149	1732165	33.27	ppm	96
92) Di-n-octylphthalate	12.435	149	2964349	35.23	ppm	98
93) Benzo[b]fluoranthene	12.783	252	2234417	25.90	ppm	96
94) Benzo[k]fluoranthene	12.810	252	2026163	26.53	ppm	96
95) Benzo[a]pyrene	13.109	252	1907744	26.91	ppm	97
96) Indeno[1,2,3-cd]pyrene	14.179	276	2602985	27.50	ppm	93
97) Dibenz(a,h)acridine	13.971	279	1922378	27.65	ppm	96
98) Dibenz[a,h]anthracene	14.190	278	2297060	27.39	ppm	95
99) 7,12-Dimethylbenz(a)an...	12.772	256	1035515	26.86	ppm	97
100) Benzo[g,h,i]perylene	14.425	276	1978531	26.81	ppm	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481519.D
Acq On : 1 May 2019 9:27 am
Operator : angelar
Sample : cc2562-25
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 01 15:50:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481520.D
Acq On : 1 May 2019 9:51 am
Operator : angelar
Sample : cc2563-25
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 01 15:52:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration

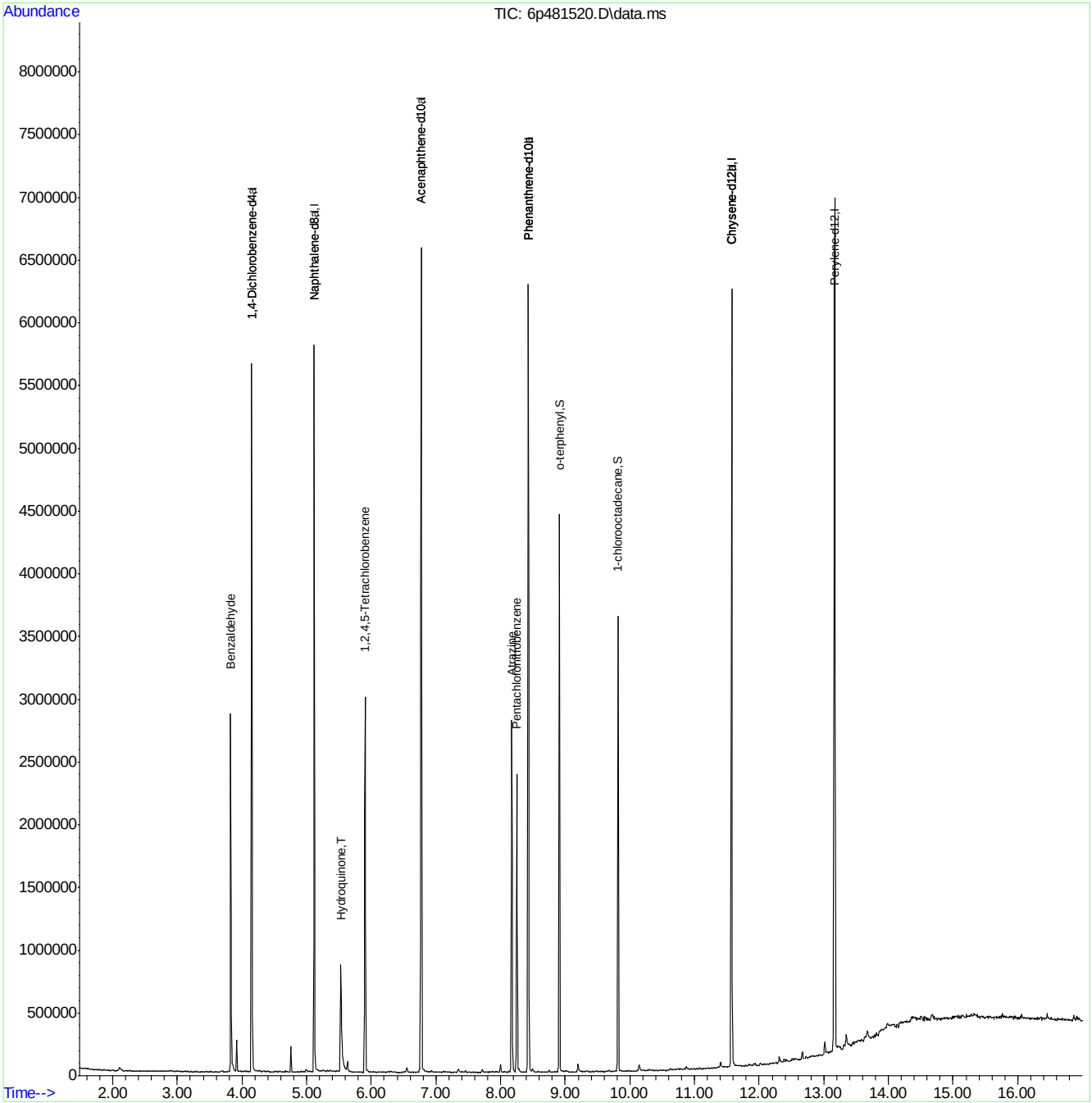
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.151	152	687100	40.00	ppm	-0.17
24) Naphthalene-d8	5.119	136	2265587	40.00	ppm	-0.19
47) Acenaphthene-d10	6.771	164	1309504	40.00	ppm	-0.23
69) Phenanthrene-d10	8.429	188	2264009	40.00	ppm	-0.24
83) Chrysene-d12	11.574	240	2108191	40.00	ppm	-0.25
91) Perylene-d12	13.168	264	2592815	40.00	ppm	-0.25
101) 1,4-Dichlorobenzene-d4a	4.151	152	687100	40.00	ppm	-0.17
103) Acenaphthene-d10a	6.771	164	1309504	40.00	ppm	-0.22
105) Phenanthrene-d10a	8.429	188	2264009	40.00	ppm	-0.24
109) Chrysene-d12a	11.574	240	2108191	40.00	ppm	-0.21
111) Naphthalene-d8a	5.119	136	2265587	40.00	ppm	-0.19
113) Phenanthrene-d10b	8.429	188	2264009	40.00	ppm	-0.24
115) Chrysene-d12b	11.574	240	2108191	40.00	ppm	-0.25
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	9.815	57	446902	33.04	ppm	-0.23
107) o-terphenyl	8.911	230	871448	26.39	ppm	-0.23
Target Compounds						Qvalue
102) Benzaldehyde	3.824	105	451829	26.50	ppm	96
104) 1,2,4,5-Tetrachloroben...	5.905	216	434595	24.86	ppm	98
108) Atrazine	8.173	215	175645	26.85	ppm	91
112) Hydroquinone	5.525	110	532375	30.60	ppm	98
114) Pentachloronitrobenzene	8.253	295	73554	26.54	ppm	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2578\
Data File : 6p481520.D
Acq On : 1 May 2019 9:51 am
Operator : angelar
Sample : cc2563-25
Misc : op17006,e6p2578,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 01 15:52:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\M6P2562.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuMon Apr 22 11:56:54 2019
QLast Update : Mon Apr 22 11:56:54 2019
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
04/16/19 10:44

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	209799	40.00	ppm	0.00
24) Naphthalene-d8	5.699	136	772072	40.00	ppm	0.00
47) Acenaphthene-d10	7.996	164	456258	40.00	ppm	0.00
69) Phenanthrene-d10	10.581	188	962273	40.00	ppm	0.00
83) Chrysene-d12	15.713	240	751600	40.00	ppm	0.00
91) Perylene-d12	18.309	264	938114	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	209799	40.00	ppm	0.00
103) Acenaphthene-d10a	7.996	164	456258	40.00	ppm	0.00
106) Chrysene-d12a	15.713	240	751600	40.00	ppm	0.00
108) Chrysene-d12b	15.713	240	751600	40.00	ppm	0.00
110) Phenanthrene-d10a	10.581	188	962273	40.00	ppm	0.00
113) Naphthalene-d8a	5.699	136	772072	40.00	ppm	0.00
115) Chrysene-d12c	15.713	240	751600	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.605	112	861150	96.77	ppm	0.00
Spiked Amount 50.000			Recovery =	193.54%		
8) Phenol-d5	4.332	99	1016962	94.70	ppm	0.00
Spiked Amount 50.000			Recovery =	189.40%		
25) Nitrobenzene-d5	5.031	82	793175	96.11	ppm	0.00
Spiked Amount 50.000			Recovery =	192.22%		
51) 2-Fluorobiphenyl	7.008	172	1465098	93.29	ppm	0.00
Spiked Amount 50.000			Recovery =	186.58%		
73) 2,4,6-Tribromophenol	9.331	330	322547	90.84	ppm	0.00
Spiked Amount 50.000			Recovery =	181.68%		
85) Terphenyl-d14	13.743	244	2066039	99.57	ppm	0.00
Spiked Amount 50.000			Recovery =	199.14%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.120	88	460644	105.26	ppm	98
3) Pyridine	2.441	79	1091159	104.74	ppm	99
4) N-Nitrosodimethylamine	2.409	42	392524	103.03	ppm	99
6) Indene	4.791	116	983600	91.81	ppm	99
7) Cumene	3.995	105	1784695	91.79	ppm	99
9) Phenol	4.342	94	947265	89.09	ppm	81
10) Aniline	4.348	93	813831	88.85	ppm	93
11) bis(2-Chloroethyl)ether	4.396	93	683763	95.37	ppm	99
12) 2-Chlorophenol	4.438	128	692304	93.29	ppm	98
13) Decane	4.481	43	465485	89.48	ppm	97
14) 1,3-Dichlorobenzene	4.545	146	746108	89.90	ppm	97
15) 1,4-Dichlorobenzene	4.604	146	706031	92.10	ppm	98
16) Benzyl alcohol	4.700	108	449881	96.66	ppm	99
17) 1,2-Dichlorobenzene	4.722	146	676103	88.77	ppm	99
18) Acetophenone	4.909	105	848333	92.65	ppm	97
19) 2-Methylphenol	4.796	108	550039	91.48	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.807	121	175370	93.95	ppm		95
21) 3&4-Methylphenol	4.914	108	551887	90.48	ppm	#	84
22) n-Nitroso-di-n-propyla...	4.919	70	406599	90.62	ppm		100
23) Hexachloroethane	4.994	201	301890	91.63	ppm		89
26) Nitrobenzene	5.053	77	727144	92.49	ppm		95
27) Quinoline	6.094	129	1401789	93.50	ppm		98
28) Isophorone	5.261	82	1372049	91.69	ppm		97
29) 2-Nitrophenol	5.330	139	370281	88.87	ppm		96
30) 2,4-Dimethylphenol	5.373	107	660434	98.24	ppm		97
31) Benzoic acid	5.523	105	494490	86.46	ppm		98
32) bis(2-Chloroethoxy)met...	5.459	93	834296	94.81	ppm		99
33) 2,4-Dichlorophenol	5.560	162	585406	89.44	ppm		99
34) 2,6-Dichlorophenol	5.790	162	534178	91.20	ppm		98
35) 1,3,5-Trichlorobenzene	5.346	180	657712	87.30	ppm		99
36) 1,2,4-Trichlorobenzene	5.646	180	671871	89.26	ppm		98
37) 1,2,3-Trichlorobenzene	5.875	180	608659	89.96	ppm		99
38) Naphthalene	5.720	128	1682052	91.21	ppm		99
39) 4-Chloroaniline	5.779	127	739698	88.40	ppm		98
40) 2,3-Dichloroaniline	6.879	161	732442	90.75	ppm		98
41) Caprolactam	6.196	55	314353m	98.30	ppm		
42) Hexachlorobutadiene	5.865	225	410798	91.11	ppm		99
43) 4-Chloro-3-methylphenol	6.345	107	664854	92.63	ppm		99
44) 2-Methylnaphthalene	6.511	141	1060287	89.46	ppm		99
45) 1-Methylnaphthalene	6.634	142	1332258	89.87	ppm		98
46) Dimethylnaphthalene	7.371	156	1163933	89.71	ppm		100
48) Hexachlorocyclopentadiene	6.730	237	875753	185.52	ppm		99
49) 2,4,6-Trichlorophenol	6.890	196	445550	91.61	ppm		98
50) 2,4,5-Trichlorophenol	6.938	196	494836	93.18	ppm		96
52) 2-Chloronaphthalene	7.162	162	1170343	92.62	ppm		98
53) Biphenyl	7.146	154	1603724	92.63	ppm		99
54) 2-Nitroaniline	7.317	65	427892	100.22	ppm		97
55) Dimethylphthalate	7.622	163	1578760	94.05	ppm		99
56) Acenaphthylene	7.766	152	1956395	92.74	ppm		99
57) 2,6-Dinitrotoluene	7.697	165	349646	92.84	ppm		95
58) 3-Nitroaniline	7.953	138	420081	97.90	ppm		97
59) Acenaphthene	8.049	153	1233364	94.71	ppm		97
60) 2,4-Dinitrophenol	8.124	184	369947	193.40	ppm		94
61) 4-Nitrophenol	8.279	109	241544	101.27	ppm		95
62) Dibenzofuran	8.332	168	1739892	93.20	ppm		94
63) 2,4-Dinitrotoluene	8.343	165	433917	95.59	ppm		93
64) 2,3,4,6-Tetrachlorophenol	8.556	232	490611	93.25	ppm		99
65) Diethylphthalate	8.807	149	1574142	94.34	ppm		99
66) Fluorene	8.909	166	1486101	93.26	ppm		99
67) 4-Chlorophenyl-phenyle...	8.946	204	737051	92.38	ppm		100
68) 4-Nitroaniline	8.989	138	380339	99.61	ppm		99
70) 4,6-Dinitro-2-methylph...	9.042	198	285701	93.98	ppm		98
71) n-Nitrosodiphenylamine	9.160	169	1117447	91.37	ppm		99
72) 1,2-Diphenylhydrazine	9.219	77	1579035	94.81	ppm		98
74) 4-Bromophenyl-phenylether	9.812	248	583579	90.05	ppm		95
75) Hexachlorobenzene	9.892	284	610907	90.10	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

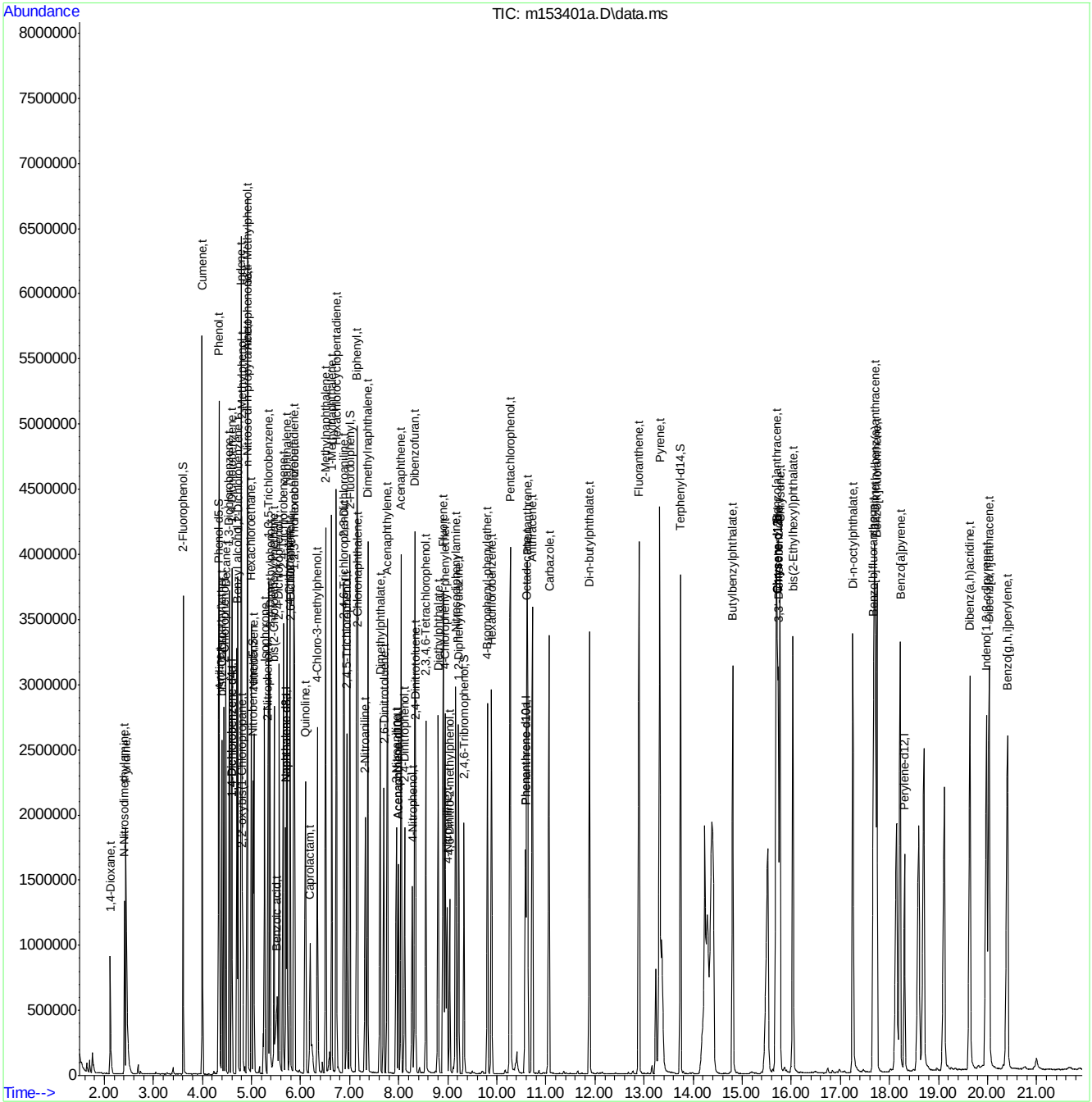
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.271	266	807802	180.41	ppm	100
77) Phenanthrene	10.629	178	2000630	91.13	ppm	99
78) Anthracene	10.725	178	2194380	90.91	ppm	99
79) Carbazole	11.067	167	2158130	90.94	ppm	99
80) Di-n-butylphthalate	11.889	149	2809220	91.66	ppm	99
81) Fluoranthene	12.899	202	2777400	89.99	ppm	99
82) Octadecane	10.607	57	706040	93.66	ppm	99
84) Pyrene	13.321	202	2672983	96.76	ppm	98
86) Butylbenzylphthalate	14.806	149	1260057	99.97	ppm	99
87) Benzo[a]anthracene	15.697	228	2555041	92.93	ppm	99
88) 3,3'-Dichlorobenzidine	15.735	252	987333	101.83	ppm	97
89) Chrysene	15.772	228	2324355	101.70	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.034	149	1663302	104.23	ppm	100
92) Di-n-octylphthalate	17.252	149	3068911	96.73	ppm	99
93) Benzo[b]fluoranthene	17.679	252	2938717	94.75	ppm	98
94) Benzo[k]fluoranthene	17.743	252	2487206	91.95	ppm	97
95) Benzo[a]pyrene	18.224	252	2429933	86.34	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.981	276	2517133	97.55	ppm	100
97) Dibenz(a,h)acridine	19.645	279	2440916	93.82	ppm	85
98) Dibenz[a,h]anthracene	20.034	278	2501423	96.26	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.706	256	1251747	98.43	ppm	98
100) Benzo[g,h,i]perylene	20.408	276	2507626	95.95	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



SGS JC86837

Manual Integration Approval Summary

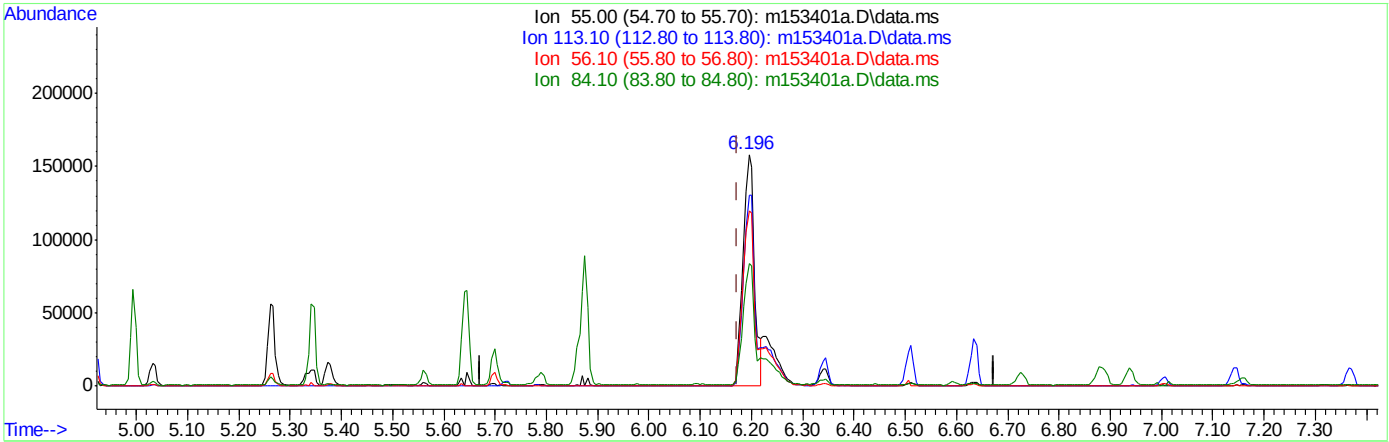
Sample Number:	EM6556-IC6556	**Method:**	SW846 8270D
Lab FileID:	M153401A.D	**Analyst approved:**	04/15/19 12:08 Ying Li
Injection Time:	04/12/19 17:56	**Supervisor approved:**	04/16/19 10:44 Nina Pandya

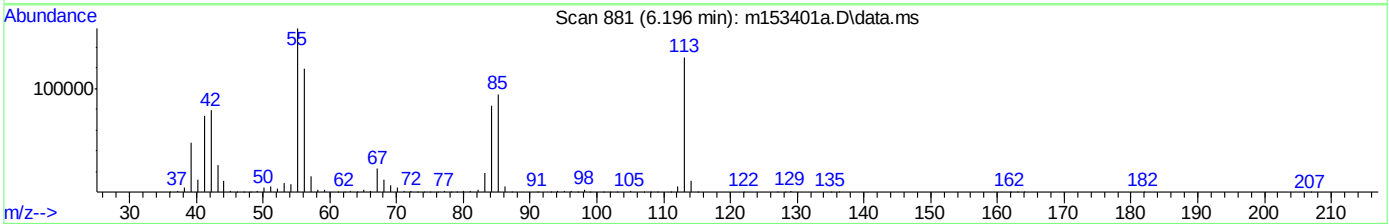
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		6.20	Split peak

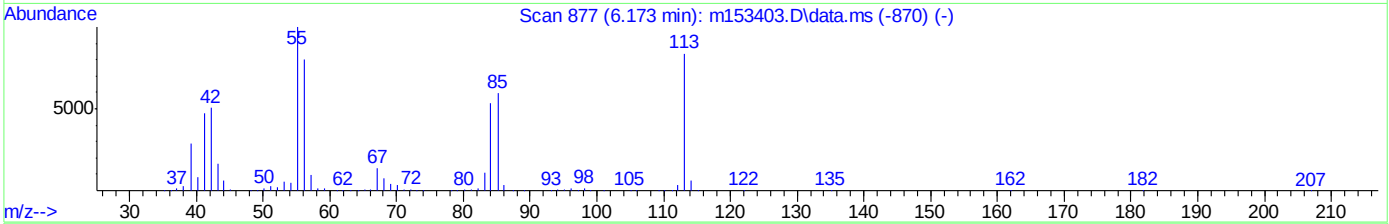
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:15:07 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration







TIC: m153401a.D\data.ms

(41) Caprolactam (t)

6.196min (+0.023) 76.33ppm

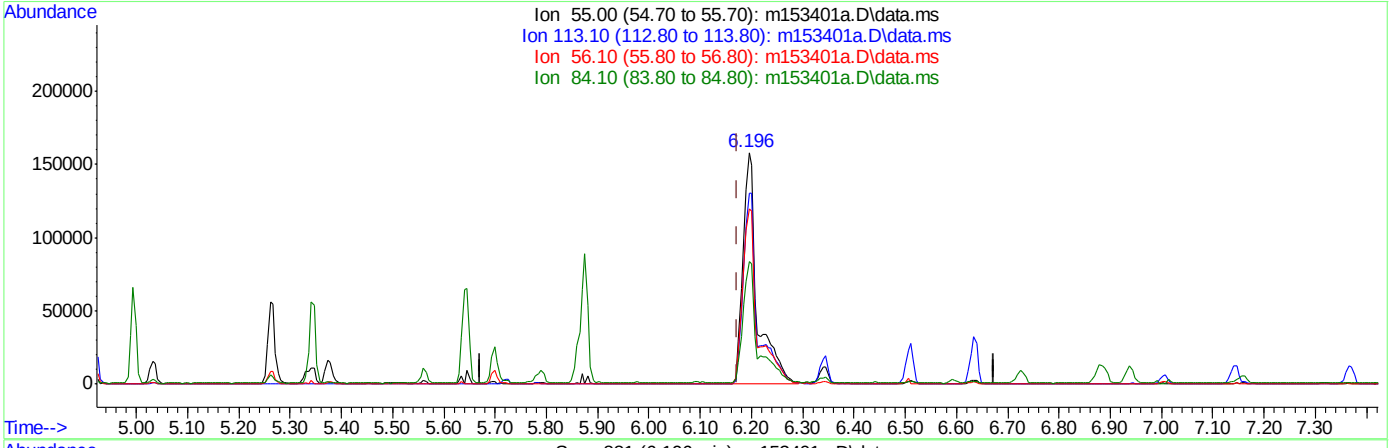
response 244082

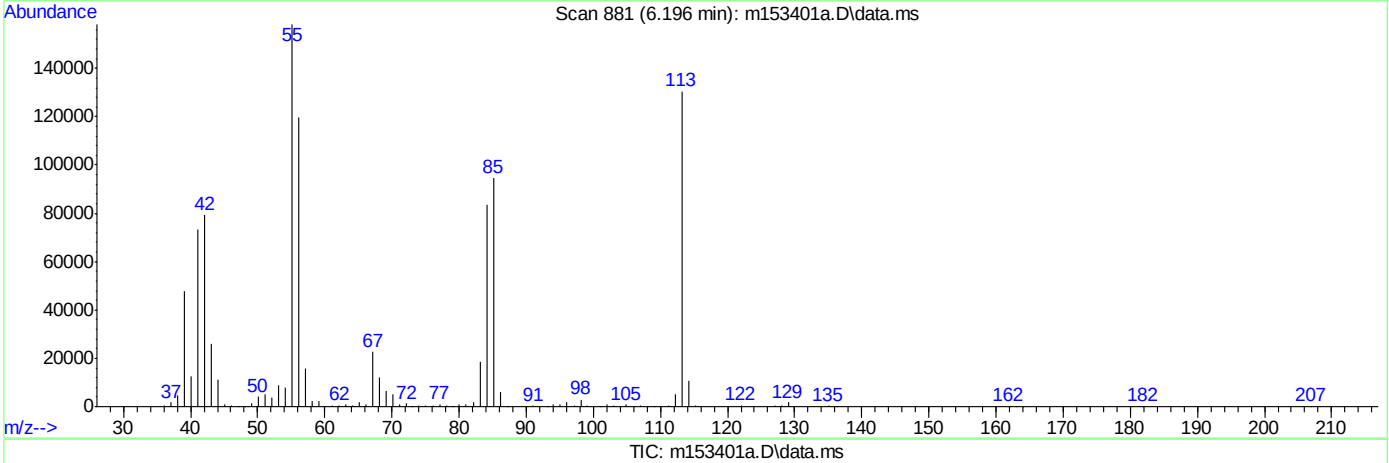
Ion	Exp%	Act%
55.00	100	100
113.10	83.80	82.69
56.10	80.40	75.39
84.10	53.50	51.72

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153401a.D
Acq On : 12 Apr 2019 5:56 pm
Operator : christc2
Sample : ic6556-100
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 10:17:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration





TIC: m153401a.D\data.ms

(41) Caprolactam (t)

6.196min (+0.023) 98.30ppm m

response 314353

Ion	Exp%	Act%
55.00	100	100
113.10	83.80	82.45
56.10	80.40	75.72
84.10	53.50	52.79

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.592	152	225155	40.00	ppm		0.00
24) Naphthalene-d8	5.697	136	803489	40.00	ppm		0.00
47) Acenaphthene-d10	7.994	164	479679	40.00	ppm		0.00
69) Phenanthrene-d10	10.579	188	997619	40.00	ppm		0.00
83) Chrysene-d12	15.712	240	851028	40.00	ppm		0.00
91) Perylene-d12	18.307	264	999499	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.592	152	225155	40.00	ppm		0.00
103) Acenaphthene-d10a	7.994	164	479679	40.00	ppm		0.00
106) Chrysene-d12a	15.712	240	851028	40.00	ppm		0.00
108) Chrysene-d12b	15.712	240	851028	40.00	ppm		0.00
110) Phenanthrene-d10a	10.579	188	997619	40.00	ppm		0.00
113) Naphthalene-d8a	5.697	136	803489	40.00	ppm		0.00
115) Chrysene-d12c	15.712	240	851028	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	3.603	112	732085	76.66	ppm		0.00
Spiked Amount 50.000			Recovery = 153.32%				
8) Phenol-d5	4.330	99	867447	75.27	ppm		0.00
Spiked Amount 50.000			Recovery = 150.54%				
25) Nitrobenzene-d5	5.030	82	660145	76.87	ppm		0.00
Spiked Amount 50.000			Recovery = 153.74%				
51) 2-Fluorobiphenyl	7.006	172	1258043	76.20	ppm		0.00
Spiked Amount 50.000			Recovery = 152.40%				
73) 2,4,6-Tribromophenol	9.329	330	281508	76.48	ppm		0.00
Spiked Amount 50.000			Recovery = 152.96%				
85) Terphenyl-d14	13.741	244	1823182	77.60	ppm		0.00
Spiked Amount 50.000			Recovery = 155.20%				
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
Spiked Amount 50.000			Recovery = 0.00%				
111) o-terphenyl	0.000	230	0	0.00	ppm		
Spiked Amount 50.000			Recovery = 0.00%				
Target Compounds							Qvalue
2) 1,4-Dioxane	2.119	88	377230	80.32	ppm		99
3) Pyridine	2.444	79	908435	81.25	ppm		97
4) N-Nitrosodimethylamine	2.407	42	320590	78.41	ppm		98
6) Indene	4.789	116	846091	73.59	ppm		100
7) Cumene	3.993	105	1544937	74.04	ppm		98
9) Phenol	4.341	94	826435	72.42	ppm		82
10) Aniline	4.346	93	722357	73.49	ppm		97
11) bis(2-Chloroethyl)ether	4.394	93	581395	75.56	ppm		99
12) 2-Chlorophenol	4.437	128	595646	74.79	ppm		98
13) Decane	4.479	43	406911	72.88	ppm		99
14) 1,3-Dichlorobenzene	4.549	146	646405	72.57	ppm		98
15) 1,4-Dichlorobenzene	4.602	146	622280	75.64	ppm		99
16) Benzyl alcohol	4.698	108	376577	75.39	ppm		97
17) 1,2-Dichlorobenzene	4.720	146	596046	72.92	ppm		99
18) Acetophenone	4.907	105	732580	74.55	ppm	#	60
19) 2-Methylphenol	4.795	108	473535	73.38	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.805	121	151063	75.41	ppm		100
21) 3&4-Methylphenol	4.912	108	488132	74.57	ppm	#	81
22) n-Nitroso-di-n-propyla...	4.912	70	350213	72.73	ppm		95
23) Hexachloroethane	4.998	201	265594	75.12	ppm		100
26) Nitrobenzene	5.051	77	618972	75.65	ppm		95
27) Quinoline	6.092	129	1187613	76.12	ppm		99
28) Isophorone	5.259	82	1171099	75.20	ppm		97
29) 2-Nitrophenol	5.329	139	329749	76.05	ppm		98
30) 2,4-Dimethylphenol	5.371	107	558209	79.78	ppm		97
31) Benzoic acid	5.510	105	469499	78.88	ppm		96
32) bis(2-Chloroethoxy)met...	5.457	93	704348	76.92	ppm		100
33) 2,4-Dichlorophenol	5.564	162	511255	75.06	ppm		97
34) 2,6-Dichlorophenol	5.788	162	457218	75.01	ppm		98
35) 1,3,5-Trichlorobenzene	5.345	180	570920	72.82	ppm		98
36) 1,2,4-Trichlorobenzene	5.644	180	584453	74.61	ppm		99
37) 1,2,3-Trichlorobenzene	5.873	180	527854	74.97	ppm		100
38) Naphthalene	5.724	128	1445690	75.33	ppm		100
39) 4-Chloroaniline	5.777	127	641760	73.70	ppm		98
40) 2,3-Dichloroaniline	6.878	161	635130	75.61	ppm		98
41) Caprolactam	6.189	55	263983	79.32	ppm		99
42) Hexachlorobutadiene	5.863	225	353936	75.43	ppm		99
43) 4-Chloro-3-methylphenol	6.338	107	565483	75.70	ppm		97
44) 2-Methylnaphthalene	6.509	141	923318	74.86	ppm		99
45) 1-Methylnaphthalene	6.637	142	1146353	74.30	ppm		99
46) Dimethylnaphthalene	7.369	156	1002140	74.22	ppm		99
48) Hexachlorocyclopentadiene	6.728	237	762663	153.67	ppm		99
49) 2,4,6-Trichlorophenol	6.888	196	387941	75.87	ppm		98
50) 2,4,5-Trichlorophenol	6.936	196	439278	78.68	ppm		97
52) 2-Chloronaphthalene	7.161	162	1010850	76.09	ppm		99
53) Biphenyl	7.145	154	1372802	75.42	ppm		99
54) 2-Nitroaniline	7.316	65	355954	79.30	ppm		94
55) Dimethylphthalate	7.620	163	1350998	76.55	ppm		99
56) Acenaphthylene	7.770	152	1679865	75.75	ppm		100
57) 2,6-Dinitrotoluene	7.695	165	301047	76.03	ppm		100
58) 3-Nitroaniline	7.951	138	356271	78.97	ppm		98
59) Acenaphthene	8.047	153	1066647	77.91	ppm		99
60) 2,4-Dinitrophenol	8.117	184	325259	161.74	ppm		92
61) 4-Nitrophenol	8.272	109	197042	78.58	ppm		99
62) Dibenzofuran	8.330	168	1490794	75.96	ppm		99
63) 2,4-Dinitrotoluene	8.341	165	365850	76.66	ppm		85
64) 2,3,4,6-Tetrachlorophenol	8.555	232	423476	76.56	ppm		98
65) Diethylphthalate	8.806	149	1341665	76.48	ppm		100
66) Fluorene	8.907	166	1276678	76.21	ppm		100
67) 4-Chlorophenyl-phenyle...	8.945	204	639241	76.21	ppm		100
68) 4-Nitroaniline	8.982	138	314723	78.40	ppm		98
70) 4,6-Dinitro-2-methylph...	9.035	198	253467	80.42	ppm		99
71) n-Nitrosodiphenylamine	9.158	169	955792	75.38	ppm		99
72) 1,2-Diphenylhydrazine	9.217	77	1332214	77.16	ppm		99
74) 4-Bromophenyl-phenylether	9.810	248	506124	75.33	ppm		97
75) Hexachlorobenzene	9.890	284	527735	75.08	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

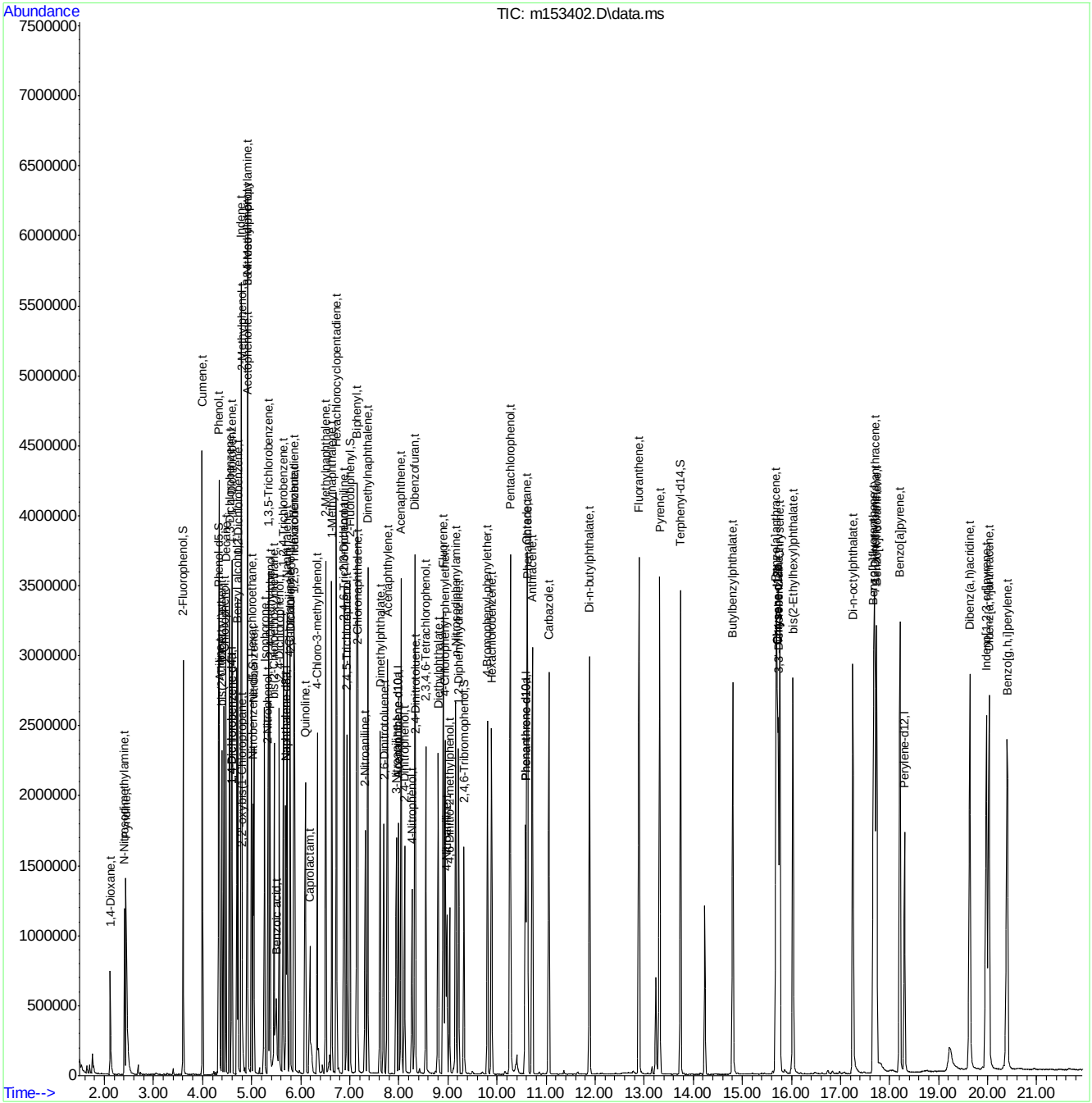
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	Pentachlorophenol	10.269	266	697346	150.22	ppm	100
77)	Phenanthrene	10.627	178	1718325	75.50	ppm	100
78)	Anthracene	10.723	178	1877702	75.03	ppm	99
79)	Carbazole	11.065	167	1850995	75.24	ppm	100
80)	Di-n-butylphthalate	11.887	149	2405373	75.70	ppm	99
81)	Fluoranthene	12.897	202	2395875	74.88	ppm	99
82)	Octadecane	10.611	57	606517	77.61	ppm	99
84)	Pyrene	13.319	202	2365428	75.62	ppm	98
86)	Butylbenzylphthalate	14.809	149	1116335	78.22	ppm	100
87)	Benzo[a]anthracene	15.690	228	2395645	76.95	ppm	100
88)	3,3'-Dichlorobenzidine	15.733	252	866134	78.89	ppm	97
89)	Chrysene	15.765	228	2002818	77.40	ppm	99
90)	bis(2-Ethylhexyl)phtha...	16.032	149	1398864	77.41	ppm	99
92)	Di-n-octylphthalate	17.250	149	2615480	77.37	ppm	99
93)	Benzo[b]fluoranthene	17.677	252	2563740	77.59	ppm	99
94)	Benzo[k]fluoranthene	17.741	252	2126801	73.80	ppm	99
95)	Benzo[a]pyrene	18.217	252	2293521	76.49	ppm	100
96)	Indeno[1,2,3-cd]pyrene	19.979	276	2136134	77.70	ppm	99
97)	Dibenz(a,h)acridine	19.643	279	2110895	76.16	ppm	99
98)	Dibenz[a,h]anthracene	20.027	278	2137844	77.22	ppm	99
99)	7,12-Dimethylbenz(a)an...	17.704	256	1049442	77.46	ppm	99
100)	Benzo[g,h,i]perylene	20.401	276	2143558	76.98	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153402.D
Acq On : 12 Apr 2019 6:24 pm
Operator : christc2
Sample : ic6556-80
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 10:19:09 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



MM6556.M Mon Apr 15 12:04:59 2019 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.592	152	263272	40.00	ppm	0.00
24) Naphthalene-d8	5.698	136	947451	40.00	ppm	0.00
47) Acenaphthene-d10	7.994	164	577166	40.00	ppm	0.00
69) Phenanthrene-d10	10.579	188	1186859	40.00	ppm	0.00
83) Chrysene-d12	15.712	240	1034026	40.00	ppm	0.00
91) Perylene-d12	18.308	264	1197275	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.592	152	263272	40.00	ppm	0.00
103) Acenaphthene-d10a	7.994	164	577166	40.00	ppm	0.00
106) Chrysene-d12a	15.712	240	1034026	40.00	ppm	0.00
108) Chrysene-d12b	15.712	240	1034026	40.00	ppm	0.00
110) Phenanthrene-d10a	10.579	188	1186859	40.00	ppm	0.00
113) Naphthalene-d8a	5.698	136	947451	40.00	ppm	0.00
115) Chrysene-d12c	15.712	240	1034026	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.604	112	558336	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
8) Phenol-d5	4.325	99	673801	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
25) Nitrobenzene-d5	5.030	82	506356	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
51) 2-Fluorobiphenyl	7.006	172	993283	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
73) 2,4,6-Tribromophenol	9.324	330	218961	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
85) Terphenyl-d14	13.741	244	1427344	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.119	88	274573	50.00	ppm	100
3) Pyridine	2.445	79	653638	50.00	ppm	100
4) N-Nitrosodimethylamine	2.407	42	239053	50.00	ppm	100
6) Indene	4.790	116	672209	50.00	ppm	100
7) Cumene	3.999	105	1219950	50.00	ppm	100
9) Phenol	4.336	94	667164	50.00	ppm	100
10) Aniline	4.346	93	574687	50.00	ppm	100
11) bis(2-Chloroethyl)ether	4.394	93	449859	50.00	ppm	100
12) 2-Chlorophenol	4.437	128	465621	50.00	ppm	100
13) Decane	4.480	43	326411	50.00	ppm	100
14) 1,3-Dichlorobenzene	4.549	146	520746	50.00	ppm	100
15) 1,4-Dichlorobenzene	4.603	146	480987	50.00	ppm	100
16) Benzyl alcohol	4.699	108	292025	50.00	ppm	100
17) 1,2-Dichlorobenzene	4.720	146	477859	50.00	ppm	100
18) Acetophenone	4.907	105	574482	50.00	ppm	100
19) 2-Methylphenol	4.790	108	379257	50.26	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.806	121	117124	50.00	ppm	100
21) 3&4-Methylphenol	4.912	108	386192	50.46	ppm	100
22) n-Nitroso-di-n-propyla...	4.912	70	281513	50.00	ppm	100
23) Hexachloroethane	4.998	201	206713	50.00	ppm	100
26) Nitrobenzene	5.046	77	482380	50.00	ppm	100
27) Quinoline	6.087	129	919860	50.00	ppm	100
28) Isophorone	5.260	82	918158	50.00	ppm	100
29) 2-Nitrophenol	5.329	139	255650	50.00	ppm	100
30) 2,4-Dimethylphenol	5.372	107	412499	50.00	ppm	100
31) Benzoic acid	5.495	105	351227	50.05	ppm	100
32) bis(2-Chloroethoxy)met...	5.457	93	539901	50.00	ppm	100
33) 2,4-Dichlorophenol	5.559	162	401597	50.00	ppm	100
34) 2,6-Dichlorophenol	5.788	162	359394	50.00	ppm	100
35) 1,3,5-Trichlorobenzene	5.345	180	462244	50.00	ppm	100
36) 1,2,4-Trichlorobenzene	5.644	180	461860	50.00	ppm	100
37) 1,2,3-Trichlorobenzene	5.874	180	415127	50.00	ppm	100
38) Naphthalene	5.719	128	1131562	50.00	ppm	100
39) 4-Chloroaniline	5.778	127	513415	50.00	ppm	100
40) 2,3-Dichloroaniline	6.878	161	495228	50.00	ppm	100
41) Caprolactam	6.173	55	196213	50.00	ppm	100
42) Hexachlorobutadiene	5.863	225	276656	50.00	ppm	100
43) 4-Chloro-3-methylphenol	6.338	107	440399	50.00	ppm	100
44) 2-Methylnaphthalene	6.509	141	727215	50.00	ppm	100
45) 1-Methylnaphthalene	6.632	142	909009	49.97	ppm	100
46) Dimethylnaphthalene	7.364	156	796076	50.00	ppm	100
48) Hexachlorocyclopentadiene	6.728	237	597151	100.00	ppm	100
49) 2,4,6-Trichlorophenol	6.889	196	307631	50.00	ppm	100
50) 2,4,5-Trichlorophenol	6.937	196	335791	49.99	ppm	100
52) 2-Chloronaphthalene	7.156	162	799205	50.00	ppm	100
53) Biphenyl	7.140	154	1095071	50.00	ppm	100
54) 2-Nitroaniline	7.316	65	270060	50.00	ppm	100
55) Dimethylphthalate	7.615	163	1061699	50.00	ppm	100
56) Acenaphthylene	7.765	152	1334232	50.00	ppm	100
57) 2,6-Dinitrotoluene	7.690	165	238205	50.00	ppm	100
58) 3-Nitroaniline	7.946	138	271410	50.00	ppm	100
59) Acenaphthene	8.048	153	823702	50.00	ppm	100
60) 2,4-Dinitrophenol	8.117	184	241976	100.00	ppm	100
61) 4-Nitrophenol	8.267	109	150862	50.00	ppm	100
62) Dibenzofuran	8.325	168	1180805	50.00	ppm	100
63) 2,4-Dinitrotoluene	8.336	165	287128	50.00	ppm	100
64) 2,3,4,6-Tetrachlorophenol	8.550	232	332782	50.00	ppm	100
65) Diethylphthalate	8.801	149	1055379	50.00	ppm	100
66) Fluorene	8.902	166	1007892	50.00	ppm	100
67) 4-Chlorophenyl-phenyle...	8.940	204	504648	50.00	ppm	100
68) 4-Nitroaniline	8.972	138	241517	50.00	ppm	100
70) 4,6-Dinitro-2-methylph...	9.030	198	187472	50.00	ppm	100
71) n-Nitrosodiphenylamine	9.153	169	754210	50.00	ppm	100
72) 1,2-Diphenylhydrazine	9.217	77	1027051	50.00	ppm	100
74) 4-Bromophenyl-phenylether	9.810	248	399649	50.00	ppm	100
75) Hexachlorobenzene	9.890	284	418128	50.00	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

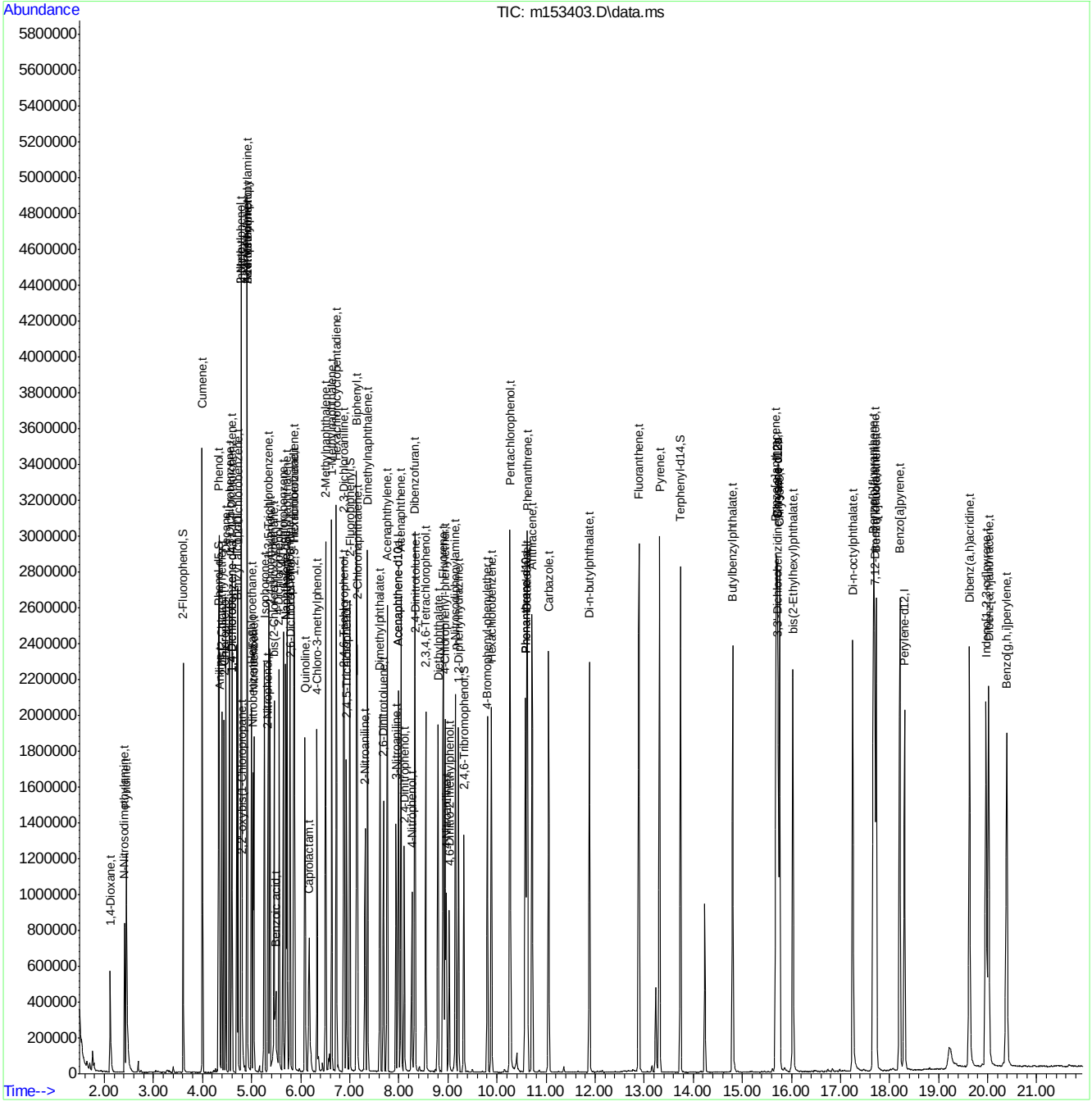
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.264	266	552267	100.00	ppm	100
77) Phenanthrene	10.622	178	1353903	50.00	ppm	100
78) Anthracene	10.718	178	1488565	50.00	ppm	100
79) Carbazole	11.060	167	1463436	50.00	ppm	100
80) Di-n-butylphthalate	11.883	149	1890098	50.00	ppm	100
81) Fluoranthene	12.892	202	1903264	50.00	ppm	100
82) Octadecane	10.606	57	464873	50.00	ppm	100
84) Pyrene	13.314	202	1900281	50.00	ppm	100
86) Butylbenzylphthalate	14.804	149	867014	50.00	ppm	100
87) Benzo[a]anthracene	15.691	228	1891375	50.00	ppm	100
88) 3,3'-Dichlorobenzidine	15.728	252	666968	50.00	ppm	100
89) Chrysene	15.760	228	1572083	50.00	ppm	100
90) bis(2-Ethylhexyl)phtha...	16.032	149	1097762	50.00	ppm	100
92) Di-n-octylphthalate	17.250	149	2024578	50.00	ppm	100
93) Benzo[b]fluoranthene	17.672	252	1979106	50.00	ppm	100
94) Benzo[k]fluoranthene	17.731	252	1726096	50.00	ppm	100
95) Benzo[a]pyrene	18.212	252	1795877	50.00	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.969	276	1646538	50.00	ppm	100
97) Dibenz(a,h)acridine	19.632	279	1660151	50.00	ppm	100
98) Dibenz[a,h]anthracene	20.022	278	1657997	49.99	ppm	100
99) 7,12-Dimethylbenz(a)an...	17.699	256	811481	50.00	ppm	100
100) Benzo[g,h,i]perylene	20.391	276	1673654	50.18	ppm	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153403.D
Acq On : 12 Apr 2019 6:53 pm
Operator : christc2
Sample : icc6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 10:14:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



SGS JC86837

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	277562	40.00	ppm	0.00
24) Naphthalene-d8	5.699	136	964004	40.00	ppm	0.00
47) Acenaphthene-d10	7.991	164	582129	40.00	ppm	0.00
69) Phenanthrene-d10	10.576	188	1169573	40.00	ppm	0.00
83) Chrysene-d12	15.708	240	1084540	40.00	ppm	0.00
91) Perylene-d12	18.304	264	1211388	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	277562	40.00	ppm	0.00
103) Acenaphthene-d10a	7.991	164	582129	40.00	ppm	0.00
106) Chrysene-d12a	15.708	240	1084540	40.00	ppm	0.00
108) Chrysene-d12b	15.708	240	1084540	40.00	ppm	0.00
110) Phenanthrene-d10a	10.576	188	1169573	40.00	ppm	0.00
113) Naphthalene-d8a	5.699	136	964004	40.00	ppm	0.00
115) Chrysene-d12c	15.708	240	1084540	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.606	112	286882	24.37	ppm	0.00
Spiked Amount 50.000			Recovery = 48.74%			
8) Phenol-d5	4.321	99	346438	24.38	ppm	0.00
Spiked Amount 50.000			Recovery = 48.76%			
25) Nitrobenzene-d5	5.026	82	262596	25.48	ppm	0.00
Spiked Amount 50.000			Recovery = 50.96%			
51) 2-Fluorobiphenyl	7.002	172	529165	26.41	ppm	0.00
Spiked Amount 50.000			Recovery = 52.82%			
73) 2,4,6-Tribromophenol	9.320	330	108513	25.15	ppm	0.00
Spiked Amount 50.000			Recovery = 50.30%			
85) Terphenyl-d14	13.738	244	744115	24.85	ppm	0.00
Spiked Amount 50.000			Recovery = 49.70%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.121	88	139830	24.15	ppm	98
3) Pyridine	2.447	79	349580	25.36	ppm	99
4) N-Nitrosodimethylamine	2.409	42	123459	24.49	ppm	99
6) Indene	4.791	116	360998	25.47	ppm	97
7) Cumene	3.995	105	668535	25.99	ppm	97
9) Phenol	4.332	94	366361	26.04	ppm	95
10) Aniline	4.343	93	332962	27.48	ppm	99
11) bis(2-Chloroethyl)ether	4.391	93	243495	25.67	ppm	98
12) 2-Chlorophenol	4.433	128	248181	25.28	ppm	96
13) Decane	4.476	43	184365	26.79	ppm	95
14) 1,3-Dichlorobenzene	4.546	146	282526	25.73	ppm	98
15) 1,4-Dichlorobenzene	4.599	146	258610	25.50	ppm	97
16) Benzyl alcohol	4.695	108	145414	23.62	ppm	97
17) 1,2-Dichlorobenzene	4.722	146	256741	25.48	ppm	99
18) Acetophenone	4.903	105	316389	26.12	ppm	98
19) 2-Methylphenol	4.786	108	208524	26.21	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.802	121	62030	25.12	ppm	99
21) 3&4-Methylphenol	4.909	108	209562	25.97	ppm	96
22) n-Nitroso-di-n-propyla...	4.909	70	158725	26.74	ppm	99
23) Hexachloroethane	4.994	201	110479	25.35	ppm	93
26) Nitrobenzene	5.042	77	253131	25.79	ppm	100
27) Quinoline	6.078	129	465379	24.86	ppm	99
28) Isophorone	5.256	82	482683	25.83	ppm	99
29) 2-Nitrophenol	5.325	139	130292	25.04	ppm	98
30) 2,4-Dimethylphenol	5.368	107	211484	25.19	ppm	96
31) Benzoic acid	5.470	105	158009	22.13	ppm	97
32) bis(2-Chloroethoxy)met...	5.454	93	278968	25.39	ppm	98
33) 2,4-Dichlorophenol	5.555	162	209733	25.66	ppm	97
34) 2,6-Dichlorophenol	5.785	162	187836	25.68	ppm	97
35) 1,3,5-Trichlorobenzene	5.341	180	253752	26.98	ppm	97
36) 1,2,4-Trichlorobenzene	5.640	180	246007	26.17	ppm	98
37) 1,2,3-Trichlorobenzene	5.870	180	225633	26.71	ppm	97
38) Naphthalene	5.721	128	595618	25.87	ppm	99
39) 4-Chloroaniline	5.774	127	265565	25.42	ppm	99
40) 2,3-Dichloroaniline	6.874	161	262704	26.07	ppm	98
41) Caprolactam	6.148	55	95863	24.01	ppm	97
42) Hexachlorobutadiene	5.859	225	147872	26.27	ppm	98
43) 4-Chloro-3-methylphenol	6.329	107	220877	24.65	ppm	99
44) 2-Methylnaphthalene	6.506	141	384085	25.95	ppm	98
45) 1-Methylnaphthalene	6.629	142	478793	25.87	ppm	100
46) Dimethylnaphthalene	7.360	156	420932	25.98	ppm	99
48) Hexachlorocyclopentadiene	6.725	237	302109	50.16	ppm	98
49) 2,4,6-Trichlorophenol	6.885	196	162550	26.19	ppm	97
50) 2,4,5-Trichlorophenol	6.928	196	170063	25.10	ppm	98
52) 2-Chloronaphthalene	7.152	162	434162	26.93	ppm	100
53) Biphenyl	7.136	154	583857	26.43	ppm	99
54) 2-Nitroaniline	7.307	65	129397	23.75	ppm	99
55) Dimethylphthalate	7.611	163	545123	25.45	ppm	100
56) Acenaphthylene	7.761	152	706715	26.26	ppm	99
57) 2,6-Dinitrotoluene	7.681	165	116586	24.26	ppm	98
58) 3-Nitroaniline	7.937	138	133122	24.32	ppm	98
59) Acenaphthene	8.044	153	428194	25.77	ppm	98
60) 2,4-Dinitrophenol	8.108	184	96805	39.66	ppm	99
61) 4-Nitrophenol	8.252	109	71256	23.41	ppm	96
62) Dibenzofuran	8.322	168	631593	26.52	ppm	100
63) 2,4-Dinitrotoluene	8.327	165	144447	24.94	ppm	90
64) 2,3,4,6-Tetrachlorophenol	8.546	232	167139	24.90	ppm	97
65) Diethylphthalate	8.792	149	541553	25.44	ppm	99
66) Fluorene	8.899	166	523316	25.74	ppm	100
67) 4-Chlorophenyl-phenyle...	8.936	204	273734	26.89	ppm	98
68) 4-Nitroaniline	8.957	138	121698	24.98	ppm	96
70) 4,6-Dinitro-2-methylph...	9.021	198	78819	21.33	ppm	99
71) n-Nitrosodiphenylamine	9.150	169	390300	26.26	ppm	99
72) 1,2-Diphenylhydrazine	9.214	77	537626	26.56	ppm	99
74) 4-Bromophenyl-phenylether	9.807	248	201222	25.55	ppm	99
75) Hexachlorobenzene	9.887	284	218898	26.56	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

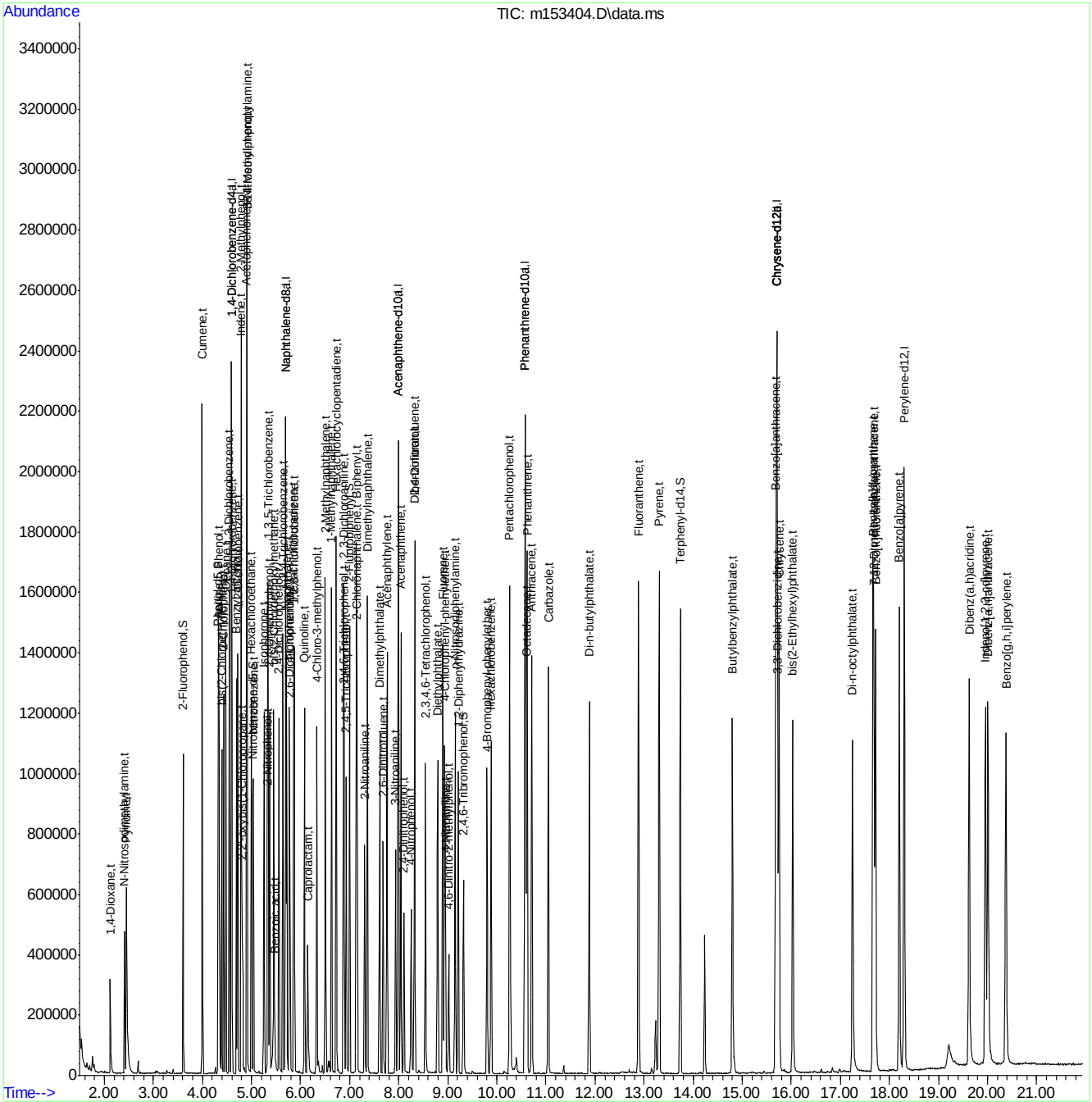
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.261	266	275158	50.56	ppm	99
77) Phenanthrene	10.618	178	712495	26.70	ppm	100
78) Anthracene	10.709	178	771837	26.31	ppm	99
79) Carbazole	11.051	167	758535	26.30	ppm	99
80) Di-n-butylphthalate	11.884	149	965711	25.92	ppm	99
81) Fluoranthene	12.888	202	995951	26.55	ppm	99
82) Octadecane	10.602	57	241476	26.36	ppm	99
84) Pyrene	13.310	202	999023	25.06	ppm	99
86) Butylbenzylphthalate	14.800	149	432256	23.77	ppm	97
87) Benzo[a]anthracene	15.687	228	962166	24.25	ppm	99
88) 3,3'-Dichlorobenzidine	15.724	252	330743	23.64	ppm	99
89) Chrysene	15.756	228	810822	24.59	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.029	149	539079	23.41	ppm	99
92) Di-n-octylphthalate	17.247	149	978451	23.88	ppm	99
93) Benzo[b]fluoranthene	17.663	252	1027165	25.65	ppm	100
94) Benzo[k]fluoranthene	17.717	252	914510	26.18	ppm	99
95) Benzo[a]pyrene	18.203	252	922796	25.39	ppm	100
96) Indeno[1,2,3-cd]pyrene	19.960	276	847552	25.44	ppm	99
97) Dibenz(a,h)acridine	19.629	279	856264	25.49	ppm	97
98) Dibenz[a,h]anthracene	20.008	278	854704	25.47	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.685	256	413338	25.17	ppm	99
100) Benzo[g,h,i]perylene	20.376	276	873483	25.88	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153404.D
Acq On : 12 Apr 2019 7:21 pm
Operator : christc2
Sample : ic6556-25
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 10:20:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	354996	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	1212660	40.00	ppm	0.00
47) Acenaphthene-d10	7.993	164	726523	40.00	ppm	0.00
69) Phenanthrene-d10	10.578	188	1444095	40.00	ppm	0.00
83) Chrysene-d12	15.705	240	1398894	40.00	ppm	0.00
91) Perylene-d12	18.307	264	1524103	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	354996	40.00	ppm	0.00
103) Acenaphthene-d10a	7.993	164	726523	40.00	ppm	0.00
106) Chrysene-d12a	15.705	240	1398894	40.00	ppm	0.00
108) Chrysene-d12b	15.705	240	1398894	40.00	ppm	0.00
110) Phenanthrene-d10a	10.578	188	1444095	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	1212660	40.00	ppm	0.00
115) Chrysene-d12c	15.705	240	1398894	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.603	112	142571	9.47	ppm	0.00
Spiked Amount 50.000			Recovery =	18.94%		
8) Phenol-d5	4.318	99	179461	9.88	ppm	0.00
Spiked Amount 50.000			Recovery =	19.76%		
25) Nitrobenzene-d5	5.029	82	136646	10.54	ppm	0.00
Spiked Amount 50.000			Recovery =	21.08%		
51) 2-Fluorobiphenyl	7.000	172	286720	11.47	ppm	0.00
Spiked Amount 50.000			Recovery =	22.94%		
73) 2,4,6-Tribromophenol	9.318	330	53310	10.00	ppm	0.00
Spiked Amount 50.000			Recovery =	20.00%		
85) Terphenyl-d14	13.735	244	388476	10.06	ppm	0.00
Spiked Amount 50.000			Recovery =	20.12%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.123	88	68242	9.22	ppm	96
3) Pyridine	2.454	79	171196	9.71	ppm	99
4) N-Nitrosodimethylamine	2.412	42	58566	9.08	ppm	93
6) Indene	4.788	116	199320	11.00	ppm	99
7) Cumene	3.998	105	354334	10.77	ppm	99
9) Phenol	4.329	94	195300	10.85	ppm	93
10) Aniline	4.345	93	193331	12.47	ppm	93
11) bis(2-Chloroethyl)ether	4.393	93	131108	10.81	ppm	96
12) 2-Chlorophenol	4.431	128	132507	10.55	ppm	92
13) Decane	4.479	43	102662	11.66	ppm	98
14) 1,3-Dichlorobenzene	4.548	146	149260	10.63	ppm	99
15) 1,4-Dichlorobenzene	4.601	146	136059	10.49	ppm	98
16) Benzyl alcohol	4.692	108	73456	9.33	ppm	92
17) 1,2-Dichlorobenzene	4.719	146	137712	10.69	ppm	98
18) Acetophenone	4.901	105	173973	11.23	ppm	98
19) 2-Methylphenol	4.783	108	112191	11.03	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.804	121	32853	10.40	ppm		90
21) 3&4-Methylphenol	4.906	108	113940	11.04	ppm	#	84
22) n-Nitroso-di-n-propyla...	4.906	70	89723	11.82	ppm		96
23) Hexachloroethane	4.997	201	57135	10.25	ppm		96
26) Nitrobenzene	5.045	77	136346	11.04	ppm		94
27) Quinoline	6.076	129	242840	10.31	ppm		99
28) Isophorone	5.253	82	250383	10.65	ppm		98
29) 2-Nitrophenol	5.328	139	65246	9.97	ppm		93
30) 2,4-Dimethylphenol	5.365	107	97255	9.21	ppm		94
31) Benzoic acid	5.445	105	72328	8.05	ppm		94
32) bis(2-Chloroethoxy)met...	5.451	93	147970	10.71	ppm		99
33) 2,4-Dichlorophenol	5.557	162	106062	10.32	ppm		97
34) 2,6-Dichlorophenol	5.782	162	98096	10.66	ppm		98
35) 1,3,5-Trichlorobenzene	5.338	180	136442	11.53	ppm		98
36) 1,2,4-Trichlorobenzene	5.643	180	131241	11.10	ppm		98
37) 1,2,3-Trichlorobenzene	5.873	180	121904	11.47	ppm		97
38) Naphthalene	5.718	128	311293	10.75	ppm		99
39) 4-Chloroaniline	5.771	127	141463	10.76	ppm		98
40) 2,3-Dichloroaniline	6.871	161	138949	10.96	ppm		97
41) Caprolactam	6.134	55	50065	9.97	ppm		96
42) Hexachlorobutadiene	5.862	225	78782	11.12	ppm		99
43) 4-Chloro-3-methylphenol	6.327	107	111891	9.93	ppm		98
44) 2-Methylnaphthalene	6.503	141	202399	10.87	ppm		99
45) 1-Methylnaphthalene	6.631	142	253283	10.88	ppm		99
46) Dimethylnaphthalene	7.357	156	226014	11.09	ppm		99
48) Hexachlorocyclopentadiene	6.727	237	152262	20.26	ppm		97
49) 2,4,6-Trichlorophenol	6.882	196	86106	11.12	ppm		98
50) 2,4,5-Trichlorophenol	6.925	196	92540	10.94	ppm		96
52) 2-Chloronaphthalene	7.149	162	237187	11.79	ppm		99
53) Biphenyl	7.133	154	312413	11.33	ppm		99
54) 2-Nitroaniline	7.304	65	65215	9.59	ppm		98
55) Dimethylphthalate	7.608	163	289710	10.84	ppm		98
56) Acenaphthylene	7.758	152	377514	11.24	ppm		98
57) 2,6-Dinitrotoluene	7.678	165	55885	9.32	ppm		90
58) 3-Nitroaniline	7.934	138	66595	9.75	ppm		94
59) Acenaphthene	8.041	153	221964	10.70	ppm		96
60) 2,4-Dinitrophenol	8.100	184	36774	12.07	ppm		94
61) 4-Nitrophenol	8.249	109	33300	8.77	ppm		99
62) Dibenzofuran	8.324	168	338793	11.40	ppm		98
63) 2,4-Dinitrotoluene	8.324	165	72549	10.04	ppm		85
64) 2,3,4,6-Tetrachlorophenol	8.543	232	83290	9.94	ppm		95
65) Diethylphthalate	8.789	149	279571	10.52	ppm		99
66) Fluorene	8.896	166	277441	10.93	ppm		97
67) 4-Chlorophenyl-phenyle...	8.938	204	145069	11.42	ppm		99
68) 4-Nitroaniline	8.949	138	61446	10.11	ppm		99
70) 4,6-Dinitro-2-methylph...	9.013	198	32862	7.20	ppm		96
71) n-Nitrosodiphenylamine	9.147	169	207178	11.29	ppm		97
72) 1,2-Diphenylhydrazine	9.211	77	285601	11.43	ppm		98
74) 4-Bromophenyl-phenylether	9.798	248	106153	10.92	ppm		93
75) Hexachlorobenzene	9.884	284	116490	11.45	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration

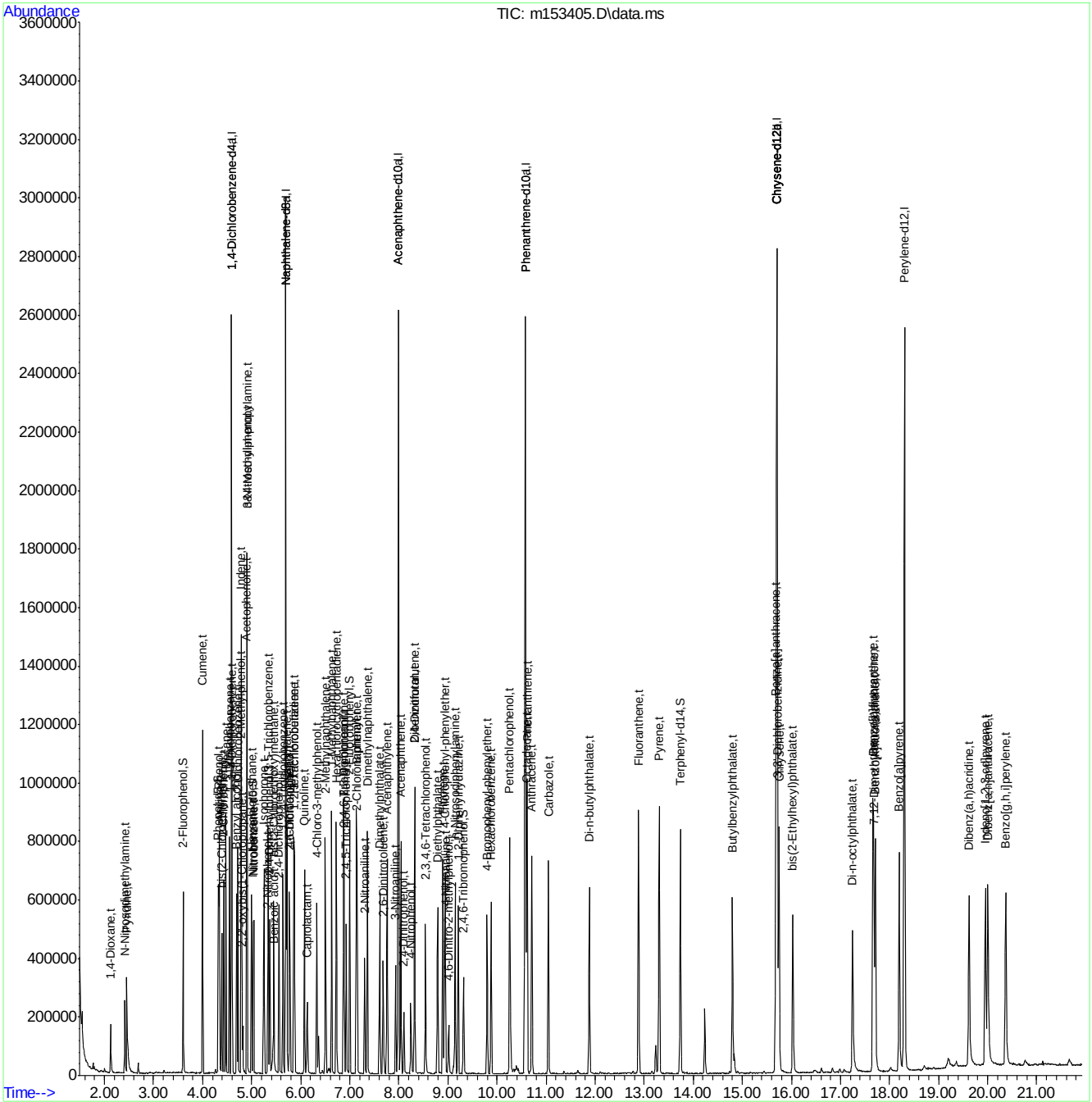
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.258	266	133443	19.86	ppm	98
77) Phenanthrene	10.615	178	378895	11.50	ppm	98
78) Anthracene	10.706	178	409530	11.31	ppm	99
79) Carbazole	11.048	167	393565	11.05	ppm	99
80) Di-n-butylphthalate	11.881	149	487217	10.59	ppm	98
81) Fluoranthene	12.885	202	520091	11.23	ppm	98
82) Octadecane	10.605	57	124800	11.03	ppm	97
84) Pyrene	13.307	202	536799	10.44	ppm	99
86) Butylbenzylphthalate	14.798	149	213025	9.08	ppm	94
87) Benzo[a]anthracene	15.684	228	489844	9.57	ppm	99
88) 3,3'-Dichlorobenzidine	15.722	252	159967	8.86	ppm	100
89) Chrysene	15.748	228	428205	10.07	ppm	98
90) bis(2-Ethylhexyl)phtha...	16.026	149	257248	8.66	ppm	99
92) Di-n-octylphthalate	17.244	149	458672	8.90	ppm	99
93) Benzo[b]fluoranthene	17.660	252	536283	10.64	ppm	99
94) Benzo[k]fluoranthene	17.708	252	493811	11.24	ppm	99
95) Benzo[a]pyrene	18.200	252	474301	10.37	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.952	276	418872	9.99	ppm	98
97) Dibenz(a,h)acridine	19.621	279	417188	9.87	ppm	85
98) Dibenz[a,h]anthracene	20.005	278	446655	10.58	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.682	256	186797	9.04	ppm	99
100) Benzo[g,h,i]perylene	20.368	276	449372	10.58	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153405.D
Acq On : 12 Apr 2019 7:49 pm
Operator : christc2
Sample : ic6556-10
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 10:26:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:14:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	362931	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	1246004	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	740803	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	1448565	40.00	ppm	0.00
83) Chrysene-d12	15.706	240	1422398	40.00	ppm	0.00
91) Perylene-d12	18.307	264	1538825	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	362931	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	740803	40.00	ppm	0.00
106) Chrysene-d12a	15.706	240	1422398	40.00	ppm	0.00
108) Chrysene-d12b	15.706	240	1422398	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	1448565	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	1246004	40.00	ppm	0.00
115) Chrysene-d12c	15.706	240	1422398	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.603	112	70644	4.59	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.18%	
8) Phenol-d5	4.319	99	88665	4.77	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.54%	
25) Nitrobenzene-d5	5.029	82	70282	5.28	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.56%	
51) 2-Fluorobiphenyl	7.000	172	148985	5.84	ppm	0.00
Spiked Amount 50.000			Recovery	=	11.68%	
73) 2,4,6-Tribromophenol	9.318	330	25439	4.76	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.52%	
85) Terphenyl-d14	13.735	244	191984	4.89	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.78%	
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.129	88	33693	4.45	ppm	96
3) Pyridine	2.465	79	86154	4.78	ppm	97
4) N-Nitrosodimethylamine	2.417	42	29834	4.53	ppm	91
6) Indene	4.789	116	103122	5.56	ppm	96
7) Cumene	3.998	105	178887	5.32	ppm	97
9) Phenol	4.329	94	97959	5.33	ppm	93
10) Aniline	4.340	93	104277	6.58	ppm	96
11) bis(2-Chloroethyl)ether	4.393	93	68122	5.49	ppm	96
12) 2-Chlorophenol	4.431	128	68286	5.32	ppm	93
13) Decane	4.479	43	53401	5.93	ppm	97
14) 1,3-Dichlorobenzene	4.548	146	79026	5.50	ppm	98
15) 1,4-Dichlorobenzene	4.602	146	69316	5.23	ppm	97
16) Benzyl alcohol	4.692	108	36952	4.59	ppm	95
17) 1,2-Dichlorobenzene	4.719	146	69919	5.31	ppm	96
18) Acetophenone	4.901	105	90244	5.70	ppm	97
19) 2-Methylphenol	4.783	108	58474	5.62	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.805	121	17308	5.36	ppm		97
21) 3&4-Methylphenol	4.906	108	56842	5.39	ppm	#	82
22) n-Nitroso-di-n-propyla...	4.906	70	46968	6.05	ppm		97
23) Hexachloroethane	4.997	201	29612	5.20	ppm		97
26) Nitrobenzene	5.045	77	68536	5.40	ppm		96
27) Quinoline	6.076	129	122244	5.05	ppm		99
28) Isophorone	5.253	82	125513	5.20	ppm		99
29) 2-Nitrophenol	5.328	139	29393	4.37	ppm		95
30) 2,4-Dimethylphenol	5.365	107	48293	4.45	ppm		93
31) Benzoic acid	5.429	105	26139	2.83	ppm		95
32) bis(2-Chloroethoxy)met...	5.451	93	77057	5.43	ppm		99
33) 2,4-Dichlorophenol	5.552	162	55157	5.22	ppm		98
34) 2,6-Dichlorophenol	5.782	162	51151	5.41	ppm		96
35) 1,3,5-Trichlorobenzene	5.339	180	70750	5.82	ppm		99
36) 1,2,4-Trichlorobenzene	5.638	180	68256	5.62	ppm		94
37) 1,2,3-Trichlorobenzene	5.873	180	63064	5.78	ppm		96
38) Naphthalene	5.718	128	162154	5.45	ppm		98
39) 4-Chloroaniline	5.771	127	72570	5.37	ppm		99
40) 2,3-Dichloroaniline	6.872	161	71480	5.49	ppm		99
41) Caprolactam	6.124	55	24890	4.82	ppm		95
42) Hexachlorobutadiene	5.862	225	40703	5.59	ppm		99
43) 4-Chloro-3-methylphenol	6.327	107	55171	4.76	ppm		98
44) 2-Methylnaphthalene	6.503	141	103175	5.39	ppm		95
45) 1-Methylnaphthalene	6.631	142	130708	5.46	ppm		97
46) Dimethylnaphthalene	7.358	156	116566	5.57	ppm		98
48) Hexachlorocyclopentadiene	6.722	237	74016	9.66	ppm		99
49) 2,4,6-Trichlorophenol	6.882	196	42257	5.35	ppm		96
50) 2,4,5-Trichlorophenol	6.925	196	43620	5.06	ppm		97
52) 2-Chloronaphthalene	7.149	162	126157	6.15	ppm		99
53) Biphenyl	7.133	154	158517	5.64	ppm		97
54) 2-Nitroaniline	7.304	65	30403	4.39	ppm		92
55) Dimethylphthalate	7.609	163	145142	5.33	ppm		98
56) Acenaphthylene	7.758	152	192037	5.61	ppm		98
57) 2,6-Dinitrotoluene	7.678	165	25057	4.10	ppm		95
58) 3-Nitroaniline	7.929	138	30026	4.31	ppm		91
59) Acenaphthene	8.041	153	113242	5.36	ppm		96
60) 2,4-Dinitrophenol	8.100	184	12104	3.90	ppm		89
61) 4-Nitrophenol	8.244	109	13988	3.61	ppm		94
62) Dibenzofuran	8.319	168	176984	5.84	ppm		95
63) 2,4-Dinitrotoluene	8.324	165	31453	4.27	ppm		78
64) 2,3,4,6-Tetrachlorophenol	8.543	232	40001	4.68	ppm		97
65) Diethylphthalate	8.789	149	139896	5.16	ppm		98
66) Fluorene	8.896	166	141985	5.49	ppm		99
67) 4-Chlorophenyl-phenyle...	8.939	204	75706	5.84	ppm		93
68) 4-Nitroaniline	8.944	138	30140	4.86	ppm		97
70) 4,6-Dinitro-2-methylph...	9.013	198	11641	2.54	ppm		88
71) n-Nitrosodiphenylamine	9.147	169	105291	5.72	ppm		99
72) 1,2-Diphenylhydrazine	9.206	77	141494	5.64	ppm		95
74) 4-Bromophenyl-phenylether	9.804	248	52386	5.37	ppm		98
75) Hexachlorobenzene	9.884	284	58771	5.76	ppm		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.258	266	60539	8.98	ppm	96
77) Phenanthrene	10.616	178	194160	5.87	ppm	97
78) Anthracene	10.706	178	205982	5.67	ppm	99
79) Carbazole	11.048	167	198330	5.55	ppm	99
80) Di-n-butylphthalate	11.881	149	229812	4.98	ppm	99
81) Fluoranthene	12.886	202	258142	5.56	ppm	98
82) Octadecane	10.605	57	61435	5.41	ppm	98
84) Pyrene	13.302	202	270696	5.18	ppm	98
86) Butylbenzylphthalate	14.798	149	96861	4.06	ppm	98
87) Benzo[a]anthracene	15.684	228	241117	4.63	ppm	97
88) 3,3'-Dichlorobenzidine	15.722	252	74185	4.04	ppm	97
89) Chrysene	15.748	228	218513	5.05	ppm	99
90) bis(2-Ethylhexyl)phtha...	16.031	149	114005	3.77	ppm	96
92) Di-n-octylphthalate	17.244	149	180377	3.47	ppm	98
93) Benzo[b]fluoranthene	17.661	252	258950	5.09	ppm	99
94) Benzo[k]fluoranthene	17.709	252	249484	5.62	ppm	99
95) Benzo[a]pyrene	18.195	252	223126	4.83	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.952	276	180234	4.26	ppm	97
97) Dibenz(a,h)acridine	19.621	279	182514	4.28	ppm	98
98) Dibenz[a,h]anthracene	20.005	278	207861	4.88	ppm	97
99) 7,12-Dimethylbenz(a)an...	17.677	256	76015	3.64	ppm	98
100) Benzo[g,h,i]perylene	20.368	276	206161	4.81	ppm	97

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

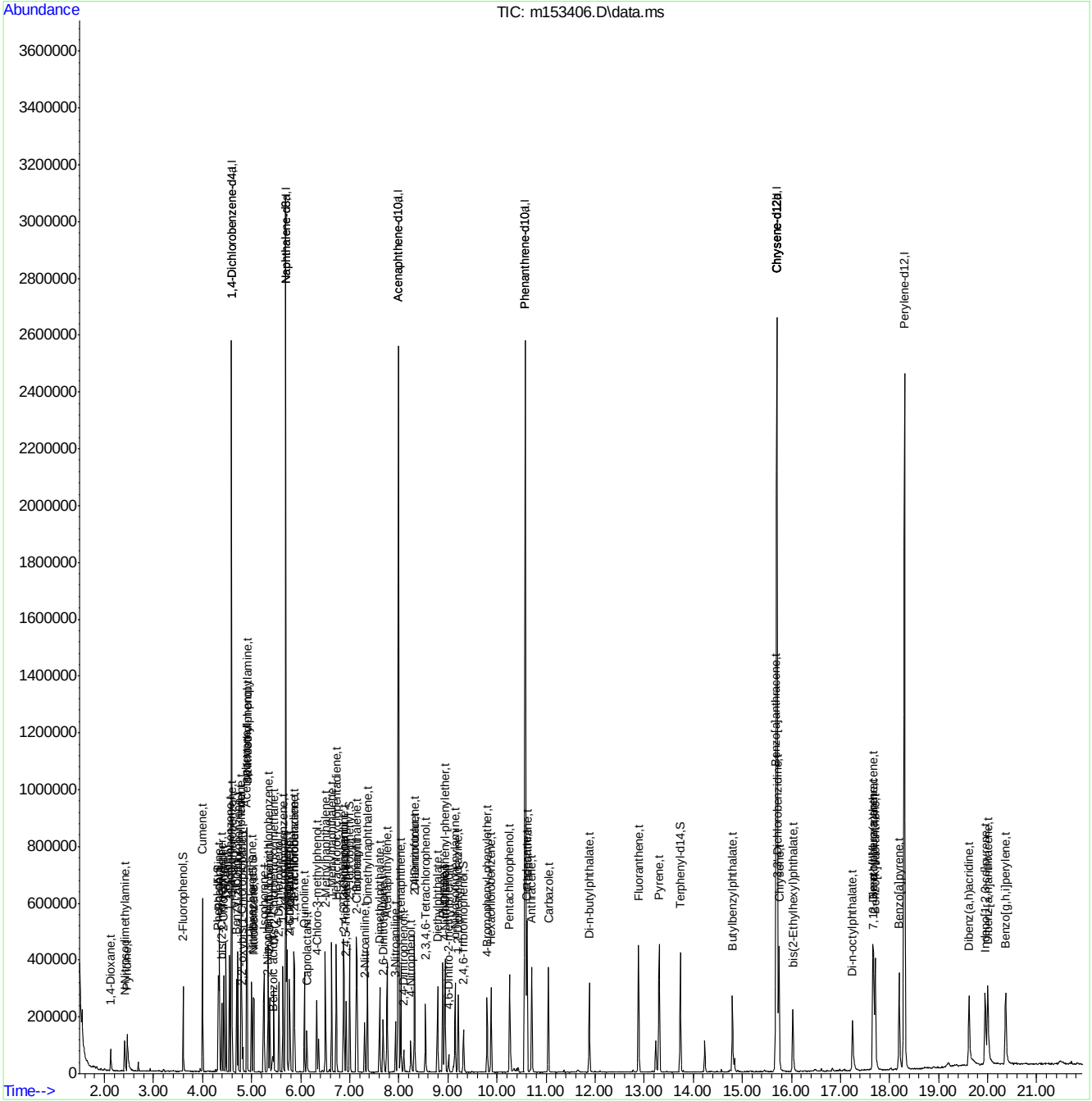
9.6.34

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153406.D
Acq On : 12 Apr 2019 8:18 pm
Operator : christc2
Sample : ic6556-5
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 10:29:22 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	321302	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	1086613	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	624876	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	1221213	40.00	ppm	0.00
83) Chrysene-d12	15.701	240	1187922	40.00	ppm	-0.01
91) Perylene-d12	18.302	264	1279525	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	321302	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	624876	40.00	ppm	0.00
106) Chrysene-d12a	15.701	240	1187922	40.00	ppm	-0.01
108) Chrysene-d12b	15.701	240	1187922	40.00	ppm	-0.01
110) Phenanthrene-d10a	10.574	188	1221213	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	1086613	40.00	ppm	0.00
115) Chrysene-d12c	15.701	240	1187922	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.604	112	22357	1.64	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.28%	
8) Phenol-d5	4.319	99	28291	1.72	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.44%	
25) Nitrobenzene-d5	5.030	82	21979	1.89	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.78%	
51) 2-Fluorobiphenyl	7.001	172	51123	2.38	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.76%	
73) 2,4,6-Tribromophenol	9.313	330	6411	1.42	ppm	-0.01
Spiked Amount 50.000			Recovery	=	2.84%	
85) Terphenyl-d14	13.736	244	60854	1.86	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.72%	
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.130	88	11381	1.70	ppm	90
3) Pyridine	2.482	79	27623	1.73	ppm	97
4) N-Nitrosodimethylamine	2.418	42	9815	1.68	ppm	93
6) Indene	4.789	116	35295	2.15	ppm	94
7) Cumene	3.999	105	60597	2.04	ppm	96
9) Phenol	4.330	94	32262	1.98	ppm	97
10) Aniline	4.341	93	35832	2.55	ppm	96
11) bis(2-Chloroethyl)ether	4.389	93	23172	2.11	ppm	94
12) 2-Chlorophenol	4.432	128	21560	1.90	ppm	92
13) Decane	4.480	43	18451	2.32	ppm	96
14) 1,3-Dichlorobenzene	4.549	146	27382	2.15	ppm	99
15) 1,4-Dichlorobenzene	4.602	146	24815	2.11	ppm	96
16) Benzyl alcohol	4.693	108	11499	1.61	ppm	97
17) 1,2-Dichlorobenzene	4.720	146	23744	2.04	ppm	98
18) Acetophenone	4.902	105	30620	2.18	ppm	97
19) 2-Methylphenol	4.784	108	18590	2.02	ppm	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.805	121	5582	1.95	ppm		97
21) 3&4-Methylphenol	4.907	108	18888	2.02	ppm		85
22) n-Nitroso-di-n-propyla...	4.907	70	15794	2.30	ppm		93
23) Hexachloroethane	4.998	201	9876	1.96	ppm		92
26) Nitrobenzene	5.040	77	22994	2.08	ppm		97
27) Quinoline	6.077	129	39477	1.87	ppm		99
28) Isophorone	5.254	82	41790	1.98	ppm		96
29) 2-Nitrophenol	5.329	139	8483	1.45	ppm		93
30) 2,4-Dimethylphenol	5.366	107	14556	1.54	ppm		98
32) bis(2-Chloroethoxy)met...	5.452	93	25887	2.09	ppm		99
33) 2,4-Dichlorophenol	5.553	162	17282	1.88	ppm		98
34) 2,6-Dichlorophenol	5.783	162	16133	1.96	ppm		99
35) 1,3,5-Trichlorobenzene	5.340	180	24781	2.34	ppm		96
36) 1,2,4-Trichlorobenzene	5.639	180	23847	2.25	ppm		93
37) 1,2,3-Trichlorobenzene	5.874	180	21881	2.30	ppm		95
38) Naphthalene	5.719	128	53779	2.07	ppm		96
39) 4-Chloroaniline	5.772	127	24490	2.08	ppm		99
40) 2,3-Dichloroaniline	6.872	161	23482	2.07	ppm		98
41) Caprolactam	6.119	55	7211	1.60	ppm		86
42) Hexachlorobutadiene	5.858	225	13305	2.10	ppm		97
43) 4-Chloro-3-methylphenol	6.322	107	16880	1.67	ppm		92
44) 2-Methylnaphthalene	6.504	141	33355	2.00	ppm		98
45) 1-Methylnaphthalene	6.627	142	44650	2.14	ppm		95
46) Dimethylnaphthalene	7.358	156	38554	2.11	ppm		99
48) Hexachlorocyclopentadiene	6.723	237	21743	3.36	ppm		93
49) 2,4,6-Trichlorophenol	6.878	196	13988	2.10	ppm		93
50) 2,4,5-Trichlorophenol	6.920	196	14693	2.02	ppm		89
52) 2-Chloronaphthalene	7.150	162	43258	2.50	ppm		98
53) Biphenyl	7.134	154	53685	2.26	ppm		98
54) 2-Nitroaniline	7.300	65	7430	1.27	ppm		92
55) Dimethylphthalate	7.604	163	47572	2.07	ppm		99
56) Acenaphthylene	7.759	152	62856	2.18	ppm		97
57) 2,6-Dinitrotoluene	7.679	165	6502	1.26	ppm		97
58) 3-Nitroaniline	7.930	138	8052	1.37	ppm		75
59) Acenaphthene	8.037	153	36991	2.07	ppm		96
60) 2,4-Dinitrophenol	8.101	184	2307	0.88	ppm		86
62) Dibenzofuran	8.320	168	59165	2.31	ppm		97
63) 2,4-Dinitrotoluene	8.320	165	7001	1.13	ppm	#	48
64) 2,3,4,6-Tetrachlorophenol	8.544	232	11072	1.54	ppm		96
65) Diethylphthalate	8.785	149	44675	1.95	ppm		96
66) Fluorene	8.897	166	47360	2.17	ppm		98
67) 4-Chlorophenyl-phenyle...	8.934	204	25071	2.29	ppm		94
68) 4-Nitroaniline	8.945	138	8066	1.54	ppm		94
70) 4,6-Dinitro-2-methylph...	9.014	198	2444	0.63	ppm		97
71) n-Nitrosodiphenylamine	9.142	169	33425	2.15	ppm		97
72) 1,2-Diphenylhydrazine	9.206	77	45557	2.16	ppm		99
74) 4-Bromophenyl-phenylether	9.799	248	16693	2.03	ppm		91
75) Hexachlorobenzene	9.879	284	20541	2.39	ppm		90
76) Pentachlorophenol	10.259	266	13876	2.44	ppm		97
77) Phenanthrene	10.611	178	66733	2.40	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

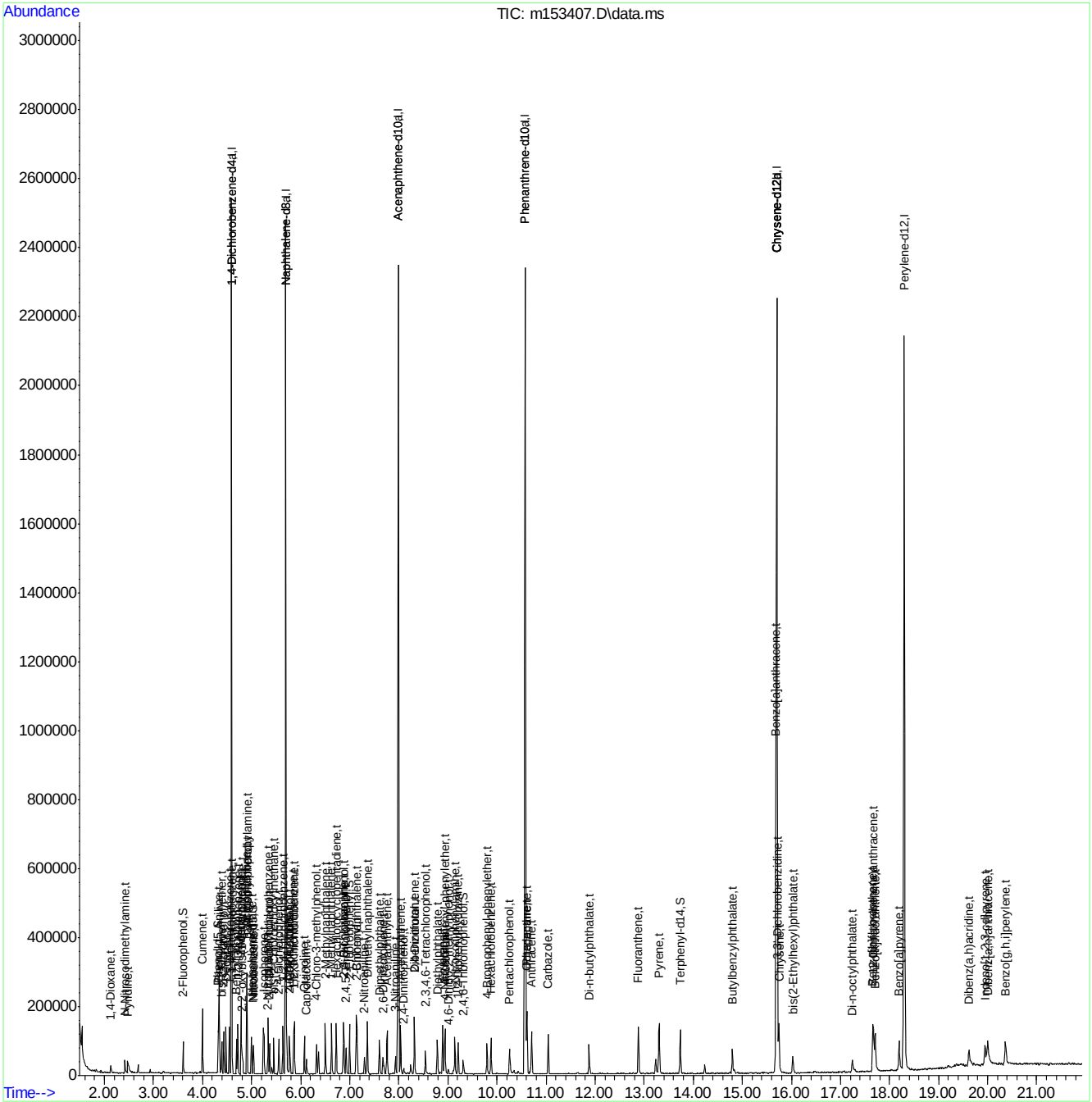
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.707	178	66921	2.18	ppm	98
79) Carbazole	11.044	167	61545	2.04	ppm	99
80) Di-n-butylphthalate	11.877	149	64886	1.67	ppm	98
81) Fluoranthene	12.881	202	79743	2.04	ppm	97
82) Octadecane	10.606	57	19409	2.03	ppm	93
84) Pyrene	13.303	202	86090	1.97	ppm	97
86) Butylbenzylphthalate	14.799	149	25053	1.26	ppm	91
87) Benzo[a]anthracene	15.685	228	73939	1.70	ppm	97
88) 3,3'-Dichlorobenzidine	15.723	252	19312	1.26	ppm	96
89) Chrysene	15.749	228	72902	2.02	ppm	98
90) bis(2-Ethylhexyl)phtha...	16.032	149	25473	1.01	ppm	97
92) Di-n-octylphthalate	17.239	149	37963	0.88	ppm	97
93) Benzo[b]fluoranthene	17.656	252	71309	1.69	ppm	97
94) Benzo[k]fluoranthene	17.704	252	81842	2.22	ppm	98
95) Benzo[a]pyrene	18.195	252	61108	1.59	ppm	96
96) Indeno[1,2,3-cd]pyrene	19.947	276	44478	1.26	ppm	98
97) Dibenz(a,h)acridine	19.622	279	45973	1.30	ppm	80
98) Dibenz[a,h]anthracene	20.001	278	52605	1.48	ppm	98
99) 7,12-Dimethylbenz(a)an...	17.672	256	22406	1.29	ppm	99
100) Benzo[g,h,i]perylene	20.364	276	56491	1.58	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153407.D
Acq On : 12 Apr 2019 8:46 pm
Operator : christc2
Sample : ic6556-2
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:01:23 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	361595	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	1234210	40.00	ppm	0.00
47) Acenaphthene-d10	7.991	164	719774	40.00	ppm	0.00
69) Phenanthrene-d10	10.576	188	1399253	40.00	ppm	0.00
83) Chrysene-d12	15.703	240	1374109	40.00	ppm	0.00
91) Perylene-d12	18.304	264	1498240	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	361595	40.00	ppm	0.00
103) Acenaphthene-d10a	7.991	164	719774	40.00	ppm	0.00
106) Chrysene-d12a	15.703	240	1374109	40.00	ppm	0.00
108) Chrysene-d12b	15.703	240	1374109	40.00	ppm	0.00
110) Phenanthrene-d10a	10.576	188	1399253	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	1234210	40.00	ppm	0.00
115) Chrysene-d12c	15.703	240	1374109	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.606	112	12086	0.79	ppm	0.00
Spiked Amount 50.000			Recovery =	1.58%		
8) Phenol-d5	4.321	99	16302	0.88	ppm	0.00
Spiked Amount 50.000			Recovery =	1.76%		
25) Nitrobenzene-d5	5.026	82	13024	0.99	ppm	0.00
Spiked Amount 50.000			Recovery =	1.98%		
51) 2-Fluorobiphenyl	6.997	172	29626	1.20	ppm	0.00
Spiked Amount 50.000			Recovery =	2.40%		
73) 2,4,6-Tribromophenol	9.321	330	3925	0.76	ppm	0.00
Spiked Amount 50.000			Recovery =	1.52%		
85) Terphenyl-d14	13.732	244	35772	0.94	ppm	0.00
Spiked Amount 50.000			Recovery =	1.88%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.137	88	6820	0.90	ppm	93
3) Pyridine	2.489	79	14453	0.80	ppm	97
4) N-Nitrosodimethylamine	2.425	42	5387	0.82	ppm	95
6) Indene	4.791	116	21025	1.14	ppm	94
7) Cumene	3.995	105	34265	1.02	ppm	99
9) Phenol	4.332	94	18877	1.03	ppm	95
10) Aniline	4.343	93	20382	1.29	ppm	95
11) bis(2-Chloroethyl)ether	4.391	93	13058	1.06	ppm	98
12) 2-Chlorophenol	4.433	128	11977	0.94	ppm	94
13) Decane	4.476	43	10763	1.20	ppm	96
14) 1,3-Dichlorobenzene	4.546	146	15906	1.11	ppm	97
15) 1,4-Dichlorobenzene	4.599	146	13381	1.01	ppm	94
16) Benzyl alcohol	4.695	108	7183	0.90	ppm	88
17) 1,2-Dichlorobenzene	4.722	146	13810	1.05	ppm	99
18) Acetophenone	4.903	105	18563	1.18	ppm	97
19) 2-Methylphenol	4.786	108	11075	1.07	ppm	88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.802	121	3806	1.18	ppm		95
21) 3&4-Methylphenol	4.903	108	10956	1.04	ppm	#	58
22) n-Nitroso-di-n-propyla...	4.903	70	8960	1.16	ppm		88
23) Hexachloroethane	4.994	201	5686	1.00	ppm		89
26) Nitrobenzene	5.042	77	12725	1.01	ppm		99
27) Quinoline	6.073	129	22674	0.95	ppm		93
28) Isophorone	5.251	82	23667	0.99	ppm		96
29) 2-Nitrophenol	5.325	139	4443	0.67	ppm		98
30) 2,4-Dimethylphenol	5.368	107	7754	0.72	ppm		85
32) bis(2-Chloroethoxy)met...	5.454	93	15522	1.10	ppm		99
33) 2,4-Dichlorophenol	5.555	162	10227	0.98	ppm		94
34) 2,6-Dichlorophenol	5.785	162	8877	0.95	ppm		96
35) 1,3,5-Trichlorobenzene	5.341	180	14638	1.22	ppm		90
36) 1,2,4-Trichlorobenzene	5.641	180	13384	1.11	ppm		94
37) 1,2,3-Trichlorobenzene	5.870	180	13641	1.26	ppm		90
38) Naphthalene	5.715	128	32776	1.11	ppm		97
39) 4-Chloroaniline	5.769	127	13320	1.00	ppm		94
40) 2,3-Dichloroaniline	6.874	161	12827	0.99	ppm		99
41) Caprolactam	6.116	55	3769	0.74	ppm		84
42) Hexachlorobutadiene	5.860	225	8056	1.12	ppm		94
43) 4-Chloro-3-methylphenol	6.324	107	8832	0.77	ppm		97
44) 2-Methylnaphthalene	6.506	141	20018	1.06	ppm		96
45) 1-Methylnaphthalene	6.629	142	26361	1.11	ppm		96
46) Dimethylnaphthalene	7.360	156	21537	1.04	ppm		94
48) Hexachlorocyclopentadiene	6.725	237	12043	1.62	ppm		95
49) 2,4,6-Trichlorophenol	6.880	196	7522	0.98	ppm		88
50) 2,4,5-Trichlorophenol	6.928	196	7962	0.95	ppm		80
52) 2-Chloronaphthalene	7.152	162	25386	1.27	ppm		94
53) Biphenyl	7.136	154	31420	1.15	ppm		95
54) 2-Nitroaniline	7.302	65	4564	0.68	ppm		90
55) Dimethylphthalate	7.606	163	28427	1.07	ppm		98
56) Acenaphthylene	7.761	152	36620	1.10	ppm		98
57) 2,6-Dinitrotoluene	7.681	165	3512	0.59	ppm		85
59) Acenaphthene	8.039	153	21927	1.07	ppm		94
62) Dibenzofuran	8.322	168	33666	1.14	ppm		97
63) 2,4-Dinitrotoluene	8.322	165	4112	0.57	ppm	#	48
64) 2,3,4,6-Tetrachlorophenol	8.541	232	5257	0.63	ppm		94
65) Diethylphthalate	8.786	149	25405	0.97	ppm		98
66) Fluorene	8.899	166	28200	1.12	ppm		96
67) 4-Chlorophenyl-phenyle...	8.936	204	15259	1.21	ppm		97
68) 4-Nitroaniline	8.941	138	4000	0.66	ppm		92
71) n-Nitrosodiphenylamine	9.144	169	19772	1.11	ppm		97
72) 1,2-Diphenylhydrazine	9.208	77	26698	1.10	ppm		83
74) 4-Bromophenyl-phenylether	9.801	248	10051	1.07	ppm		96
75) Hexachlorobenzene	9.881	284	12007	1.22	ppm		90
77) Phenanthrene	10.613	178	39852	1.25	ppm		99
78) Anthracene	10.709	178	37676	1.07	ppm		98
79) Carbazole	11.046	167	34716	1.01	ppm		94
80) Di-n-butylphthalate	11.879	149	35987	0.81	ppm		94
81) Fluoranthene	12.883	202	46006	1.03	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
82) Octadecane	10.602	57	11357	1.04	ppm	89
84) Pyrene	13.305	202	49946	0.99	ppm	96
87) Benzo[a]anthracene	15.687	228	44818	0.89	ppm	98
89) Chrysene	15.746	228	42317	1.01	ppm	99
93) Benzo[b]fluoranthene	17.658	252	37401	0.76	ppm	99
94) Benzo[k]fluoranthene	17.706	252	46383	1.07	ppm	99
95) Benzo[a]pyrene	18.197	252	33232	0.74	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.944	276	22073	0.54	ppm	84
98) Dibenz[a,h]anthracene	19.997	278	26530	0.64	ppm	87
100) Benzo[g,h,i]perylene	20.366	276	31660	0.76	ppm	96

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

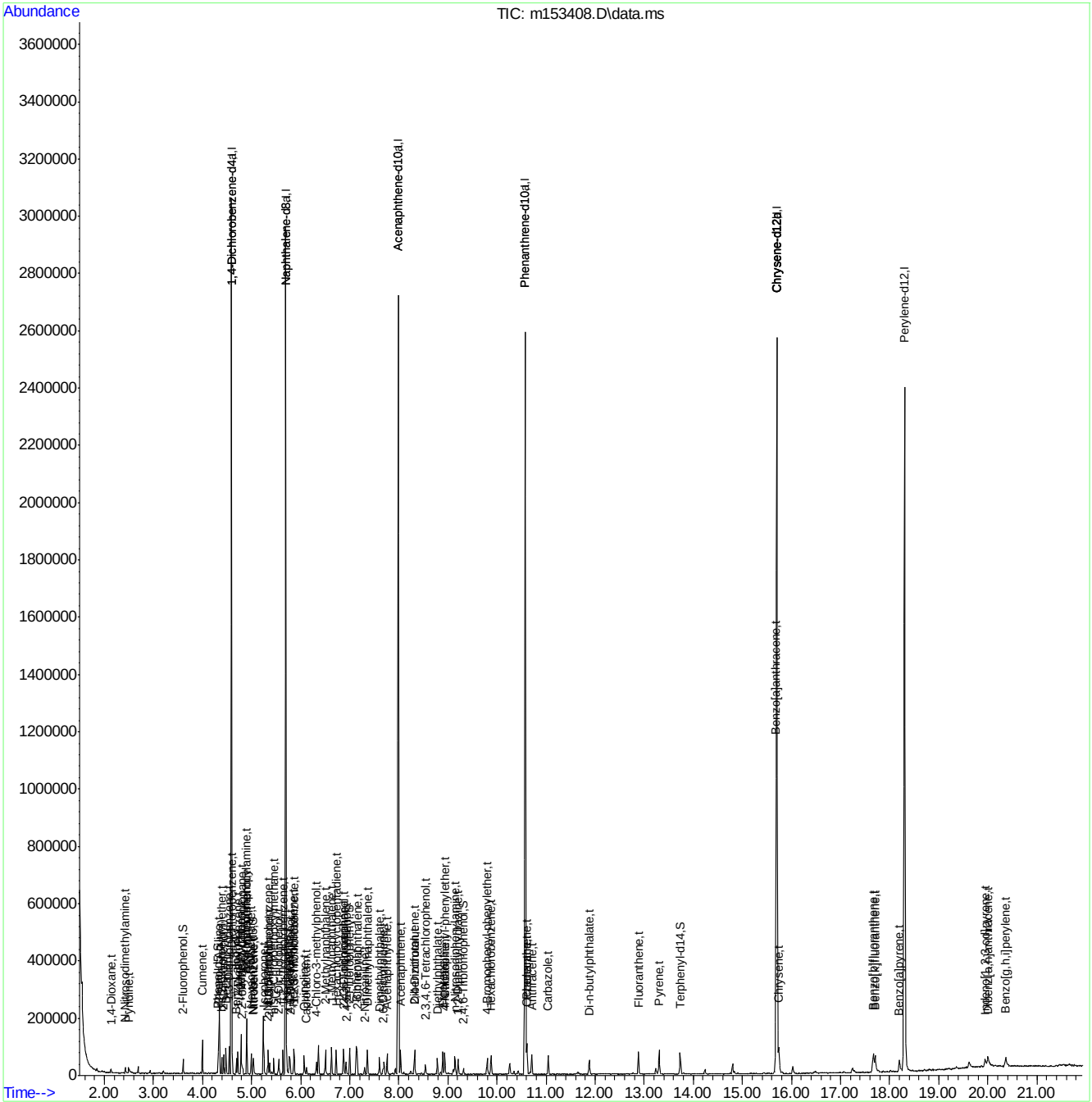
9.6.36

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153408.D
Acq On : 12 Apr 2019 9:15 pm
Operator : christc2
Sample : ic6556-1
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:02:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 10:27:56 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153409.D
Acq On : 12 Apr 2019 9:43 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 15 11:54:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:19:20 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.590	152	255989	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	854763	40.00	ppm	0.00
47) Acenaphthene-d10	7.993	164	517248	40.00	ppm	0.00
69) Phenanthrene-d10	10.572	188	1007716	40.00	ppm	0.00
83) Chrysene-d12	15.705	240	815608	40.00	ppm	0.00
91) Perylene-d12	18.301	264	903170	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.590	152	255989	40.00	ppm	0.00
103) Acenaphthene-d10a	7.993	164	517248	40.00	ppm	0.00
106) Chrysene-d12a	15.705	240	815608	40.00	ppm	0.00
108) Chrysene-d12b	15.705	240	815608	40.00	ppm	0.00
110) Phenanthrene-d10a	10.572	188	1007716	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	854763	40.00	ppm	0.00
115) Chrysene-d12c	15.705	240	815608	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	2.422	42	180752	41.67	ppm	95
11) bis(2-Chloroethyl)ether	4.393	93	459749	51.17	ppm	96
14) 1,3-Dichlorobenzene	4.548	146	485227	46.81	ppm	99
15) 1,4-Dichlorobenzene	4.601	146	442586	47.02	ppm	98
17) 1,2-Dichlorobenzene	4.719	146	431561	46.33	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.804	121	128350	55.26	ppm	96
22) n-Nitroso-di-n-propyla...	4.906	70	301654	51.35	ppm	97
23) Hexachloroethane	4.996	201	179100	45.04	ppm	97
26) Nitrobenzene	5.044	77	398131	44.97	ppm	96
28) Isophorone	5.253	82	755092	45.71	ppm	100
32) bis(2-Chloroethoxy)met...	5.456	93	489120	48.81	ppm	100
36) 1,2,4-Trichlorobenzene	5.643	180	410184	47.19	ppm	98
38) Naphthalene	5.717	128	989343	47.27	ppm	100
42) Hexachlorobutadiene	5.862	225	249878	48.24	ppm	99
48) Hexachlorocyclopentadiene	6.727	237	243786	48.47	ppm	100
52) 2-Chloronaphthalene	7.154	162	760150	47.77	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153409.D
Acq On : 12 Apr 2019 9:43 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 15 11:54:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:19:20 2019
Response via : Initial Calibration

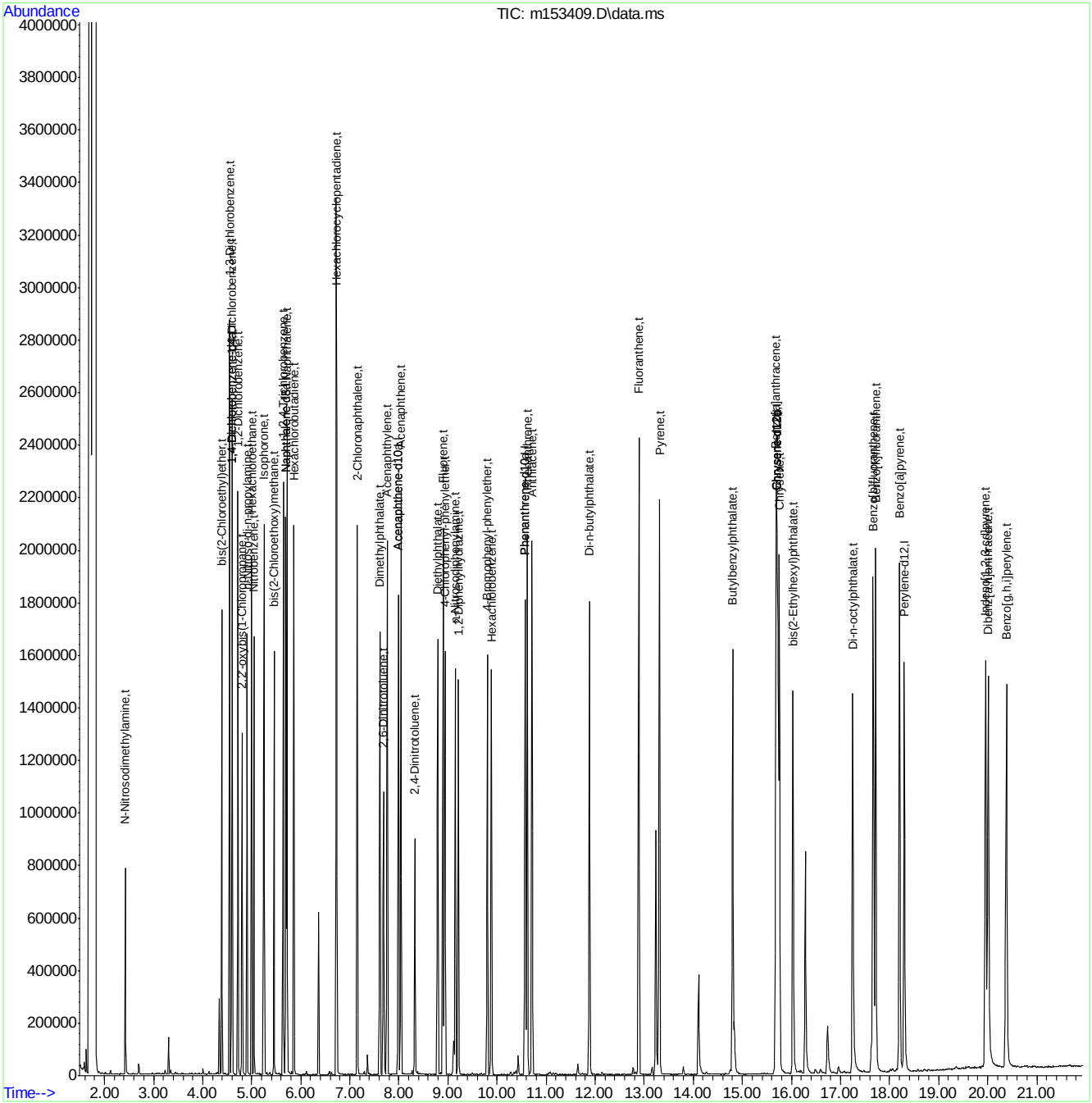
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Dimethylphthalate	7.613	163	861945	44.34	ppm	99
56) Acenaphthylene	7.763	152	1066980	42.70	ppm	99
57) 2,6-Dinitrotoluene	7.683	165	158034	43.40	ppm	93
59) Acenaphthene	8.041	153	642939	42.50	ppm	96
63) 2,4-Dinitrotoluene	8.329	165	196523	38.32	ppm	89
65) Diethylphthalate	8.794	149	829797	44.17	ppm	99
66) Fluorene	8.901	166	816843	43.52	ppm	99
67) 4-Chlorophenyl-phenyle...	8.938	204	406549	41.70	ppm	98
71) n-Nitrosodiphenylamine	9.152	169	560669	41.85	ppm	98
72) 1,2-Diphenylhydrazine	9.210	77	798413	43.46	ppm	100
74) 4-Bromophenyl-phenylether	9.803	248	309156	44.93	ppm	94
75) Hexachlorobenzene	9.889	284	319865	41.86	ppm	99
77) Phenanthrene	10.621	178	1138336	45.56	ppm	99
78) Anthracene	10.711	178	1163645	44.21	ppm	99
80) Di-n-butylphthalate	11.881	149	1391234	45.65	ppm	100
81) Fluoranthene	12.890	202	1438085	43.54	ppm	98
84) Pyrene	13.312	202	1383124	46.31	ppm	99
86) Butylbenzylphthalate	14.803	149	607124	49.50	ppm	99
87) Benzo[a]anthracene	15.689	228	1317427	47.18	ppm	100
89) Chrysene	15.753	228	1110896	44.75	ppm	98
90) bis(2-Ethylhexyl)phtha...	16.031	149	750962	45.23	ppm	99
92) Di-n-octylphthalate	17.249	149	1325247	44.04	ppm	100
93) Benzo[b]fluoranthene	17.665	252	1307739	45.96	ppm	98
94) Benzo[k]fluoranthene	17.719	252	1275584	47.10	ppm	99
95) Benzo[a]pyrene	18.205	252	1254031	50.21	ppm	99
96) Indeno[1,2,3-cd]pyrene	19.957	276	1156959	46.70	ppm	99
98) Dibenz[a,h]anthracene	20.015	278	1088531	47.29	ppm	98
100) Benzo[g,h,i]perylene	20.384	276	1210960	51.12	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153409.D
Acq On : 12 Apr 2019 9:43 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 15 11:54:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:19:20 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153410.D
Acq On : 12 Apr 2019 10:12 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 15 11:34:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:20:55 2019
Response via : Initial Calibration

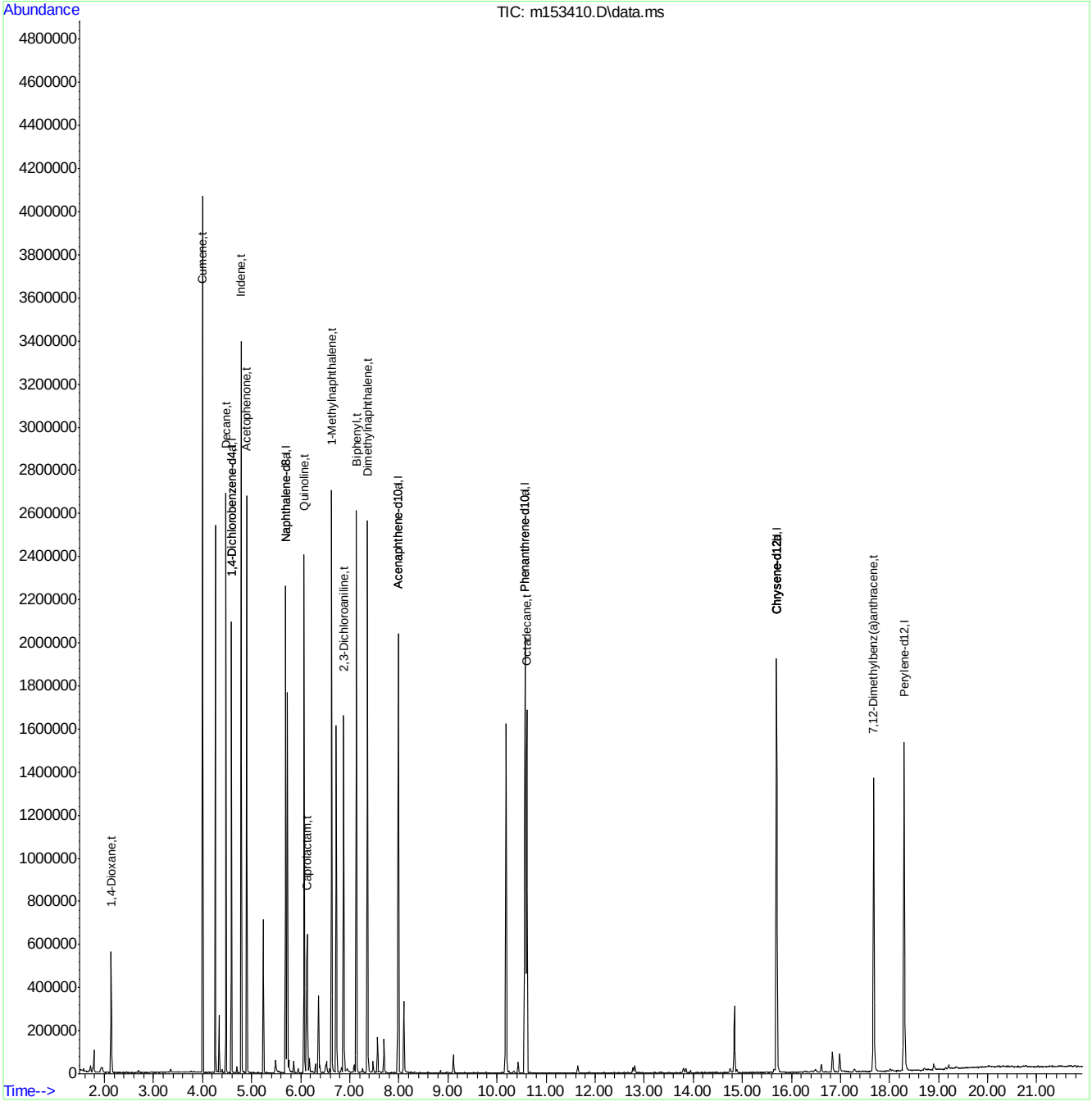
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.587	152	272197	40.00	ppm	0.00
24) Naphthalene-d8	5.698	136	1002860	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	520748	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	1073176	40.00	ppm	0.00
83) Chrysene-d12	15.696	240	1083311	40.00	ppm	-0.02
91) Perylene-d12	18.303	264	923549	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.587	152	272197	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	520748	40.00	ppm	0.00
106) Chrysene-d12a	15.696	240	1083311	40.00	ppm	-0.02
108) Chrysene-d12b	15.696	240	1083311	40.00	ppm	-0.02
110) Phenanthrene-d10a	10.574	188	1073176	40.00	ppm	0.00
113) Naphthalene-d8a	5.698	136	1002860	40.00	ppm	0.00
115) Chrysene-d12c	15.696	240	1083311	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.135	88	227785	42.30	ppm	98
6) Indene	4.790	116	764954	53.15	ppm	97
7) Cumene	3.999	105	1126025	44.28	ppm	99
13) Decane	4.480	43	312181	43.08	ppm	98
18) Acetophenone	4.902	105	581613	46.44	ppm	88
27) Quinoline	6.072	129	812753	42.78	ppm	99
40) 2,3-Dichloroaniline	6.873	161	409589	38.51	ppm	97
41) Caprolactam	6.136	55	144688	37.48	ppm	97
45) 1-Methylnaphthalene	6.632	142	799685	40.40	ppm	99
46) Dimethylnaphthalene	7.364	156	722174	41.91	ppm	99
53) Biphenyl	7.134	154	980730	46.88	ppm	99
82) Octadecane	10.606	57	421400	48.92	ppm	99
99) 7,12-Dimethylbenz(a)an...	17.678	256	447153	40.08	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153410.D
Acq On : 12 Apr 2019 10:12 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 15 11:34:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:20:55 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153411.D
Acq On : 12 Apr 2019 10:40 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 15 11:40:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:38:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	264730	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	863210	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	533118	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	960221	40.00	ppm	0.00
83) Chrysene-d12	15.696	240	910115	40.00	ppm	-0.02
91) Perylene-d12	18.297	264	931035	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.586	152	264730	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	533118	40.00	ppm	0.00
106) Chrysene-d12a	15.696	240	910115	40.00	ppm	-0.02
108) Chrysene-d12b	15.696	240	910115	40.00	ppm	-0.02
110) Phenanthrene-d10a	10.574	188	960221	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	863210	40.00	ppm	0.00
115) Chrysene-d12c	15.696	240	910115	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
9) Phenol	4.335	94	657793	48.97	ppm	89
12) 2-Chlorophenol	4.432	128	463052	50.18	ppm	94
19) 2-Methylphenol	4.784	108	409886	52.76	ppm	98
21) 3&4-Methylphenol	4.907	108	421160	53.92	ppm	98
29) 2-Nitrophenol	5.329	139	230378	55.70	ppm	92
30) 2,4-Dimethylphenol	5.366	107	401819	58.67	ppm	98
31) Benzoic acid	5.478	105	259004	47.58	ppm	97
33) 2,4-Dichlorophenol	5.553	162	354984	49.43	ppm	97
34) 2,6-Dichlorophenol	5.783	162	349388	53.67	ppm	98
43) 4-Chloro-3-methylphenol	6.322	107	374639	50.41	ppm	99
49) 2,4,6-Trichlorophenol	6.883	196	311464	53.97	ppm	99
50) 2,4,5-Trichlorophenol	6.926	196	297762	48.07	ppm	95
60) 2,4-Dinitrophenol	8.101	184	73751	37.76	ppm	89
61) 4-Nitrophenol	8.250	109	114332	44.50	ppm	97
64) 2,3,4,6-Tetrachlorophenol	8.544	232	267965	48.31	ppm	95
70) 4,6-Dinitro-2-methylph...	9.014	198	140324	46.69	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153411.D
Acq On : 12 Apr 2019 10:40 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 15 11:40:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:38:00 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	10.259	266	259692	64.03	ppm	99

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

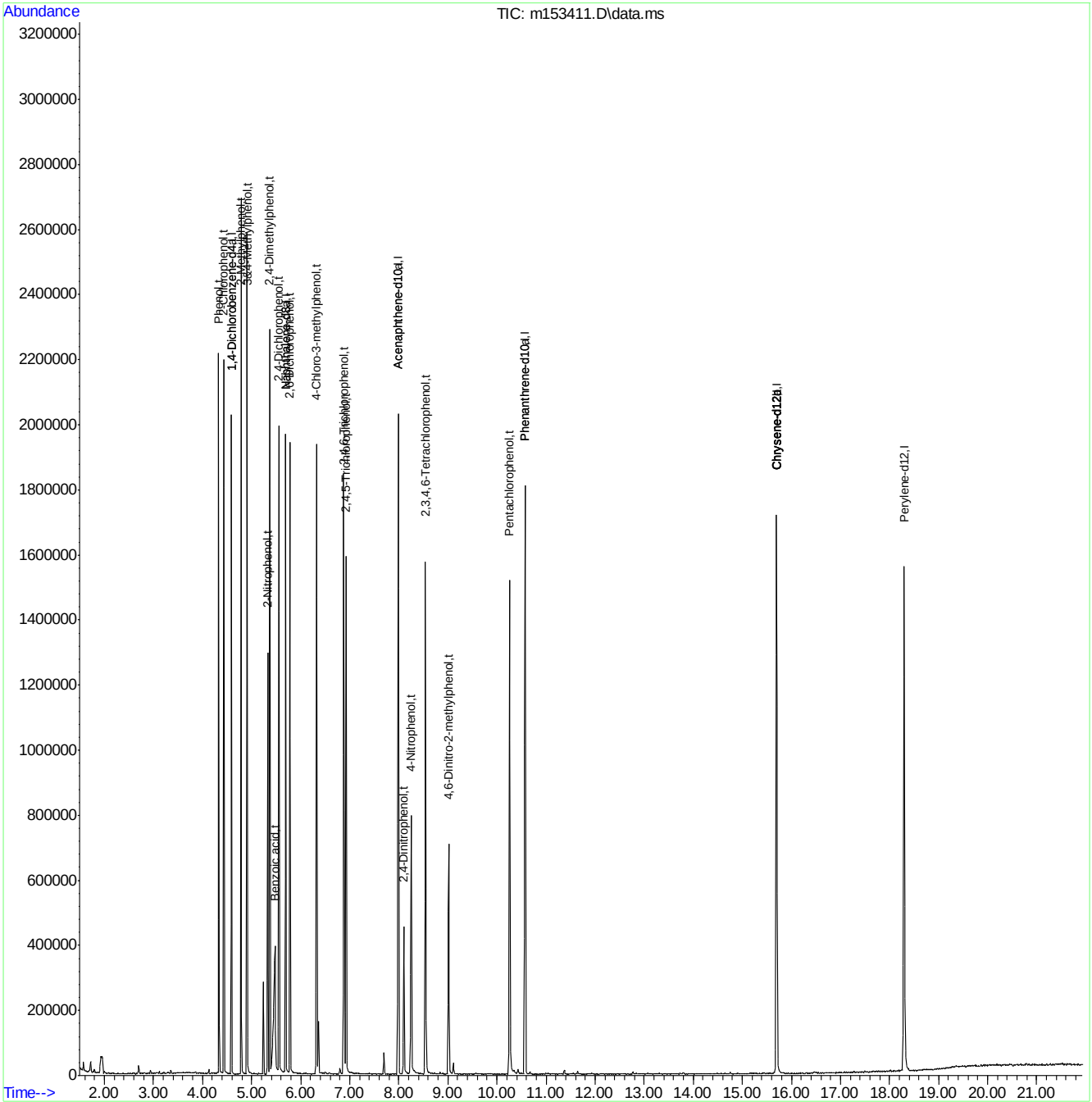
9.6.39

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153411.D
Acq On : 12 Apr 2019 10:40 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 15 11:40:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:38:00 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153413.D
Acq On : 12 Apr 2019 11:37 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 15 11:55:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration

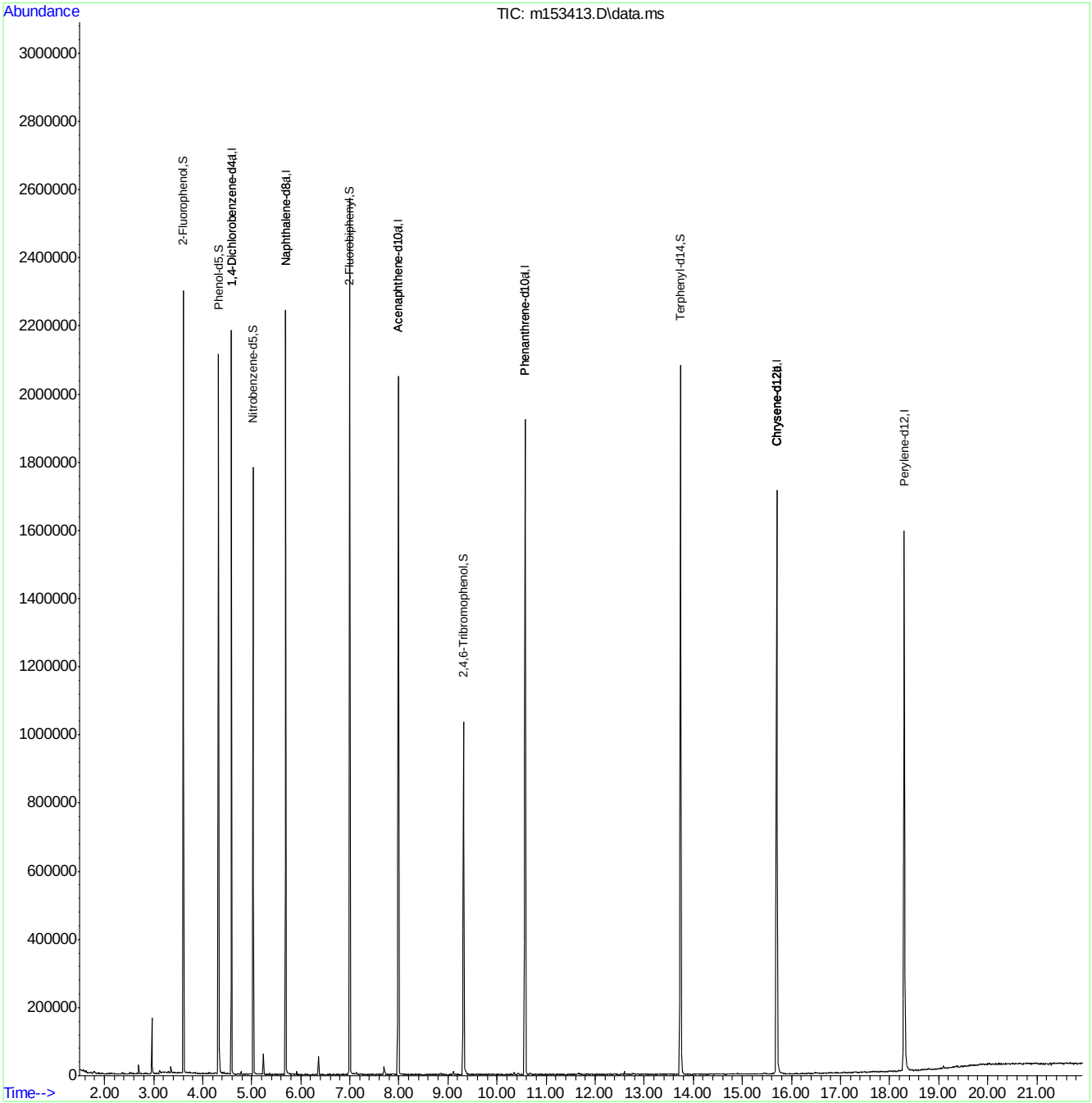
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	281722	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	960107	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	539229	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	1006489	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	882944	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	919162	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	281722	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	539229	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	882944	40.00	ppm	-0.01
108) Chrysene-d12b	15.700	240	882944	40.00	ppm	-0.01
110) Phenanthrene-d10a	10.573	188	1006489	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	960107	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	882944	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.608	112	474038	43.04	ppm	0.00
Spiked Amount 50.000			Recovery = 86.08%			
8) Phenol-d5	4.324	99	566883	41.67	ppm	0.00
Spiked Amount 50.000			Recovery = 83.34%			
25) Nitrobenzene-d5	5.029	82	458825	44.80	ppm	0.00
Spiked Amount 50.000			Recovery = 89.60%			
51) 2-Fluorobiphenyl	6.999	172	916400	45.71	ppm	0.00
Spiked Amount 50.000			Recovery = 91.42%			
73) 2,4,6-Tribromophenol	9.317	330	171091	50.53	ppm	0.00
Spiked Amount 50.000			Recovery = 101.06%			
85) Terphenyl-d14	13.740	244	1147831	48.21	ppm	0.00
Spiked Amount 50.000			Recovery = 96.42%			
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153413.D
Acq On : 12 Apr 2019 11:37 pm
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 15 11:55:44 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153414.D
Acq On : 13 Apr 2019 12:06 am
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 15 11:58:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration

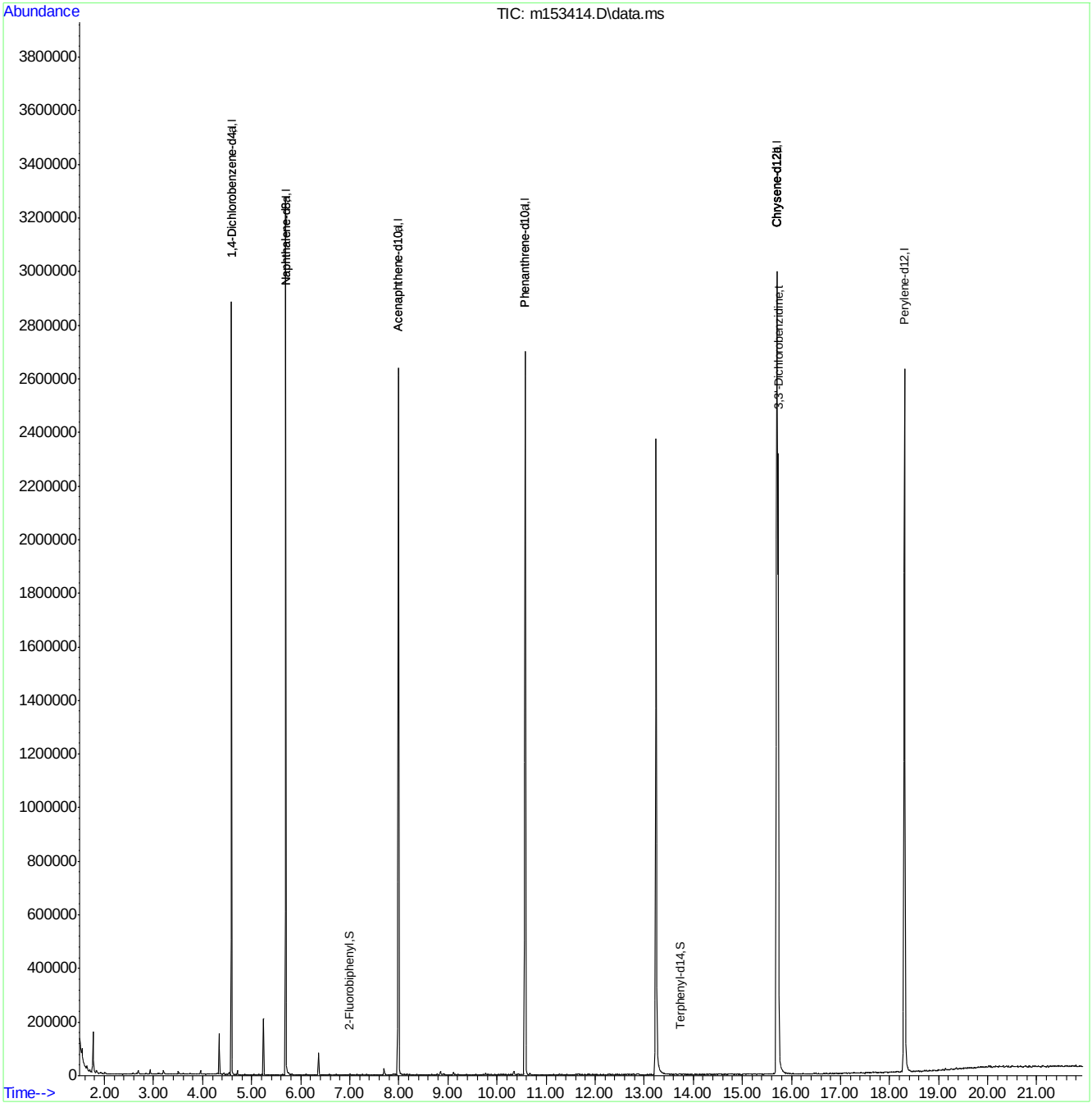
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	391476	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	1323791	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	755879	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	1530539	40.00	ppm	0.00
83) Chrysene-d12	15.705	240	1602158	40.00	ppm	0.00
91) Perylene-d12	18.307	264	1647623	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	391476	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	755879	40.00	ppm	0.00
106) Chrysene-d12a	15.705	240	1602158	40.00	ppm	0.00
108) Chrysene-d12b	15.705	240	1602158	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	1530539	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	1323791	40.00	ppm	0.00
115) Chrysene-d12c	15.705	240	1602158	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	7.000	172	894	0.03	ppm	0.00
Spiked Amount 50.000			Recovery =	0.06%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	13.735	244	1429	0.03	ppm	0.00
Spiked Amount 50.000			Recovery =	0.06%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	15.732	252	857087	46.26	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6556\
Data File : m153414.D
Acq On : 13 Apr 2019 12:06 am
Operator : christc2
Sample : icv6556-50
Misc : op17006,em6556,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 15 11:58:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 11:48:45 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153420.D
Acq On : 13 Apr 2019 1:52 am
Operator : chriss2
Sample : ic6557-100
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 12:26:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

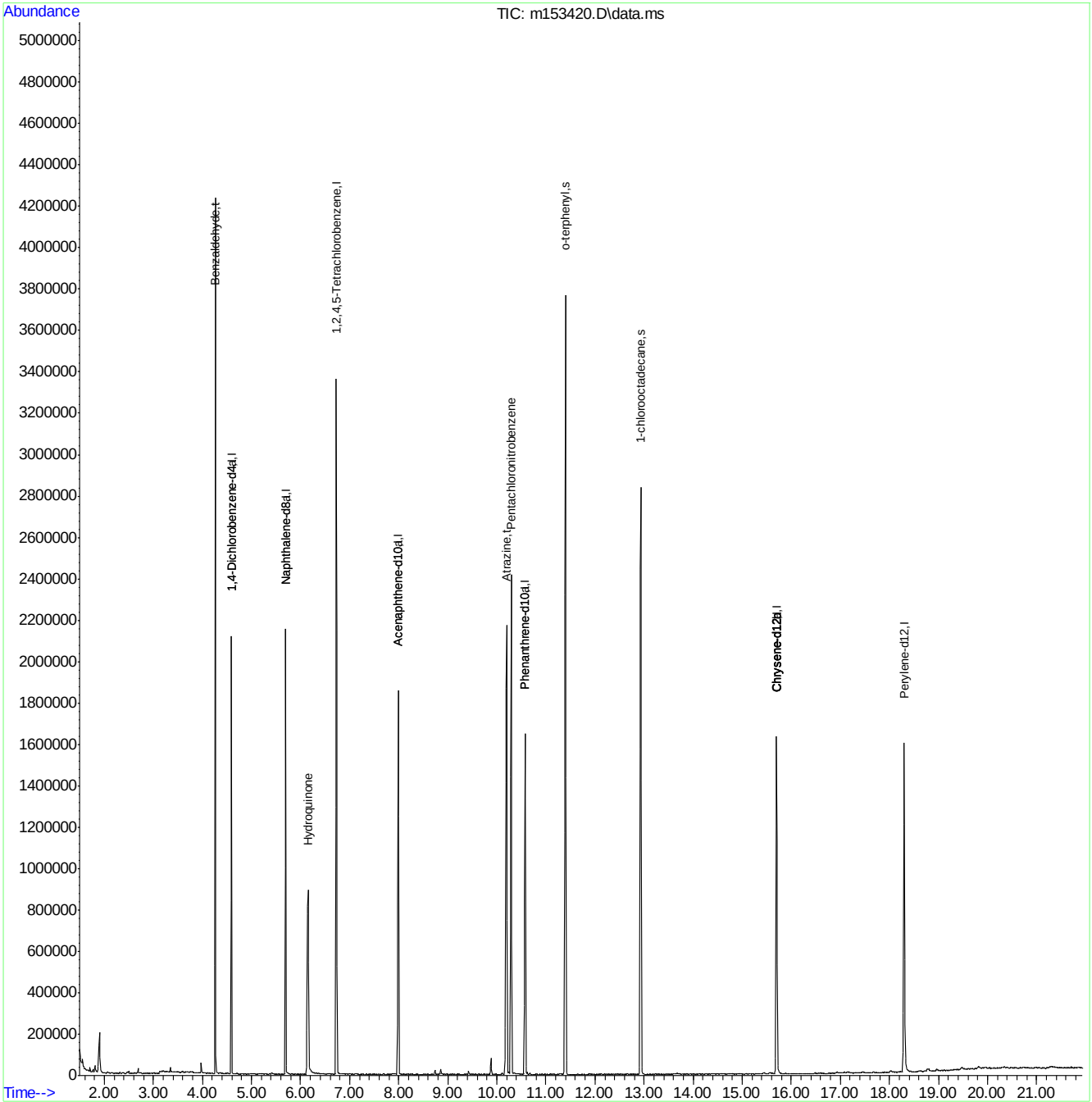
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	248991	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	888990	40.00	ppm	0.00
47) Acenaphthene-d10	7.990	164	494865	40.00	ppm	0.00
69) Phenanthrene-d10	10.575	188	860239	40.00	ppm	0.00
83) Chrysene-d12	15.697	240	867470	40.00	ppm	-0.01
91) Perylene-d12	18.304	264	944528	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	248991	40.00	ppm	0.00
103) Acenaphthene-d10a	7.990	164	494865	40.00	ppm	0.00
106) Chrysene-d12a	15.697	240	867470	40.00	ppm	0.00
108) Chrysene-d12b	15.697	240	867470	40.00	ppm	0.00
110) Phenanthrene-d10a	10.575	188	860239	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	888990	40.00	ppm	0.00
115) Chrysene-d12c	15.697	240	867470	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.931	57	519520	90.45	ppm	0.00
Spiked Amount 50.000			Recovery =	180.90%		
111) o-terphenyl	11.398	230	1185509	90.52	ppm	0.00
Spiked Amount 50.000			Recovery =	181.04%		
Target Compounds						Qvalue
102) Benzaldehyde	4.262	105	632656	91.41	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.730	216	721687	89.16	ppm	99
105) Atrazine	10.196	215	242842	92.28	ppm	99
112) Pentachloronitrobenzene	10.292	295	110807	95.49	ppm	97
114) Hydroquinone	6.153	110	784835	100.57	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153420.D
Acq On : 13 Apr 2019 1:52 am
Operator : chriss2
Sample : ic6557-100
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 12:26:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153421.D
Acq On : 13 Apr 2019 2:20 am
Operator : chriss2
Sample : ic6557-80
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 12:28:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

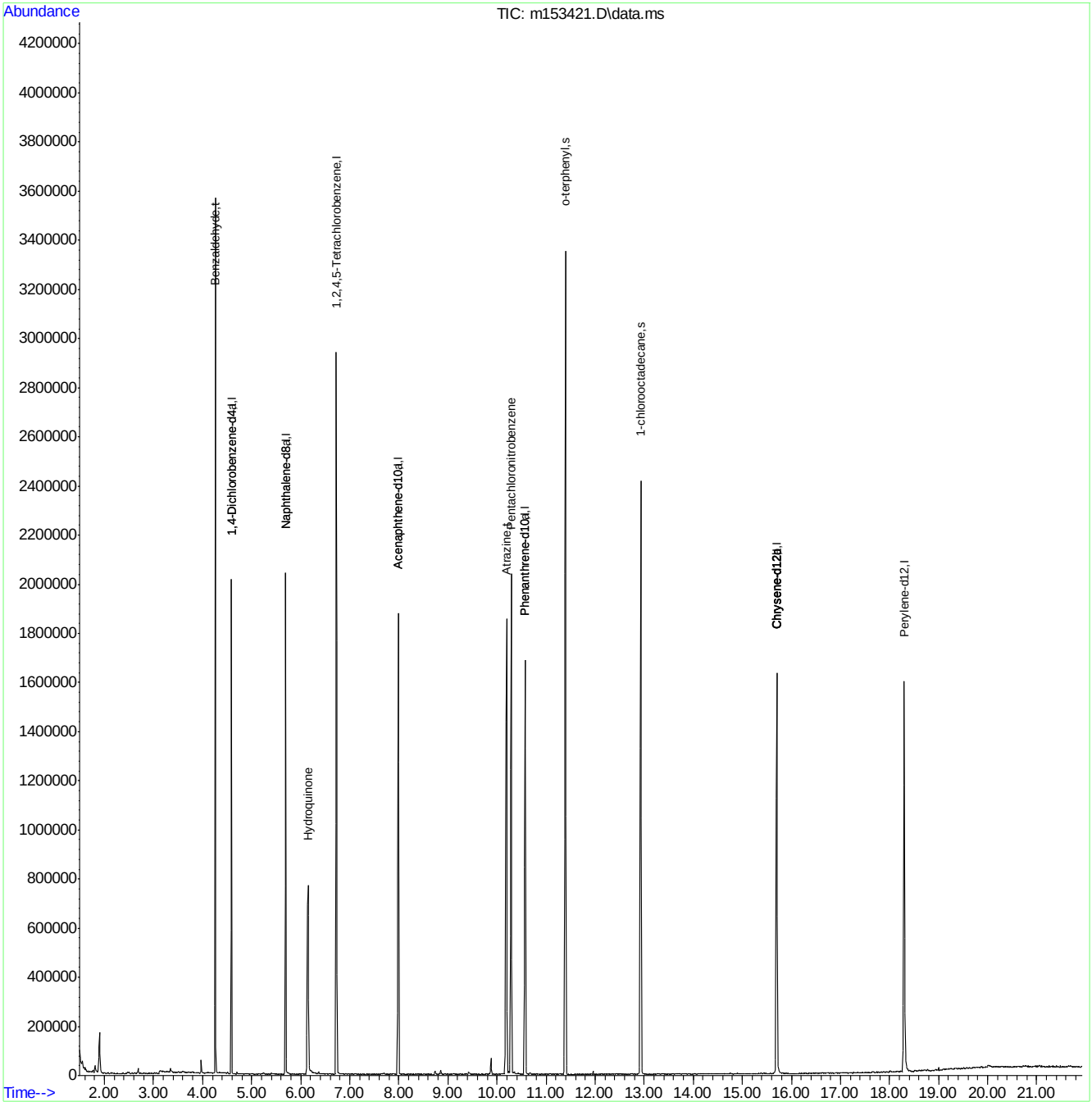
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	243035	40.00	ppm	0.00
24) Naphthalene-d8	5.692	136	874501	40.00	ppm	0.00
47) Acenaphthene-d10	7.989	164	498260	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	871711	40.00	ppm	0.00
83) Chrysene-d12	15.701	240	870140	40.00	ppm	-0.01
91) Perylene-d12	18.302	264	935216	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	243035	40.00	ppm	0.00
103) Acenaphthene-d10a	7.989	164	498260	40.00	ppm	0.00
106) Chrysene-d12a	15.701	240	870140	40.00	ppm	0.00
108) Chrysene-d12b	15.701	240	870140	40.00	ppm	0.00
110) Phenanthrene-d10a	10.574	188	871711	40.00	ppm	0.00
113) Naphthalene-d8a	5.692	136	874501	40.00	ppm	0.00
115) Chrysene-d12c	15.701	240	870140	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.929	57	428342	74.35	ppm	0.00
Spiked Amount 50.000			Recovery =	148.70%		
111) o-terphenyl	11.396	230	997159	75.14	ppm	0.00
Spiked Amount 50.000			Recovery =	150.28%		
Target Compounds						Qvalue
102) Benzaldehyde	4.261	105	523047	77.43	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.728	216	608164	74.62	ppm	99
105) Atrazine	10.194	215	201735	76.14	ppm	96
112) Pentachloronitrobenzene	10.291	295	91963	78.21	ppm	99
114) Hydroquinone	6.151	110	623099	81.16	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153421.D
Acq On : 13 Apr 2019 2:20 am
Operator : chriss2
Sample : ic6557-80
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 15 12:28:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153422.D
Acq On : 13 Apr 2019 2:49 am
Operator : chriss2
Sample : icc6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 12:24:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

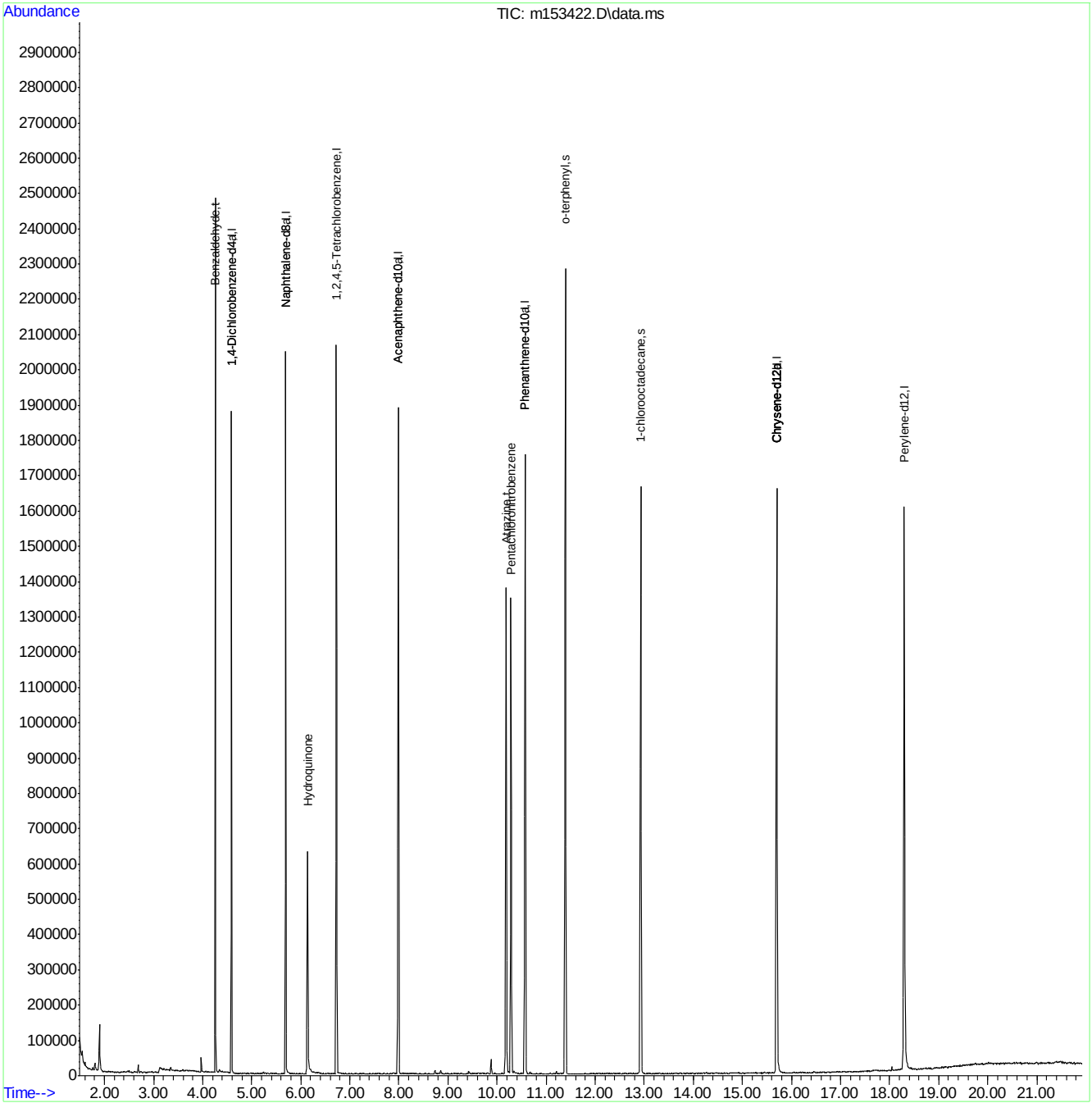
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.585	152	248621	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	869958	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	497180	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	887279	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	868264	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	936185	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.585	152	248621	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	497180	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	868264	40.00	ppm	0.00
108) Chrysene-d12b	15.700	240	868264	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	887279	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	869958	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	868264	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.928	57	287441	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
111) o-terphenyl	11.395	230	675395	50.00	ppm	0.00
Spiked Amount 50.000			Recovery =	100.00%		
Target Compounds						Qvalue
102) Benzaldehyde	4.259	105	345534	50.00	ppm	100
104) 1,2,4,5-Tetrachloroben...	6.727	216	406621	50.00	ppm	100
105) Atrazine	10.188	215	132189	50.00	ppm	100
112) Pentachloronitrobenzene	10.289	295	59841	50.00	ppm	100
114) Hydroquinone	6.139	110	381857	50.00	ppm	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153422.D
Acq On : 13 Apr 2019 2:49 am
Operator : chriss2
Sample : icc6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 12:24:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153423.D
Acq On : 13 Apr 2019 3:17 am
Operator : chriss2
Sample : ic6557-25
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 12:29:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

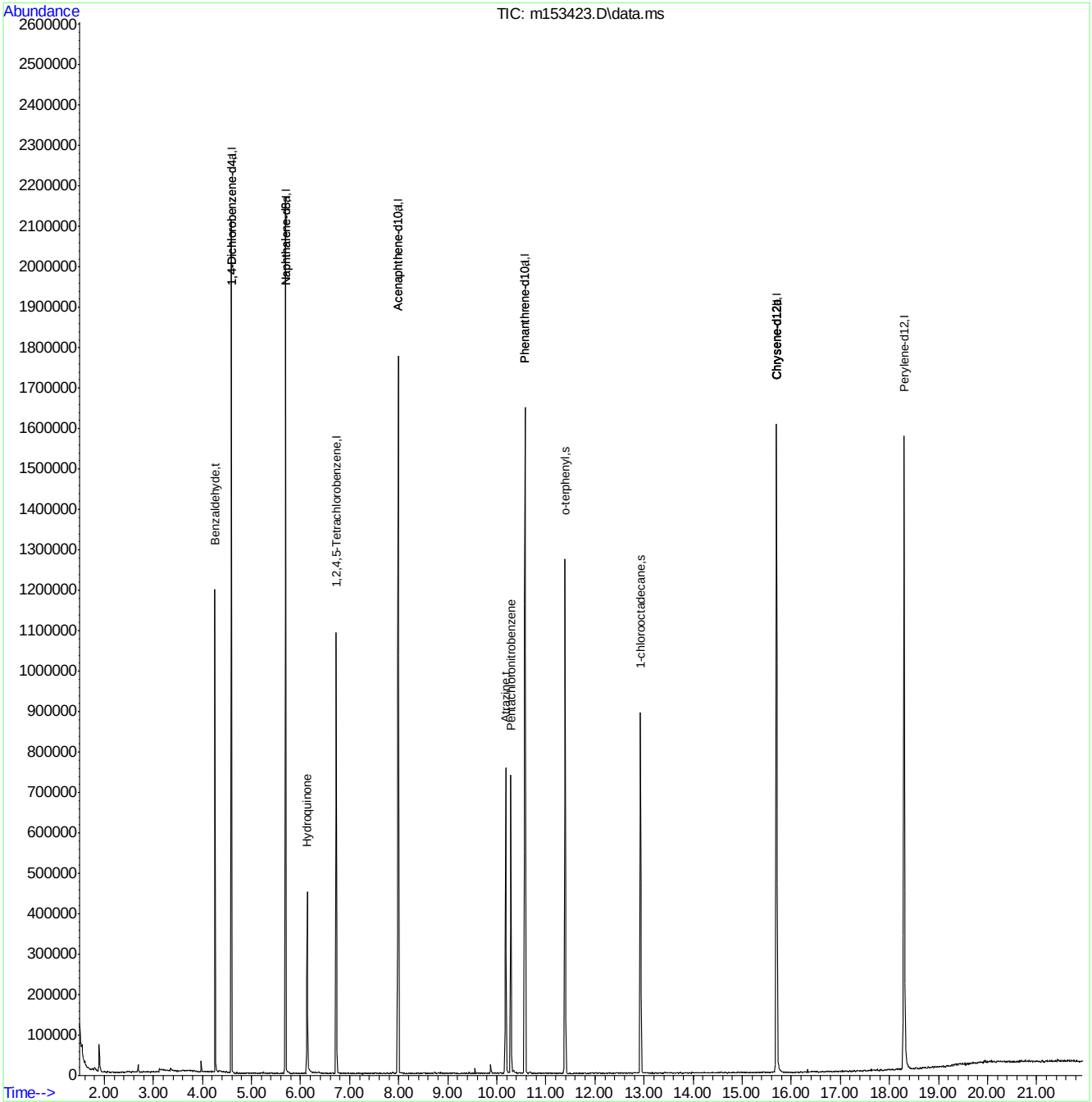
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	248183	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	874946	40.00	ppm	0.00
47) Acenaphthene-d10	7.990	164	491195	40.00	ppm	0.00
69) Phenanthrene-d10	10.570	188	882243	40.00	ppm	0.00
83) Chrysene-d12	15.698	240	849067	40.00	ppm	-0.01
91) Perylene-d12	18.299	264	910419	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	248183	40.00	ppm	0.00
103) Acenaphthene-d10a	7.990	164	491195	40.00	ppm	0.00
106) Chrysene-d12a	15.698	240	849067	40.00	ppm	0.00
108) Chrysene-d12b	15.698	240	849067	40.00	ppm	0.00
110) Phenanthrene-d10a	10.570	188	882243	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	874946	40.00	ppm	0.00
115) Chrysene-d12c	15.698	240	849067	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.926	57	148373	26.39	ppm	0.00
Spiked Amount 50.000			Recovery =	52.78%		
111) o-terphenyl	11.393	230	364283	27.12	ppm	0.00
Spiked Amount 50.000			Recovery =	54.24%		
Target Compounds						Qvalue
102) Benzaldehyde	4.257	105	185136	26.84	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.725	216	220531	27.45	ppm	98
105) Atrazine	10.180	215	65573	25.10	ppm	96
112) Pentachloronitrobenzene	10.287	295	28170	23.67	ppm	96
114) Hydroquinone	6.132	110	179238	23.34	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153423.D
Acq On : 13 Apr 2019 3:17 am
Operator : chriss2
Sample : ic6557-25
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 15 12:29:52 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153424.D
Acq On : 13 Apr 2019 3:46 am
Operator : chriss2
Sample : ic6557-10
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 12:31:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

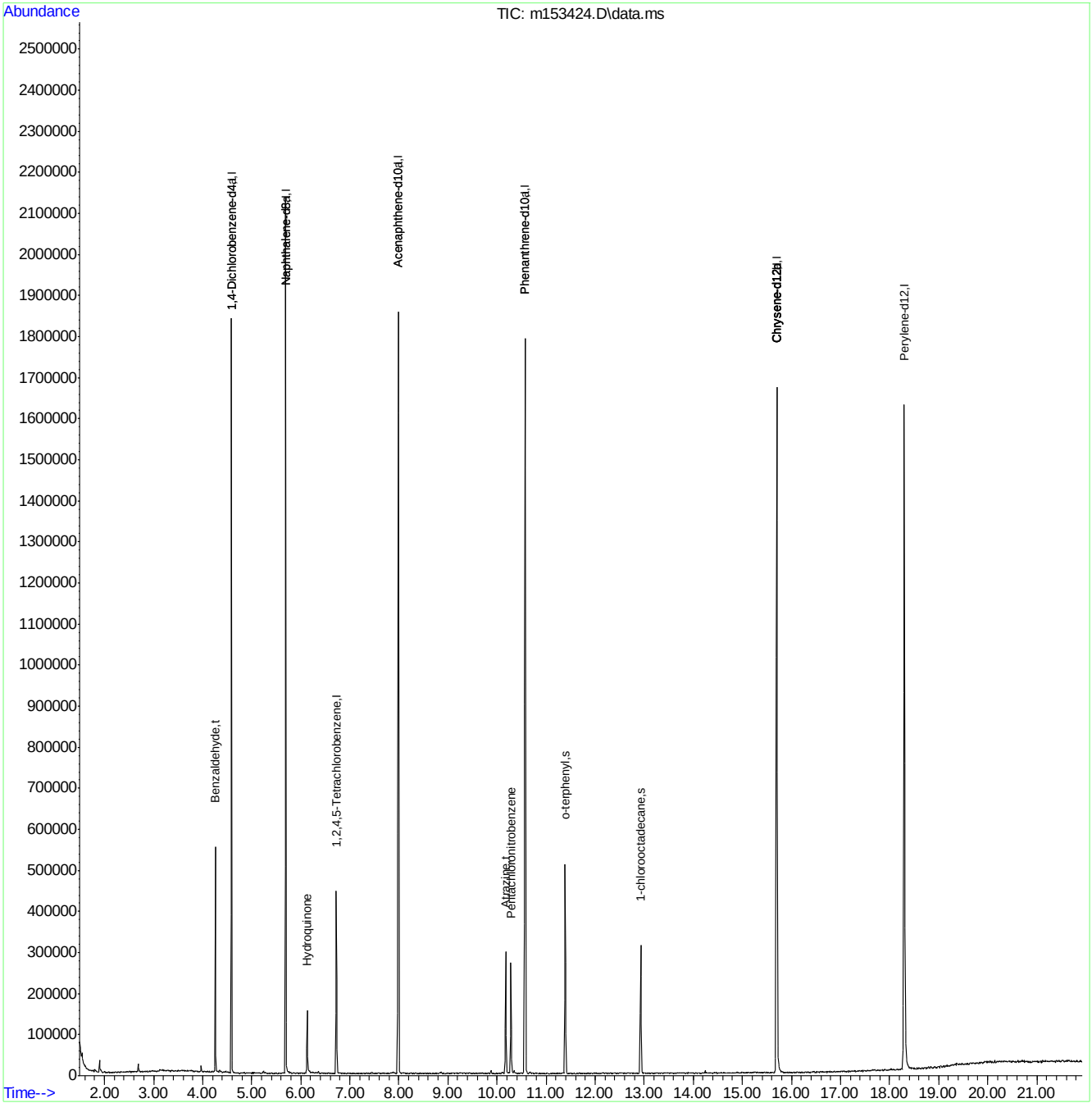
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	255818	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	892243	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	505258	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	938579	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	874604	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	921494	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	255818	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	505258	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	874604	40.00	ppm	0.00
108) Chrysene-d12b	15.700	240	874604	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	938579	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	892243	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	874604	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.928	57	52058	8.99	ppm	0.00
Spiked Amount 50.000			Recovery =	17.98%		
111) o-terphenyl	11.390	230	142404	9.97	ppm	0.00
Spiked Amount 50.000			Recovery =	19.94%		
Target Compounds						Qvalue
102) Benzaldehyde	4.259	105	71952	10.12	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.727	216	89089	10.78	ppm	98
105) Atrazine	10.177	215	23507	8.75	ppm	93
112) Pentachloronitrobenzene	10.284	295	9630	7.61	ppm	97
114) Hydroquinone	6.129	110	53620	6.85	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153424.D
Acq On : 13 Apr 2019 3:46 am
Operator : chriss2
Sample : ic6557-10
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 15 12:31:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153425.D
Acq On : 13 Apr 2019 4:14 am
Operator : chriss2
Sample : ic6557-5
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 12:32:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

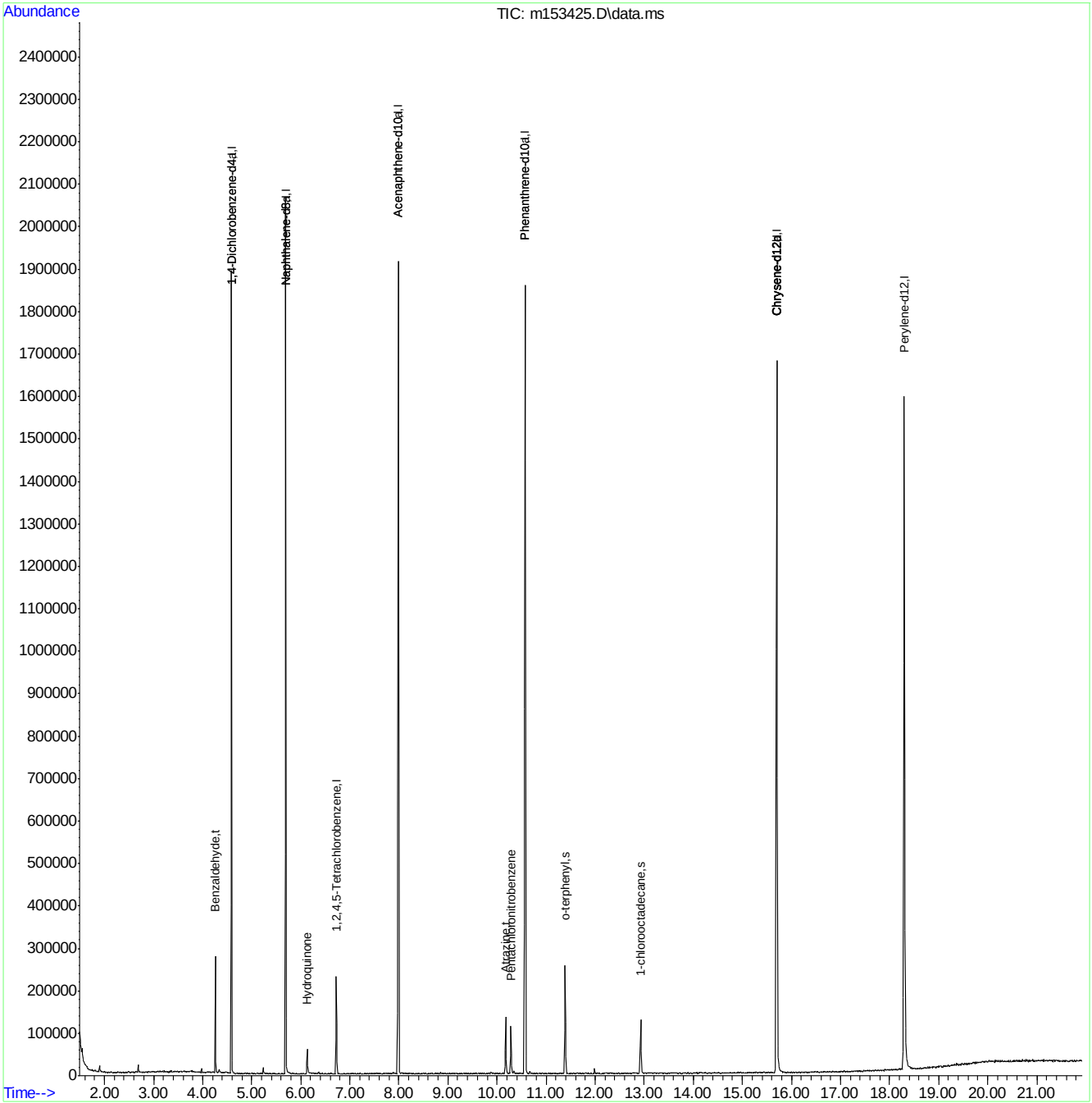
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	260557	40.00	ppm	0.00
24) Naphthalene-d8	5.696	136	872990	40.00	ppm	0.00
47) Acenaphthene-d10	7.987	164	500483	40.00	ppm	0.00
69) Phenanthrene-d10	10.573	188	936387	40.00	ppm	0.00
83) Chrysene-d12	15.700	240	866791	40.00	ppm	-0.01
91) Perylene-d12	18.301	264	913024	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.591	152	260557	40.00	ppm	0.00
103) Acenaphthene-d10a	7.987	164	500483	40.00	ppm	0.00
106) Chrysene-d12a	15.700	240	866791	40.00	ppm	0.00
108) Chrysene-d12b	15.700	240	866791	40.00	ppm	0.00
110) Phenanthrene-d10a	10.573	188	936387	40.00	ppm	0.00
113) Naphthalene-d8a	5.696	136	872990	40.00	ppm	0.00
115) Chrysene-d12c	15.700	240	866791	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.928	57	22583	3.93	ppm	0.00
Spiked Amount 50.000			Recovery =	7.86%		
111) o-terphenyl	11.390	230	70987	4.98	ppm	0.00
Spiked Amount 50.000			Recovery =	9.96%		
Target Compounds						Qvalue
102) Benzaldehyde	4.259	105	37284	5.15	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.727	216	45863	5.60	ppm	99
105) Atrazine	10.177	215	10172	3.82	ppm	93
112) Pentachloronitrobenzene	10.284	295	3820	3.02	ppm	85
114) Hydroquinone	6.129	110	22627	2.95	ppm	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153425.D
Acq On : 13 Apr 2019 4:14 am
Operator : chriss2
Sample : ic6557-5
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 15 12:32:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153426.D
Acq On : 13 Apr 2019 4:42 am
Operator : chriss2
Sample : ic6557-2
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:33:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration

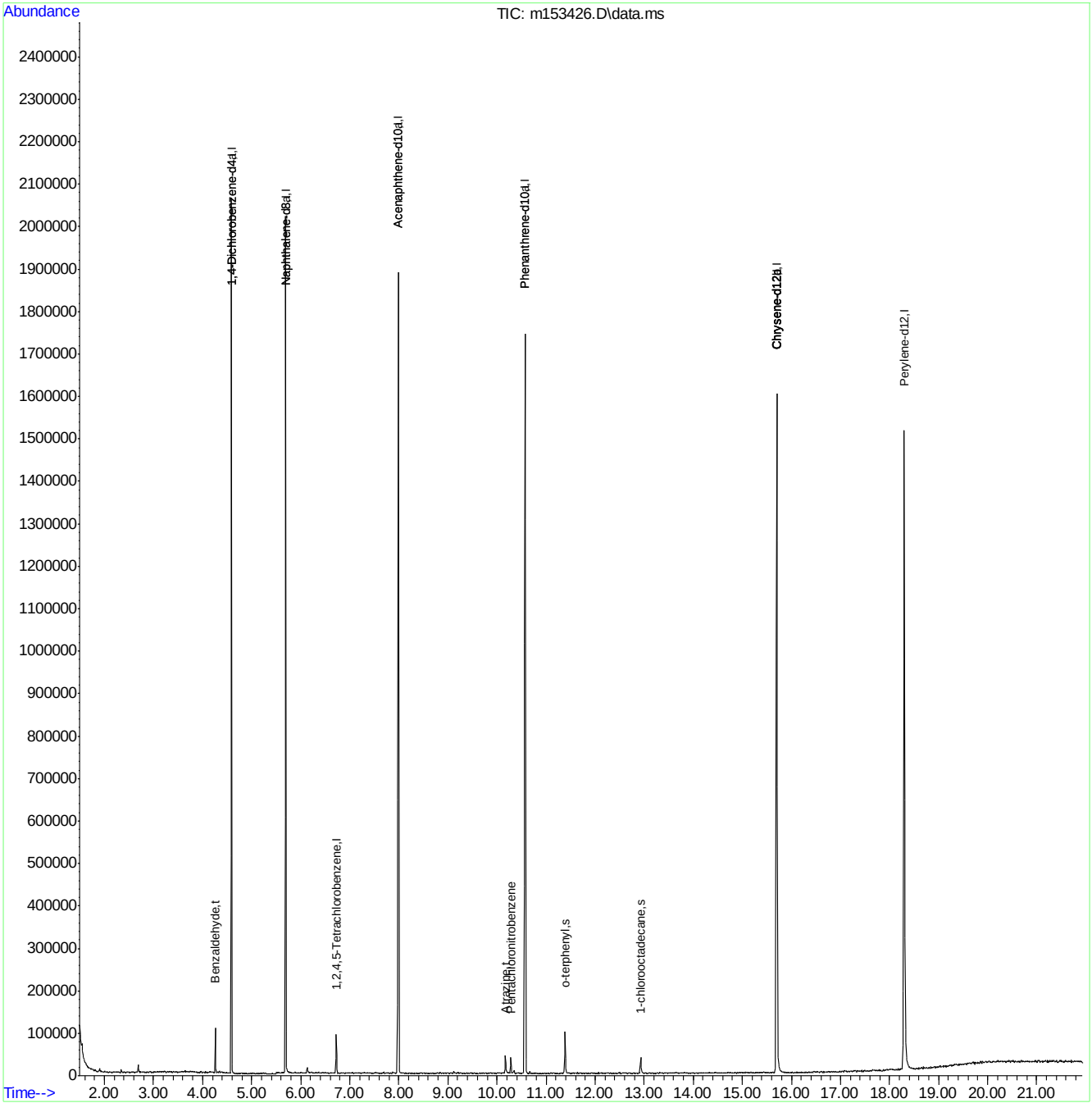
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.586	152	261346	40.00	ppm		0.00
24) Naphthalene-d8	5.697	136	879739	40.00	ppm		0.00
47) Acenaphthene-d10	7.988	164	502520	40.00	ppm		0.00
69) Phenanthrene-d10	10.573	188	929939	40.00	ppm		0.00
83) Chrysene-d12	15.701	240	849953	40.00	ppm		-0.01
91) Perylene-d12	18.302	264	882871	40.00	ppm		0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	261346	40.00	ppm		0.00
103) Acenaphthene-d10a	7.988	164	502520	40.00	ppm		0.00
106) Chrysene-d12a	15.701	240	849953	40.00	ppm		0.00
108) Chrysene-d12b	15.701	240	849953	40.00	ppm		0.00
110) Phenanthrene-d10a	10.573	188	929939	40.00	ppm		0.00
113) Naphthalene-d8a	5.697	136	879739	40.00	ppm		0.00
115) Chrysene-d12c	15.701	240	849953	40.00	ppm		0.00
System Monitoring Compounds							
5) 2-Fluorophenol	0.000	112	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
85) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000			Recovery =	0.00%			
109) 1-chlorooctadecane	12.929	57	7346	1.31	ppm		0.00
Spiked Amount 50.000			Recovery =	2.62%			
111) o-terphenyl	11.391	230	26782	1.89	ppm		0.00
Spiked Amount 50.000			Recovery =	3.78%			
Target Compounds							Qvalue
102) Benzaldehyde	4.260	105	15043	2.07	ppm		94
104) 1,2,4,5-Tetrachloroben...	6.728	216	17824	2.17	ppm		94
105) Atrazine	10.178	215	3463	1.30	ppm	#	84
112) Pentachloronitrobenzene	10.285	295	1148	0.92	ppm	#	80

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153426.D
Acq On : 13 Apr 2019 4:42 am
Operator : chriss2
Sample : ic6557-2
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 15 12:33:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:23:22 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153427.D
Acq On : 13 Apr 2019 5:11 am
Operator : chriss2
Sample : ic6557-1
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:35:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu Apr 11 08:18:08 2019
Response via : Initial Calibration

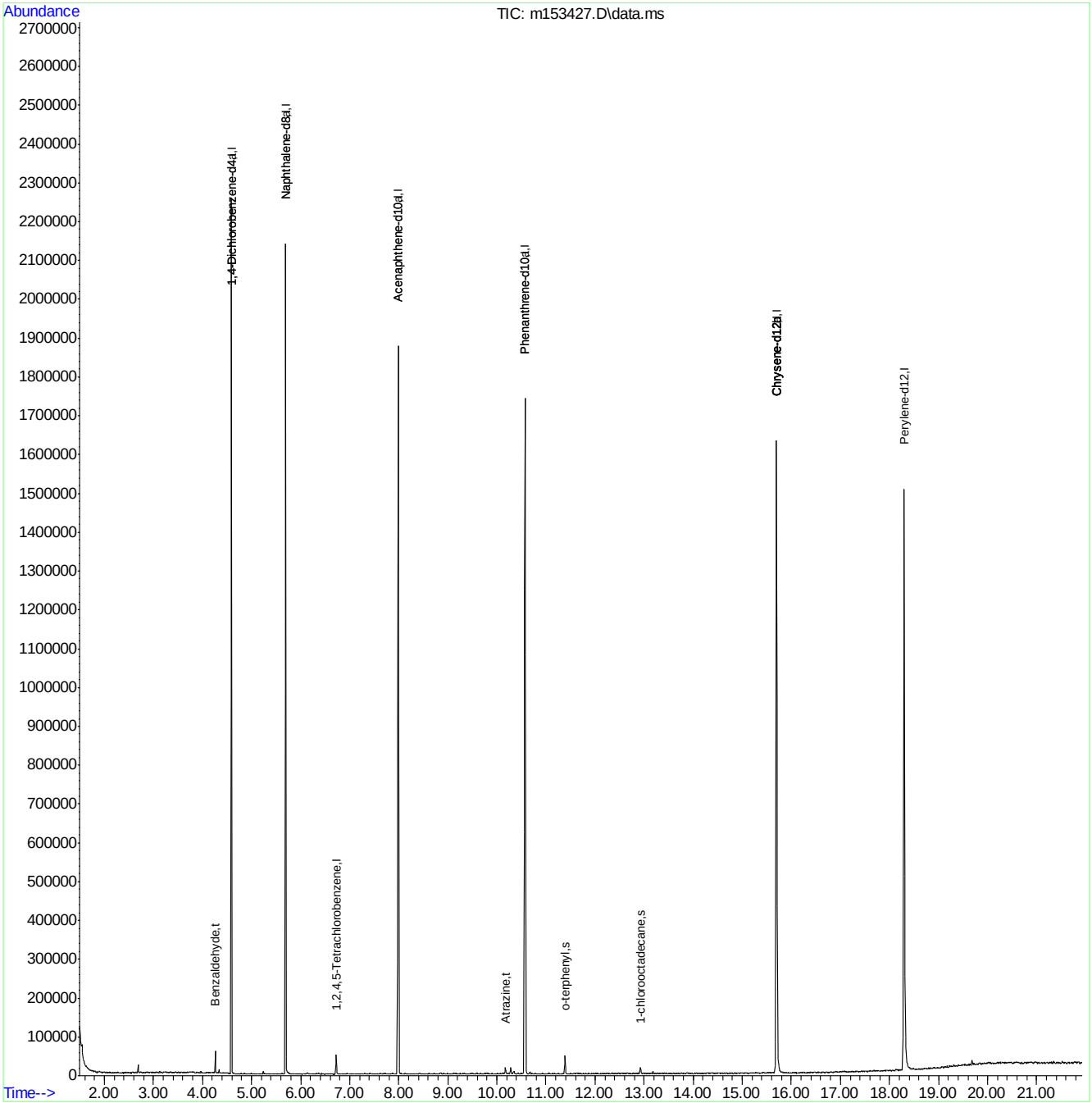
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.587	152	264413	40.00	ppm	-0.02
24) Naphthalene-d8	5.693	136	880440	40.00	ppm	-0.03
47) Acenaphthene-d10	7.990	164	506899	40.00	ppm	-0.04
69) Phenanthrene-d10	10.569	188	938033	40.00	ppm	-0.05
83) Chrysene-d12	15.697	240	843931	40.00	ppm	-0.06
91) Perylene-d12	18.298	264	885109	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.587	152	264413	40.00	ppm	-0.02
103) Acenaphthene-d10a	7.990	164	506899	40.00	ppm	-0.04
106) Chrysene-d12a	15.697	240	843931	40.00	ppm	-0.04
108) Chrysene-d12b	15.697	240	843931	40.00	ppm	-0.05
110) Phenanthrene-d10a	10.569	188	938033	40.00	ppm	-0.05
113) Naphthalene-d8a	5.693	136	880440	40.00	ppm	-0.03
115) Chrysene-d12c	15.697	240	843931	40.00	ppm	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.925	57	3140	0.54	ppm	-0.05
Spiked Amount 50.000			Recovery =	1.08%		
111) o-terphenyl	11.392	230	13314	0.98	ppm	-0.05
Spiked Amount 50.000			Recovery =	1.96%		
Target Compounds						Qvalue
102) Benzaldehyde	4.262	105	7675	1.00	ppm	90
104) 1,2,4,5-Tetrachloroben...	6.724	216	9523	1.32	ppm	90
105) Atrazine	10.174	215	1573	0.70	ppm	85

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153427.D
Acq On : 13 Apr 2019 5:11 am
Operator : chriss2
Sample : ic6557-1
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 15 12:35:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu Apr 11 08:18:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153441.D
Acq On : 14 Apr 2019 7:00 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 15 12:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration

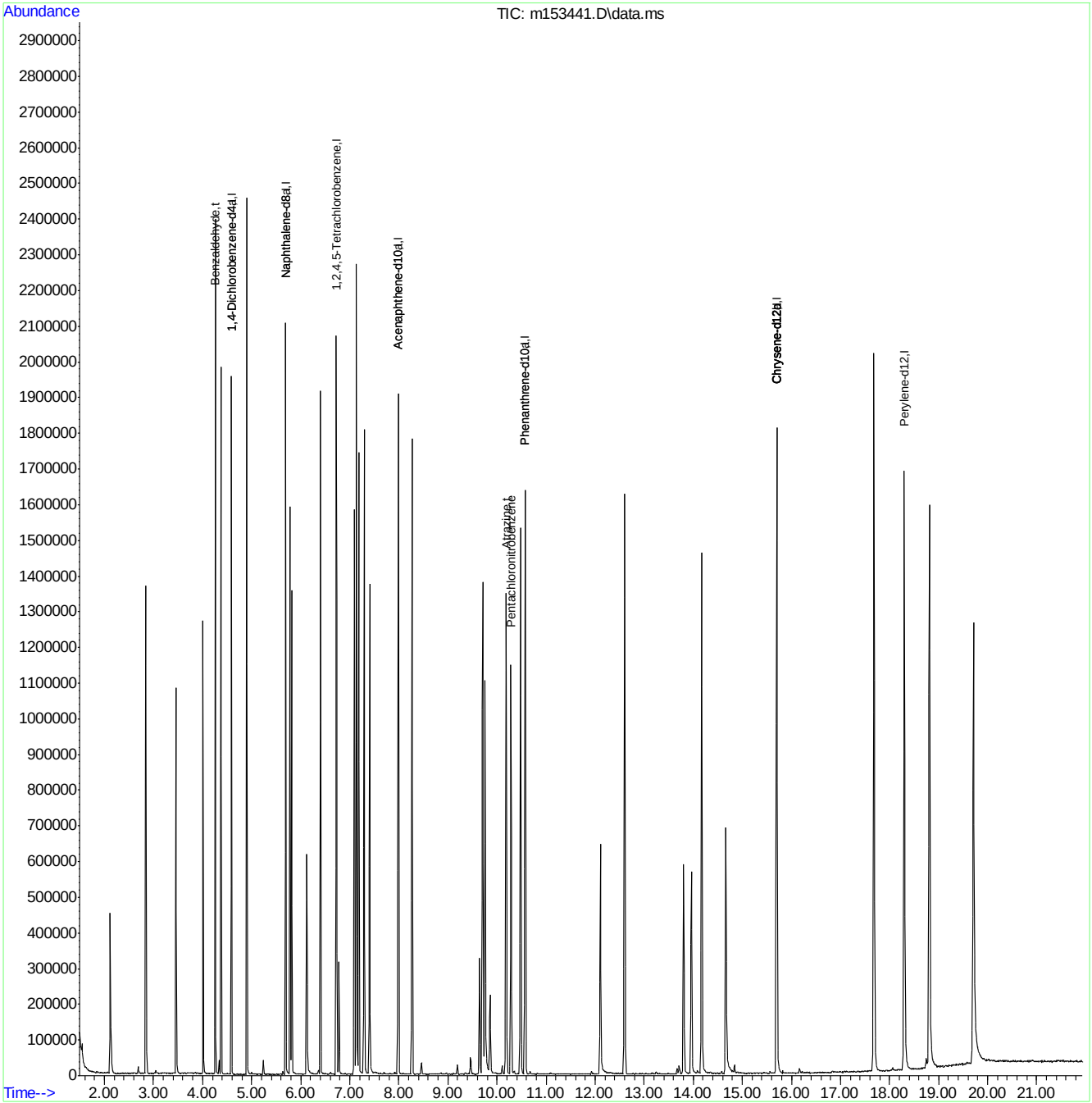
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.586	152	251302	40.00	ppm	0.00
24) Naphthalene-d8	5.697	136	913631	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	510965	40.00	ppm	0.00
69) Phenanthrene-d10	10.574	188	883153	40.00	ppm	0.00
83) Chrysene-d12	15.701	240	924351	40.00	ppm	-0.01
91) Perylene-d12	18.302	264	979351	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.586	152	251302	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	510965	40.00	ppm	0.00
106) Chrysene-d12a	15.701	240	924351	40.00	ppm	0.00
108) Chrysene-d12b	15.701	240	924351	40.00	ppm	0.00
110) Phenanthrene-d10a	10.574	188	883153	40.00	ppm	0.00
113) Naphthalene-d8a	5.697	136	913631	40.00	ppm	0.00
115) Chrysene-d12c	15.701	240	924351	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
102) Benzaldehyde	4.260	105	340363	48.26	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.728	216	409726	46.95	ppm	98
105) Atrazine	10.189	215	131085	54.77	ppm	95
112) Pentachloronitrobenzene	10.290	295	51722	49.67	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153441.D
Acq On : 14 Apr 2019 7:00 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 15 12:54:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153442.D
Acq On : 14 Apr 2019 7:28 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 15 12:55:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration

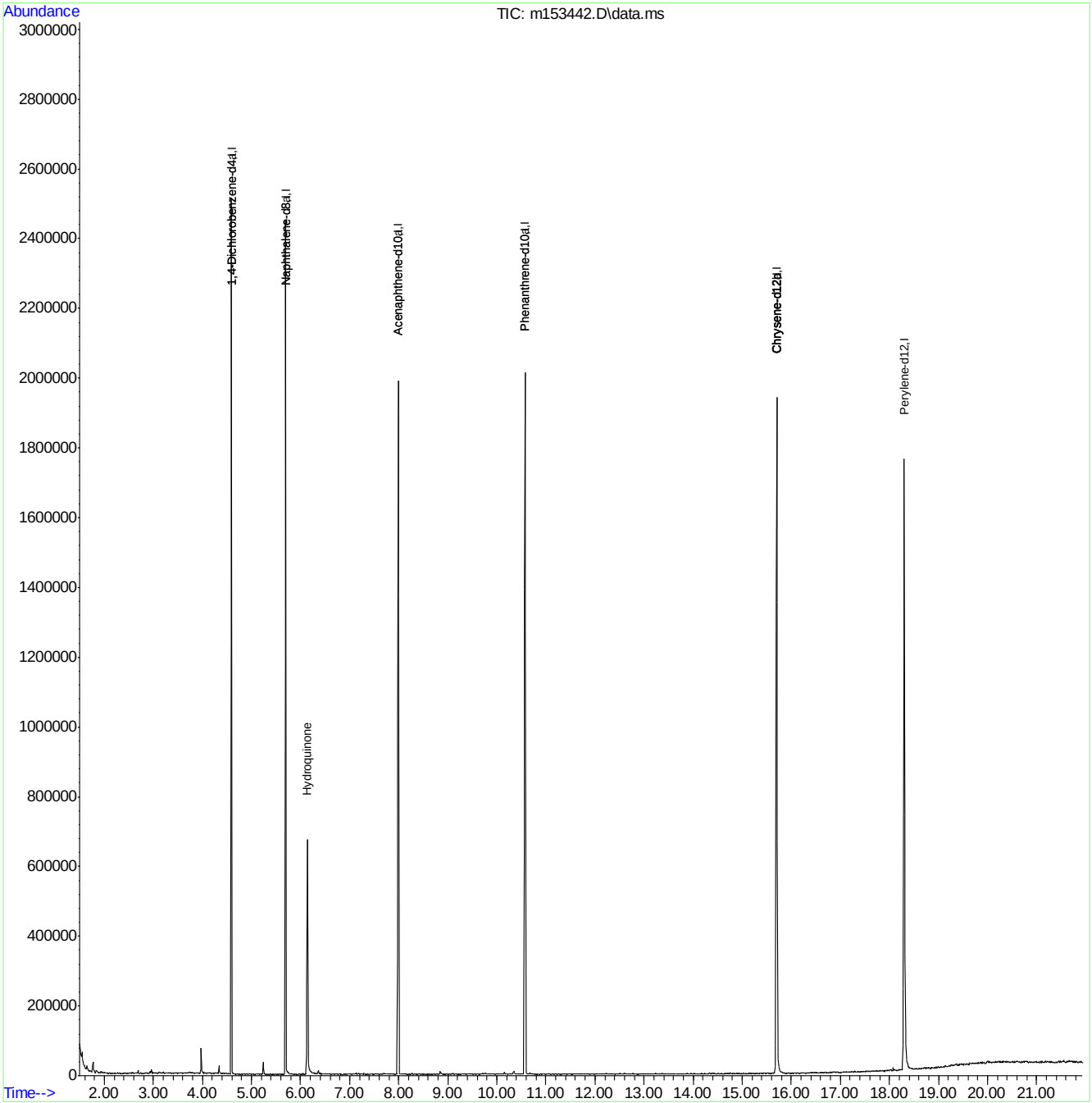
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.588	152	292219	40.00	ppm	0.00
24) Naphthalene-d8	5.694	136	1010964	40.00	ppm	0.00
47) Acenaphthene-d10	7.991	164	537966	40.00	ppm	0.00
69) Phenanthrene-d10	10.576	188	1106091	40.00	ppm	0.00
83) Chrysene-d12	15.703	240	1089749	40.00	ppm	0.00
91) Perylene-d12	18.304	264	1043981	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.588	152	292219	40.00	ppm	0.00
103) Acenaphthene-d10a	7.991	164	537966	40.00	ppm	0.00
106) Chrysene-d12a	15.703	240	1089749	40.00	ppm	0.00
108) Chrysene-d12b	15.703	240	1089749	40.00	ppm	0.00
110) Phenanthrene-d10a	10.576	188	1106091	40.00	ppm	0.00
113) Naphthalene-d8a	5.694	136	1010964	40.00	ppm	0.00
115) Chrysene-d12c	15.703	240	1089749	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
114) Hydroquinone	6.137	110	384489	46.70	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6557\
Data File : m153442.D
Acq On : 14 Apr 2019 7:28 pm
Operator : chriss2
Sample : icv6557-50
Misc : op17006,em6557,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 15 12:55:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 12:52:14 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153444.D
Acq On : 15 Apr 2019 2:05 pm
Operator : christc2
Sample : ic6556-50
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 14:53:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 13:37:21 2019
Response via : Initial Calibration

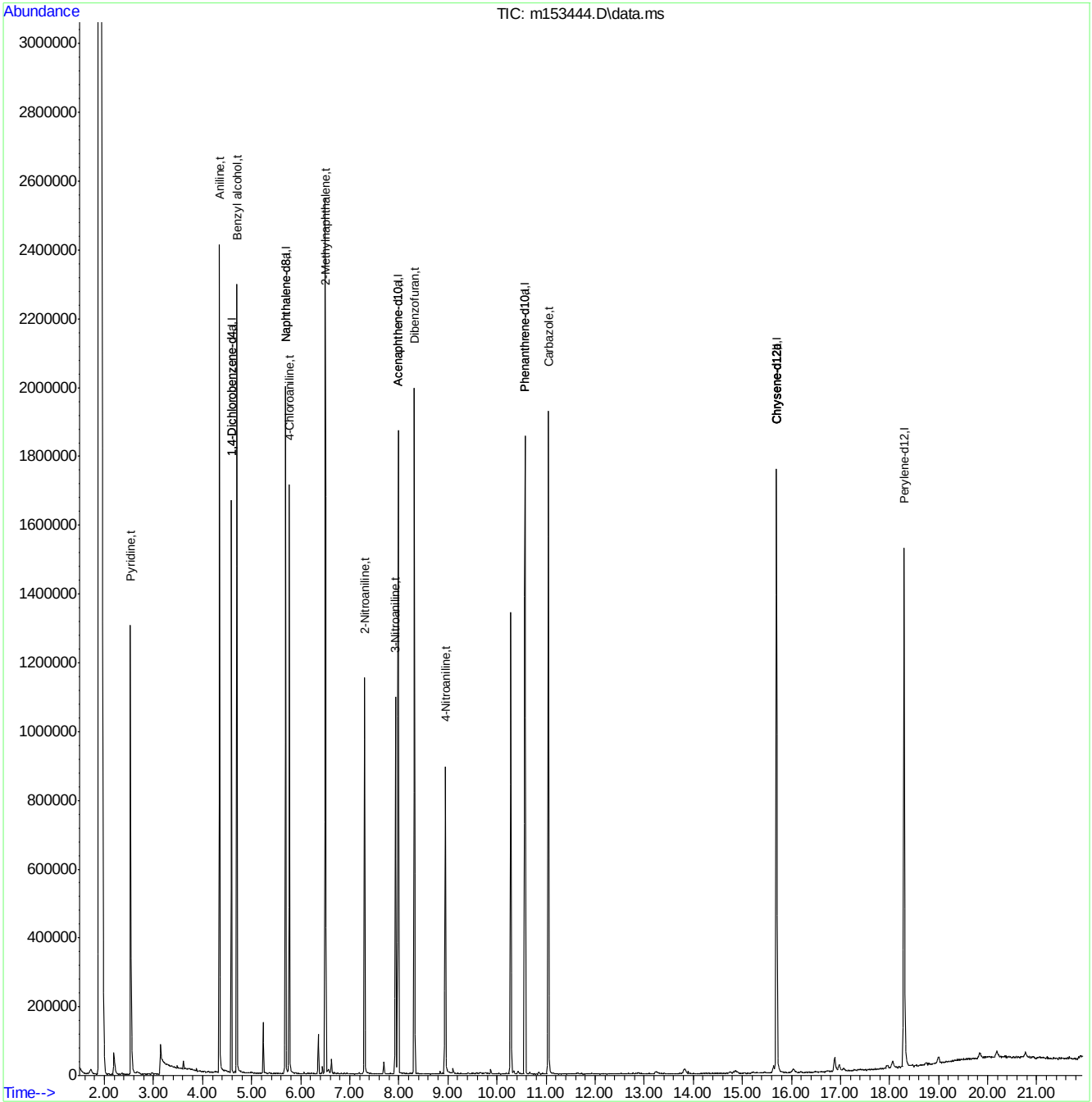
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.591	152	259492	40.00	ppm	0.00
24) Naphthalene-d8	5.692	136	951960	40.00	ppm	0.00
47) Acenaphthene-d10	7.988	164	516788	40.00	ppm	0.00
69) Phenanthrene-d10	10.568	188	984216	40.00	ppm	-0.01
83) Chrysene-d12	15.695	240	882663	40.00	ppm	-0.02
91) Perylene-d12	18.296	264	888272	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.591	152	259492	40.00	ppm	0.00
103) Acenaphthene-d10a	7.988	164	516788	40.00	ppm	0.00
106) Chrysene-d12a	15.695	240	882663	40.00	ppm	0.00
108) Chrysene-d12b	15.695	240	882663	40.00	ppm	0.00
110) Phenanthrene-d10a	10.568	188	984216	40.00	ppm	0.00
113) Naphthalene-d8a	5.692	136	951960	40.00	ppm	0.00
115) Chrysene-d12c	15.695	240	882663	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
3) Pyridine	2.530	79	533530	43.16	ppm	99
10) Aniline	4.346	93	729119	55.28	ppm	98
16) Benzyl alcohol	4.698	108	277294	52.03	ppm	96
39) 4-Chloroaniline	5.772	127	480601	46.53	ppm	99
44) 2-Methylnaphthalene	6.503	141	626814	42.41	ppm	98
54) 2-Nitroaniline	7.305	65	202466	47.22	ppm	96
58) 3-Nitroaniline	7.935	138	212033	47.27	ppm	96
62) Dibenzofuran	8.319	168	1046488	46.31	ppm	98
68) 4-Nitroaniline	8.950	138	204471	51.16	ppm	97
79) Carbazole	11.049	167	1158275	46.87	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6559\
Data File : m153444.D
Acq On : 15 Apr 2019 2:05 pm
Operator : christc2
Sample : ic6556-50
Misc : op17006,em6559,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 15 14:53:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon Apr 15 13:37:21 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153893.D
Acq On : 30 Apr 2019 9:18 am
Operator : christc2
Sample : cc6556-50
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 30 12:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.432	152	152105	40.00	ppm	0.00
24) Naphthalene-d8	5.495	136	528716	40.00	ppm	0.00
47) Acenaphthene-d10	7.722	164	312056	40.00	ppm	-0.01
69) Phenanthrene-d10	10.280	188	613730	40.00	ppm	-0.03
83) Chrysene-d12	15.397	240	555604	40.00	ppm	-0.06
91) Perylene-d12	17.987	264	602344	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.432	152	152105	40.00	ppm	0.00
103) Acenaphthene-d10a	7.722	164	312056	40.00	ppm	-0.01
106) Chrysene-d12a	15.397	240	555604	40.00	ppm	-0.06
108) Chrysene-d12b	15.397	240	555604	40.00	ppm	-0.06
110) Phenanthrene-d10a	10.280	188	613730	40.00	ppm	-0.03
113) Naphthalene-d8a	5.495	136	528716	40.00	ppm	0.00
115) Chrysene-d12c	15.397	240	555604	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.454	112	253430	42.62	ppm	-0.03
Spiked Amount 50.000			Recovery = 85.24%			
8) Phenol-d5	4.186	99	322333	43.89	ppm	0.00
Spiked Amount 50.000			Recovery = 87.78%			
25) Nitrobenzene-d5	4.859	82	241637	42.84	ppm	0.00
Spiked Amount 50.000			Recovery = 85.68%			
51) 2-Fluorobiphenyl	6.760	172	556089	47.93	ppm	-0.02
Spiked Amount 50.000			Recovery = 95.86%			
73) 2,4,6-Tribromophenol	9.041	330	138494	67.08	ppm	-0.04
Spiked Amount 50.000			Recovery = 134.16%			
85) Terphenyl-d14	13.437	244	728362	48.61	ppm	-0.07
Spiked Amount 50.000			Recovery = 97.22%			
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.911	88	107842	35.84	ppm	93
3) Pyridine	2.258	79	265618	36.65	ppm	99
4) N-Nitrosodimethylamine	2.215	42	102119	39.62	ppm	92
6) Indene	4.624	116	385409	47.92	ppm	97
7) Cumene	3.834	105	592917	41.73	ppm	99
9) Phenol	4.197	94	333515	43.21	ppm	98
10) Aniline	4.191	93	338847	43.83	ppm	59
11) bis(2-Chloroethyl)ether	4.239	93	222775	41.73	ppm	97
12) 2-Chlorophenol	4.282	128	254850	48.07	ppm	96
13) Decane	4.325	43	180562	44.59	ppm	97
14) 1,3-Dichlorobenzene	4.389	146	296675	48.17	ppm	96
15) 1,4-Dichlorobenzene	4.442	146	284995	50.96	ppm	96
16) Benzyl alcohol	4.539	108	152166	48.71	ppm	97
17) 1,2-Dichlorobenzene	4.555	146	272745	49.28	ppm	97
18) Acetophenone	4.742	105	328029	46.87	ppm	95
19) 2-Methylphenol	4.635	108	213771	47.89	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153893.D
Acq On : 30 Apr 2019 9:18 am
Operator : christc2
Sample : cc6556-50
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 30 12:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
20) 2,2'-oxybis(1-Chloropr...	4.640	121	59931	43.43	ppm	94
21) 3&4-Methylphenol	4.752	108	219718	48.96	ppm	93
22) n-Nitroso-di-n-propyla...	4.742	70	163856	46.94	ppm	94
23) Hexachloroethane	4.816	201	118924	50.33	ppm	94
26) Nitrobenzene	4.875	77	242099	44.20	ppm	89
27) Quinoline	5.874	129	469761	46.90	ppm	96
28) Isophorone	5.078	82	441015	43.16	ppm	95
29) 2-Nitrophenol	5.142	139	147880	58.38	ppm	92
30) 2,4-Dimethylphenol	5.196	107	213485	50.89	ppm	91
31) Benzoic acid	5.318	105	201156	60.33	ppm	96
32) bis(2-Chloroethoxy)met...	5.270	93	267446	43.14	ppm	97
33) 2,4-Dichlorophenol	5.372	162	226367	51.46	ppm	93
34) 2,6-Dichlorophenol	5.585	162	210908	52.90	ppm	94
35) 1,3,5-Trichlorobenzene	5.153	180	270088	48.91	ppm	99
36) 1,2,4-Trichlorobenzene	5.441	180	259563	48.28	ppm	97
37) 1,2,3-Trichlorobenzene	5.666	180	238817	47.85	ppm	99
38) Naphthalene	5.516	128	647838	50.04	ppm	99
39) 4-Chloroaniline	5.575	127	283813	49.48	ppm	98
40) 2,3-Dichloroaniline	6.638	161	283526	50.56	ppm	94
41) Caprolactam	5.954	55	94902	46.63	ppm	93
42) Hexachlorobutadiene	5.649	225	151834	47.39	ppm	99
43) 4-Chloro-3-methylphenol	6.130	107	200828	44.12	ppm	85
44) 2-Methylnaphthalene	6.274	141	390827	47.61	ppm	96
45) 1-Methylnaphthalene	6.397	142	496201	47.54	ppm	97
46) Dimethylnaphthalene	7.113	156	427029	47.00	ppm	96
48) Hexachlorocyclopentadiene	6.488	237	362953	119.61	ppm	99
49) 2,4,6-Trichlorophenol	6.654	196	182183	53.93	ppm	97
50) 2,4,5-Trichlorophenol	6.702	196	191154	52.72	ppm	98
52) 2-Chloronaphthalene	6.905	162	459192	47.83	ppm	97
53) Biphenyl	6.894	154	619267	49.40	ppm	99
54) 2-Nitroaniline	7.065	65	145575	56.23	ppm	95
55) Dimethylphthalate	7.364	163	549347	46.84	ppm	99
56) Acenaphthylene	7.503	152	732317	48.58	ppm	98
57) 2,6-Dinitrotoluene	7.439	165	128531	58.51	ppm	89
58) 3-Nitroaniline	7.690	138	143834	53.10	ppm	82
59) Acenaphthene	7.775	153	455260	49.88	ppm	96
60) 2,4-Dinitrophenol	7.861	184	161620	125.61	ppm	94
61) 4-Nitrophenol	8.032	109	69476	46.20	ppm	93
62) Dibenzofuran	8.053	168	663621	48.63	ppm	94
63) 2,4-Dinitrotoluene	8.074	165	162669	53.02	ppm	76
64) 2,3,4,6-Tetrachlorophenol	8.283	232	186333	57.39	ppm	97
65) Diethylphthalate	8.528	149	530576	46.82	ppm	98
66) Fluorene	8.624	166	549646	48.54	ppm	99
67) 4-Chlorophenyl-phenyle...	8.662	204	279751	47.57	ppm	94
68) 4-Nitroaniline	8.699	138	123299	51.09	ppm	90
70) 4,6-Dinitro-2-methylph...	8.763	198	116356	60.76	ppm	91
71) n-Nitrosodiphenylamine	8.876	169	395515	48.48	ppm	97
72) 1,2-Diphenylhydrazine	8.934	77	478247	42.74	ppm	96
74) 4-Bromophenyl-phenylether	9.516	248	206862	49.36	ppm	99
75) Hexachlorobenzene	9.602	284	247967	53.28	ppm	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153893.D
Acq On : 30 Apr 2019 9:18 am
Operator : christc2
Sample : cc6556-50
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 30 12:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration

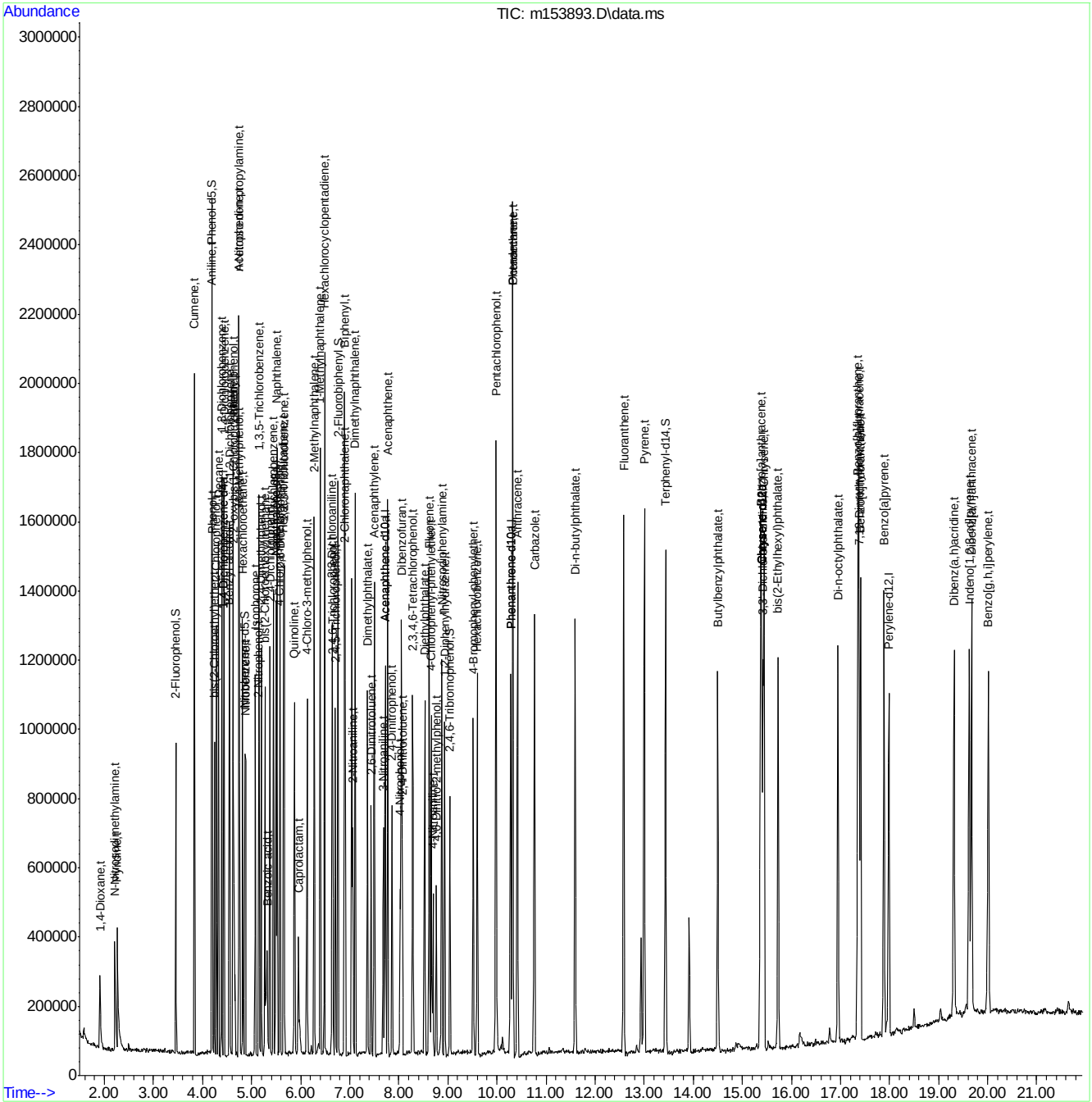
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) Pentachlorophenol	9.981	266	352360	135.94	ppm	98
77) Phenanthrene	10.323	178	828420	54.44	ppm	99
78) Anthracene	10.419	178	800351	49.93	ppm	99
79) Carbazole	10.766	167	760955	49.38	ppm	99
80) Di-n-butylphthalate	11.594	149	969121	52.21	ppm	99
81) Fluoranthene	12.582	202	984962	48.97	ppm	98
82) Octadecane	10.323	57	236215	47.95	ppm	97
84) Pyrene	13.004	202	1007295	49.51	ppm	99
86) Butylbenzylphthalate	14.500	149	429272	51.38	ppm	99
87) Benzo[a]anthracene	15.376	228	948370	49.85	ppm	97
88) 3,3'-Dichlorobenzidine	15.424	252	362631	56.44	ppm	100
89) Chrysene	15.445	228	814936	48.20	ppm	98
90) bis(2-Ethylhexyl)phtha...	15.728	149	557768	49.04	ppm	99
92) Di-n-octylphthalate	16.951	149	954709	47.57	ppm	99
93) Benzo[b]fluoranthene	17.357	252	959270	50.55	ppm	99
94) Benzo[k]fluoranthene	17.411	252	828229	45.85	ppm	98
95) Benzo[a]pyrene	17.891	252	825659	49.57	ppm	99
96) Indeno[1,2,3-cd]pyrene	19.627	276	780019	47.22	ppm	97
97) Dibenz(a,h)acridine	19.317	279	745679	48.83	ppm	85
98) Dibenz[a,h]anthracene	19.675	278	809132	52.70	ppm	98
99) 7,12-Dimethylbenz(a)an...	17.378	256	419119	57.60	ppm	94
100) Benzo[g,h,i]perylene	20.017	276	762767	48.28	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153893.D
Acq On : 30 Apr 2019 9:18 am
Operator : christc2
Sample : cc6556-50
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 30 12:07:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 12:06:53 2019
Response via : Initial Calibration



SGS JC86837

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153894.D
Acq On : 30 Apr 2019 9:46 am
Operator : christc2
Sample : cc6557-50
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 30 12:00:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 08:49:12 2019
Response via : Initial Calibration

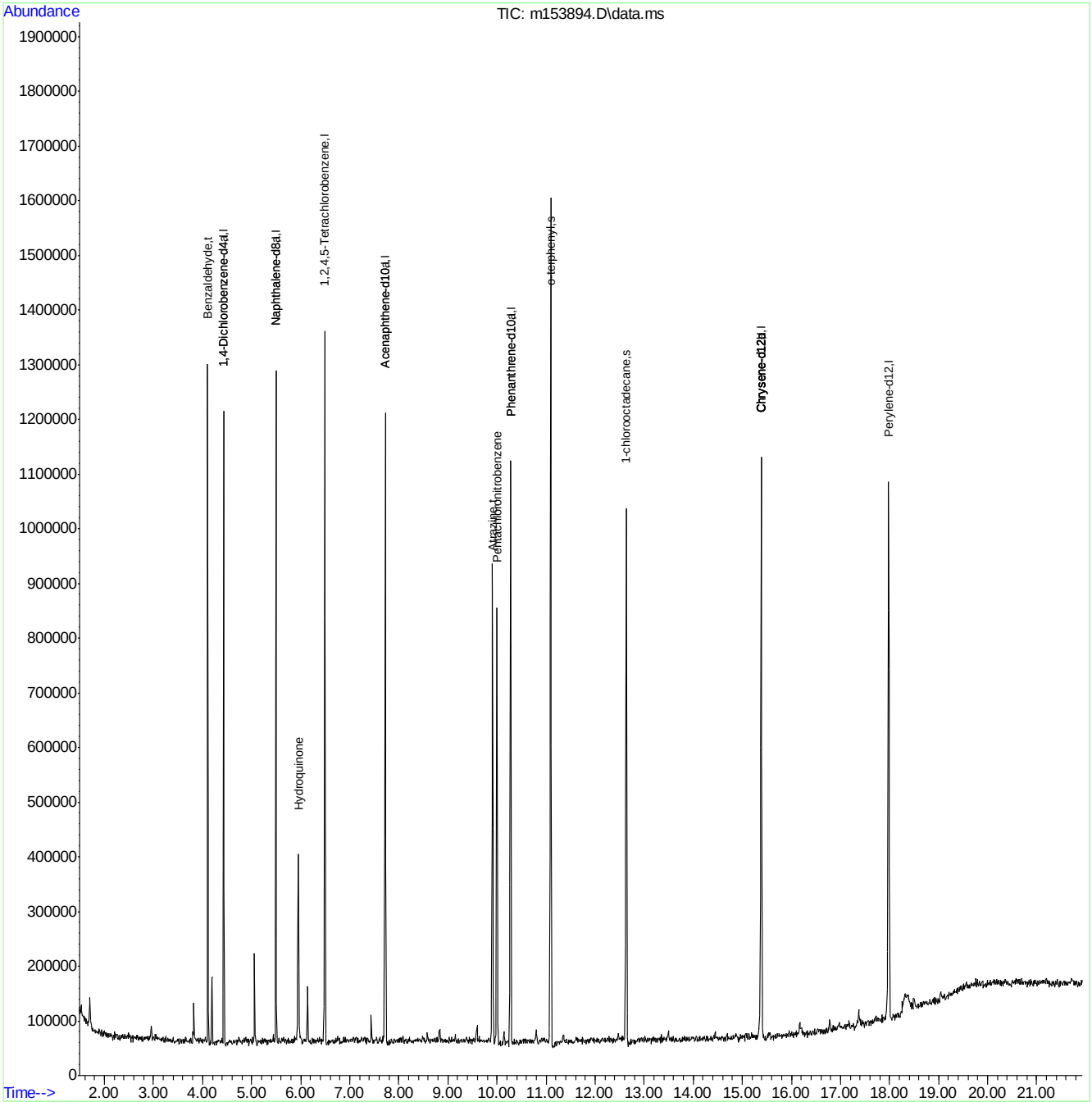
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.431	152	141750	40.00	ppm	0.00
24) Naphthalene-d8	5.494	136	501414	40.00	ppm	0.00
47) Acenaphthene-d10	7.721	164	305227	40.00	ppm	-0.02
69) Phenanthrene-d10	10.280	188	570864	40.00	ppm	-0.03
83) Chrysene-d12	15.386	240	546206	40.00	ppm	-0.07
91) Perylene-d12	17.981	264	597093	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.431	152	141750	40.00	ppm	0.00
103) Acenaphthene-d10a	7.721	164	305227	40.00	ppm	-0.02
106) Chrysene-d12a	15.386	240	546206	40.00	ppm	-0.07
108) Chrysene-d12b	15.386	240	546119	40.00	ppm	-0.07
110) Phenanthrene-d10a	10.280	188	570864	40.00	ppm	-0.03
113) Naphthalene-d8a	5.494	136	501414	40.00	ppm	0.00
115) Chrysene-d12c	15.386	240	546206	40.00	ppm	-0.07
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.635	57	173136	51.53	ppm	-0.09
Spiked Amount 50.000			Recovery =	103.06%		
111) o-terphenyl	11.097	230	462638	54.60	ppm	-0.01
Spiked Amount 50.000			Recovery =	109.20%		
Target Compounds						Qvalue
102) Benzaldehyde	4.105	105	188425	47.37	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.493	216	261394	50.14	ppm	99
105) Atrazine	9.916	215	89110	62.33	ppm	93
112) Pentachloronitrobenzene	10.002	295	43181	64.15	ppm	95
114) Hydroquinone	5.953	110	212380	52.01	ppm	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6576\
Data File : m153894.D
Acq On : 30 Apr 2019 9:46 am
Operator : christc2
Sample : cc6557-50
Misc : op17006,em6576,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 30 12:00:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 30 08:49:12 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153922.d
Acq On : 1 May 2019 7:27 am
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:19:05 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:12:59 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.418	152	235855	40.00	ppm	0.00
24) Naphthalene-d8	5.481	136	829917	40.00	ppm	0.00
47) Acenaphthene-d10	7.708	164	496816	40.00	ppm	0.00
69) Phenanthrene-d10	10.261	188	934384	40.00	ppm	0.00
83) Chrysene-d12	15.373	240	799335	40.00	ppm	0.00
91) Perylene-d12	17.968	264	882028	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.418	152	235855	40.00	ppm	0.00
103) Acenaphthene-d10a	7.708	164	496816	40.00	ppm	0.00
106) Chrysene-d12a	15.373	240	799335	40.00	ppm	0.00
108) Chrysene-d12b	15.373	240	799335	40.00	ppm	0.00
110) Phenanthrene-d10a	10.261	188	934384	40.00	ppm	0.00
113) Naphthalene-d8a	5.481	136	829917	40.00	ppm	0.00
115) Chrysene-d12c	15.373	240	799335	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.441	112	188148	20.41	ppm	-0.03
Spiked Amount 50.000			Recovery =	40.82%		
8) Phenol-d5	4.172	99	247830	21.76	ppm	0.01
Spiked Amount 50.000			Recovery =	43.52%		
25) Nitrobenzene-d5	4.845	82	195261	22.05	ppm	0.00
Spiked Amount 50.000			Recovery =	44.10%		
51) 2-Fluorobiphenyl	6.741	172	442633	23.96	ppm	-0.01
Spiked Amount 50.000			Recovery =	47.92%		
73) 2,4,6-Tribromophenol	9.022	330	101565	32.31	ppm	-0.02
Spiked Amount 50.000			Recovery =	64.62%		
85) Terphenyl-d14	13.412	244	532626	24.71	ppm	-0.03
Spiked Amount 50.000			Recovery =	49.42%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.892	88	85532	18.33	ppm	99
3) Pyridine	2.244	79	206723	18.40	ppm	97
4) N-Nitrosodimethylamine	2.201	42	75017	18.77	ppm	94
6) Indene	4.610	116	307755	24.68	ppm	98
7) Cumene	3.825	105	450097	20.43	ppm	98
9) Phenol	4.183	94	264600	22.11	ppm	84
10) Aniline	4.178	93	274604	22.91	ppm	82
11) bis(2-Chloroethyl)ether	4.231	93	176489	21.32	ppm	98
12) 2-Chlorophenol	4.268	128	198669	24.17	ppm	91
13) Decane	4.317	43	148175	23.60	ppm	95
14) 1,3-Dichlorobenzene	4.381	146	235198	24.63	ppm	96
15) 1,4-Dichlorobenzene	4.434	146	220362	25.41	ppm	96
16) Benzyl alcohol	4.530	108	116773	24.11	ppm	94
17) 1,2-Dichlorobenzene	4.546	146	215716	25.14	ppm	94
18) Acetophenone	4.728	105	258527	23.82	ppm	85
19) 2-Methylphenol	4.626	108	168892	24.40	ppm	96
20) 2,2'-oxybis(1-Chloropr...	4.632	121	48413	22.62	ppm	90
21) 3&4-Methylphenol	4.744	108	174913	25.13	ppm #	71
22) n-Nitroso-di-n-propyla...	4.733	70	134044	24.76	ppm	99
23) Hexachloroethane	4.808	201	92579	25.27	ppm	97
26) Nitrobenzene	4.861	77	191061	22.22	ppm	91
27) Quinoline	5.855	129	376314	23.94	ppm	94
28) Isophorone	5.064	82	345899	21.57	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153922.d
Acq On : 1 May 2019 7:27 am
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:19:05 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:12:59 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29)	2-Nitrophenol	5.134	139	121955	30.67	ppm		89
30)	2,4-Dimethylphenol	5.182	107	163298	24.80	ppm		90
31)	Benzoic acid	5.294	105	152832	29.20	ppm		88
32)	bis(2-Chloroethoxy)met...	5.257	93	216916	22.29	ppm		99
33)	2,4-Dichlorophenol	5.358	162	177002	25.64	ppm		95
34)	2,6-Dichlorophenol	5.572	162	166506	26.61	ppm		96
35)	1,3,5-Trichlorobenzene	5.144	180	213652	24.65	ppm		98
36)	1,2,4-Trichlorobenzene	5.433	180	206106	24.42	ppm		98
37)	1,2,3-Trichlorobenzene	5.652	180	190387	24.30	ppm		96
38)	Naphthalene	5.502	128	502138	24.71	ppm		99
39)	4-Chloroaniline	5.561	127	230744	25.63	ppm		98
40)	2,3-Dichloroaniline	6.624	161	226053	25.68	ppm		97
41)	Caprolactam	5.930	55	75234	23.55	ppm		93
42)	Hexachlorobutadiene	5.641	225	112876	22.44	ppm		98
43)	4-Chloro-3-methylphenol	6.111	107	162688	22.77	ppm		90
44)	2-Methylnaphthalene	6.266	141	311653	24.19	ppm		96
45)	1-Methylnaphthalene	6.383	142	397828	24.28	ppm		96
46)	Dimethylnaphthalene	7.094	156	340981	23.91	ppm		97
48)	Hexachlorocyclopentadiene	6.474	237	266511	55.16	ppm		97
49)	2,4,6-Trichlorophenol	6.635	196	141005	26.22	ppm		98
50)	2,4,5-Trichlorophenol	6.688	196	153086	26.52	ppm		96
52)	2-Chloronaphthalene	6.891	162	365266	23.90	ppm		98
53)	Biphenyl	6.875	154	484352	24.27	ppm		99
54)	2-Nitroaniline	7.046	65	118131	28.66	ppm		95
55)	Dimethylphthalate	7.345	163	432908	23.18	ppm		99
56)	Acenaphthylene	7.484	152	589571	24.57	ppm		98
57)	2,6-Dinitrotoluene	7.420	165	104786	29.96	ppm		89
58)	3-Nitroaniline	7.665	138	111840	25.94	ppm		83
59)	Acenaphthene	7.756	153	363456	25.01	ppm		98
60)	2,4-Dinitrophenol	7.842	184	116979	59.77	ppm		91
61)	4-Nitrophenol	8.013	109	52098	21.76	ppm	#	75
62)	Dibenzofuran	8.034	168	528187	24.31	ppm		93
63)	2,4-Dinitrotoluene	8.055	165	131580	26.64	ppm		81
64)	2,3,4,6-Tetrachlorophenol	8.264	232	139369	26.96	ppm		97
65)	Diethylphthalate	8.504	149	424421	23.52	ppm		97
66)	Fluorene	8.600	166	441651	24.50	ppm		99
67)	4-Chlorophenyl-phenyle...	8.643	204	220486	23.55	ppm		94
68)	4-Nitroaniline	8.669	138	96825	25.20	ppm		84
70)	4,6-Dinitro-2-methylph...	8.744	198	85725	29.81	ppm		92
71)	n-Nitrosodiphenylamine	8.856	169	318037	25.60	ppm		99
72)	1,2-Diphenylhydrazine	8.915	77	384650	22.58	ppm		95
74)	4-Bromophenyl-phenylether	9.497	248	154845	24.27	ppm		95
75)	Hexachlorobenzene	9.577	284	190624	26.90	ppm		93
76)	Pentachlorophenol	9.962	266	259830	65.84	ppm		97
77)	Phenanthrene	10.299	178	622974	26.89	ppm		98
78)	Anthracene	10.395	178	639927	26.22	ppm		99
79)	Carbazole	10.742	167	591076	25.19	ppm		99
80)	Di-n-butylphthalate	11.575	149	739667	26.17	ppm		99
81)	Fluoranthene	12.558	202	730608	23.86	ppm		98
82)	Octadecane	10.304	57	185797	24.77	ppm		96
84)	Pyrene	12.980	202	760068	25.97	ppm		98
86)	Butylbenzylphthalate	14.481	149	319233	26.56	ppm		94
87)	Benzo[a]anthracene	15.351	228	681479	24.90	ppm		98
88)	3,3'-Dichlorobenzidine	15.394	252	255783	27.67	ppm		97
89)	Chrysene	15.421	228	606522	24.93	ppm		98
90)	bis(2-Ethylhexyl)phtha...	15.709	149	412403	26.20	ppm		99
92)	Di-n-octylphthalate	16.927	149	688449	23.80	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153922.d
Acq On : 1 May 2019 7:27 am
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:19:05 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:12:59 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	Benzo[b]fluoranthene	17.333	252	687696	24.75	ppm	99
94)	Benzo[k]fluoranthene	17.381	252	616208	23.30	ppm	97
95)	Benzo[a]pyrene	17.861	252	605452	24.82	ppm	99
96)	Indeno[1,2,3-cd]pyrene	19.597	276	582746	24.03	ppm	96
97)	Dibenz(a,h)acridine	19.288	279	554411	24.79	ppm	85
98)	Dibenz[a,h]anthracene	19.645	278	585644	26.05	ppm	98
99)	7,12-Dimethylbenz(a)an...	17.349	256	299630	28.12	ppm	94
100)	Benzo[g,h,i]perylene	19.982	276	567681	24.54	ppm	97

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

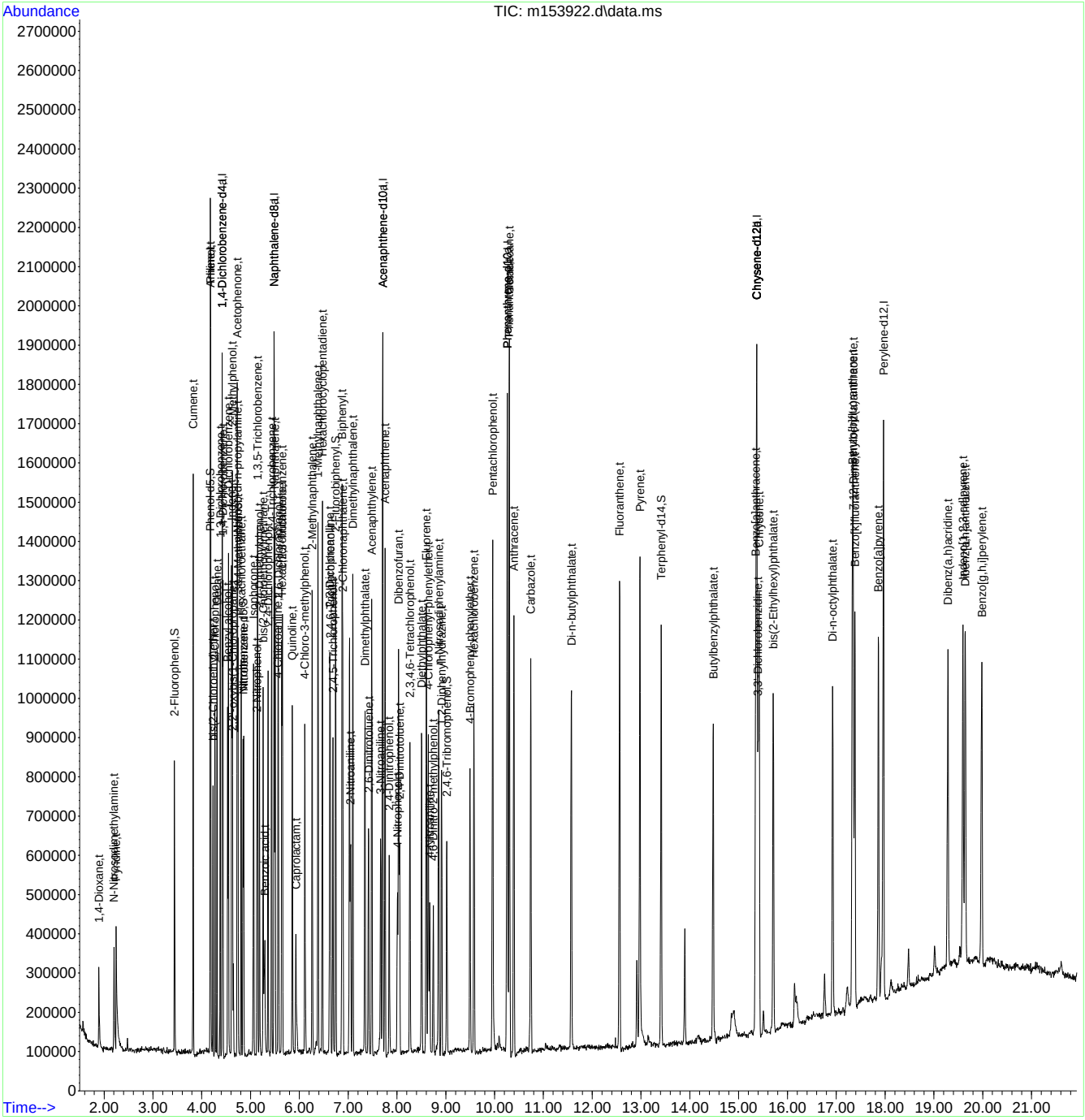
9.6.55

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153922.d
Acq On : 1 May 2019 7:27 am
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:19:05 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:12:59 2019
Response via : Initial Calibration



JC86837

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153923.d
Acq On : 1 May 2019 7:56 am
Operator : christc2
Sample : cc6557-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:21:46 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:12:59 2019
Response via : Initial Calibration

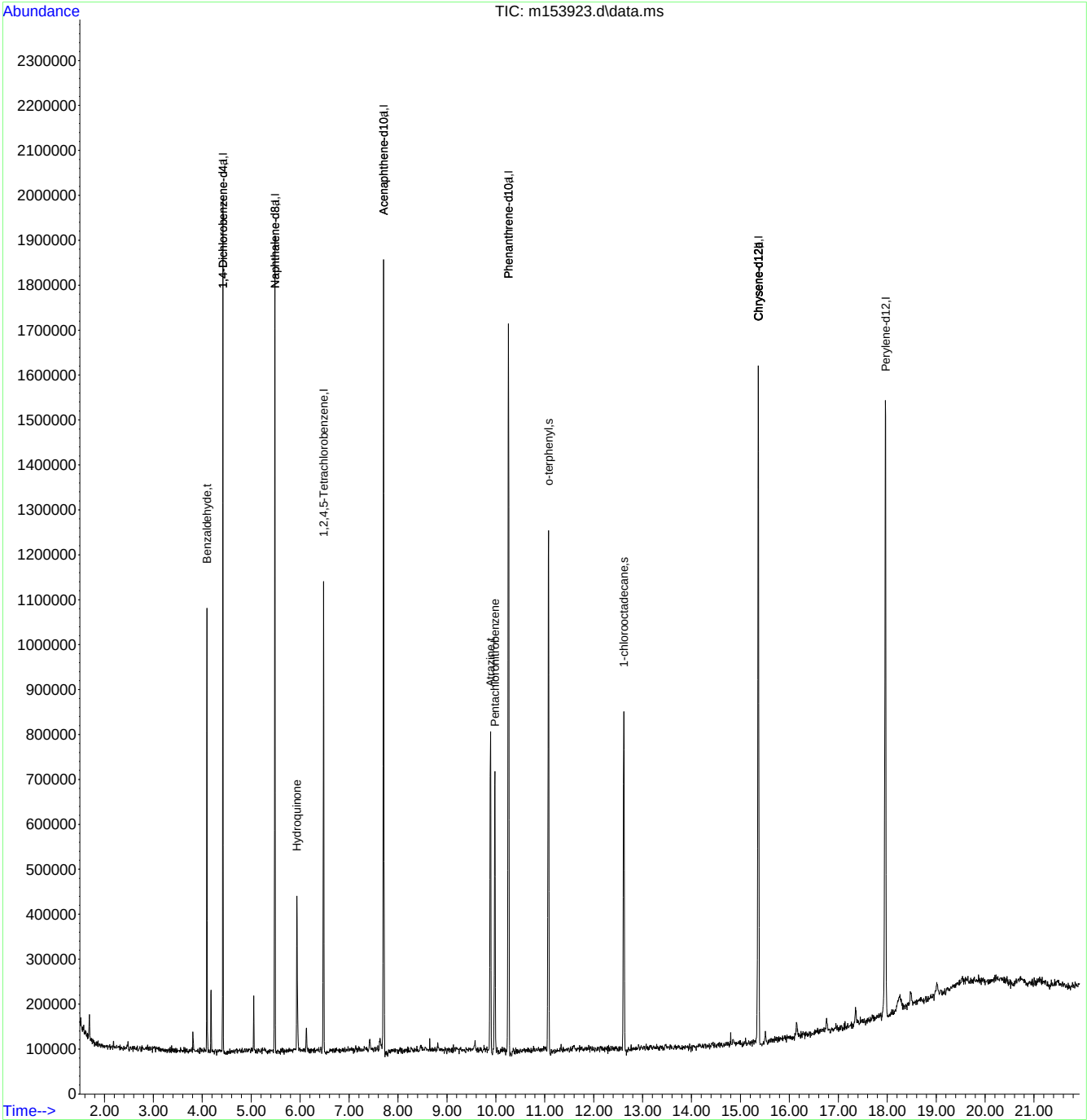
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.421	152	233943	40.00	ppm	0.00
24) Naphthalene-d8	5.484	136	797032	40.00	ppm	0.00
47) Acenaphthene-d10	7.706	164	471505	40.00	ppm	0.00
69) Phenanthrene-d10	10.259	188	882292	40.00	ppm	0.00
83) Chrysene-d12	15.365	240	810929	40.00	ppm	0.00
91) Perylene-d12	17.966	264	853763	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.421	152	233943	40.00	ppm	0.00
103) Acenaphthene-d10a	7.706	164	471505	40.00	ppm	0.00
106) Chrysene-d12a	15.365	240	810929	40.00	ppm	0.00
108) Chrysene-d12b	15.365	240	810929	40.00	ppm	0.00
110) Phenanthrene-d10a	10.259	188	882292	40.00	ppm	0.00
113) Naphthalene-d8a	5.484	136	797032	40.00	ppm	0.00
115) Chrysene-d12c	15.365	240	810929	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.615	57	138450	27.75	ppm	-0.04
Spiked Amount 50.000			Recovery =	55.50%		
111) o-terphenyl	11.076	230	350373	26.75	ppm	0.02
Spiked Amount 50.000			Recovery =	53.50%		
Target Compounds						Qvalue
102) Benzaldehyde	4.096	105	152966	23.30	ppm	94
104) 1,2,4,5-Tetrachloroben...	6.478	216	214297	26.61	ppm	94
105) Atrazine	9.891	215	67578	30.60	ppm	98
112) Pentachloronitrobenzene	9.982	295	35638	34.26	ppm	90
114) Hydroquinone	5.933	110	170867	26.33	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\jeryllr\em6577\
Data File : m153923.d
Acq On : 1 May 2019 7:56 am
Operator : christc2
Sample : cc6557-25 Inst : MSM
Misc : op17006,em6577,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 02 03:21:46 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 02 03:12:59 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153975.d
Acq On : 2 May 2019 1:37 pm
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 12:23:13 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:22:09 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.396	152	203868	40.00	ppm	0.00
24) Naphthalene-d8	5.448	136	705420	40.00	ppm	0.00
47) Acenaphthene-d10	7.665	164	422659	40.00	ppm	0.00
69) Phenanthrene-d10	10.207	188	811706	40.00	ppm	0.00
83) Chrysene-d12	15.308	240	735865	40.00	ppm	0.00
91) Perylene-d12	17.904	264	852302	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.396	152	203868	40.00	ppm	0.00
103) Acenaphthene-d10a	7.665	164	422659	40.00	ppm	0.00
106) Chrysene-d12a	15.308	240	735865	40.00	ppm	0.00
108) Chrysene-d12b	15.308	240	735865	40.00	ppm	0.00
110) Phenanthrene-d10a	10.207	188	811706	40.00	ppm	0.00
113) Naphthalene-d8a	5.448	136	705420	40.00	ppm	0.00
115) Chrysene-d12c	15.308	240	735865	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.413	112	160655	20.16	ppm	-0.03
Spiked Amount 50.000			Recovery =	40.32%		
8) Phenol-d5	4.145	99	213232	21.66	ppm	0.00
Spiked Amount 50.000			Recovery =	43.32%		
25) Nitrobenzene-d5	4.818	82	169596	22.54	ppm	0.00
Spiked Amount 50.000			Recovery =	45.08%		
51) 2-Fluorobiphenyl	6.703	172	375564	23.90	ppm	0.00
Spiked Amount 50.000			Recovery =	47.80%		
73) 2,4,6-Tribromophenol	8.973	330	88346	32.35	ppm	-0.01
Spiked Amount 50.000			Recovery =	64.70%		
85) Terphenyl-d14	13.358	244	477166	24.05	ppm	-0.02
Spiked Amount 50.000			Recovery =	48.10%		
109) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
111) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.864	88	76870	19.06	ppm	99
3) Pyridine	2.217	79	169041	17.40	ppm	100
4) N-Nitrosodimethylamine	2.169	42	66788	19.33	ppm	100
6) Indene	4.583	116	259576	24.08	ppm	100
7) Cumene	3.798	105	388809	20.42	ppm	100
9) Phenol	4.156	94	233202	22.54	ppm	100
10) Aniline	4.204	93	150207	14.50	ppm	45
11) bis(2-Chloroethyl)ether	4.204	93	150347	21.01	ppm	100
12) 2-Chlorophenol	4.241	128	169032	23.79	ppm	100
13) Decane	4.289	43	129203	23.81	ppm	100
14) 1,3-Dichlorobenzene	4.353	146	199253	24.14	ppm	100
15) 1,4-Dichlorobenzene	4.407	146	187835	25.06	ppm	100
16) Benzyl alcohol	4.503	108	103756	24.78	ppm	100
17) 1,2-Dichlorobenzene	4.519	146	182637	24.62	ppm	100
18) Acetophenone	4.700	105	220952	23.56	ppm	100
19) 2-Methylphenol	4.599	108	145349	24.30	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.604	121	40931	22.13	ppm	100
21) 3&4-Methylphenol	4.716	108	154513	25.69	ppm	100
22) n-Nitroso-di-n-propyla...	4.706	70	117033	25.01	ppm	100
23) Hexachloroethane	4.781	201	78080	24.66	ppm	100
26) Nitrobenzene	4.834	77	168684	23.08	ppm	100
27) Quinoline	5.817	129	323157	24.18	ppm	100
28) Isophorone	5.032	82	305443	22.41	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153975.d
Acq On : 2 May 2019 1:37 pm
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 12:23:13 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:22:09 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
29) 2-Nitrophenol	5.101	139	99238	29.36	ppm	100
30) 2,4-Dimethylphenol	5.149	107	142699	25.50	ppm	100
31) Benzoic acid	5.251	105	135922	30.55	ppm	100
32) bis(2-Chloroethoxy)met...	5.229	93	181948	22.00	ppm	100
33) 2,4-Dichlorophenol	5.325	162	151097	25.75	ppm	100
34) 2,6-Dichlorophenol	5.539	162	139393	26.20	ppm	100
35) 1,3,5-Trichlorobenzene	5.112	180	187230	25.41	ppm	100
36) 1,2,4-Trichlorobenzene	5.400	180	178816	24.93	ppm	100
37) 1,2,3-Trichlorobenzene	5.619	180	165469	24.85	ppm	100
38) Naphthalene	5.470	128	431943	25.01	ppm	100
39) 4-Chloroaniline	5.528	127	197062	25.75	ppm	100
40) 2,3-Dichloroaniline	6.586	161	187875	25.11	ppm	100
41) Caprolactam	5.891	55	65662	24.18	ppm	100
42) Hexachlorobutadiene	5.608	225	102809	24.05	ppm	100
43) 4-Chloro-3-methylphenol	6.073	107	137644	22.66	ppm	100
44) 2-Methylnaphthalene	6.223	141	265566	24.25	ppm	100
45) 1-Methylnaphthalene	6.345	142	340492	24.45	ppm	100
46) Dimethylnaphthalene	7.056	156	294831	24.32	ppm	100
48) Hexachlorocyclopentadiene	6.436	237	232169	56.49	ppm	100
49) 2,4,6-Trichlorophenol	6.596	196	124444	27.20	ppm	100
50) 2,4,5-Trichlorophenol	6.645	196	131492	26.78	ppm	100
52) 2-Chloronaphthalene	6.848	162	320770	24.67	ppm	100
53) Biphenyl	6.837	154	409257	24.10	ppm	100
54) 2-Nitroaniline	7.008	65	104423	29.78	ppm	100
55) Dimethylphthalate	7.302	163	366563	23.08	ppm	100
56) Acenaphthylene	7.440	152	500646	24.52	ppm	100
57) 2,6-Dinitrotoluene	7.376	165	85493	28.74	ppm	100
58) 3-Nitroaniline	7.622	138	96113	26.20	ppm	100
59) Acenaphthene	7.713	153	311732	25.22	ppm	100
60) 2,4-Dinitrophenol	7.793	184	111433	66.22	ppm	100
61) 4-Nitrophenol	7.958	109	44186	21.69	ppm	100
62) Dibenzofuran	7.991	168	452912	24.51	ppm	100
63) 2,4-Dinitrotoluene	8.007	165	111966	26.65	ppm	100
64) 2,3,4,6-Tetrachlorophenol	8.215	232	121388	27.61	ppm	100
65) Diethylphthalate	8.461	149	355510	23.16	ppm	100
66) Fluorene	8.557	166	370728	24.17	ppm	100
67) 4-Chlorophenyl-phenyle...	8.594	204	190882	23.96	ppm	100
68) 4-Nitroaniline	8.626	138	88954	27.21	ppm	100
70) 4,6-Dinitro-2-methylph...	8.690	198	81125	32.31	ppm	100
71) n-Nitrosodiphenylamine	8.808	169	272298	25.24	ppm	100
72) 1,2-Diphenylhydrazine	8.866	77	332856	22.49	ppm	100
74) 4-Bromophenyl-phenylether	9.449	248	133781	24.14	ppm	100
75) Hexachlorobenzene	9.529	284	164846	26.78	ppm	100
76) Pentachlorophenol	9.908	266	225324	65.73	ppm	100
77) Phenanthrene	10.250	178	535816	26.62	ppm	100
78) Anthracene	10.341	178	539048	25.43	ppm	100
79) Carbazole	10.688	167	521260	25.58	ppm	100
80) Di-n-butylphthalate	11.526	149	633794	25.82	ppm	100
81) Fluoranthene	12.504	202	644235	24.22	ppm	100
82) Octadecane	10.260	57	168269	25.83	ppm	100
84) Pyrene	12.920	202	656749	24.37	ppm	100
86) Butylbenzylphthalate	14.427	149	281017	25.39	ppm	100
87) Benzo[a]anthracene	15.292	228	618699	24.56	ppm	90
88) 3,3'-Dichlorobenzidine	15.340	252	241155	28.34	ppm	100
89) Chrysene	15.356	228	543723	24.28	ppm	67
90) bis(2-Ethylhexyl)phtha...	15.660	149	371960	25.70	ppm	100
92) Di-n-octylphthalate	16.873	149	648333	23.22	ppm	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153975.d
Acq On : 2 May 2019 1:37 pm
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 12:23:13 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:22:09 2019
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93)	Benzo[b]fluoranthene	17.263	252	642694	23.94	ppm	65
94)	Benzo[k]fluoranthene	17.316	252	589253	23.05	ppm	100
95)	Benzo[a]pyrene	17.797	252	595456	25.26	ppm	56
96)	Indeno[1,2,3-cd]pyrene	19.527	276	552545	23.59	ppm	100
97)	Dibenz(a,h)acridine	19.223	279	542732	25.11	ppm	100
98)	Dibenz[a,h]anthracene	19.575	278	572704	26.36	ppm	98
99)	7,12-Dimethylbenz(a)an...	17.284	256	287742	27.95	ppm	100
100)	Benzo[g,h,i]perylene	19.906	276	571094	25.55	ppm	85

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

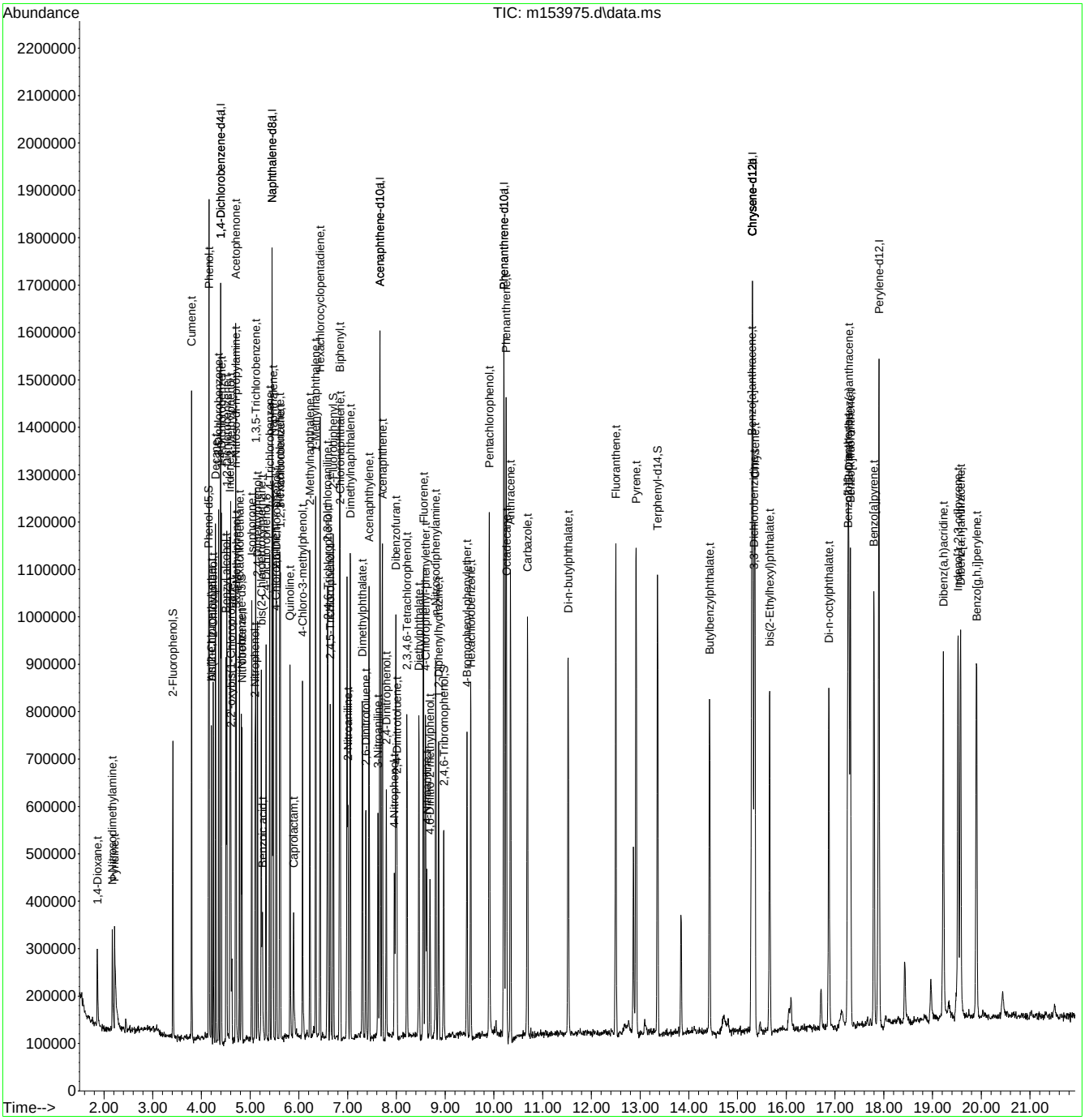
9.6.57

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153975.d
Acq On : 2 May 2019 1:37 pm
Operator : christc2
Sample : cc6556-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 12:23:13 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:22:09 2019
Response via : Initial Calibration



SGS JC86837

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153976.d
Acq On : 2 May 2019 2:07 pm
Operator : christc2
Sample : cc6557-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 12:17:22 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:13:48 2019
Response via : Initial Calibration

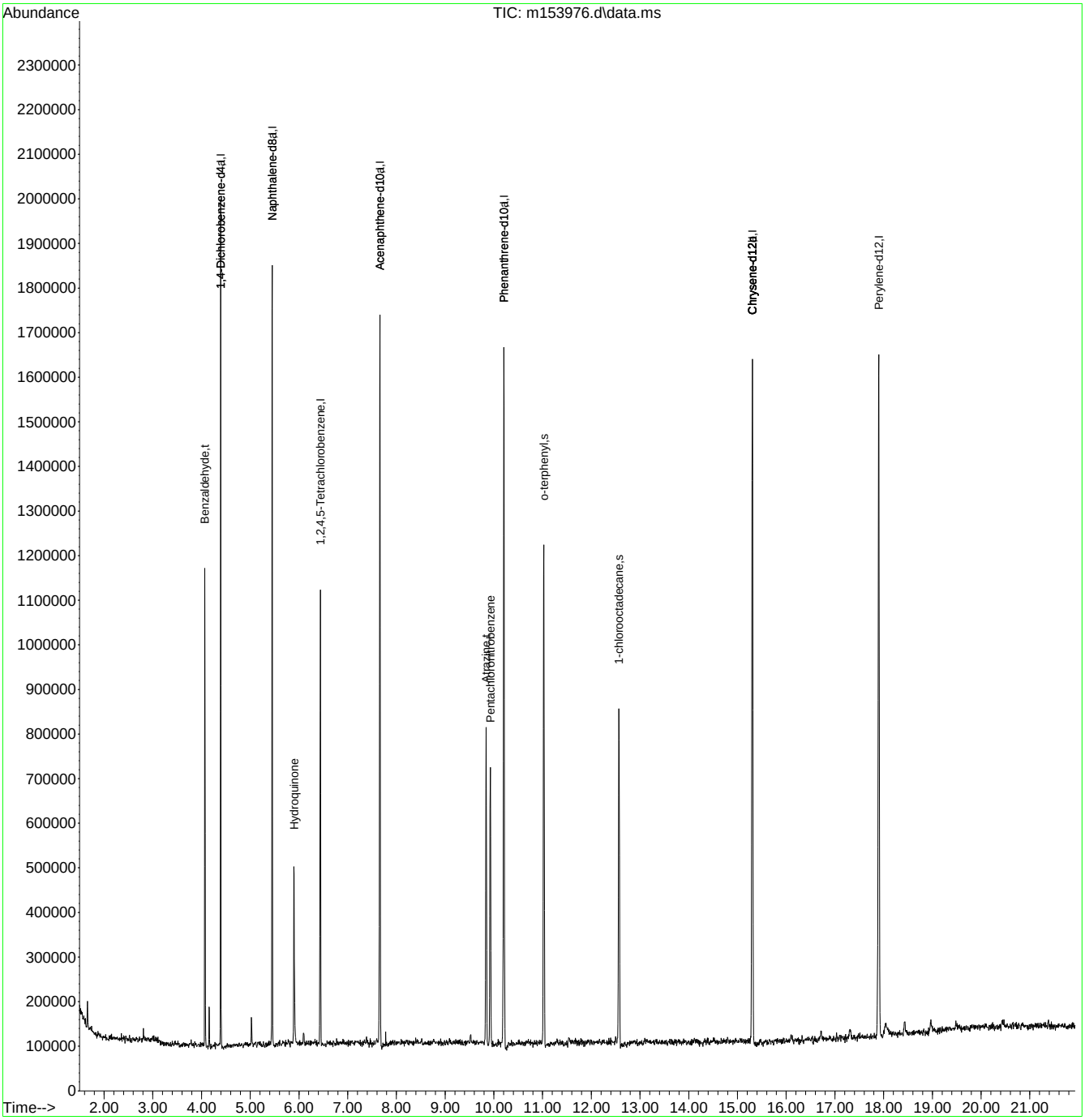
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.394	152	221749	40.00	ppm	0.00
24) Naphthalene-d8	5.452	136	770491	40.00	ppm	0.00
47) Acenaphthene-d10	7.663	164	450652	40.00	ppm	0.00
69) Phenanthrene-d10	10.205	188	853702	40.00	ppm	0.00
83) Chrysene-d12	15.306	240	812854	40.00	ppm	0.00
91) Perylene-d12	17.902	264	950605	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.394	152	221749	40.00	ppm	0.00
103) Acenaphthene-d10a	7.663	164	450652	40.00	ppm	0.00
106) Chrysene-d12a	15.306	240	812854	40.00	ppm	0.00
108) Chrysene-d12b	15.306	240	812854	40.00	ppm	0.00
110) Phenanthrene-d10a	10.205	188	853702	40.00	ppm	0.00
113) Naphthalene-d8a	5.452	136	770491	40.00	ppm	0.00
115) Chrysene-d12c	15.306	240	812854	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery =	0.00%		
109) 1-chlorooctadecane	12.566	57	141556	28.30	ppm	0.00
Spiked Amount 50.000			Recovery =	56.60%		
111) o-terphenyl	11.028	230	340449	26.87	ppm	0.02
Spiked Amount 50.000			Recovery =	53.74%		
Target Compounds						Qvalue
102) Benzaldehyde	4.068	105	151105	24.28	ppm	# 68
104) 1,2,4,5-Tetrachloroben...	6.440	216	202157	26.26	ppm	100
105) Atrazine	9.842	215	66000	31.27	ppm	99
112) Pentachloronitrobenzene	9.928	295	31880	31.67	ppm	94
114) Hydroquinone	5.900	110	186915	29.79	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\em6579\
Data File : m153976.d
Acq On : 2 May 2019 2:07 pm
Operator : christc2
Sample : cc6557-25 Inst : MSM
Misc : op17006,em6579,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MM6556.M
Quant Results File: MM6556.RES
Quant Time: May 03 12:17:22 2019
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Fri May 03 12:13:48 2019
Response via : Initial Calibration



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 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
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	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P	481134	IC2562-1				9					ok	sv182535-96l
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	ALS	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	sv182535-121f	25ppm	dcm/fisher	191109	--
tcl42	sv182535-120f	25ppm			
bna ver	sv182535-10m	2ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/16/19	Sequence Loaded By:	angelar	Quant Method/s	M6P2562
Batch ID	E6P2576	Analysis Date	4/29/2019	Data Processed By:	JONKM	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	7/2019 12:04:14 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P	481451	DFTPP				1					not using	
6P	481452	CC2562-25		bna		2					not using	areas low, raise EM volts
6P	481453	DFTPP				1					ok	9:24am
6P	481454	CC2562-25		bna		2					ok	#60,#70 low #86,#90,#92 high
6P	481455	CC2563-25		tcl42		3					ok	
6P	481456	BNA 2PPM VER				4				x	ok	
	481457	OP20035-MB1	OP20035	AB8270TCL20,B82702MNAP,B8270NAP,B8270PAH	SO	5			x	x	ok	
	481458	OP20035-BS1	OP20035	AB8270TCL20,B82702MNAP,B8270NAP,B8270PAH	SO	6			x	x	ok	
	481459	OP20035-BSD	OP20035	AB8270TCL20,B82702MNAP,B8270NAP,B8270PAH	SO	7			x	x	ok	
6P	481460	JC87040-1	OP20035	B8270NAP	SO	8			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
6P	481461	JC87040-3	OP20035	B8270NAP	SO	9			x	x	ok	dl for non-target
6P	481462	JC87040-2	OP20035	B8270NAP	SO	10			x	x	ok	
	481463	OP20035-MS	OP20035	AB8270TCL20,B82702MNAP,B8270NAP,B8270PAH	SO	11			Y	Y	OK	
	481464	OP20035-MSD	OP20035	AB8270TCL20,B82702MNAP,B8270NAP,B8270PAH	SO	12			Y	Y	OK	
6P	481465	JC86837-8	OP20035	AB8270TCL20	SO	13			Y	Y	OK	
6P	481466	JC86552-16	OP19893	B8270PAH	SO	14	25		Y	Y	OK	
6P	481467	JC86875-1	OP20035	B82702MNAP	SO	15			Y	Y	OK	
6P	481468	JC86875-2	OP20035	B82702MNAP	SO	16			Y	Y	OK	
6P	481469	JC86875-3	OP20035	B82702MNAP	SO	17			Y	Y	OK	
6P	481470	JC86838-1	OP20035	AB8270TCL20	SO	18			Y	Y	OK	
6P	481471	JC86838-3	OP20035	AB8270TCL20	SO	19			Y	Y	OK	
6P	481472	JC86867-2	OP20035	B8270PAH	SO	20			Y	Y	OK	
6P	481473	JC86867-3	OP20035	B8270PAH	SO	21			Y	Y	OK	
6P	481474	JC86867-6	OP20035	B8270PAH	SO	22			Y	Y	OK	
6P	481475	JC86837-9	OP20035	AB8270TCL20	SO	23			Y	Y	OK	
6P	481476	JC86837-11	OP20035	AB8270TCL20	SO	24			Y	Y	OK	
6P	481477	JC86867-4	OP20035	B8270PAH	SO	25			Y	Y	rr/DL	needs dil
6P	481478	JC86867-5	OP20035	B8270PAH	SO	26			Y	Y	OK	
6P	481479	JC86867-1	OP20035	B8270PAH	SO	27			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
6P	481480	JC86867-7	OP20035	B8270PAH	SO	28			Y	Y	rr/DL	needs dil
6P	481481	JC86837-12	OP20035	AB8270TCL20	SO	29			Y	Y	rr/DL	end (09:14, 4/29/19); needs dil
6P	481482	JC86837-10	OP20035	AB8270TCL20	SO	30					RR	out of clock

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	sv182535-121h	25ppm	dcm/fisher	191532	--
tcl42	sv182535-120h	25ppm			
bna ver	sv182535-10u	2ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/16/19	Sequence Loaded By:	angelar	Quant Method/s	M6P2562
Batch ID	E6P2578	Analysis Date	5/1/2019	Data Processed By:	michellc	Injection Volume	1.0ul
Approved By:	KRISTIS	Approved Date	7/2019 12:06:09 P				

☑ 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	481516	DFTPP				1					not using	68 high, rr
6P	481517	DFTPP				1					not using	127 high, bake out and rr
6P	481518	DFTPP				1					ok	9:13am
6P	481519	CC2562-25		bna		2					ok	
6P	481520	CC2563-25		tcl42		3					ok	
6P	481521	BNA 2PPM VER				4					ok	
	481522	OP20013-MB1	OP20013	AB8270NJTCL20+,AB8270TCL20+,B8270BIPHNYL	AQ	5		X	y	y	ok	
6P	481523	JC86689-6	OP20013	AB8270TCL20	AQ	6			y	y	ok	
	481524	JC86976-1	OP20013	AB8270NJTCL20+	AQ	7		X	y	y	ok	
	481525	JC86976-3	OP20013	AB8270NJTCL20+	AQ	8		X	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
	481526	JC86976-4	OP20013	AB8270NJTCL20+	AQ	9		X	y	y	ok	
	481527	JC86976-6	OP20013	AB8270NJTCL20+	AQ	10		X	y	y	ok	
	481528	JC86976-7	OP20013	AB8270NJTCL20+	AQ	11		X	y	y	ok	
6P	481529a	JC86976-8	OP20013	AB8270NJTCL20+	AQ	12		X	y	y	ok	software shutdown run as "a"file.
6P	481530	JC86972-14	OP20013	AB8270TCL20+	AQ	13		X	y	y	ok	
6P	481531	JC86941-1	OP20044	B82702MNAP	SO	14			y	y	ok	
6P	481532	JC86941-2	OP20044	B82702MNAP	SO	15			y	y	ok	
6P	481533	JC86941-3	OP20044	B82702MNAP	SO	16			y	y	ok	
6P	481534	JC86952-4	OP20044	B8270PAH	SO	17					ok	
6P	481535	JC86916-14	OP20044	AB8270TCL20	SO	18	100		y	y	OK	
6P	481536	JC86837-12	OP20035	AB8270TCL20	SO	19	10		y	y	OK	
6P	481537	JC86867-7	OP20035	B8270PAH	SO	20	5		y	y	OK	
6P	481538	JC86867-4	OP20035	B8270PAH	SO	21	2		y	y	OK	
6P	481539	JC86837-10	OP20035	AB8270TCL20	SO	22	5		y	y	OK	
6P	481540	JC86916-15	OP20044	AB8270TCL20	SO	23	5		y	y	OK	
6P	481541	JC86952-1	OP20044	B8270PAH	SO	24	2		y	y	OK	
6P	481542	JC86916-14	OP20044	AB8270TCL20	SO	25	20		y	y	OK	
6P	481543	JC86952-2	OP20044	B8270PAH	SO	26			y	y	OK	
6P	481544	JC86952-5	OP20044	B8270PAH	SO	27			y	y	OK	

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	481545	JC86837-10	OP20035	AB8270TCL20	SO	28			y	y	OK	902 pm
6P	481546	JC86952-3	OP20044	B8270PAH	SO	29	5				not using	diluted due to viscosity 9:26pm outside 12 hours

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
			DCM/fisher	190729	

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6556	Analysis Date	4/12/2019	Data Processed By:	ying li	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	24/2019 5:48:51 F				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153397	DFTPP				1						
M	153398	DFTPP				1						
M	153399	DFTPP				1						
M	153400	DFTPP				1					ok	4:58pm
M	153401	IC6556-100				2					ok	sv182535-96a
M	153402	IC6556-80				3					ok	sv182535-96b
M	153403	ICC6556-50				4					ok	sv182535-96c
M	153404	IC6556-25				5					ok	sv182535-96d
M	153405	IC6556-10				6					ok	sv182535-96e
M	153406	IC6556-5				7					ok	sv182535-96g

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153407	IC6556-2				8					ok	sv182535-96h
M	153408	IC6556-1				9					ok	sv182535-96i
M	153409	ICV6556-50		bn1		10					ok	op182336-51
M	153410	ICV6556-50		bn2		11					ok	op182160-30
M	153411	ICV6556-50		acid		12					ok	op192336-47
M	153412	ICV6556-50		aniline		13					ng	op192336-72 10#/68# high
M	153413	ICV6556-50		abn surr		14					ok	op192336-76
M	153414	ICV6556-50		bzd 3rd		15					ok	sv182490-113 12:06am

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
			DCM/fisher	190729	

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	chriss2	Quant Method/s	MM6556
Batch ID	EM6557	Analysis Date	4/13/2019	Data Processed By:	ying li	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	24/2019 5:49:14 F				

☑ SW846 8270 D
☑ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153415	DFTPP				1						51 low, up flow
M	153416	DFTPP				1						51 low, rerun
M	153417	DFTPP				1						51 low, drop flow
M	153418	DFTPP				1						51 low, drop repeller
M	153419	DFTPP				1					ok	1:19am
M	153420	IC6557-100		TCL42		2					ok	sv192573-9a
M	153421	IC6557-80				3					ok	sv192573-9b
M	153422	ICC6557-50				4					ok	sv192573-9c
M	153423	IC6557-25				5					ok	sv192573-9d
M	153424	IC6557-10				6					ok	sv192573-9e

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153425	IC6557-5				7					ok	sv192573-9g
M	153426	IC6557-2				8					ok	sv192573-9h
M	153427	IC6557-1				9					ok	sv192573-9i 5:11am
M	153428	ICV6557-50		AP9 Mix#2		10					nr	sv192573-8
M	153429	ICV6557-50		HQ 2nd		11					nr	sv18490-103b

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	A0144955	4000ppm
bna	sv182535-121b	50ppm	DCM/fisher	190729	
tcl42	sv182535-120b	50ppm			
bzd	sv182535-71b	50ppm			
bna verf	sv182535-10t	2ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6559	Analysis Date	4/15/2019	Data Processed By:	aimeel	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	24/2019 5:50:30 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153443	DFTPP				1					ok	1:54pm
M	153444	ICV6556-50		aniline		2					ok	op192336-85
M	153445	CC6556-50		bna		3					ok	Low 31,60
M	153446	CC6557-50		tcl42		4					OK	
M	153447	CC6558-50		bzd		5					OK	
M	153448	BNA 2PPM VERF				6					OK	Verified
M	153449	OP19637-MB1	OP19637	B8270HQ	AQ	7						
M	153450	JC80385A-2I	OP19637	B8270HQ	AQ	8						bs1
M	153451	JC80385A-2I	OP19637	B8270HQ	AQ	9						bs2
M	153452	JC80385A-2I	OP19637	B8270HQ	AQ	10						bs3

GCMS Semi Volatile Run Log

	Data File	Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
	153453	OP19732-MB1	OP19732		SO	11		X	y	y	OK	Hit 53
	153454	OP19732-BS1	OP19732		SO	12		X	y	y	OK	
	153455	OP19732-BSD	OP19732		SO	13		X	y	y	OK	
	153456	JC86060-8F	OP19680	B8270TICS+	AQ	14		X	y	y	OK	
	153457	JC86060-8	OP19680	B8270TICS+	AQ	15		X	y	y	OK	
M	153458	JC86229-5	OP19732	AB8270TCL20+	SO	16		X	y	y	OK	
M	153459	JC86222-1	OP19732	AB8270PPTCL20+	SO	17		X	y	y	OK	
M	153460	JC86204-7	OP19732	AB8270TCL20	SO	18			y	y	OK	
	153461	OP19732-MS	OP19732		SO	19		X	y	y	OK	
	153462	OP19732-MSD	OP19732		SO	20		X	y	y	OK	
M	153463	JC86204-8	OP19732	AB8270TCL20	SO	21			y	y	OK	
M	153464	JC86204-14	OP19732	AB8270TCL20	SO	22			y	y	OK	
M	153465	JC86204-10	OP19732	AB8270TCL20	SO	23			y	y	OK	
M	153466	JC86204-9	OP19732	AB8270TCL20	SO	24			y	y	OK	
M	153467	JC86204-13	OP19732	AB8270TCL20	SO	25			y	y	OK	
M	153468	JC86204-12	OP19732	AB8270TCL20	SO	26			y	y	N	Needs Dilution
M	153469	JC86204-4	OP19732	AB8270TCL20	SO	27			y	y	OK	1:50am

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	CL13166	4000ppm
bna	sv182535-121c	50ppm	DCM/fisher	191532	
tcl42	sv182535-120c	50ppm			
bna verif	sv182535-10l	1ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6576	Analysis Date	4/30/2019	Data Processed By:	JERYLLR	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	7/2019 12:07:46 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153892	DFTPP				1					ok	9:06am
M	153893	CC6556-50		bna		2					ok	
M	153894	CC6557-50		tcl42		3					ok	
M	153895	BNA 1PPM VERF				4					ok	
M	153896	OP20021-MB1				5			y	y	ok	
	153897	OP20021-BS1	OP20021	AB8270TCL20,AB8270TCL20+,B8270PAH,B8270TCL20	SO	6		X	y	y	ok	
M	153898	JC86989-2	OP20021	B8270PAH	SO	7			y	y	ok	
M	153899	JC86989-3	OP20021	B8270PAH	SO	8			y	y	ok	
M	153900	JC86989-4	OP20021	B8270PAH	SO	9			y	y	ok	
M	153901	JC86989-5	OP20021	B8270PAH	SO	10			y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153902	JC86989-1	OP20021	B8270PAH	SO	11			y	y	ok	
M	153903	JC86973-1	OP20021	AB8270TCL20+	SO	12		X	y	y	ok	
M	153904	JC86864-10	OP19980	AB8270TCL20+	SO	13		X	y	y	ok	
	153905	OP20021-MS	OP20021	AB8270TCL20,AB8270TCL20+,B8270PAH,B8270TCL20	SO	14		X	y	y	ok	
	153906	OP20021-MSD	OP20021	AB8270TCL20,AB8270TCL20+,B8270PAH,B8270TCL20	SO	15		X	y	y	ok	
M	153907	JC86768-7	OP20021	B8270TCL20	SO	16			y	y	ok	
M	153908	JC86909-3	OP20042	AB8270TCL20+	SO	17		X	Y	Y	OK	
M	153909	JC86909-5	OP20042	AB8270TCL20+	SO	18		X	Y	Y	OK	
M	153910	JC86906-7	OP20042	B8270CP51FO	SO	19			Y	Y	OK	
M	153911	JC86909-4	OP20042	AB8270TCL20+	SO	20		X	Y	Y	OK	
M	153912	JC86909-6	OP20042	AB8270TCL20+	SO	21		X	Y	Y	OK	
M	153913	JC86903-2	OP20042	B8270SL	SO	22			Y	Y	OK	
M	153914	JC86906-3	OP20042	B8270CP51FO	SO	23			Y	Y	OK	
M	153915	JC86909-2	OP20042	AB8270TCL20+	SO	24		X	Y	Y	OK	
M	153916	JC86903-3	OP20042	B8270SL	SO	25			Y	Y	OK	
M	153917	JC86903-4	OP20042	B8270SL	SO	26			Y	Y	OK	8:43pm
M	153918	JC86821-12	OP20021	AB8270TCL20+	SO	27		X	Y	Y	OK	RR OUT OF CLOCK 9:12pm
M	153919	JC86821-11	OP20021	AB8270TCL20+	SO	28	2	X	LOW	Y	OK	diluted for visc.; RR OUT OF CLOCK; 09:40PM

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	CL13166	4000ppm
bna	sv182535-121g	25ppm	DCM/fisher	191532	
tcl42	sv182535-120g	25ppm			
bna verif	sv182535-10o	1ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6577	Analysis Date	5/1/2019	Data Processed By:	jeryllr	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	7/2019 12:08:43 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153920	DFTPP				1					NG	run method error, rr
M	153921	DFTPP				1					OK	7:15am
M	153922	CC6556-25		bna		2					OK	LOW:2,3,4 HIGH:29,73,76
M	153923	CC6557-25		tcl42		3					OK	HIGH:105,112
M	153924	BNA 1PPM VERF				4					OK	
M	153925	OP20064-MB	OP20064	AB8270TCL20+,B8270PAH	SO	5		X	Y	Y	OK	
	153926	OP20064-BS1	OP20064	AB8270TCL20+,B8270PAH	SO	6		X	Y	Y	OK	
M	153927	JC87099-8	OP20064	AB8270TCL20+	SO	7		X	Y	Y	OK	
M	153928	JC87099-9	OP20064	AB8270TCL20+	SO	8		X	Y	Y	OK	
M	153929	JC87099-10	OP20064	AB8270TCL20+	SO	9		X	Y	Y	OK	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153930	JC87099-11	OP20064	AB8270TCL20+	SO	10		X	Y	Y	OK	
M	153931	JC87099-6	OP20064	AB8270TCL20+	SO	11		X	Y	Y	OK	
M	153932	JC87099-7	OP20064	AB8270TCL20+	SO	12		X	Y	Y	OK	
M	153933	JC87099-5	OP20064	AB8270TCL20+	SO	13		X	Y	Y	OK	
M	153934	JC87077-1	OP20064	AB8270TCL20+	SO	14		X	Y	Y	OK	
M	153935	OP20064-MS	OP20064	AB8270TCL20+,B8270PAH	SO	15		X	Y	Y	OK	
M	153936	OP20064-MSD	OP20064	AB8270TCL20+,B8270PAH	SO	16		X	Y	Y	OK	
M	153937	JC87091-3	OP20064	AB8270TCL20+	SO	17		X	Y	Y	OK	
M	153938	JC86837-2	OP20021	AB8270TCL20	SO	18			Y	Y	OK	
M	153939	JC86837-5	OP20021	AB8270TCL20	SO	19			Y	Y	OK	
M	153940	JC86837-4	OP20021	AB8270TCL20	SO	20			Y	Y	OK	
M	153941	JC86837-7	OP20021	AB8270TCL20	SO	21			Y	Y	OK	
M	153942	JC86837-6	OP20021	AB8270TCL20	SO	22			Y	Y	OK	
M	153943	JC86837-3	OP20021	AB8270TCL20	SO	23			Y	Y	OK	
M	153944	JC86821-12	OP20021	AB8270TCL20+	SO	24		X	Y	Y	OK	
M	153945	JC86837-1	OP20021	AB8270TCL20	SO	25			Y	Y	OK	CORR NEEDS DILUTION 6:57pm
M	153946	JC86821-11	OP20021	AB8270TCL20+	SO	26	2	X	Y	Y	OK	diluted for visc.; RR OUT OF CLOCK; 07:25PM
M	153947	JC86629-4	OP19935	AB8270TCL20	SO	27	2		Y	Y	OK	ran after m153941 5:04pm

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv182535-77	50ppm	ISTD	CL13166	4000ppm
bna	sv182535-121h	25ppm	DCM/fisher	191532	
tcl42	sv182535-120h	25ppm			
bna verif	sv182535-10l	1ppm			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	4/12/2019	Sequence Loaded By:	christc2	Quant Method/s	MM6556
Batch ID	EM6579	Analysis Date	5/2/2019	Data Processed By:	aimeel	Injection Volume	1uL
Approved By:	KRISTIS	Approved Date	7/2019 12:10:54 F				

☑ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153974	DFTPP				1					ok	1:25pm
M	153975	CC6556-25		bna		2					ok	Low 2,3,4,10 High 31,60,70,73,76
M	153976	CC6557-25		tcl42		3					ok	High 105,112
M	153977	BNA 1PPM VERF				4					ok	
M	153978	OP19637-MB2	OP19637	B8270HQ	AQ	5			y	y	ok	
M	153979	JC80787-2E	OP19637	B8270HQ	AQ	6					ok	bs4
M	153980	JC80787-2E	OP19637	B8270HQ	AQ	7					ok	bs5
M	153981	JC80787-2E	OP19637	B8270HQ	AQ	8					ok	bs6 *cannot make csv fully*
M	153982	JC86536-3R	OP20064	AB8270TCL20+	SO	9		X	x	y	N	Surrout #51,73
M	153983	JC87091-13	OP20064	AB8270TCL20+	SO	10		X	y	y	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	153984	JC87091-19	OP20064	AB8270TCL20+	SO	11		X	y	y	ok	
M	153985	JC87091-7	OP20064	AB8270TCL20+	SO	12		X	y	y	ok	
M	153986	JC86837-1	OP20021	AB8270TCL20	SO	13	100		y	y	ok	
M	153987	JC86837-1	OP20021	AB8270TCL20	SO	14	10		y	y	N	Needs Dilution
M	153988	JC86499-6	OP20064	B8270PAH	SO	15			y	y	ok	
M	153989	JC87130-1	OP20064	AB8270TCL20+	SO	16		X	y	y	ok	
M	153990	JC87130-2	OP20064	AB8270TCL20+	SO	17		X	y	y	ok	
M	153991	JC87130-3	OP20064	AB8270TCL20+	SO	18		X	y	y	ok	
M	153992	JC87130-4	OP20064	AB8270TCL20+	SO	19		X	y	y	ok	
M	153993	JC87130-5	OP20064	AB8270TCL20+	SO	20		X	y	y	ok	
M	153994	JC86821-11	OP20021	AB8270TCL20+	SO	21	2	X	y	y	ok	diluted for visc. 10:46pm

LOGBOOK ID: 8-2316

ABN Extraction Log - Solids

Date started: 4/28/19 Time started: 7:35
Date finished: 4/28/19 Time finished: 13:15

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C ____
Waste Dil. SW3580A ____ Soxhlet SW3540C ____

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD:
Final Volume: due 5/2
Other:

SGS
Form: OP019A-10
Rev Date: 8/2/17

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	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				15	clear	1.0		
	BS1			sand	30.0				5	yellow	1.0		
	JC86825-1 MS		1	soil	30.4		–					–	*
	1 MSD		1	soil	30.4		–					–	*
	BS												
	JC86768-7 MS		1	soil	30.6		–	15		brown	1.0		*
	1 MSD		1	soil	30.4		–	15		brown	1.0		*
	BS												
	MS												
	MSD												
1	JC86768-7	abn	1	soil	30.3		–	15		brown	1.0		*
2	JC86821-11		1	soil	30.9		–	15		brown	1.0		
3	-12		1	soil	30.0		–	15		brown	1.0		
4	JC86825-1												Δ
5	-2												Δ
6	-3												Δ
7	-4												Δ
8	JC86837-1		1	soil	30.7		–	15		brown	1.0		
9	-2		1	clay	30.4		–	15		yellow	1.0		
10	-3		1	soil	30.8		–	15		brown	1.0		
11	-4		1	wet sand	30.2		–	15		yellow	1.0		
12	-5		1	wet sand	30.6		–	15		yellow	1.0		
13	-6		1	wet soil	30.2		–	15		brown	1.0		
14	-7		1	wet sand	30.2		–	15		yellow	1.0		
15	JC86973-1		1	soil	30.6		–	15		brown	1.0		
16	JC86989-1		1	soil	30.7		–	15		yellow	1.0		
17	-2		1	soil	30.6		–	15		yellow	1.0		
18	-3		1	soil	30.7		–	15		yellow	1.0		
19	-4		1	soil	31.8		–	15		yellow	1.0		
20	-5		1	soil	30.7		–	15		yellow	1.0		

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:
* MS/MSD - link sample changed to JC86768-7
Δ JC86825-1, 2, 3, 4 samples need to be crushed.

BATCH # MS 20021 RACK# R-46

Weighed by: SH
Extracted by: SH, SA, LJ
Concentrated by: SA
Final Vol. Top-up:
Vialed by: LJ
Supervisor Review: aj 4/29/19

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	10, 11		-1.0		ok
Waterbath Chiller (GPM)	V3, V4		–	–	OS
NEVAP (32-38°C, LPM)	2		+0.1		10
Balance	BAS6 N/A	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	OP192336109	50	1.0
ABN DOD SIM			

WITNESS SIGN: SA SPIKE SIGN: LJ

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	OP192336104	50	Acid: 1.0
Acid (for SIM)			A(SIM):
Base #1	OP192336107	50	1.0
Base #2	OP192336106	50	1.0
Aniline	OP192336103	50	1.0
BSIM			

WITNESS SIGN: SA SPIKE SIGN: LJ

SOLVENT	LOT #	BRAND	AMT (mL)
1:1 METH CHLOR/ ACETONE	191109 / 188038	FISHER	30.0
METH CHLOR			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	VA35092	4-4-19A	AGILENT
SODIUM SULFATE	183473	4-11-19A	FISHER
FILTER PAPER	16819760		FISHER

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	SGA180130A	3-5-19	FISHER

LOGBOOK ID: 8-2316

ABN Extraction Log - Solids

Date started: 4/28/19 Time started: 7:35
Date finished: 4/28/19 Time finished: 13:30

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C _____
Waste Dil. SW3580A _____ Soxhlet SW3540C _____

BATCH # MS 20035 RACK# R-46

Weighed by:	SA
Extracted by:	SA, SA, LJ
Concentrated by:	SA
Final Vol. Top-up:	
Vialed by:	LJ
Supervisor Review:	aj 4/29/19

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	10, 11		-1.0		OK
Waterbath Chiller (GPM)	V5, V4		-	-	0.8
NEVAP (32-38°C; LPM)	2		+0.1		10
Balance	D-28	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	OP192336107	50	1.0
ABN DOD SIM			

WITNESS SIGN: SA SPIKE SIGN: LJ

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	OP192336104	50	Acid: 1.0
Acid (for SIM)			A(SIM):
Base #1	OP192336107	50	1.0
Base #2	OP192336106	50	1.0
Aniline	OP192336105	50	1.0
BSIM			

WITNESS SIGN: SA SPIKE SIGN: LJ

SOLVENT	LOT #	BRAND	AMT (mL)
1:1 METH CHLOR/ ACETONE	191109 / 186350	FISHER	30.0
METH CHLOR			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	6435092	4-4-19A	AGILENT
SODIUM SULFATE	183473	4-11-19A	FISHER
FILTER PAPER	16819760D		FISHER

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	96A1801030A	3-5-19	FISHER

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD:
Final Volume:
Other: due 4/29 RCP

SGS
Form: OP019A-10
Rev Date: 8/2/17

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	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				15	clear	1.0		
	BS1			sand	30.0				15	yellow	1.0		
	JC86837-8 MS		1	soil	30.1			-	15	brown	1.0		
	MSD		1	soil	31.2			-	15	brown	1.0		
	BS D		1	sand	30.0				15	yellow	1.0		
	MS												
	MSD												
	BS												
	MS												
	MSD												
1	JC87040-1	abn	1	soil	31.8		-		15	yellow	1.0		
2	-2		1	soil	30.9		-		15	brown	1.0		
3	-3		1	soil	31.1		-		15	brown	1.0		
4	JC86837-8		1	soil	30.2		-		15	brown	1.0		
5	-9		1	soil	30.9		-		15	yellow	1.0		
6	-10		1	soil	30.7		-		15	brown	1.0		
7	-11		1	soil	31.0		-		15	brown	1.0		
8	-12		1	soil	31.2		-		15	brown	1.0		
9	JC86838-1		1	soil	31.1		-		15	yellow	1.0		
10	-3		1	soil	31.2		-		15	yellow	1.0		
11	JC86867-1		1	soil	31.2		-		15	brown	1.0		
12	-2		1	soil	30.5		-		15	yellow	1.0		
13	-3		1	soil	32.0		-		15	yellow	1.0		
14	-4		1	soil	32.1		-		15	brown	1.0		
15	-5		1	soil	30.8		-		15	brown	1.0		
16	-6		1	wet soil	30.3	-			15	yellow	1.0		
17	-7		1	soil	31.6		-		15	brown	1.0		
18	JC86875-1		1	soil	31.6		-		15	yellow	1.0		
19	-2		1	sand	31.6		-		15	yellow	1.0		
20	-3		1	sand	32.2		-		15	yellow	1.0		

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Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- DDT/Endrin Breakdown Checks
- GC Identification Summaries (Hits)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20020-MB1	6G64644.D	1	05/03/19	MH	05/02/19	OP20020	G6G2001

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC86837-1

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.67	0.55	ug/kg	
319-84-6	alpha-BHC	ND	0.67	0.54	ug/kg	
319-85-7	beta-BHC	ND	0.67	0.60	ug/kg	
319-86-8	delta-BHC	ND	0.67	0.64	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.67	0.49	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.67	0.54	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.67	0.30	ug/kg	
60-57-1	Dieldrin	ND	0.67	0.46	ug/kg	
72-54-8	4,4'-DDD	ND	0.67	0.61	ug/kg	
72-55-9	4,4'-DDE	ND	0.67	0.58	ug/kg	
50-29-3	4,4'-DDT	ND	0.67	0.59	ug/kg	
72-20-8	Endrin	ND	0.67	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.67	0.52	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.67	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.67	0.38	ug/kg	
33213-65-9	Endosulfan-II	ND	0.67	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.67	0.57	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.67	0.47	ug/kg	
72-43-5	Methoxychlor	ND	1.3	0.53	ug/kg	
53494-70-5	Endrin ketone	ND	0.67	0.48	ug/kg	
8001-35-2	Toxaphene	ND	17	16	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	132%	25-135%
877-09-8	Tetrachloro-m-xylene	99%	25-135%
2051-24-3	Decachlorobiphenyl	91%	10-156%
2051-24-3	Decachlorobiphenyl	93%	10-156%

Method Blank Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20019-MB1	XX2434600.D	1	05/04/19	TR	05/02/19	OP20019	GXX6680

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC86837-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	16	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	26	ug/kg	
53469-21-9	Aroclor 1242	ND	33	14	ug/kg	
12672-29-6	Aroclor 1248	ND	33	30	ug/kg	
11097-69-1	Aroclor 1254	ND	33	18	ug/kg	
11096-82-5	Aroclor 1260	ND	33	14	ug/kg	
11100-14-4	Aroclor 1268	ND	33	14	ug/kg	
37324-23-5	Aroclor 1262	ND	33	22	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	76%	31-146%
877-09-8	Tetrachloro-m-xylene	85%	31-146%
2051-24-3	Decachlorobiphenyl	74%	17-164%
2051-24-3	Decachlorobiphenyl	87%	17-164%

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20020-BS1	6G64645.D	1	05/03/19	MH	05/02/19	OP20020	G6G2001

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC86837-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	16.7	11.0	66 [a]	46-120
319-84-6	alpha-BHC	16.7	10.7	64 [a]	45-116
319-85-7	beta-BHC	16.7	10.9	65	42-121
319-86-8	delta-BHC	16.7	10.0	60	42-121
58-89-9	gamma-BHC (Lindane)	16.7	10.1	61	46-118
5103-71-9	alpha-Chlordane	16.7	11.5	69	49-119
5103-74-2	gamma-Chlordane	16.7	10.8	65	48-121
60-57-1	Dieldrin	16.7	9.7	58	48-126
72-54-8	4,4'-DDD	16.7	9.4	56	47-120
72-55-9	4,4'-DDE	16.7	10.9	65	48-121
50-29-3	4,4'-DDT	16.7	10.3	62	45-135
72-20-8	Endrin	16.7	9.7	58	51-137
1031-07-8	Endosulfan sulfate	16.7	10.1	61	48-128
7421-93-4	Endrin aldehyde	16.7	10.2	61	46-125
959-98-8	Endosulfan-I	16.7	9.9	59	47-118
33213-65-9	Endosulfan-II	16.7	9.8	59	49-121
76-44-8	Heptachlor	16.7	8.7	52	48-120
1024-57-3	Heptachlor epoxide	16.7	10.3	62	46-122
72-43-5	Methoxychlor	16.7	9.3	56	44-136
53494-70-5	Endrin ketone	16.7	9.7	58	44-139

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	80%	25-135%
877-09-8	Tetrachloro-m-xylene	75%	25-135%
2051-24-3	Decachlorobiphenyl	69%	10-156%
2051-24-3	Decachlorobiphenyl	75%	10-156%

(a) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20019-BS1	XX2434601.D	1	05/04/19	TR	05/02/19	OP20019	GXX6680

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC86837-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	146	109	67-157
11104-28-2	Aroclor 1221		ND		70-130
11141-16-5	Aroclor 1232		ND		70-130
53469-21-9	Aroclor 1242		ND		70-130
12672-29-6	Aroclor 1248		ND		70-130
11097-69-1	Aroclor 1254		ND		70-130
11096-82-5	Aroclor 1260	133	138	103	63-155
11100-14-4	Aroclor 1268		ND		50-150 [a]
37324-23-5	Aroclor 1262		ND		50-150 [a]

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	109%	31-146%
877-09-8	Tetrachloro-m-xylene	121%	31-146%
2051-24-3	Decachlorobiphenyl	107%	17-164%
2051-24-3	Decachlorobiphenyl	125%	17-164%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20020-MS	6G64647.D	1	05/03/19	MH	05/02/19	OP20020	G6G2001
OP20020-MSD	6G64648.D	1	05/03/19	MH	05/02/19	OP20020	G6G2001
JC86768-1	6G64646.D	1	05/03/19	MH	05/02/19	OP20020	G6G2001

The QC reported here applies to the following samples: **Method:** SW846 8081B

JC86837-1

CAS No.	Compound	JC86768-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		19.8	15.5	78	19.6	15.1	77	3	23-143/44
319-84-6	alpha-BHC	ND		19.8	15.8	80	19.6	14.9	76	6	18-152/47
319-85-7	beta-BHC	ND		19.8	14.6	74	19.6	13.6	69	7	7-143/48
319-86-8	delta-BHC	ND		19.8	15.4	78	19.6	14.7	75	5	13-155/49
58-89-9	gamma-BHC (Lindane)	ND		19.8	15.0	76	19.6	14.5	74	3	23-138/49
5103-71-9	alpha-Chlordane	ND		19.8	16.9	85	19.6	16.2	82	4	16-149/46
5103-74-2	gamma-Chlordane	ND		19.8	15.5	78	19.6	14.8	75	5	14-152/45
60-57-1	Dieldrin	ND		19.8	14.4	73	19.6	12.6	64	13	14-154/46
72-54-8	4,4'-DDD	ND		19.8	13.3	67	19.6	12.8	65	4	18-149/51
72-55-9	4,4'-DDE	ND		19.8	14.8	75	19.6	14.1	72	5	10-154/49
50-29-3	4,4'-DDT	ND		19.8	14.9	75	19.6	14.5	74	3	10-170/50
72-20-8	Endrin	ND		19.8	14.9	75	19.6	14.3	73	4	18-173/49
1031-07-8	Endosulfan sulfate	ND		19.8	13.8	70	19.6	13.2	67	4	19-132/50
7421-93-4	Endrin aldehyde	ND		19.8	14.1	71	19.6	14.2	72	1	10-160/53
959-98-8	Endosulfan-I	ND		19.8	14.2	72	19.6	13.6	69	4	18-143/46
33213-65-9	Endosulfan-II	ND		19.8	14.0	71	19.6	13.7	70	2	21-132/46
76-44-8	Heptachlor	ND		19.8	12.8	65	19.6	12.0	61	6	22-146/46
1024-57-3	Heptachlor epoxide	ND		19.8	14.8	75	19.6	14.0	71	6	21-151/45
72-43-5	Methoxychlor	ND		19.8	13.5	68	19.6	12.8	65	5	11-166/50
53494-70-5	Endrin ketone	ND		19.8	15.1	76	19.6	14.4	73	5	8-179/51
8001-35-2	Toxaphene	ND			ND			ND		nc	50-150/30

CAS No.	Surrogate Recoveries	MS	MSD	JC86768-1	Limits
877-09-8	Tetrachloro-m-xylene	88%	83%	76%	25-135%
877-09-8	Tetrachloro-m-xylene	81%	77%	68%	25-135%
2051-24-3	Decachlorobiphenyl	74%	71%	67%	10-156%
2051-24-3	Decachlorobiphenyl	79%	77%	63%	10-156%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20019-MS	XX2434603.D	1	05/04/19	TR	05/02/19	OP20019	GXX6680
OP20019-MSD	XX2434604.D	1	05/04/19	TR	05/02/19	OP20019	GXX6680
JC86768-1	XX2434602.D	1	05/04/19	TR	05/02/19	OP20019	GXX6680

The QC reported here applies to the following samples: **Method:** SW846 8082A

JC86837-1

CAS No.	Compound	JC86768-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		160	125	78	155	107	69	16	36-191/60
11104-28-2	Aroclor 1221	ND			ND			ND		nc	70-130/50
11141-16-5	Aroclor 1232	ND			ND			ND		nc	70-130/1
53469-21-9	Aroclor 1242	ND			ND			ND		nc	70-130/6
12672-29-6	Aroclor 1248	ND			ND			ND		nc	70-130/33
11097-69-1	Aroclor 1254	ND			ND			ND		nc	70-130/38
11096-82-5	Aroclor 1260	ND		160	100	62	155	87.3	56	14	15-200/68
11100-14-4	Aroclor 1268	ND			ND			ND		nc	-/50
37324-23-5	Aroclor 1262	ND			ND			ND		nc	-/17

CAS No.	Surrogate Recoveries	MS	MSD	JC86768-1	Limits
877-09-8	Tetrachloro-m-xylene	77%	73%	80%	31-146%
877-09-8	Tetrachloro-m-xylene	85%	82%	89%	31-146%
2051-24-3	Decachlorobiphenyl	63%	61%	63%	17-164%
2051-24-3	Decachlorobiphenyl	85%	81%	84%	17-164%

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
Check Std	209003128	2.17	111078848	1.95
Upper Limit [a]	418006256	2.67	222157696	2.45
Lower Limit [b]	104501564	1.67	55539424	1.45

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP20020-MB1	196813537	2.17	111116628	1.95
OP20020-BS1	198638449	2.17	120940961	1.95
JC86768-1	216065698	2.17	125286573	1.95
OP20020-MS	206524130	2.17	123451737	1.95
OP20020-MSD	212689373	2.17	127596123	1.95
ZZZZZZ	189573180	2.17	124153755	1.95
ZZZZZZ	215809181	2.17	139096266	1.95
ZZZZZZ	241588920	2.17	142995603	1.95
ZZZZZZ	196543621	2.17	131508574	1.95
ZZZZZZ	217836323	2.17	143506819	1.95
ZZZZZZ	205538919	2.17	137305368	1.95
ZZZZZZ	205618595	2.17	141319501	1.95
ZZZZZZ	214284742	2.17	146647033	1.95
ZZZZZZ	203845574	2.17	140230428	1.95
ZZZZZZ	232118407	2.17	149458231	1.95
JC86837-1	183594780	2.17	128028110	1.95
ZZZZZZ	229722726	2.17	151162263	1.95

IS 1 = 1-Bromo-2-nitrobenzene (Signal #2)
IS 2 = 1-Bromo-2-nitrobenzene (Signal #1)

(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.

DDT/Endrin Breakdown Check

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	G6G1999-DDT	**Injection Date:**	05/01/19
Lab File ID:	6G64594.D	**Injection Time:**	13:45
Instrument ID:	GC6G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	3139730	6699043
4,4'-DDE	4295744	4369650
4,4'-DDT	318870056	336679007
DDT Breakdown [a]	2.3 %	3.2 %
Endrin aldehyde	635996	567572
Endrin ketone	1643899	2358298
Endrin	199722819	211699599
Endrin Breakdown [b]	1.1 %	1.4 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

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
G6G1999-IC1999	6G64596.D	05/01/19	14:22	00:37	Initial cal 1
G6G1999-IC1999	6G64597.D	05/01/19	14:40	00:55	Initial cal 2
G6G1999-IC1999	6G64598.D	05/01/19	14:59	01:13	Initial cal 5
G6G1999-IC1999	6G64599.D	05/01/19	15:17	01:31	Initial cal 10
G6G1999-ICC1999	6G64600.D	05/01/19	15:35	01:50	Initial cal 25
G6G1999-IC1999	6G64601.D	05/01/19	15:53	02:08	Initial cal 50
G6G1999-IC1999	6G64602.D	05/01/19	16:11	02:26	Initial cal 75
G6G1999-IC1999	6G64603.D	05/01/19	16:28	02:43	Initial cal 100
G6G1999-IC1999	6G64604.D	05/01/19	16:47	03:01	Initial cal 500
G6G1999-IC1999	6G64605.D	05/01/19	17:05	03:20	Initial cal 500
G6G1999-ICV1999	6G64606.D	05/01/19	17:23	03:38	Initial cal verification 25
G6G1999-ICV1999	6G64607.D	05/01/19	17:42	03:56	Initial cal verification 500
G6G1999-ICV1999	6G64608.D	05/01/19	18:00	04:15	Initial cal verification 500
G6G1999-ICV1999	6G64609.D	05/01/19	18:18	04:33	Initial cal verification 50
G6G1999-ICV1999	6G64610.D	05/01/19	18:37	04:51	Initial cal verification 50

DDT/Endrin Breakdown Check

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	G6G2001-DDT	**Injection Date:**	05/03/19
Lab File ID:	6G64641.D	**Injection Time:**	13:33
Instrument ID:	GC6G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	2114772	5548511
4,4'-DDE	4278194	7790766
4,4'-DDT	227473190	398843135
DDT Breakdown [a]	2.7 %	3.2 %
Endrin aldehyde	1240336	2044005
Endrin ketone	1966798	3894390
Endrin	141418296	246441625
Endrin Breakdown [b]	2.2 %	2.4 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

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
G6G2001-CC1999	6G64642.D	05/03/19	13:53	00:19	Continuing cal 50
OP20020-MB1	6G64644.D	05/03/19	14:28	00:54	Method Blank
OP20020-BS1	6G64645.D	05/03/19	14:46	01:13	Blank Spike
JC86768-1	6G64646.D	05/03/19	15:04	01:31	(used for QC only; not part of job JC86837)
OP20020-MS	6G64647.D	05/03/19	15:23	01:49	Matrix Spike
OP20020-MSD	6G64648.D	05/03/19	15:40	02:07	Matrix Spike Duplicate
ZZZZZZ	6G64649.D	05/03/19	15:58	02:25	(unrelated sample)
ZZZZZZ	6G64650.D	05/03/19	16:17	02:43	(unrelated sample)
ZZZZZZ	6G64651.D	05/03/19	16:35	03:02	(unrelated sample)
ZZZZZZ	6G64652.D	05/03/19	16:53	03:20	(unrelated sample)
ZZZZZZ	6G64653.D	05/03/19	17:12	03:38	(unrelated sample)
ZZZZZZ	6G64654.D	05/03/19	17:30	03:57	(unrelated sample)
ZZZZZZ	6G64655.D	05/03/19	17:48	04:15	(unrelated sample)
ZZZZZZ	6G64656.D	05/03/19	18:06	04:33	(unrelated sample)
ZZZZZZ	6G64657.D	05/03/19	18:25	04:51	(unrelated sample)
ZZZZZZ	6G64658.D	05/03/19	18:43	05:10	(unrelated sample)
JC86837-1	6G64659.D	05/03/19	19:01	05:28	PSCB-41R(0.5-2)
ZZZZZZ	6G64660.D	05/03/19	19:20	05:46	(unrelated sample)
G6G2001-CC1999	6G64663.D	05/03/19	20:15	06:41	Continuing cal 25
ZZZZZZ	6G64665.D	05/03/19	20:51	07:18	(unrelated sample)
ZZZZZZ	6G64666.D	05/03/19	21:10	07:36	(unrelated sample)
ZZZZZZ	6G64667.D	05/03/19	21:28	07:54	(unrelated sample)
ZZZZZZ	6G64668.D	05/03/19	21:46	08:13	(unrelated sample)
ZZZZZZ	6G64669.D	05/03/19	22:05	08:31	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	G6G2001-DDT	**Injection Date:**	05/03/19
Lab File ID:	6G64641.D	**Injection Time:**	13:33
Instrument ID:	GC6G		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	6G64670.D	05/03/19	22:23	08:49	(unrelated sample)
ZZZZZZ	6G64671.D	05/03/19	22:41	09:08	(unrelated sample)

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	JC86837-1	**Injection Date:**	05/03/19
Lab File ID:	6G64659.D	**Injection Time:**	19:01
Client ID:	PSCB-41R(0.5-2)		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
4,4'-DDD	1	6.20	6.20	12.8		ug/kg	97.7
4,4'-DDD [a]	2 [b]	7.66	7.67	4.4		ug/kg	
4,4'-DDE	1	5.34	5.35	6.6		ug/kg	20.0
4,4'-DDE	2 [b]	6.71	6.71	5.4		ug/kg	
4,4'-DDT	1	6.60	6.62	7.1		ug/kg	23.6
4,4'-DDT	2 [b]	8.20	8.20	5.6		ug/kg	

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Final result reported from this column.

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	OP20020-BS1	**Injection Date:**	05/03/19
Lab File ID:	6G64645.D	**Injection Time:**	14:46
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1	4.17	4.17	10.9		ug/kg	0.9
Aldrin [a]	2 [b]	5.11	5.11	11.0		ug/kg	
alpha-BHC	1	3.03	3.03	10.2		ug/kg	4.8
alpha-BHC [a]	2 [b]	3.64	3.64	10.7		ug/kg	
beta-BHC	1 [b]	3.41	3.41	10.9		ug/kg	8.8
beta-BHC	2	4.16	4.16	11.9		ug/kg	
delta-BHC	1 [b]	3.59	3.59	10.0		ug/kg	8.6
delta-BHC	2	4.56	4.56	10.9		ug/kg	
gamma-BHC (Lindane)	1 [b]	3.33	3.33	10.1		ug/kg	4.8
gamma-BHC (Lindane)	2	4.07	4.07	10.6		ug/kg	
alpha-Chlordane	1	5.23	5.24	12.0		ug/kg	4.3
alpha-Chlordane	2 [b]	6.45	6.45	11.5		ug/kg	
gamma-Chlordane	1 [b]	5.06	5.06	10.8		ug/kg	6.3
gamma-Chlordane	2	6.22	6.22	11.5		ug/kg	
Dieldrin	1 [b]	5.74	5.74	9.7		ug/kg	16.1
Dieldrin	2	6.98	6.98	11.4		ug/kg	
4,4'-DDD	1 [b]	6.19	6.20	9.4		ug/kg	22.6
4,4'-DDD	2	7.66	7.67	11.8		ug/kg	
4,4'-DDE	1 [b]	5.34	5.35	10.9		ug/kg	4.5
4,4'-DDE	2	6.71	6.71	11.4		ug/kg	
4,4'-DDT	1 [b]	6.61	6.62	10.3		ug/kg	23.9
4,4'-DDT	2	8.20	8.20	13.1		ug/kg	
Endrin	1 [b]	6.06	6.07	9.7		ug/kg	17.8
Endrin	2	7.48	7.48	11.6		ug/kg	
Endosulfan sulfate	1 [b]	7.71	7.71	10.1		ug/kg	18.0
Endosulfan sulfate	2	8.88	8.88	12.1		ug/kg	
Endrin aldehyde	1 [b]	7.02	7.03	10.2		ug/kg	3.8
Endrin aldehyde	2	8.41	8.41	10.6		ug/kg	
Endosulfan-I	1 [b]	5.41	5.42	9.9		ug/kg	12.3
Endosulfan-I	2	6.54	6.54	11.2		ug/kg	
Endosulfan-II	1 [b]	6.39	6.39	9.8		ug/kg	16.0
Endosulfan-II	2	7.83	7.83	11.5		ug/kg	
Heptachlor	1 [b]	3.83	3.83	8.7		ug/kg	20.6
Heptachlor	2	4.65	4.65	10.7		ug/kg	
Heptachlor epoxide	1 [b]	4.89	4.90	10.3		ug/kg	8.4
Heptachlor epoxide	2	5.93	5.93	11.2		ug/kg	
Methoxychlor	1 [b]	7.40	7.41	9.3		ug/kg	28.6
Methoxychlor	2	9.44	9.45	12.4		ug/kg	
Endrin ketone	1 [b]	8.15	8.16	9.7		ug/kg	21.2
Endrin ketone	2	9.84	9.84	12.0		ug/kg	

(a) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	OP20020-BS1	**Injection Date:**	05/03/19
Lab File ID:	6G64645.D	**Injection Time:**	14:46
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc

being used for confirmation only.
(b) QC results reported from this column.

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	OP20020-MS	**Injection Date:**	05/03/19
Lab File ID:	6G64647.D	**Injection Time:**	15:23
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 [a]	4.17	4.17	15.5		ug/kg	5.3
Aldrin	2	5.11	5.11	14.7		ug/kg	
alpha-BHC	1 [a]	3.03	3.03	15.8		ug/kg	6.5
alpha-BHC	2	3.64	3.64	14.8		ug/kg	
beta-BHC	1 [a]	3.41	3.41	14.6		ug/kg	9.2
beta-BHC	2	4.16	4.16	16.0		ug/kg	
delta-BHC	1 [a]	3.59	3.59	15.4		ug/kg	2.6
delta-BHC	2	4.56	4.56	15.0		ug/kg	
gamma-BHC (Lindane)	1 [a]	3.33	3.33	15.0		ug/kg	2.0
gamma-BHC (Lindane)	2	4.07	4.07	14.7		ug/kg	
alpha-Chlordane	1 [a]	5.23	5.24	16.9		ug/kg	14.6
alpha-Chlordane	2	6.45	6.45	14.6		ug/kg	
gamma-Chlordane	1 [a]	5.06	5.06	15.5		ug/kg	8.8
gamma-Chlordane	2	6.22	6.22	14.2		ug/kg	
Dieldrin	1 [a]	5.74	5.74	14.4		ug/kg	6.1
Dieldrin	2	6.98	6.98	15.3		ug/kg	
4,4'-DDD	1 [a]	6.19	6.20	13.3		ug/kg	15.3
4,4'-DDD	2	7.66	7.67	15.5		ug/kg	
4,4'-DDE	1 [a]	5.34	5.35	14.8		ug/kg	2.7
4,4'-DDE	2	6.71	6.71	14.4		ug/kg	
4,4'-DDT	1 [a]	6.61	6.62	14.9		ug/kg	14.3
4,4'-DDT	2	8.20	8.20	17.2		ug/kg	
Endrin	1 [a]	6.06	6.07	14.9		ug/kg	3.3
Endrin	2	7.48	7.48	15.4		ug/kg	
Endosulfan sulfate	1 [a]	7.71	7.71	13.8		ug/kg	19.6
Endosulfan sulfate	2	8.88	8.88	16.8		ug/kg	
Endrin aldehyde	1 [a]	7.02	7.03	14.1		ug/kg	4.3
Endrin aldehyde	2	8.41	8.41	13.5		ug/kg	
Endosulfan-I	1 [a]	5.41	5.42	14.2		ug/kg	4.1
Endosulfan-I	2	6.54	6.54	14.8		ug/kg	
Endosulfan-II	1 [a]	6.39	6.39	14.0		ug/kg	8.9
Endosulfan-II	2	7.83	7.83	15.3		ug/kg	
Heptachlor	1 [a]	3.83	3.83	12.8		ug/kg	11.1
Heptachlor	2	4.65	4.65	14.3		ug/kg	
Heptachlor epoxide	1 [a]	4.89	4.90	14.8		ug/kg	0.7
Heptachlor epoxide	2	5.93	5.93	14.9		ug/kg	
Methoxychlor	1 [a]	7.40	7.41	13.5		ug/kg	13.8
Methoxychlor	2	9.44	9.45	15.5		ug/kg	
Endrin ketone	1 [a]	8.15	8.16	15.1		ug/kg	8.3
Endrin ketone	2	9.84	9.84	16.4		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

Sample ID:	OP20020-MSD	**Injection Date:**	05/03/19
Lab File ID:	6G64648.D	**Injection Time:**	15:40
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 [a]	4.17	4.17	15.1		ug/kg	7.6
Aldrin	2	5.11	5.11	14.0		ug/kg	
alpha-BHC	1 [a]	3.03	3.03	14.9		ug/kg	4.8
alpha-BHC	2	3.64	3.64	14.2		ug/kg	
beta-BHC	1 [a]	3.40	3.41	13.6		ug/kg	11.8
beta-BHC	2	4.16	4.16	15.3		ug/kg	
delta-BHC	1 [a]	3.59	3.59	14.7		ug/kg	2.1
delta-BHC	2	4.56	4.56	14.4		ug/kg	
gamma-BHC (Lindane)	1 [a]	3.33	3.33	14.5		ug/kg	2.1
gamma-BHC (Lindane)	2	4.07	4.07	14.2		ug/kg	
alpha-Chlordane	1 [a]	5.23	5.24	16.2		ug/kg	16.0
alpha-Chlordane	2	6.45	6.45	13.8		ug/kg	
gamma-Chlordane	1 [a]	5.06	5.06	14.8		ug/kg	6.3
gamma-Chlordane	2	6.22	6.22	13.9		ug/kg	
Dieldrin	1 [a]	5.73	5.74	12.6		ug/kg	13.3
Dieldrin	2	6.98	6.98	14.4		ug/kg	
4,4'-DDD	1 [a]	6.18	6.20	12.8		ug/kg	13.8
4,4'-DDD	2	7.66	7.67	14.7		ug/kg	
4,4'-DDE	1 [a]	5.34	5.35	14.1		ug/kg	2.9
4,4'-DDE	2	6.71	6.71	13.7		ug/kg	
4,4'-DDT	1 [a]	6.61	6.62	14.5		ug/kg	12.3
4,4'-DDT	2	8.20	8.20	16.4		ug/kg	
Endrin	1 [a]	6.06	6.07	14.3		ug/kg	2.1
Endrin	2	7.48	7.48	14.6		ug/kg	
Endosulfan sulfate	1 [a]	7.71	7.71	13.2		ug/kg	16.7
Endosulfan sulfate	2	8.88	8.88	15.6		ug/kg	
Endrin aldehyde	1 [a]	7.02	7.03	14.2		ug/kg	8.1
Endrin aldehyde	2	8.41	8.41	13.1		ug/kg	
Endosulfan-I	1 [a]	5.41	5.42	13.6		ug/kg	3.6
Endosulfan-I	2	6.54	6.54	14.1		ug/kg	
Endosulfan-II	1 [a]	6.39	6.39	13.7		ug/kg	6.4
Endosulfan-II	2	7.83	7.83	14.6		ug/kg	
Heptachlor	1 [a]	3.83	3.83	12.0		ug/kg	15.4
Heptachlor	2	4.65	4.65	14.0		ug/kg	
Heptachlor epoxide	1 [a]	4.89	4.90	14.0		ug/kg	1.4
Heptachlor epoxide	2	5.93	5.93	14.2		ug/kg	
Methoxychlor	1 [a]	7.40	7.41	12.8		ug/kg	16.5
Methoxychlor	2	9.44	9.45	15.1		ug/kg	
Endrin ketone	1 [a]	8.15	8.16	14.4		ug/kg	6.7
Endrin ketone	2	9.84	9.84	15.4		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	GXX6680-CC6666	**Injection Date:**	05/04/19
Lab File ID:	XX2434598.D	**Injection Time:**	10:08
Instrument ID:	GCXX	**Method:**	SW846 8082A

Sample ID:	OP20019-BS1	**Injection Date:**	05/04/19
Lab File ID:	XX2434601.D	**Injection Time:**	11:04
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 [a]			146		ug/kg	8.5
Aroclor 1016	2			159		ug/kg	
AR1016-A	1	3.67	3.67	157		ug/kg	
AR1016-A	2	4.73	4.73	178		ug/kg	
AR1016-B	1	4.11	4.11	146		ug/kg	
AR1016-B	2	5.31	5.31	154		ug/kg	
AR1016-C	1	4.69	4.69	135		ug/kg	
AR1016-C	2	5.97	5.97	150		ug/kg	
AR1016-D	1	4.87	4.87	148		ug/kg	
AR1016-D	2	6.16	6.16	150		ug/kg	
AR1016-E	1	5.40	5.40	144		ug/kg	
AR1016-E	2	6.84	6.84	161		ug/kg	
Aroclor 1260	1 [a]			138		ug/kg	12.9
Aroclor 1260	2			157		ug/kg	
AR1260-A	1	7.84	7.84	136		ug/kg	
AR1260-A	2	9.49	9.48	154		ug/kg	
AR1260-B	1	8.00	8.00	139		ug/kg	
AR1260-B	2	9.61	9.60	159		ug/kg	
AR1260-C	1	8.35	8.35	140		ug/kg	
AR1260-C	2	10.05	10.05	162		ug/kg	
AR1260-D	1	8.79	8.78	139		ug/kg	
AR1260-D	2	10.39	10.39	158		ug/kg	
AR1260-E	1	9.19	9.18	134		ug/kg	
AR1260-E	2	10.95	10.95	154		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	GXX6680-CC6666	**Injection Date:**	05/04/19
Lab File ID:	XX2434598.D	**Injection Time:**	10:08
Instrument ID:	GCXX	**Method:**	SW846 8082A

Sample ID:	OP20019-MS	**Injection Date:**	05/04/19
Lab File ID:	XX2434603.D	**Injection Time:**	11:41
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 [a]			125		ug/kg	9.2
Aroclor 1016	2			137		ug/kg	
AR1016-A	1	3.67	3.67	135		ug/kg	
AR1016-A	2	4.73	4.73	151		ug/kg	
AR1016-B	1	4.11	4.11	122		ug/kg	
AR1016-B	2	5.31	5.31	129		ug/kg	
AR1016-C	1	4.69	4.69	108		ug/kg	
AR1016-C	2	5.97	5.97	124		ug/kg	
AR1016-D	1	4.87	4.87	133		ug/kg	
AR1016-D	2	6.16	6.16	120		ug/kg	
AR1016-E	1	5.40	5.40	125		ug/kg	
AR1016-E	2	6.84	6.84	162		ug/kg	
Aroclor 1260	1 [a]			100		ug/kg	19.8
Aroclor 1260	2			122		ug/kg	
AR1260-A	1	7.84	7.84	104		ug/kg	
AR1260-A	2	9.48	9.48	121		ug/kg	
AR1260-B	1	8.00	8.00	99.7		ug/kg	
AR1260-B	2	9.60	9.60	125		ug/kg	
AR1260-C	1	8.35	8.35	98.4		ug/kg	
AR1260-C	2	10.04	10.05	133		ug/kg	
AR1260-D	1	8.78	8.78	103		ug/kg	
AR1260-D	2	10.39	10.39	122		ug/kg	
AR1260-E	1	9.18	9.18	95.5		ug/kg	
AR1260-E	2	10.94	10.95	110		ug/kg	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	GXX6680-CC6666	**Injection Date:**	05/04/19
Lab File ID:	XX2434598.D	**Injection Time:**	10:08
Instrument ID:	GCXX	**Method:**	SW846 8082A

Sample ID:	OP20019-MSD	**Injection Date:**	05/04/19
Lab File ID:	XX2434604.D	**Injection Time:**	11:59
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 [a]			107		ug/kg	6.3
Aroclor 1016	2			114		ug/kg	
AR1016-A	1	3.67	3.67	115		ug/kg	
AR1016-A	2	4.73	4.73	124		ug/kg	
AR1016-B	1	4.11	4.11	104		ug/kg	
AR1016-B	2	5.31	5.31	118		ug/kg	
AR1016-C	1	4.69	4.69	93.6		ug/kg	
AR1016-C	2	5.97	5.97	111		ug/kg	
AR1016-D	1	4.87	4.87	115		ug/kg	
AR1016-D	2	6.16	6.16	104		ug/kg	
AR1016-E	1	5.40	5.40	106		ug/kg	
AR1016-E	2	6.84	6.84	114		ug/kg	
Aroclor 1260	1 [a]			87.3		ug/kg	22.1
Aroclor 1260	2			109		ug/kg	
AR1260-A	1	7.84	7.84	86.8		ug/kg	
AR1260-A	2	9.48	9.48	109		ug/kg	
AR1260-B	1	8.00	8.00	85.3		ug/kg	
AR1260-B	2	9.60	9.60	124		ug/kg	
AR1260-C	1	8.35	8.35	86.8		ug/kg	
AR1260-C	2	10.05	10.05	109		ug/kg	
AR1260-D	1	8.78	8.78	88.5		ug/kg	
AR1260-D	2	10.39	10.39	105		ug/kg	
AR1260-E	1	9.18	9.18	89.0		ug/kg	
AR1260-E	2	10.95	10.95	96.7		ug/kg	

(a) QC results reported from this column.

Surrogate Recovery Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8081B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC86837-1	6G64659.D	89	63	59	171* [c]
OP20020-BS1	6G64645.D	80	75	69	75
OP20020-MB1	6G64644.D	132	99	91	93
OP20020-MS	6G64647.D	88	81	74	79
OP20020-MSD	6G64648.D	83	77	71	77

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	25-135%
S2 = Decachlorobiphenyl	10-156%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to matrix interference.

Surrogate Recovery Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC86837-1	XX2434623.D	140	335* [c]	67	210* [c]
OP20019-BS1	XX2434601.D	109	121	107	125
OP20019-MB1	XX2434600.D	76	85	74	87
OP20019-MS	XX2434603.D	77	85	63	85
OP20019-MSD	XX2434604.D	73	82	61	81

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	31-146%
S2 = Decachlorobiphenyl	17-164%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to matrix interference.

GC Surrogate Retention Time Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	G6G2001-CC1999	**Injection Date:**	05/03/19
Lab File ID:	6G64642.D	**Injection Time:**	13:53
Instrument ID:	GC6G	**Method:**	SW846 8081B

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	2.55	2.98	9.97	11.95

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP20020-MB1	6G64644.D	05/03/19	14:28	2.55	2.98	9.96	11.95
OP20020-BS1	6G64645.D	05/03/19	14:46	2.55	2.98	9.97	11.95
JC86768-1	6G64646.D	05/03/19	15:04	2.55	2.98	9.97	11.95
OP20020-MS	6G64647.D	05/03/19	15:23	2.55	2.98	9.97	11.95
OP20020-MSD	6G64648.D	05/03/19	15:40	2.55	2.98	9.96	11.95
ZZZZZZ	6G64649.D	05/03/19	15:58	2.55	2.98	9.97	11.95
ZZZZZZ	6G64650.D	05/03/19	16:17	2.55	2.98	9.97	11.95
ZZZZZZ	6G64651.D	05/03/19	16:35	2.55	2.98	9.97	11.95
ZZZZZZ	6G64652.D	05/03/19	16:53	2.56	2.98	9.97	11.95
ZZZZZZ	6G64653.D	05/03/19	17:12	2.55	2.98	9.97	11.95
ZZZZZZ	6G64654.D	05/03/19	17:30	2.55	2.98	9.97	11.95
ZZZZZZ	6G64655.D	05/03/19	17:48	2.56	2.98	9.97	11.95
ZZZZZZ	6G64656.D	05/03/19	18:06	2.56	2.98	9.97	11.95
ZZZZZZ	6G64657.D	05/03/19	18:25	2.55	2.98	9.97	11.95
ZZZZZZ	6G64658.D	05/03/19	18:43	2.55	2.98	9.97	11.95
JC86837-1	6G64659.D	05/03/19	19:01	2.56	2.98	9.97	11.95
ZZZZZZ	6G64660.D	05/03/19	19:20	2.55	2.98	9.97	11.95

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	GXX6680-CC6666	**Injection Date:**	05/04/19
Lab File ID:	XX2434598.D	**Injection Time:**	10:08
Instrument ID:	GCXX	**Method:**	SW846 8082A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	3.26	4.04	10.75	12.64

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP20019-MB1	XX2434600.D	05/04/19	10:46	3.27	4.04	10.75	12.64
OP20019-BS1	XX2434601.D	05/04/19	11:04	3.26	4.04	10.75	12.64
JC86768-1	XX2434602.D	05/04/19	11:22	3.27	4.04	10.74	12.64
OP20019-MS	XX2434603.D	05/04/19	11:41	3.27	4.04	10.74	12.64
OP20019-MSD	XX2434604.D	05/04/19	11:59	3.26	4.04	10.75	12.64
ZZZZZZ	XX2434605.D	05/04/19	12:17	3.27	4.04	10.75	12.64
ZZZZZZ	XX2434606.D	05/04/19	12:35	3.27	4.04	10.75	12.64

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	GXX6680-CC6666	**Injection Date:**	05/04/19
Lab File ID:	XX2434620.D	**Injection Time:**	16:52
Instrument ID:	GCXX	**Method:**	SW846 8082A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	3.27	4.04	10.75	12.64

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
ZZZZZZ	XX2434622.D	05/04/19	17:28	3.27	4.04	10.74	12.63
JC86837-1	XX2434623.D	05/04/19	17:47	3.27	4.06	10.74	12.66
ZZZZZZ	XX2434624.D	05/04/19	18:05	3.27	4.04	10.74	12.64
ZZZZZZ	XX2434625.D	05/04/19	18:23	3.27	4.04	10.75	12.64
ZZZZZZ	XX2434626.D	05/04/19	18:42	3.27	4.04	10.74	12.64
ZZZZZZ	XX2434627.D	05/04/19	19:00	3.27	4.04	10.74	12.64
ZZZZZZ	XX2434628.D	05/04/19	19:18	3.27	4.04	10.74	12.66

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICC1999
Lab FileID: 6G64600.D

Response Factor Report GC6G

Method : C:\MSDCHEM\1\METHODS\6PST1999.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration

Calibration Files
5 =6g64598.d 10 =6g64599.d 25 =6g64600.d 50 =6g64601.d
100 =6g64603.d 1 =6g64596.d 75 =6g64602.d 2 =6g64597.d
= =

Compound	5	10	25	50	100	1	75	2	Avg	%RSD
1) I 1-bromo-2-nitrobenzen	ISTD									
2) Tetrachloro-m-xylene	0.757	0.735	0.760	0.764	0.793	0.733	0.772	0.732	0.756	2.83
3) hexachlorobenzene	1.755	1.706	1.768	1.777	1.828	1.850	1.789	1.805	1.785	2.51
4) alpha-BHC	1.110	1.130	1.313	1.473	1.689	1.155	1.582	1.093	1.318	17.85
5) gamma-BHC	1.090	1.101	1.258	1.383	1.557	1.114	1.467	1.054	1.253	15.50
6) Heptachlor	1.228	1.238	1.375	1.473	1.644	1.326	1.552	1.243	1.385	11.34
7) beta-BHC	0.534	0.516	0.537	0.542	0.571	0.618	0.553	0.528	0.550	5.82
8) delta-BHC	0.969	0.974	1.150	1.295	1.493	1.058	1.409	0.915	1.158	18.83
9) Aldrin	1.129	1.119	1.270	1.373	1.539	1.238	1.454	1.086	1.276	13.06
10) alachlor	0.147	0.152	0.154	0.149	0.150		0.148		0.150	1.78
11) Heptachlor Epoxide	1.116	1.103	1.208	1.281	1.417	1.262	1.343	1.110	1.230	9.48
12) gamma-Chlordane	1.086	1.077	1.190	1.275	1.419	1.167	1.340	1.075	1.204	10.78
13) alpha-Chlordane	1.060	1.062	1.183	1.260	1.378	1.156	1.314	1.007	1.178	11.24
14) Endosulfan I	1.129	1.114	1.221	1.282	1.400	1.247	1.334	1.151	1.235	8.25
15) 4,4'-DDE	1.050	1.027	1.127	1.200	1.313	1.163	1.248	1.041	1.146	9.12
16) Dieldrin	1.119	1.088	1.223	1.307	1.464	1.204	1.384	1.072	1.233	11.58
17) Endrin	1.047	1.046	1.157	1.233	1.380	1.127	1.309	1.050	1.169	10.94
18) 4,4'-DDD	0.727	0.735	0.798	0.866	0.970	0.787	0.911	0.701	0.812	11.79
19) Endosulfan II	1.055	1.034	1.113	1.168	1.273	1.139	1.214	1.070	1.133	7.29
20) 4,4'-DDT	0.771	0.770	0.877	0.948	1.078	0.779	1.009	0.718	0.869	15.05
21) Endrin Aldehyde	0.932	0.894	0.945	0.970	1.029	0.908	0.987	0.941	0.951	4.61
22) Endosulfan Sulfate	0.936	0.902	0.974	1.013	1.114	1.012	1.057	0.908	0.990	7.50
23) Methoxychlor										

Initial Calibration Summary

Job Number: JC86837 **Sample:** G6G1999-ICC1999
Account: BBLNYS Arcadis **Lab FileID:** 6G64600.D
Project: National Grid, Philly Coke, Philadelphia, PA

	0.518	0.515	0.555	0.556	0.587	0.638	0.569	0.488	0.553	8.50
24) Mirex										
	1.040	0.985	1.005	0.975	0.989	1.201	0.972	1.034	1.025	7.35
25) Endrin Ketone										
	1.106	1.075	1.185	1.231	1.331	1.156	1.277	1.113	1.184	7.57
26) Decachlorobiphenyl										
	1.449	1.390	1.443	1.435	1.476	1.550	1.446	1.514	1.463	3.41
27) I 1-bromo-2-nitrobenzen ----------ISTD----------										
28) Toxaphene{A}										
				0.021					0.021	0.00
29) Toxaphene{B}										
				0.049					0.049	0.00
30) Toxaphene{C}										
				0.039					0.039	0.00
31) Toxaphene{D}										
				0.030					0.030	0.00
32) Toxaphene{E}										
				0.033					0.033	0.00
33) I 1-bromo-2-nitrobenzen ----------ISTD----------										
34) Chlordane {A}										
				0.075					0.075	0.00
35) Chlordane {B}										
				0.046					0.046	0.00
36) Chlordane {C}										
				0.169					0.169	0.00
37) Chlordane {D}										
				0.268					0.268	0.00
38) Chlordane {E}										
				0.034					0.034	0.00

Signal #2

1) I 1-bromo-2-nitrobenzen ----------ISTD----------										
2) Tetrachloro-m-xylene										
	1.051	0.956	0.958	0.945	0.973	1.044	0.947	1.000	0.984	4.35
3) hexachlorobenzene										
	1.136	1.023	1.012	0.984	0.998	1.139	0.977	1.110	1.047	6.61
4) alpha-BHC										
	1.298	1.232	1.294	1.331	1.415	1.303	1.360	1.243	1.310	4.57
5) gamma-BHC										
	1.234	1.153	1.198	1.212	1.270	1.245	1.228	1.186	1.216	3.01
6) Heptachlor										
	1.292	1.177	1.196	1.201	1.239	1.340	1.206	1.279	1.241	4.57
7) beta-BHC										
	0.589	0.552	0.552	0.534	0.536	0.637	0.527	0.576	0.563	6.51
8) delta-BHC										
	1.113	1.056	1.122	1.147	1.217	1.089	1.177	1.044	1.121	5.24
9) Aldrin										
	1.179	1.080	1.095	1.092	1.127	1.226	1.094	1.152	1.131	4.55
10) alachlor										
	0.177	0.168	0.166	0.156	0.147		0.149		0.161	7.36
11) Heptachlor Epoxide										
	1.147	1.050	1.055	1.034	1.049	1.181	1.026	1.123	1.083	5.40
12) gamma-Chlordane										
	1.140	1.037	1.033	1.017	1.034	1.164	1.011	1.100	1.067	5.54
13) alpha-Chlordane										
	1.139	1.038	1.023	0.994	1.001	1.163	0.982	1.112	1.056	6.71

Initial Calibration Summary

Job Number: JC86837 **Sample:** G6G1999-ICC1999
Account: BBLNYS Arcadis **Lab FileID:** 6G64600.D
Project: National Grid, Philly Coke, Philadelphia, PA

```
14)  Endosulfan I
          1.055 0.973 0.963 0.942 0.955 1.057 0.935 1.036          0.990     5.17
15)  4,4'-DDE
          1.010 0.930 0.956 0.964 0.996 0.988 0.964 0.956          0.970     2.64
16)  Dieldrin
          1.109 1.020 1.030 1.024 1.065 1.139 1.026 1.088          1.063     4.25
17)  Endrin
          1.053 0.975 0.985 0.966 0.988 1.095 0.965 1.039          1.008     4.79
18)  4,4'-DDD
          0.853 0.799 0.812 0.807 0.833 0.858 0.809 0.834          0.826     2.69
19)  Endosulfan II
          1.040 0.949 0.940 0.917 0.936 1.074 0.913 1.016          0.973     6.30
20)  4,4'-DDT
          0.750 0.731 0.785 0.789 0.831 0.747 0.800 0.686          0.765     5.95
21)  Endrin Aldehyde
          0.854 0.782 0.770 0.745 0.752 0.835 0.729 0.843          0.789     6.18
22)  Endosulfan Sulfate
          0.960 0.864 0.849 0.814 0.815 0.990 0.803 0.928          0.878     8.20
23)  Methoxychlor
          0.492 0.474 0.484 0.467 0.470 0.518 0.462 0.437          0.475     4.97
24)  Mirex
          0.937 0.837 0.794 0.739 0.707 0.935 0.710 0.935          0.824    12.37
25)  Endrin Ketone
          1.052 0.970 0.975 0.957 0.972 1.092 0.950 1.027          0.999     5.16
26)  Decachlorobiphenyl
          0.970 0.862 0.826 0.773 0.748 1.039 0.750 0.961          0.866    12.93

27) I   1-bromo-2-nitrobenzen ----------------ISTD--------------------
28)  Toxaphene{A}
                              0.024                                0.024     0.00
29)  Toxaphene{B}
                              0.029                                0.029     0.00
30)  Toxaphene{C}
                              0.049                                0.049     0.00
31)  Toxaphene{D}
                              0.030                                0.030     0.00
32)  Toxaphene{E}
                              0.026                                0.026     0.00

33) I   1-bromo-2-nitrobenzen ----------------ISTD--------------------
34)  Chlordane {A}
                              0.067                                0.067     0.00
35)  Chlordane {B}
                              0.038                                0.038     0.00
36)  Chlordane {C}
                              0.123                                0.123     0.00
37)  Chlordane {D}
                              0.206                                0.206     0.00
38)  Chlordane {E}
                              0.034                                0.034     0.00
-------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          6PST1999.M        Thu May 02 08:57:08 2019
```

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64606.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1999\6g64606.d\ECD1A.CH Vial: 13
Signal #2 : C:\msdchem\1\data\G6G1999\6g64606.d\ECD2B.CH
Acq On : 01-May-19, 17:23:52 Operator: mailisih
Sample : icv1999-25 Inst : GC6G
Misc : op19990,g6g1999,16.4,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST1999.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Thu May 02 08:49:25 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.46- 2.46
2	SAB	Tetrachloro-m-xylene	0.756	0.688	9.0	89	0.00	2.53- 2.59
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC	1.318	1.373	-4.2	103	0.00	3.00- 3.06
5	MA	gamma-BHC	1.253	1.303	-4.0	102	0.00	3.30- 3.36
6	MA	Heptachlor	1.385	1.415	-2.2	102	0.00	3.80- 3.86
7	B	beta-BHC	0.550	0.557	-1.3	102	0.00	3.38- 3.44
8	B	delta-BHC	1.158	1.208	-4.3	104	0.00	3.56- 3.62
9	MB	Aldrin	1.276	1.319	-3.4	102	0.00	4.14- 4.20
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide	1.230	1.264	-2.8	103	0.00	4.86- 4.92
12	B	gamma-Chlordane	1.204	1.254	-4.2	104	0.00	5.03- 5.09
13	B	alpha-Chlordane	1.178	1.245	-5.7	104	0.00	5.20- 5.26
14	A	Endosulfan I	1.235	1.278	-3.5	103	0.00	5.38- 5.44
15	B	4,4'-DDE	1.146	1.155	-0.8	101	0.00	5.32- 5.38
16	MA	Dieldrin	1.233	1.274	-3.3	103	0.00	5.71- 5.77
17	MA	Endrin	1.169	1.205	-3.1	103	0.00	6.04- 6.10
18	A	4,4'-DDD	0.812	0.823	-1.4	102	0.00	6.17- 6.23
19	B	Endosulfan II	1.133	1.145	-1.1	101	0.00	6.36- 6.42
20	MA	4,4'-DDT	0.869	0.899	-3.5	101	0.00	6.59- 6.65
21	B	Endrin Aldehyde	0.951	1.010	-6.2	105	0.00	7.00- 7.06
22	B	Endosulfan Sulfate	0.990	0.965	2.5	98	0.00	7.69- 7.75
23	A	Methoxychlor	0.553	0.534	3.4	95	0.00	7.39- 7.45
24		Mirex	1.025	0.826	19.4	81	0.00	7.53- 7.59
25	B	Endrin Ketone	1.184	1.236	-4.4	103	0.00	8.13- 8.19
26	SA	Decachlorobiphenyl	1.463	1.303	10.9	89	0.00	9.94-10.00
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.46- 2.46
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.46- 2.46
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64606.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.67- 2.67
2	SAB	Tetrachloro-m-xylene	0.984	0.860	12.6	89	0.00	2.95- 3.01
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC	1.310	1.354	-3.4	103	0.00	3.62- 3.68
5	MA	gamma-BHC	1.216	1.242	-2.1	102	0.00	4.05- 4.11
6	MA	Heptachlor	1.241	1.225	1.3	101	0.00	4.62- 4.68
7	B	beta-BHC	0.563	0.575	-2.1	103	0.00	4.13- 4.19
8	B	delta-BHC	1.121	1.174	-4.7	103	0.00	4.53- 4.59
9	MB	Aldrin	1.131	1.146	-1.3	103	0.00	5.08- 5.14
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide	1.083	1.094	-1.0	102	0.00	5.90- 5.96
12	B	gamma-Chlordane	1.067	1.083	-1.5	104	0.00	6.19- 6.25
13	B	alpha-Chlordane	1.056	1.067	-1.0	103	0.00	6.42- 6.48
14	A	Endosulfan I	0.990	1.002	-1.2	103	0.00	6.51- 6.57
15	B	4,4'-DDE	0.970	1.000	-3.1	103	0.00	6.68- 6.74
16	MA	Dieldrin	1.063	1.091	-2.6	105	0.00	6.95- 7.01
17	MA	Endrin	1.008	1.024	-1.6	103	0.00	7.46- 7.52
18	A	4,4'-DDD	0.826	0.855	-3.5	104	0.00	7.64- 7.70
19	B	Endosulfan II	0.973	0.972	0.1	102	0.00	7.81- 7.87
20	MA	4,4'-DDT	0.765	0.809	-5.8	102	0.00	8.17- 8.23
21	B	Endrin Aldehyde	0.789	0.823	-4.3	106	0.00	8.38- 8.44
22	B	Endosulfan Sulfate	0.878	0.869	1.0	101	0.00	8.85- 8.91
23	A	Methoxychlor	0.475	0.478	-0.6	97	0.00	9.42- 9.48
24		Mirex	0.824	0.671	18.6	84	0.00	9.75- 9.81
25	B	Endrin Ketone	0.999	1.022	-2.3	104	0.00	9.82- 9.88
26	SA	Decachlorobiphenyl	0.866	0.757	12.6	91	0.00	11.93-11.99
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.67- 2.67
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.67- 2.67
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64600.d 6PST1999.M Thu May 02 08:56:14 2019

10.9.2 10

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64607.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1999\6g64607.d\ECD1A.CH Vial: 14
Signal #2 : C:\msdchem\1\data\G6G1999\6g64607.d\ECD2B.CH
Acq On : 01-May-19, 17:42:09 Operator: mailisih
Sample : icv1999-500 Inst : GC6G
Misc : op19990,g6g1999,16.4,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST1999.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Thu May 02 08:49:25 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.46- 2.46
2	SAB	Tetrachloro-m-xylene	0.756	0.815	-7.8	110	0.00	2.52- 2.58
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl	1.463	1.557	-6.4	112	0.00	9.94-10.00
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.46- 2.46
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.46- 2.46
34		Chlordane {A}	0.075	0.072	4.0	95	0.00	3.73- 3.93
35		Chlordane {B}	0.046	0.046	0.0	99	0.00	4.22- 4.42
36		Chlordane {C}	0.169	0.164	3.0	97	0.00	4.96- 5.16
37		Chlordane {D}	0.268	0.266	0.7	99	0.00	5.13- 5.33
38		Chlordane {E}	0.034	0.036	-5.9	104	0.00	6.20- 6.40

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64607.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	103	0.00	1.67- 2.67
2	SAB	Tetrachloro-m-xylene	0.984	1.017	-3.4	111	0.00	2.95- 3.01
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl	0.866	0.849	2.0	114	0.00	11.93-11.99
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	98	0.00	1.67- 2.67
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.67- 2.67
34		Chlordane {A}	0.067	0.065	3.0	97	0.00	4.56- 4.76
35		Chlordane {B}	0.038	0.039	-2.6	102	0.00	5.20- 5.40
36		Chlordane {C}	0.123	0.122	0.8	99	0.00	6.12- 6.32
37		Chlordane {D}	0.206	0.207	-0.5	100	0.00	6.35- 6.55
38		Chlordane {E}	0.034	0.034	0.0	101	0.00	7.82- 8.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64601.d 6PST1999.M Thu May 02 08:56:31 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64608.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1999\6g64608.d\ECD1A.CH Vial: 15
Signal #2 : C:\msdchem\1\data\G6G1999\6g64608.d\ECD2B.CH
Acq On : 01-May-19, 18:00:25 Operator: mailisih
Sample : icv1999-500 Inst : GC6G
Misc : op19990,g6g1999,16.4,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST1999.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Thu May 02 08:49:25 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.46- 2.46
2	SAB	Tetrachloro-m-xylene	0.756	0.819	-8.3	108	0.00	2.52- 2.58
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl	1.463	1.578	-7.9	110	0.00	9.94-10.00
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.46- 2.46
28	L8	Toxaphene{A}	0.021	0.021	0.0	95	0.00	5.65- 5.85
29	L8	Toxaphene{B}	0.049	0.049	0.0	95	0.00	6.28- 6.48
30	L8	Toxaphene{C}	0.039	0.040	-2.6	98	0.00	6.46- 6.66
31	L8	Toxaphene{D}	0.030	0.031	-3.3	101	0.00	6.80- 7.00
32	L8	Toxaphene{E}	0.033	0.033	0.0	95	0.00	7.46- 7.66
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.00	1.46- 2.46
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64608.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.67- 2.67
2	SAB	Tetrachloro-m-xylene	0.984	1.025	-4.2	111	0.00	2.95- 3.01
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl	0.866	0.843	2.7	111	0.00	11.93-11.99
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.00	1.67- 2.67
28	L8	Toxaphene{A}	0.024	0.024	0.0	101	0.00	6.85- 7.05
29	L8	Toxaphene{B}	0.029	0.028	3.4	95	0.00	7.71- 7.91
30	L8	Toxaphene{C}	0.049	0.050	-2.0	98	0.00	7.87- 8.07
31	L8	Toxaphene{D}	0.030	0.031	-3.3	99	0.00	8.31- 8.51
32	L8	Toxaphene{E}	0.026	0.027	-3.8	100	0.00	9.21- 9.41
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.67- 2.67
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64601.d 6PST1999.M Thu May 02 08:56:33 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64609.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1999\6g64609.d\ECD1A.CH Vial: 16
Signal #2 : C:\msdchem\1\data\G6G1999\6g64609.d\ECD2B.CH
Acq On : 01-May-19, 18:18:41 Operator: mailisih
Sample : icv1999-50 Inst : GC6G
Misc : op19990,g6g1999,16.4,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST1999.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Thu May 02 08:49:25 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.46- 2.46
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		hexachlorobenzene	1.785	1.944	-8.9	109	0.00	2.86- 2.92
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl		----------NA----------				
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	95	0.00	1.46- 2.46
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	96	0.00	1.46- 2.46
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64609.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.67- 2.67
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		hexachlorobenzene	1.047	1.071	-2.3	109	0.00	3.46- 3.52
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor		----------NA----------				
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl		----------NA----------				
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	95	0.00	1.67- 2.67
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.00	1.67- 2.67
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64601.d 6PST1999.M Thu May 02 08:56:35 2019

10.9.5 10

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64610.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1999\6g64610.d\ECD1A.CH Vial: 17
Signal #2 : C:\msdchem\1\data\G6G1999\6g64610.d\ECD2B.CH
Acq On : 01-May-19, 18:37:02 Operator: mailisih
Sample : icv1999-50 Inst : GC6G
Misc : op19990,g6g1999,16.4,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6PST1999.M (ChemStation Integrator)
Title : PEST/PCB
Last Update : Thu May 02 08:49:25 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.46- 2.46
2	SAB	Tetrachloro-m-xylene		----------NA----------				
3		hexachlorobenzene		----------NA----------				
4	A	alpha-BHC		----------NA----------				
5	MA	gamma-BHC		----------NA----------				
6	MA	Heptachlor		----------NA----------				
7	B	beta-BHC		----------NA----------				
8	B	delta-BHC		----------NA----------				
9	MB	Aldrin		----------NA----------				
10		alachlor	0.150	0.160	-6.7	108	0.00	4.29- 4.35
11	B	Heptachlor Epoxide		----------NA----------				
12	B	gamma-Chlordane		----------NA----------				
13	B	alpha-Chlordane		----------NA----------				
14	A	Endosulfan I		----------NA----------				
15	B	4,4'-DDE		----------NA----------				
16	MA	Dieldrin		----------NA----------				
17	MA	Endrin		----------NA----------				
18	A	4,4'-DDD		----------NA----------				
19	B	Endosulfan II		----------NA----------				
20	MA	4,4'-DDT		----------NA----------				
21	B	Endrin Aldehyde		----------NA----------				
22	B	Endosulfan Sulfate		----------NA----------				
23	A	Methoxychlor		----------NA----------				
24		Mirex		----------NA----------				
25	B	Endrin Ketone		----------NA----------				
26	SA	Decachlorobiphenyl		----------NA----------				
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.00	1.46- 2.46
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	98	0.00	1.46- 2.46
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G1999-ICV1999
Lab FileID: 6G64610.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.67-	2.67
2	SAB	Tetrachloro-m-xylene		----------NA----------					
3		hexachlorobenzene		----------NA----------					
4	A	alpha-BHC		----------NA----------					
5	MA	gamma-BHC		----------NA----------					
6	MA	Heptachlor		----------NA----------					
7	B	beta-BHC		----------NA----------					
8	B	delta-BHC		----------NA----------					
9	MB	Aldrin		----------NA----------					
10		alachlor	0.161	0.166	-3.1	108	0.00	4.89-	4.95
11	B	Heptachlor Epoxide		----------NA----------					
12	B	gamma-Chlordane		----------NA----------					
13	B	alpha-Chlordane		----------NA----------					
14	A	Endosulfan I		----------NA----------					
15	B	4,4'-DDE		----------NA----------					
16	MA	Dieldrin		----------NA----------					
17	MA	Endrin		----------NA----------					
18	A	4,4'-DDD		----------NA----------					
19	B	Endosulfan II		----------NA----------					
20	MA	4,4'-DDT		----------NA----------					
21	B	Endrin Aldehyde		----------NA----------					
22	B	Endosulfan Sulfate		----------NA----------					
23	A	Methoxychlor		----------NA----------					
24		Mirex		----------NA----------					
25	B	Endrin Ketone		----------NA----------					
26	SA	Decachlorobiphenyl		----------NA----------					
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	97	0.00	1.67-	2.67
28	L8	Toxaphene{A}		----------NA----------					
29	L8	Toxaphene{B}		----------NA----------					
30	L8	Toxaphene{C}		----------NA----------					
31	L8	Toxaphene{D}		----------NA----------					
32	L8	Toxaphene{E}		----------NA----------					
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	98	0.00	1.67-	2.67
34		Chlordane {A}		----------NA----------					
35		Chlordane {B}		----------NA----------					
36		Chlordane {C}		----------NA----------					
37		Chlordane {D}		----------NA----------					
38		Chlordane {E}		----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64601.d 6PST1999.M Thu May 02 08:56:37 2019

10.9.6 10

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G2001-CC1999
Lab FileID: 6G64642.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...01\6g64642.d\ECD1A.CH Vial: 4
Signal #2 : C:\msdchem\1\data\anndg\g6g2001\6g64642.d\ECD2B.CH
Acq On : 03-May-19, 13:53:11 Operator: mailisih
Sample : cc1999-50 Inst : GC6G
Misc : op20120,g6g2001,300,,,2,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6pst1999.m (ChemStation Integrator)
Title : PEST/PCB
Last Update : Sun May 05 20:50:20 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	67	0.00	1.45- 2.45
2	SAB	Tetrachloro-m-xylene	0.756	0.929	-22.9#	81	0.00	2.52- 2.58
3		hexachlorobenzene	1.785	2.005	-12.3	75	0.00	2.86- 2.92
4	A	alpha-BHC	1.318	1.603	-21.6#	73	0.00	3.00- 3.06
5	MA	gamma-BHC	1.253	1.421	-13.4	69	0.00	3.30- 3.36
6	MA	Heptachlor	1.385	1.302	6.0	59	0.00	3.80- 3.86
7	B	beta-BHC	0.550	0.547	0.5	67	0.00	3.38- 3.44
8	B	delta-BHC	1.158	1.261	-8.9	65	0.00	3.56- 3.62
9	MB	Aldrin	1.276	1.603	-25.6#	78	0.00	4.14- 4.20
10		alachlor	0.150	0.127	15.3	57	0.00	4.29- 4.35
11	B	Heptachlor Epoxide	1.230	1.291	-5.0	67	0.00	4.87- 4.93
12	B	gamma-Chlordane	1.204	1.392	-15.6	73	0.00	5.03- 5.09
13	B	alpha-Chlordane	1.178	1.414	-20.0#	75	0.00	5.21- 5.27
14	A	Endosulfan I	1.235	1.317	-6.6	69	0.00	5.39- 5.45
15	B	4,4'-DDE	1.146	1.242	-8.4	69	0.00	5.32- 5.38
16	MA	Dieldrin	1.233	1.309	-6.2	67	0.00	5.71- 5.77
17	MA	Endrin	1.169	1.146	2.0	62	0.00	6.04- 6.10
18	A	4,4'-DDD	0.812	0.818	-0.7	63	0.00	6.17- 6.23
19	B	Endosulfan II	1.133	1.155	-1.9	66	0.00	6.36- 6.42
20	MA	4,4'-DDT	0.869	0.897	-3.2	63	0.00	6.59- 6.65
21	B	Endrin Aldehyde	0.951	0.906	4.7	62	0.00	7.00- 7.06
22	B	Endosulfan Sulfate	0.990	1.005	-1.5	66	0.00	7.68- 7.74
23	A	Methoxychlor	0.553	0.455	17.7	55	0.00	7.38- 7.44
24		Mirex	1.025	0.991	3.3	68	0.00	7.53- 7.59
25	B	Endrin Ketone	1.184	1.106	6.6	60	0.00	8.13- 8.19
26	SA	Decachlorobiphenyl	1.463	1.386	5.3	64	0.00	9.94-10.00
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	64	0.00	1.45- 2.45
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	65	0.00	1.45- 2.45
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G2001-CC1999
Lab FileID: 6G64642.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	91	0.00	1.67- 2.67
2	SAB	Tetrachloro-m-xylene	0.984	1.005	-2.1	97	0.00	2.95- 3.01
3		hexachlorobenzene	1.047	1.037	1.0	96	0.00	3.46- 3.52
4	A	alpha-BHC	1.310	1.402	-7.0	96	0.00	3.61- 3.67
5	MA	gamma-BHC	1.216	1.280	-5.3	96	0.00	4.04- 4.10
6	MA	Heptachlor	1.241	1.252	-0.9	95	0.00	4.62- 4.68
7	B	beta-BHC	0.563	0.573	-1.8	98	0.00	4.13- 4.19
8	B	delta-BHC	1.121	1.207	-7.7	96	0.00	4.53- 4.59
9	MB	Aldrin	1.131	1.168	-3.3	98	0.00	5.08- 5.14
10		alachlor	0.161	0.173	-7.5	101	0.00	4.89- 4.95
11	B	Heptachlor Epoxide	1.083	1.105	-2.0	98	0.00	5.90- 5.96
12	B	gamma-Chlordane	1.067	1.096	-2.7	98	0.00	6.19- 6.25
13	B	alpha-Chlordane	1.056	1.072	-1.5	99	0.00	6.42- 6.48
14	A	Endosulfan I	0.990	1.011	-2.1	98	0.00	6.51- 6.57
15	B	4,4'-DDE	0.970	1.039	-7.1	98	0.00	6.68- 6.74
16	MA	Dieldrin	1.063	1.101	-3.6	98	0.00	6.95- 7.01
17	MA	Endrin	1.008	1.040	-3.2	98	0.00	7.45- 7.51
18	A	4,4'-DDD	0.826	0.858	-3.9	97	0.00	7.64- 7.70
19	B	Endosulfan II	0.973	0.976	-0.3	97	0.00	7.80- 7.86
20	MA	4,4'-DDT	0.765	0.845	-10.5	98	0.00	8.17- 8.23
21	B	Endrin Aldehyde	0.789	0.789	0.0	97	0.00	8.38- 8.44
22	B	Endosulfan Sulfate	0.878	0.875	0.3	98	0.00	8.85- 8.91
23	A	Methoxychlor	0.475	0.498	-4.8	97	0.00	9.42- 9.48
24		Mirex	0.824	0.788	4.4	97	0.00	9.74- 9.80
25	B	Endrin Ketone	0.999	1.010	-1.1	96	0.00	9.81- 9.87
26	SA	Decachlorobiphenyl	0.866	0.805	7.0	95	0.00	11.92-11.98
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	87	0.00	1.67- 2.67
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	88	0.00	1.67- 2.67
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64642.d 6pst1999.m Sun May 05 20:53:59 2019

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G2001-CC1999
Lab FileID: 6G64663.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\an...01\6g64663.d\ECD1A.CH Vial: 2
Signal #2 : C:\msdchem\1\data\anndg\g6g2001\6g64663.d\ECD2B.CH
Acq On : 03-May-19, 20:15:11 Operator: mailisih
Sample : cc1999-25 Inst : GC6G
Misc : op20020,g6g2001,15.5,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\6pst1999.m (ChemStation Integrator)
Title : PEST/PCB
Last Update : Sun May 05 20:50:20 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 : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	98	0.00	1.45- 2.45
2	SAB	Tetrachloro-m-xylene	0.756	0.839	-11.0	108	0.00	2.52- 2.58
3		hexachlorobenzene	1.785	1.821	-2.0	101	0.00	2.86- 2.92
4	A	alpha-BHC	1.318	1.424	-8.0	106	0.00	3.00- 3.06
5	MA	gamma-BHC	1.253	1.341	-7.0	104	0.00	3.30- 3.36
6	MA	Heptachlor	1.385	1.172	15.4	83	0.00	3.80- 3.86
7	B	beta-BHC	0.550	0.563	-2.4	103	0.00	3.38- 3.44
8	B	delta-BHC	1.158	1.191	-2.8	101	0.00	3.56- 3.62
9	MB	Aldrin	1.276	1.382	-8.3	107	0.00	4.14- 4.20
10		alachlor	0.150	0.131	12.7	83	0.00	4.28- 4.34
11	B	Heptachlor Epoxide	1.230	1.226	0.3	99	0.00	4.86- 4.92
12	B	gamma-Chlordane	1.204	1.266	-5.1	104	0.00	5.03- 5.09
13	B	alpha-Chlordane	1.178	1.266	-7.5	105	0.00	5.20- 5.26
14	A	Endosulfan I	1.235	1.255	-1.6	101	0.00	5.38- 5.44
15	B	4,4'-DDE	1.146	1.133	1.1	98	0.00	5.32- 5.38
16	MA	Dieldrin	1.233	1.225	0.6	98	0.00	5.71- 5.77
17	MA	Endrin	1.169	1.053	9.9	89	0.00	6.03- 6.09
18	A	4,4'-DDD	0.812	0.778	4.2	95	0.00	6.16- 6.22
19	B	Endosulfan II	1.133	1.069	5.6	94	0.00	6.36- 6.42
20	MA	4,4'-DDT	0.869	0.731	15.9	82	0.00	6.58- 6.64
21	B	Endrin Aldehyde	0.951	0.900	5.4	93	0.00	6.99- 7.05
22	B	Endosulfan Sulfate	0.990	0.950	4.0	95	0.00	7.68- 7.74
23	A	Methoxychlor	0.553	0.413	25.3#	73	0.00	7.38- 7.44
24		Mirex	1.025	1.000	2.4	97	0.00	7.53- 7.59
25	B	Endrin Ketone	1.184	1.136	4.1	94	0.00	8.12- 8.18
26	SA	Decachlorobiphenyl	1.463	1.258	14.0	85	0.00	9.94-10.00
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.45- 2.45
28	L8	Toxaphene{A}		----------NA----------				
29	L8	Toxaphene{B}		----------NA----------				
30	L8	Toxaphene{C}		----------NA----------				
31	L8	Toxaphene{D}		----------NA----------				
32	L8	Toxaphene{E}		----------NA----------				
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.45- 2.45
34		Chlordane {A}		----------NA----------				
35		Chlordane {B}		----------NA----------				
36		Chlordane {C}		----------NA----------				
37		Chlordane {D}		----------NA----------				
38		Chlordane {E}		----------NA----------				

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: G6G2001-CC1999
Lab FileID: 6G64663.D

***** Signal #2 *****

1	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	107	0.00	1.66- 2.66
2	SAB	Tetrachloro-m-xylene	0.984	0.996	-1.2	111	0.00	2.95- 3.01
3		hexachlorobenzene	1.047	1.052	-0.5	111	0.00	3.46- 3.52
4	A	alpha-BHC	1.310	1.352	-3.2	112	0.00	3.61- 3.67
5	MA	gamma-BHC	1.216	1.247	-2.5	111	0.00	4.04- 4.10
6	MA	Heptachlor	1.241	1.192	3.9	107	0.00	4.62- 4.68
7	B	beta-BHC	0.563	0.582	-3.4	113	0.00	4.13- 4.19
8	B	delta-BHC	1.121	1.161	-3.6	111	0.00	4.53- 4.59
9	MB	Aldrin	1.131	1.156	-2.2	113	0.00	5.08- 5.14
10		alachlor	0.161	0.179	-11.2	115	0.00	4.88- 4.95
11	B	Heptachlor Epoxide	1.083	1.103	-1.8	112	0.00	5.90- 5.96
12	B	gamma-Chlordane	1.067	1.087	-1.9	113	0.00	6.19- 6.25
13	B	alpha-Chlordane	1.056	1.076	-1.9	112	0.00	6.42- 6.48
14	A	Endosulfan I	0.990	1.014	-2.4	113	0.00	6.51- 6.57
15	B	4,4'-DDE	0.970	1.007	-3.8	113	0.00	6.68- 6.74
16	MA	Dieldrin	1.063	1.080	-1.6	112	0.00	6.95- 7.01
17	MA	Endrin	1.008	0.976	3.2	106	0.00	7.45- 7.51
18	A	4,4'-DDD	0.826	0.875	-5.9	115	0.00	7.64- 7.70
19	B	Endosulfan II	0.973	0.976	-0.3	111	0.00	7.80- 7.86
20	MA	4,4'-DDT	0.765	0.762	0.4	104	0.00	8.17- 8.23
21	B	Endrin Aldehyde	0.789	0.790	-0.1	110	0.00	8.38- 8.44
22	B	Endosulfan Sulfate	0.878	0.856	2.5	108	0.00	8.85- 8.91
23	A	Methoxychlor	0.475	0.448	5.7	99	0.00	9.42- 9.48
24		Mirex	0.824	0.805	2.3	108	0.00	9.74- 9.80
25	B	Endrin Ketone	0.999	1.005	-0.6	110	0.00	9.81- 9.87
26	SA	Decachlorobiphenyl	0.866	0.766	11.5	99	0.00	11.92-11.98
27	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.66- 2.66
28	L8	Toxaphene{A}	----------NA----------					
29	L8	Toxaphene{B}	----------NA----------					
30	L8	Toxaphene{C}	----------NA----------					
31	L8	Toxaphene{D}	----------NA----------					
32	L8	Toxaphene{E}	----------NA----------					
33	I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	0#	0.00	1.66- 2.66
34		Chlordane {A}	----------NA----------					
35		Chlordane {B}	----------NA----------					
36		Chlordane {C}	----------NA----------					
37		Chlordane {D}	----------NA----------					
38		Chlordane {E}	----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6g64600.d 6pst1999.m Sun May 05 23:57:10 2019

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICC6666
Lab FileID: XX2434144.D

Response Factor Report HP G1530A

Method Path : C:\msdchem\1\METHODS\
Method File : PCB6666.M
Title :
Last Update : Thu Apr 25 09:02:33 2019
Response Via : Initial Calibration

Calibration Files
50 =xx2434141.D 250 =xx2434142.D 500 =xx2434143.D
1000 =xx2434144.D 2000 =xx2434145.D 3000 =xx2434146.D

	Compound	50	250	500	1000	2000	3000	Avg		%RSD
1) S	Tetrachloro-m...		1.239	1.266	1.328	1.366	1.384	1.317	E7	4.78
2)	AR1221-A				1.144			1.144	E5	0.00
3)	AR1221-B				1.584			1.584	E5	0.00
4)	AR1221-C				4.939			4.939	E5	0.00
5)	AR1221-D				7.517			7.517	E4	0.00
6)	AR1221-E				8.291			8.291	E4	0.00
7)	AR1232-A				3.746			3.746	E5	0.00
8)	AR1232-B				2.450			2.450	E5	0.00
9)	AR1232-C				5.223			5.223	E5	0.00
10)	AR1232-D				1.948			1.948	E5	0.00
11)	AR1232-E				1.908			1.908	E5	0.00
12)	AR1242-A				3.912			3.912	E5	0.00
13)	AR1242-B				8.970			8.970	E5	0.00
14)	AR1242-C				3.312			3.312	E5	0.00
15)	AR1242-D				3.530			3.530	E5	0.00
16)	AR1242-E				5.329			5.329	E5	0.00
17)	AR1248-A				2.045			2.045	E5	0.00
18)	AR1248-B				5.309			5.309	E5	0.00
19)	AR1248-C				5.445			5.445	E5	0.00
20)	AR1248-D				5.602			5.602	E5	0.00
21)	AR1248-E				5.090			5.090	E5	0.00
22)	AR1248-F				9.214			9.214	E5	0.00
23)	AR1248-G				4.028			4.028	E5	0.00
24)	AR1254-A				4.248			4.248	E5	0.00
25)	AR1254-B				8.676			8.676	E5	0.00
26)	AR1254-C				4.824			4.824	E5	0.00
27)	AR1254-D				8.567			8.567	E5	0.00
28)	AR1254-E				5.293			5.293	E5	0.00
29)	AR1254-F				6.043			6.043	E5	0.00
30)	AR1254-G				8.558			8.558	E5	0.00
31)	AR1262-A				6.447			6.447	E5	0.00
32)	AR1262-B				8.518			8.518	E5	0.00
33)	AR1262-C				8.168			8.168	E5	0.00
34)	AR1262-D				1.609			1.609	E6	0.00
35)	AR1262-E				2.008			2.008	E6	0.00
36)	AR1268-A				2.081			2.081	E6	0.00
37)	AR1268-B				2.245			2.245	E6	0.00
38)	AR1268-C				1.740			1.740	E6	0.00
39)	AR1268-D				7.171			7.171	E5	0.00
40)	AR1268-E				6.573			6.573	E6	0.00
41)	AR1016-A	2.964	2.845	2.762	2.754	2.692	2.652	2.778	E5	4.05
42)	AR1016-B	5.188	5.105	4.934	4.964	4.918	4.859	4.995	E5	2.51
43)	AR1016-C	1.160	1.119	1.120	1.161	1.184	1.181	1.154	E6	2.47
44)	AR1016-D	4.418	4.222	4.136	4.198	4.264	4.249	4.248	E5	2.23
45)	AR1016-E	4.538	4.308	4.235	4.323	4.407	4.385	4.366	E5	2.38
46)	AR1260-A	0.893	0.917	0.952	1.002	1.058	1.068	0.982	E6	7.41

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICC6666
Lab FileID: XX2434144.D

47)		AR1260-B	5.153	5.295	5.408	5.549	5.788	5.771	5.494 E5	4.68
48)		AR1260-C	6.437	6.005	6.050	6.267	6.544	6.568	6.312 E5	3.88
49)		AR1260-D	1.152	1.208	1.265	1.370	1.447	1.474	1.319 E6	9.96
50)		AR1260-E	1.406	1.398	1.463	1.489	1.582	1.598	1.489 E6	5.73
51)	S	Decachlorobip...	1.433	1.380	1.380	1.392	1.414	1.430	1.405 E7	1.72

Signal #2 Calibration Files

50	=xx2434141.D	250	=xx2434142.D	500	=xx2434143.D
1000	=xx2434144.D	2000	=xx2434145.D	3000	=xx2434146.D

		Compound	50	250	500	1000	2000	3000	Avg	%RSD
1)	S	Tetrachloro-m...		1.021	1.056	1.083	1.078	1.084	1.064 E7	2.53
2)		AR1221-A				8.199			8.199 E4	0.00
3)		AR1221-B				1.247			1.247 E5	0.00
4)		AR1221-C				3.082			3.082 E5	0.00
5)		AR1221-D				6.136			6.136 E4	0.00
6)		AR1221-E				3.665			3.665 E4	0.00
7)		AR1232-A				2.463			2.463 E5	0.00
8)		AR1232-B				1.922			1.922 E5	0.00
9)		AR1232-C				4.098			4.098 E5	0.00
10)		AR1232-D				1.567			1.567 E5	0.00
11)		AR1232-E				1.117			1.117 E5	0.00
12)		AR1242-A				3.052			3.052 E5	0.00
13)		AR1242-B				6.881			6.881 E5	0.00
14)		AR1242-C				2.595			2.595 E5	0.00
15)		AR1242-D				2.050			2.050 E5	0.00
16)		AR1242-E				2.602			2.602 E5	0.00
17)		AR1248-A				1.687			1.687 E5	0.00
18)		AR1248-B				4.562			4.562 E5	0.00
19)		AR1248-C				2.532			2.532 E5	0.00
20)		AR1248-D				3.415			3.415 E5	0.00
21)		AR1248-E				3.785			3.785 E5	0.00
22)		AR1248-F				4.662			4.662 E5	0.00
23)		AR1248-G				4.179			4.179 E5	0.00
24)		AR1254-A				4.204			4.204 E5	0.00
25)		AR1254-B				4.609			4.609 E5	0.00
26)		AR1254-C				3.768			3.768 E5	0.00
27)		AR1254-D				7.208			7.208 E5	0.00
28)		AR1254-E				5.519			5.519 E5	0.00
29)		AR1254-F				5.714			5.714 E5	0.00
30)		AR1254-G				7.493			7.493 E5	0.00
31)		AR1262-A				5.386			5.386 E5	0.00
32)		AR1262-B				8.704			8.704 E5	0.00
33)		AR1262-C				6.981			6.981 E5	0.00
34)		AR1262-D				1.622			1.622 E6	0.00
35)		AR1262-E				1.847			1.847 E6	0.00
36)		AR1268-A				2.122			2.122 E6	0.00
37)		AR1268-B				1.973			1.973 E6	0.00
38)		AR1268-C				1.762			1.762 E6	0.00
39)		AR1268-D				6.771			6.771 E5	0.00
40)		AR1268-E				5.214			5.214 E6	0.00
41)		AR1016-A	2.136	1.925	1.879	1.855	1.806	1.784	1.898 E5	6.70
42)		AR1016-B	4.340	3.972	4.081	4.051	3.781	3.759	3.997 E5	5.38
43)		AR1016-C	9.555	8.894	8.728	8.848	8.759	8.842	8.938 E5	3.45
44)		AR1016-D	3.315	3.356	3.258	3.290	3.233	3.278	3.288 E5	1.31
45)		AR1016-E	2.935	2.594	2.592	2.563	2.539	2.558	2.630 E5	5.73
46)		AR1260-A	8.900	8.485	8.409	8.640	8.702	8.783	8.653 E5	2.12
47)		AR1260-B	6.203	5.909	5.839	5.903	5.902	5.873	5.938 E5	2.23
48)		AR1260-C	5.714	5.481	5.508	5.609	5.640	5.663	5.602 E5	1.62

Initial Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICC6666
Lab FileID: XX2434144.D

49)		AR1260-D	1.389	1.343	1.378	1.425	1.439	1.435	1.402	E6	2.70
50)		AR1260-E	1.506	1.379	1.372	1.397	1.399	1.427	1.413	E6	3.47
51)	S	Decachlorobip...	1.140	1.051	1.053	1.070	1.070	1.074	1.076	E7	3.06

(#) = Out of Range

PCB6666.M Thu Apr 25 09:33:40 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434151.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Tetrachloro-m-xylene	13.166	12.168 E6	7.6	92	0.01
41		AR1016-A	277.819	256.959 E3	7.5	93	0.01
42		AR1016-B	499.475	449.836 E3	9.9	91	0.01
43		AR1016-C	1.154	1.023 E6	11.4	88	0.00
44		AR1016-D	424.796	380.423 E3	10.4	91	0.00
45		AR1016-E	436.599	394.592 E3	9.6	91	0.00
46		AR1260-A	981.893	938.154 E3	4.5	94	0.00
47		AR1260-B	549.406	542.915 E3	1.2	98	0.00
48		AR1260-C	631.195	612.291 E3	3.0	98	0.00
49		AR1260-D	1.319	1.320 E6	-0.1	96	0.00
50		AR1260-E	1.489	1.388 E6	6.8	93	0.00
51	S	Decachlorobiphenyl	14.048	14.252 E6	-1.5	102	0.00

Signal #2

1	S	Tetrachloro-m-xylene	10.643	10.009 E6	6.0	92	0.00
41		AR1016-A	189.758	182.830 E3	3.7	99	0.01
42		AR1016-B	399.721	351.189 E3	12.1	87	0.00
43		AR1016-C	893.776	796.127 E3	10.9	90	0.00
44		AR1016-D	328.845	298.749 E3	9.2	91	0.00
45		AR1016-E	263.021	233.386 E3	11.3	91	0.00
46		AR1260-A	865.325	809.802 E3	6.4	94	0.00
47		AR1260-B	593.832	573.194 E3	3.5	97	0.00
48		AR1260-C	560.244	542.389 E3	3.2	97	0.00
49		AR1260-D	1.402	1.408 E6	-0.4	99	0.00
50		AR1260-E	1.413	1.299 E6	8.1	93	0.03
51	S	Decachlorobiphenyl	10.763	11.058 E6	-2.7	103	0.00

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434151.D

(#) = Out of Range SPCC's out = 0 CCC's out = 0

PCB6666.M Thu Apr 25 09:12:25 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434152.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On   : 24 Apr 2019   6:36 pm
Operator : summerk
Sample   : icv6666-1000
Misc   : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14   Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:05 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation   6890 Scale Mode: Large solvent peaks clipped

Volume Inj.   : 1ul
Signal #1 Phase : ZB-CLP1   Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF   :   0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20%   Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Tetrachloro-m-xylene	13.166	18.376 E6	-39.6#	138	0.00
2		AR1221-A	114.434	113.529 E3	0.8	99	0.00
3		AR1221-B	158.444	142.829 E3	9.9	90	0.00
4		AR1221-C	493.918	437.577 E3	11.4	89	0.00
5		AR1221-D	75.173	59.866 E3	20.4#	80	0.00
6		AR1221-E	82.910	71.345 E3	13.9	86	0.00
24		AR1254-A	424.806	427.085 E3	-0.5	101	0.00
25		AR1254-B	867.617	879.028 E3	-1.3	101	0.00
26		AR1254-C	482.391	484.022 E3	-0.3	100	0.00
27		AR1254-D	856.749	855.557 E3	0.1	100	0.00
28		AR1254-E	529.303	521.501 E3	1.5	99	0.00
29		AR1254-F	604.322	620.394 E3	-2.7	103	0.00
30		AR1254-G	855.805	861.727 E3	-0.7	101	0.00
51	S	Decachlorobiphenyl	14.048	19.855 E6	-41.3#	143	0.00

Signal #2

1	S	Tetrachloro-m-xylene	10.643	14.340 E6	-34.7#	132	0.00
2		AR1221-A	81.989	81.221 E3	0.9	99	0.00
3		AR1221-B	124.683	113.887 E3	8.7	91	0.00
4		AR1221-C	308.217	278.800 E3	9.5	90	0.00
5		AR1221-D	61.361	51.269 E3	16.4	84	0.00
6		AR1221-E	36.652	35.440 E3	3.3	97	0.00
24		AR1254-A	420.366	416.245 E3	1.0	99	0.00
25		AR1254-B	460.915	458.162 E3	0.6	99	0.00
26		AR1254-C	376.756	374.537 E3	0.6	99	0.00
27		AR1254-D	720.750	709.999 E3	1.5	99	0.00
28		AR1254-E	551.860	547.408 E3	0.8	99	0.00
29		AR1254-F	571.392	559.748 E3	2.0	98	0.00
30		AR1254-G	749.287	745.824 E3	0.5	100	0.00

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434152.D

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 51 S   Decachlorobiphenyl           10.763  15.248 E6  -41.7#  143   0.00

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    (#) = Out of Range               SPCC's out = 0  CCC's out = 0

PCB6666.M Thu Apr 25 09:12:26 2019
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10.9.11
10

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434153.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Tetrachloro-m-xylene	13.166	18.263 E6	-38.7#	138	0.00
7		AR1232-A	374.641	345.510 E3	7.8	92	0.00
8		AR1232-B	244.993	230.255 E3	6.0	94	0.00
9		AR1232-C	522.300	486.467 E3	6.9	93	0.00
10		AR1232-D	194.754	180.781 E3	7.2	93	0.00
11		AR1232-E	190.813	173.157 E3	9.3	91	0.00
31		AR1262-A	644.684	652.272 E3	-1.2	101	0.00
32		AR1262-B	851.843	867.226 E3	-1.8	102	0.00
33		AR1262-C	816.778	829.479 E3	-1.6	102	0.00
34		AR1262-D	1.609	1.623 E6	-0.9	101	0.00
35		AR1262-E	2.008	2.041 E6	-1.6	102	0.00
51	S	Decachlorobiphenyl	14.048	20.336 E6	-44.8#	146	0.00

Signal #2

1	S	Tetrachloro-m-xylene	10.643	14.587 E6	-37.1#	135	0.00
7		AR1232-A	246.253	230.311 E3	6.5	94	0.00
8		AR1232-B	192.155	181.128 E3	5.7	94	0.00
9		AR1232-C	409.789	384.996 E3	6.1	94	0.00
10		AR1232-D	156.728	147.448 E3	5.9	94	0.00
11		AR1232-E	111.675	105.226 E3	5.8	94	0.00
31		AR1262-A	538.617	555.660 E3	-3.2	103	0.00
32		AR1262-B	870.424	894.335 E3	-2.7	103	0.00
33		AR1262-C	698.134	722.485 E3	-3.5	103	0.00
34		AR1262-D	1.622	1.683 E6	-3.8	104	0.00
35		AR1262-E	1.847	1.943 E6	-5.2	105	0.00
51	S	Decachlorobiphenyl	10.763	15.620 E6	-45.1#	146	0.00

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434153.D

(#) = Out of Range SPCC's out = 0 CCC's out = 0

PCB6666.M Thu Apr 25 09:12:27 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434154.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:14 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Tetrachloro-m-xylene	13.166	18.361 E6	-39.5#	138	0.00
12		AR1242-A	391.221	402.227 E3	-2.8	103	0.00
13		AR1242-B	896.987	924.605 E3	-3.1	103	0.00
14		AR1242-C	331.170	342.294 E3	-3.4	103	0.00
15		AR1242-D	353.027	356.358 E3	-0.9	101	0.00
16		AR1242-E	532.895	536.392 E3	-0.7	101	0.00
36		AR1268-A	2.081	2.032 E6	2.4	98	0.00
37		AR1268-B	2.245	2.191 E6	2.4	98	0.00
38		AR1268-C	1.740	1.733 E6	0.4	100	0.00
39		AR1268-D	717.064	693.645 E3	3.3	97	0.00
40		AR1268-E	6.573	6.444 E6	2.0	98	0.00
51	S	Decachlorobiphenyl	14.048	54.738 E6	-289.6#	393#	0.00

Signal #2

1	S	Tetrachloro-m-xylene	10.643	14.985 E6	-40.8#	138	0.00
12		AR1242-A	305.179	317.725 E3	-4.1	104	0.00
13		AR1242-B	688.144	721.369 E3	-4.8	105	0.00
14		AR1242-C	259.497	273.945 E3	-5.6	106	0.00
15		AR1242-D	204.991	210.704 E3	-2.8	103	0.00
16		AR1242-E	260.154	263.667 E3	-1.4	101	0.00
36		AR1268-A	2.122	2.087 E6	1.6	98	0.00
37		AR1268-B	1.973	1.937 E6	1.8	98	0.00
38		AR1268-C	1.762	1.728 E6	1.9	98	0.00
39		AR1268-D	677.089	657.802 E3	2.8	97	0.00
40		AR1268-E	5.214	5.123 E6	1.7	98	0.00
51	S	Decachlorobiphenyl	10.763	39.949 E6	-271.2#	373#	0.00

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434154.D

(#) = Out of Range SPCC's out = 0 CCC's out = 0

PCB6666.M Thu Apr 25 09:12:28 2019

Initial Calibration Verification

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6666-ICV6666
Lab FileID: XX2434155.D

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:09:55 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Tetrachloro-m-xylene	13.166	18.499 E6	-40.5#	139	0.00
17		AR1248-A	204.484	189.445 E3	7.4	93	0.00
18		AR1248-B	530.878	515.210 E3	3.0	97	0.00
19		AR1248-C	544.471	558.112 E3	-2.5	103	0.00
20		AR1248-D	560.224	563.534 E3	-0.6	101	0.00
21		AR1248-E	509.003	520.150 E3	-2.2	102	0.00
22		AR1248-F	921.411	978.377 E3	-6.2	106	0.00
23		AR1248-G	402.798	420.047 E3	-4.3	104	0.00
51	S	Decachlorobiphenyl	14.048	20.870 E6	-48.6#	150	0.00

Signal #2

1	S	Tetrachloro-m-xylene	10.643	15.251 E6	-43.3#	141	0.00
17		AR1248-A	168.664	154.965 E3	8.1	92	0.00
18		AR1248-B	456.182	447.490 E3	1.9	98	0.00
19		AR1248-C	253.188	254.906 E3	-0.7	101	0.00
20		AR1248-D	341.456	346.963 E3	-1.6	102	0.00
21		AR1248-E	378.518	395.432 E3	-4.5	104	0.00
22		AR1248-F	466.244	493.829 E3	-5.9	106	0.00
23		AR1248-G	417.885	446.886 E3	-6.9	107	0.00
51	S	Decachlorobiphenyl	10.763	16.016 E6	-48.8#	150	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

PCB6666.M Thu Apr 25 09:12:29 2019

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434598.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sy...\xx2434598.d\ECD1A.CH Vial: 1
Signal #2 : C:\msdchem\1\data\syrap\gxx6680\xx2434598.d\ECD2B.CH
Acq On : 04 May 2019 10:08 am Operator: tianweir
Sample : cc6666-500 Inst : HP G1530A
Misc : op20077,gxx6680,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\pcb6666.m (ChemStation Integrator)
Title :
Last Update : Sun May 05 21:20:18 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	13.166	11.513 E6	12.6	91	0.00	3.23- 3.29
2		AR1221-A		----------NA----------				
3		AR1221-B		----------NA----------				
4		AR1221-C		----------NA----------				
5		AR1221-D		----------NA----------				
6		AR1221-E		----------NA----------				
7		AR1232-A		----------NA----------				
8		AR1232-B		----------NA----------				
9		AR1232-C		----------NA----------				
10		AR1232-D		----------NA----------				
11		AR1232-E		----------NA----------				
12		AR1242-A		----------NA----------				
13		AR1242-B		----------NA----------				
14		AR1242-C		----------NA----------				
15		AR1242-D		----------NA----------				
16		AR1242-E		----------NA----------				
17		AR1248-A		----------NA----------				
18		AR1248-B		----------NA----------				
19		AR1248-C		----------NA----------				
20		AR1248-D		----------NA----------				
21		AR1248-E		----------NA----------				
22		AR1248-F		----------NA----------				
23		AR1248-G		----------NA----------				
24		AR1254-A		----------NA----------				
25		AR1254-B		----------NA----------				
26		AR1254-C		----------NA----------				
27		AR1254-D		----------NA----------				
28		AR1254-E		----------NA----------				
29		AR1254-F		----------NA----------				
30		AR1254-G		----------NA----------				
31		AR1262-A		----------NA----------				
32		AR1262-B		----------NA----------				
33		AR1262-C		----------NA----------				
34		AR1262-D		----------NA----------				
35		AR1262-E		----------NA----------				
36		AR1268-A		----------NA----------				
37		AR1268-B		----------NA----------				
38		AR1268-C		----------NA----------				
39		AR1268-D		----------NA----------				
40		AR1268-E		----------NA----------				
41		AR1016-A	277.819	239.634 E3	13.7	87	0.00	3.64- 3.70

10.9.15
10

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434598.D

42		AR1016-B	499.475	437.416	E3	12.4	89	0.00	4.08- 4.14
43		AR1016-C	1.154	0.970	E6	15.9	87	0.00	4.66- 4.72
44		AR1016-D	424.796	356.623	E3	16.0	86	0.00	4.84- 4.90
45		AR1016-E	436.599	366.204	E3	16.1	86	0.00	5.37- 5.44
46		AR1260-A	981.893	810.129	E3	17.5	85	0.00	7.81- 7.87
47		AR1260-B	549.406	455.101	E3	17.2	84	0.00	7.97- 8.03
48		AR1260-C	631.195	512.211	E3	18.9	85	0.00	8.31- 8.38
49		AR1260-D	1.319	1.079	E6	18.2	85	0.00	8.75- 8.81
50		AR1260-E	1.489	1.242	E6	16.6	85	0.00	9.15- 9.21
51	S	Decachlorobiphenyl	14.048	11.071	E6	21.2#	80	0.00	10.71-10.78
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	10.643	10.078	E6	5.3	95	0.00	4.01- 4.07
2		AR1221-A	----------NA----------						
3		AR1221-B	----------NA----------						
4		AR1221-C	----------NA----------						
5		AR1221-D	----------NA----------						
6		AR1221-E	----------NA----------						
7		AR1232-A	----------NA----------						
8		AR1232-B	----------NA----------						
9		AR1232-C	----------NA----------						
10		AR1232-D	----------NA----------						
11		AR1232-E	----------NA----------						
12		AR1242-A	----------NA----------						
13		AR1242-B	----------NA----------						
14		AR1242-C	----------NA----------						
15		AR1242-D	----------NA----------						
16		AR1242-E	----------NA----------						
17		AR1248-A	----------NA----------						
18		AR1248-B	----------NA----------						
19		AR1248-C	----------NA----------						
20		AR1248-D	----------NA----------						
21		AR1248-E	----------NA----------						
22		AR1248-F	----------NA----------						
23		AR1248-G	----------NA----------						
24		AR1254-A	----------NA----------						
25		AR1254-B	----------NA----------						
26		AR1254-C	----------NA----------						
27		AR1254-D	----------NA----------						
28		AR1254-E	----------NA----------						
29		AR1254-F	----------NA----------						
30		AR1254-G	----------NA----------						
31		AR1262-A	----------NA----------						
32		AR1262-B	----------NA----------						
33		AR1262-C	----------NA----------						
34		AR1262-D	----------NA----------						
35		AR1262-E	----------NA----------						
36		AR1268-A	----------NA----------						
37		AR1268-B	----------NA----------						
38		AR1268-C	----------NA----------						
39		AR1268-D	----------NA----------						
40		AR1268-E	----------NA----------						
41		AR1016-A	189.758	177.417	E3	6.5	94	0.00	4.70- 4.76
42		AR1016-B	399.721	369.587	E3	7.5	91	0.00	5.28- 5.34
43		AR1016-C	893.776	831.936	E3	6.9	95	0.00	5.94- 6.00
44		AR1016-D	328.845	311.558	E3	5.3	96	0.00	6.13- 6.19
45		AR1016-E	263.021	243.500	E3	7.4	94	0.00	6.81- 6.87
46		AR1260-A	865.325	805.988	E3	6.9	96	0.00	9.45- 9.51
47		AR1260-B	593.832	550.213	E3	7.3	94	0.00	9.57- 9.63

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434598.D

48		AR1260-C	560.244	525.111	E3	6.3	95	0.00	10.02-10.08
49		AR1260-D	1.402	1.314	E6	6.3	95	0.00	10.36-10.42
50		AR1260-E	1.413	1.300	E6	8.0	95	0.03	10.92-10.98
51	S	Decachlorobiphenyl	10.763	9.960	E6	7.5	95	0.00	12.61-12.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
xx2434598.d pcb6666.m Sun May 05 21:29:12 2019

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434609.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sy...\xx2434609.d\ECD1A.CH Vial: 11
Signal #2 : C:\msdchem\1\data\syrap\gxx6680\xx2434609.d\ECD2B.CH
Acq On : 04 May 2019 1:30 pm Operator: tianweir
Sample : CC6666-1000 Inst : HP G1530A
Misc : op20019,GXX6680,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\pcb6666.m (ChemStation Integrator)
Title :
Last Update : Sun May 05 21:20:18 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	13.166	12.261 E6	6.9	92	0.00	3.23- 3.29
2		AR1221-A		----------NA----------				
3		AR1221-B		----------NA----------				
4		AR1221-C		----------NA----------				
5		AR1221-D		----------NA----------				
6		AR1221-E		----------NA----------				
7		AR1232-A		----------NA----------				
8		AR1232-B		----------NA----------				
9		AR1232-C		----------NA----------				
10		AR1232-D		----------NA----------				
11		AR1232-E		----------NA----------				
12		AR1242-A		----------NA----------				
13		AR1242-B		----------NA----------				
14		AR1242-C		----------NA----------				
15		AR1242-D		----------NA----------				
16		AR1242-E		----------NA----------				
17		AR1248-A		----------NA----------				
18		AR1248-B		----------NA----------				
19		AR1248-C		----------NA----------				
20		AR1248-D		----------NA----------				
21		AR1248-E		----------NA----------				
22		AR1248-F		----------NA----------				
23		AR1248-G		----------NA----------				
24		AR1254-A		----------NA----------				
25		AR1254-B		----------NA----------				
26		AR1254-C		----------NA----------				
27		AR1254-D		----------NA----------				
28		AR1254-E		----------NA----------				
29		AR1254-F		----------NA----------				
30		AR1254-G		----------NA----------				
31		AR1262-A		----------NA----------				
32		AR1262-B		----------NA----------				
33		AR1262-C		----------NA----------				
34		AR1262-D		----------NA----------				
35		AR1262-E		----------NA----------				
36		AR1268-A		----------NA----------				
37		AR1268-B		----------NA----------				
38		AR1268-C		----------NA----------				
39		AR1268-D		----------NA----------				
40		AR1268-E		----------NA----------				
41		AR1016-A	277.819	250.373 E3	9.9	91	0.00	3.64- 3.70

10.9.16 10

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434609.D

42		AR1016-B	499.475	451.918	E3	9.5	91	0.00	4.08- 4.14
43		AR1016-C	1.154	1.029	E6	10.8	89	0.00	4.66- 4.72
44		AR1016-D	424.796	376.655	E3	11.3	90	0.00	4.83- 4.89
45		AR1016-E	436.599	390.721	E3	10.5	90	0.00	5.37- 5.44
46		AR1260-A	981.893	874.247	E3	11.0	87	0.00	7.81- 7.87
47		AR1260-B	549.406	486.576	E3	11.4	88	0.00	7.97- 8.03
48		AR1260-C	631.195	546.219	E3	13.5	87	0.00	8.31- 8.38
49		AR1260-D	1.319	1.173	E6	11.1	86	0.00	8.75- 8.81
50		AR1260-E	1.489	1.326	E6	10.9	89	0.00	9.15- 9.21
51	S	Decachlorobiphenyl	14.048	11.321	E6	19.4	81	0.00	10.71-10.78
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	10.643	10.216	E6	4.0	94	0.00	4.01- 4.07
2		AR1221-A	----------NA----------						
3		AR1221-B	----------NA----------						
4		AR1221-C	----------NA----------						
5		AR1221-D	----------NA----------						
6		AR1221-E	----------NA----------						
7		AR1232-A	----------NA----------						
8		AR1232-B	----------NA----------						
9		AR1232-C	----------NA----------						
10		AR1232-D	----------NA----------						
11		AR1232-E	----------NA----------						
12		AR1242-A	----------NA----------						
13		AR1242-B	----------NA----------						
14		AR1242-C	----------NA----------						
15		AR1242-D	----------NA----------						
16		AR1242-E	----------NA----------						
17		AR1248-A	----------NA----------						
18		AR1248-B	----------NA----------						
19		AR1248-C	----------NA----------						
20		AR1248-D	----------NA----------						
21		AR1248-E	----------NA----------						
22		AR1248-F	----------NA----------						
23		AR1248-G	----------NA----------						
24		AR1254-A	----------NA----------						
25		AR1254-B	----------NA----------						
26		AR1254-C	----------NA----------						
27		AR1254-D	----------NA----------						
28		AR1254-E	----------NA----------						
29		AR1254-F	----------NA----------						
30		AR1254-G	----------NA----------						
31		AR1262-A	----------NA----------						
32		AR1262-B	----------NA----------						
33		AR1262-C	----------NA----------						
34		AR1262-D	----------NA----------						
35		AR1262-E	----------NA----------						
36		AR1268-A	----------NA----------						
37		AR1268-B	----------NA----------						
38		AR1268-C	----------NA----------						
39		AR1268-D	----------NA----------						
40		AR1268-E	----------NA----------						
41		AR1016-A	189.758	174.154	E3	8.2	94	0.00	4.70- 4.76
42		AR1016-B	399.721	386.047	E3	3.4	95	0.00	5.28- 5.34
43		AR1016-C	893.776	837.667	E3	6.3	95	0.00	5.93- 5.99
44		AR1016-D	328.845	312.451	E3	5.0	95	0.00	6.13- 6.19
45		AR1016-E	263.021	243.775	E3	7.3	95	0.00	6.81- 6.87
46		AR1260-A	865.325	807.215	E3	6.7	93	0.00	9.45- 9.51
47		AR1260-B	593.832	552.287	E3	7.0	94	0.00	9.57- 9.63

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434609.D

48		AR1260-C	560.244	527.260	E3	5.9	94	0.00	10.01-10.07
49		AR1260-D	1.402	1.317	E6	6.1	92	0.00	10.36-10.42
50		AR1260-E	1.413	1.306	E6	7.6	93	0.03	10.91-10.97
51	S	Decachlorobiphenyl	10.763	9.702	E6	9.9	91	0.00	12.61-12.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
xx2434181.d pcb6666.m Sun May 05 21:28:47 2019

10.9.16
10

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434620.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sy...\xx2434620.d\ECD1A.CH Vial: 19
Signal #2 : C:\msdchem\1\data\syrap\gxx6680\xx2434620.d\ECD2B.CH
Acq On : 04 May 2019 4:52 pm Operator: tianweir
Sample : CC6666-500 Inst : HP G1530A
Misc : op20019,GXX6680,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\pcb6666.m (ChemStation Integrator)
Title :
Last Update : Sun May 05 21:20:18 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1 S	Tetrachloro-m-xylene	13.166	12.520 E6	4.9	99	0.00	3.24- 3.30
2	AR1221-A		----------NA----------				
3	AR1221-B		----------NA----------				
4	AR1221-C		----------NA----------				
5	AR1221-D		----------NA----------				
6	AR1221-E		----------NA----------				
7	AR1232-A		----------NA----------				
8	AR1232-B		----------NA----------				
9	AR1232-C		----------NA----------				
10	AR1232-D		----------NA----------				
11	AR1232-E		----------NA----------				
12	AR1242-A		----------NA----------				
13	AR1242-B		----------NA----------				
14	AR1242-C		----------NA----------				
15	AR1242-D		----------NA----------				
16	AR1242-E		----------NA----------				
17	AR1248-A		----------NA----------				
18	AR1248-B		----------NA----------				
19	AR1248-C		----------NA----------				
20	AR1248-D		----------NA----------				
21	AR1248-E		----------NA----------				
22	AR1248-F		----------NA----------				
23	AR1248-G		----------NA----------				
24	AR1254-A		----------NA----------				
25	AR1254-B		----------NA----------				
26	AR1254-C		----------NA----------				
27	AR1254-D		----------NA----------				
28	AR1254-E		----------NA----------				
29	AR1254-F		----------NA----------				
30	AR1254-G		----------NA----------				
31	AR1262-A		----------NA----------				
32	AR1262-B		----------NA----------				
33	AR1262-C		----------NA----------				
34	AR1262-D		----------NA----------				
35	AR1262-E		----------NA----------				
36	AR1268-A		----------NA----------				
37	AR1268-B		----------NA----------				
38	AR1268-C		----------NA----------				
39	AR1268-D		----------NA----------				
40	AR1268-E		----------NA----------				
41	AR1016-A	277.819	267.979 E3	3.5	97	0.00	3.64- 3.70

10.9.17 10

Continuing Calibration Summary

Job Number: JC86837 **Sample:** GXX6680-CC6666
Account: BBLNYS Arcadis **Lab FileID:** XX2434620.D
Project: National Grid, Philly Coke, Philadelphia, PA

42		AR1016-B	499.475	476.300	E3	4.6	97	0.00	4.07- 4.13
43		AR1016-C	1.154	1.047	E6	9.3	94	0.00	4.66- 4.72
44		AR1016-D	424.796	390.435	E3	8.1	94	0.00	4.83- 4.89
45		AR1016-E	436.599	406.507	E3	6.9	96	0.00	5.37- 5.44
46		AR1260-A	981.893	875.514	E3	10.8	92	0.00	7.81- 7.87
47		AR1260-B	549.406	493.381	E3	10.2	91	0.00	7.97- 8.03
48		AR1260-C	631.195	550.658	E3	12.8	91	0.00	8.31- 8.38
49		AR1260-D	1.319	1.170	E6	11.3	92	0.00	8.75- 8.81
50		AR1260-E	1.489	1.306	E6	12.3	89	0.00	9.15- 9.21
51	S	Decachlorobiphenyl	14.048	11.298	E6	19.6	82	0.00	10.71-10.78
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	10.643	10.084	E6	5.3	96	0.00	4.01- 4.07
2		AR1221-A	----------NA----------						
3		AR1221-B	----------NA----------						
4		AR1221-C	----------NA----------						
5		AR1221-D	----------NA----------						
6		AR1221-E	----------NA----------						
7		AR1232-A	----------NA----------						
8		AR1232-B	----------NA----------						
9		AR1232-C	----------NA----------						
10		AR1232-D	----------NA----------						
11		AR1232-E	----------NA----------						
12		AR1242-A	----------NA----------						
13		AR1242-B	----------NA----------						
14		AR1242-C	----------NA----------						
15		AR1242-D	----------NA----------						
16		AR1242-E	----------NA----------						
17		AR1248-A	----------NA----------						
18		AR1248-B	----------NA----------						
19		AR1248-C	----------NA----------						
20		AR1248-D	----------NA----------						
21		AR1248-E	----------NA----------						
22		AR1248-F	----------NA----------						
23		AR1248-G	----------NA----------						
24		AR1254-A	----------NA----------						
25		AR1254-B	----------NA----------						
26		AR1254-C	----------NA----------						
27		AR1254-D	----------NA----------						
28		AR1254-E	----------NA----------						
29		AR1254-F	----------NA----------						
30		AR1254-G	----------NA----------						
31		AR1262-A	----------NA----------						
32		AR1262-B	----------NA----------						
33		AR1262-C	----------NA----------						
34		AR1262-D	----------NA----------						
35		AR1262-E	----------NA----------						
36		AR1268-A	----------NA----------						
37		AR1268-B	----------NA----------						
38		AR1268-C	----------NA----------						
39		AR1268-D	----------NA----------						
40		AR1268-E	----------NA----------						
41		AR1016-A	189.758	176.501	E3	7.0	94	0.00	4.70- 4.76
42		AR1016-B	399.721	389.356	E3	2.6	95	0.00	5.28- 5.34
43		AR1016-C	893.776	828.527	E3	7.3	95	0.00	5.94- 6.00
44		AR1016-D	328.845	309.809	E3	5.8	95	0.00	6.13- 6.19
45		AR1016-E	263.021	245.073	E3	6.8	95	0.00	6.81- 6.87
46		AR1260-A	865.325	776.882	E3	10.2	92	0.00	9.45- 9.51
47		AR1260-B	593.832	531.750	E3	10.5	91	0.00	9.57- 9.63

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434620.D

48		AR1260-C	560.244	504.643	E3	9.9	92	0.00	10.02-10.08
49		AR1260-D	1.402	1.242	E6	11.4	90	0.00	10.36-10.42
50		AR1260-E	1.413	1.233	E6	12.7	90	0.03	10.91-10.97
51	S	Decachlorobiphenyl	10.763	9.064	E6	15.8	86	0.00	12.61-12.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
xx2434598.d pcb6666.m Sun May 05 21:33:29 2019

10.9.17
10

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434631.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\sy...\xx2434631.d\ECD1A.CH Vial: 27
Signal #2 : C:\msdchem\1\data\syrap\gxx6680\xx2434631.d\ECD2B.CH
Acq On : 04 May 2019 8:14 pm Operator: tianweir
Sample : CC6666-1000 Inst : HP G1530A
Misc : op20019,GXX6680,15.0,,,10,1 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\pcb6666.m (ChemStation Integrator)
Title :
Last Update : Sun May 05 21:20:18 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1 S	Tetrachloro-m-xylene	13.166	13.144 E6	0.2	99	0.00	3.24- 3.30
2	AR1221-A		----------NA----------				
3	AR1221-B		----------NA----------				
4	AR1221-C		----------NA----------				
5	AR1221-D		----------NA----------				
6	AR1221-E		----------NA----------				
7	AR1232-A		----------NA----------				
8	AR1232-B		----------NA----------				
9	AR1232-C		----------NA----------				
10	AR1232-D		----------NA----------				
11	AR1232-E		----------NA----------				
12	AR1242-A		----------NA----------				
13	AR1242-B		----------NA----------				
14	AR1242-C		----------NA----------				
15	AR1242-D		----------NA----------				
16	AR1242-E		----------NA----------				
17	AR1248-A		----------NA----------				
18	AR1248-B		----------NA----------				
19	AR1248-C		----------NA----------				
20	AR1248-D		----------NA----------				
21	AR1248-E		----------NA----------				
22	AR1248-F		----------NA----------				
23	AR1248-G		----------NA----------				
24	AR1254-A		----------NA----------				
25	AR1254-B		----------NA----------				
26	AR1254-C		----------NA----------				
27	AR1254-D		----------NA----------				
28	AR1254-E		----------NA----------				
29	AR1254-F		----------NA----------				
30	AR1254-G		----------NA----------				
31	AR1262-A		----------NA----------				
32	AR1262-B		----------NA----------				
33	AR1262-C		----------NA----------				
34	AR1262-D		----------NA----------				
35	AR1262-E		----------NA----------				
36	AR1268-A		----------NA----------				
37	AR1268-B		----------NA----------				
38	AR1268-C		----------NA----------				
39	AR1268-D		----------NA----------				
40	AR1268-E		----------NA----------				
41	AR1016-A	277.819	267.920 E3	3.6	97	0.00	3.64- 3.70

10.9.18 10

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434631.D

42		AR1016-B	499.475	480.468	E3	3.8	97	0.00	4.08- 4.14
43		AR1016-C	1.154	1.096	E6	5.0	94	0.00	4.66- 4.72
44		AR1016-D	424.796	401.264	E3	5.5	96	0.00	4.84- 4.90
45		AR1016-E	436.599	416.727	E3	4.6	96	0.00	5.37- 5.44
46		AR1260-A	981.893	935.350	E3	4.7	93	0.00	7.81- 7.87
47		AR1260-B	549.406	513.067	E3	6.6	92	0.00	7.97- 8.03
48		AR1260-C	631.195	577.515	E3	8.5	92	0.00	8.31- 8.38
49		AR1260-D	1.319	1.273	E6	3.5	93	0.00	8.75- 8.81
50		AR1260-E	1.489	1.374	E6	7.7	92	0.00	9.15- 9.21
51	S	Decachlorobiphenyl	14.048	11.714	E6	16.6	84	0.00	10.71-10.78
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	10.643	10.371	E6	2.6	96	0.00	4.01- 4.07
2		AR1221-A	----------NA----------						
3		AR1221-B	----------NA----------						
4		AR1221-C	----------NA----------						
5		AR1221-D	----------NA----------						
6		AR1221-E	----------NA----------						
7		AR1232-A	----------NA----------						
8		AR1232-B	----------NA----------						
9		AR1232-C	----------NA----------						
10		AR1232-D	----------NA----------						
11		AR1232-E	----------NA----------						
12		AR1242-A	----------NA----------						
13		AR1242-B	----------NA----------						
14		AR1242-C	----------NA----------						
15		AR1242-D	----------NA----------						
16		AR1242-E	----------NA----------						
17		AR1248-A	----------NA----------						
18		AR1248-B	----------NA----------						
19		AR1248-C	----------NA----------						
20		AR1248-D	----------NA----------						
21		AR1248-E	----------NA----------						
22		AR1248-F	----------NA----------						
23		AR1248-G	----------NA----------						
24		AR1254-A	----------NA----------						
25		AR1254-B	----------NA----------						
26		AR1254-C	----------NA----------						
27		AR1254-D	----------NA----------						
28		AR1254-E	----------NA----------						
29		AR1254-F	----------NA----------						
30		AR1254-G	----------NA----------						
31		AR1262-A	----------NA----------						
32		AR1262-B	----------NA----------						
33		AR1262-C	----------NA----------						
34		AR1262-D	----------NA----------						
35		AR1262-E	----------NA----------						
36		AR1268-A	----------NA----------						
37		AR1268-B	----------NA----------						
38		AR1268-C	----------NA----------						
39		AR1268-D	----------NA----------						
40		AR1268-E	----------NA----------						
41		AR1016-A	189.758	177.213	E3	6.6	96	0.00	4.70- 4.76
42		AR1016-B	399.721	370.946	E3	7.2	92	0.00	5.28- 5.34
43		AR1016-C	893.776	850.764	E3	4.8	96	0.00	5.94- 6.00
44		AR1016-D	328.845	316.119	E3	3.9	96	0.00	6.13- 6.19
45		AR1016-E	263.021	248.331	E3	5.6	97	0.00	6.81- 6.87
46		AR1260-A	865.325	809.162	E3	6.5	94	0.00	9.45- 9.51
47		AR1260-B	593.832	547.199	E3	7.9	93	0.00	9.57- 9.63

Continuing Calibration Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: GXX6680-CC6666
Lab FileID: XX2434631.D

48		AR1260-C	560.244	521.454	E3	6.9	93	0.00	10.01-10.07
49		AR1260-D	1.402	1.310	E6	6.6	92	0.00	10.36-10.42
50		AR1260-E	1.413	1.268	E6	10.3	91	0.03	10.91-10.97
51	S	Decachlorobiphenyl	10.763	9.513	E6	11.6	89	0.00	12.61-12.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
xx2434181.d pcb6666.m Sun May 05 21:38:00 2019

10.9.18
10

GC/LC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64659.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 19:01:54
Operator : mailisih
Sample : jc86837-1
Misc : op20020,g6g2001,15.7,,,10,1
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 23:48:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.953	2.166	128.0E6	183.6E6	50.000	50.000
27) I	1-bromo-2...	1.953	2.166	128.0E6	183.6E6	50.000	50.000
33) I	1-bromo-2...	1.953	2.166	128.0E6	183.6E6	50.000	50.000
	System Monitoring Compounds						
2) SAB	Tetrachlo...	2.556	2.981	68896892	91660928	35.602	25.361 #
Spiked Amount	40.000	Range	30 - 150	Recovery	=	89.00%	63.40%
26) SA	Decachlor...	9.965	11.946	88659122	217.8E6	23.670	68.475 #
Spiked Amount	40.000			Recovery	=	59.17%	171.19%
	Target Compounds						
15) B	4,4'-DDE	5.341	6.709	24495341	24374025	8.347	6.840m
18) A	4,4'-DDD	6.200	7.658	33715827	16805996	16.218	5.543 #
20) MA	4,4'-DDT	6.601f	8.196	20009256	20067066	8.995	7.145
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

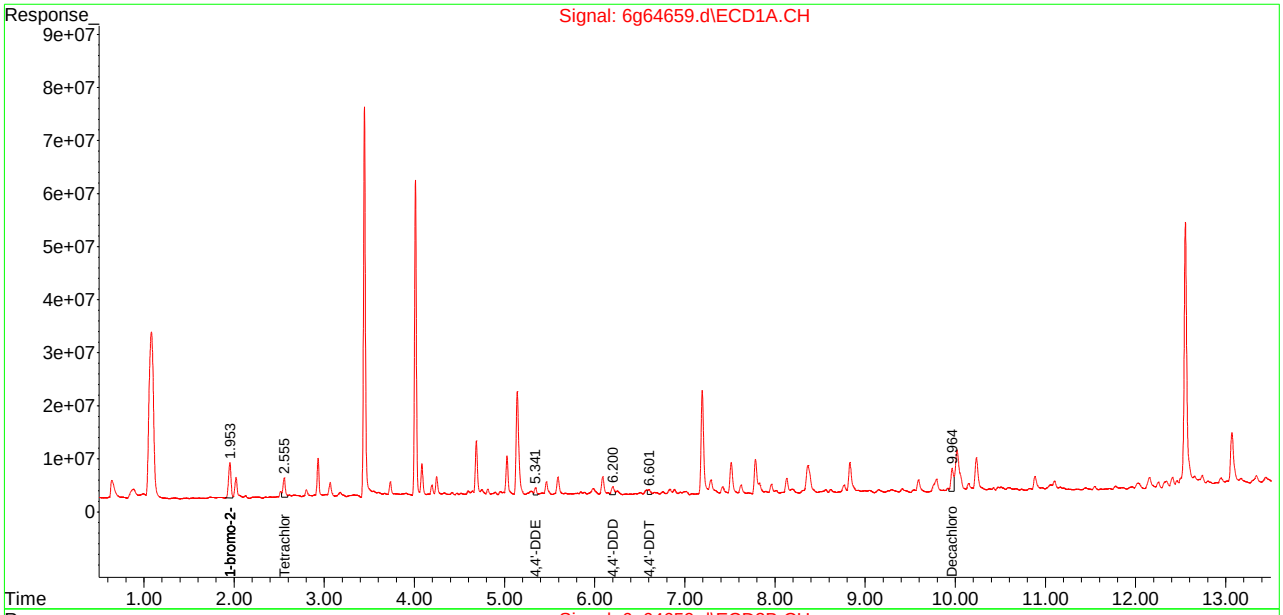
11.1.1 11

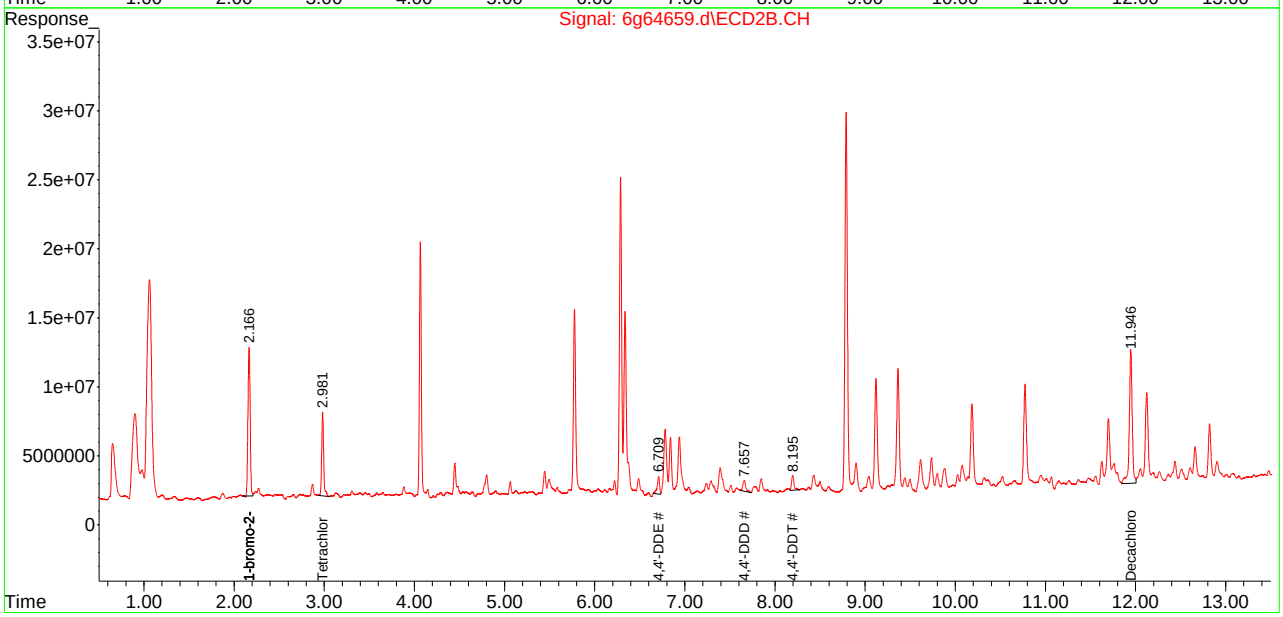
Quantitation Report (QT Reviewed)

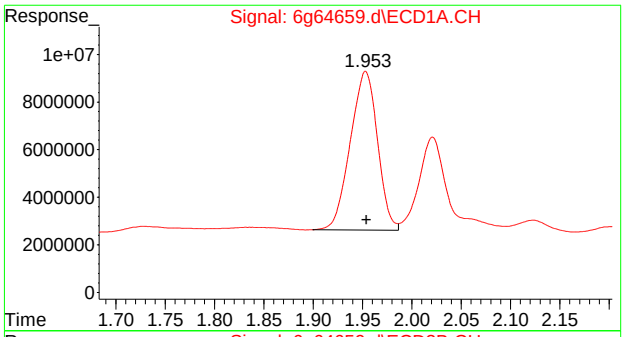
Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64659.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 19:01:54
Operator : mailisih
Sample : jc86837-1
Misc : op20020,g6g2001,15.7,,,10,1
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 23:48:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

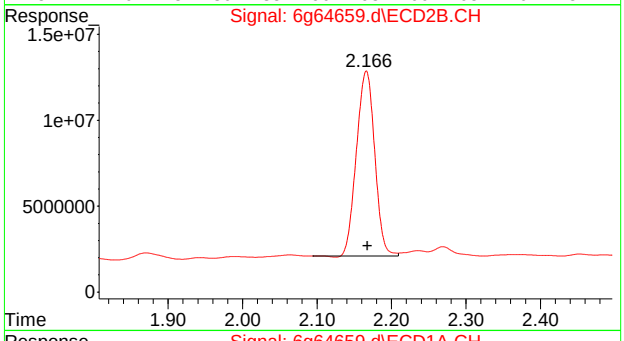






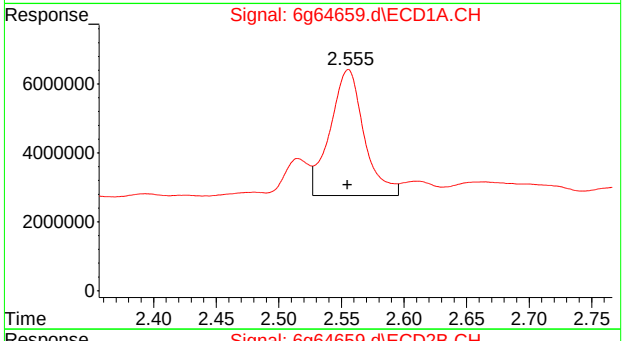
#1 1-bromo-2-nitrobenzene

R.T.: 1.953 min
Delta R.T.: 0.000 min
Response: 128028110
Conc: 50.00 PPB



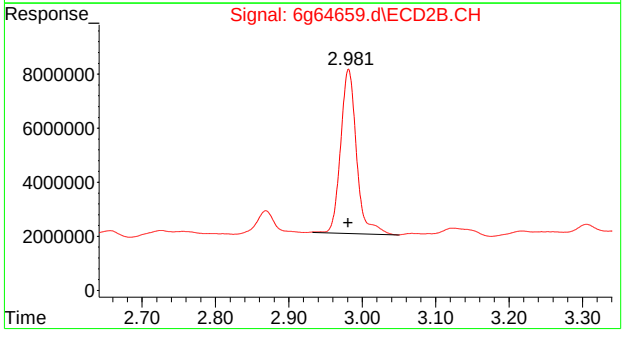
#1 1-bromo-2-nitrobenzene

R.T.: 2.166 min
Delta R.T.: -0.001 min
Response: 183594780
Conc: 50.00 PPB



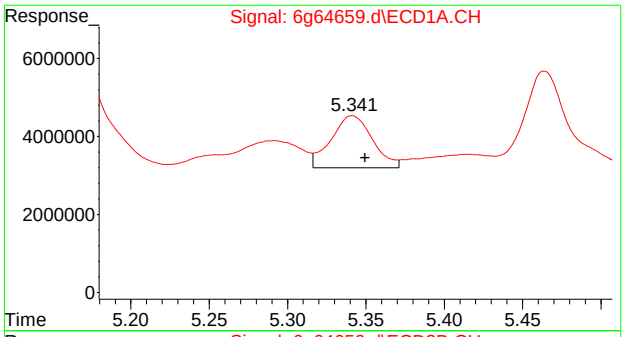
#2 Tetrachloro-m-xylene

R.T.: 2.556 min
Delta R.T.: 0.000 min
Response: 68896892
Conc: 35.60 PPB



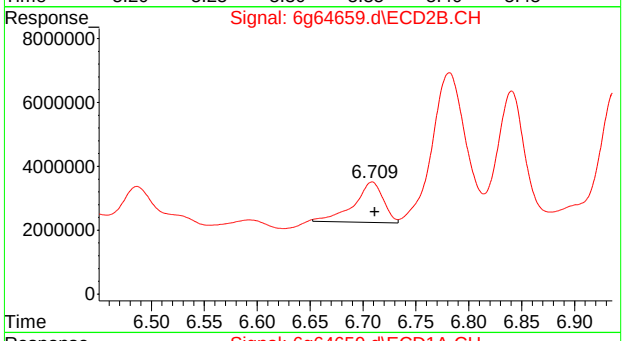
#2 Tetrachloro-m-xylene

R.T.: 2.981 min
Delta R.T.: 0.000 min
Response: 91660928
Conc: 25.36 PPB



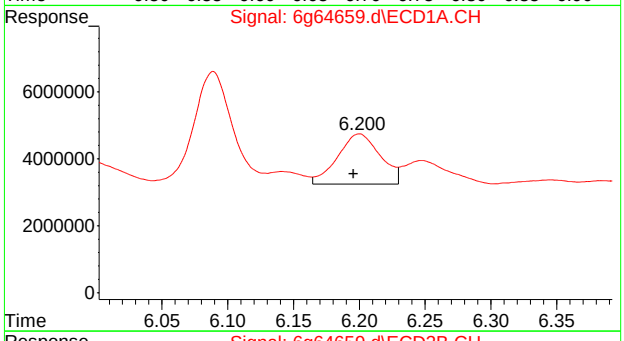
#15 4,4'-DDE

R.T.: 5.341 min
Delta R.T.: -0.008 min
Response: 24495341
Conc: 8.35 PPB



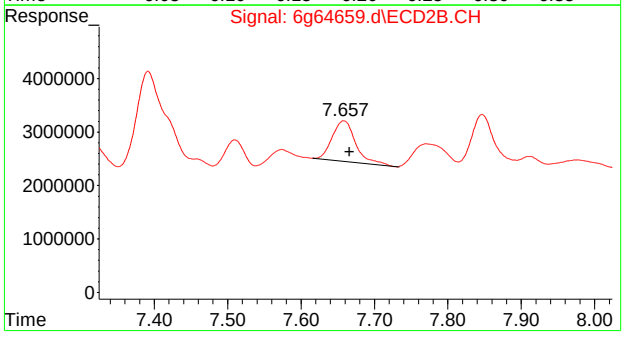
#15 4,4'-DDE

R.T.: 6.709 min
Delta R.T.: -0.003 min
Response: 24374025
Conc: 6.84 PPB m



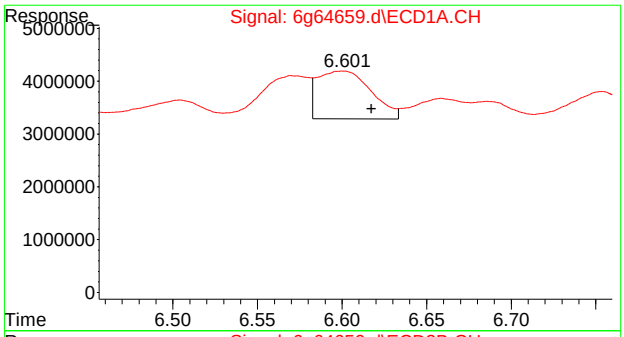
#18 4,4'-DDD

R.T.: 6.200 min
Delta R.T.: 0.005 min
Response: 33715827
Conc: 16.22 PPB



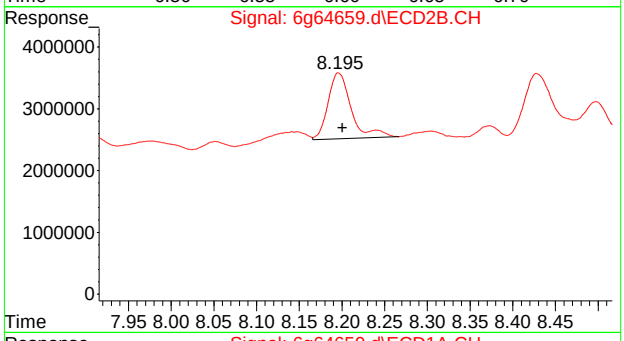
#18 4,4'-DDD

R.T.: 7.658 min
Delta R.T.: -0.008 min
Response: 16805996
Conc: 5.54 PPB



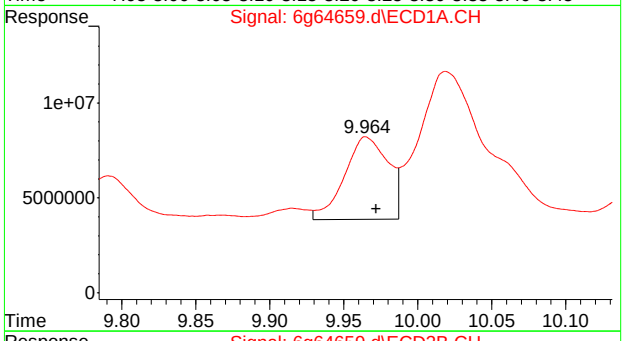
#20 4,4'-DDT

R.T.: 6.601 min
Delta R.T.: -0.017 min
Response: 20009256
Conc: 9.00 PPB



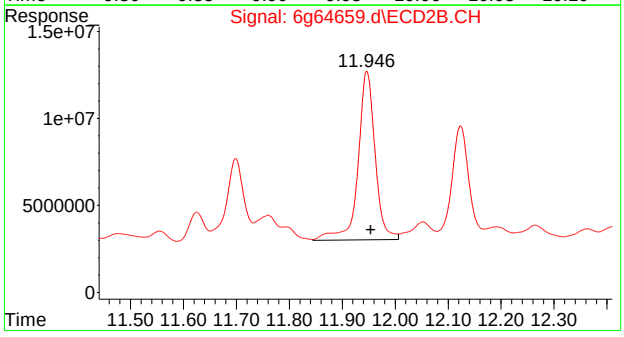
#20 4,4'-DDT

R.T.: 8.196 min
Delta R.T.: -0.004 min
Response: 20067066
Conc: 7.15 PPB



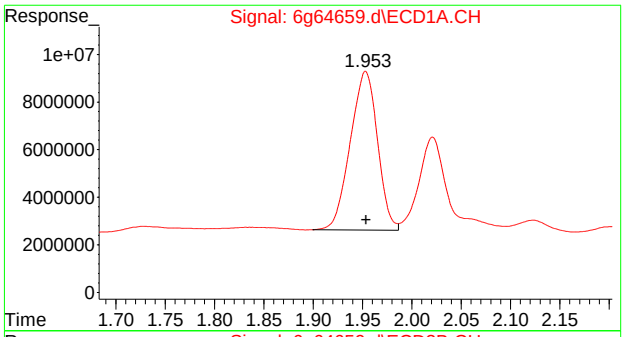
#26 Decachlorobiphenyl

R.T.: 9.965 min
Delta R.T.: -0.006 min
Response: 88659122
Conc: 23.67 PPB



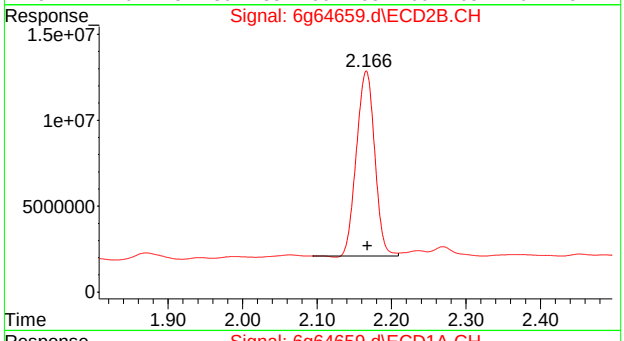
#26 Decachlorobiphenyl

R.T.: 11.946 min
Delta R.T.: -0.007 min
Response: 217769358
Conc: 68.47 PPB



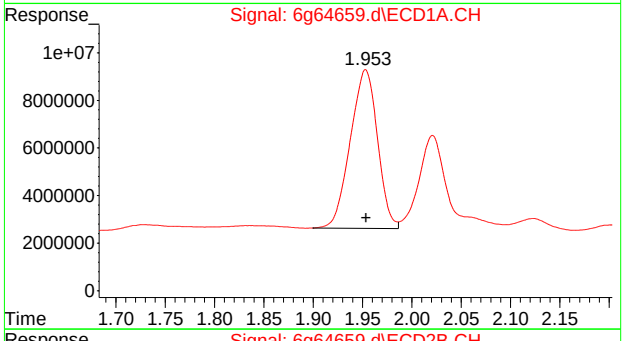
#27 1-bromo-2-nitrobenzeneA

R.T.: 1.953 min
Delta R.T.: 0.000 min
Response: 128028110
Conc: 50.00 PPB



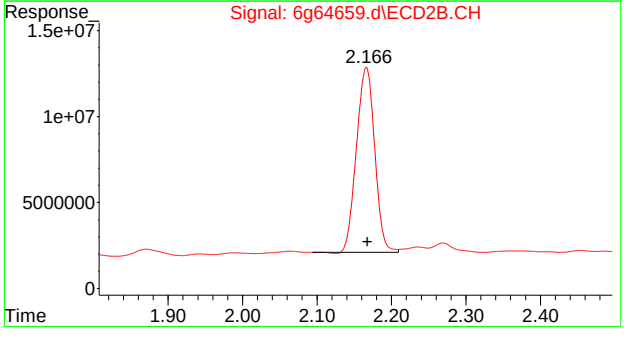
#27 1-bromo-2-nitrobenzeneA

R.T.: 2.166 min
Delta R.T.: -0.001 min
Response: 183594780
Conc: 50.00 PPB



#33 1-bromo-2-nitrobenzeneB

R.T.: 1.953 min
Delta R.T.: 0.000 min
Response: 128028110
Conc: 50.00 PPB



#33 1-bromo-2-nitrobenzeneB

R.T.: 2.166 min
Delta R.T.: -0.001 min
Response: 183594780
Conc: 50.00 PPB

Manual Integration Approval Summary

Sample Number:	JC86837-1	**Method:**	SW846 8081B
Lab FileID:	6G64659.D	**Analyst approved:**	05/06/19 00:43 Ann DeGuzman
Injection Time:	05/03/19 19:01	**Supervisor approved:**	05/06/19 07:59 Gwendolyn Burns

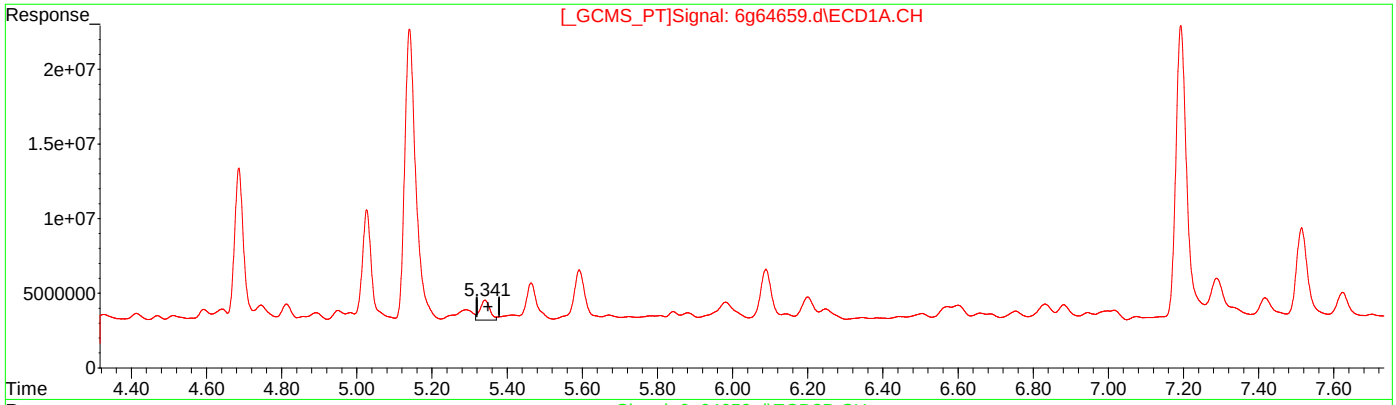
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDE	72-55-9	2	6.71	Poor instrument integration

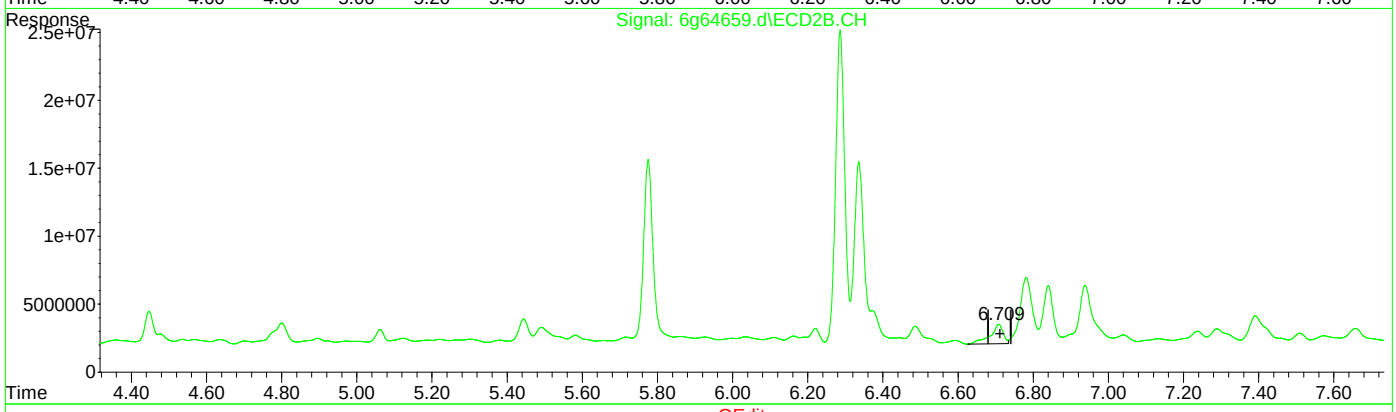
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64659.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 19:01:54
Operator : mailisih
Sample : jc86837-1
Misc : op20020,g6g2001,15.7,,,10,1
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:03:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(15) 4,4'-DDE (B)

5.341min 8.347 PPB

response 24495341

(15) 4,4'-DDE #2 (B)

6.709min 9.757 PPB

response 34769167

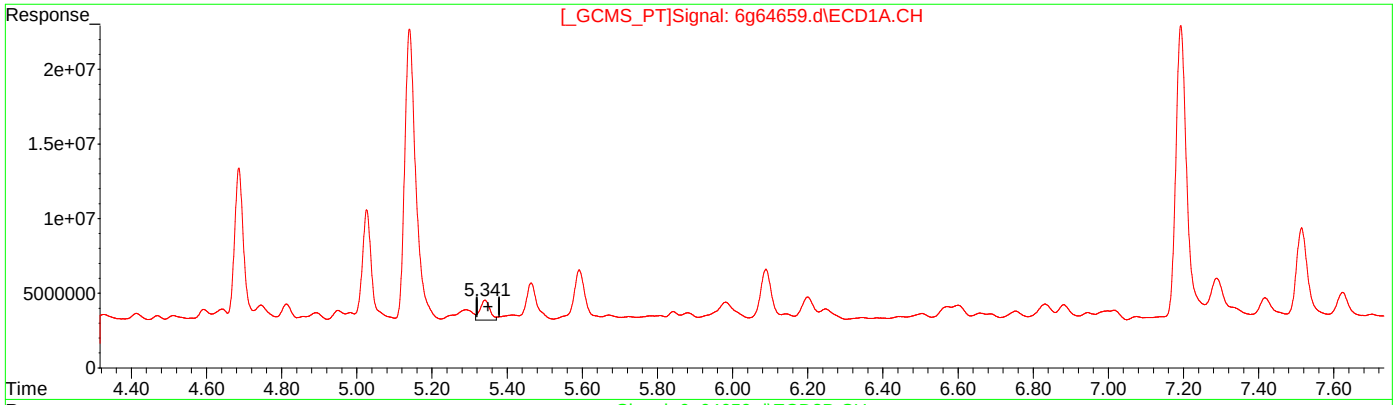
(+) = Expected Retention Time
6pst1999.m Sun May 05 23:46:14 2019

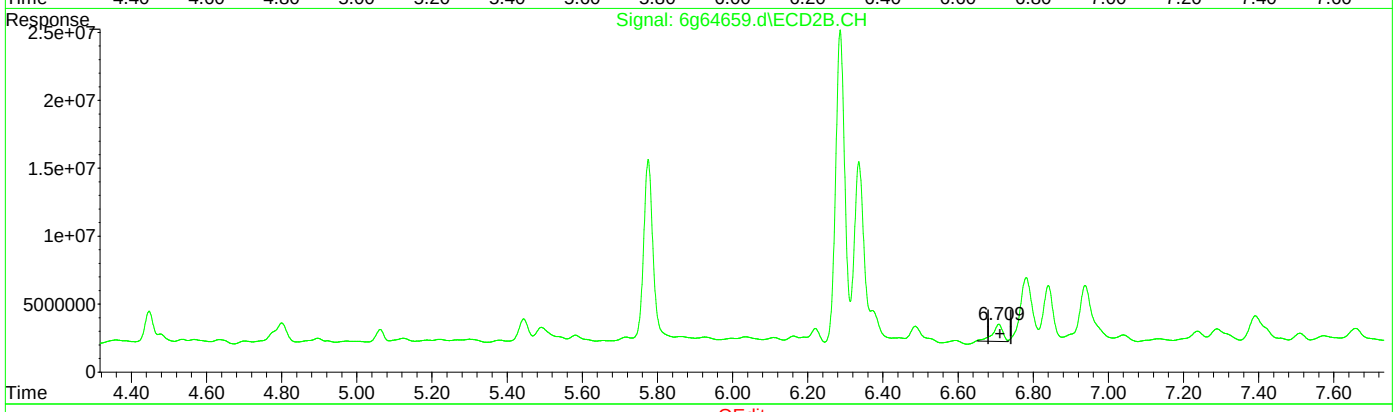
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64659.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 19:01:54
Operator : mailisih
Sample : jc86837-1
Misc : op20020,g6g2001,15.7,,,10,1
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:03:47 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(15) 4,4'-DDE (B)

5.341min 8.347 PPB

response 24495341

(15) 4,4'-DDE #2 (B)

6.709min 6.840 PPB m

response 24374025

(+) = Expected Retention Time
6pst1999.m Sun May 05 23:47:03 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434623.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 5:47 pm
Operator : tianweir
Sample : jc86837-1
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 23:48:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.272	4.057f	737.0E6	1427.1E6	55.982	134.089	#
	Spiked Amount 40.000			Recovery	=	139.96%	335.22%	
51)	S Decachlor...	10.742	12.664f	375.6E6	903.9E6	26.737	83.977	#
	Spiked Amount 40.000			Recovery	=	66.84%	209.94%	
	Target Compounds							

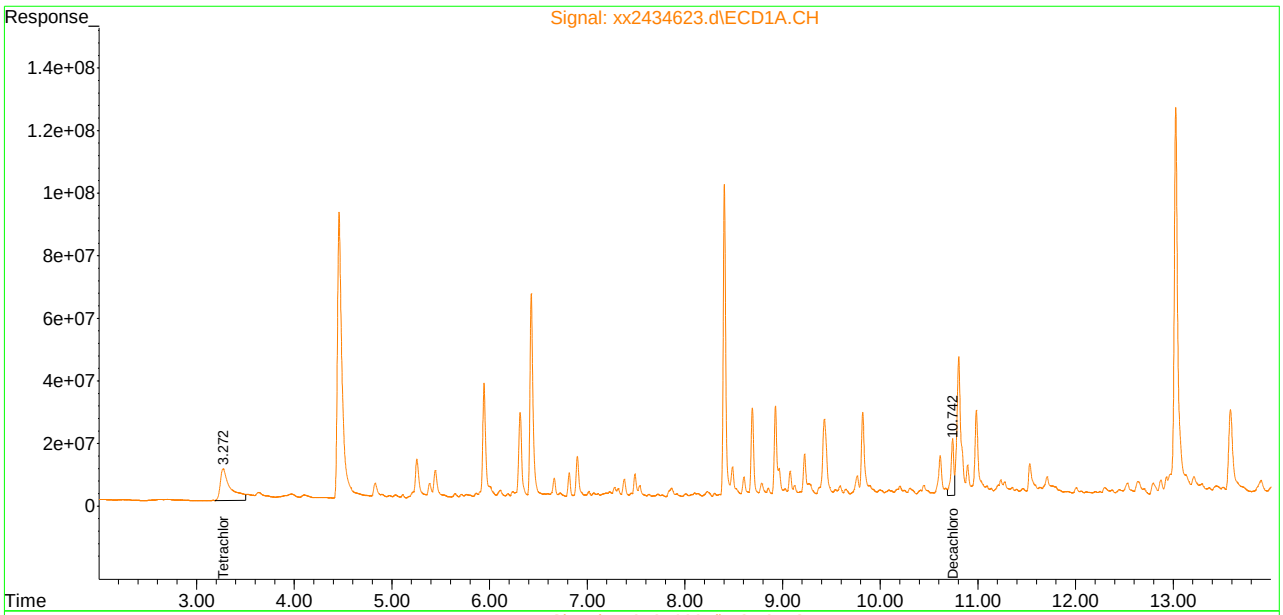
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

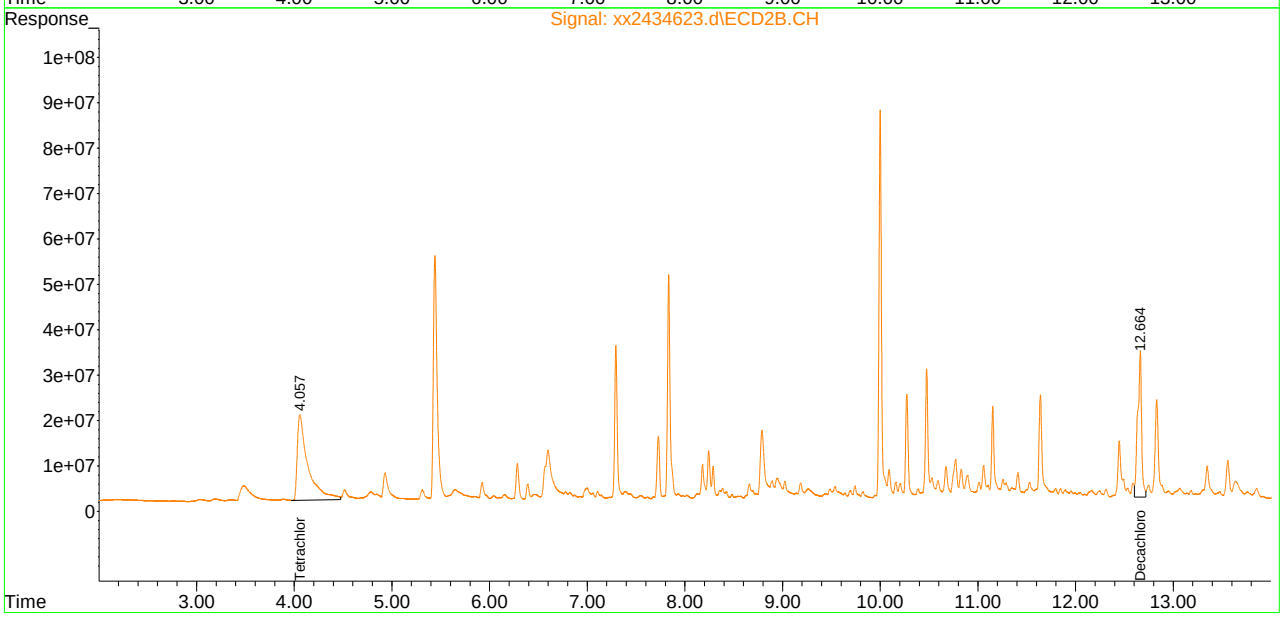
Quantitation Report (QT Reviewed)

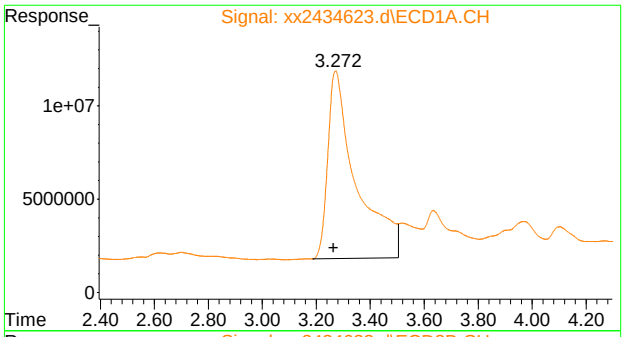
Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434623.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 5:47 pm
Operator : tianweir
Sample : jc86837-1
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 23:48:48 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

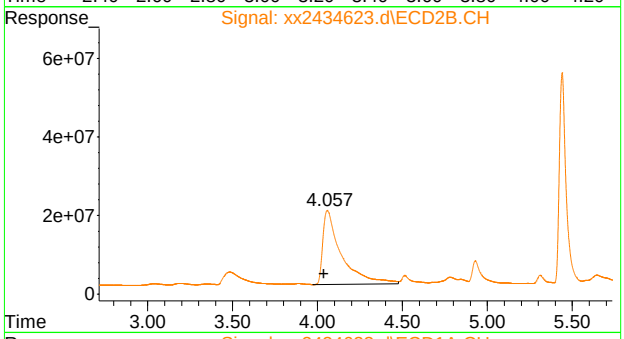






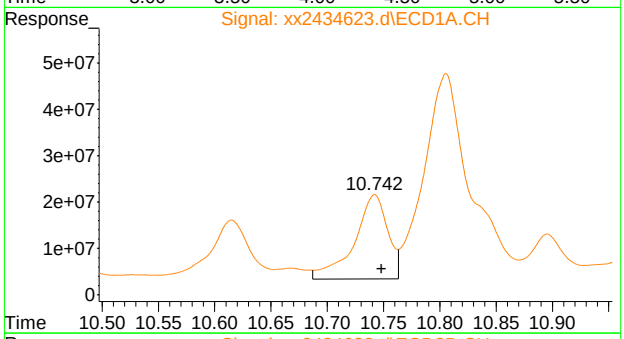
#1 Tetrachloro-m-xylene

R.T.: 3.272 min
Delta R.T.: 0.009 min
Response: 737041124
Conc: 55.98 ppb



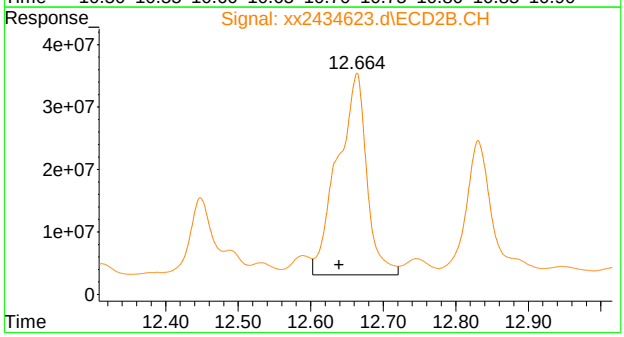
#1 Tetrachloro-m-xylene

R.T.: 4.057 min
Delta R.T.: 0.020 min
Response: 1427076795
Conc: 134.09 ppb



#51 Decachlorobiphenyl

R.T.: 10.742 min
Delta R.T.: -0.006 min
Response: 375600698
Conc: 26.74 ppb



#51 Decachlorobiphenyl

R.T.: 12.664 min
Delta R.T.: 0.025 min
Response: 903852065
Conc: 83.98 ppb

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64644.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:28:06
Operator : mailisih
Sample : op20020-mb1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
Internal Standards						
1) I 1-bromo-2...	1.950	2.166	111.1E6	196.8E6	50.000	50.000
27) I 1-bromo-2...	1.950	2.166	111.1E6	196.8E6	50.000	50.000
33) I 1-bromo-2...	1.950	2.166	111.1E6	196.8E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.551	2.980	88510080	153.1E6	52.697	39.522 #
Spiked Amount	40.000 Range	30 - 150	Recovery	=	131.74%	98.80%
26) SA Decachlor...	9.965	11.951	117.8E6	126.7E6	36.243m	37.158m
Spiked Amount	40.000		Recovery	=	90.61%	92.90%
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

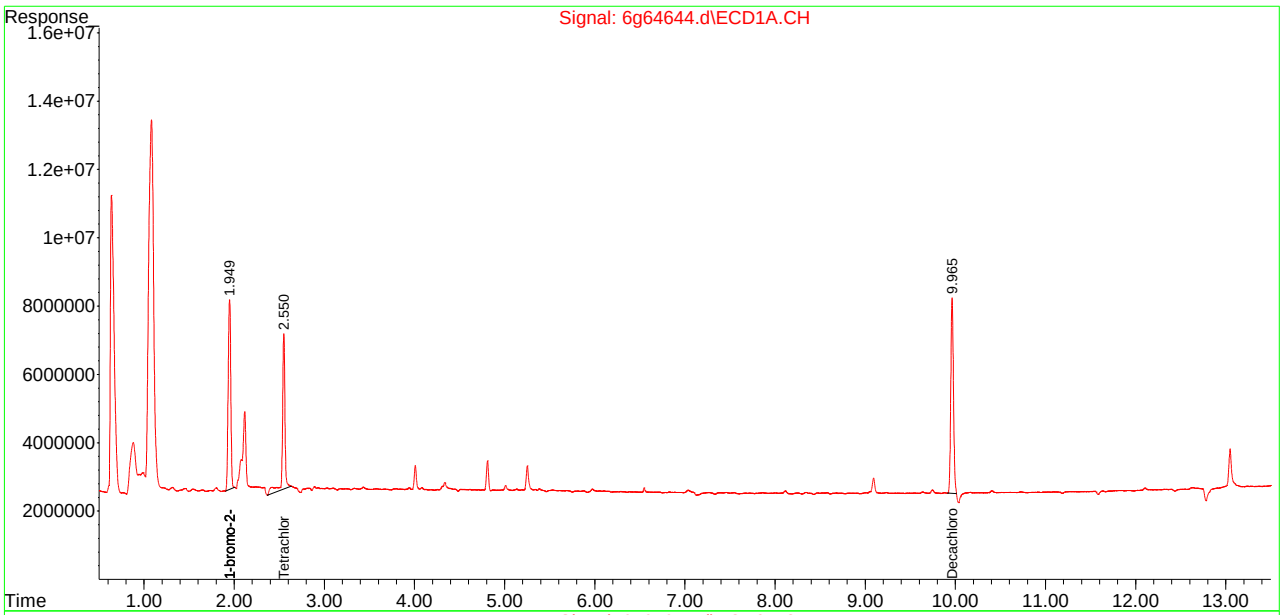
11.2.1 11

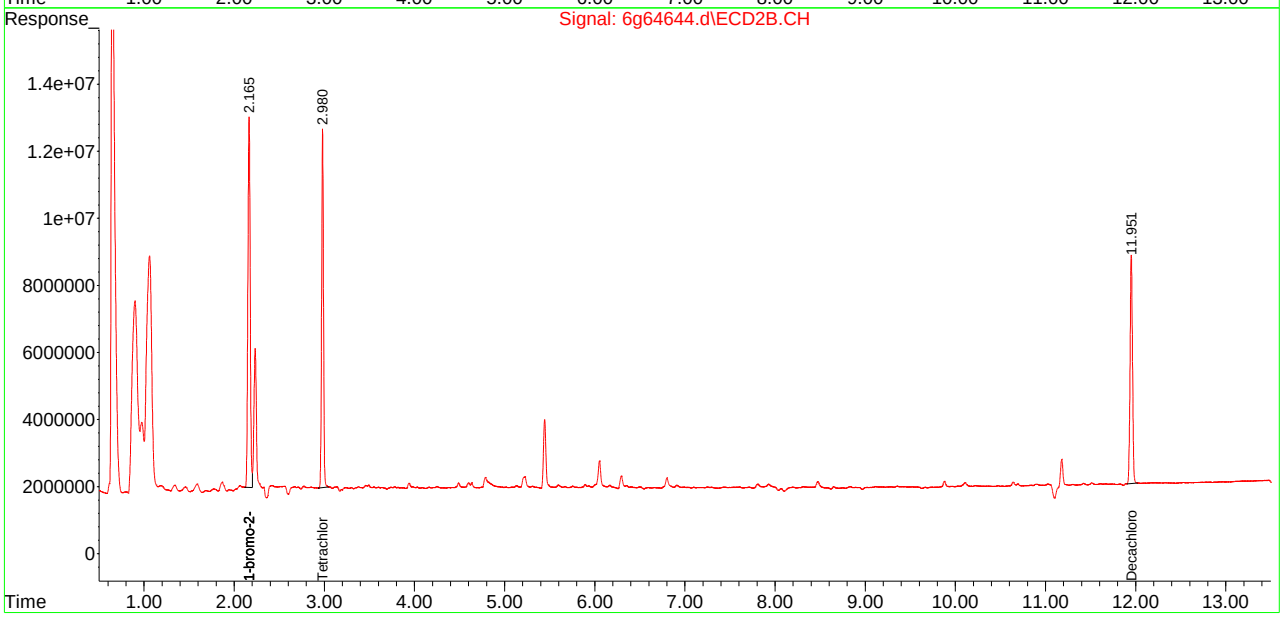
Quantitation Report (QT Reviewed)

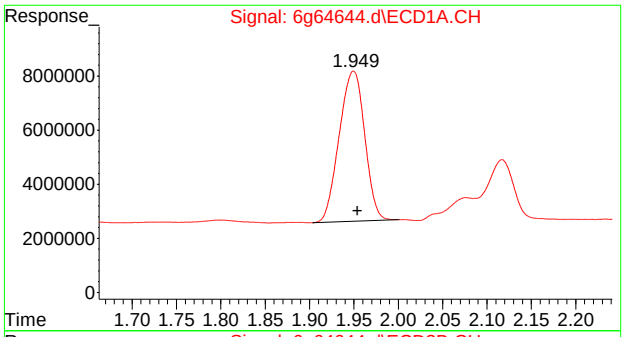
Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64644.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:28:06
Operator : mailisih
Sample : op20020-mb1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

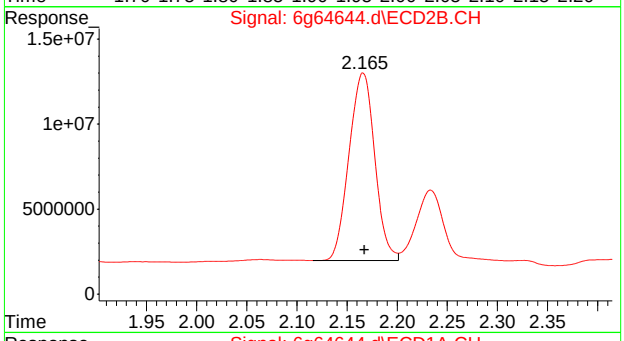






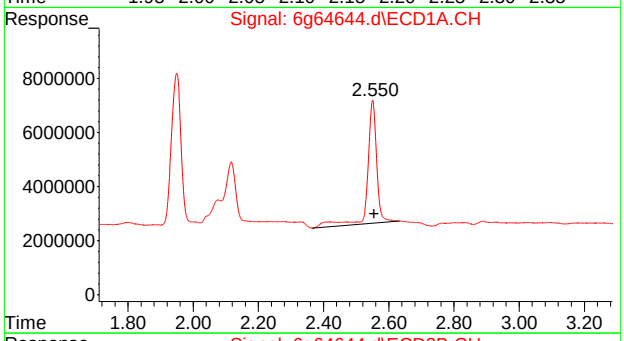
#1 1-bromo-2-nitrobenzene

R.T.: 1.950 min
Delta R.T.: -0.004 min
Response: 111116628
Conc: 50.00 PPB



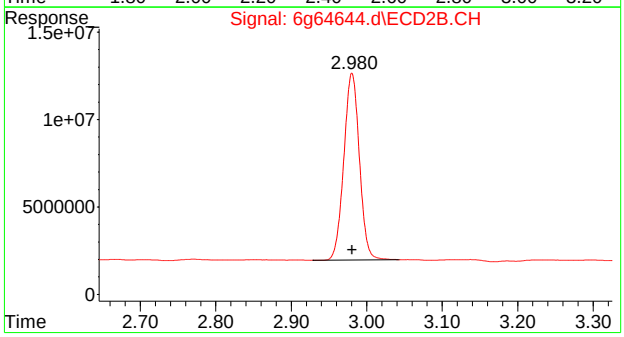
#1 1-bromo-2-nitrobenzene

R.T.: 2.166 min
Delta R.T.: -0.002 min
Response: 196813537
Conc: 50.00 PPB



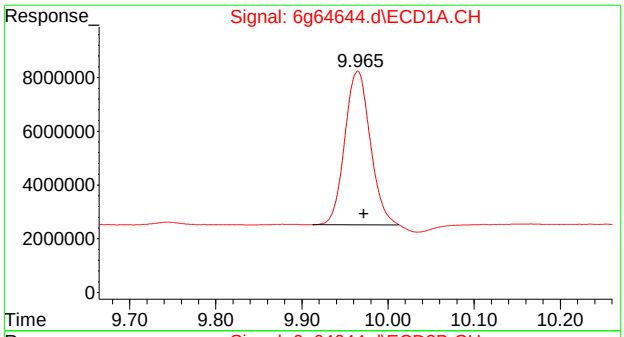
#2 Tetrachloro-m-xylene

R.T.: 2.551 min
Delta R.T.: -0.004 min
Response: 88510080
Conc: 52.70 PPB



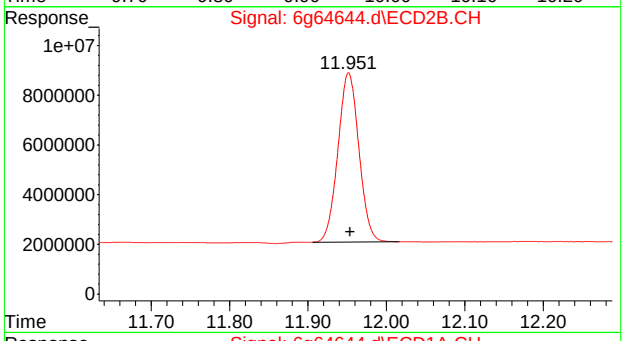
#2 Tetrachloro-m-xylene

R.T.: 2.980 min
Delta R.T.: 0.000 min
Response: 153125096
Conc: 39.52 PPB



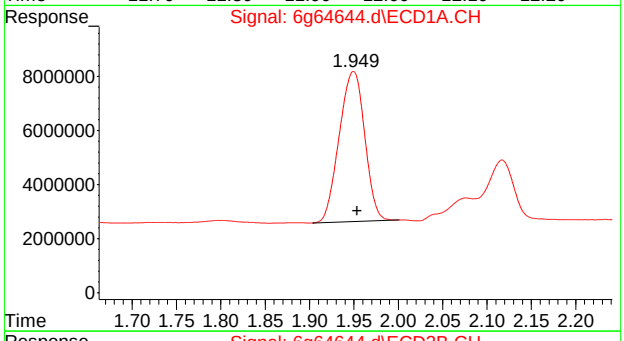
#26 Decachlorobiphenyl

R.T.: 9.965 min
Delta R.T.: -0.007 min
Response: 117824890
Conc: 36.24 PPB m



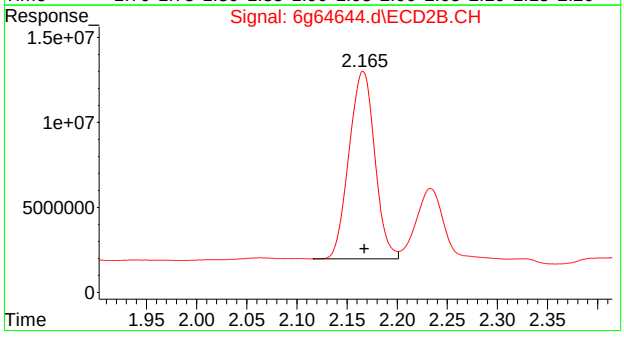
#26 Decachlorobiphenyl

R.T.: 11.951 min
Delta R.T.: -0.002 min
Response: 126682356
Conc: 37.16 PPB m



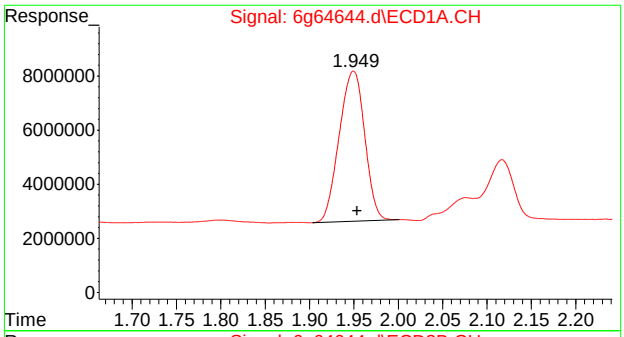
#27 1-bromo-2-nitrobenzeneA

R.T.: 1.950 min
Delta R.T.: -0.004 min
Response: 111116628
Conc: 50.00 PPB



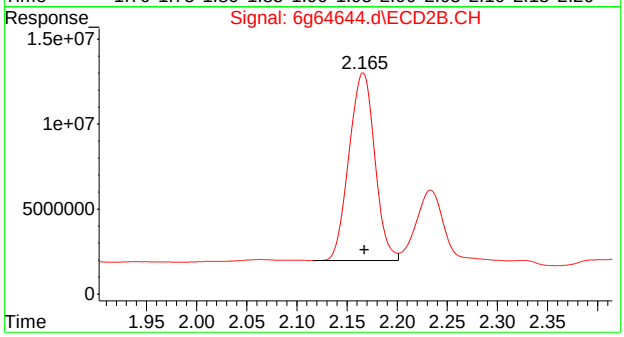
#27 1-bromo-2-nitrobenzeneA

R.T.: 2.166 min
Delta R.T.: -0.002 min
Response: 196813537
Conc: 50.00 PPB



#33 1-bromo-2-nitrobenzeneB

R.T.: 1.950 min
Delta R.T.: -0.004 min
Response: 111116628
Conc: 50.00 PPB



#33 1-bromo-2-nitrobenzeneB

R.T.: 2.166 min
Delta R.T.: -0.002 min
Response: 196813537
Conc: 50.00 PPB

Manual Integration Approval Summary

Sample Number:	OP20020-MB1	**Method:**	SW846 8081B
Lab FileID:	6G64644.D	**Analyst approved:**	05/06/19 00:43 Ann DeGuzman
Injection Time:	05/03/19 14:28	**Supervisor approved:**	05/06/19 07:51 Gwendolyn Burns

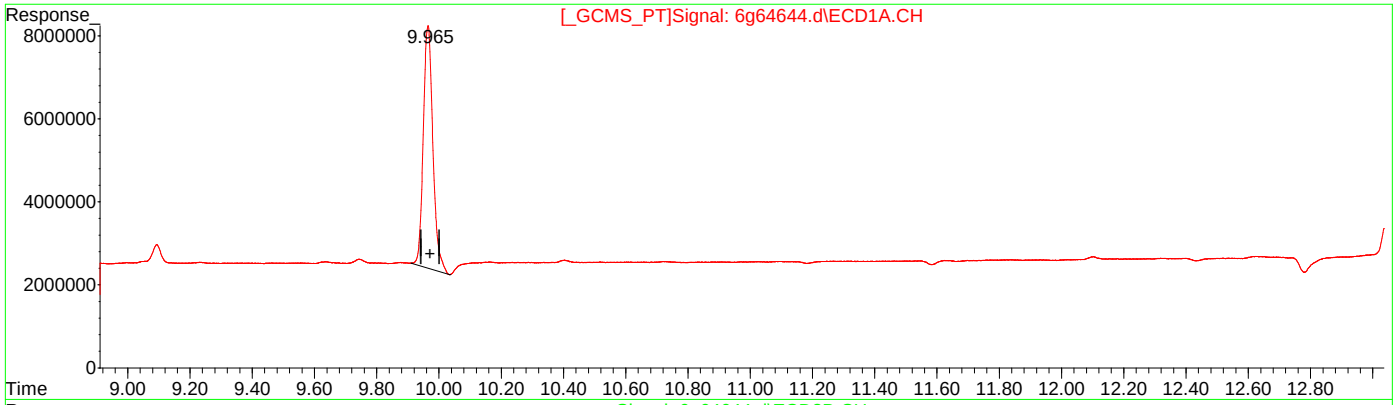
Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	1	9.96	Poor instrument integration
Decachlorobiphenyl	2051-24-3	2	11.95	Poor instrument integration

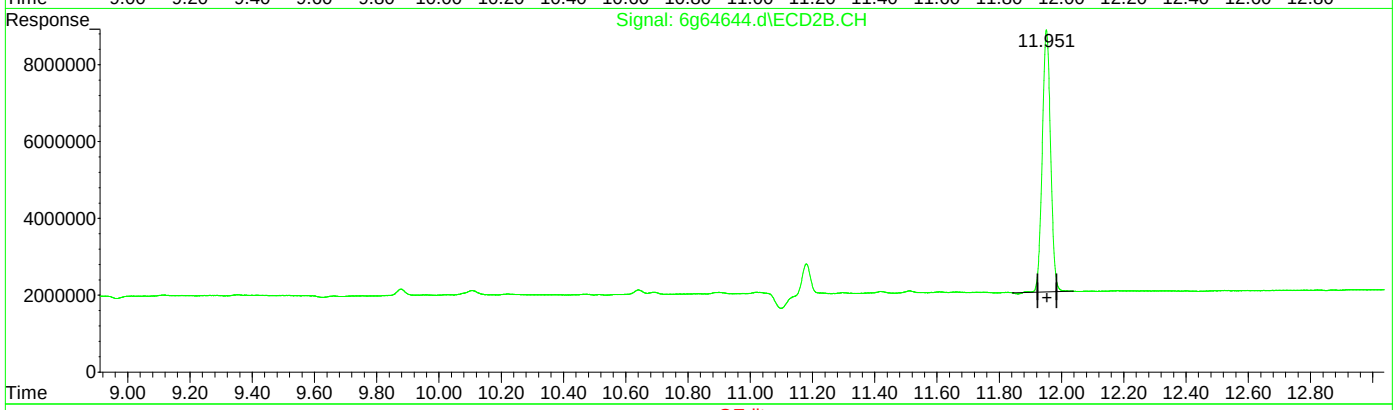
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64644.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:28:06
Operator : mailisih
Sample : op20020-mb1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.965min 38.611 PPB

response 125522474

(26) Decachlorobiphenyl #2 (SA)

11.952min 37.327 PPB

response 127256221

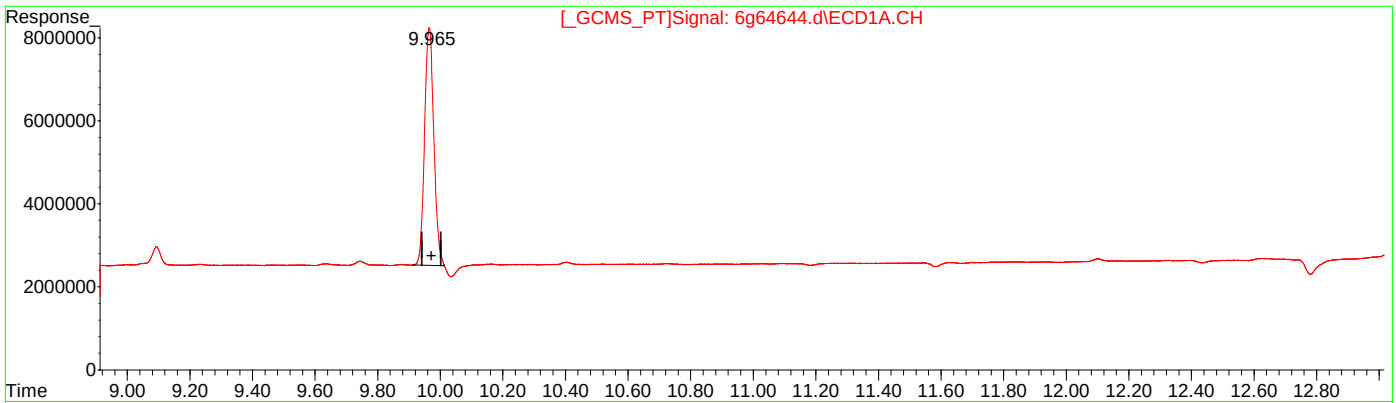
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:19:47 2019

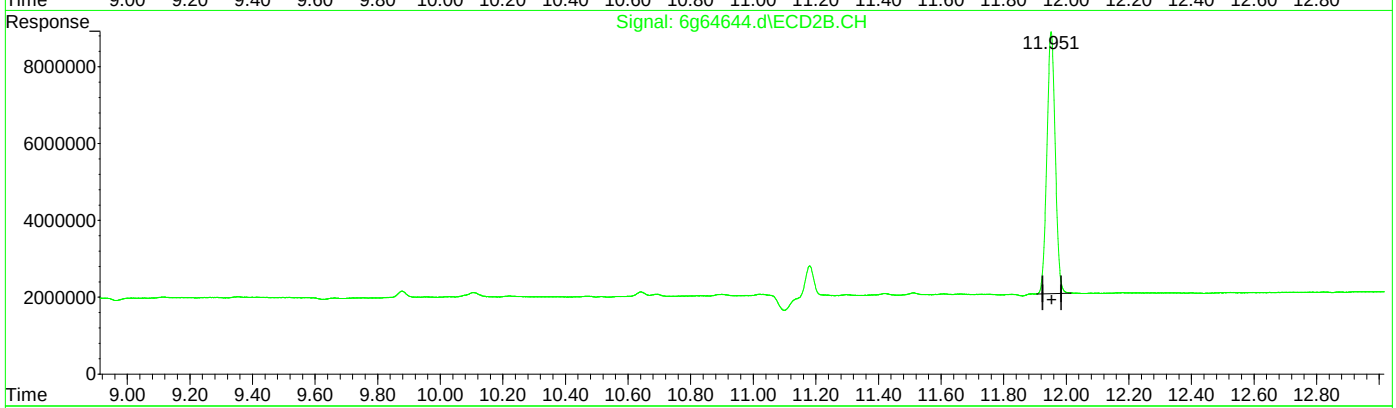
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64644.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:28:06
Operator : mailisih
Sample : op20020-mb1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 18 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.965min 36.243 PPB m

response 117824890

(26) Decachlorobiphenyl #2 (SA)

11.951min 37.158 PPB m

response 126682356

(+) = Expected Retention Time
6pst1999.m Sun May 05 21:20:25 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434600.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:46 am
Operator : tianweir
Sample : op20019-mb1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:53:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.267	4.037	402.8E6	361.1E6	30.593	33.928
	Spiked Amount	40.000		Recovery	=	76.48%	84.82%
51) S	Decachlor...	10.749	12.639	418.6E6	376.2E6	29.797	34.953
	Spiked Amount	40.000		Recovery	=	74.49%	87.38%
	Target Compounds						

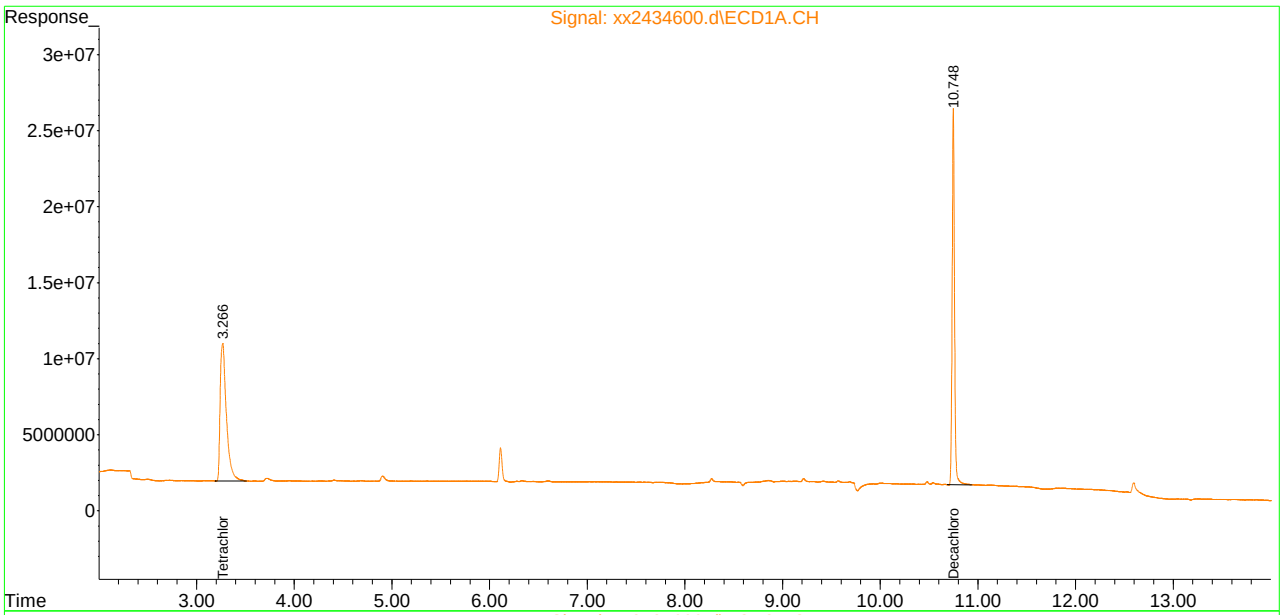
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

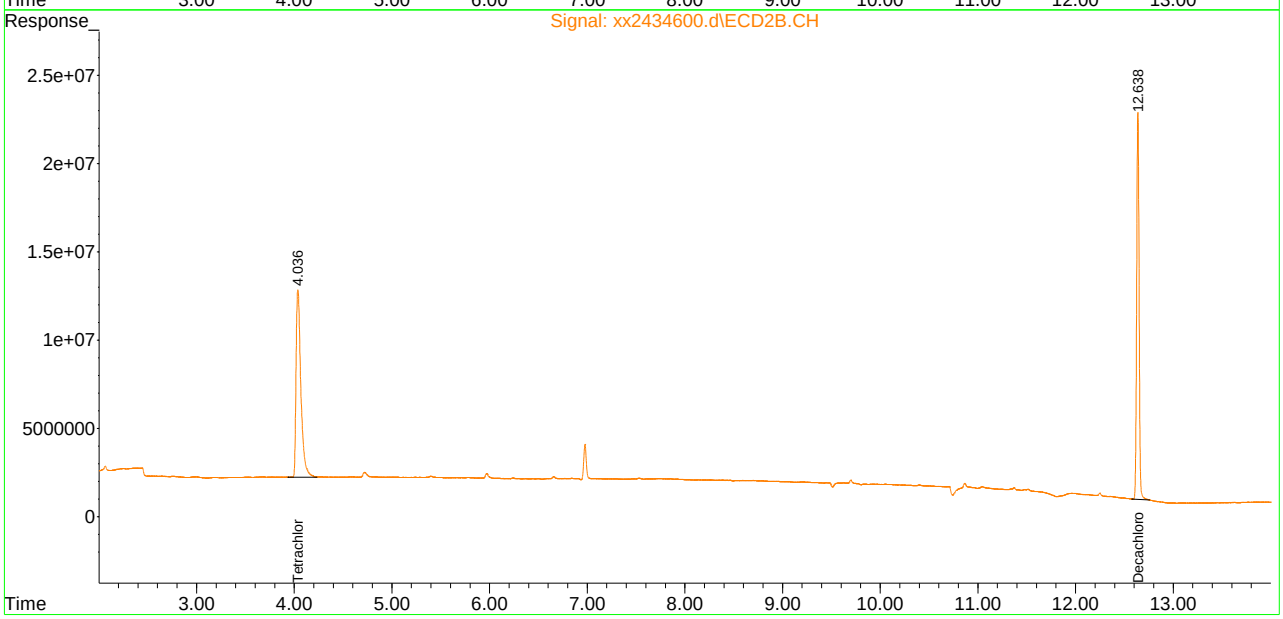
Quantitation Report (QT Reviewed)

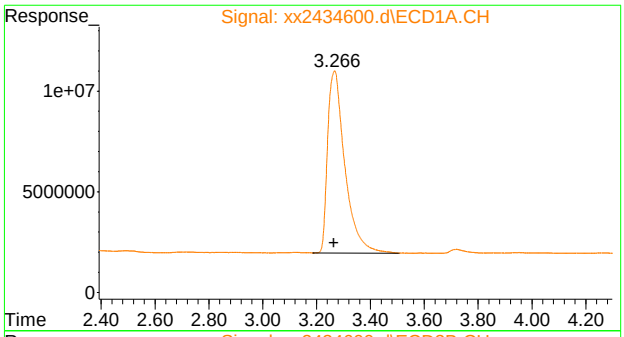
Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434600.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:46 am
Operator : tianweir
Sample : op20019-mb1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:53:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

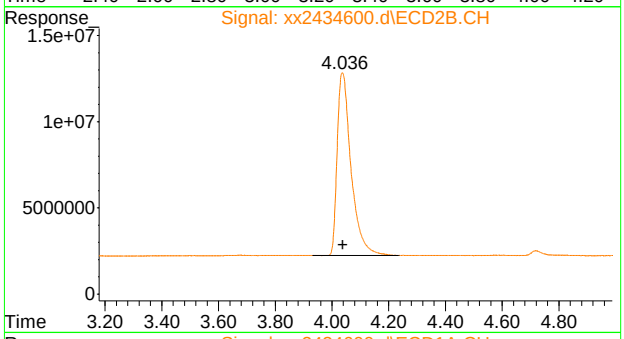






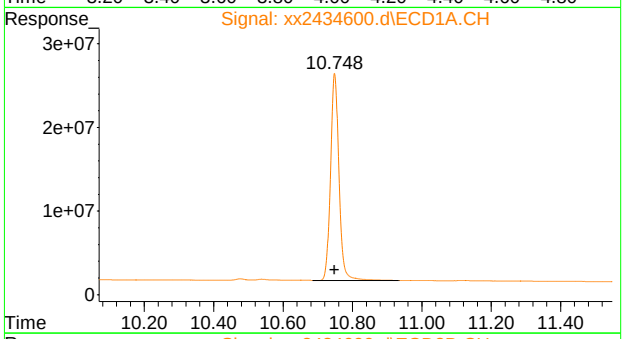
#1 Tetrachloro-m-xylene

R.T.: 3.267 min
Delta R.T.: 0.004 min
Response: 402780589
Conc: 30.59 ppb



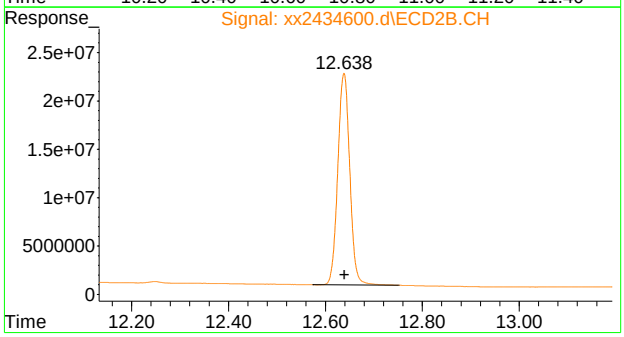
#1 Tetrachloro-m-xylene

R.T.: 4.037 min
Delta R.T.: 0.000 min
Response: 361087973
Conc: 33.93 ppb



#51 Decachlorobiphenyl

R.T.: 10.749 min
Delta R.T.: 0.000 min
Response: 418594351
Conc: 29.80 ppb



#51 Decachlorobiphenyl

R.T.: 12.639 min
Delta R.T.: 0.000 min
Response: 376203527
Conc: 34.95 ppb

Manual Integrations APPROVED
(compounds with "m" flag)
Gwendolyn Burns
05/06/19 07:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64645.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:46:30
Operator : mailisih
Sample : op20020-bs1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:23:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	Internal Standards							
1)	I 1-bromo-2...	1.952	2.167	120.9E6	198.6E6	50.000	50.000	
27)	I 1-bromo-2...	1.952	2.167	120.9E6	198.6E6	50.000	50.000	
33)	I 1-bromo-2...	1.952	2.167	120.9E6	198.6E6	50.000	50.000	
	System Monitoring Compounds							
2)	SAB Tetrachlo...	2.554	2.981	58726799	117.0E6	32.125m	29.930	
	Spiked Amount 40.000	Range 30 - 150		Recovery =		80.31%	74.83%	
26)	SA Decachlor...	9.967	11.953	97525979	103.5E6	27.563m	30.083m	
	Spiked Amount 40.000			Recovery =		68.91%	75.21%	
	Target Compounds							
3)	hexachlor...	2.889	3.491	71846836	74539520	16.645	17.912	
4)	A alpha-BHC	3.031	3.644	48714099	83298963	15.277	16.012	
5)	MA gamma-BHC	3.329	4.074	45740887	77077885	15.093	15.959	
6)	MA Heptachlor	3.831	4.653	43644908	79298153	13.028	16.081	
7)	B beta-BHC	3.405	4.161	21755034	39907088	16.353	17.847	
8)	B delta-BHC	3.592	4.558	42095343	73058259	15.030	16.409	
9)	MB Aldrin	4.170	5.107	50239584	74135535	16.277	16.506	
10)	alachlor	4.316	4.915	7470600	12112784	20.589	18.990	
11)	B Heptachlo...	4.893	5.932	45788412	72241984	15.388	16.789	
12)	B gamma-Chl...	5.058	6.218	47128385	73102955	16.188	17.246	
13)	B alpha-Chl...	5.232	6.445	51139600	72676773	17.955	17.316	
14)	A Endosulfan I	5.411	6.542	44314762	66258627	14.835	16.855	
15)	B 4,4'-DDE	5.344	6.711	45518836	65669977	16.420	17.033	
16)	MA Dieldrin	5.737	6.978	43296179	72190068	14.518	17.102	
17)	MA Endrin	6.064	7.483	41002020	69934984	14.502	17.460	
18)	A 4,4'-DDD	6.188	7.665	27802936	57840947	14.158	17.634	
19)	B Endosulfa...	6.388	7.834	40448960	66676147	14.755	17.249	
20)	MA 4,4'-DDT	6.612	8.198	32514884	59851449	15.473	19.697	#
21)	B Endrin Al...	7.021	8.408	35224507	49920497	15.318	15.928	
22)	B Endosulfa...	7.711	8.879	36357351	63150709	15.190	18.110	
23)	A Methoxychlor	7.402	9.445	18691157	35061542	13.971	18.564	#
25)	B Endrin Ke...	8.151	9.842	41631505	71241004	14.533	17.944	
	Sum Toxaphene			0	0	N.D.	N.D.	
	Average Toxaphene					0.000	0.000	

SemiQuant Compounds - Not Calibrated on this Instrument

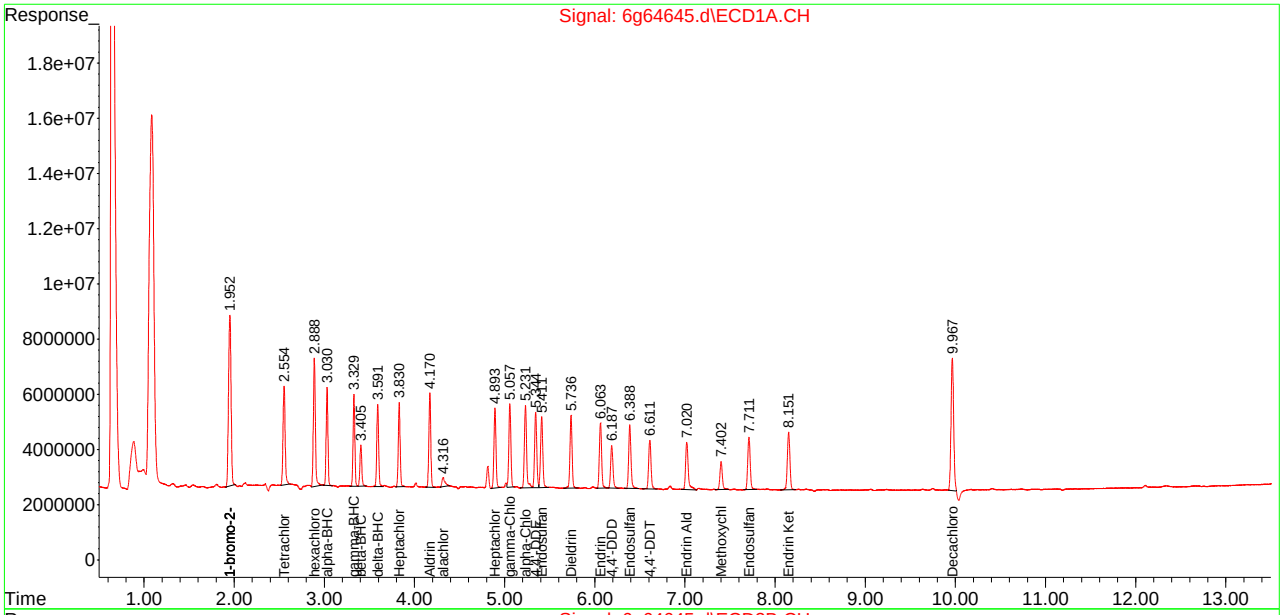
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

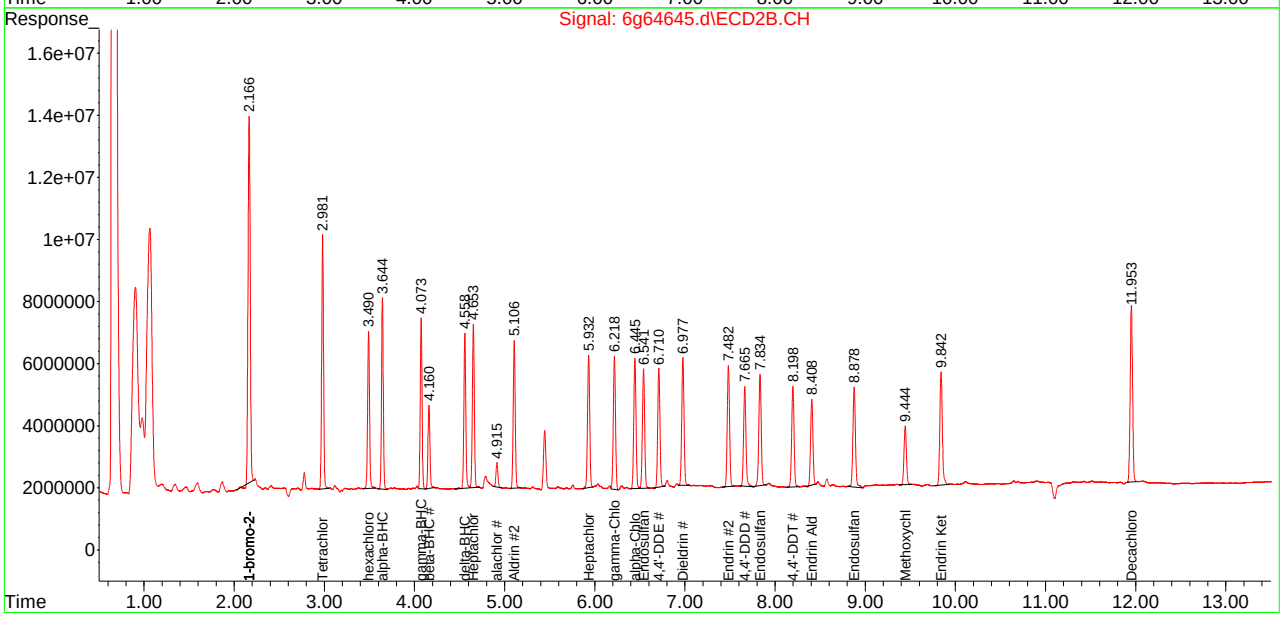
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64645.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:46:30
Operator : mailisih
Sample : op20020-bs1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:23:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number: OP20020-BS1
Lab FileID: 6G64645.D
Injection Time: 05/03/19 14:46
Method: SW846 8081B
Analyst approved: 05/06/19 00:43 Ann DeGuzman
Supervisor approved: 05/06/19 07:51 Gwendolyn Burns

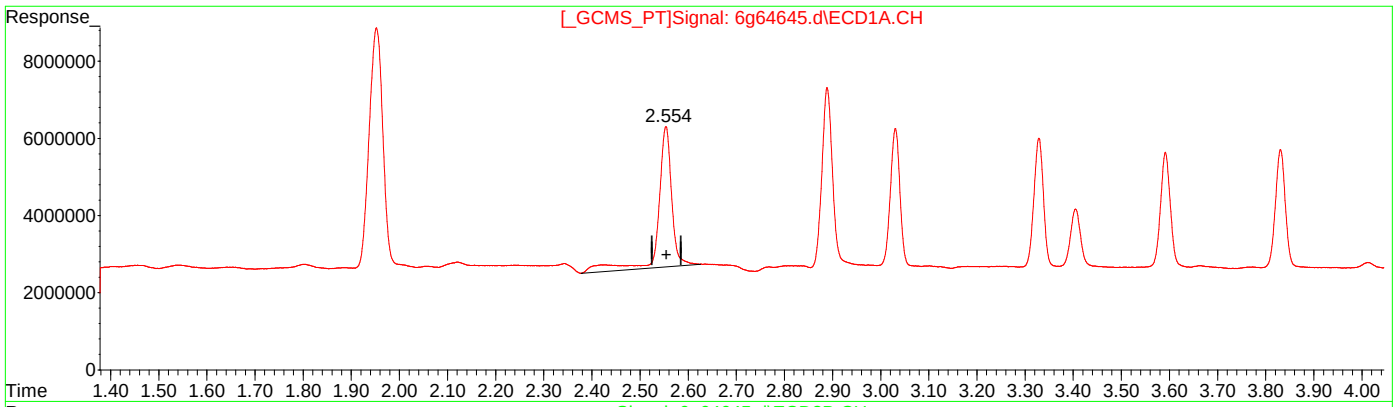
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.55	Poor instrument integration
Decachlorobiphenyl	2051-24-3	1	9.97	Poor instrument integration
Decachlorobiphenyl	2051-24-3	2	11.95	Poor instrument integration

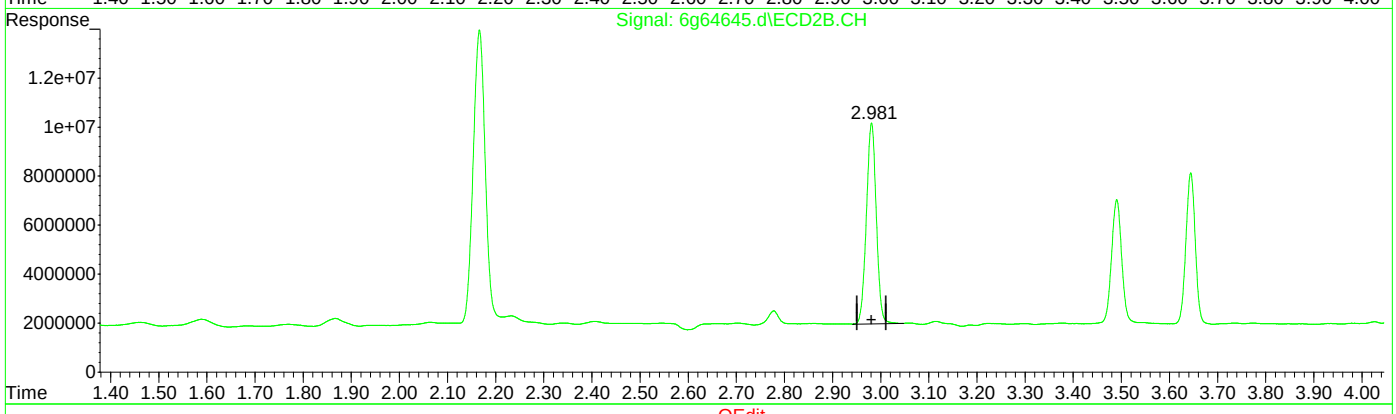
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64645.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:46:30
Operator : mailisih
Sample : op20020-bs1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(2) Tetrachloro-m-xylene (SAB)

2.554min 38.871 PPB

response 71059536

(2) Tetrachloro-m-xylene #2 (SAB)

2.981min 29.930 PPB

response 117034444

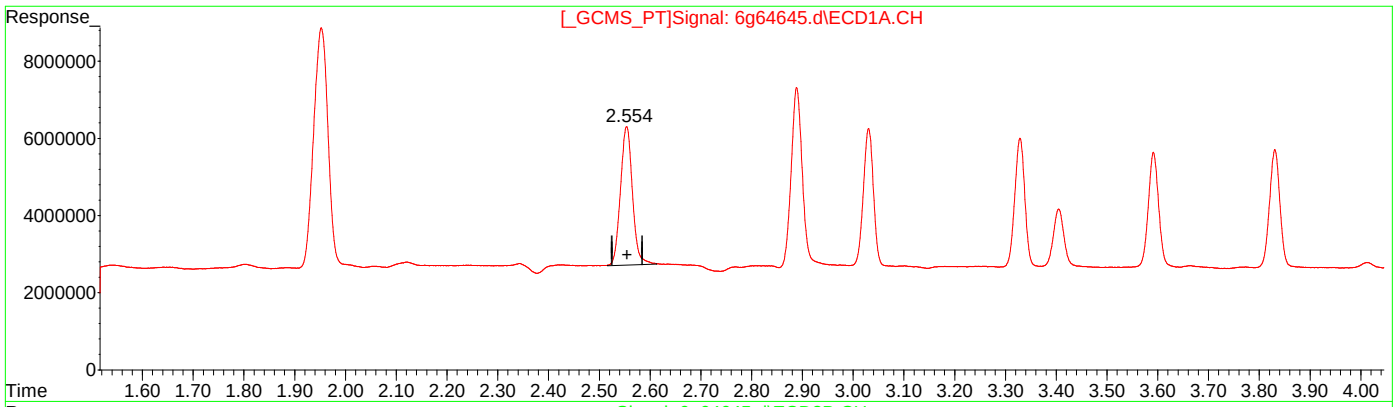
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:21:35 2019

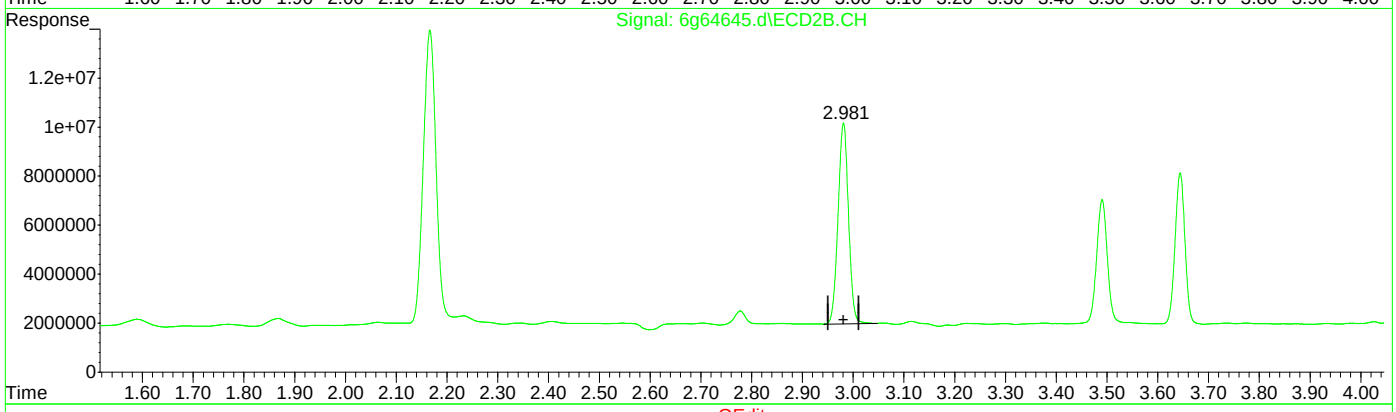
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64645.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:46:30
Operator : mailisih
Sample : op20020-bs1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(2) Tetrachloro-m-xylene (SAB)

2.554min 32.125 PPB m

response 58726799

(2) Tetrachloro-m-xylene #2 (SAB)

2.981min 29.930 PPB

response 117034444

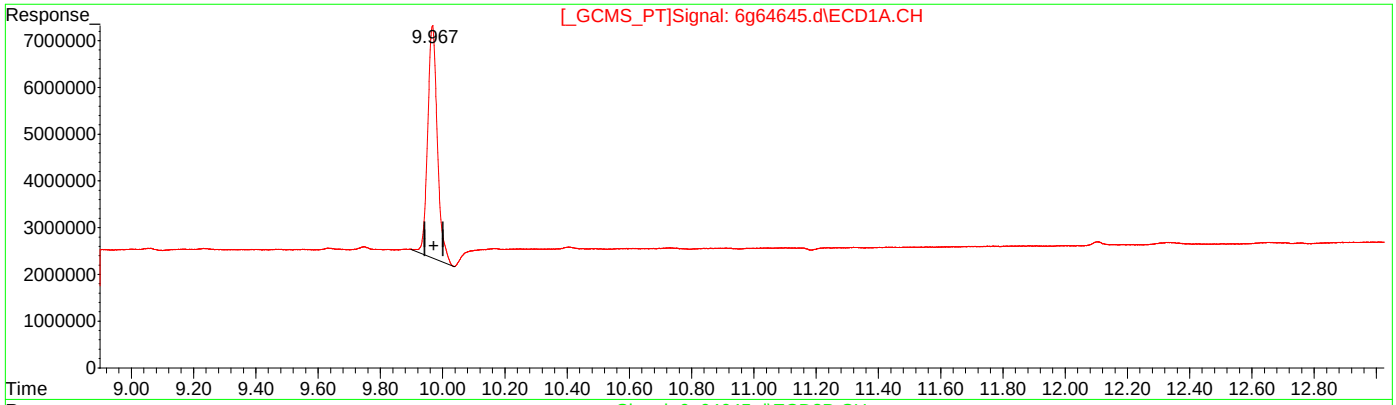
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:22:01 2019

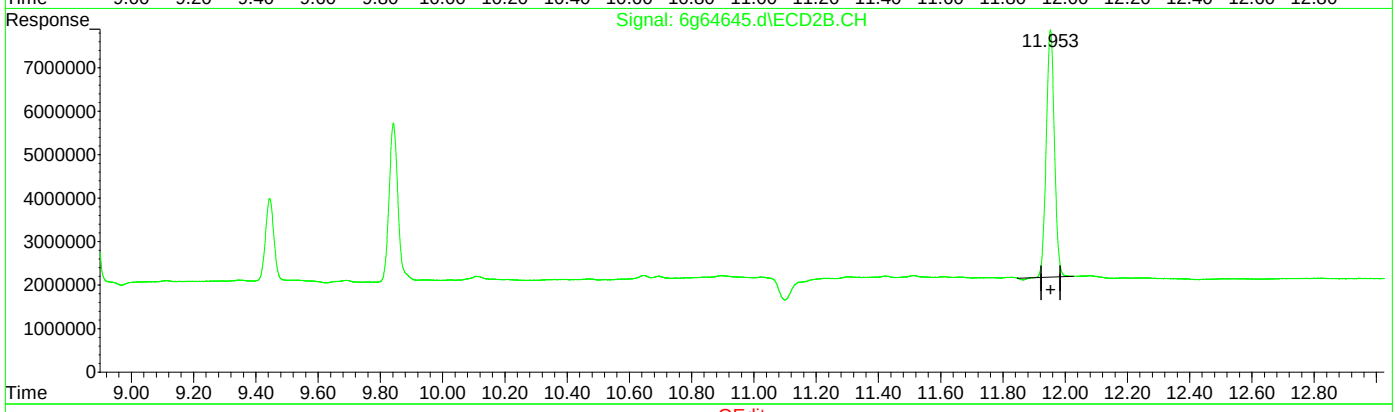
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64645.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:46:30
Operator : mailisih
Sample : op20020-bs1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.967min 30.481 PPB

response 107852953

(26) Decachlorobiphenyl #2 (SA)

11.953min 30.112 PPB

response 103612277

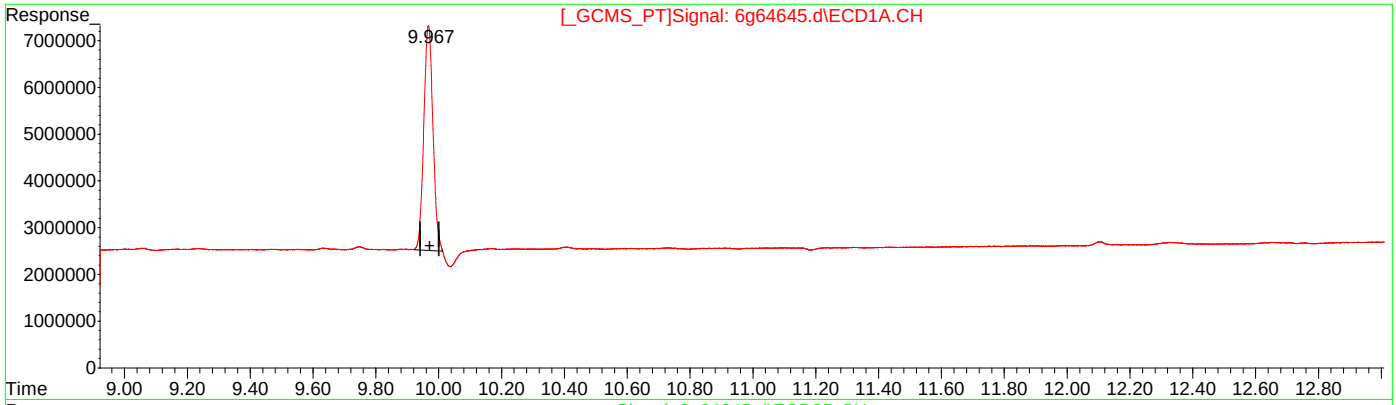
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:22:36 2019

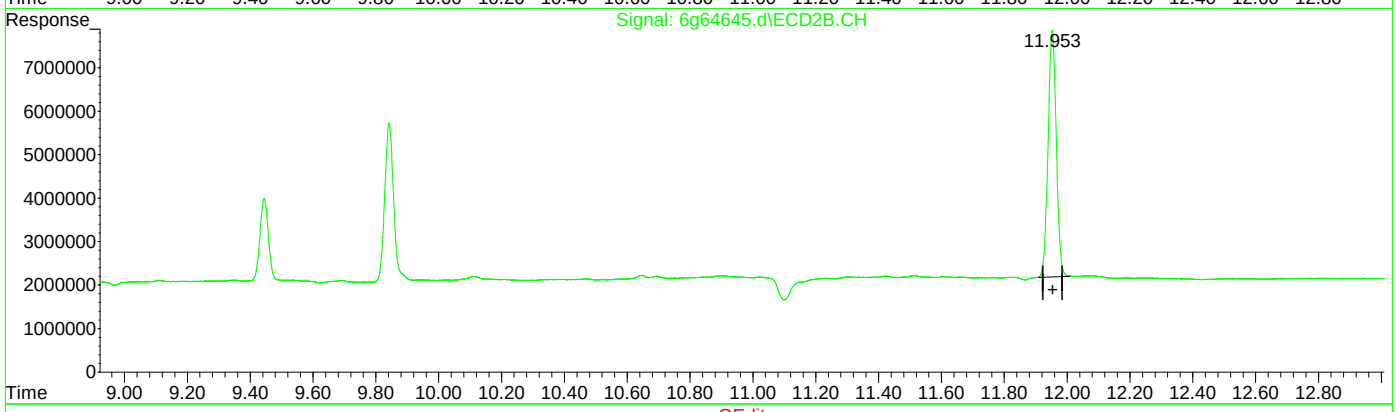
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64645.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 14:46:30
Operator : mailisih
Sample : op20020-bs1
Misc : op20020,g6g2001,15.0,,,10,1
ALS Vial : 19 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.967min 27.563 PPB m

response 97525979

(26) Decachlorobiphenyl #2 (SA)

11.953min 30.083 PPB m

response 103510303

(+) = Expected Retention Time
6pst1999.m Sun May 05 21:23:12 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:56:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.265	4.037	573.7E6	514.7E6	43.577	48.358
	Spiked Amount 40.000			Recovery	= 108.94%		120.90%
51) S	Decachlor...	10.749	12.639	599.4E6	538.2E6	42.668	50.000
	Spiked Amount 40.000			Recovery	= 106.67%		125.00%
	Target Compounds						
41)	AR1016-A	3.671	4.729	65304410	50529389	235.061	266.283
42)	AR1016-B	4.107	5.307	109.5E6	92577784	219.203	231.606
43)	AR1016-C	4.694	5.968	233.6E6	201.3E6	202.451	225.280m
44)	AR1016-D	4.867	6.161	94242989	73978797	221.855	224.965
45)	AR1016-E	5.403	6.838	94353031	63643579	216.109	241.971
46)	AR1260-A	7.841	9.486	200.8E6	200.2E6	204.548	231.368m
47)	AR1260-B	8.004	9.606	114.4E6	141.3E6	208.165	237.945
48)	AR1260-C	8.349	10.047	132.7E6	135.8E6	210.192	242.322
49)	AR1260-D	8.787	10.390	275.1E6	331.3E6	208.491	236.348
50)	AR1260-E	9.185	10.946f	299.4E6	326.4E6	201.046m	230.994m

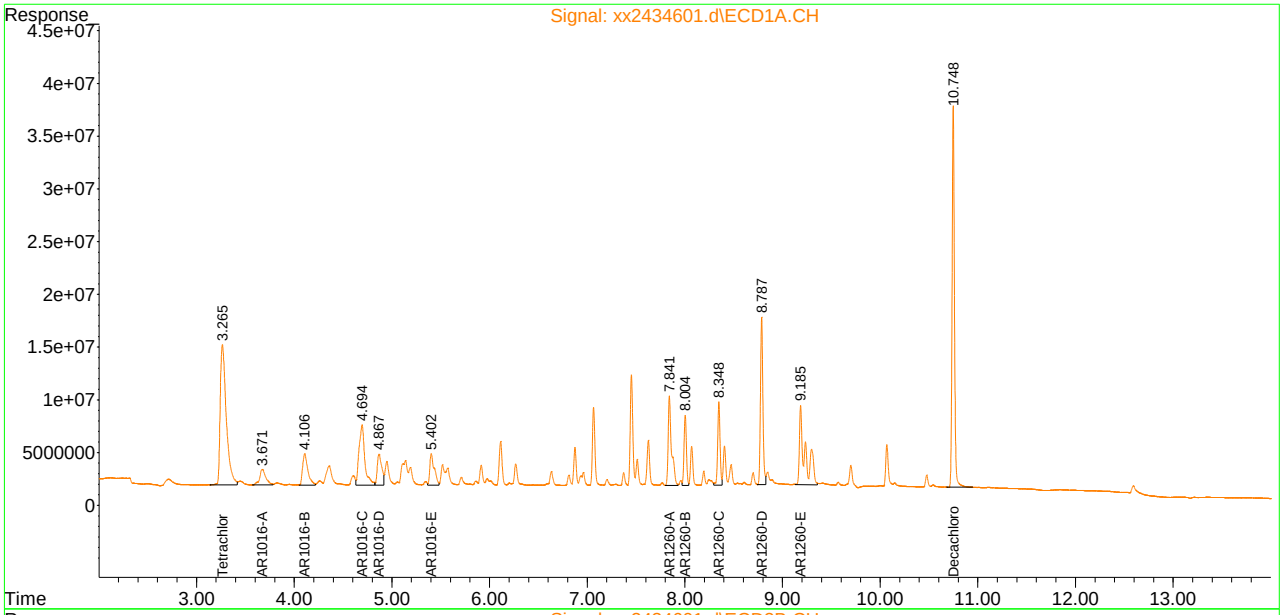
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

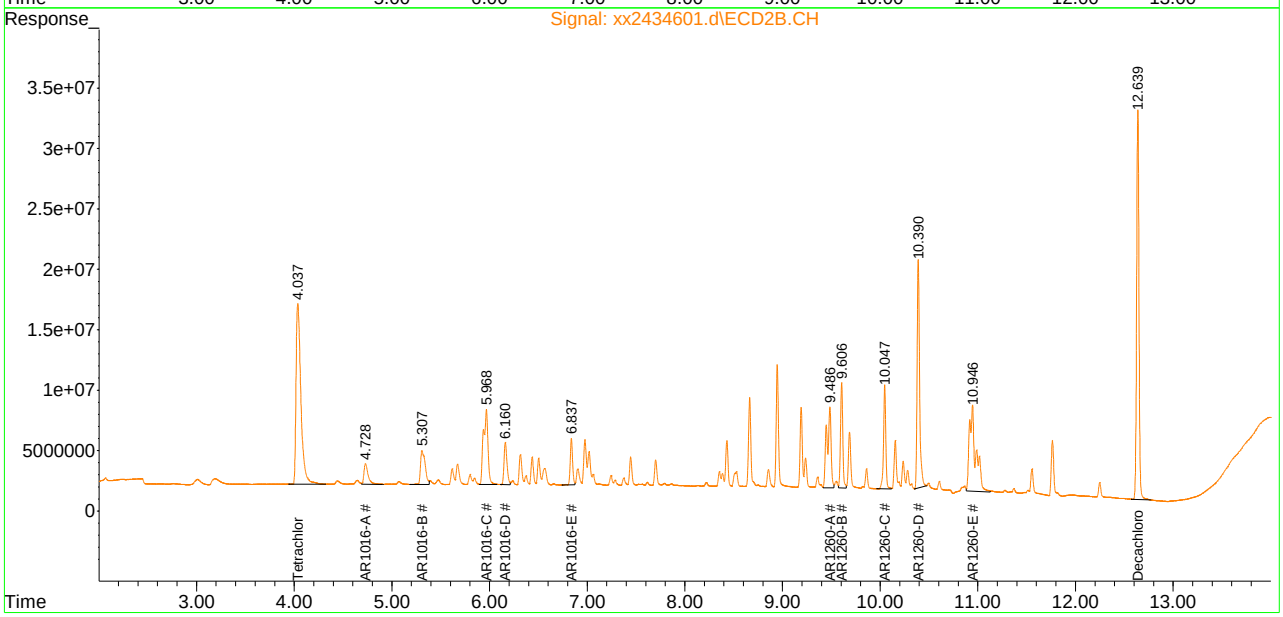
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:56:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	OP20019-BS1	**Method:**	SW846 8082A
Lab FileID:	XX2434601.D	**Analyst approved:**	05/06/19 00:58 Syra Marie Pacheco
Injection Time:	05/04/19 11:04	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

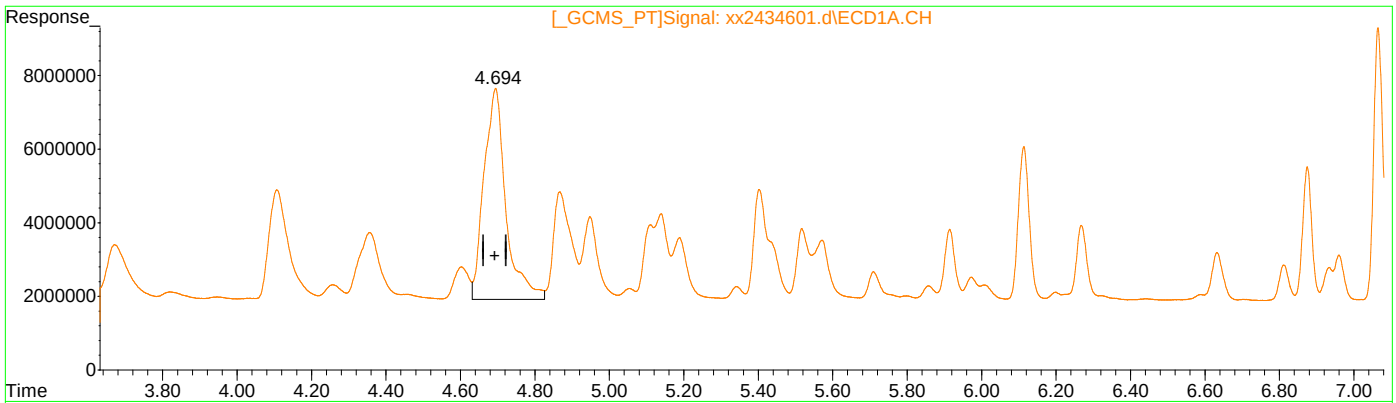
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Poorly defined baseline
AR1260-E		1	9.19	Poorly defined baseline
AR1260-A		2	9.49	Poorly defined baseline
AR1260-E		2	10.95	Poorly defined baseline

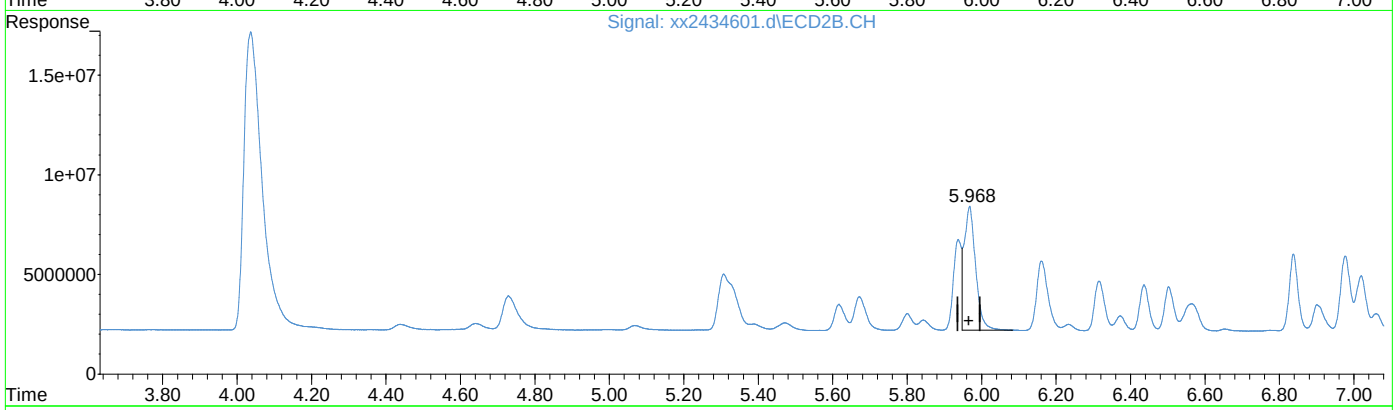
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:45:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.694min 202.451 PPB

response 233643700

(43) AR1016-C #2

5.968min 148.855 PPB

response 133042747

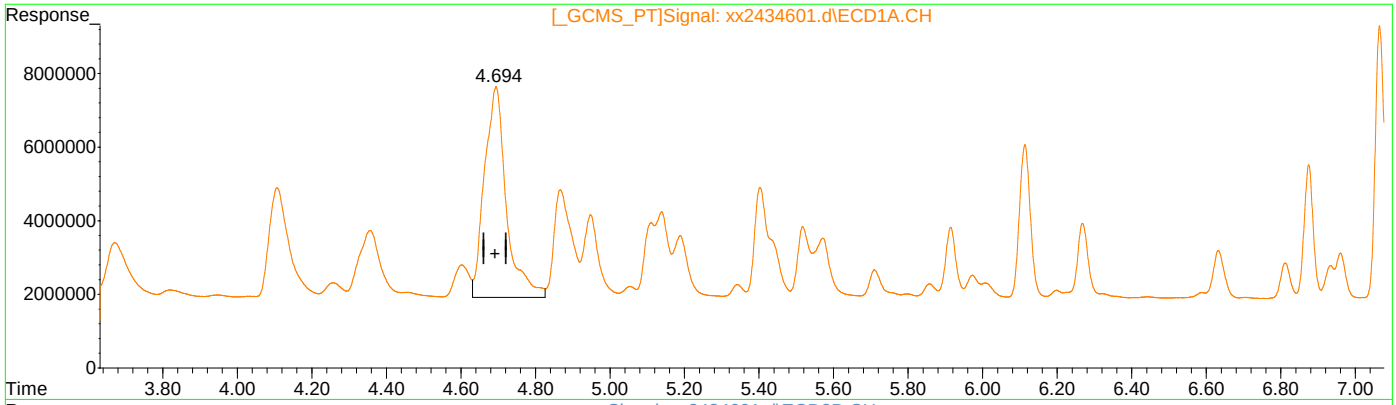
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:54:41 2019

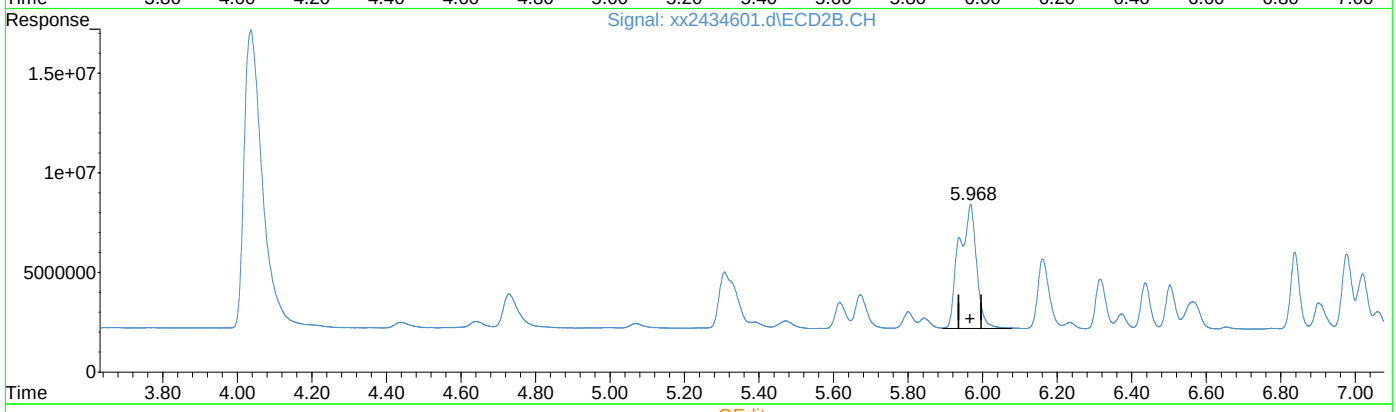
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:45:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.694min 202.451 PPB

response 233643700

(43) AR1016-C #2

5.968min 225.280 PPB m

response 201349864

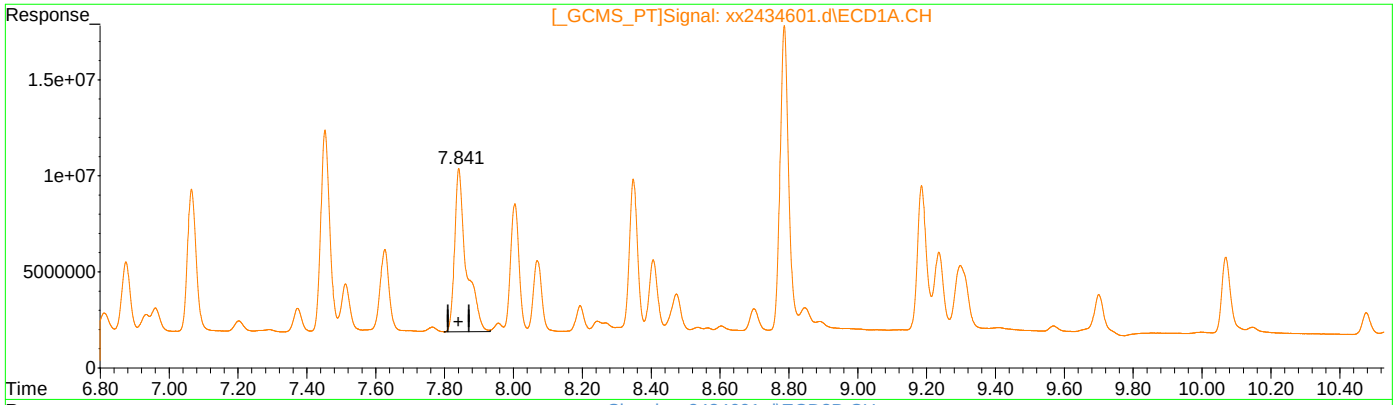
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:55:19 2019

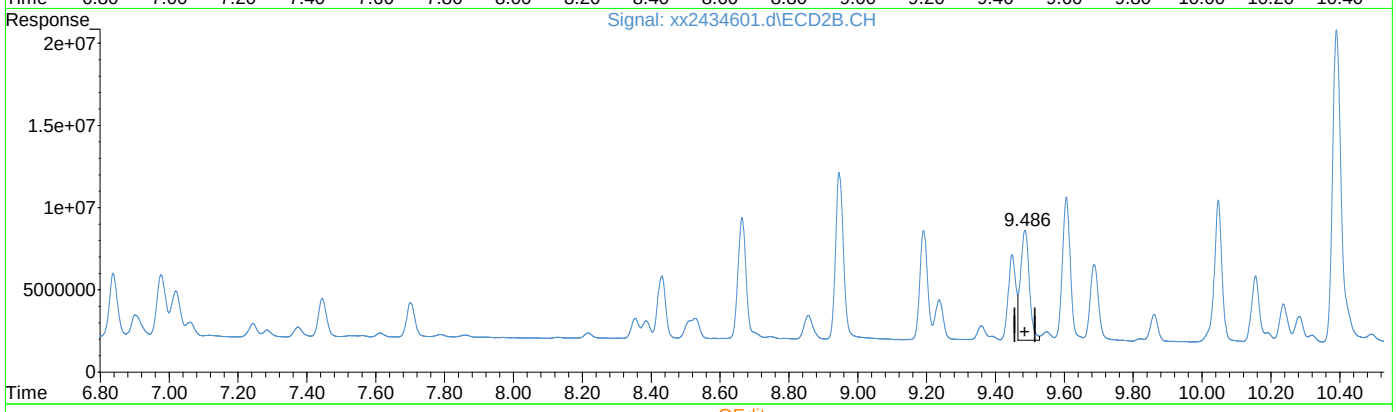
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:45:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.841min 204.548 PPB

response 200844163

(46) AR1260-A #2

9.486min 138.075 PPB

response 119479805

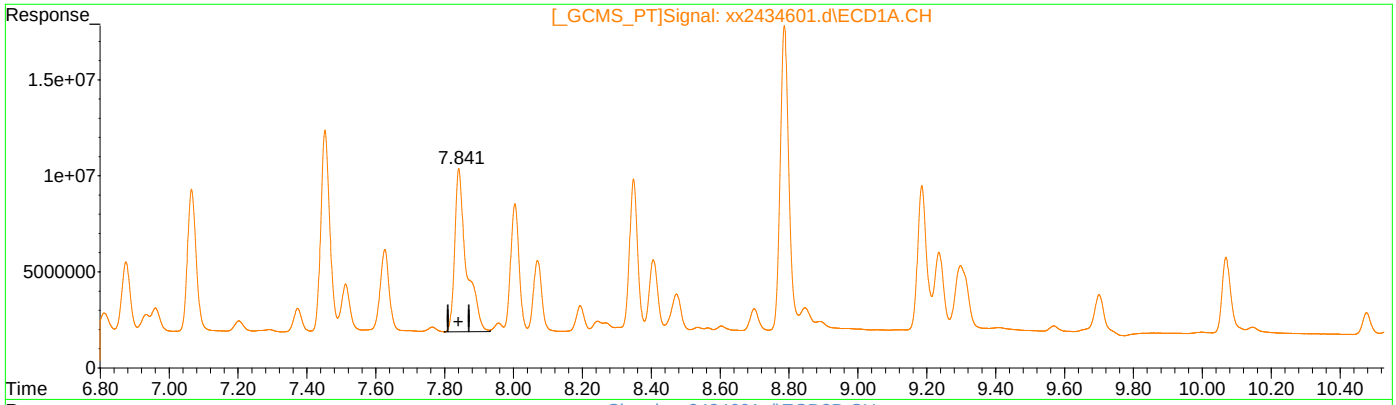
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:55:36 2019

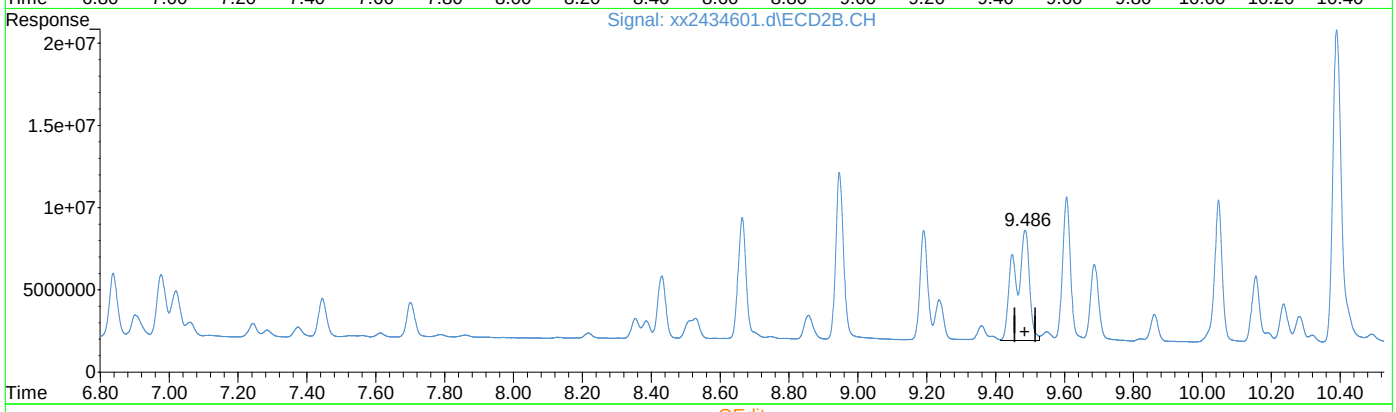
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:45:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.841min 204.548 PPB

response 200844163

(46) AR1260-A #2

9.486min 231.368 PPB m

response 200208161

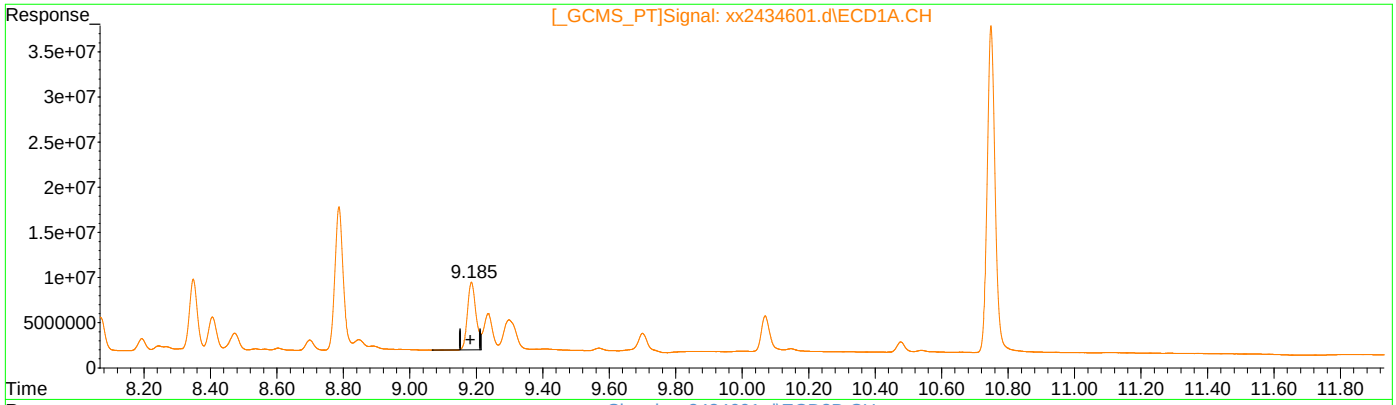
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:55:52 2019

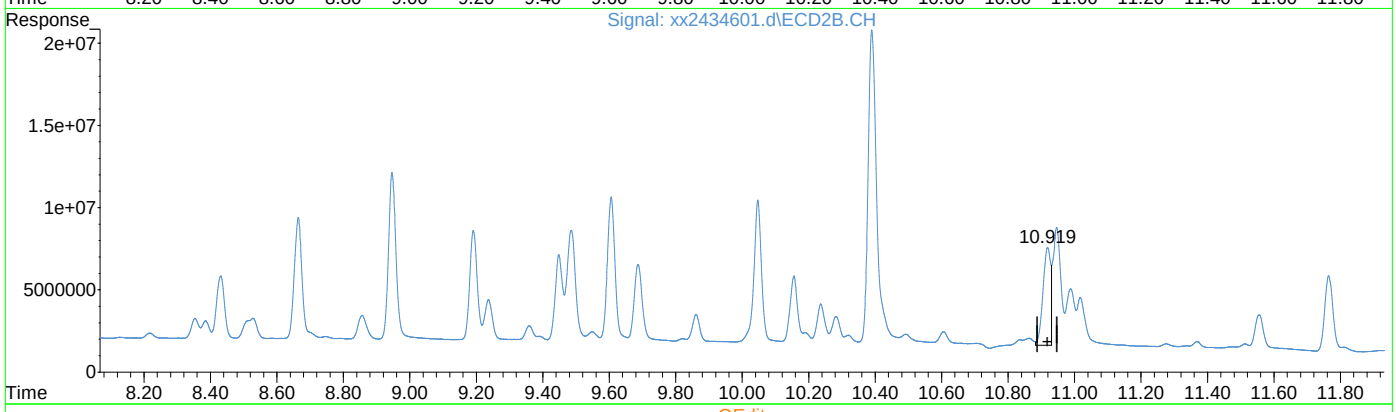
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:45:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.186min 89.250 PPB

response 132925523

(50) AR1260-E #2

10.919min 66.656 PPB

response 94200230

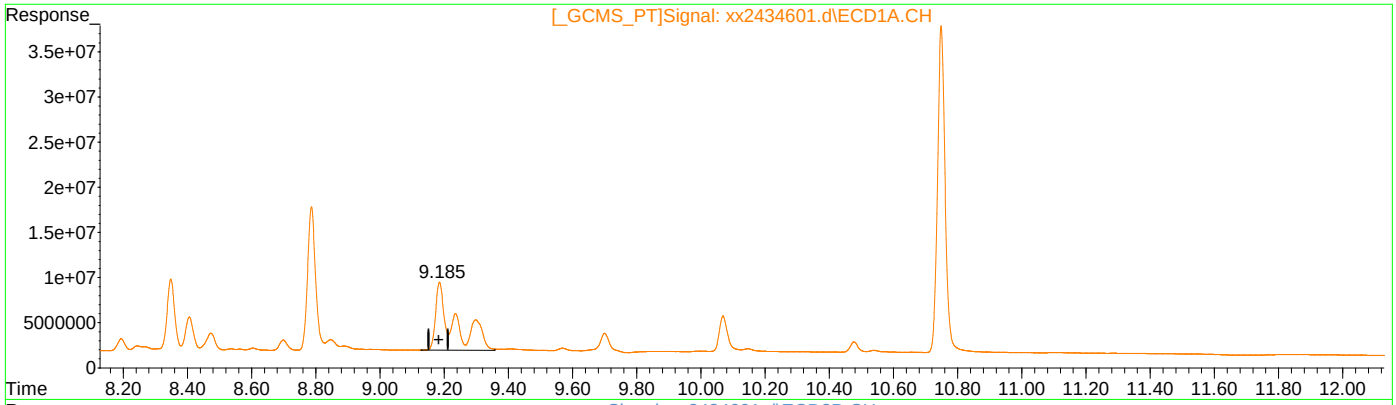
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:56:03 2019

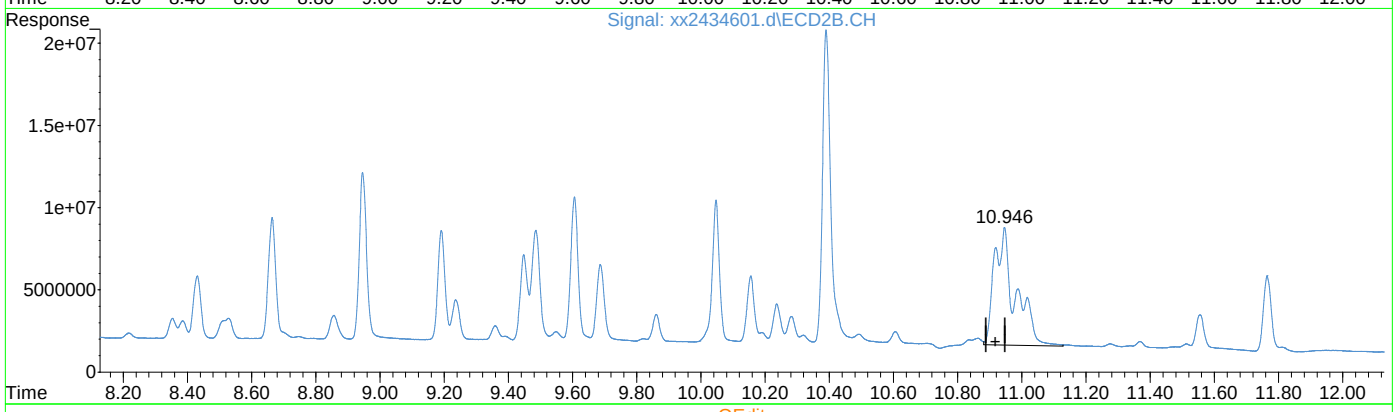
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:04 am
Operator : tianweir
Sample : op20019-bs1
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:45:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.185min 201.046 PPB m

response 299430513

(50) AR1260-E #2

10.946min 230.994 PPB m

response 326445878

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:56:38 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
05/06/19 07:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64647.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:23:01
Operator : mailisih
Sample : op20020-ms
Misc : op20020,g6g2001,15.4,,,10,1
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:32:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.952	2.166	123.5E6	206.5E6	50.000	50.000
27) I	1-bromo-2...	1.952	2.166	123.5E6	206.5E6	50.000	50.000
33) I	1-bromo-2...	1.952	2.166	123.5E6	206.5E6	50.000	50.000
	System Monitoring Compounds						
2) SAB	Tetrachlo...	2.554	2.982	65914714	131.0E6	35.323m	32.229
	Spiked Amount 40.000	Range 30 - 150		Recovery =		88.31%	80.57%
26) SA	Decachlor...	9.966	11.953	106.6E6	113.5E6	29.525m	31.730
	Spiked Amount 40.000			Recovery =		73.81%	79.33%
	Target Compounds						
3)	hexachlor...	2.889	3.491	87430741	86127017	19.843	19.907
4) A	alpha-BHC	3.031	3.645	65058612	101.2E6	19.988	18.706
5) MA	gamma-BHC	3.329	4.075	58780203	93608048	19.002	18.641
6) MA	Heptachlor	3.830	4.654	55411840	92523224	16.204	18.047
7) B	beta-BHC	3.405	4.161	24983702	47140296	18.398	20.277
8) B	delta-BHC	3.592	4.558	55532654	88066601	19.425	19.025
9) MB	Aldrin	4.170	5.107	61884092	86751689	19.642	18.578
10)	alachlor	4.316	4.915	9597176	14192688	25.912	21.401
11) B	Heptachlo...	4.893	5.933	57025483	84241604	18.774	18.830
12) B	gamma-Chl...	5.058	6.218	58373149	78879540	19.643	17.898
13) B	alpha-Chl...	5.231	6.446	62214279	80483626	21.399	18.443
14) A	Endosulfan I	5.411	6.543	54642261	76573160	17.921	18.735
15) B	4,4'-DDE	5.343	6.711	52867869	72739732	18.684	18.146
16) MA	Dieldrin	5.737	6.979	55455301	85143556	18.218	19.401
17) MA	Endrin	6.063	7.484	54226516	81167084	18.790	19.491
18) A	4,4'-DDD	6.186	7.664	33596088	66740491	16.760	19.570
19) B	Endosulfa...	6.388	7.834	49618080	77770746	17.731	19.351
20) MA	4,4'-DDT	6.609	8.198	40281796	68885972	18.780	21.804
21) B	Endrin Al...	7.022	8.408	41978492	55617328	17.884	17.068
22) B	Endosulfa...	7.711	8.878	42664249	76835880	17.462	21.193
23) A	Methoxychlor	7.400	9.443	23245834	38541863	17.023	19.628
25) B	Endrin Ke...	8.150	9.842	55982369	85582264	19.145	20.733
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

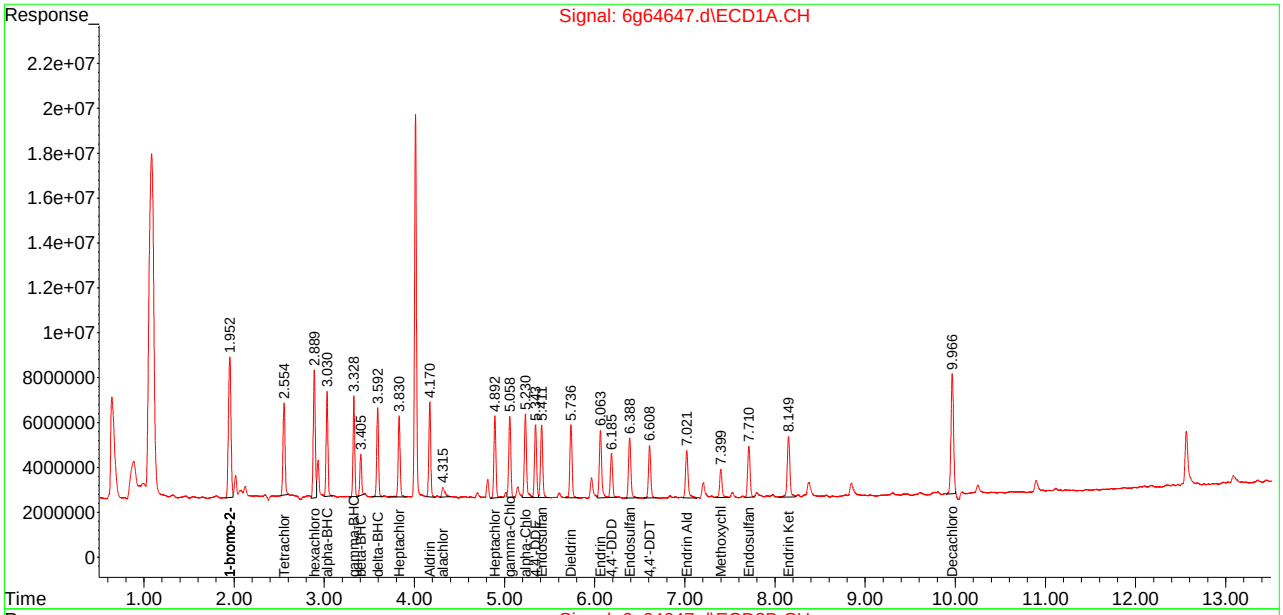
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

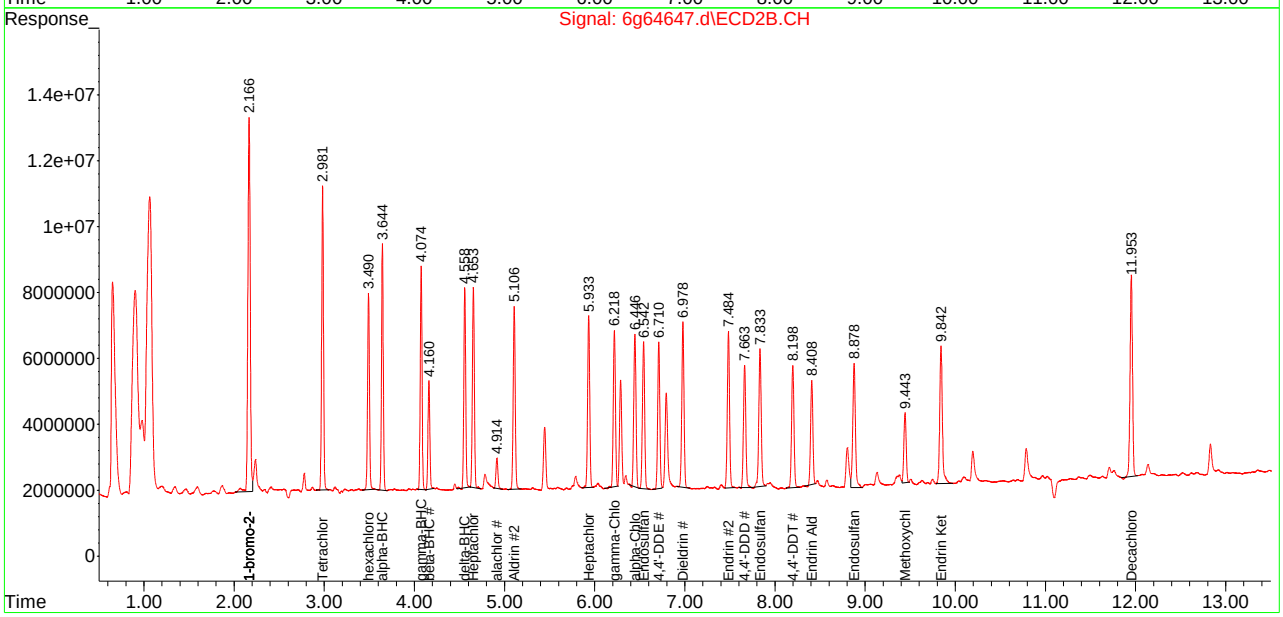
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64647.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:23:01
Operator : mailisih
Sample : op20020-ms
Misc : op20020,g6g2001,15.4,,,10,1
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:32:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number:	OP20020-MS	**Method:**	SW846 8081B
Lab FileID:	6G64647.D	**Analyst approved:**	05/06/19 00:43 Ann DeGuzman
Injection Time:	05/03/19 15:23	**Supervisor approved:**	05/06/19 07:51 Gwendolyn Burns

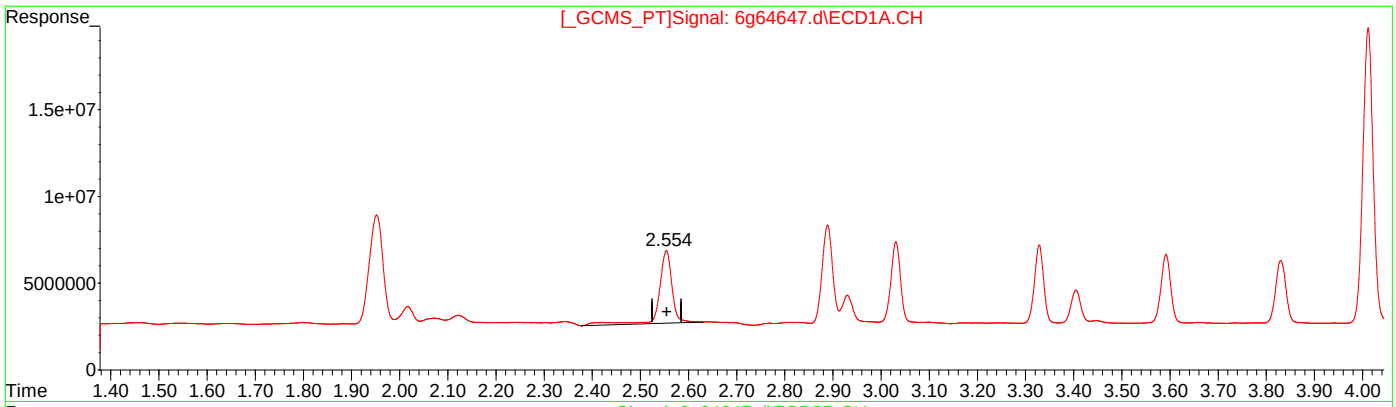
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.55	Poor instrument integration
Decachlorobiphenyl	2051-24-3	1	9.97	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64647.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:23:01
Operator : mailisih
Sample : op20020-ms
Misc : op20020,g6g2001,15.4,,,10,1
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(2) Tetrachloro-m-xylene (SAB)

2.554min 42.085 PPB

response 78532456

(2) Tetrachloro-m-xylene #2 (SAB)

2.982min 32.229 PPB

response 131030442

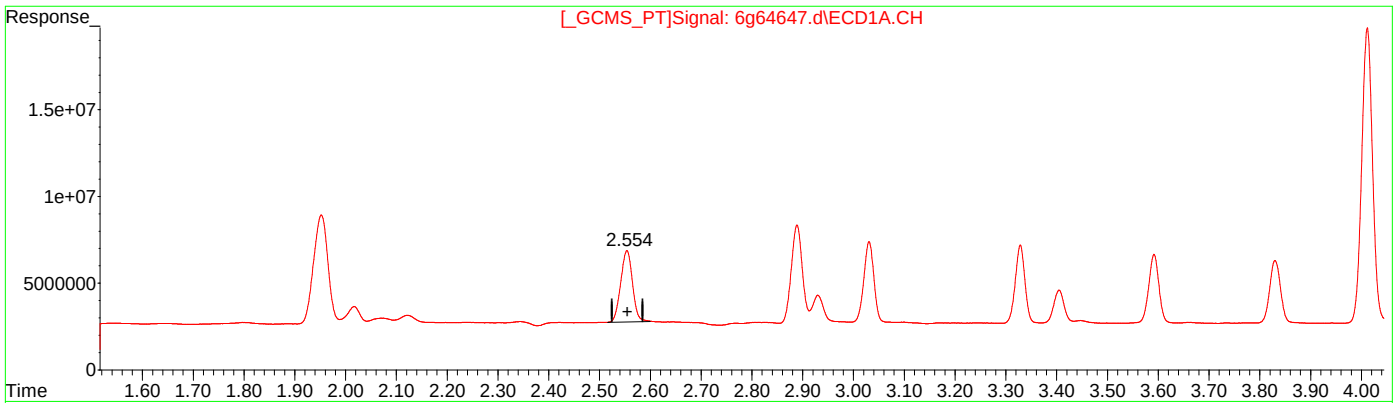
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:25:33 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64647.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:23:01
Operator : mailisih
Sample : op20020-ms
Misc : op20020,g6g2001,15.4,,,10,1
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(2) Tetrachloro-m-xylene (SAB)

2.554min 35.323 PPB m

response 65914714

(2) Tetrachloro-m-xylene #2 (SAB)

2.982min 32.229 PPB

response 131030442

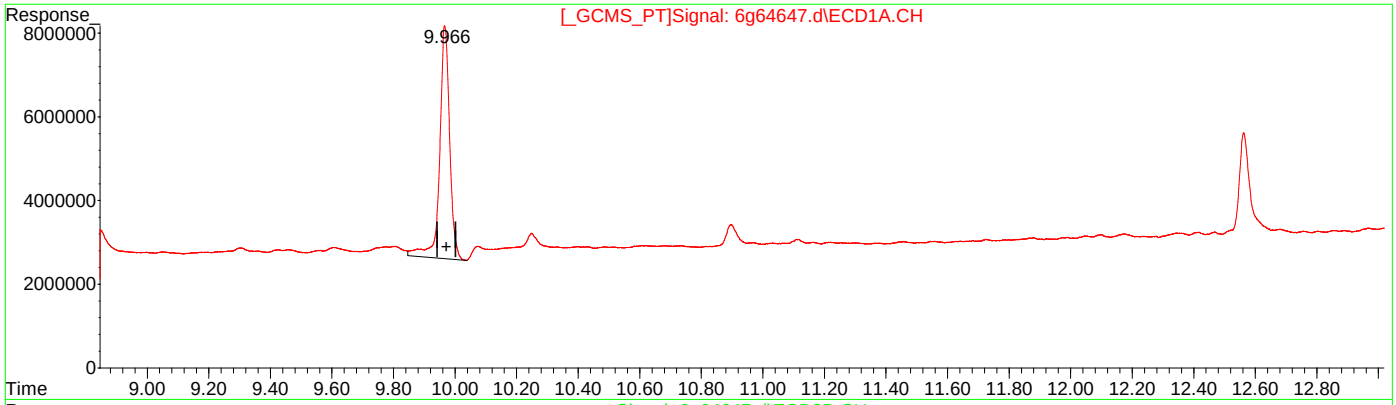
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:25:57 2019

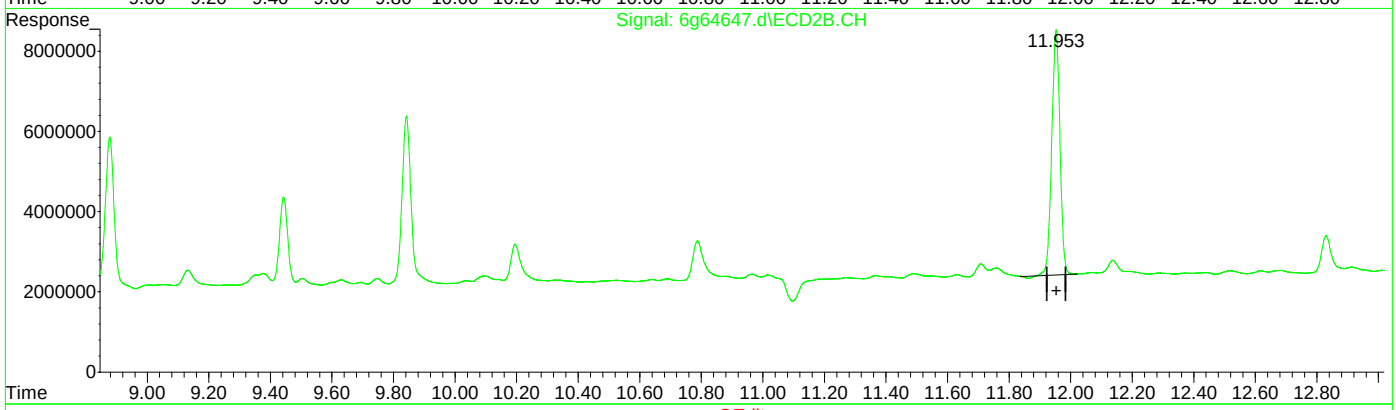
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64647.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:23:01
Operator : mailisih
Sample : op20020-ms
Misc : op20020,g6g2001,15.4,,,10,1
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.967min 34.863 PPB

response 125918306

(26) Decachlorobiphenyl #2 (SA)

11.953min 31.730 PPB

response 113512564

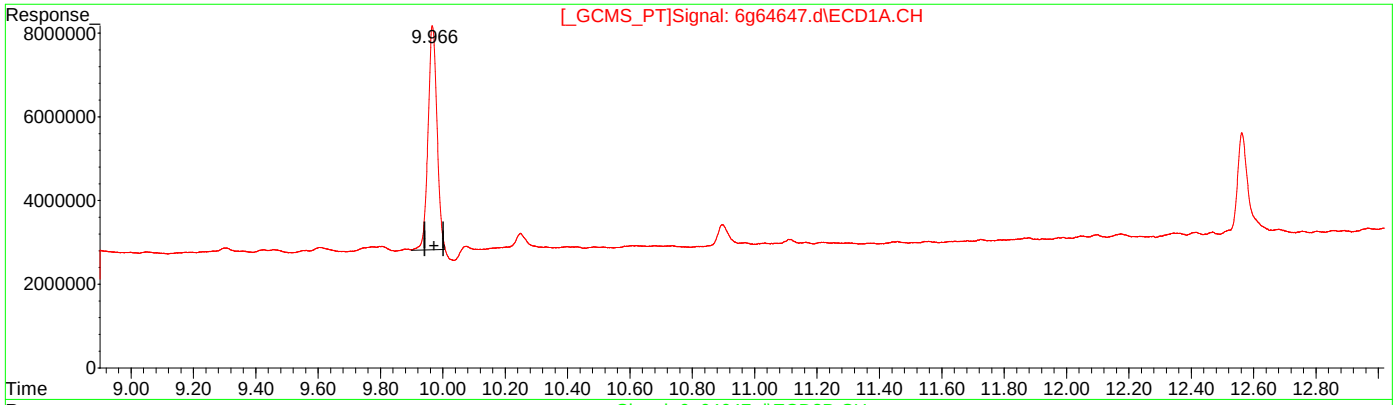
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:32:15 2019

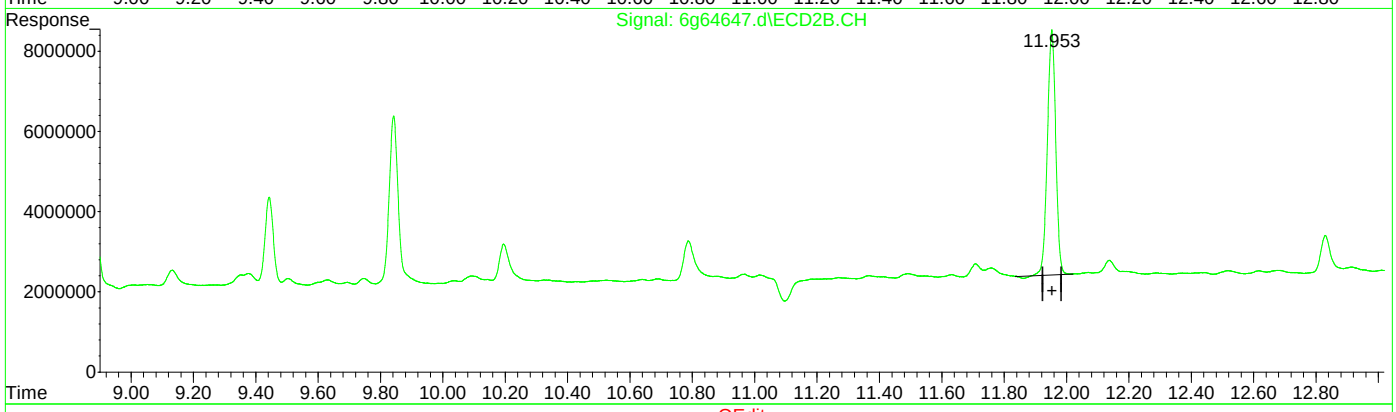
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64647.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:23:01
Operator : mailisih
Sample : op20020-ms
Misc : op20020,g6g2001,15.4,,,10,1
ALS Vial : 21 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:54 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.966min 29.525 PPB m

response 106637344

(26) Decachlorobiphenyl #2 (SA)

11.953min 31.730 PPB

response 113512564

(+) = Expected Retention Time
6pst1999.m Sun May 05 21:33:00 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:51

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64648.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:40:32
Operator : mailisih
Sample : op20020-msd
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.950	2.166	127.6E6	212.7E6	50.000	50.000
27)	I 1-bromo-2...	1.950	2.166	127.6E6	212.7E6	50.000	50.000
33)	I 1-bromo-2...	1.950	2.166	127.6E6	212.7E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.551	2.981	64141687	128.4E6	33.257m	30.664
	Spiked Amount 40.000	Range 30 - 150		Recovery =		83.14%	76.66%
26)	SA Decachlor...	9.965	11.953	105.6E6	113.6E6	28.298m	30.838
	Spiked Amount 40.000			Recovery =		70.74%	77.09%
	Target Compounds						
3)	hexachlor...	2.887	3.490	85834425	86492305	18.848	19.412
4)	A alpha-BHC	3.029	3.645	63809588	100.5E6	18.967	18.049
5)	MA gamma-BHC	3.326	4.075	58994187	93558832	18.451	18.091
6)	MA Heptachlor	3.828	4.653	53919676	93742355	15.256	17.754
7)	B beta-BHC	3.402	4.160	24305564	46562092	17.317	19.448
8)	B delta-BHC	3.589	4.558	55148273	87081403	18.664	18.267
9)	MB Aldrin	4.168	5.107	62486267	85594111	19.189	17.798
10)	alachlor	4.314	4.915	10371056	14818769	27.092	21.698
11)	B Heptachlo...	4.890	5.932	56005592	83075662	17.840	18.031
12)	B gamma-Chl...	5.056	6.219	57824469	80087032	18.826	17.646
13)	B alpha-Chl...	5.229	6.445	62002976	78636170	20.634	17.498
14)	A Endosulfan I	5.409	6.541	54456555	75439548	17.280	17.923
15)	B 4,4'-DDE	5.341	6.710	52531031	72149254	17.962	17.477
16)	MA Dieldrin	5.735	6.978	50542272	82958800	16.064	18.355
17)	MA Endrin	6.061	7.482	54262295	79448688	18.191	18.525
18)	A 4,4'-DDD	6.184	7.662	33702205	65659703	16.266	18.695
19)	B Endosulfa...	6.385	7.833	50349510	76761816	17.408	18.547
20)	MA 4,4'-DDT	6.607	8.197	41013287	67800157	18.500	20.839
21)	B Endrin Al...	7.018	8.408	43702224	56004516	18.014	16.689
22)	B Endosulfa...	7.708	8.877	42442490	74175681	16.807	19.866
23)	A Methoxychlor	7.396	9.443	22979526	38963260	16.281	19.267
25)	B Endrin Ke...	8.148	9.841	55250200	83339084	18.281	19.604
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

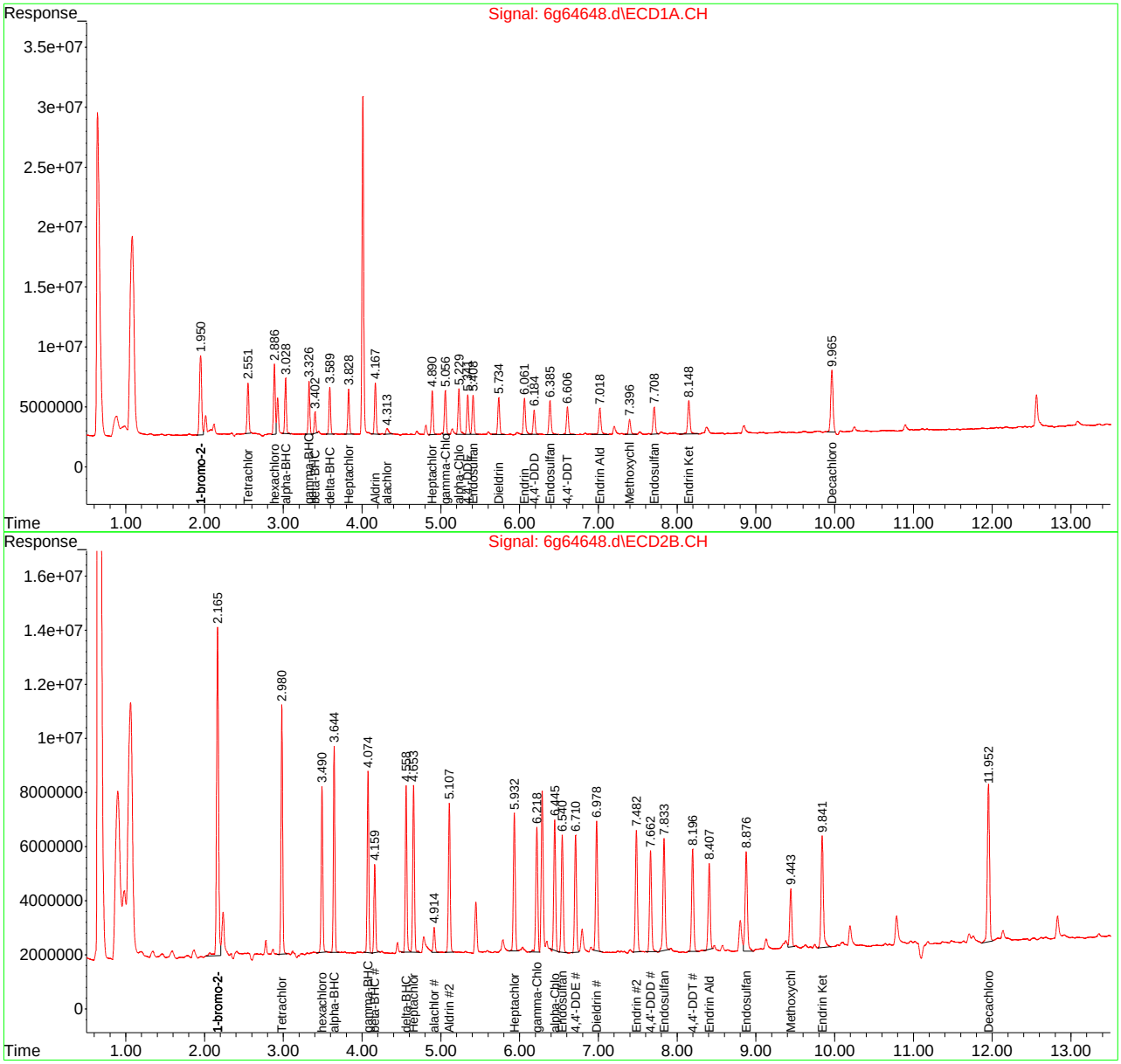
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64648.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:40:32
Operator : mailisih
Sample : op20020-msd
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



Manual Integration Approval Summary

Sample Number:	OP20020-MSD	**Method:**	SW846 8081B
Lab FileID:	6G64648.D	**Analyst approved:**	05/06/19 00:43 Ann DeGuzman
Injection Time:	05/03/19 15:40	**Supervisor approved:**	05/06/19 07:51 Gwendolyn Burns

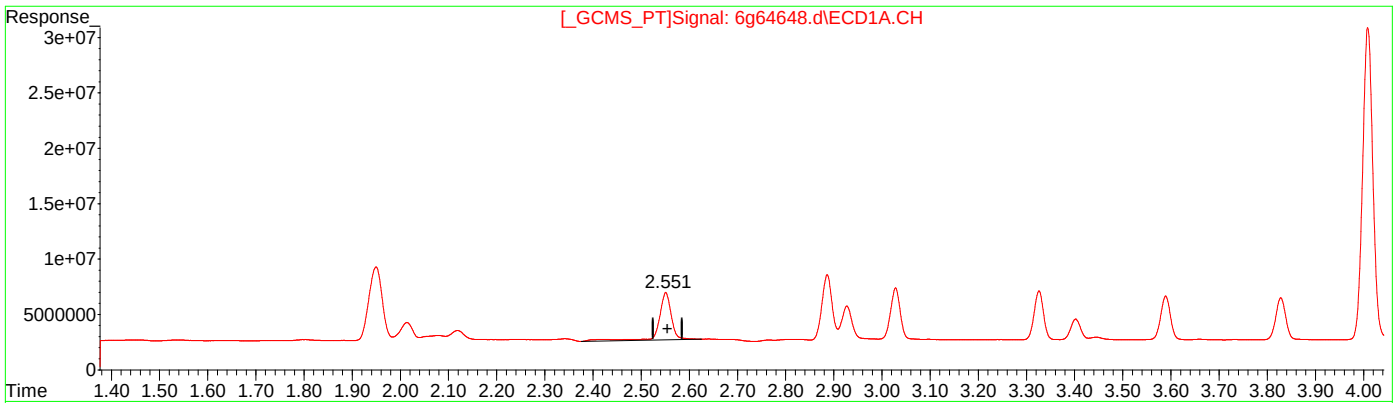
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.55	Poor instrument integration
Decachlorobiphenyl	2051-24-3	1	9.96	Poor instrument integration

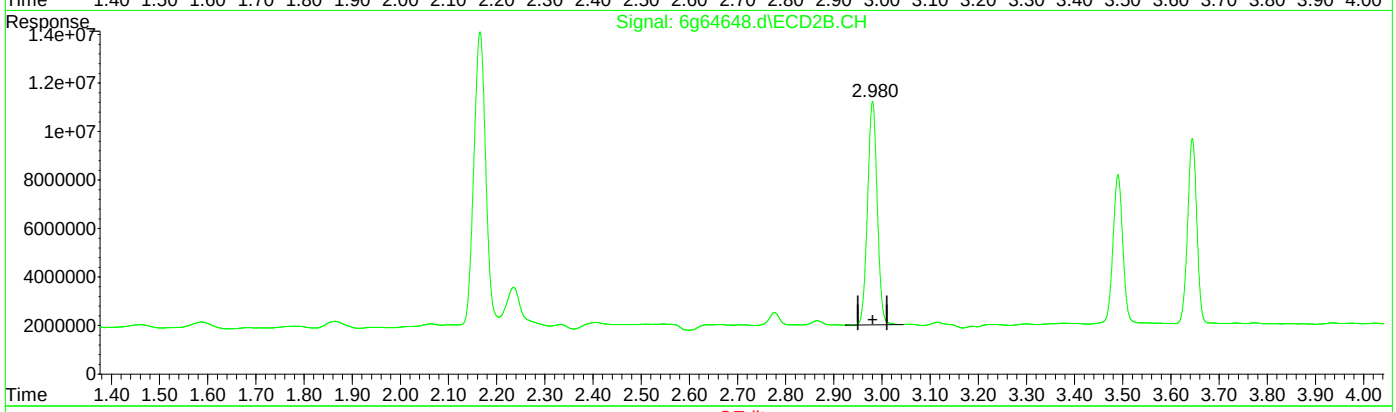
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64648.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:40:32
Operator : mailisih
Sample : op20020-msd
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:01:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(2) Tetrachloro-m-xylene (SAB)

2.551min 39.802 PPB

response 76765840

(2) Tetrachloro-m-xylene #2 (SAB)

2.981min 30.664 PPB

response 128387872

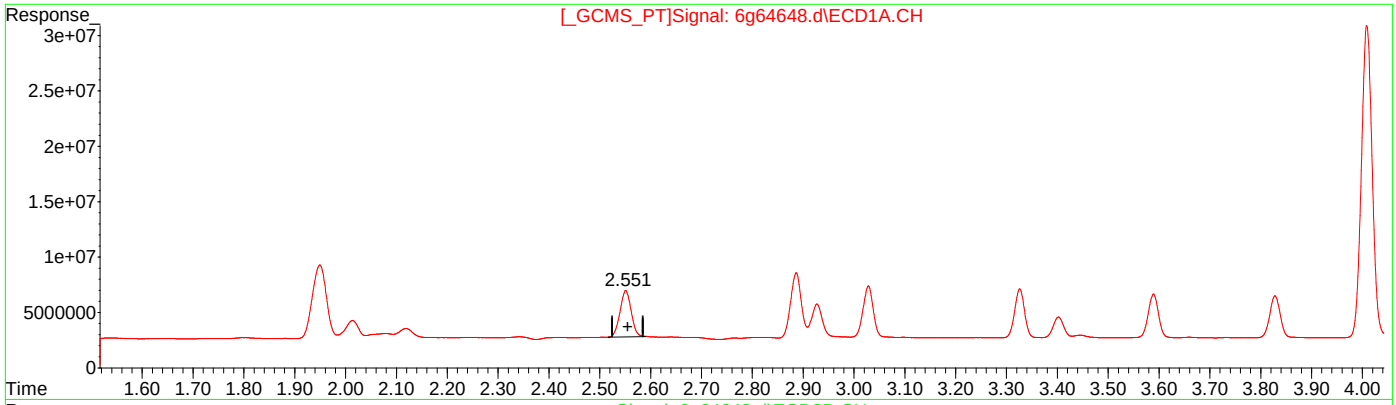
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:33:35 2019

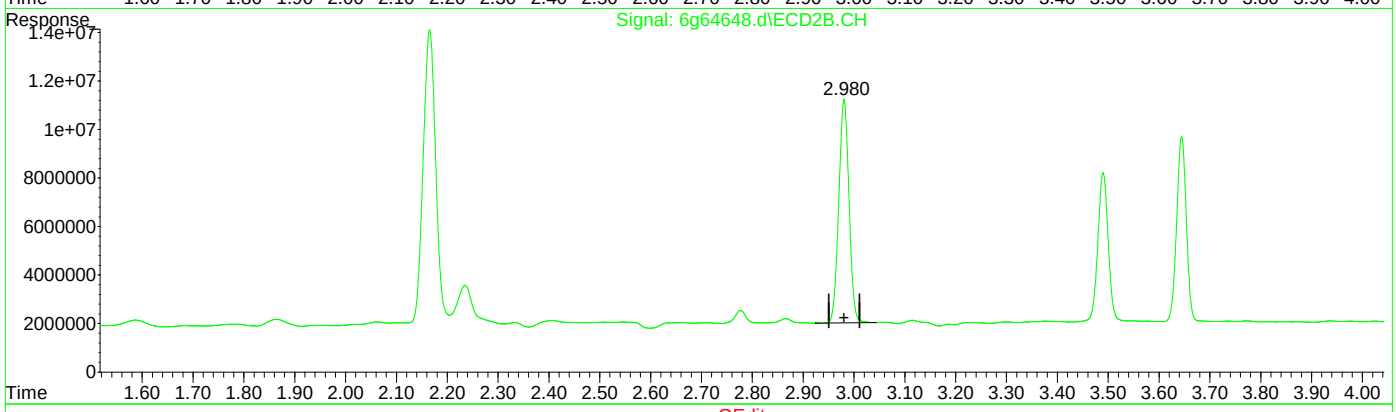
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64648.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:40:32
Operator : mailisih
Sample : op20020-msd
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:01:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(2) Tetrachloro-m-xylene (SAB)

2.551min 33.257 PPB m

response 64141687

(2) Tetrachloro-m-xylene #2 (SAB)

2.981min 30.664 PPB

response 128387872

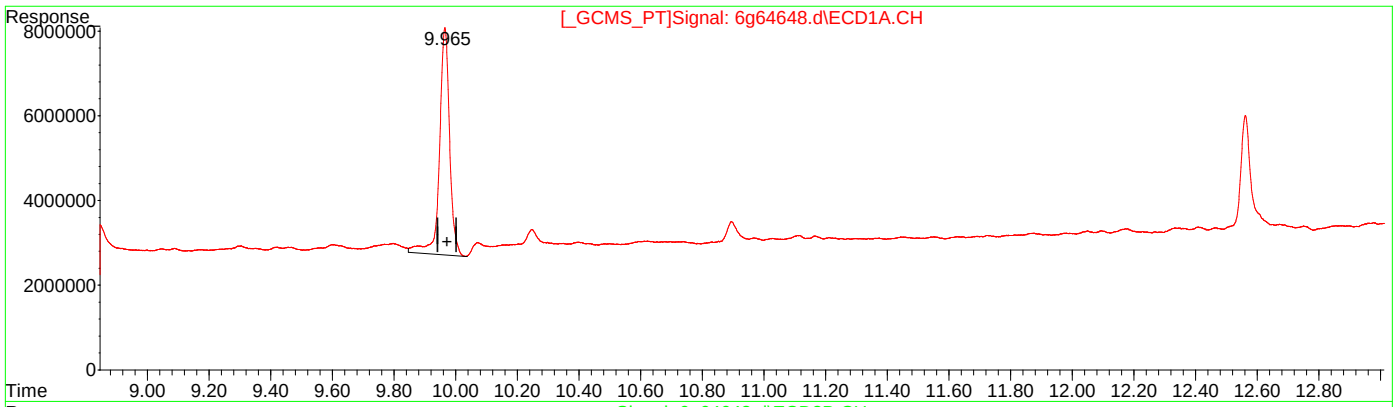
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:33:56 2019

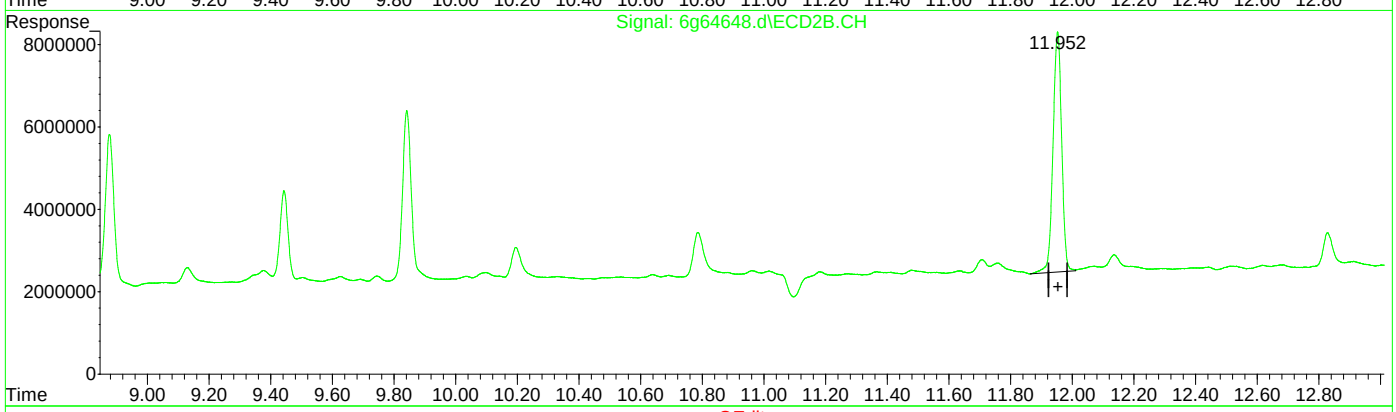
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64648.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:40:32
Operator : mailisih
Sample : op20020-msd
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:01:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.965min 32.924 PPB

response 122907072

(26) Decachlorobiphenyl #2 (SA)

11.953min 30.838 PPB

response 113616308

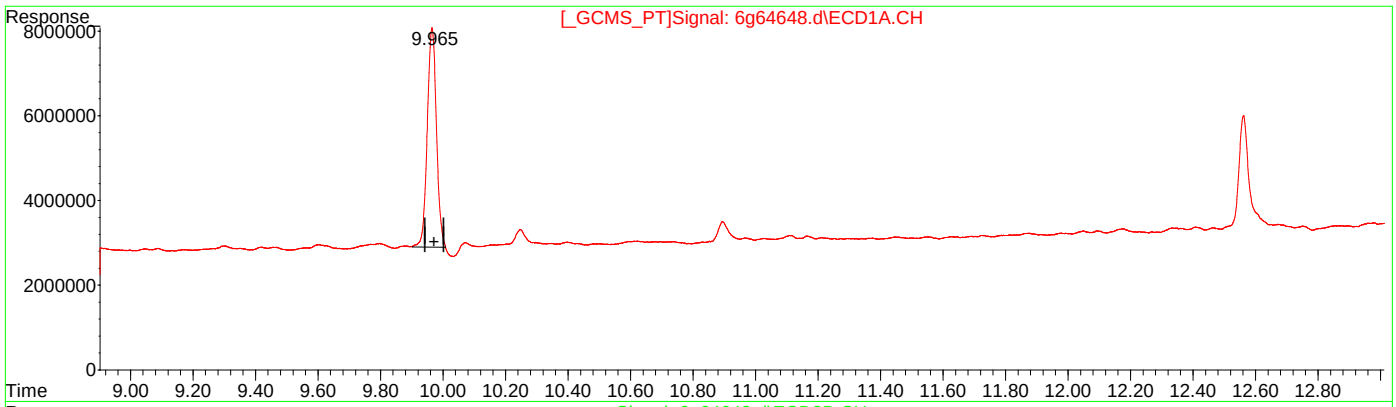
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:34:37 2019

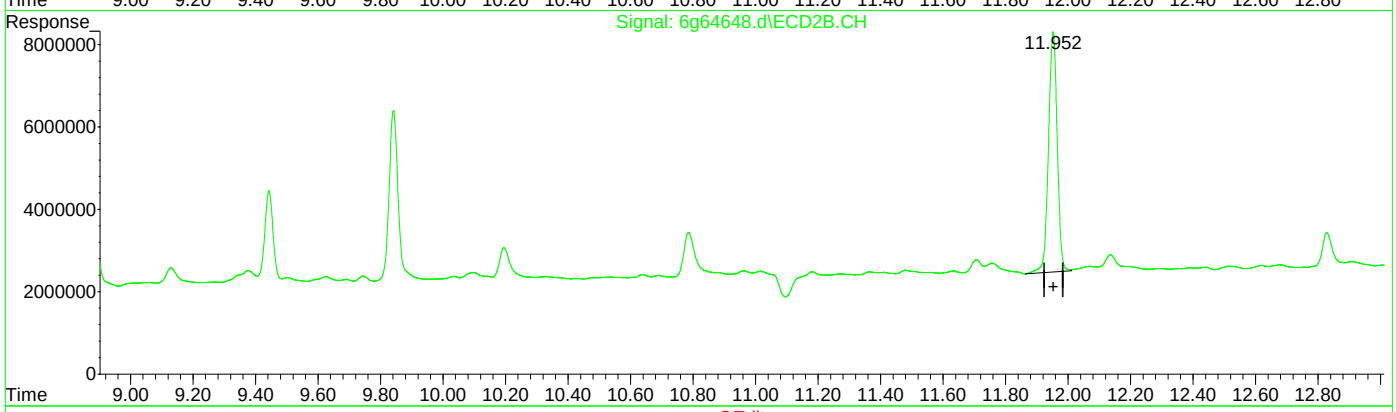
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64648.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 15:40:32
Operator : mailisih
Sample : op20020-msd
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 22 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:01:19 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.965min 28.298 PPB m

response 105638607

(26) Decachlorobiphenyl #2 (SA)

11.953min 30.838 PPB

response 113616308

(+) = Expected Retention Time
6pst1999.m Sun May 05 21:35:02 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:01:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.269	4.038	403.8E6	363.8E6	30.671	34.180
	Spiked Amount 40.000			Recovery	=	76.68%	85.45%
51) S	Decachlor...	10.745	12.635	353.5E6	366.2E6	25.165	34.023 #
	Spiked Amount 40.000			Recovery	=	62.91%	85.06%
	Target Compounds						
41)	AR1016-A	3.672	4.731	46729803	35820315	168.202	188.768
42)	AR1016-B	4.107	5.310	76275380	64128247	152.711	160.432
43)	AR1016-C	4.694	5.967	155.5E6	138.6E6	134.781	155.020m
44)	AR1016-D	4.866	6.162	70598273	49375991	166.193	150.150
45)	AR1016-E	5.402	6.837	67925658	53176481	155.579	202.176 #
46)	AR1260-A	7.838	9.483	127.6E6	131.1E6	129.950	151.509m
47)	AR1260-B	8.001	9.604	68340261	92822805	124.389	156.312 #
48)	AR1260-C	8.345	10.045	77501978	93216267	122.786	166.385 #
49)	AR1260-D	8.783	10.388	169.4E6	213.8E6	128.408	152.514
50)	AR1260-E	9.181	10.943f	177.4E6	193.2E6	119.127m	136.695m

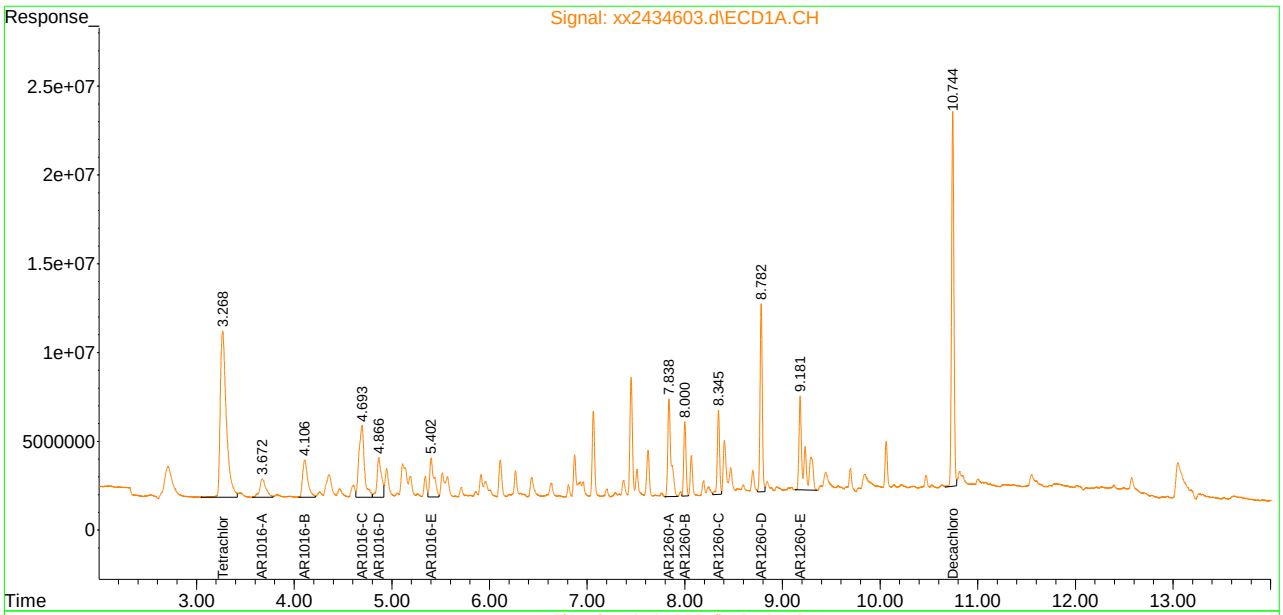
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

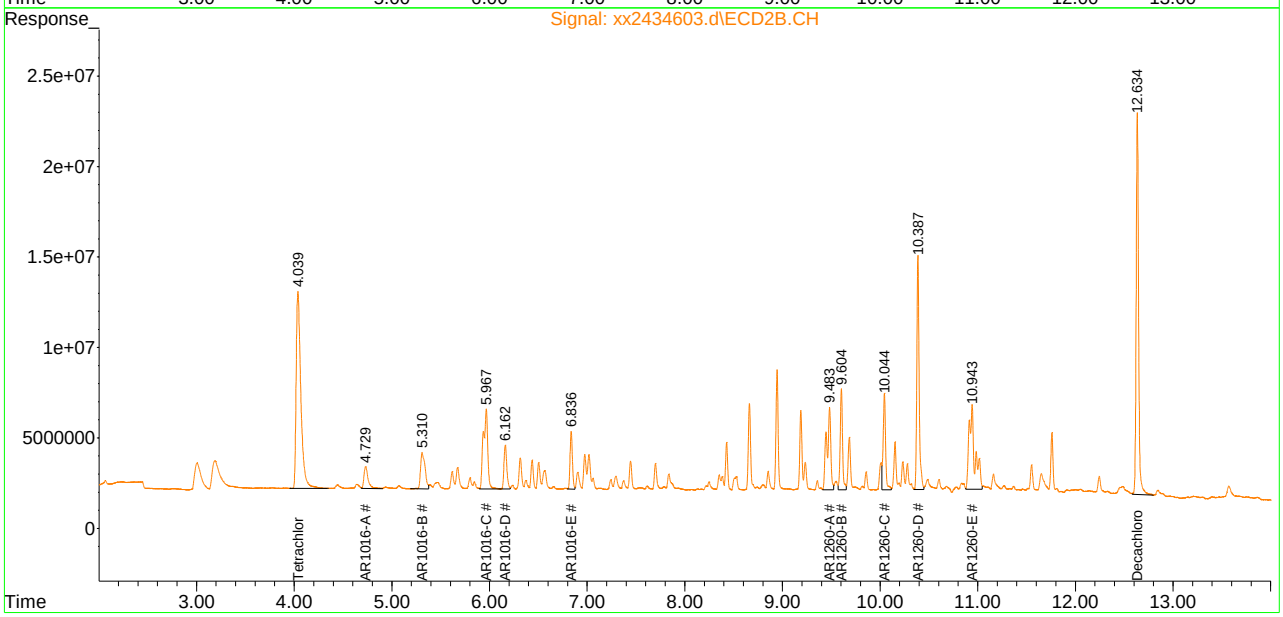
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:01:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	OP20019-MS	**Method:**	SW846 8082A
Lab FileID:	XX2434603.D	**Analyst approved:**	05/06/19 00:58 Syra Marie Pacheco
Injection Time:	05/04/19 11:41	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

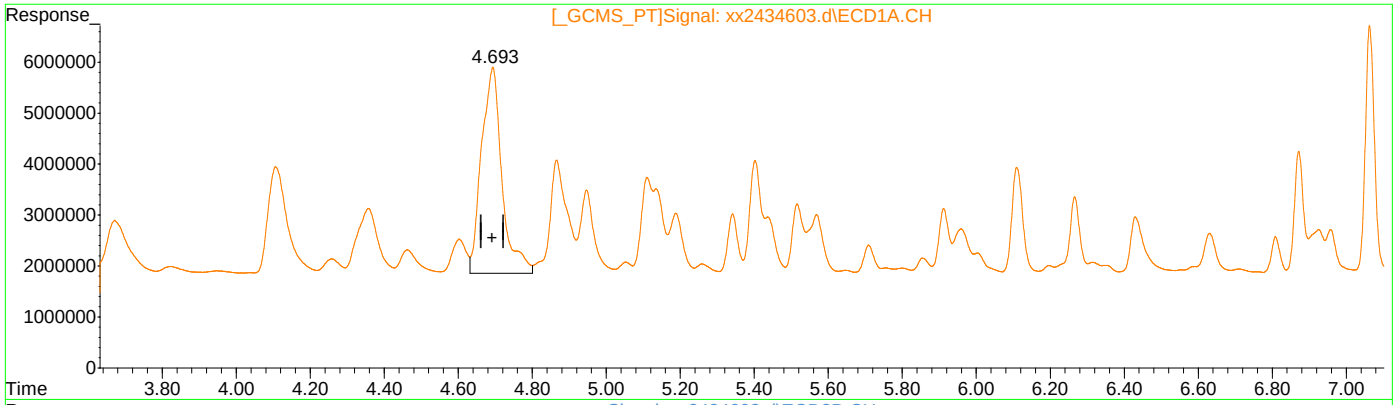
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Poorly defined baseline
AR1260-E		1	9.18	Poorly defined baseline
AR1260-A		2	9.48	Poorly defined baseline
AR1260-E		2	10.94	Poorly defined baseline

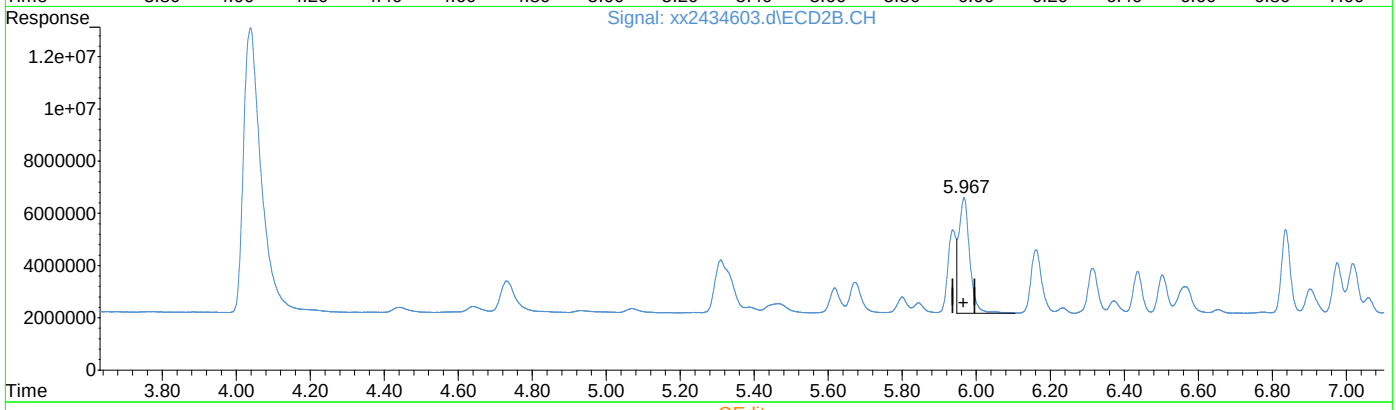
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.694min 134.781 PPB

response 155547990

(43) AR1016-C #2

5.967min 101.400 PPB

response 90628707

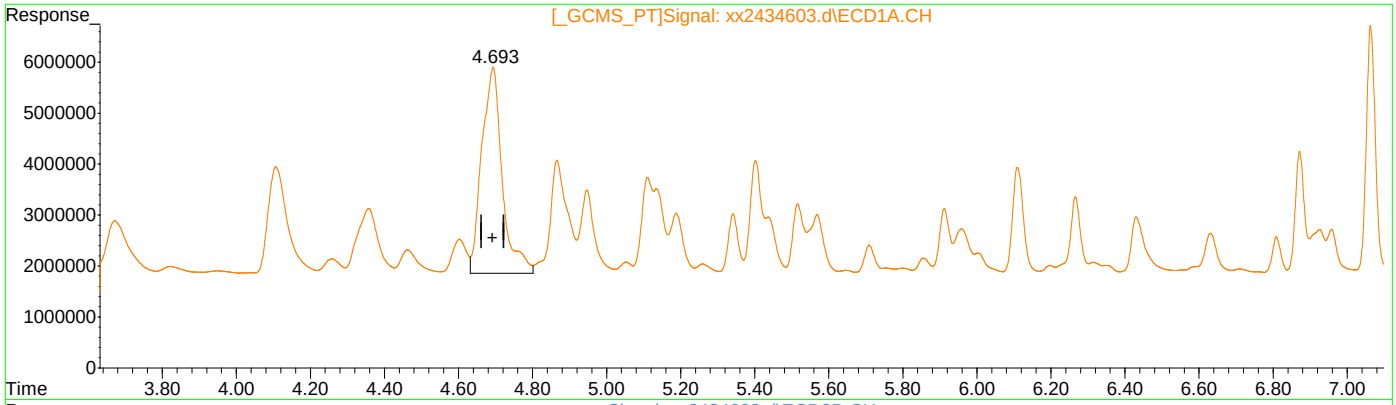
(+) = Expected Retention Time

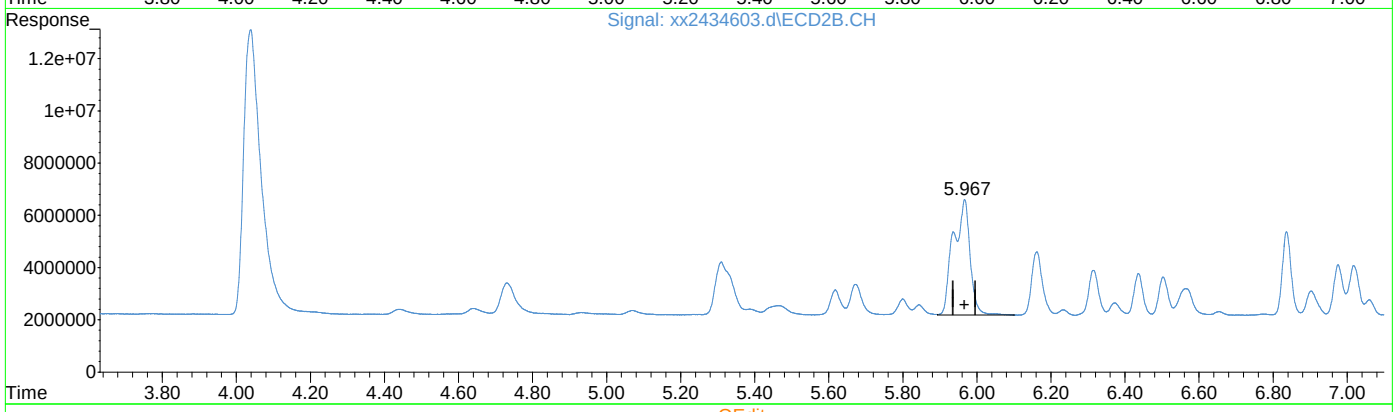
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.694min 134.781 PPB

response 155547990

(43) AR1016-C #2

5.967min 155.020 PPB m

response 138553451

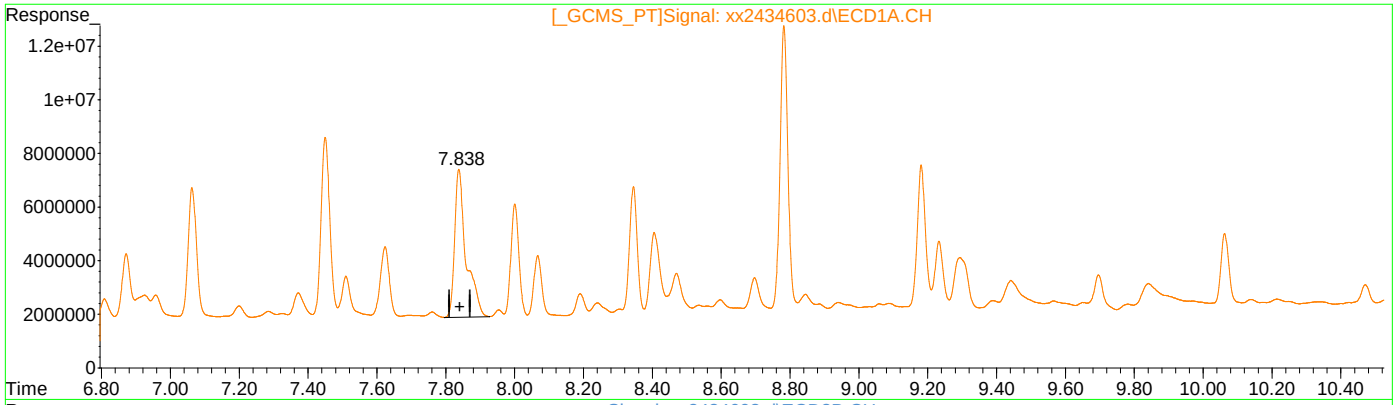
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:59:11 2019

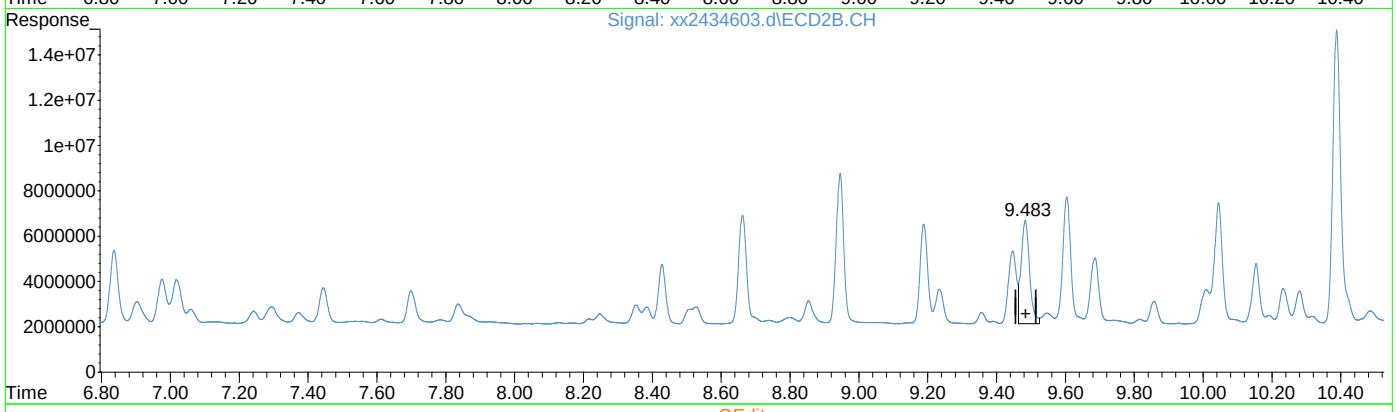
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.838min 129.950 PPB

response 127596904

(46) AR1260-A #2

9.483min 91.740 PPB

response 79385085

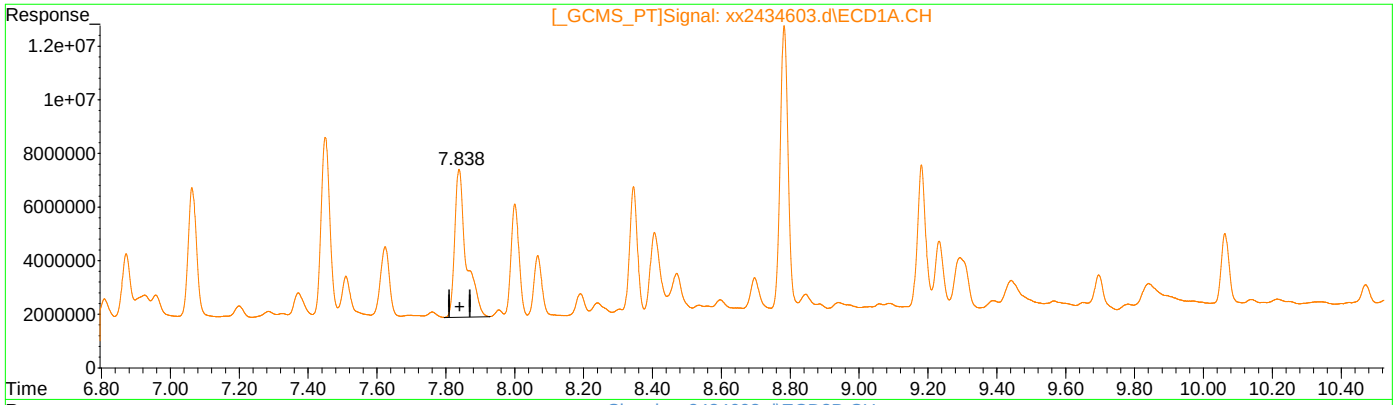
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:59:29 2019

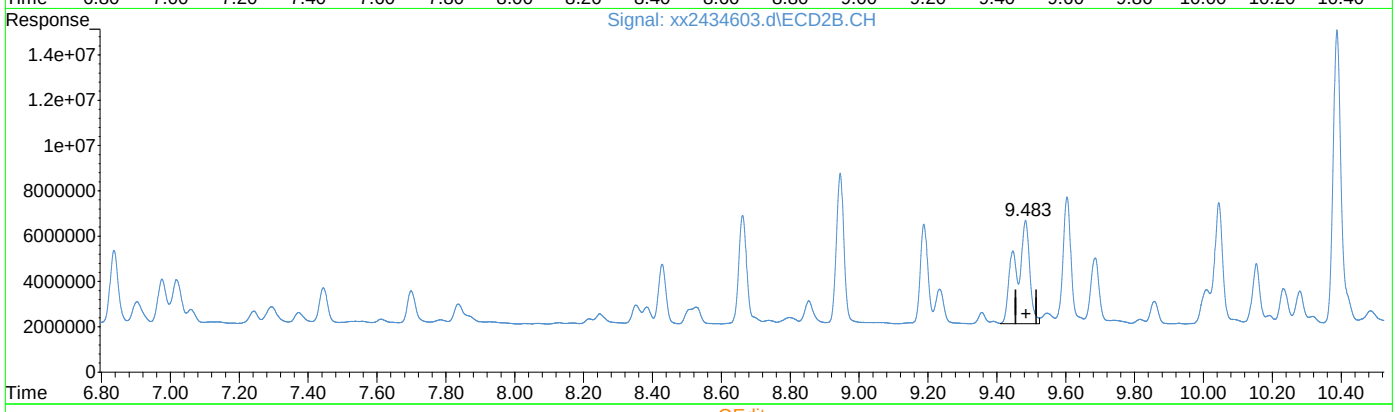
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.838min 129.950 PPB

response 127596904

(46) AR1260-A #2

9.483min 151.509 PPB m

response 131104825

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:59:45 2019

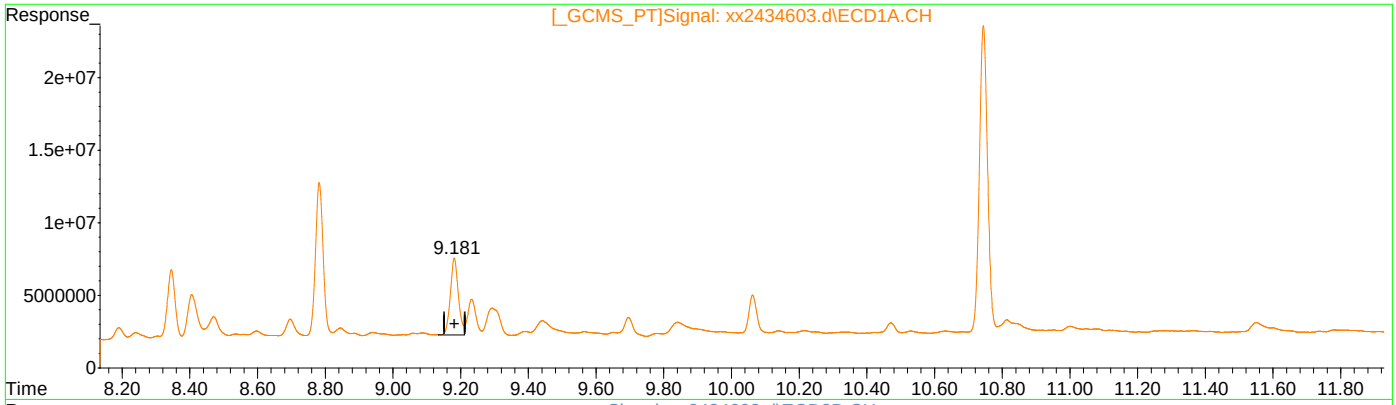
11.4.3.5 11

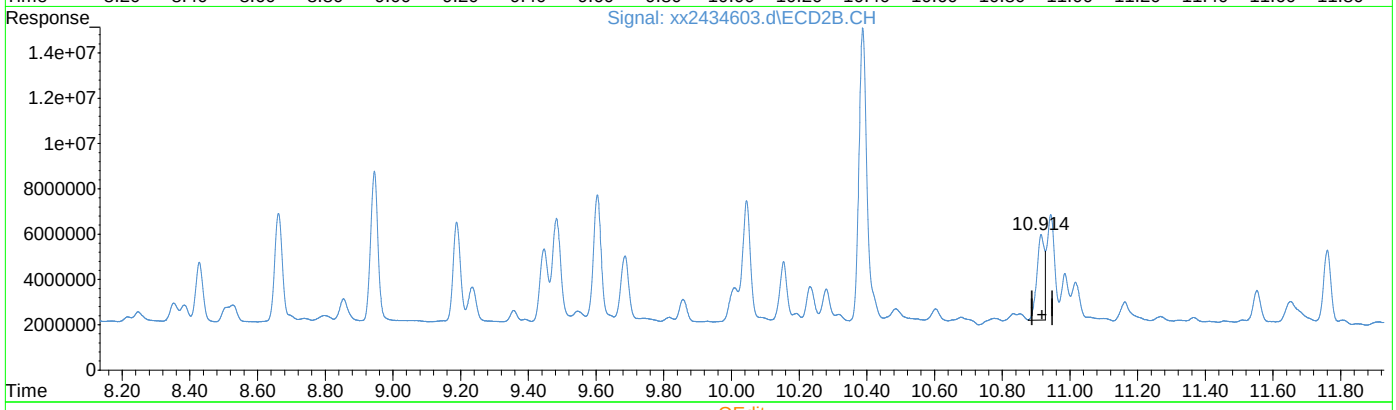
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.182min 58.573 PPB

response 87236608

(50) AR1260-E #2

10.915min 40.999 PPB

response 57941177

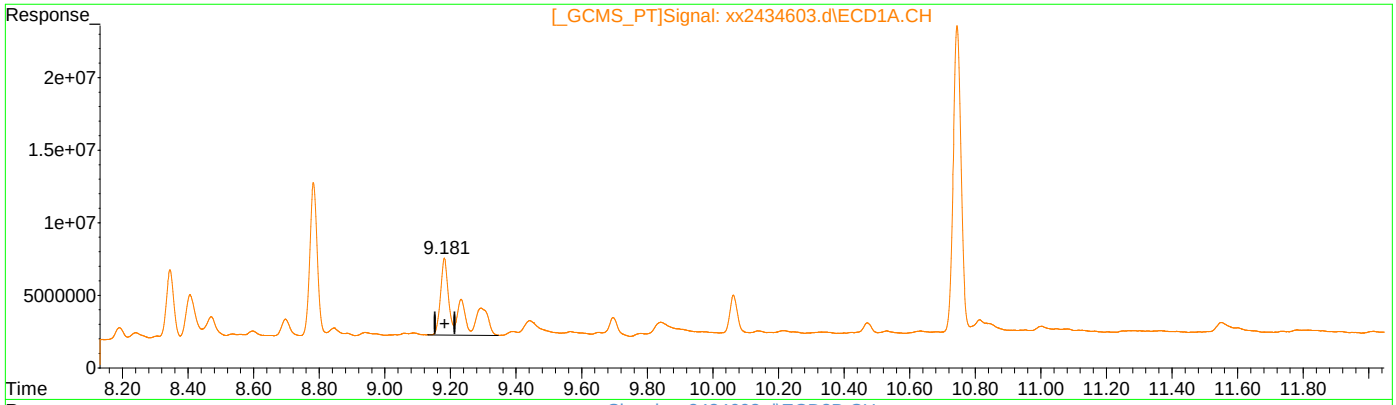
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:00:16 2019

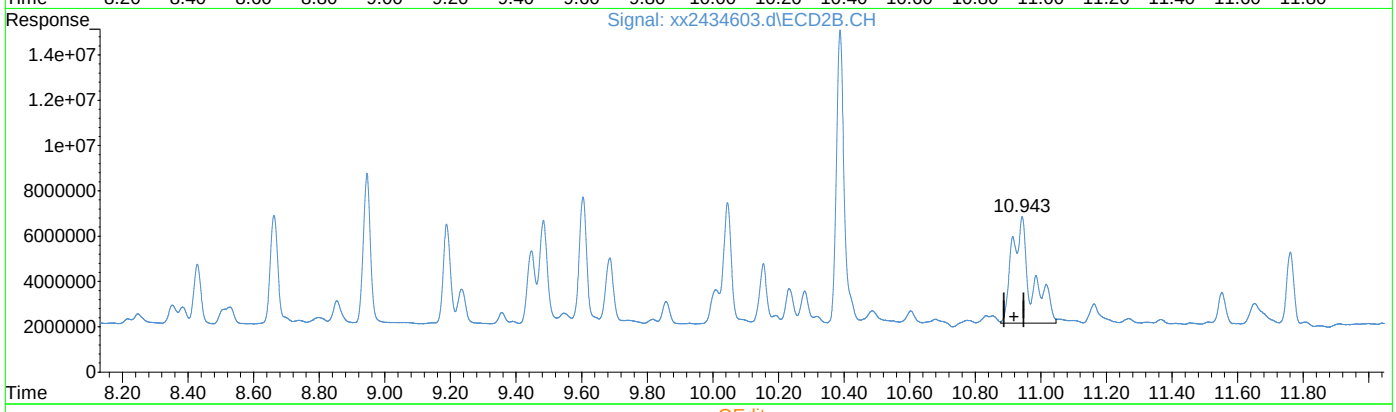
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:41 am
Operator : tianweir
Sample : op20019-ms
Misc : op20019,GXX6680,15.2,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:10 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.181min 119.127 PPB m

response 177423742

(50) AR1260-E #2

10.943min 136.695 PPB m

response 193179668

(+) = Expected Retention Time
pcb6666.m Sun May 05 22:01:17 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:05:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.264	4.037	384.8E6	347.1E6	29.230	32.612
	Spiked Amount 40.000			Recovery	=	73.08%	81.53%
51) S	Decachlor...	10.746	12.636	340.4E6	348.0E6	24.228	32.335 #
	Spiked Amount 40.000			Recovery	=	60.57%	80.84%
	Target Compounds						
41)	AR1016-A	3.675	4.729	41255229	30448638	148.497	160.460
42)	AR1016-B	4.109	5.307	67134758	60744905	134.411	151.968
43)	AR1016-C	4.692	5.966	139.2E6	127.6E6	120.652	142.733m
44)	AR1016-D	4.865	6.162	63124196	44240365	148.599	134.533
45)	AR1016-E	5.401	6.837	59611176	38731825	136.535	147.257
46)	AR1260-A	7.840	9.483	109.9E6	121.5E6	111.930	140.379m#
47)	AR1260-B	8.002	9.604	60416306	94565871	109.967	159.247 #
48)	AR1260-C	8.346	10.045	70646876	78467302	111.926	140.059m#
49)	AR1260-D	8.783	10.389	150.5E6	190.6E6	114.091	135.977
50)	AR1260-E	9.181	10.945f	170.9E6	176.2E6	114.753m	124.704m

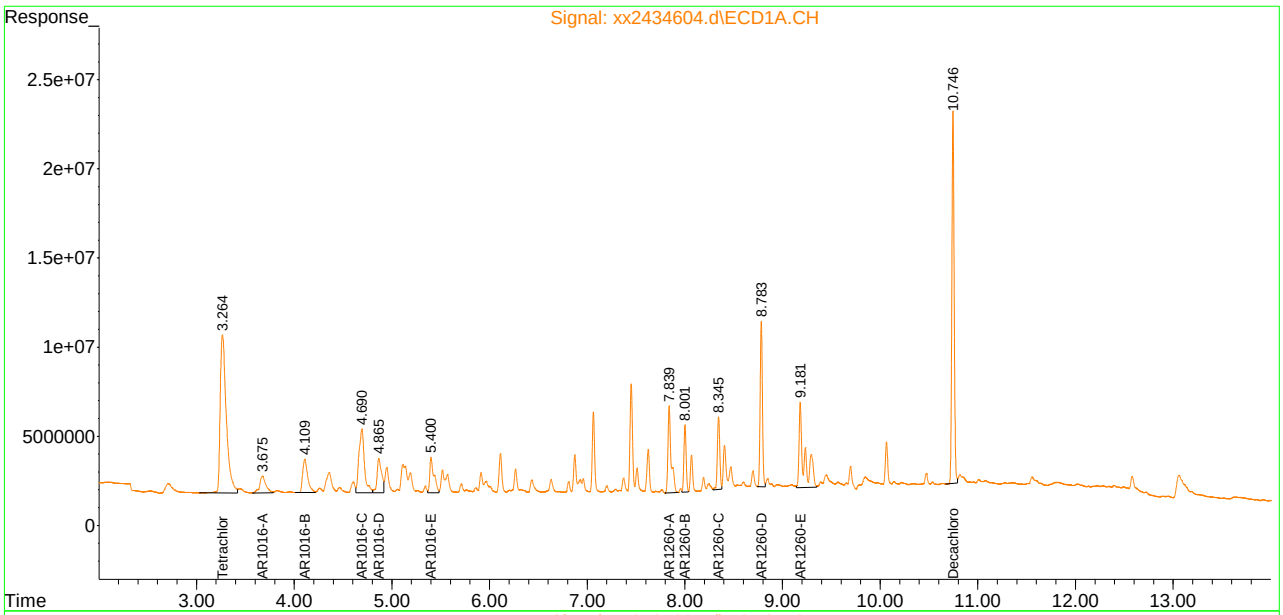
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

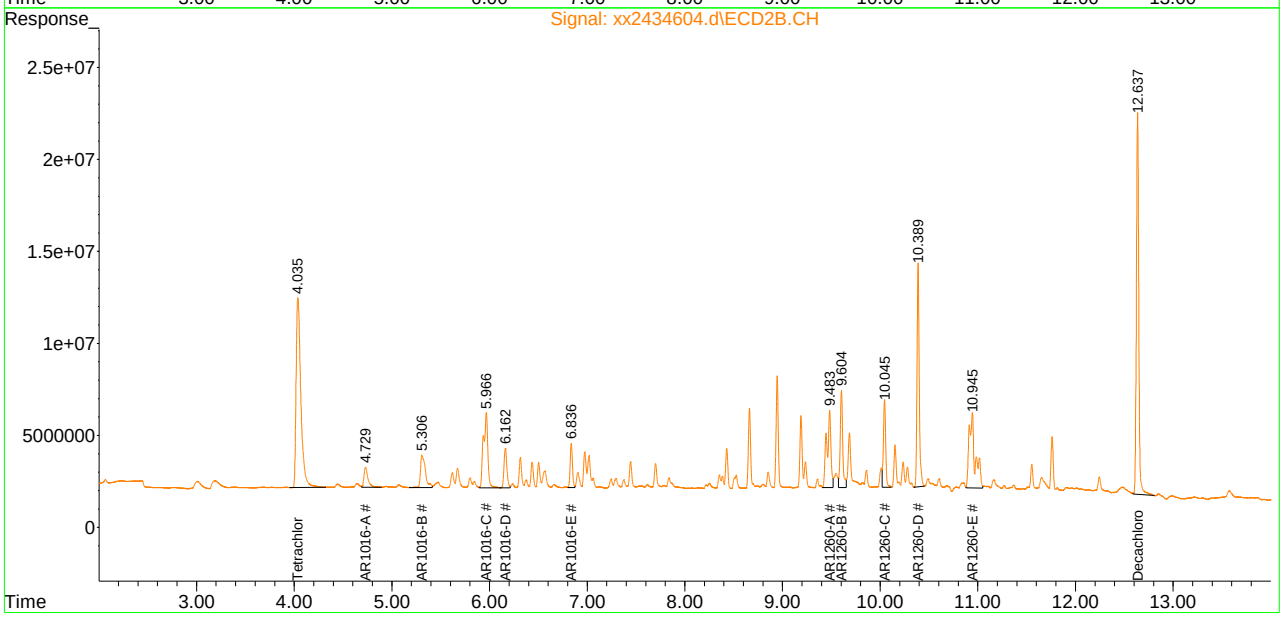
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:05:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	OP20019-MSD	**Method:**	SW846 8082A
Lab FileID:	XX2434604.D	**Analyst approved:**	05/06/19 06:35 Gwendolyn Burns
Injection Time:	05/04/19 11:59	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

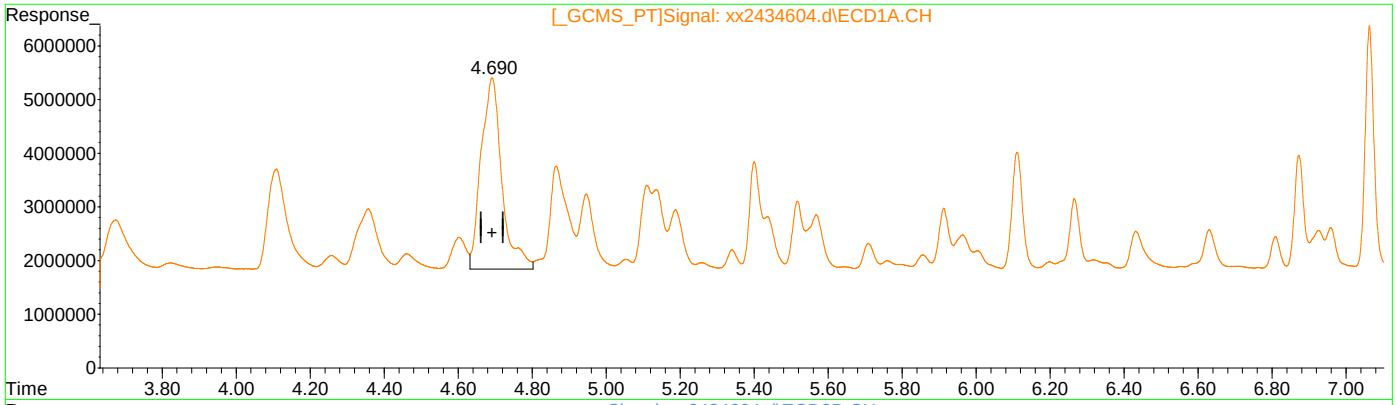
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Poorly defined baseline
AR1260-E		1	9.18	Poorly defined baseline
AR1260-A		2	9.48	Poorly defined baseline
AR1260-C		2	10.05	Poorly defined baseline
AR1260-E		2	10.95	Poorly defined baseline

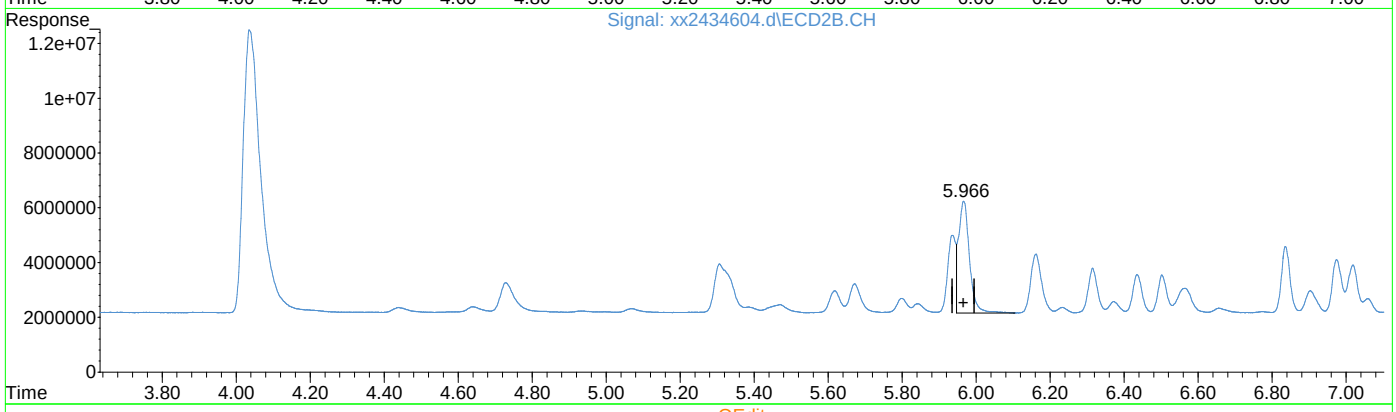
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.692min 120.652 PPB

response 139241992

(43) AR1016-C #2

5.967min 94.754 PPB

response 84688739

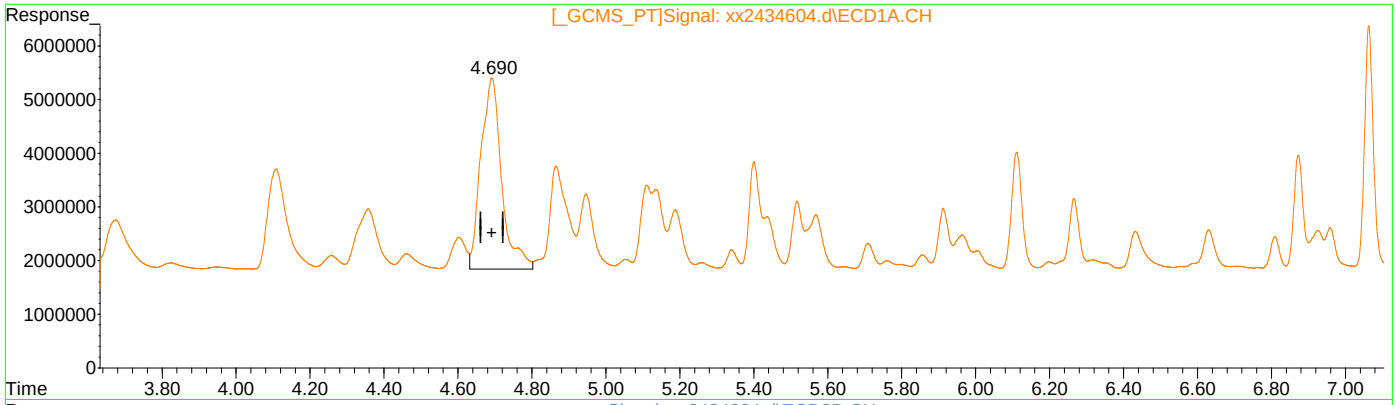
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:02:11 2019

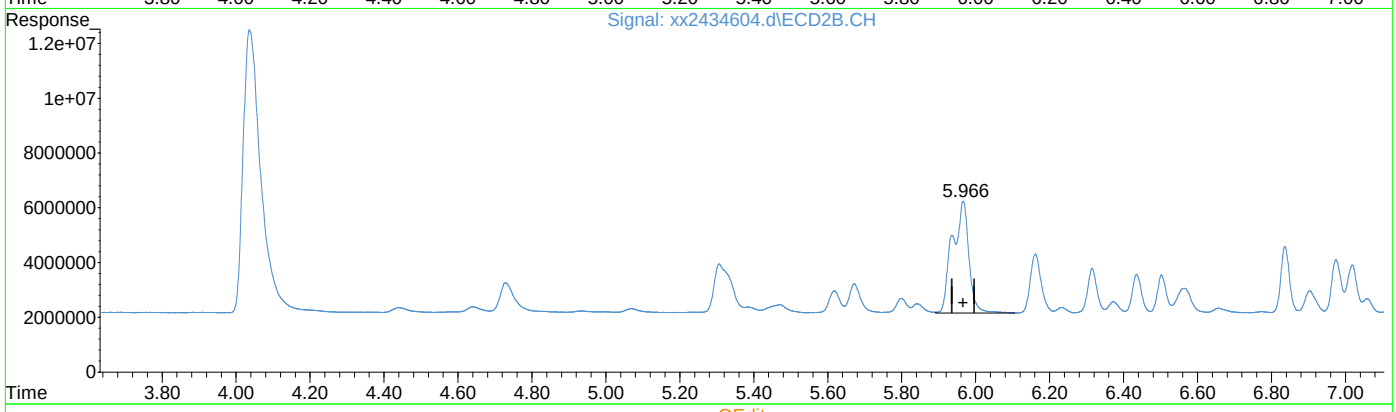
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.692min 120.652 PPB

response 139241992

(43) AR1016-C #2

5.966min 142.733 PPB m

response 127570994

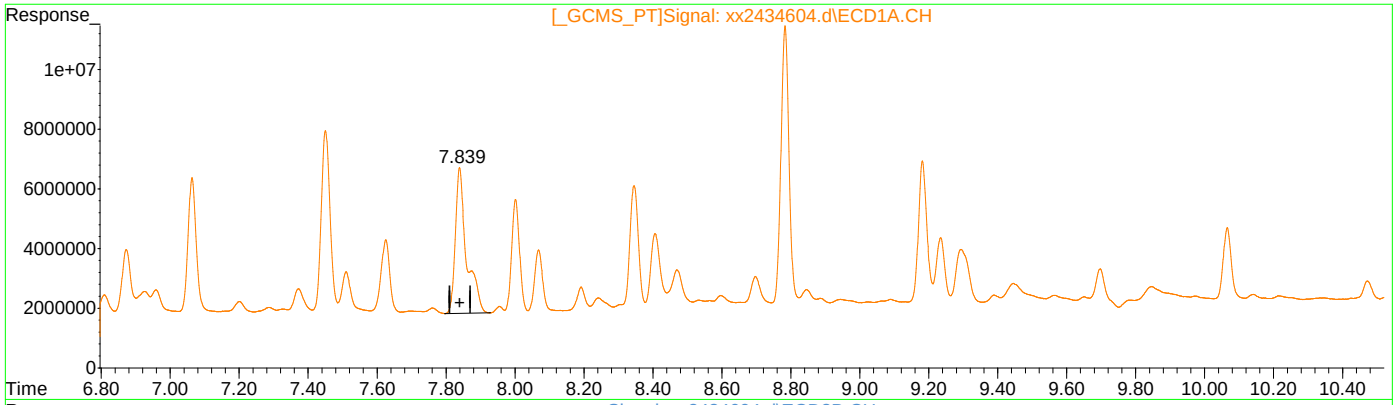
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:02:31 2019

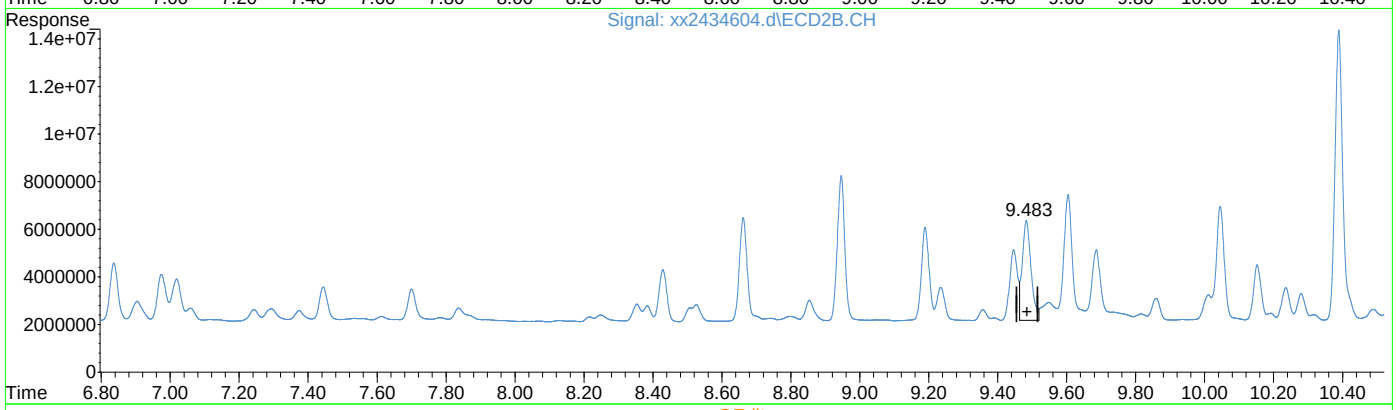
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 111.930 PPB

response 109903703

(46) AR1260-A #2

9.483min 86.735 PPB

response 75054386

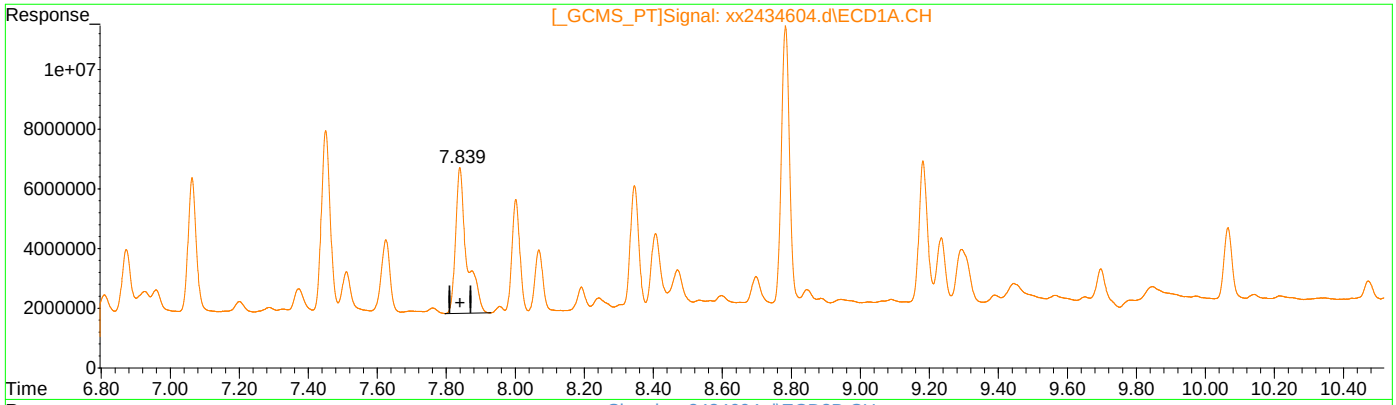
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:02:43 2019

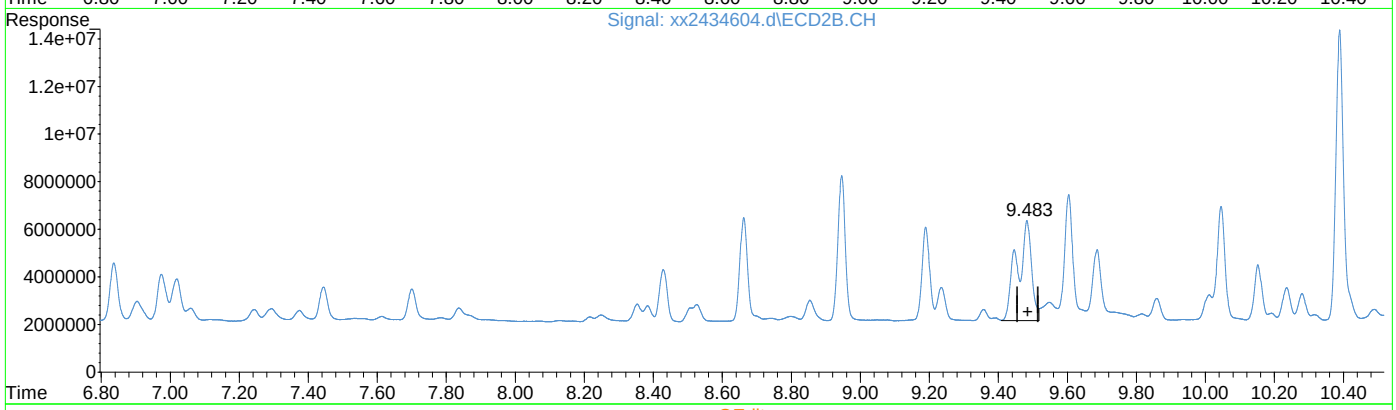
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:46:33 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 111.930 PPB

response 109903703

(46) AR1260-A #2

9.483min 140.379 PPB m

response 121473108

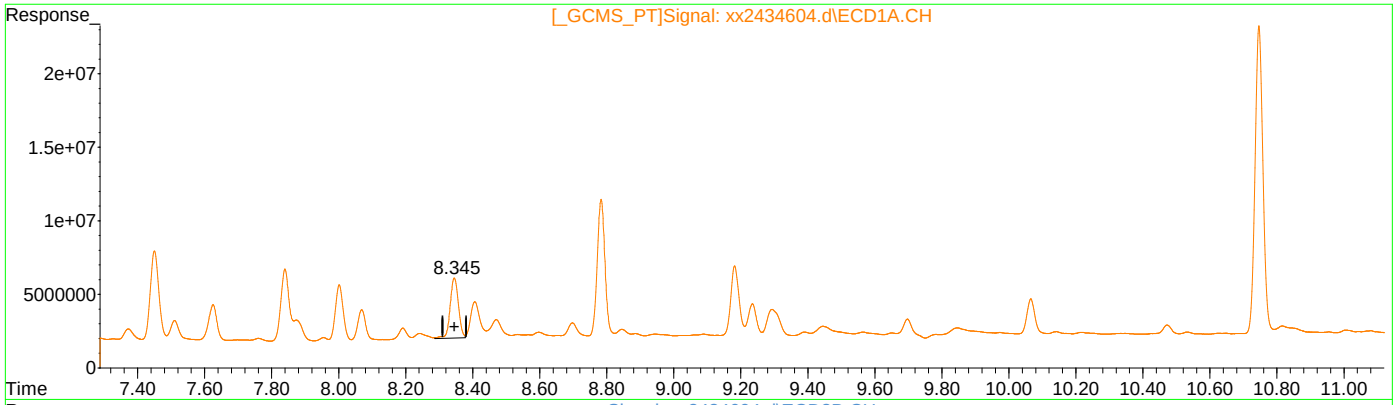
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:02:59 2019

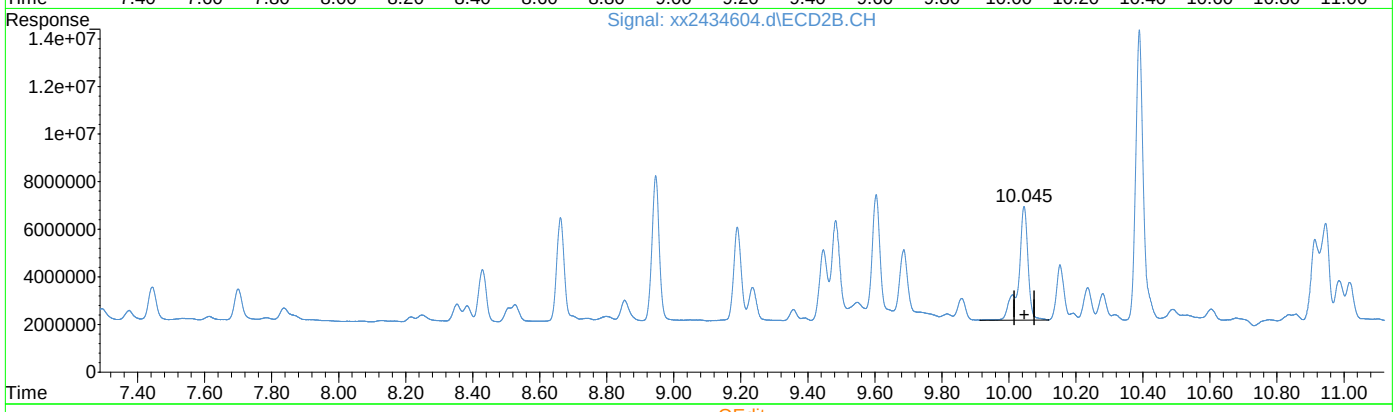
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:02:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(48) AR1260-C

8.346min 111.926 PPB

response 70646876

(48) AR1260-C #2

10.046min 170.968 PPB

response 95783910

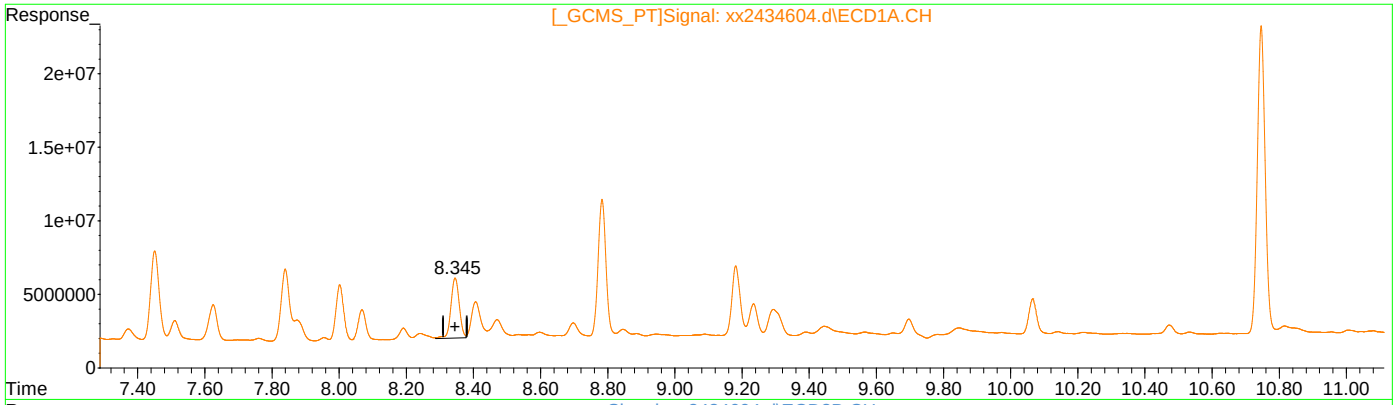
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:04:07 2019

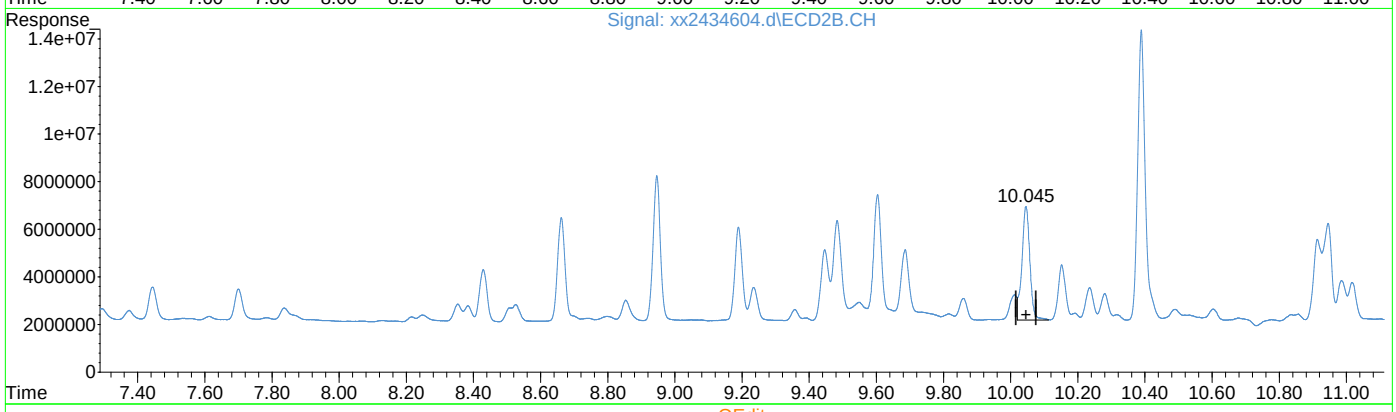
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:02:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(48) AR1260-C

8.346min 111.926 PPB

response 70646876

(48) AR1260-C #2

10.045min 140.059 PPB m

response 78467302

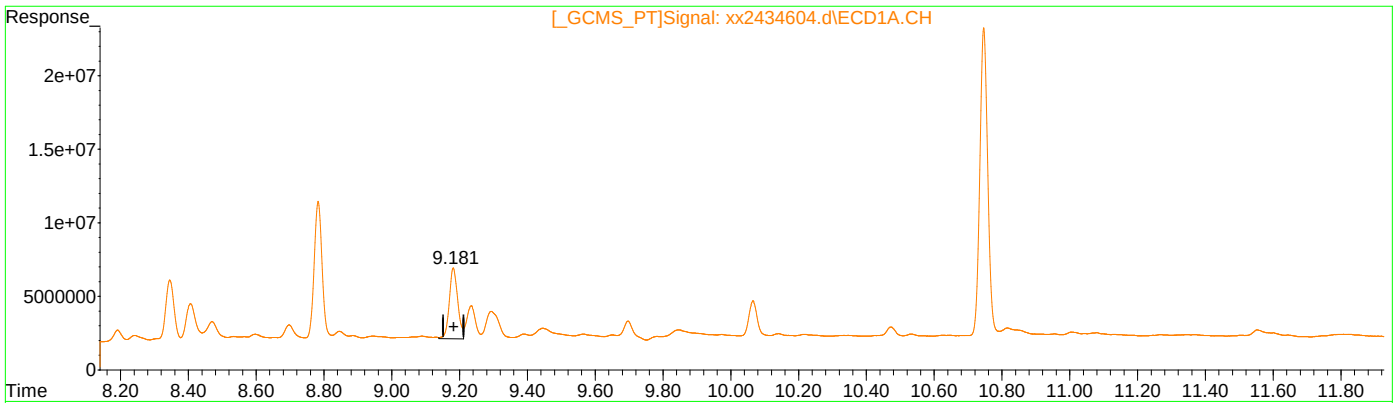
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:05:22 2019

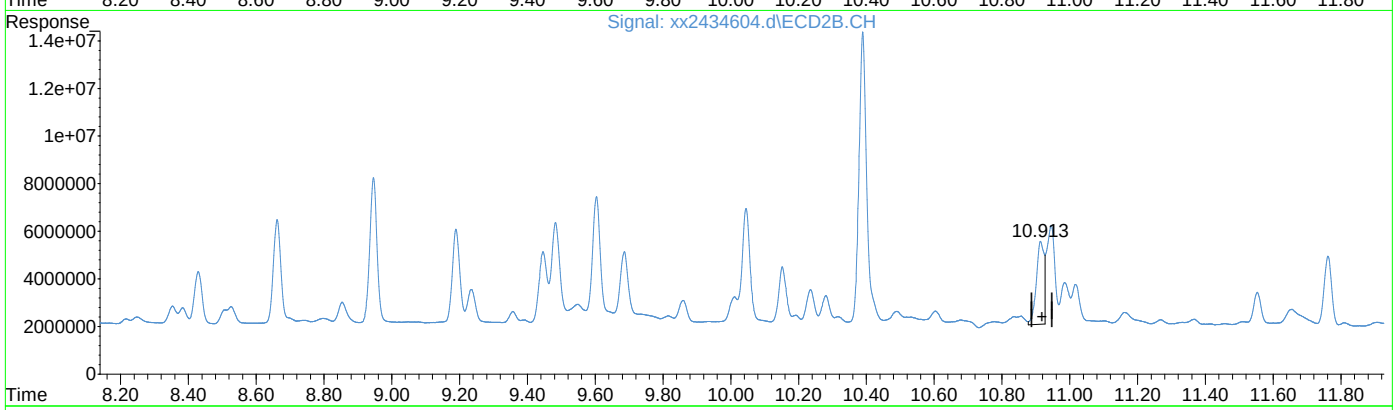
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:02:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.182min 56.423 PPB

response 84034557

(50) AR1260-E #2

10.914min 38.792 PPB

response 54822148

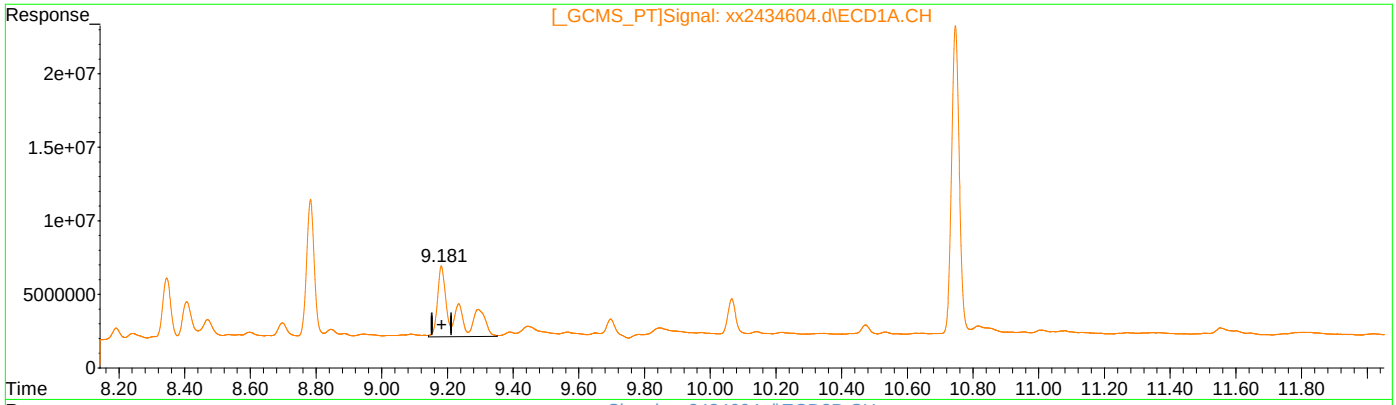
(+) = Expected Retention Time
pcb6666.m Sun May 05 22:05:38 2019

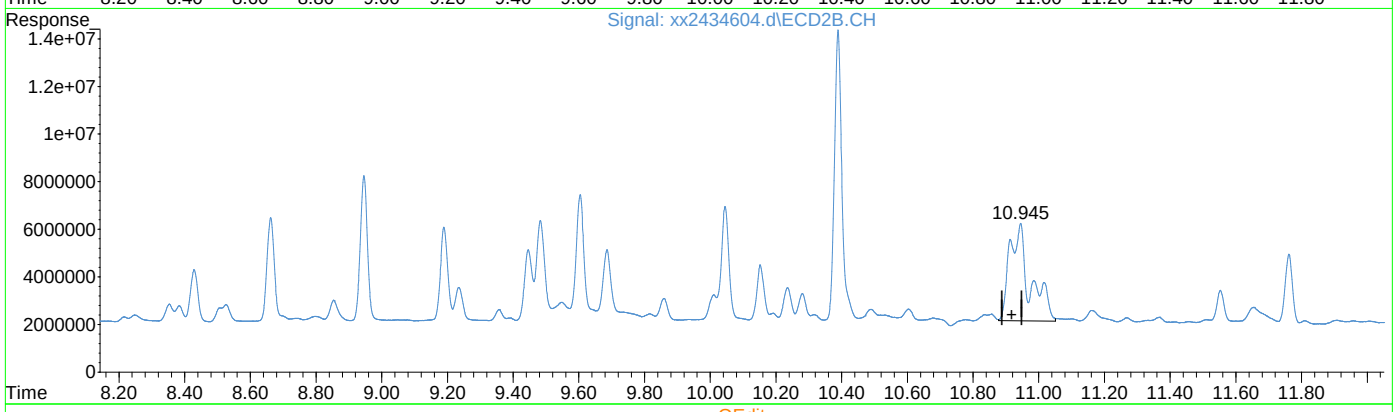
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 11:59 am
Operator : tianweir
Sample : op20019-msd
Misc : op20019,GXX6680,15.7,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 22:02:51 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.181min 114.753 PPB m

response 170909286

(50) AR1260-E #2

10.945min 124.704 PPB m

response 176234002

(+) = Expected Retention Time
pcb6666.m Sun May 05 22:06:08 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/03/19 14:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:55:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.955	2.168	158.7E6	219.6E6	50.000	50.000
27)	I 1-bromo-2...	1.955	2.168	158.7E6	219.6E6	50.000	50.000
33)	I 1-bromo-2...	1.955	2.168	158.7E6	219.6E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.554	2.982	160.2E6	273.3E6	66.756	63.236
	Spiked Amount 40.000	Range 30 - 150		Recovery = 166.89%#		158.09%#	
26)	SA Decachlor...	9.967	11.954	307.4E6	212.9E6	66.197	55.975
	Spiked Amount 40.000			Recovery = 165.49%		139.94%	
	Target Compounds						
15)	B 4,4'-DDE	5.348	6.714	4295744	4369650	1.181	1.025m
17)	MA Endrin	6.063	7.486	199.7E6	211.7E6	53.822	47.817
18)	A 4,4'-DDD	6.195	7.666	3139730	6699043	1.218m	1.848m#
20)	MA 4,4'-DDT	6.612	8.201	318.9E6	336.7E6	115.617	100.239
21)	B Endrin Al...	7.022	8.410	635996	567572	0.211m	0.164m
25)	B Endrin Ke...	8.149	9.842	1643899	2358298	0.437m	0.537m
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

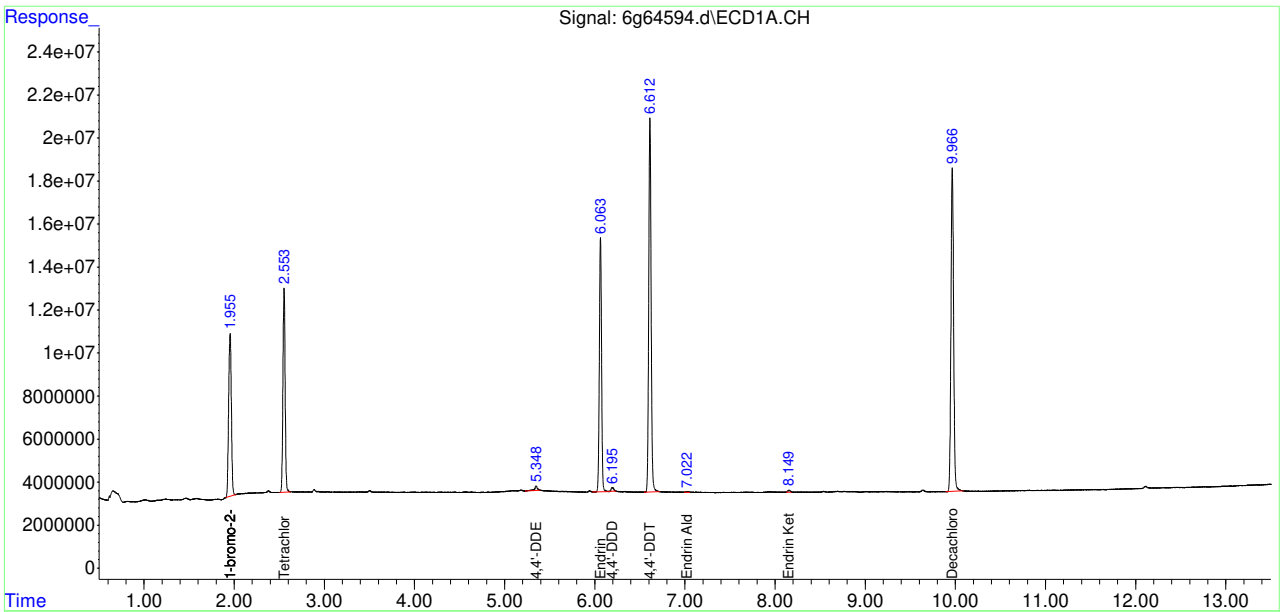
11.5.1 11

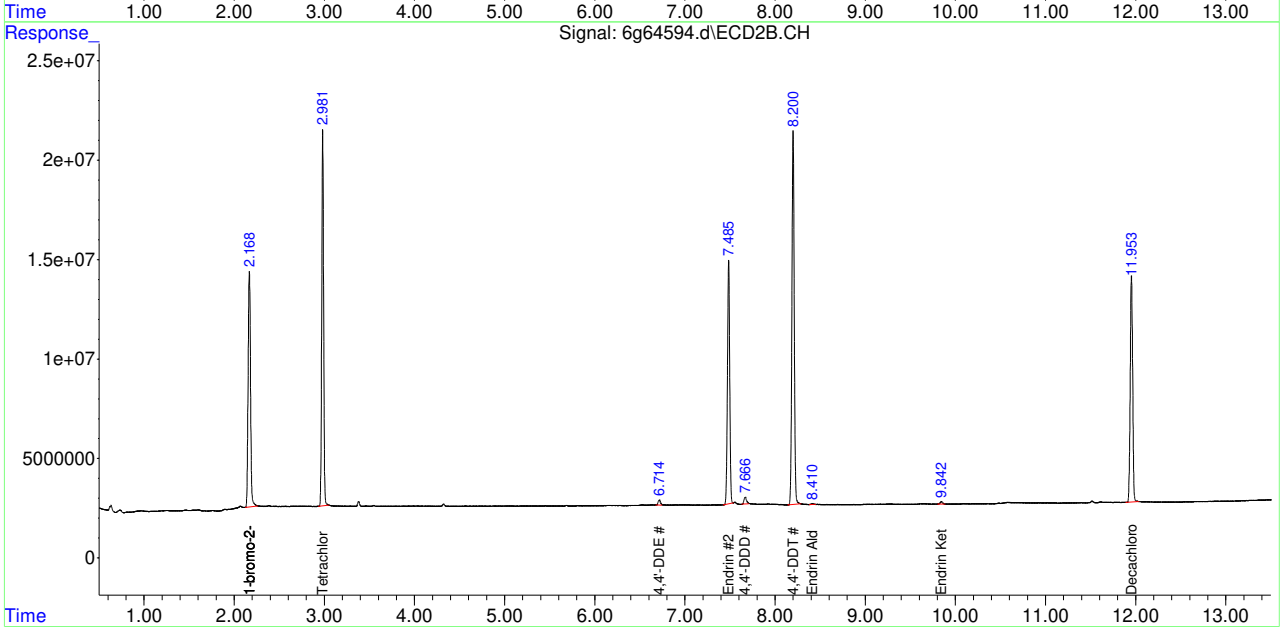
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:55:31 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number:	G6G1999-DDT	**Method:**	SW846 8081B
Lab FileID:	6G64594.D	**Analyst approved:**	05/02/19 08:59 Mailisi Heshuote
Injection Time:	05/01/19 13:45	**Supervisor approved:**	05/03/19 14:18 Gwendolyn Burns

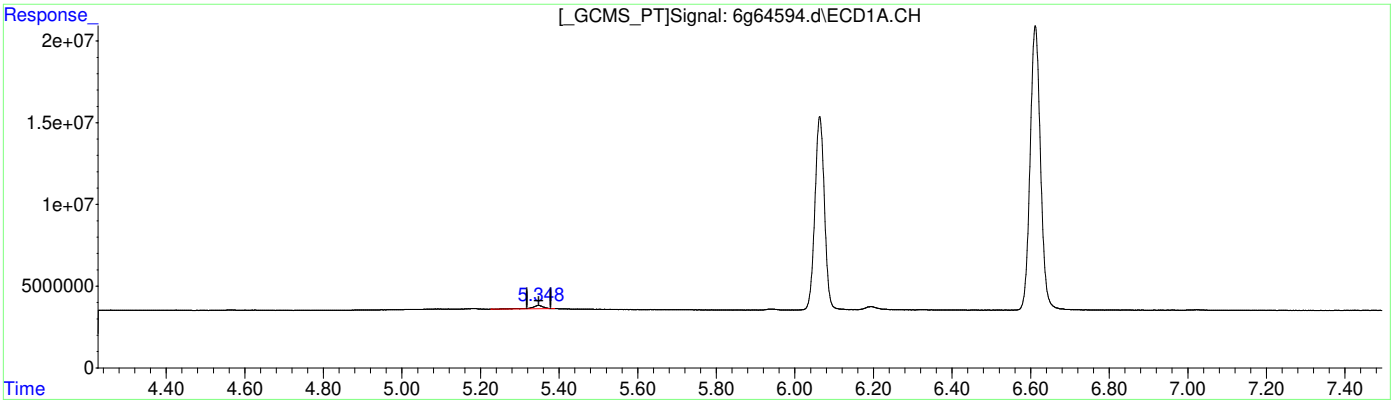
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDD	72-54-8	1	6.20	Poorly defined baseline
4,4'-DDE	72-55-9	2	6.71	Poorly defined baseline
Endrin aldehyde	7421-93-4	1	7.02	Poorly defined baseline
4,4'-DDD	72-54-8	2	7.67	Poorly defined baseline
Endrin ketone	53494-70-5	1	8.15	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	8.41	Poorly defined baseline
Endrin ketone	53494-70-5	2	9.84	Poorly defined baseline

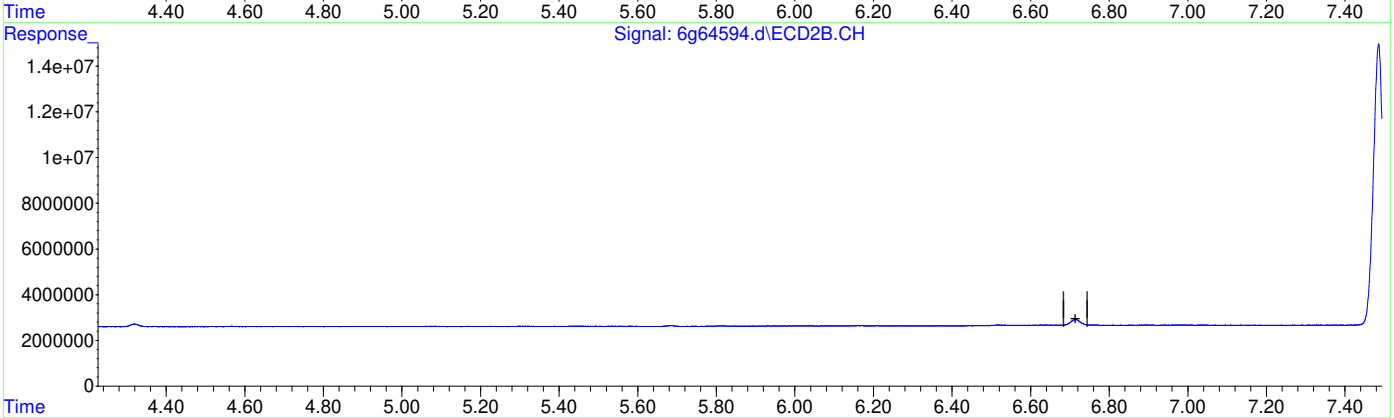
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(15) 4,4'-DDE (B)

5.348min 1.181 PPB

response 4295744

(15) 4,4'-DDE #2 (B)

0.000min 0.000 PPB

response 0

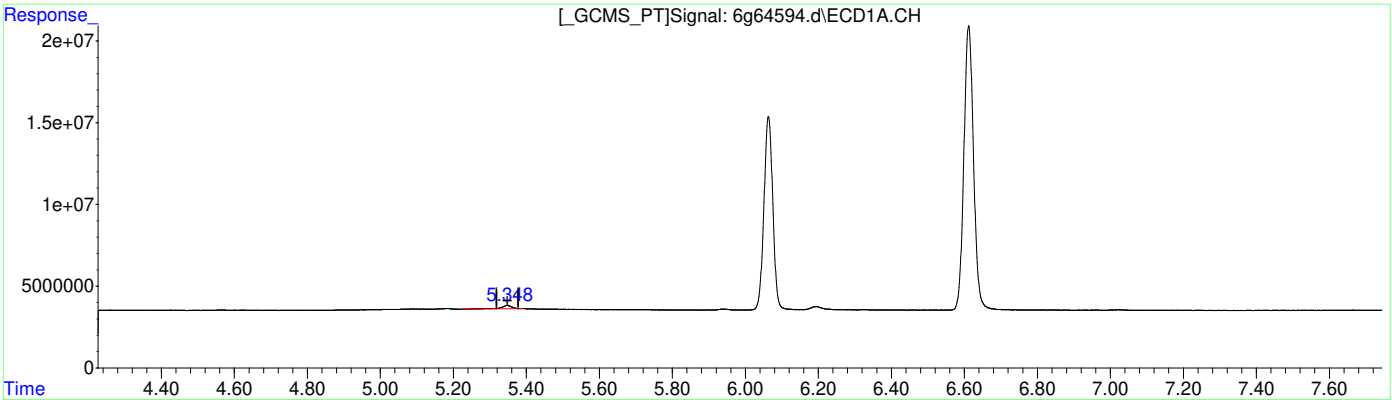
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:13 2019

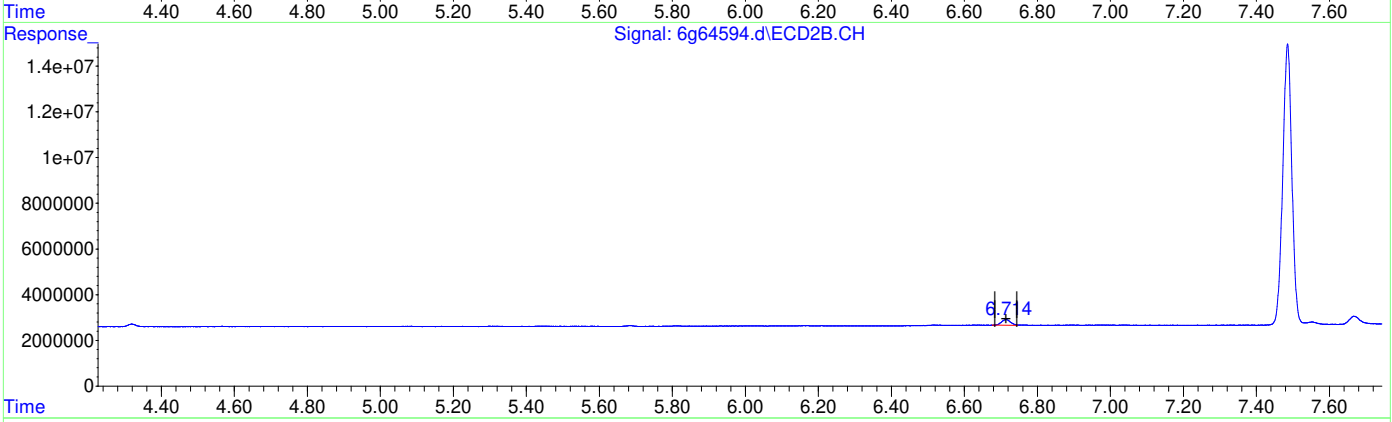
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(15) 4,4'-DDE (B)

5.348min 1.181 PPB

response 4295744

(15) 4,4'-DDE #2 (B)

6.714min 1.025 PPB m

response 4369650

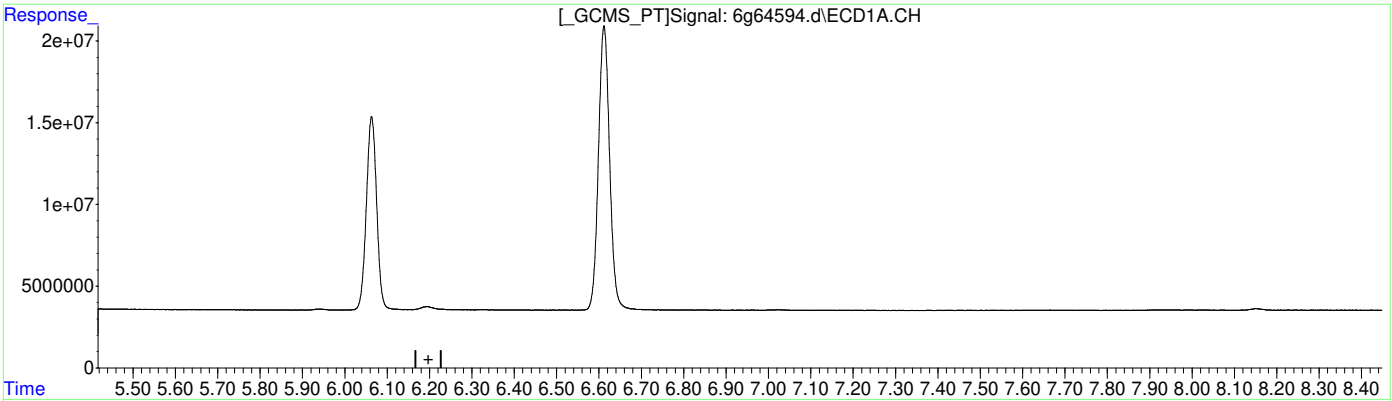
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:19 2019

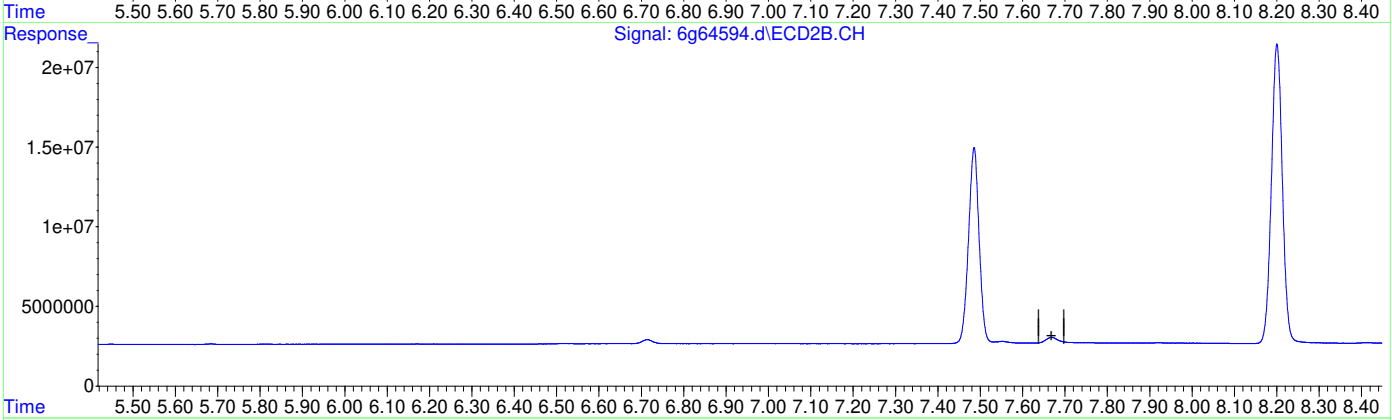
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(18) 4,4'-DDD (A)

0.000min 0.000 PPB

response 0

(18) 4,4'-DDD #2 (A)

0.000min 0.000 PPB

response 0

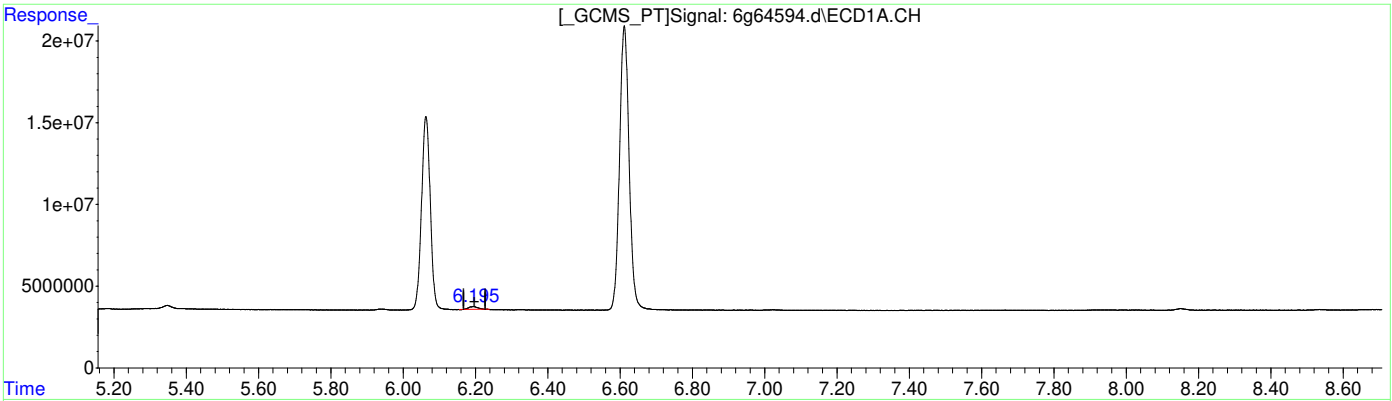
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:24 2019

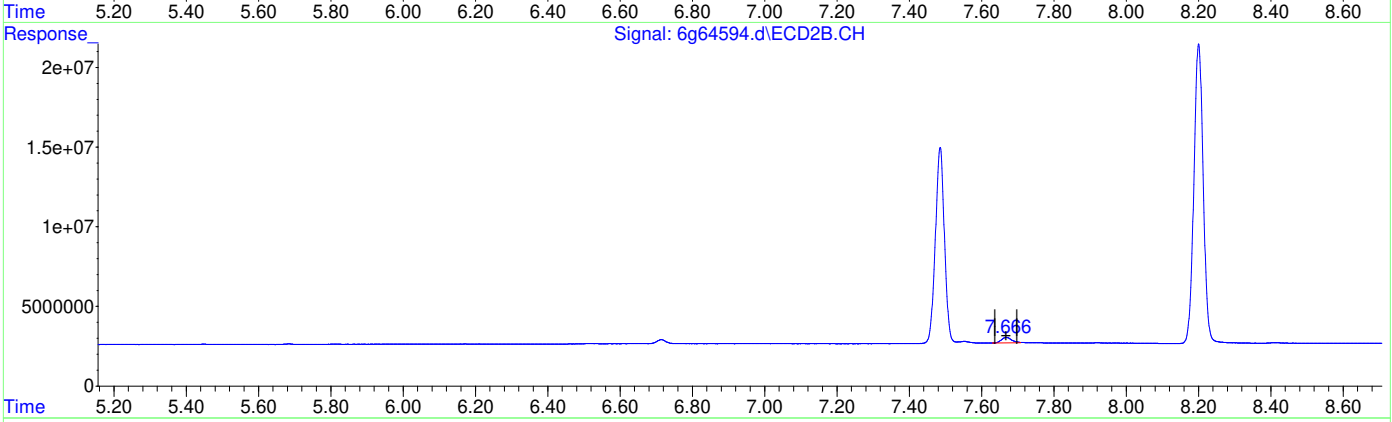
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(18) 4,4'-DDD (A)

6.195min 1.218 PPB m

response 3139730

(18) 4,4'-DDD #2 (A)

7.666min 1.848 PPB m

response 6699043

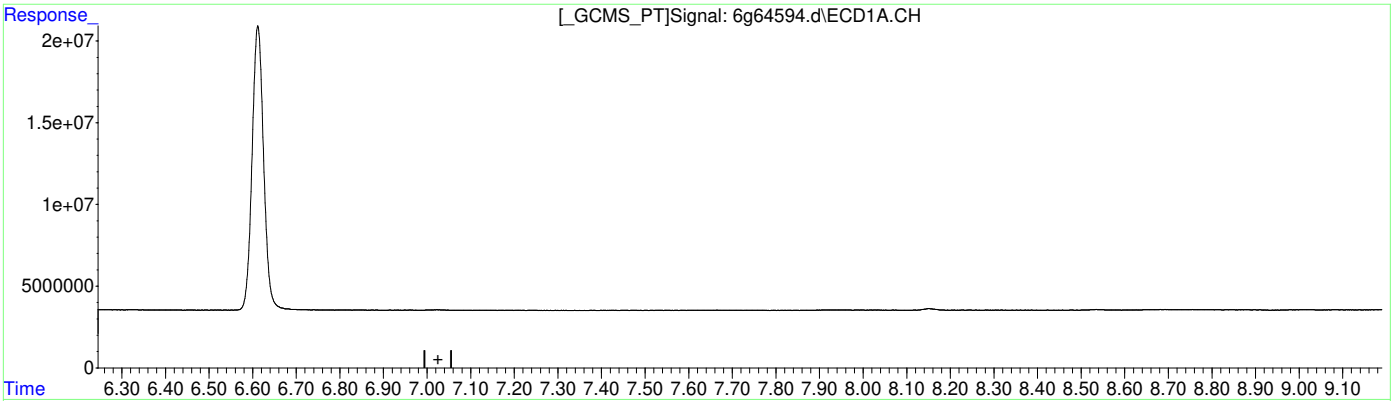
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:35 2019

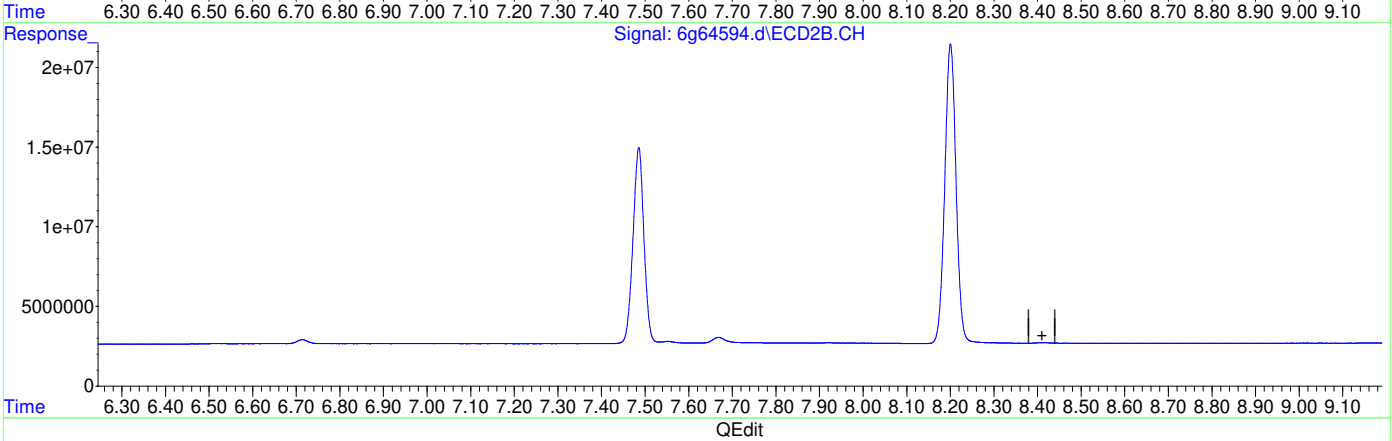
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(21) Endrin Aldehyde (B)

0.000min 0.000 PPB

response 0

(21) Endrin Aldehyde #2 (B)

0.000min 0.000 PPB

response 0

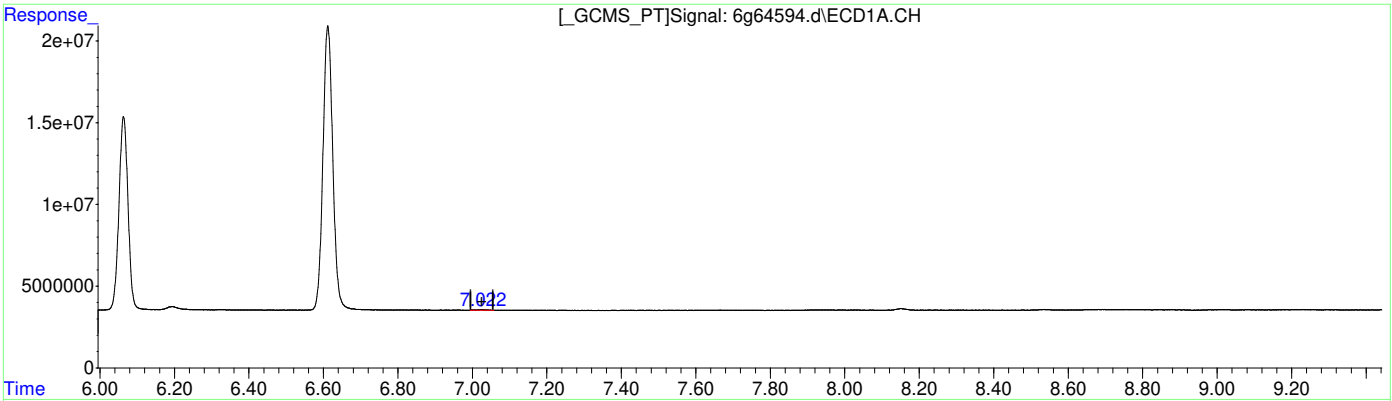
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:39 2019

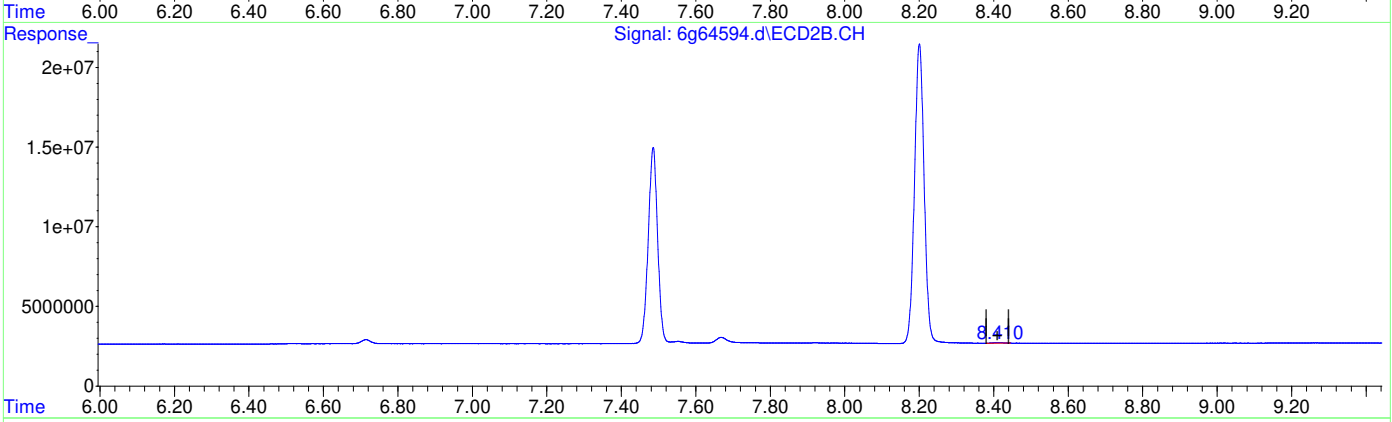
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(21) Endrin Aldehyde (B)

7.022min 0.211 PPB m

response 635996

(21) Endrin Aldehyde #2 (B)

8.410min 0.164 PPB m

response 567572

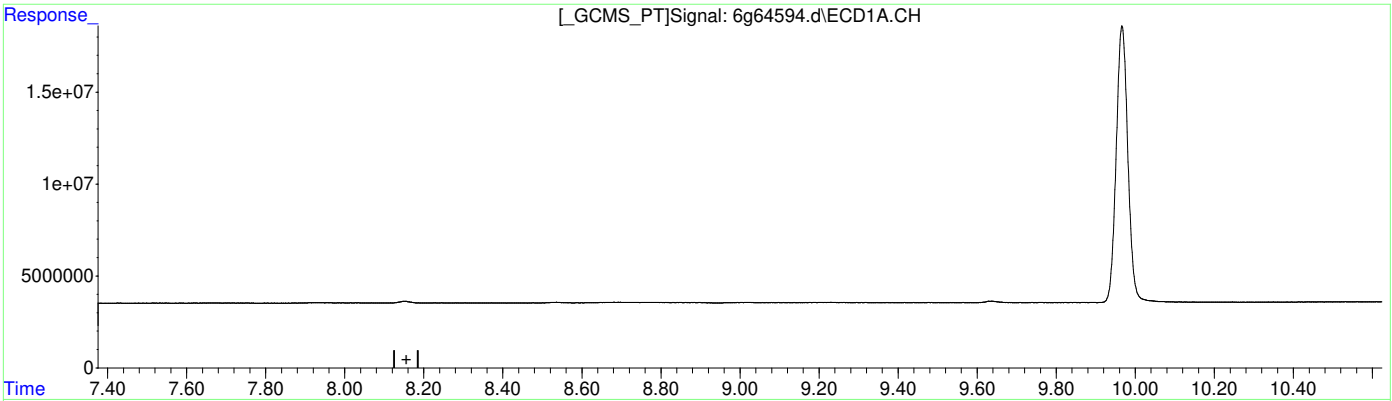
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:53 2019

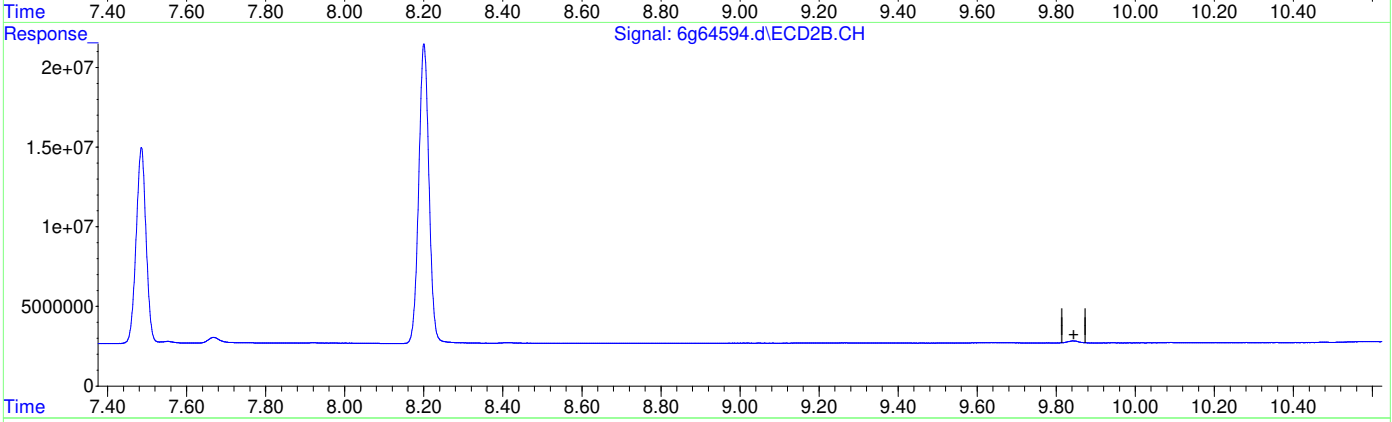
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(25) Endrin Ketone (B)

0.000min 0.000 PPB

response 0

(25) Endrin Ketone #2 (B)

0.000min 0.000 PPB

response 0

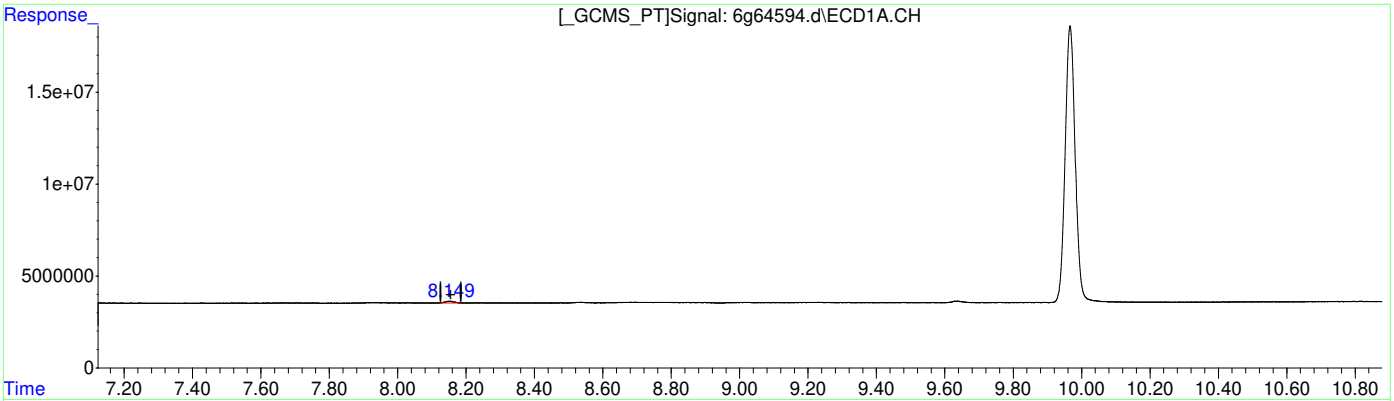
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:54:56 2019

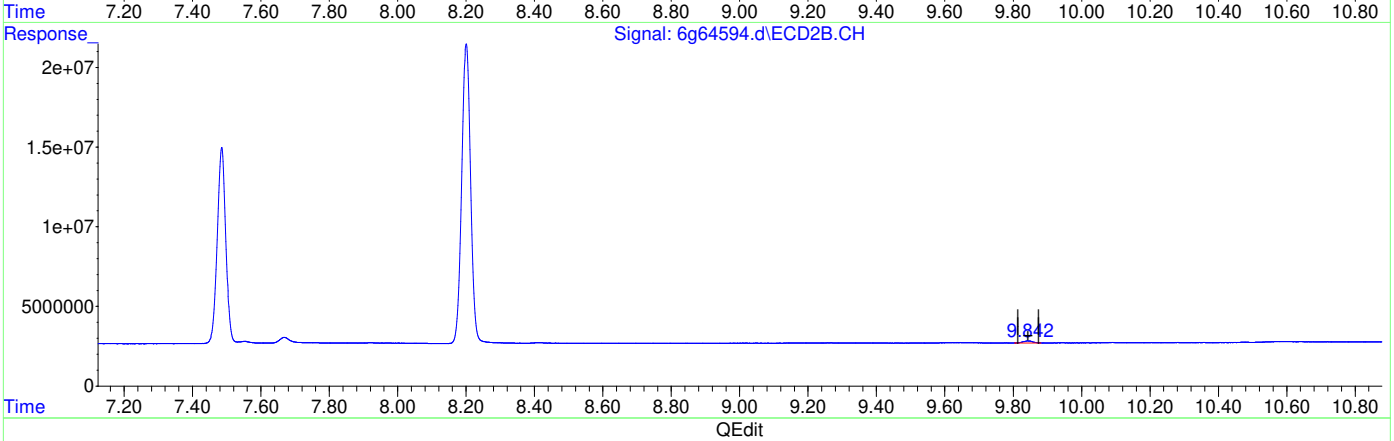
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64594.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 13:45:51
Operator : mailisih
Sample : ddt
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:54:06 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(25) Endrin Ketone (B)

8.149min 0.437 PPB m

response 1643899

(25) Endrin Ketone #2 (B)

9.842min 0.537 PPB m

response 2358298

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:55:12 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:45

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:17:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.956	2.166	115.1E6	234.3E6	50.000	50.000
27) I	1-bromo-2...	1.956	2.166	115.1E6	234.3E6	50.000	50.000
33) I	1-bromo-2...	1.956	2.166	115.1E6	234.3E6	50.000	50.000
	System Monitoring Compounds						
2) SAB	Tetrachlo...	2.559	2.979	151.7E6	315.2E6	87.195	68.354
	Spiked Amount 40.000	Range 30 - 150		Recovery =		217.99%#	170.88%#
26) SA	Decachlor...	9.977	11.956	227.9E6	245.7E6	67.661	60.546
	Spiked Amount 40.000			Recovery =		169.15%	151.36%
	Target Compounds						
15) B	4,4'-DDE	5.356	6.713	4278194	7790766	1.622	1.713
17) MA	Endrin	6.075	7.486	141.4E6	246.4E6	52.555	52.171
18) A	4,4'-DDD	6.198	7.666	2114772	5548511	1.131m	1.434m#
20) MA	4,4'-DDT	6.624	8.201	227.5E6	398.8E6	113.741	111.297
21) B	Endrin Al...	7.029	8.409	1240336	2044005	0.567m	0.553m
25) B	Endrin Ke...	8.163	9.846	1966798	3894390	0.721m	0.832m
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

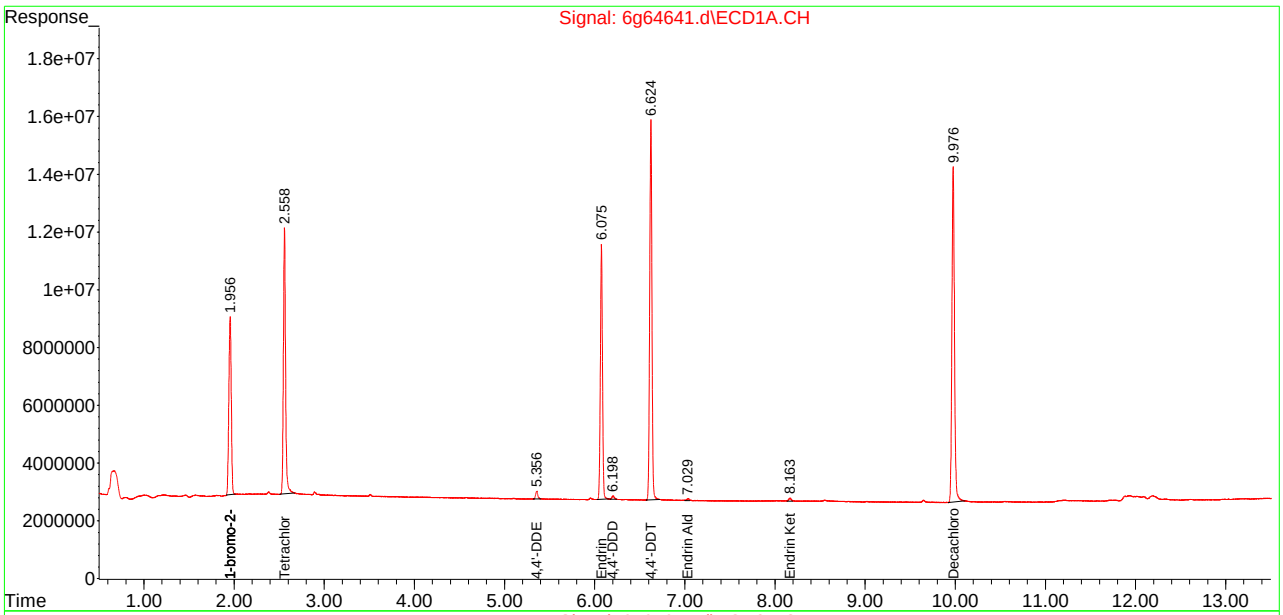
11.5.2 11

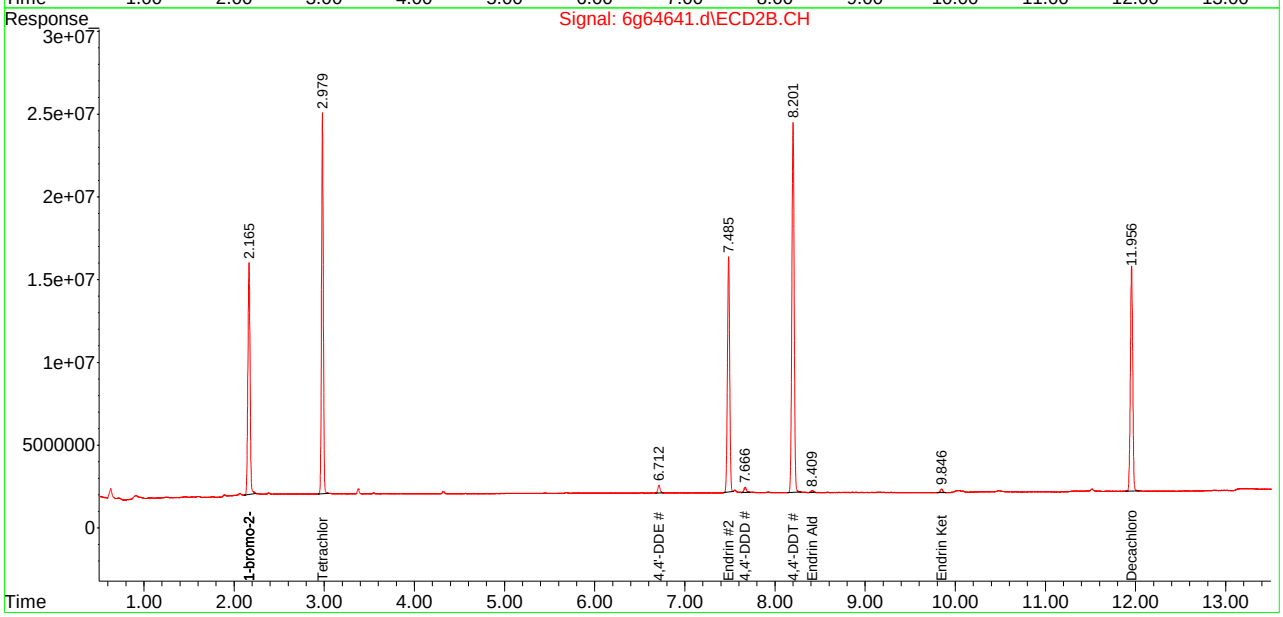
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:17:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number: G6G2001-DDT
Lab FileID: 6G64641.D
Injection Time: 05/03/19 13:33
Method: SW846 8081B
Analyst approved: 05/06/19 00:43 Ann DeGuzman
Supervisor approved: 05/06/19 07:45 Gwendolyn Burns

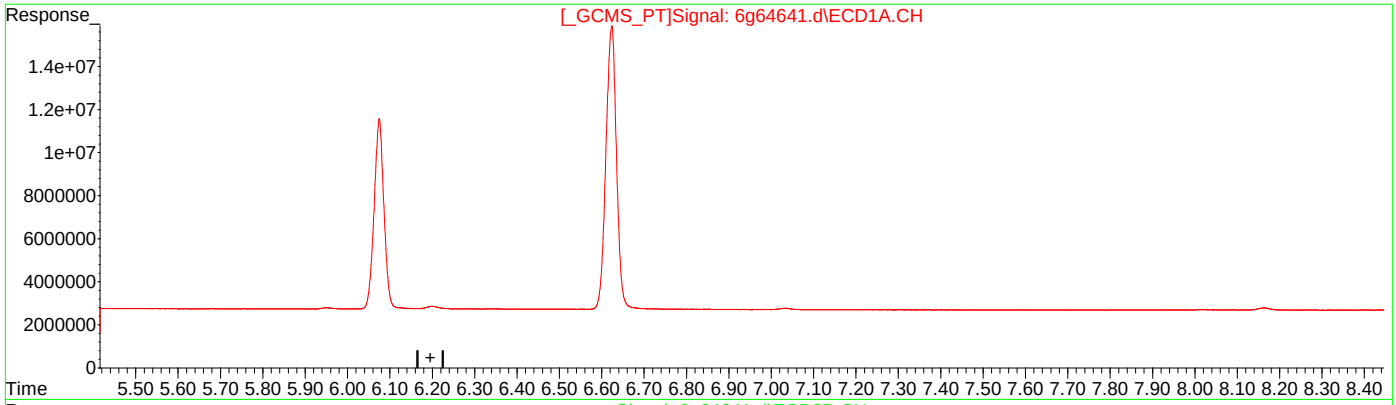
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDD	72-54-8	1	6.20	Missed peak
Endrin aldehyde	7421-93-4	1	7.03	Missed peak
4,4'-DDD	72-54-8	2	7.67	Missed peak
Endrin ketone	53494-70-5	1	8.16	Missed peak
Endrin aldehyde	7421-93-4	2	8.41	Missed peak
Endrin ketone	53494-70-5	2	9.85	Poor instrument integration

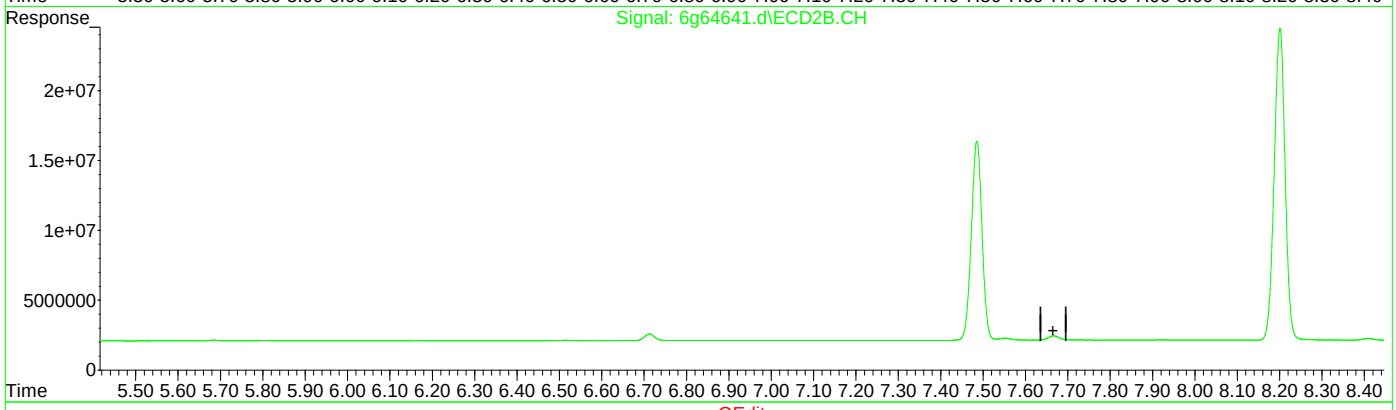
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(18) 4,4'-DDD (A)

0.000min 0.000 PPB

response 0

(18) 4,4'-DDD #2 (A)

0.000min 0.000 PPB

response 0

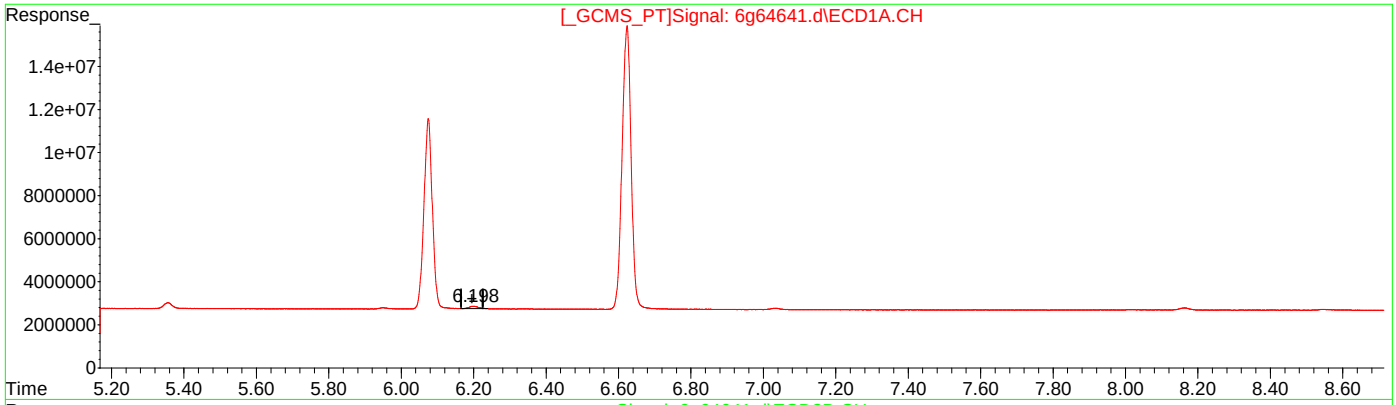
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:13:43 2019

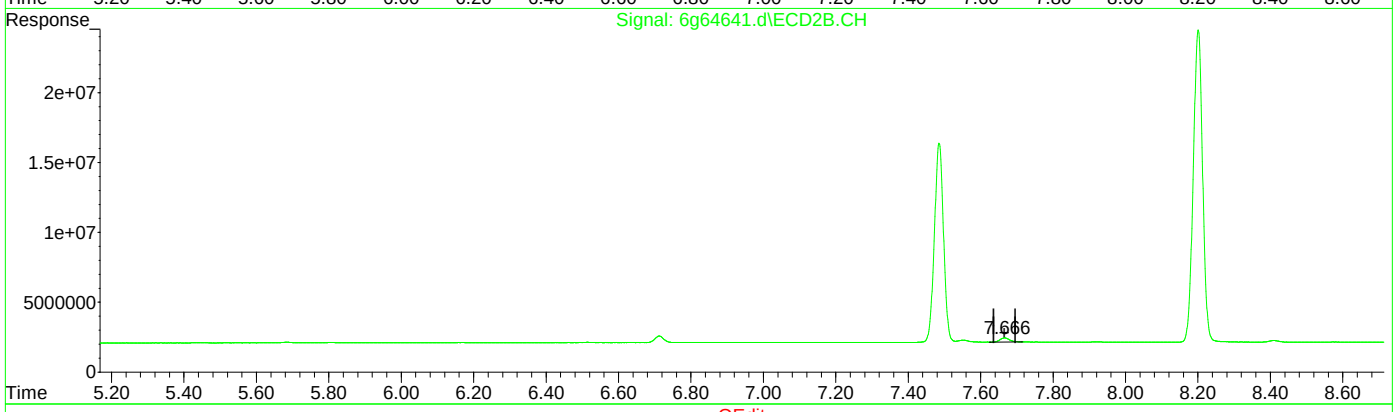
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(18) 4,4'-DDD (A)

6.198min 1.131 PPB m

response 2114772

(18) 4,4'-DDD #2 (A)

7.666min 1.434 PPB m

response 5548511

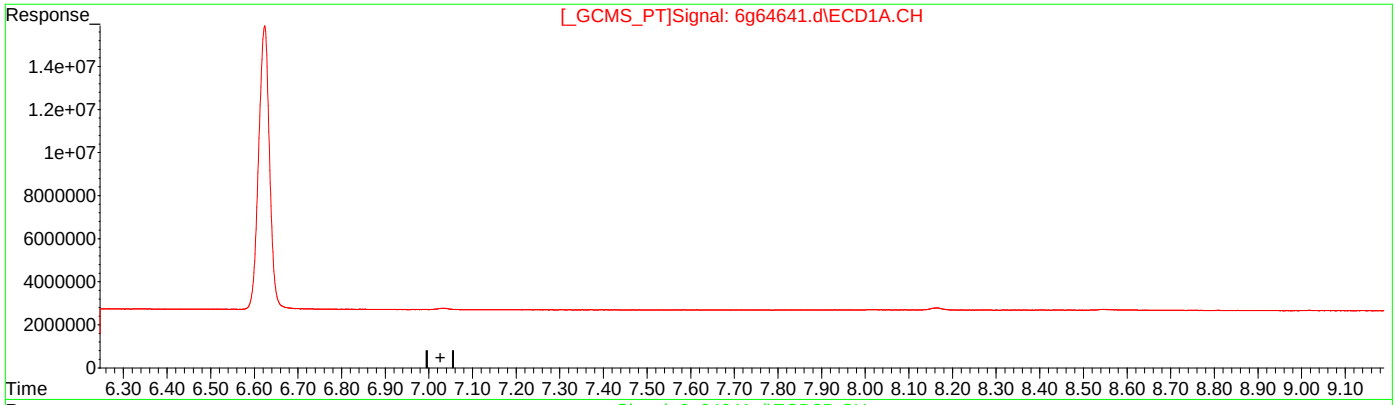
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:14:40 2019

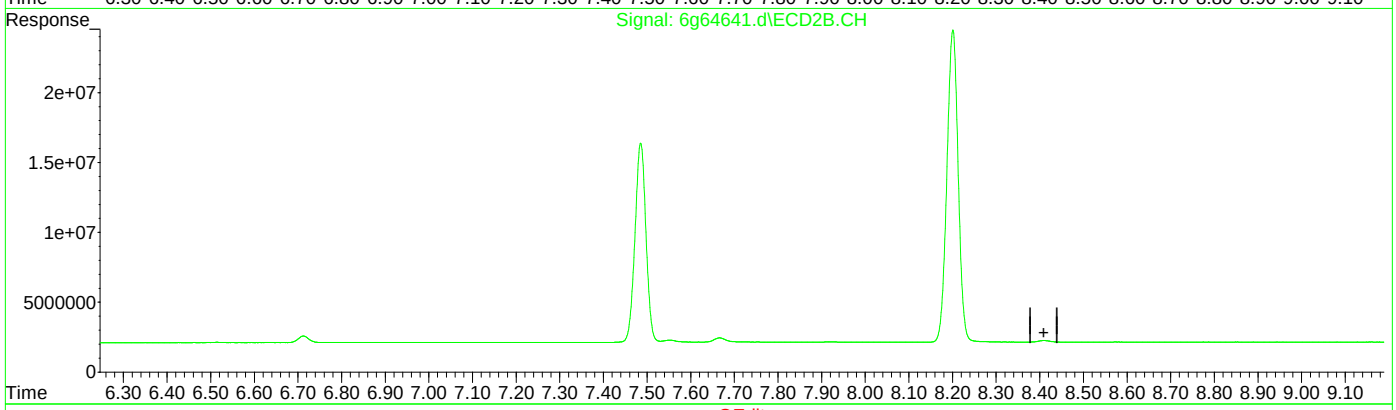
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(21) Endrin Aldehyde (B)

0.000min 0.000 PPB

response 0

(21) Endrin Aldehyde #2 (B)

0.000min 0.000 PPB

response 0

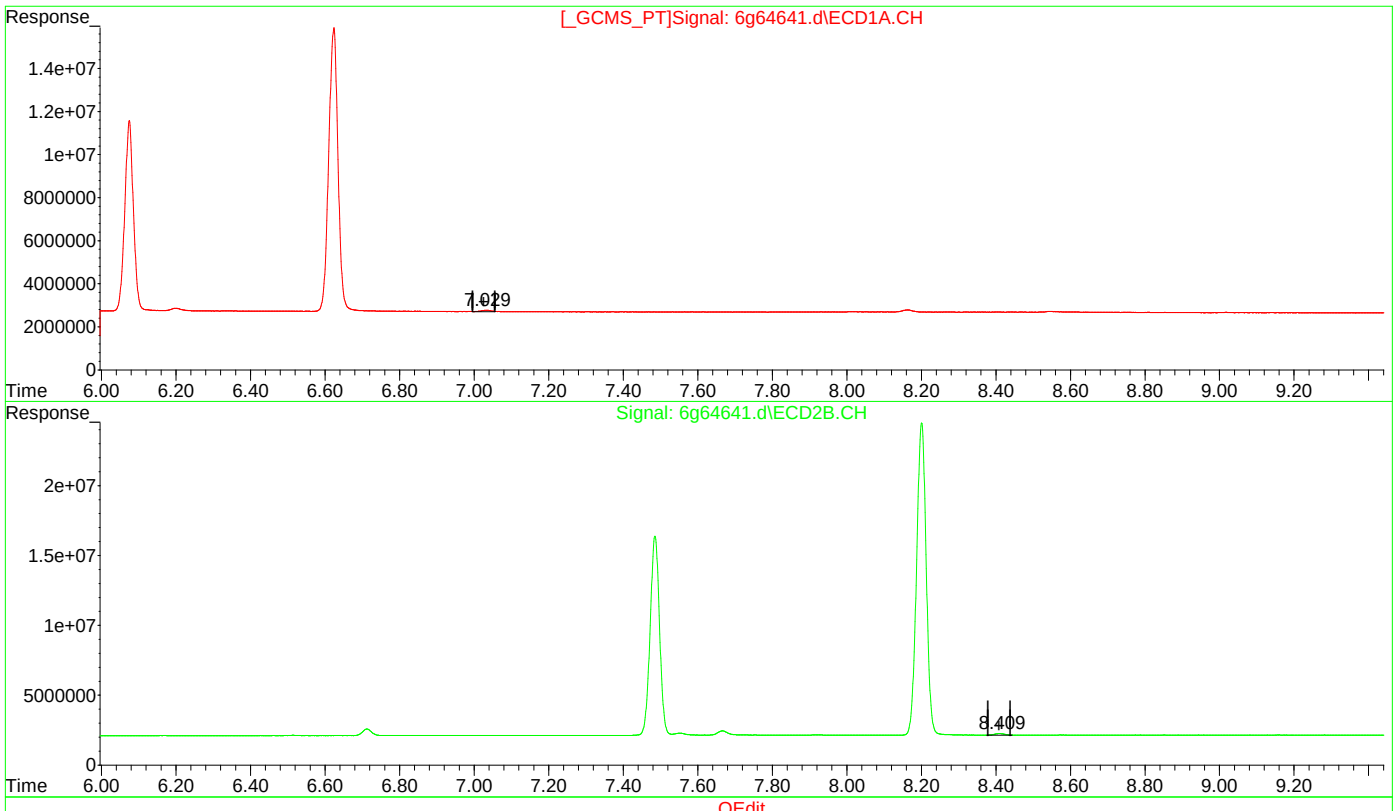
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:14:51 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(21) Endrin Aldehyde (B)

7.029min 0.567 PPB m

response 1240336

(21) Endrin Aldehyde #2 (B)

8.409min 0.553 PPB m

response 2044005

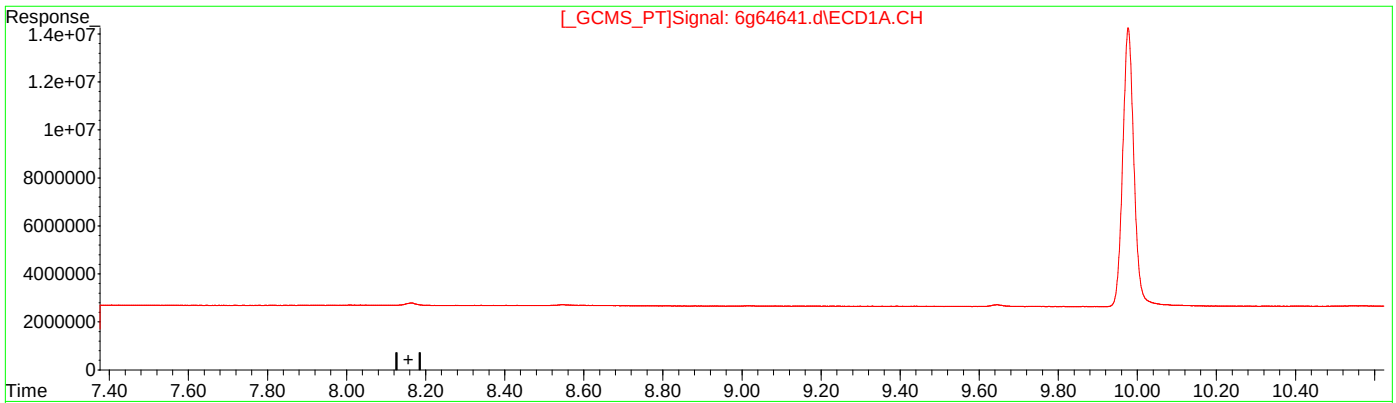
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:15:38 2019

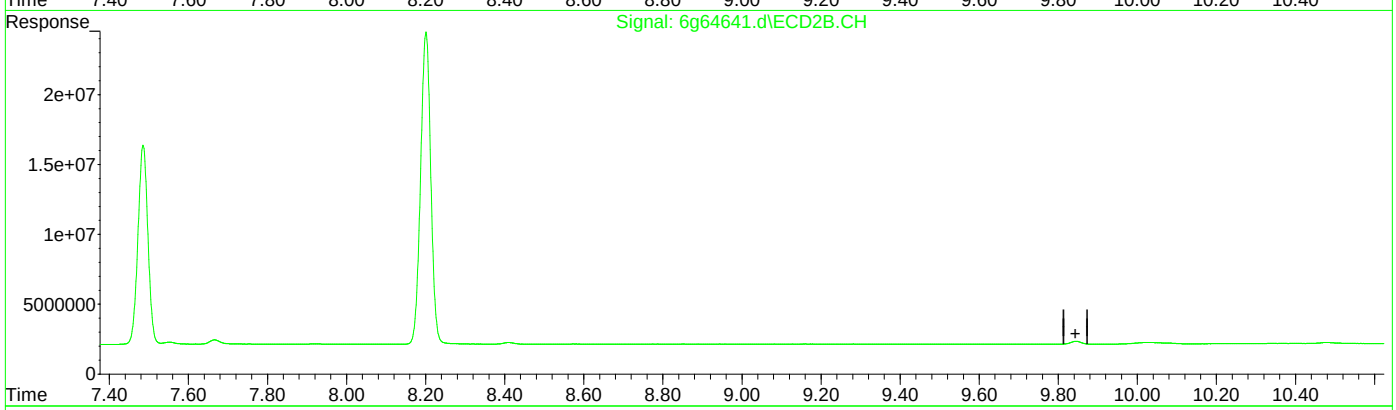
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(25) Endrin Ketone (B)

0.000min 0.000 PPB

response 0

(25) Endrin Ketone #2 (B)

0.000min 0.000 PPB

response 0

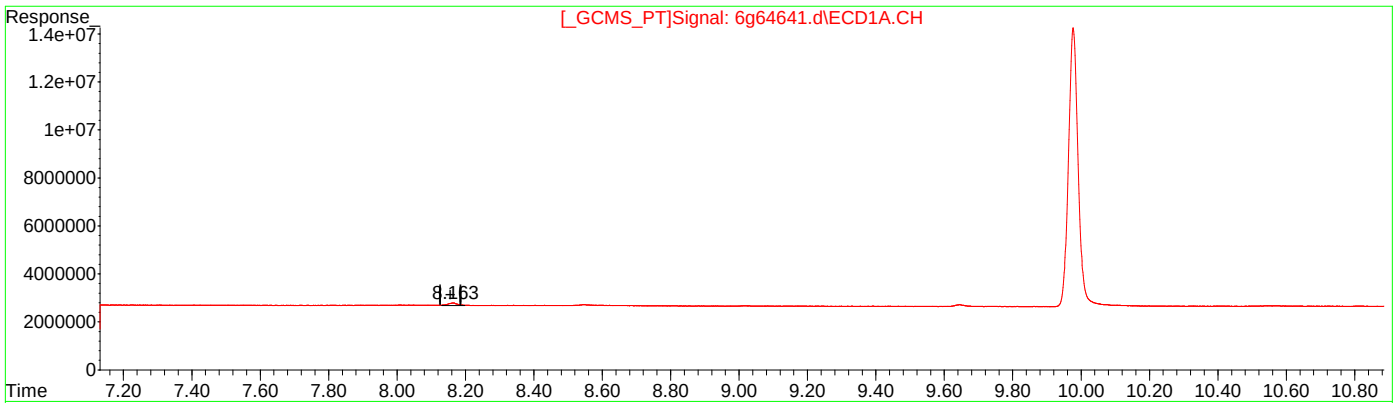
(+) = Expected Retention Time
6pst1999.m Sun May 05 21:16:01 2019

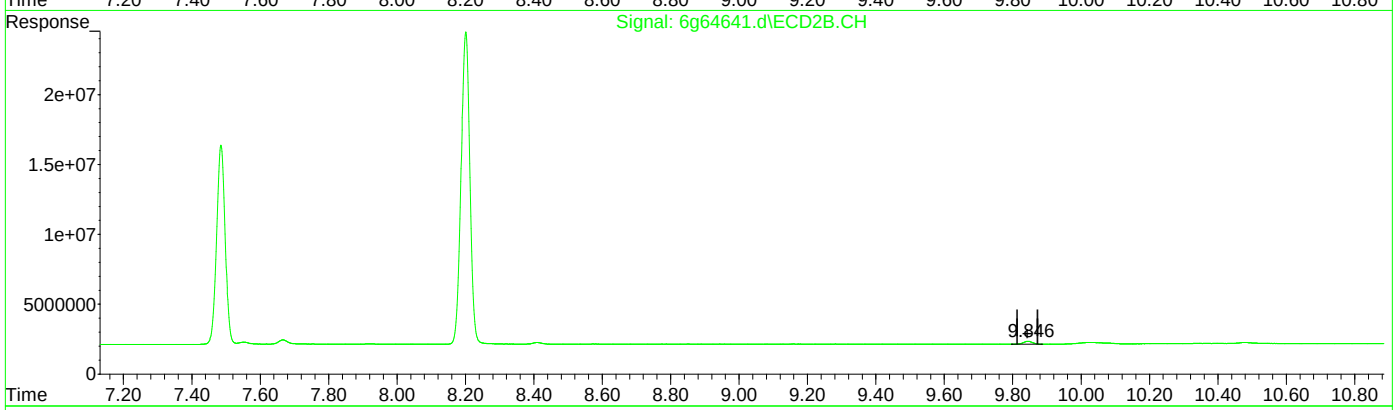
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64641.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:33:53
Operator : mailisih
Sample : ddt
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 1 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:00:00 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(25) Endrin Ketone (B)

8.163min 0.721 PPB m

response 1966798

(25) Endrin Ketone #2 (B)

9.846min 0.832 PPB m

response 3894390

(+) = Expected Retention Time
6pst1999.m Sun May 05 21:16:57 2019

11.5.2.7

Manual Integrations APPROVED
(compounds with "m" flag)
Gwendolyn Burns
05/03/19 14:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.953	2.167	155.9E6	213.9E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.555	2.981	2285532	4466400	1.414m	1.479m
	Spiked Amount 40.000	Range 30 - 150		Recovery =		3.54%#	3.70%#
26) SA	Decachlor...	9.974	11.956	4833198	4446956	1.534	1.752
	Spiked Amount 40.000			Recovery =		3.84%	4.38%
	Target Compounds						
3)	hexachlor...	2.889	3.491	5766352	4874802	1.488	1.501
4) A	alpha-BHC	3.029	3.646	3599593	5574535	1.222	1.379
5) MA	gamma-BHC	3.328	4.076	3471565	5327335	1.257	1.418
6) MA	Heptachlor	3.832	4.655	4133872	5732024	1.365	1.483
7) B	beta-BHC	3.404	4.163	1926127	2724718	1.629	1.570m
8) B	delta-BHC	3.592	4.559	3298813	4661622	1.287	1.315
9) MB	Aldrin	4.170	5.109	3858656	5245468	1.382	1.507
10)	alachlor	4.323	4.917	625160	753113	1.896m	1.505m
11) B	Heptachlo...	4.895	5.935	3934690	5052373	1.458	1.505
12) B	gamma-Chl...	5.061	6.220	3636967	4978721	1.380	1.498
13) B	alpha-Chl...	5.234	6.446	3603268	4974156	1.408m	1.521
14) A	Endosulfan I	5.413	6.543	3887526	4520887	1.444	1.460
15) B	4,4'-DDE	5.347	6.714	3623941	4226811	1.422	1.395
16) MA	Dieldrin	5.740	6.981	3754000	4872558	1.389	1.478
17) MA	Endrin	6.067	7.485	3514334	4685820	1.350	1.489
18) A	4,4'-DDD	6.203	7.668	2454781	3672121	1.336m	1.419m
19) B	Endosulfa...	6.392	7.838	3550376	4594857	1.443	1.532
20) MA	4,4'-DDT	6.618	8.203	2429628	3197051	1.245m	1.342m
21) B	Endrin Al...	7.026	8.412	2830728	3573900	1.372	1.469
22) B	Endosulfa...	7.715	8.881	3153324	4234029	1.411	1.532
23) A	Methoxychlor	7.411	9.453	1988064	2214693	1.637m	1.499m
24)	Mirex	7.562	9.776	3742372	4002027	1.672	1.570
25) B	Endrin Ke...	8.155	9.845	3602670	4672429	1.415	1.566
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

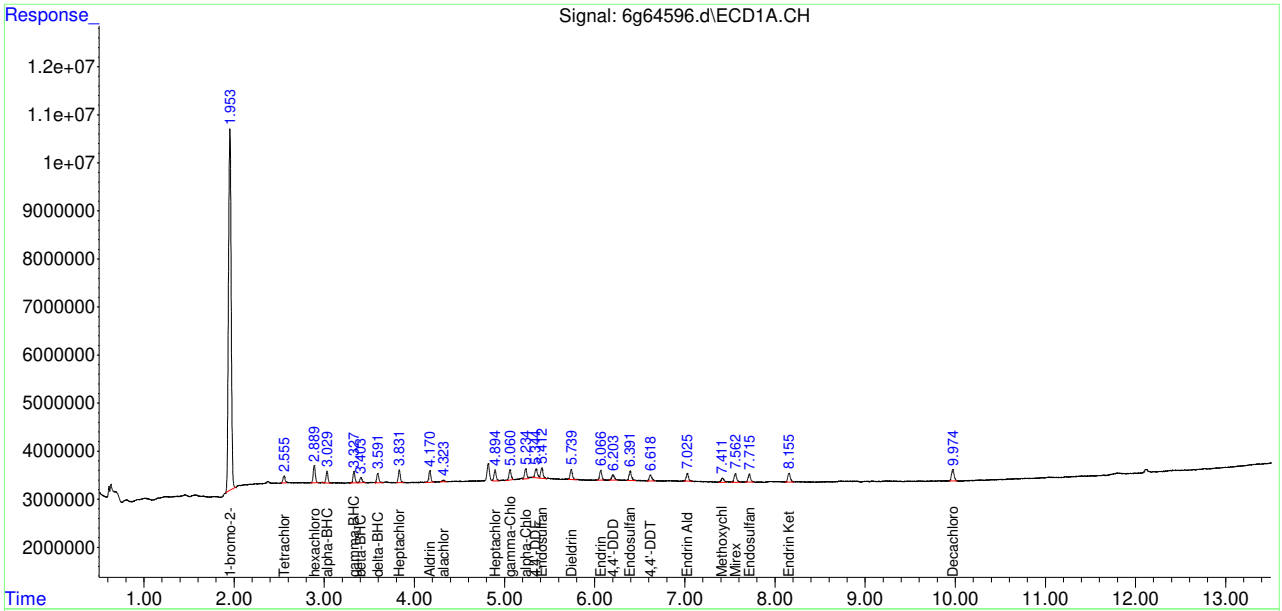
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

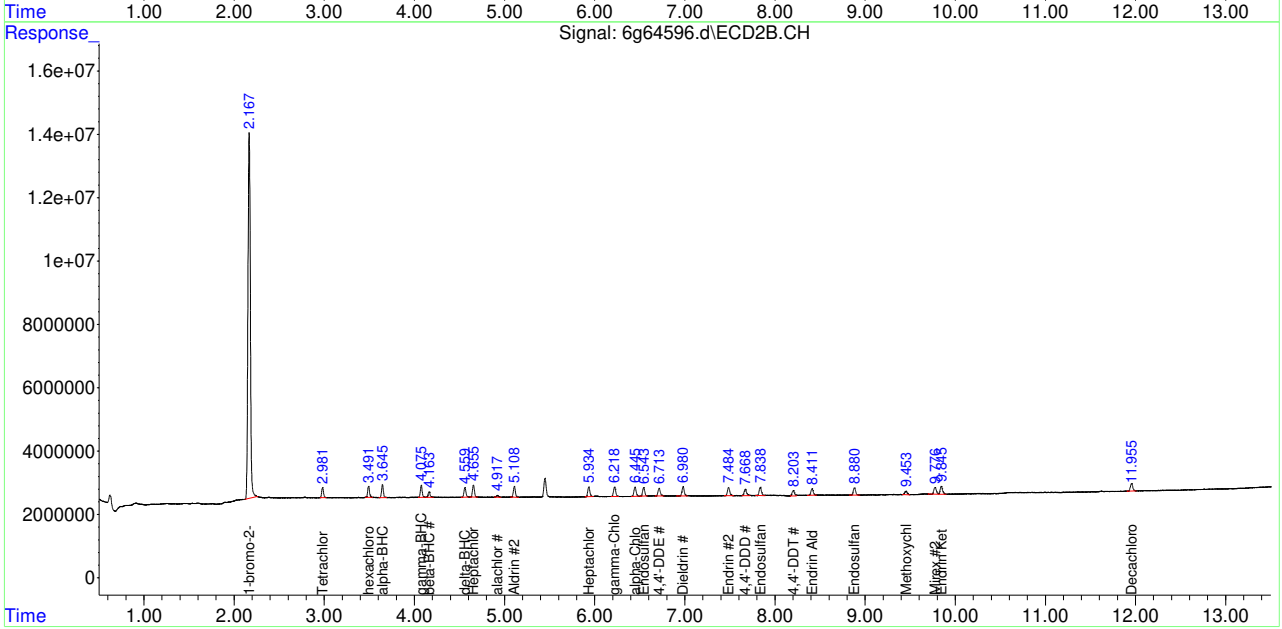
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:05 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number: G6G1999-IC1999
Lab FileID: 6G64596.D
Injection Time: 05/01/19 14:22
Method: SW846 8081B
Analyst approved: 05/02/19 08:59 Mailisi Heshuote
Supervisor approved: 05/03/19 14:18 Gwendolyn Burns

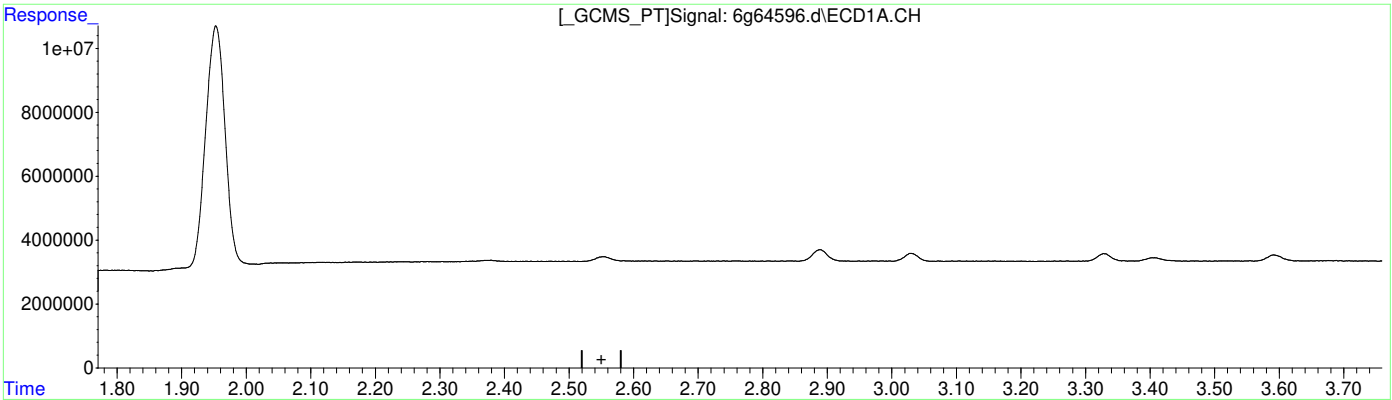
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.55	Poorly defined baseline
Tetrachloro-m-xylene	877-09-8	2	2.98	Poorly defined baseline
beta-BHC	319-85-7	2	4.16	Poorly defined baseline
Alachlor	15972-60-8	1	4.32	Poorly defined baseline
Alachlor	15972-60-8	2	4.92	Poorly defined baseline
alpha-Chlordane	5103-71-9	1	5.23	Poorly defined baseline
4,4'-DDD	72-54-8	1	6.20	Poorly defined baseline
4,4'-DDT	50-29-3	1	6.62	Poorly defined baseline
Methoxychlor	72-43-5	1	7.41	Poorly defined baseline
4,4'-DDD	72-54-8	2	7.67	Poorly defined baseline
4,4'-DDT	50-29-3	2	8.20	Poorly defined baseline
Methoxychlor	72-43-5	2	9.45	Poorly defined baseline

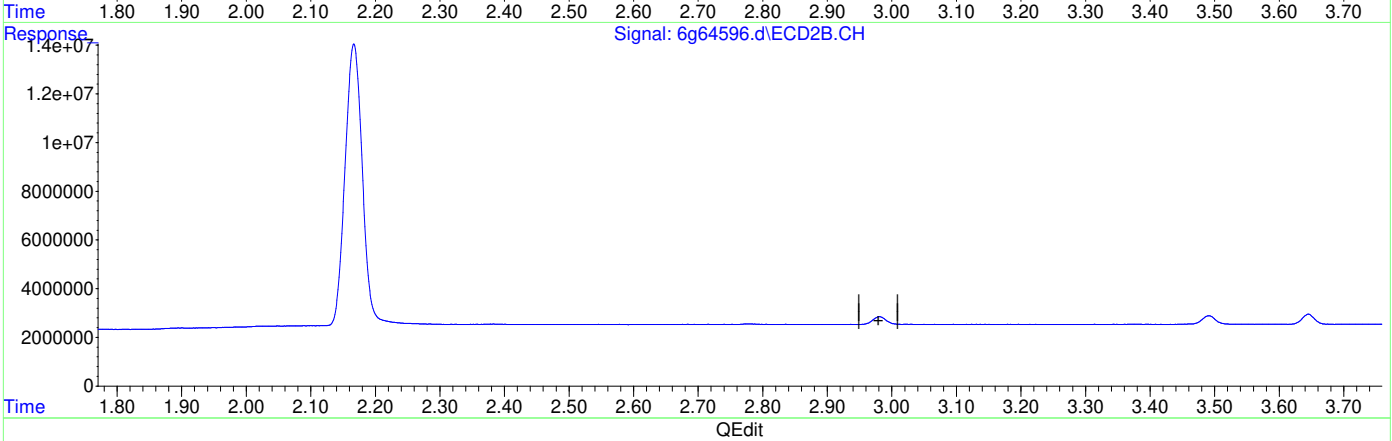
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(2) Tetrachloro-m-xylene (SAB)

0.000min 0.000 PPB

response 0

(2) Tetrachloro-m-xylene #2 (SAB)

0.000min 0.000 PPB

response 0

(+) = Expected Retention Time

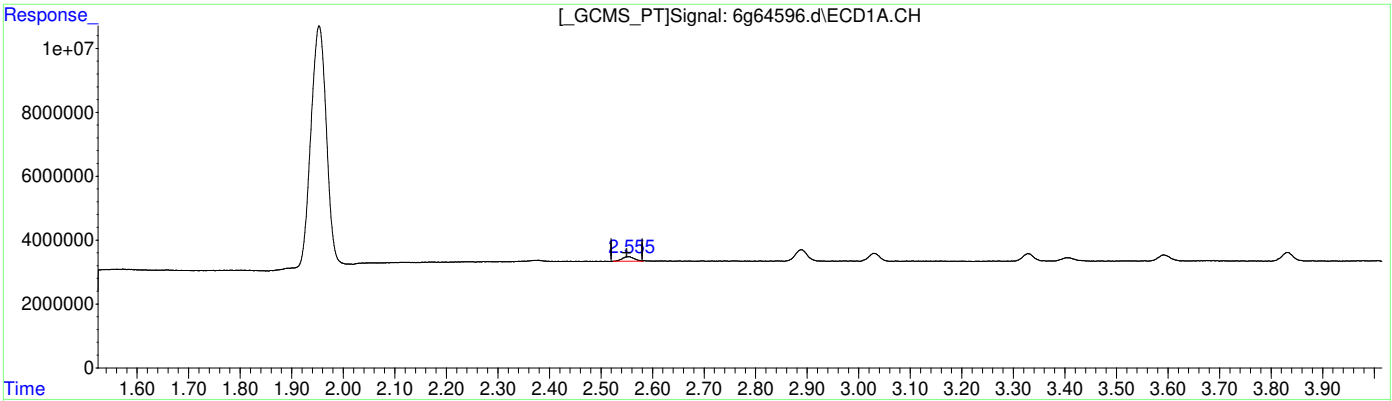
6PST1999.M Thu May 02 08:38:40 2019

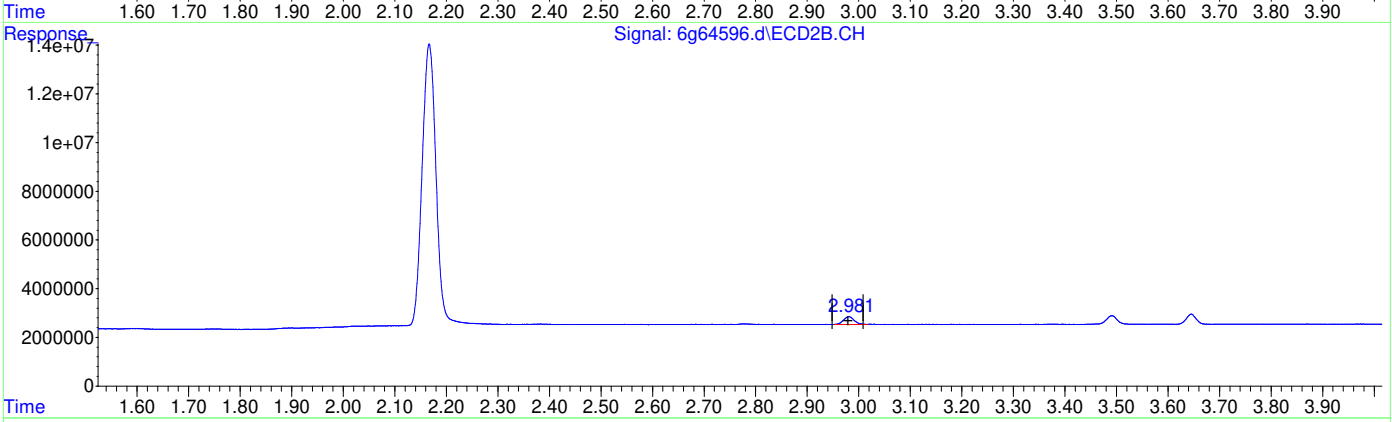
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(2) Tetrachloro-m-xylene (SAB)

2.555min 1.414 PPB m

response 2285532

(2) Tetrachloro-m-xylene #2 (SAB)

2.981min 1.479 PPB m

response 4466400

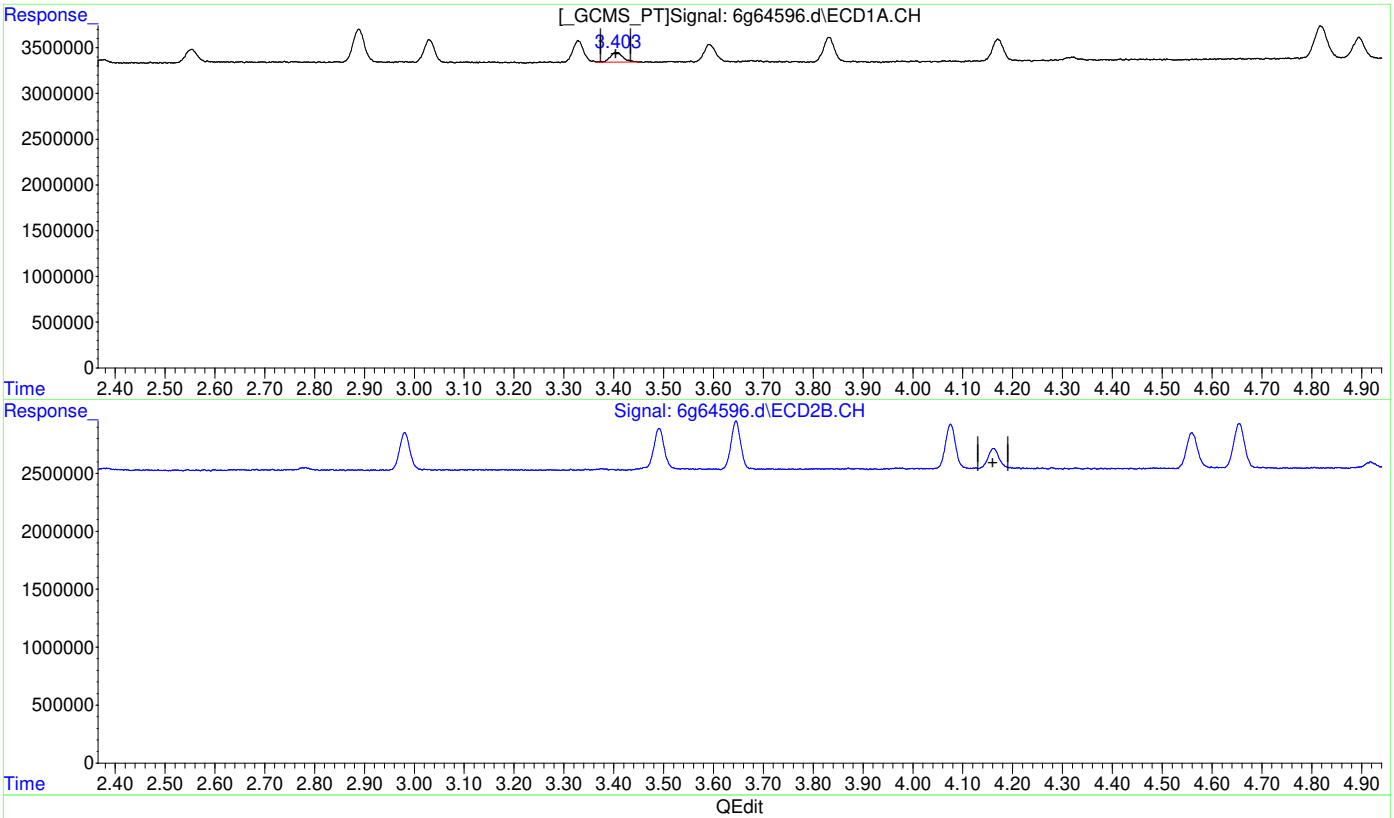
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:38:59 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(7) beta-BHC (B)

3.404min 1.629 PPB

response 1926127

(7) beta-BHC #2 (B)

0.000min 0.000 PPB

response 0

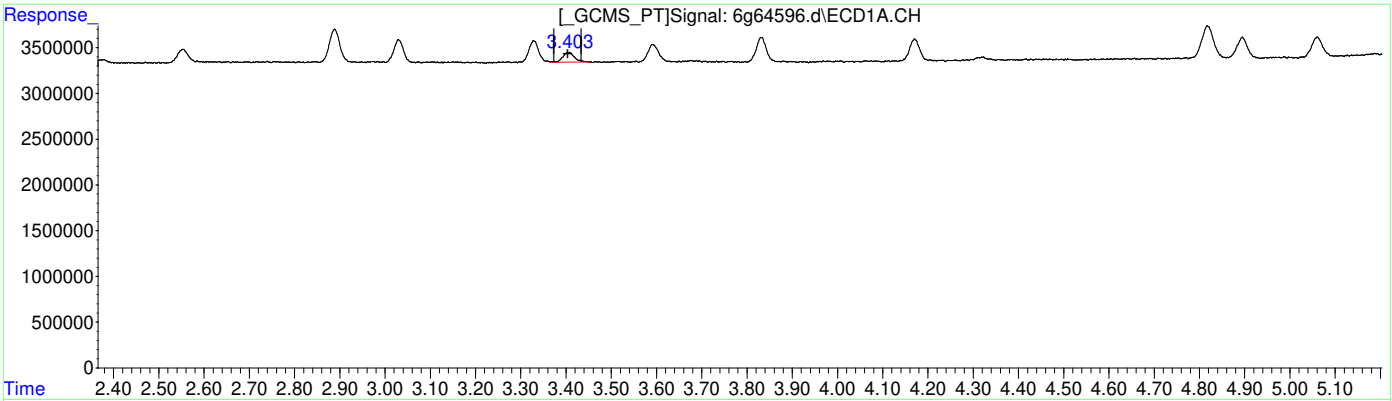
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:39:05 2019

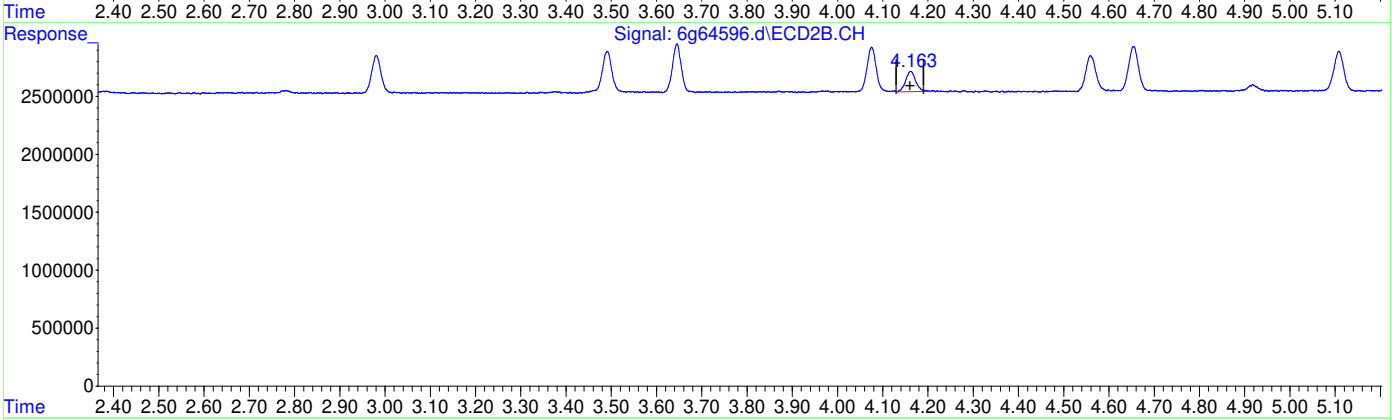
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(7) beta-BHC (B)

3.404min 1.629 PPB

response 1926127

(7) beta-BHC #2 (B)

4.163min 1.570 PPB m

response 2724718

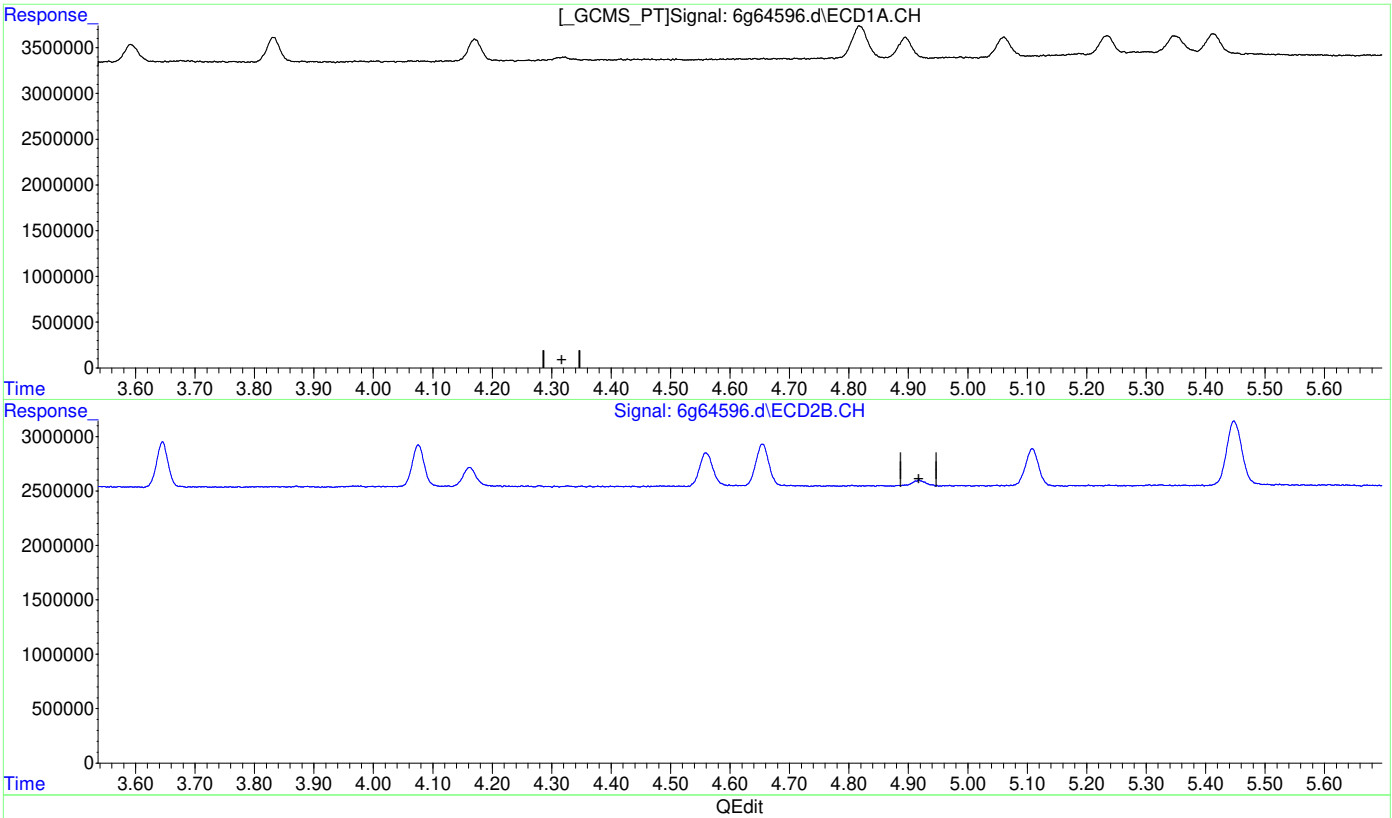
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:39:14 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(10) alachlor

0.000min 0.000 PPB

response 0

(10) alachlor #2

0.000min 0.000 PPB

response 0

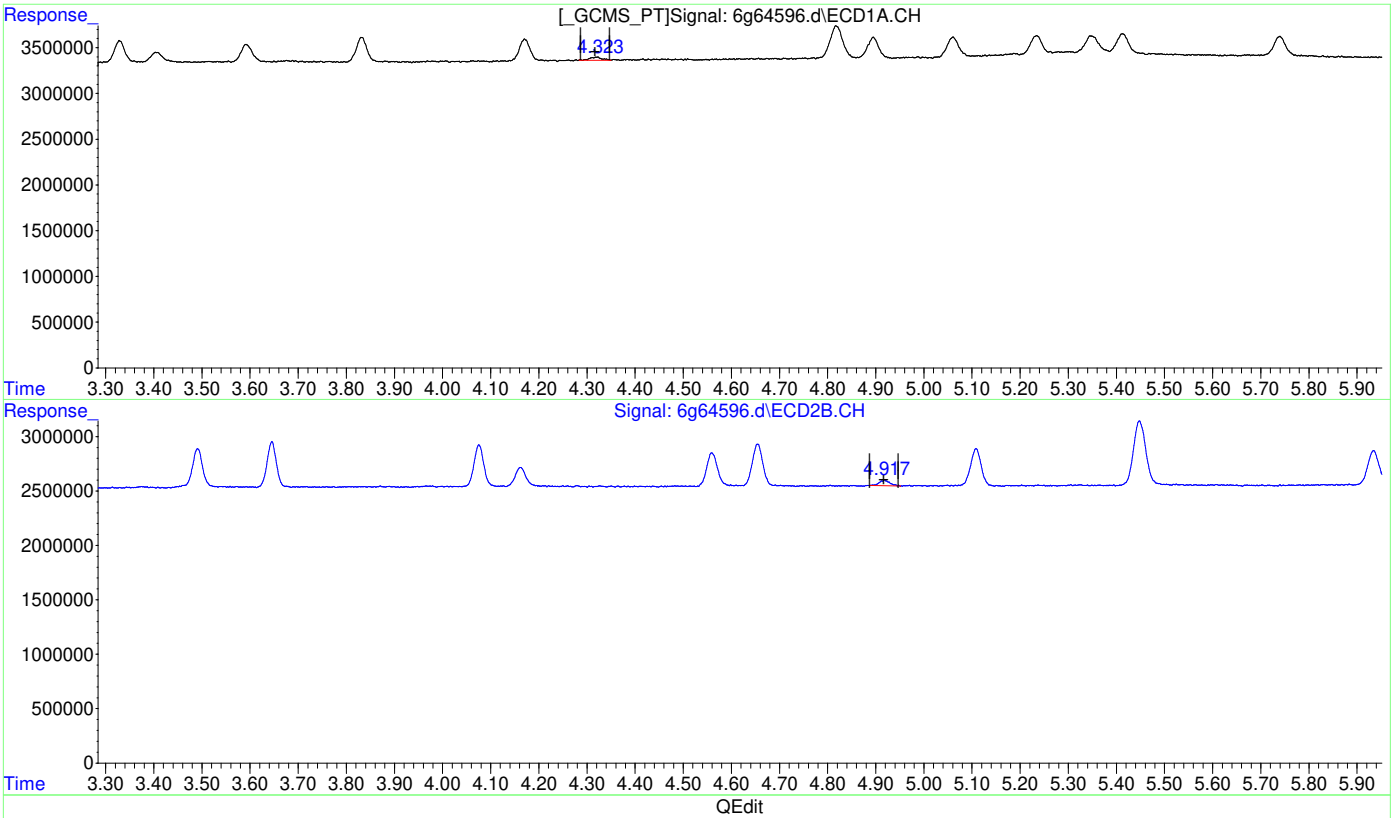
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:39:19 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(10) alachlor

4.323min 1.896 PPB m

response 625160

(10) alachlor #2

4.917min 1.505 PPB m

response 753113

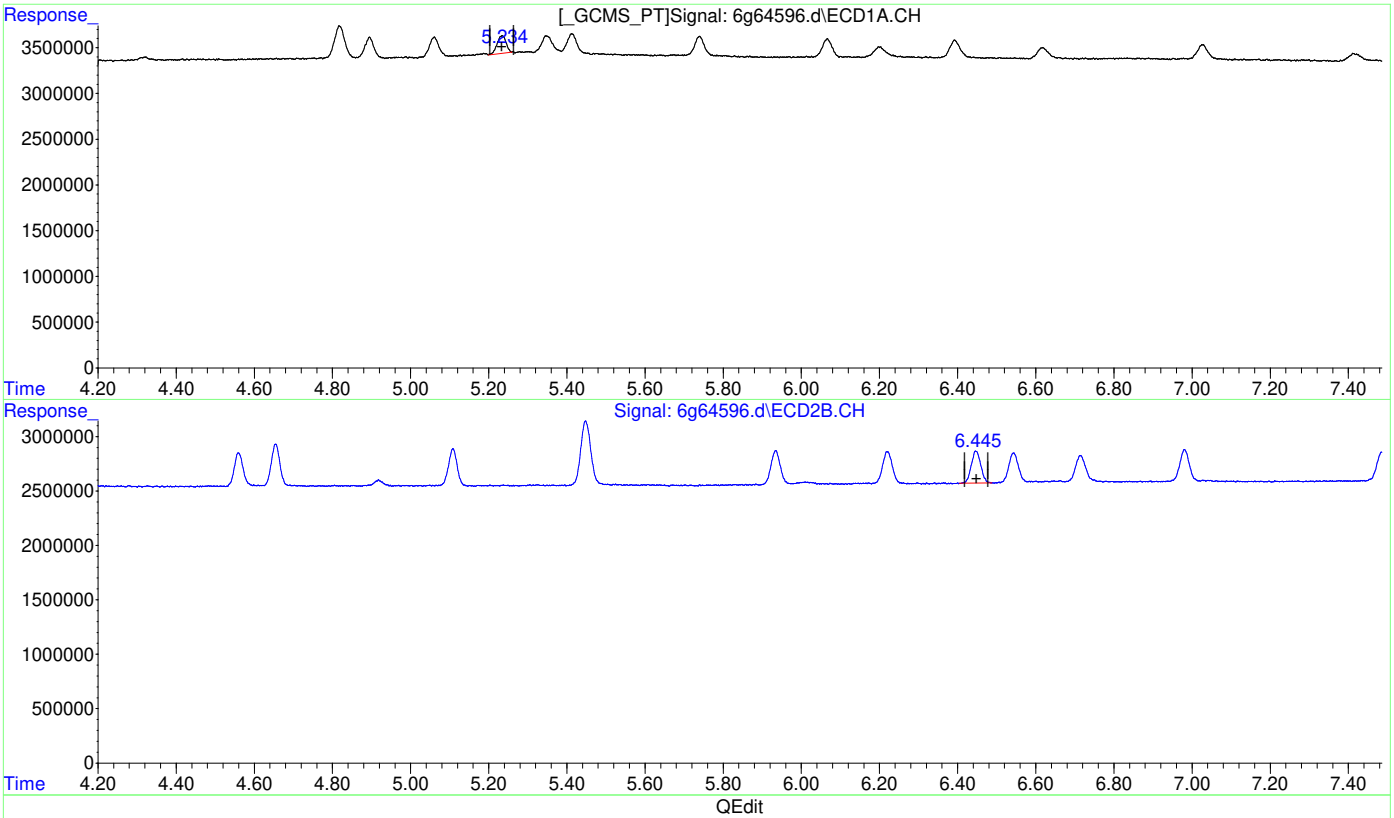
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:39:36 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(13) alpha-Chlordane (B)

5.234min 1.190 PPB

response 3045295

(13) alpha-Chlordane #2 (B)

6.446min 1.521 PPB

response 4974156

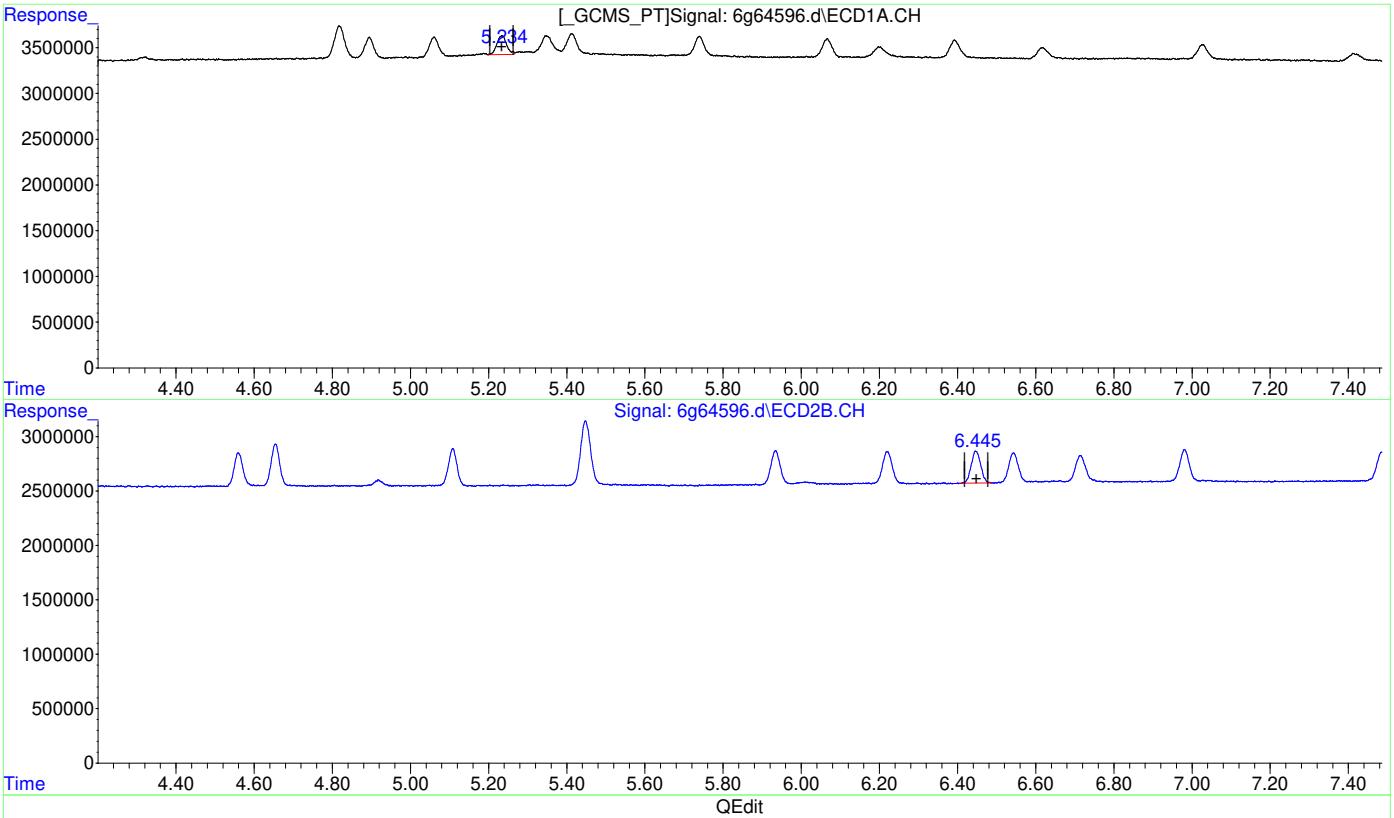
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:39:47 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(13) alpha-Chlordane (B)

5.234min 1.408 PPB m

response 3603268

(13) alpha-Chlordane #2 (B)

6.446min 1.521 PPB

response 4974156

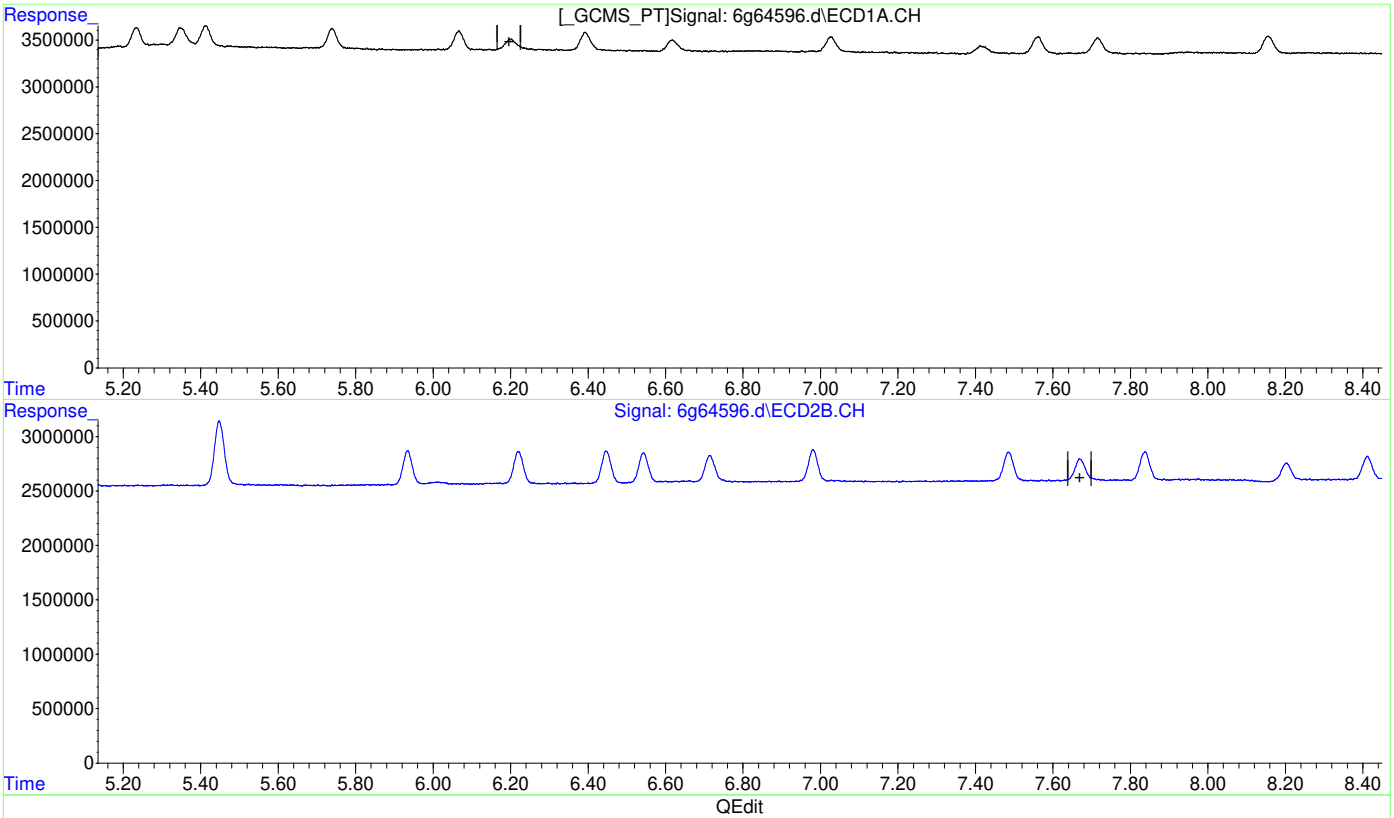
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:39:55 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(18) 4,4'-DDD (A)

6.198min -0.515 PPB

response -946442

(18) 4,4'-DDD #2 (A)

0.000min 0.000 PPB

response 0

(+) = Expected Retention Time

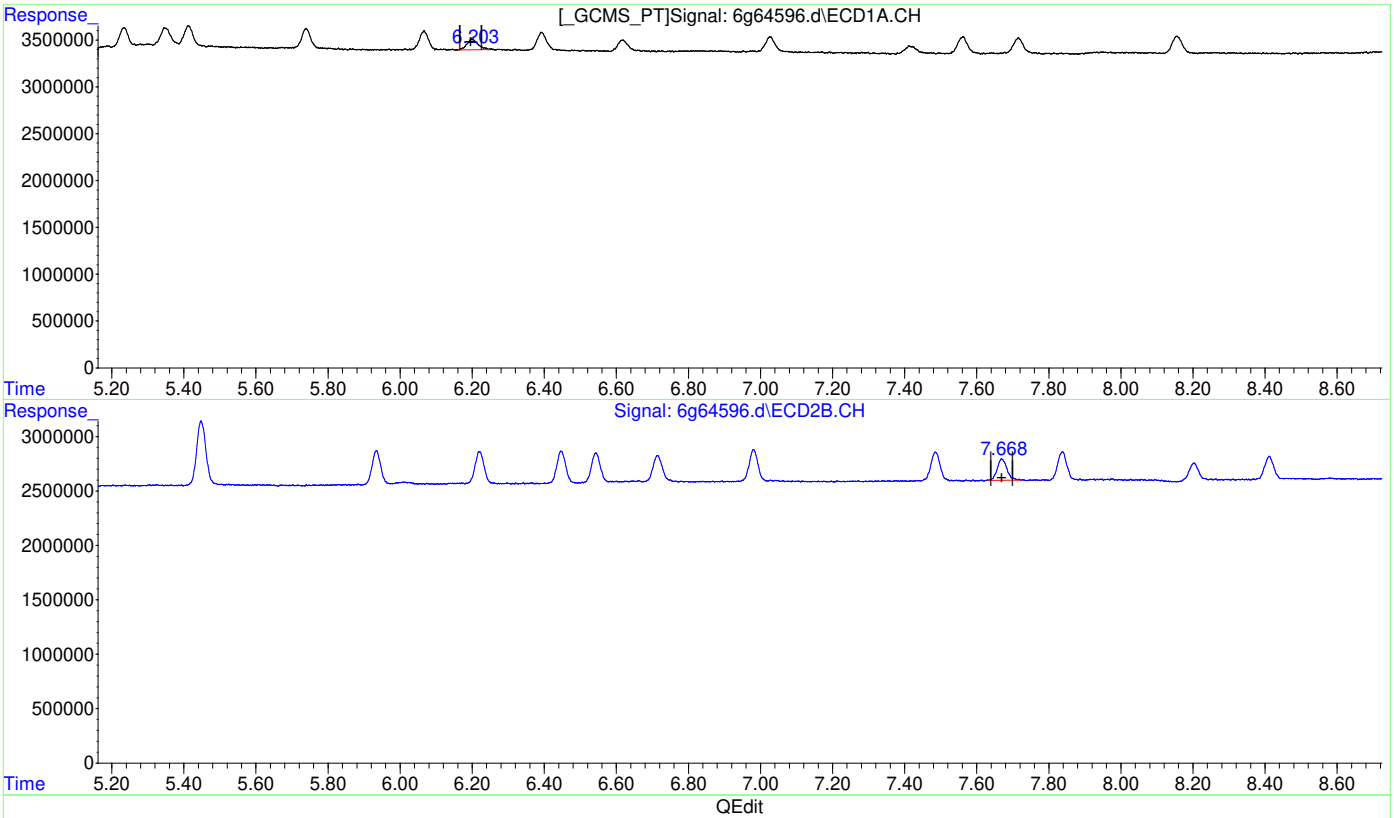
6PST1999.M Thu May 02 08:40:02 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(18) 4,4'-DDD (A)

6.203min 1.336 PPB m

response 2454781

(18) 4,4'-DDD #2 (A)

7.668min 1.419 PPB m

response 3672121

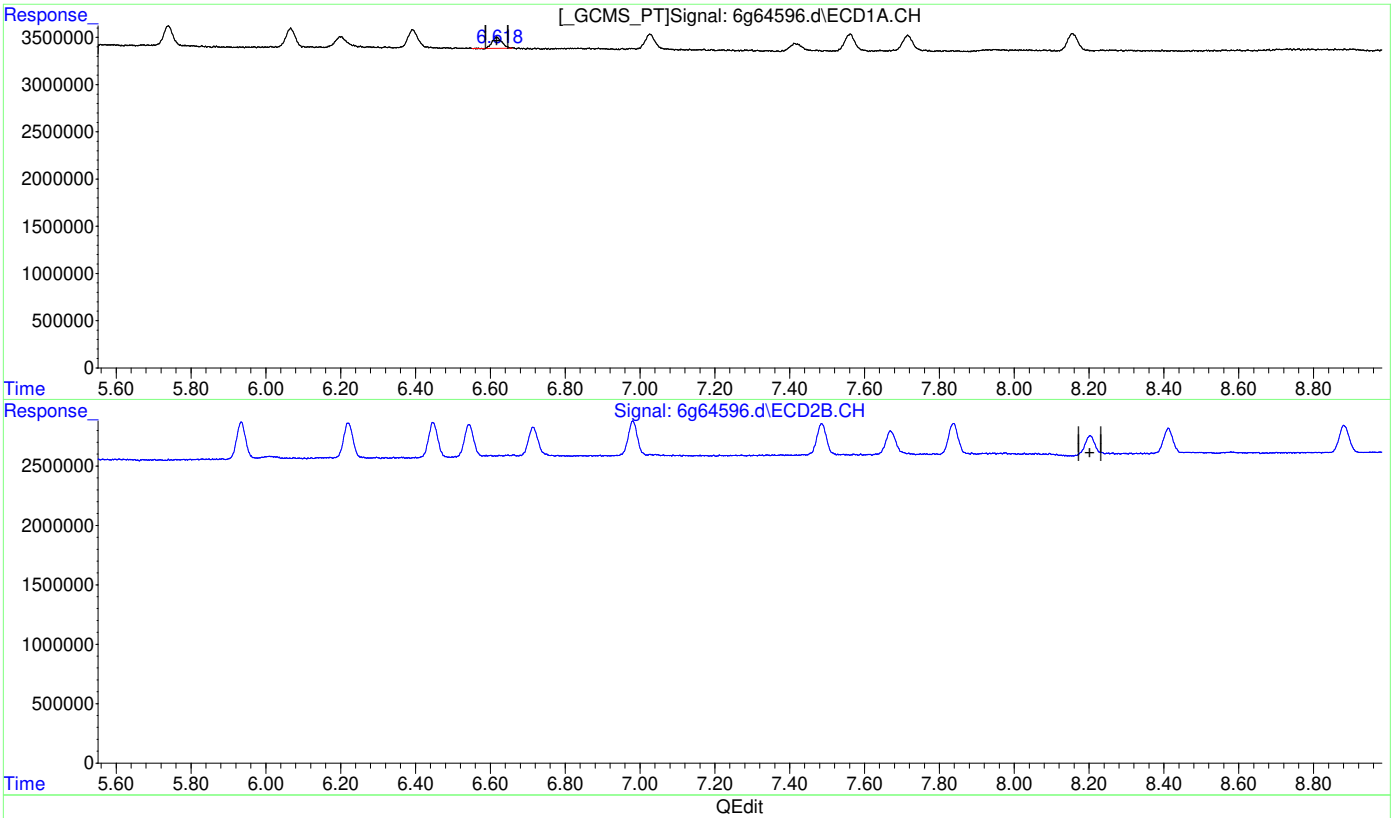
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:40:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(20) 4,4'-DDT (MA)

6.618min 1.094 PPB

response 2135856

(20) 4,4'-DDT #2 (MA)

0.000min 0.000 PPB

response 0

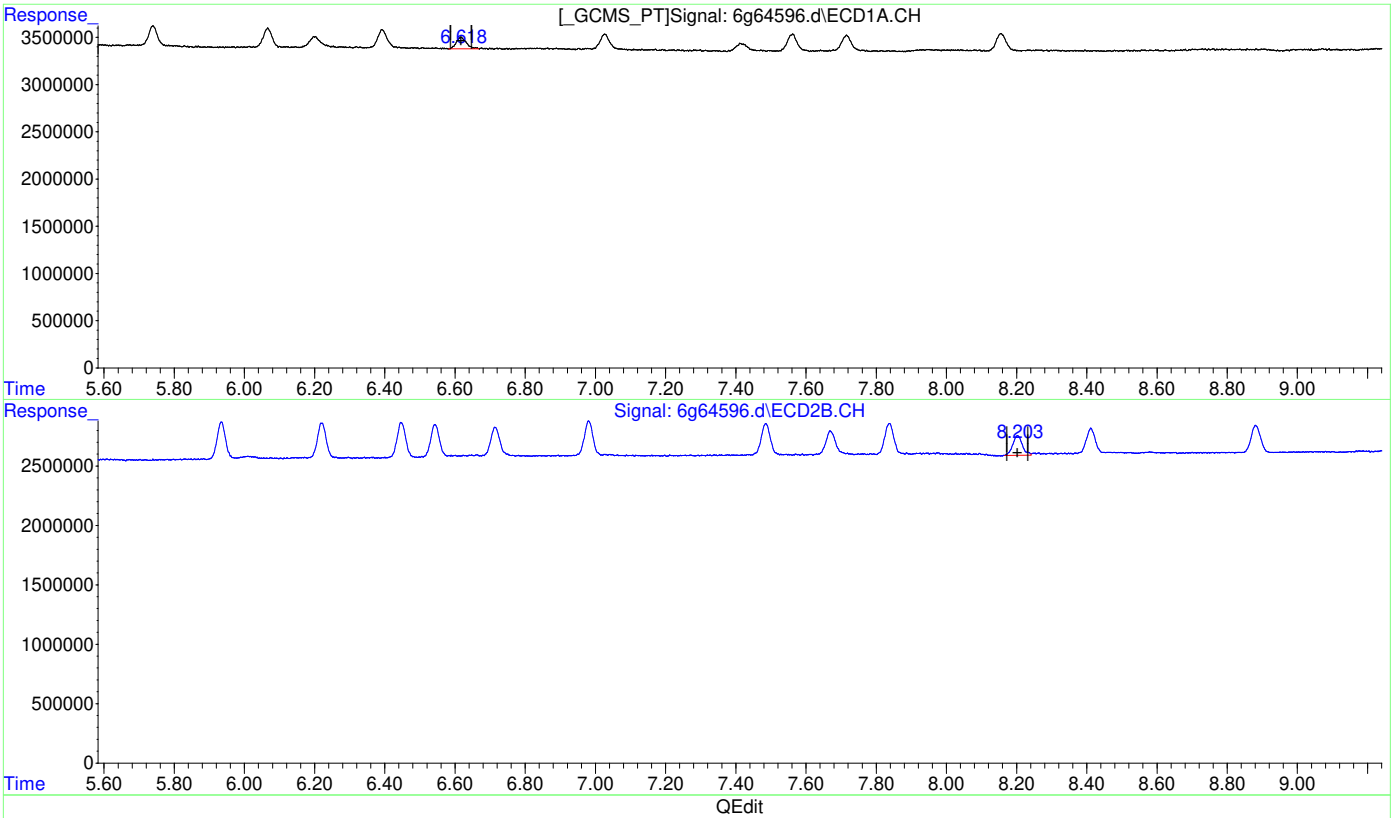
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(20) 4,4'-DDT (MA)

6.618min 1.245 PPB m

response 2429628

(20) 4,4'-DDT #2 (MA)

8.203min 1.342 PPB m

response 3197051

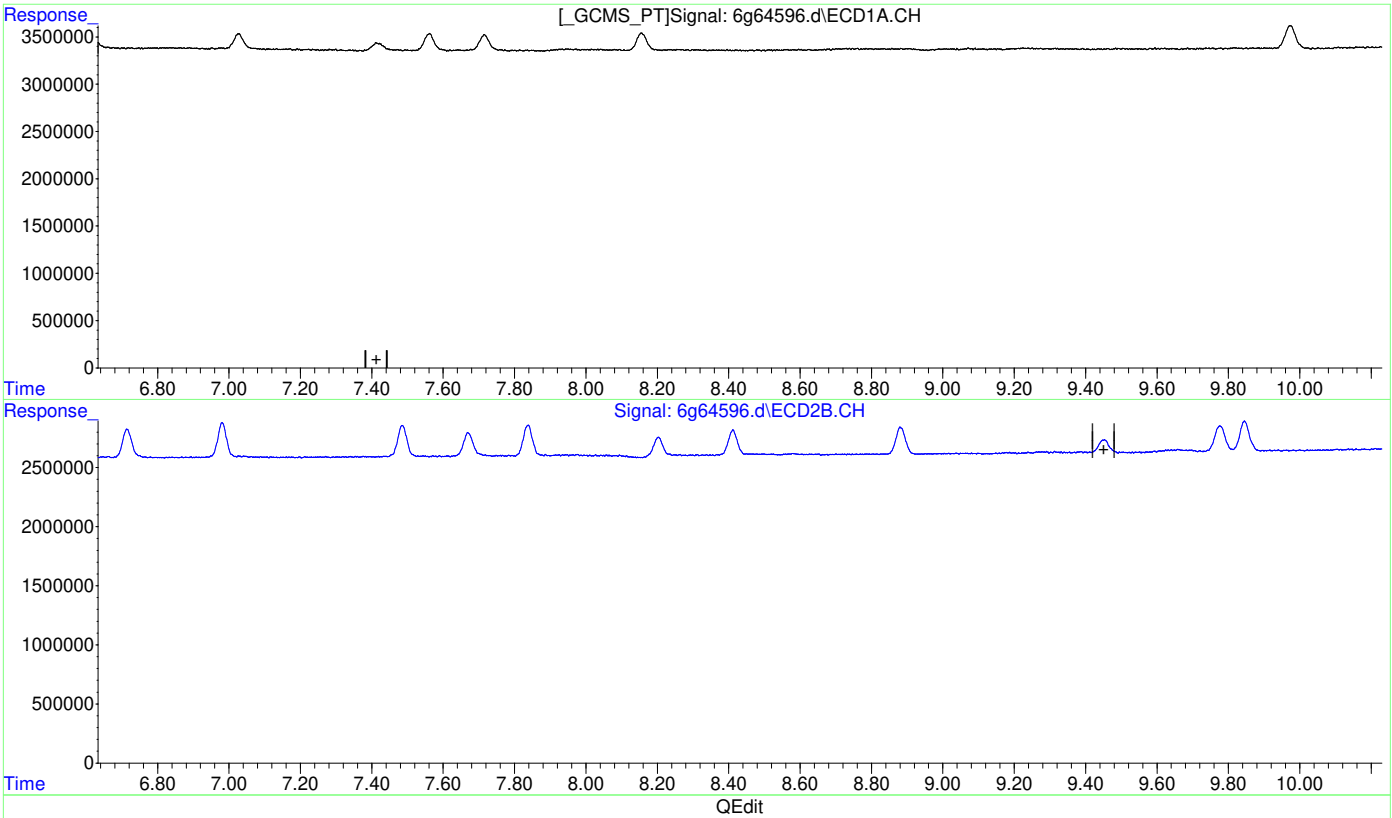
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:40:38 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(23) Methoxychlor (A)

0.000min 0.000 PPB

response 0

(23) Methoxychlor #2 (A)

0.000min 0.000 PPB

response 0

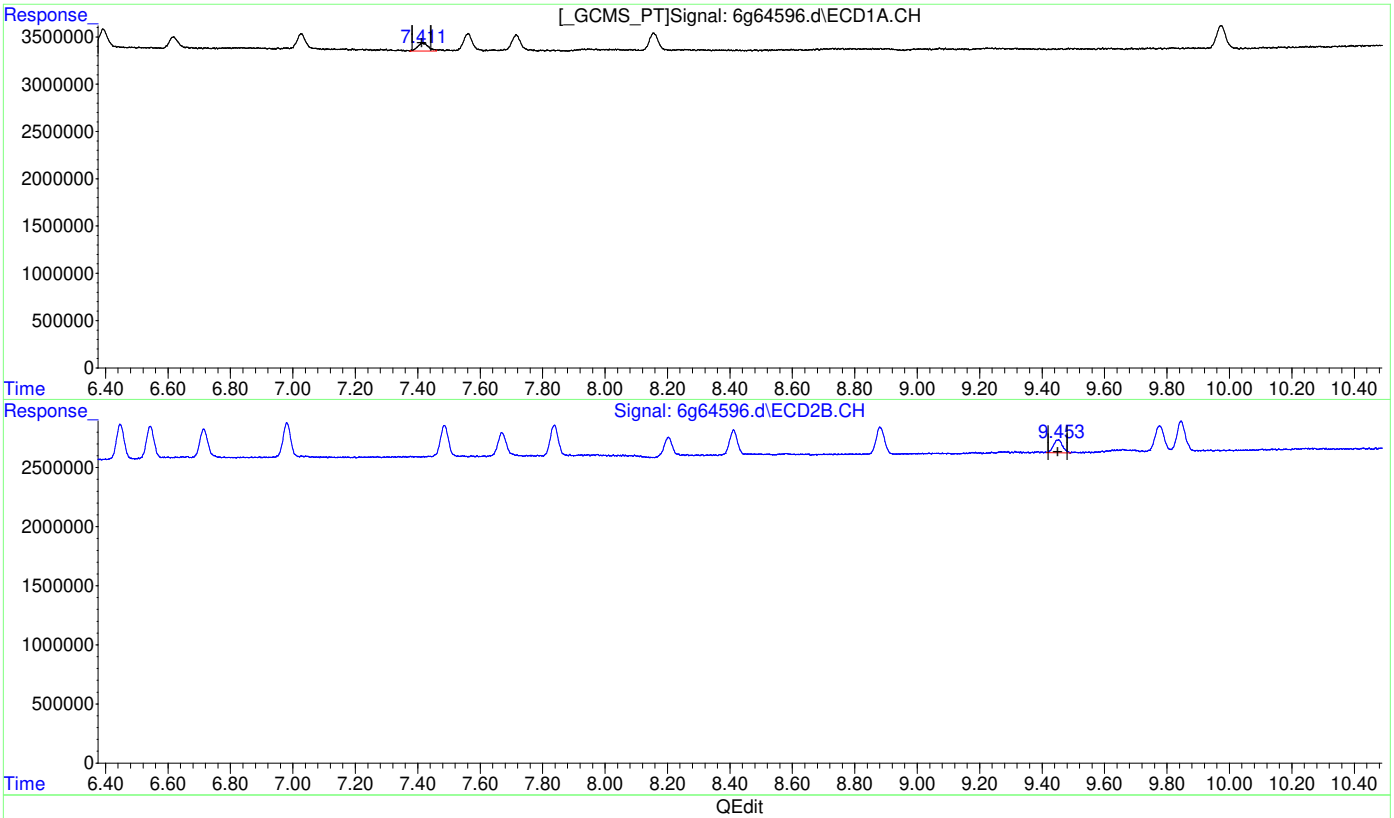
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:40:43 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64596.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:22:25
Operator : mailisih
Sample : ic1999-1
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 3 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:38:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(23) Methoxychlor (A)

7.411min 1.637 PPB m

response 1988064

(23) Methoxychlor #2 (A)

9.453min 1.499 PPB m

response 2214693

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:41:03 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/03/19 14:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.957	2.170	164.3E6	224.7E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.557	2.983	4812206	8990473	2.825	2.835
	Spiked Amount 40.000	Range 30 - 150		Recovery =		7.06%#	7.09%#
26) SA	Decachlor...	9.974	11.956	9949337	8640102	2.997	3.241
	Spiked Amount 40.000			Recovery =		7.49%	8.10%
	Target Compounds						
3)	hexachlor...	2.889	3.492	11861866	9979741	2.903	2.926
4) A	alpha-BHC	3.033	3.646	7183755	11171037	2.314	2.630
5) MA	gamma-BHC	3.330	4.076	6925134	10655761	2.379	2.701
6) MA	Heptachlor	3.833	4.656	8166896	11491411	2.559	2.831
7) B	beta-BHC	3.405	4.163	3473020	5179634	2.787m	2.841m
8) B	delta-BHC	3.594	4.562	6015364	9386635	2.225	2.521
9) MB	Aldrin	4.172	5.109	7137368	10353337	2.425	2.833
10)	alachlor	4.318	4.918	1052263	1611365	3.028m	3.065m
11) B	Heptachlo...	4.895	5.935	7297242	10097220	2.566	2.864
12) B	gamma-Chl...	5.061	6.221	7062936	9882976	2.542	2.832
13) B	alpha-Chl...	5.234	6.448	6618981	9996001	2.453	2.910
14) A	Endosulfan I	5.413	6.545	7565705	9310086	2.666	2.862
15) B	4,4'-DDE	5.350	6.716	6839024	8590163	2.545	2.699
16) MA	Dieldrin	5.741	6.981	7046882	9778056	2.474	2.825
17) MA	Endrin	6.067	7.486	6900185	9341456	2.515	2.826
18) A	4,4'-DDD	6.200	7.671	4604935	7497207	2.378m	2.759m
19) B	Endosulfa...	6.393	7.838	7033830	9127825	2.712	2.898
20) MA	4,4'-DDT	6.619	8.202	4719863	6165192	2.294	2.463m
21) B	Endrin Al...	7.026	8.412	6183335	7580300	2.844	2.967m
22) B	Endosulfa...	7.717	8.882	5967982	8336606	2.533	2.873
23) A	Methoxychlor	7.417	9.451	3207490	3929773	2.505m	2.533m
24)	Mirex	7.562	9.777	6794116	8405938	2.879	3.139
25) B	Endrin Ke...	8.157	9.846	7317539	9233852	2.727	2.946
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

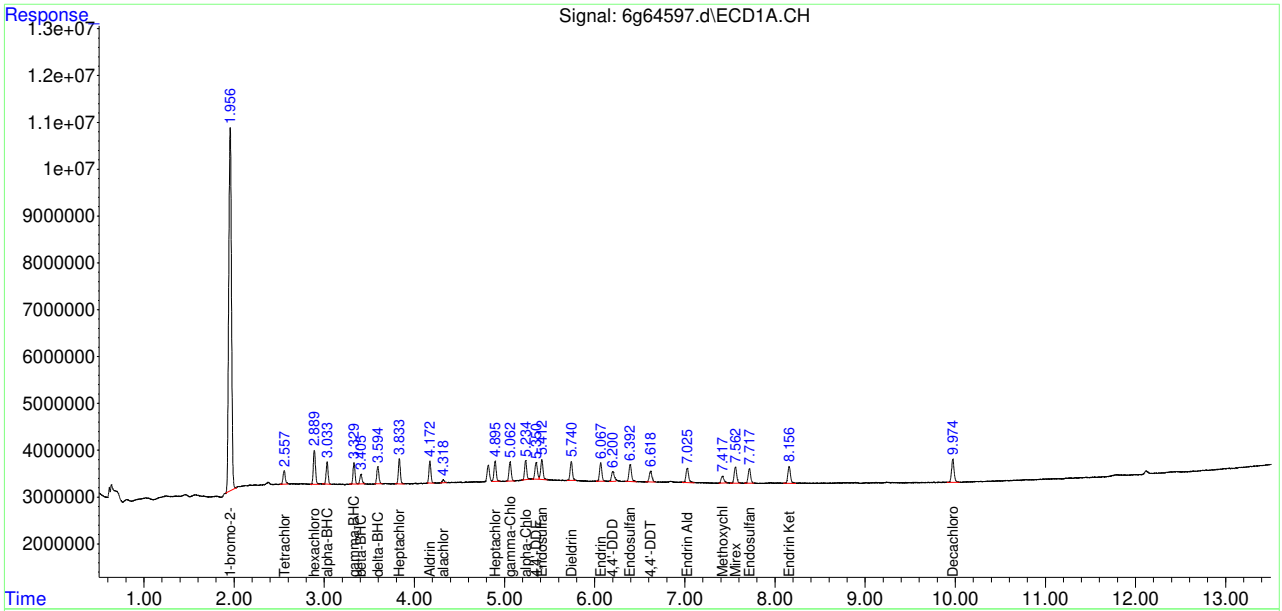
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

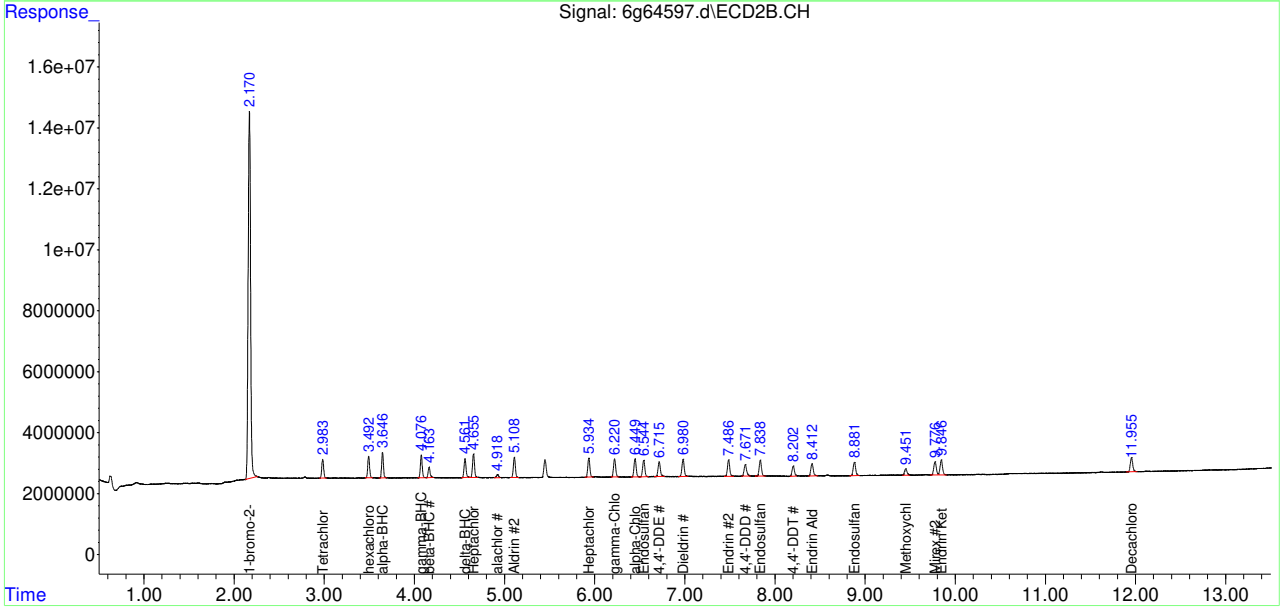
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number: G6G1999-IC1999
Lab FileID: 6G64597.D
Injection Time: 05/01/19 14:40
Method: SW846 8081B
Analyst approved: 05/02/19 08:59 Mailisi Heshuote
Supervisor approved: 05/03/19 14:18 Gwendolyn Burns

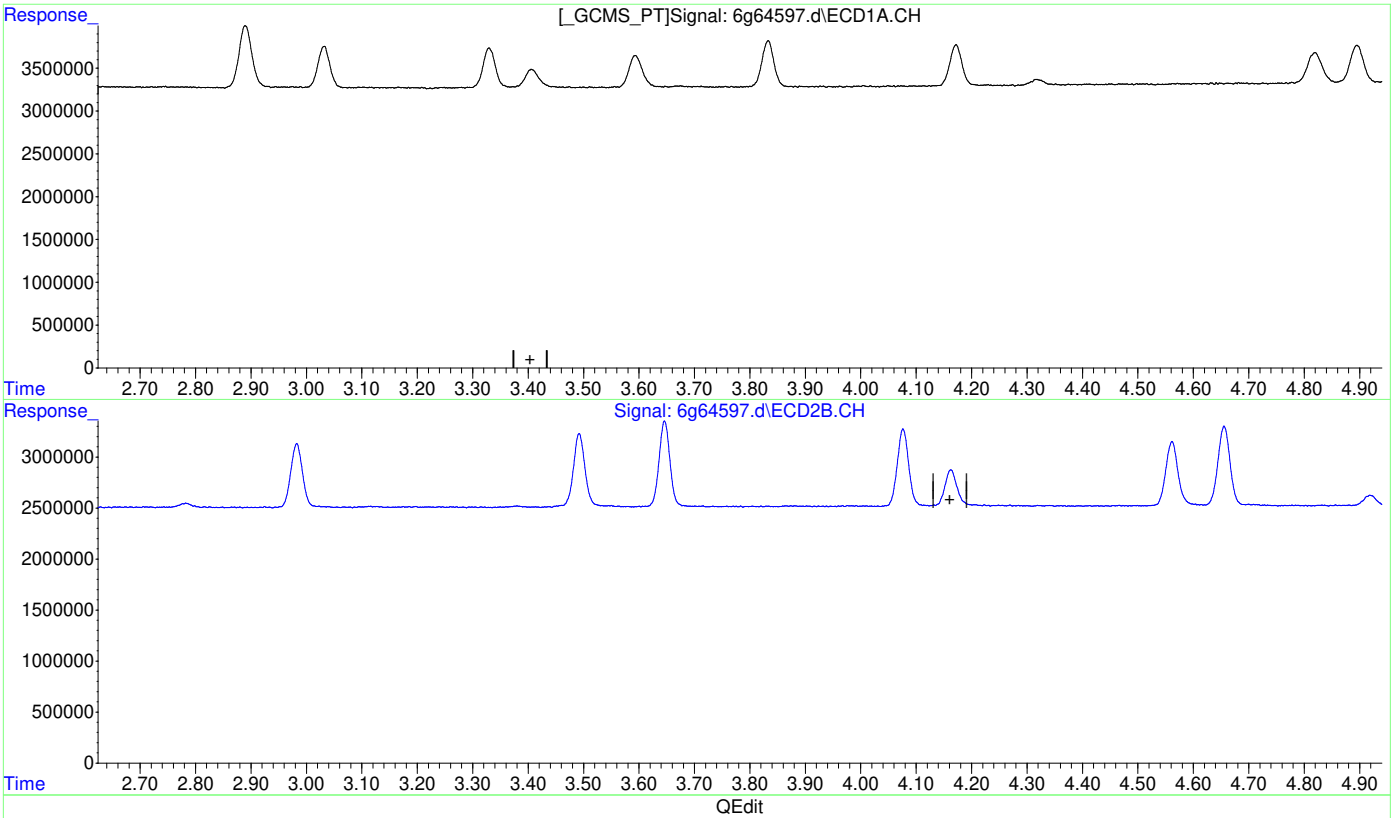
Parameter	CAS	Sig#	R.T. (min.)	Reason
beta-BHC	319-85-7	1	3.41	Poorly defined baseline
beta-BHC	319-85-7	2	4.16	Poorly defined baseline
Alachlor	15972-60-8	1	4.32	Poorly defined baseline
Alachlor	15972-60-8	2	4.92	Poorly defined baseline
4,4'-DDD	72-54-8	1	6.20	Poorly defined baseline
Methoxychlor	72-43-5	1	7.42	Poorly defined baseline
4,4'-DDD	72-54-8	2	7.67	Poorly defined baseline
4,4'-DDT	50-29-3	2	8.20	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	8.41	Poorly defined baseline
Methoxychlor	72-43-5	2	9.45	Poorly defined baseline

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(7) beta-BHC (B)

0.000min 0.000 PPB

response 0

(7) beta-BHC #2 (B)

0.000min 0.000 PPB

response 0

(+) = Expected Retention Time

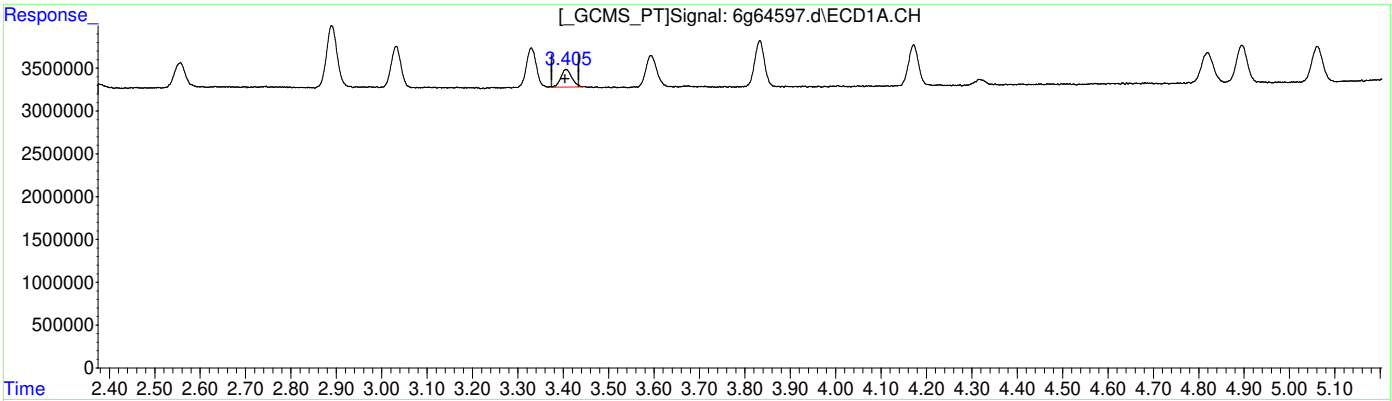
6PST1999.M Thu May 02 08:26:43 2019 Page: 1

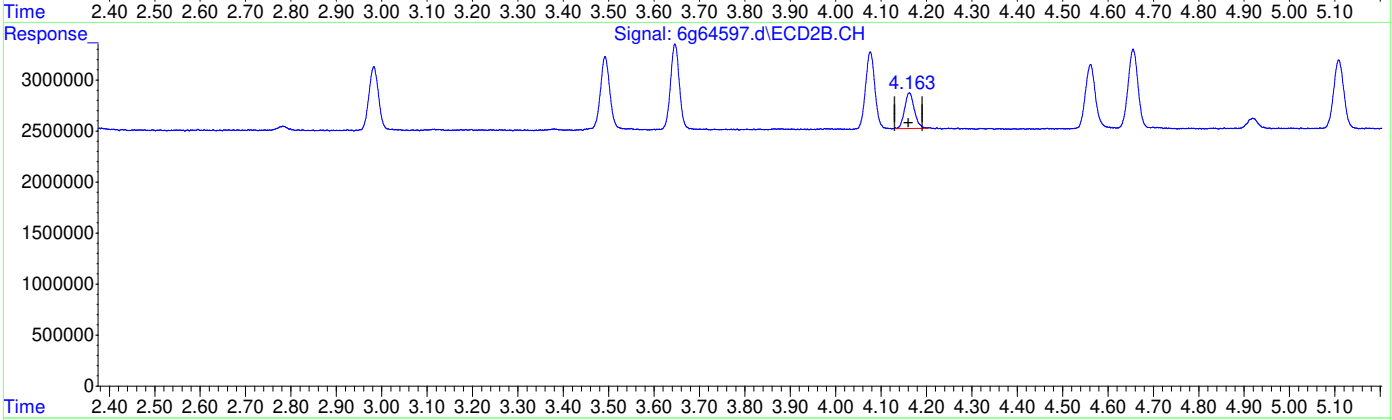
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(7) beta-BHC (B)

3.405min 2.787 PPB m

response 3473020

(7) beta-BHC #2 (B)

4.163min 2.841 PPB m

response 5179634

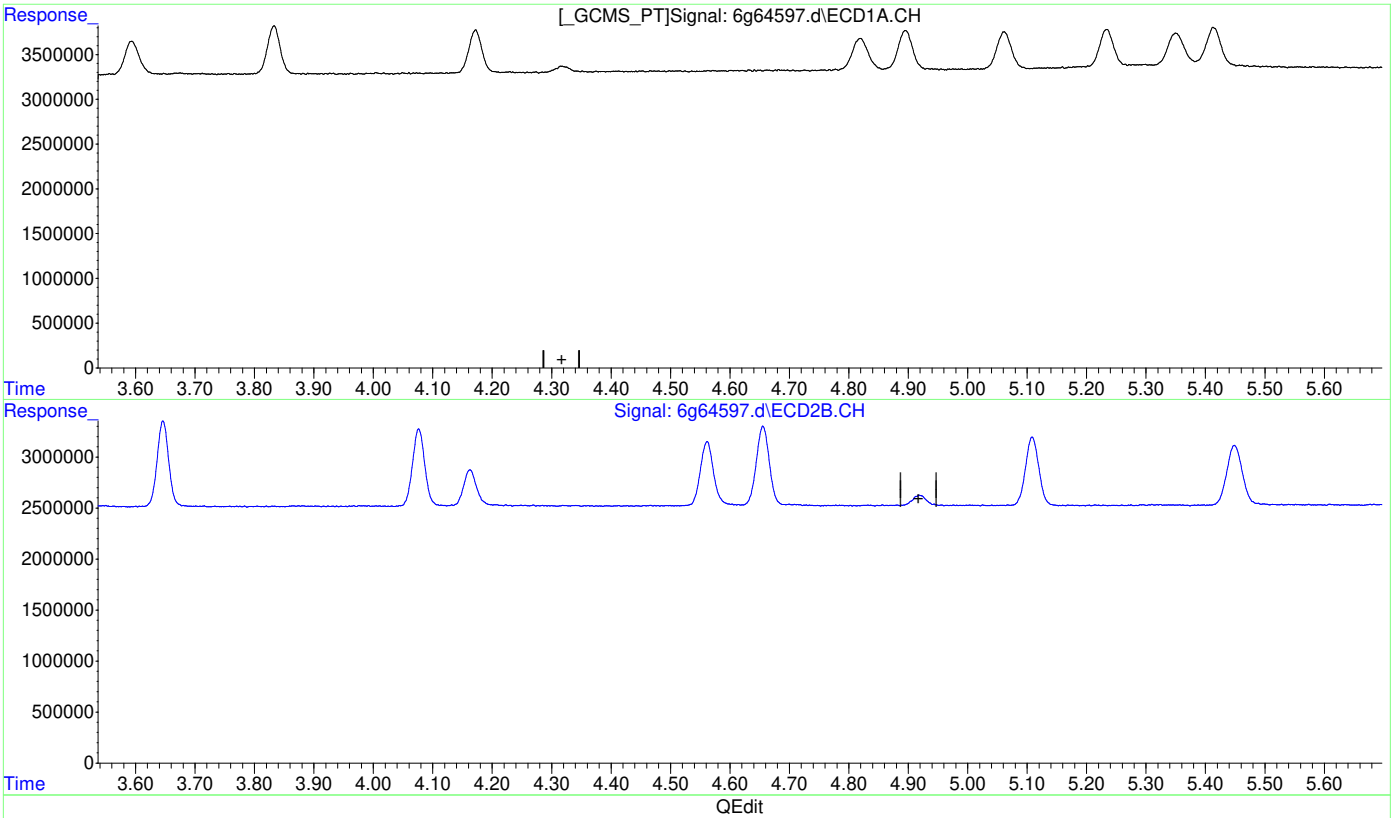
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:27:02 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(10) alachlor

0.000min 0.000 PPB

response 0

(10) alachlor #2

0.000min 0.000 PPB

response 0

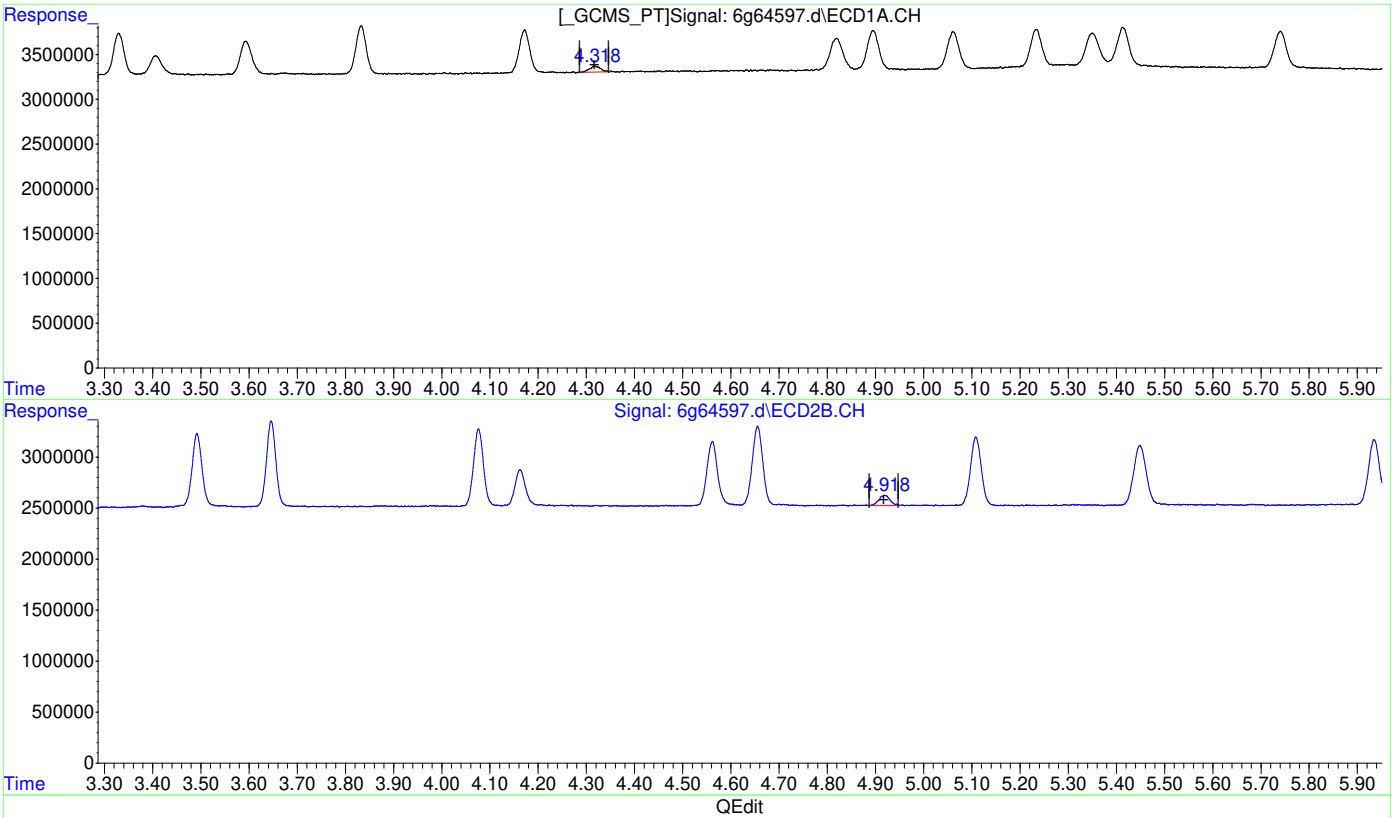
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:27:06 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(10) alachlor

4.318min 3.028 PPB m

response 1052263

(10) alachlor #2

4.918min 3.065 PPB m

response 1611365

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:27:19 2019

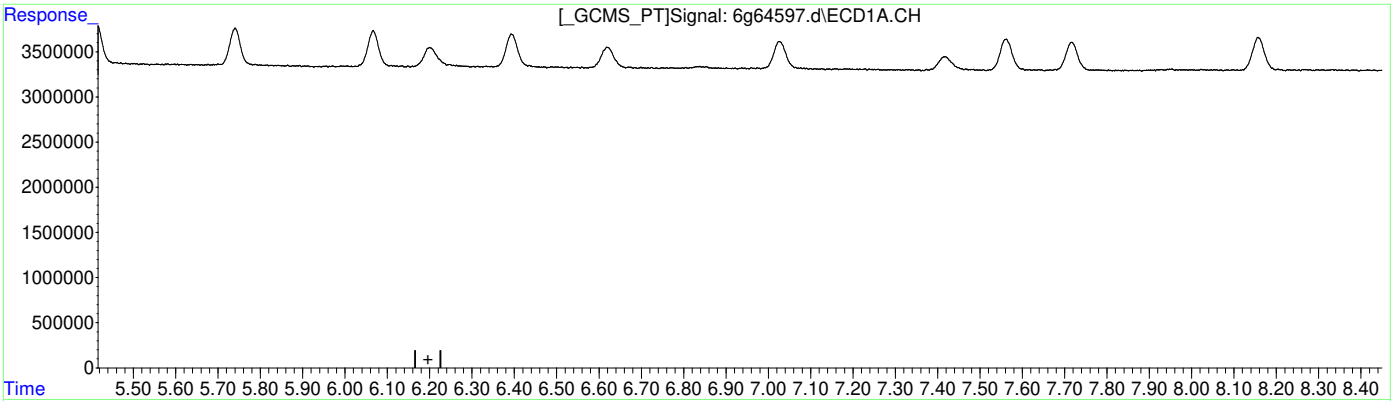
11.6.2.5

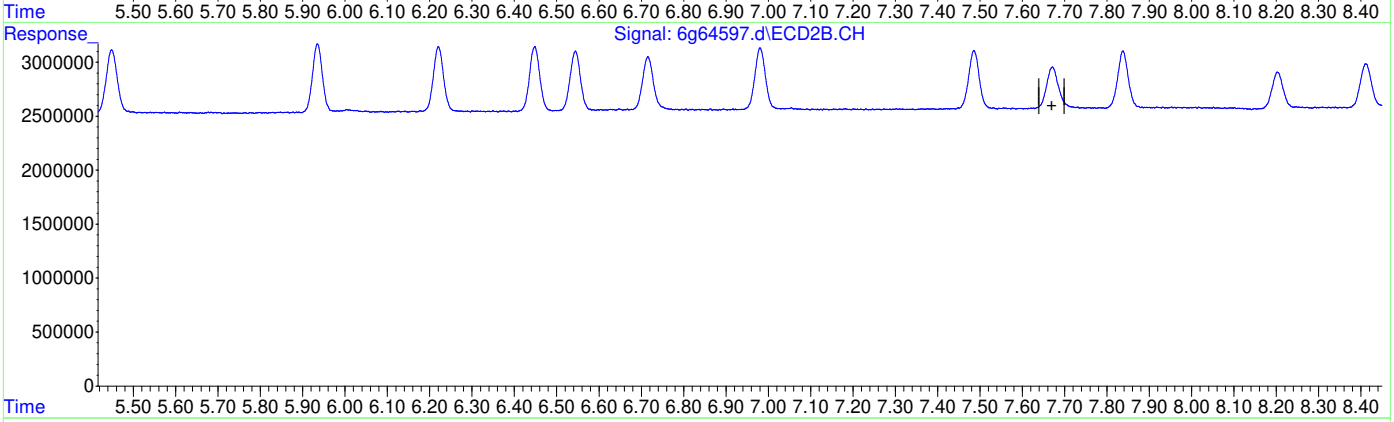
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(18) 4,4'-DDD (A)

0.000min 0.000 PPB

response 0

(18) 4,4'-DDD #2 (A)

0.000min 0.000 PPB

response 0

(+) = Expected Retention Time

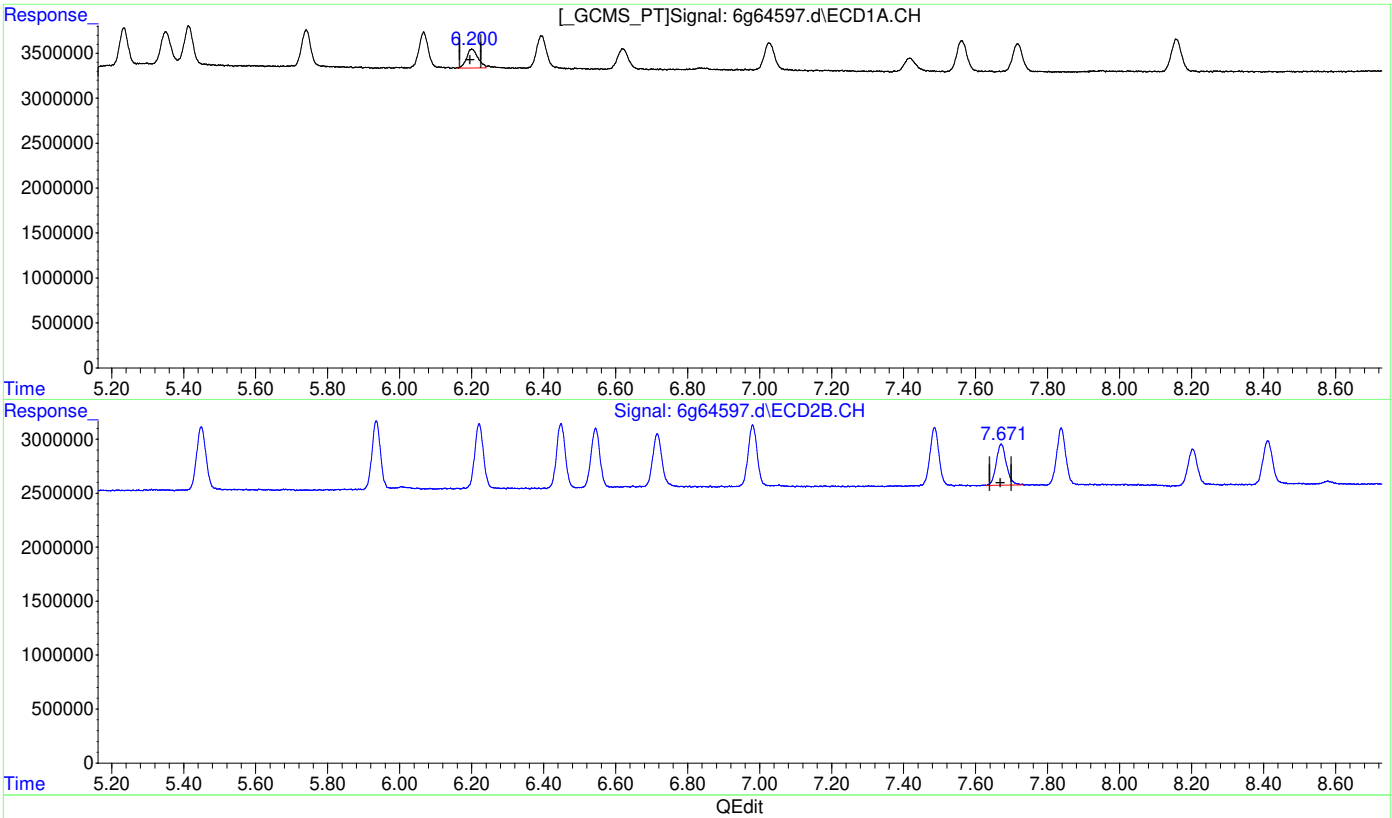
6PST1999.M Thu May 02 08:27:27 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(18) 4,4'-DDD (A)

6.200min 2.378 PPB m

response 4604935

(18) 4,4'-DDD #2 (A)

7.671min 2.759 PPB m

response 7497207

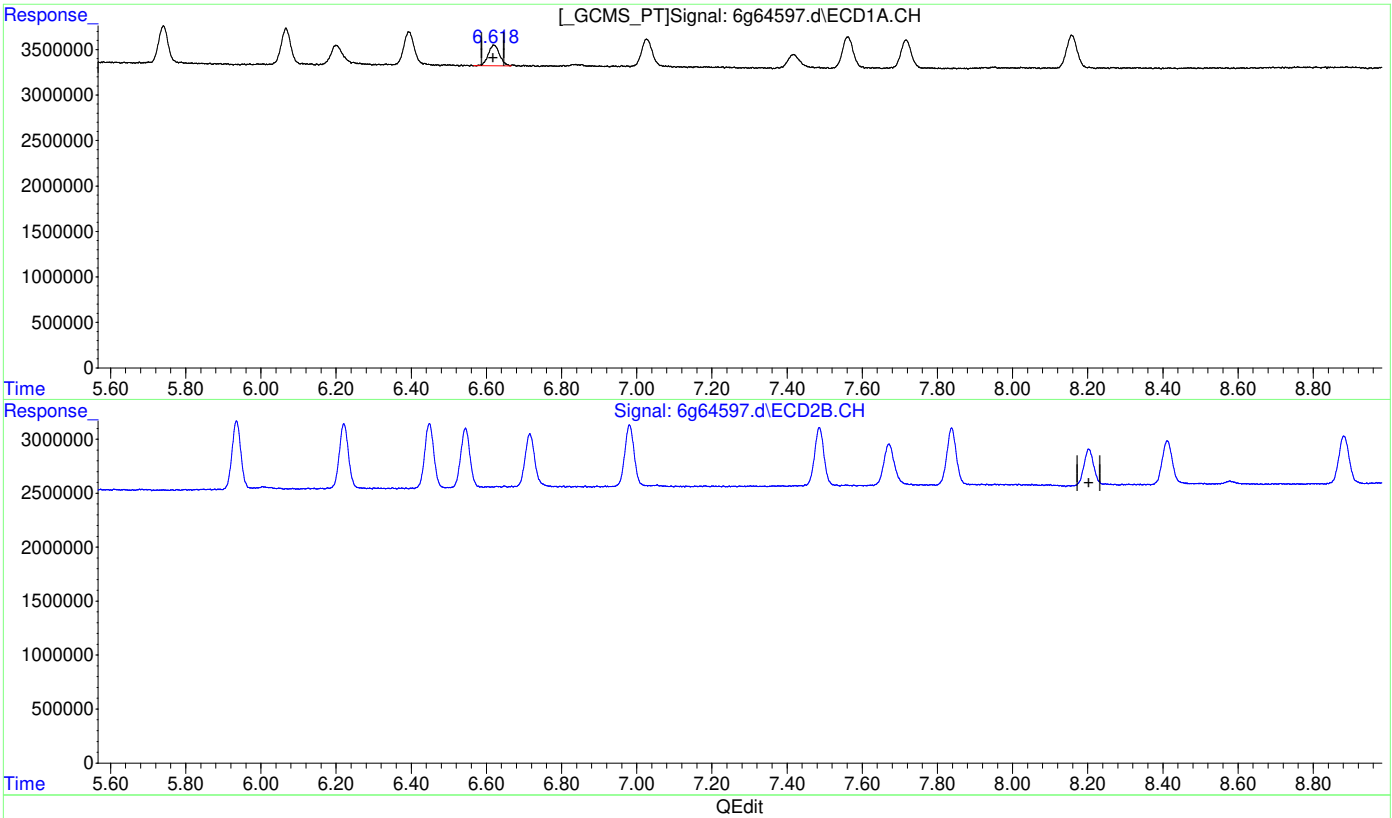
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:27:47 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(20) 4,4'-DDT (MA)

6.619min 2.294 PPB

response 4719863

(20) 4,4'-DDT #2 (MA)

0.000min 0.000 PPB

response 0

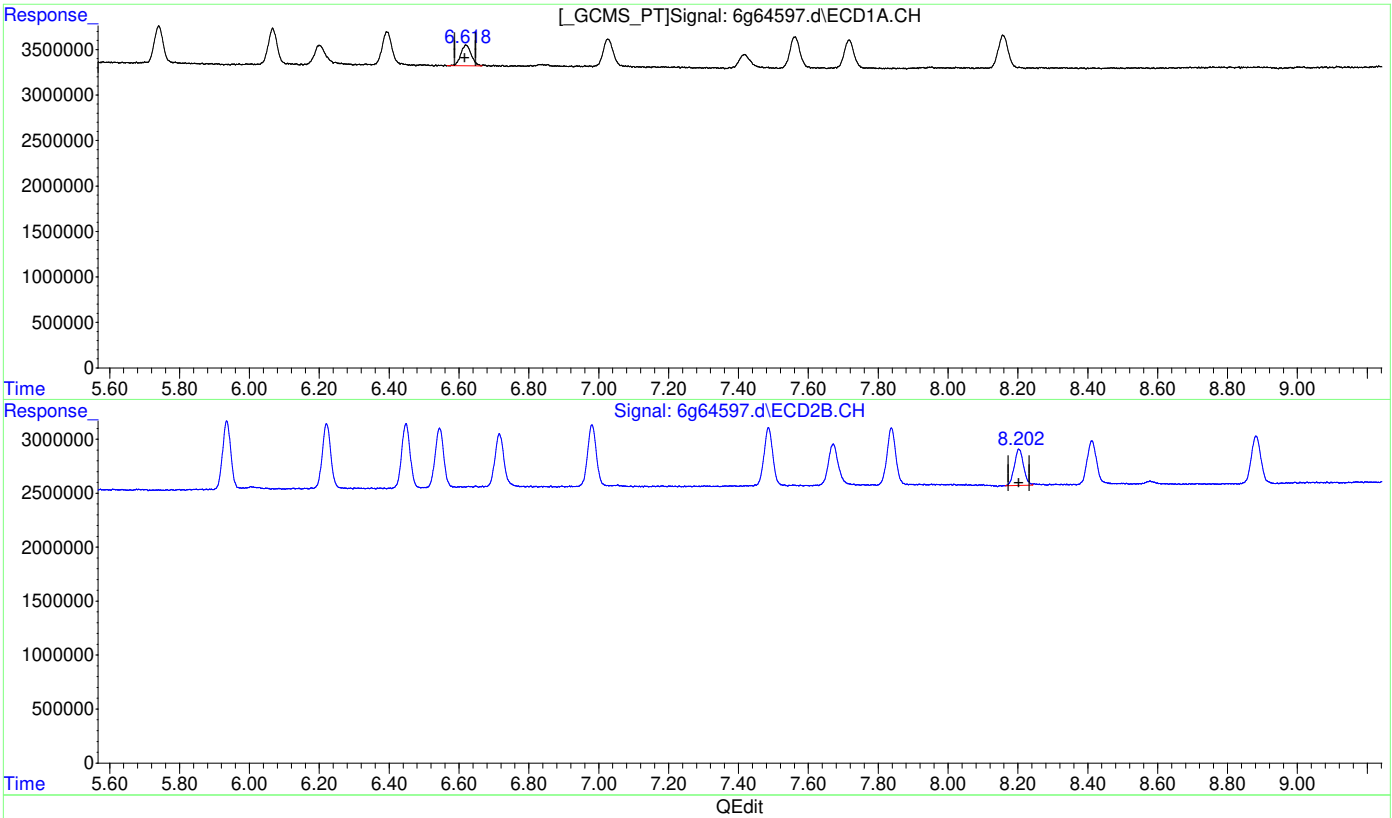
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:27:51 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(20) 4,4'-DDT (MA)

6.619min 2.294 PPB

response 4719863

(20) 4,4'-DDT #2 (MA)

8.202min 2.463 PPB m

response 6165192

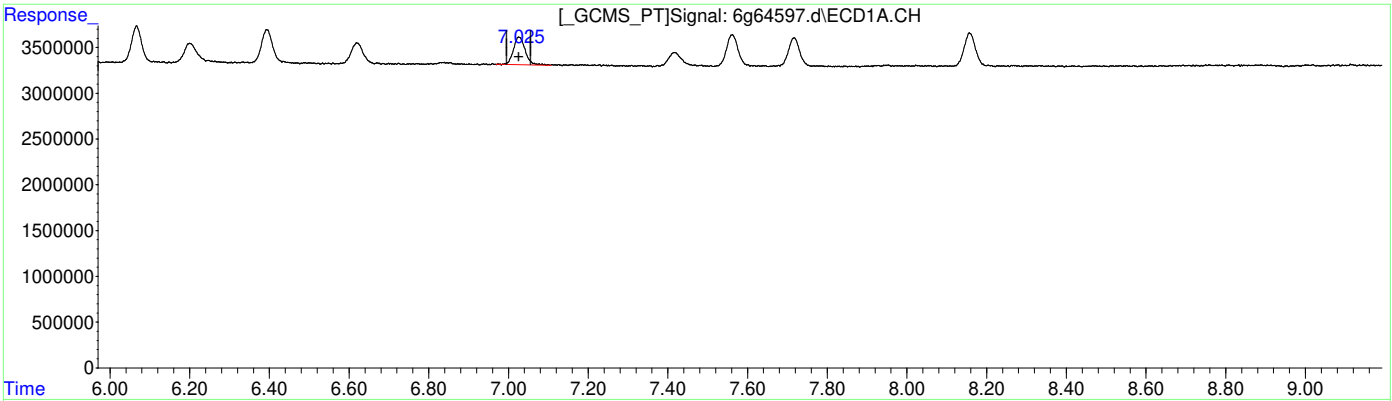
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:28:02 2019

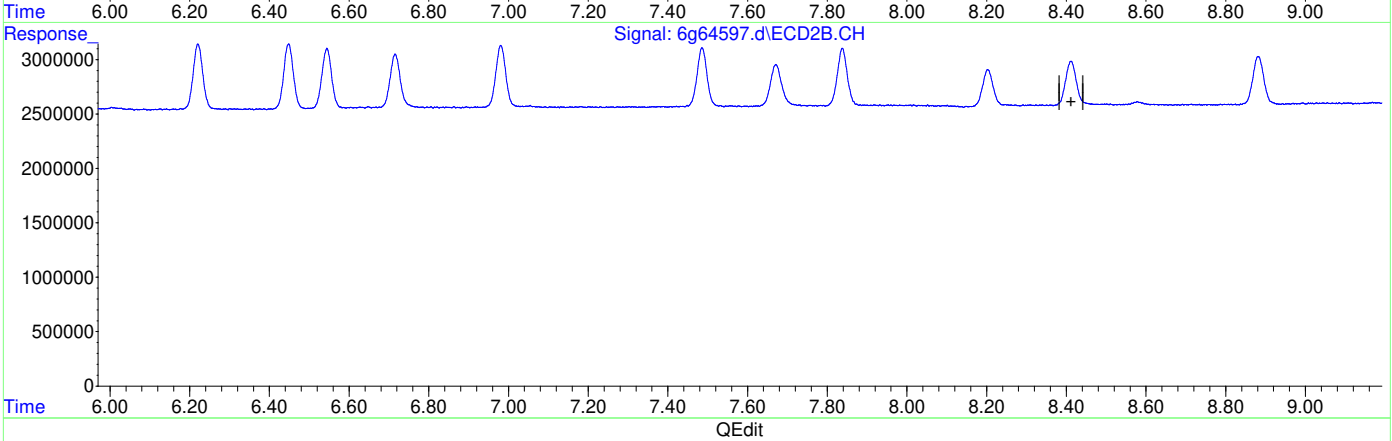
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(21) Endrin Aldehyde (B)

7.026min 2.844 PPB

response 6183335

(21) Endrin Aldehyde #2 (B)

0.000min 0.000 PPB

response 0

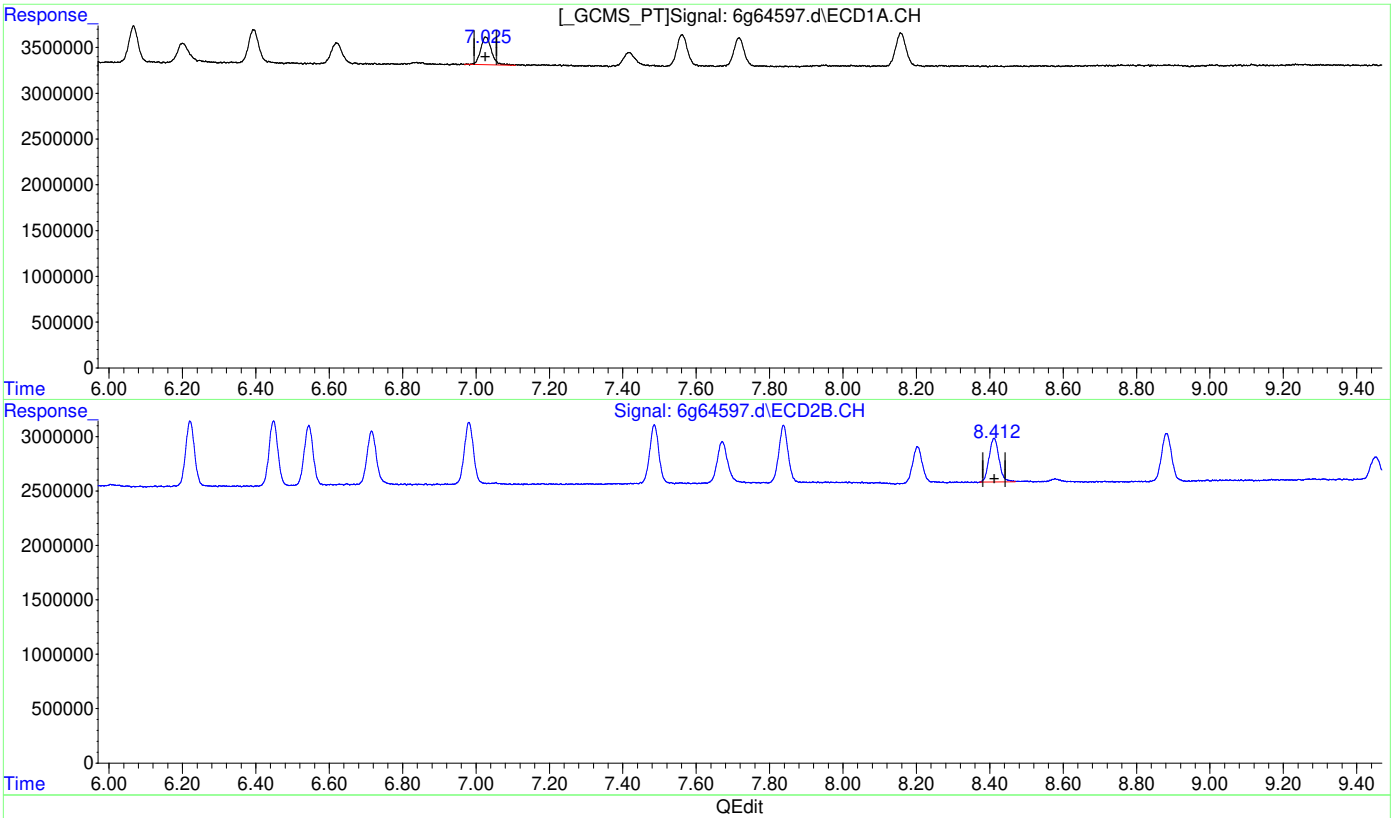
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:28:04 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(21) Endrin Aldehyde (B)

7.026min 2.844 PPB

response 6183335

(21) Endrin Aldehyde #2 (B)

8.412min 2.967 PPB m

response 7580300

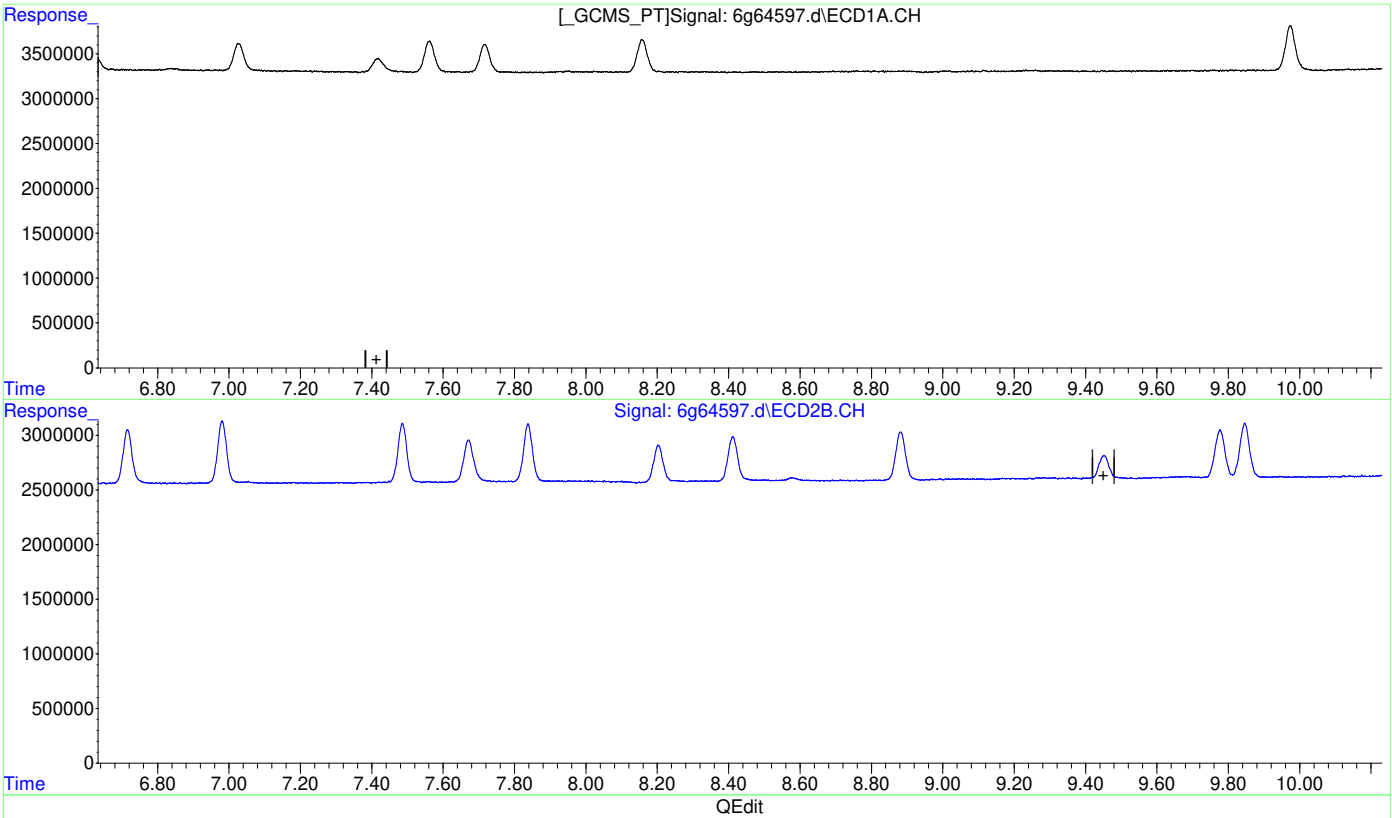
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:28:14 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(23) Methoxychlor (A)

0.000min 0.000 PPB

response 0

(23) Methoxychlor #2 (A)

0.000min 0.000 PPB

response 0

(+) = Expected Retention Time

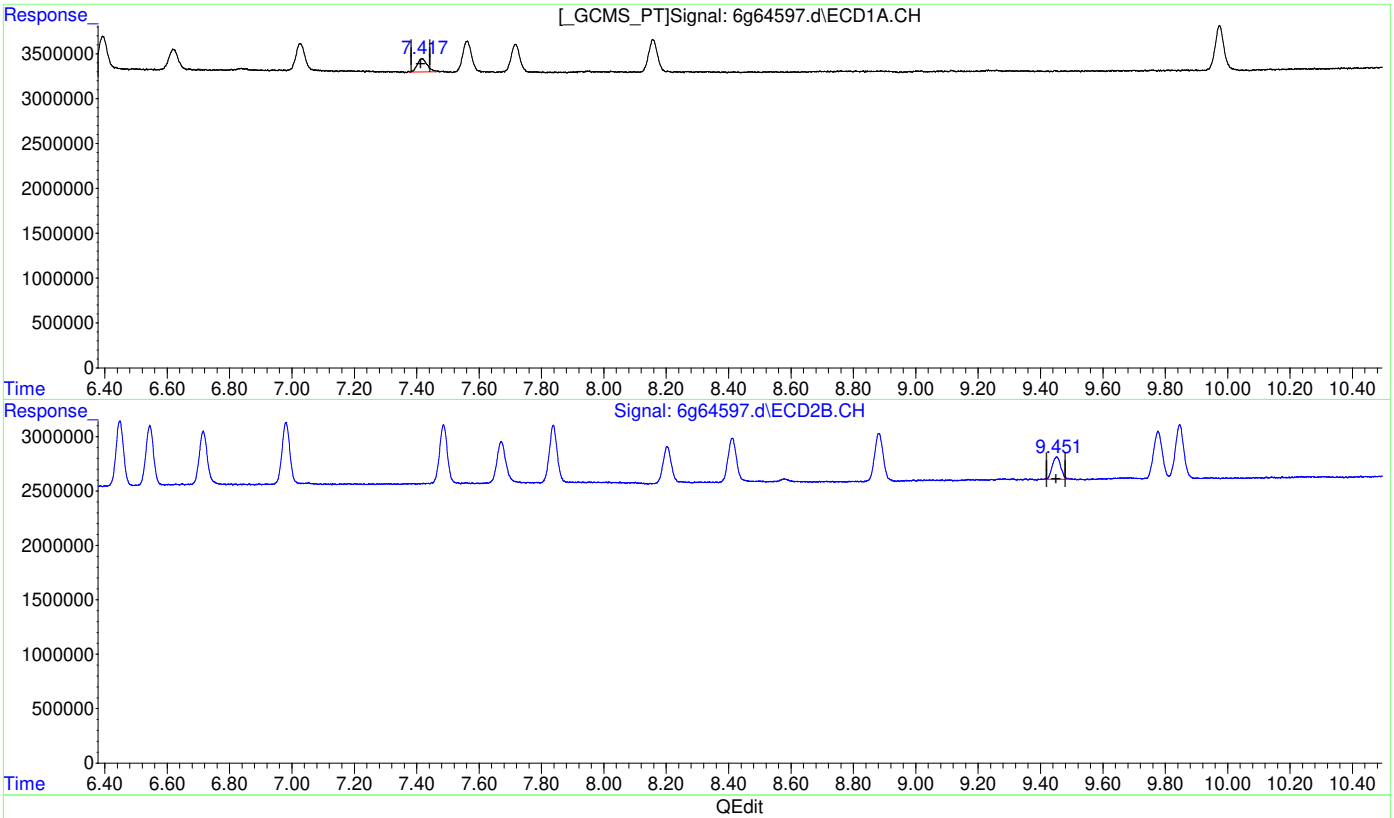
6PST1999.M Thu May 02 08:28:17 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64597.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:40:41
Operator : mailisih
Sample : ic1999-2
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:26:37 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(23) Methoxychlor (A)

7.417min 2.505 PPB m

response 3207490

(23) Methoxychlor #2 (A)

9.451min 2.533 PPB m

response 3929773

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:28:33 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/03/19 14:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:59:04
Operator : mailisih
Sample : ic1999-5
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.955	2.168	164.4E6	217.8E6	50.000	50.000m
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.555	2.981	12437548	22901020	7.298	7.448
	Spiked Amount 40.000	Range 30 - 150		Recovery =		18.25%#	18.62%#
26) SA	Decachlor...	9.972	11.955	23819041	21137412	7.171	8.178
	Spiked Amount 40.000			Recovery =		17.93%	20.45%
	Target Compounds						
3)	hexachlor...	2.889	3.491	28842281	24751144	7.056	7.485
4) A	alpha-BHC	3.031	3.645	18251758	28280784	5.876	6.869
5) MA	gamma-BHC	3.329	4.075	17910172	26882476	6.149	7.027
6) MA	Heptachlor	3.832	4.654	20191569	28141860	6.323	7.152
7) B	beta-BHC	3.406	4.161	8781644	12822123	7.043	7.255
8) B	delta-BHC	3.593	4.560	15924151	24250273	5.889	6.719
9) MB	Aldrin	4.171	5.107	18555684	25672695	6.302	7.246
10)	alachlor	4.320	4.918	2416836	3860578	6.950m	7.574m
11) B	Heptachlo...	4.895	5.934	18347057	24977120	6.448	7.309
12) B	gamma-Chl...	5.061	6.220	17855874	24834401	6.422	7.340
13) B	alpha-Chl...	5.234	6.447	17417454	24813236	6.452	7.450
14) A	Endosulfan I	5.413	6.542	18552192	22990332	6.534	7.291
15) B	4,4'-DDE	5.350	6.714	17254104	21992776	6.418	7.129
16) MA	Dieldrin	5.740	6.981	18390947	24149624	6.454	7.196
17) MA	Endrin	6.066	7.485	17213981	22942574	6.271	7.160
18) A	4,4'-DDD	6.199	7.670	11947249	18583182	6.166	7.054
19) B	Endosulfa...	6.393	7.837	17341111	22649236	6.683	7.416
20) MA	4,4'-DDT	6.618	8.203	12670379	16340622	6.155	6.734
21) B	Endrin Al...	7.027	8.411	15322067	18601708	7.044	7.510
22) B	Endosulfa...	7.716	8.881	15392885	20903295	6.529	7.430
23) A	Methoxychlor	7.415	9.451	8517988	10723088	6.649	7.129
24)	Mirex	7.560	9.776	17094658	20414815	7.240	7.863
25) B	Endrin Ke...	8.157	9.846	18180496	22917578	6.771	7.542
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

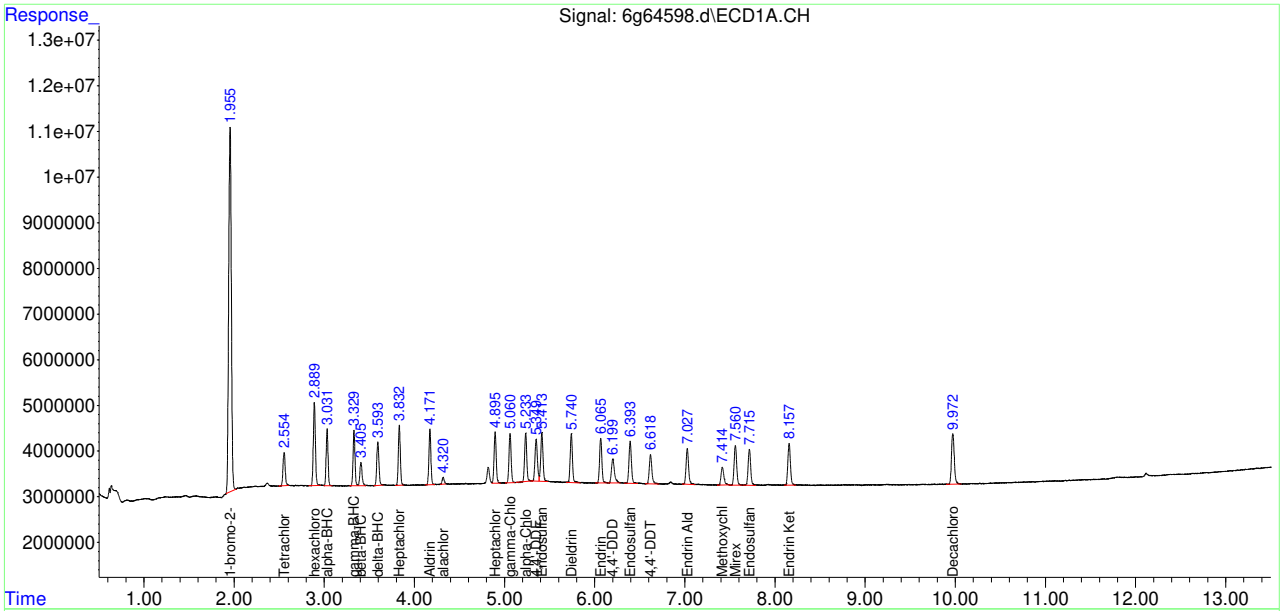
11.6.3 11

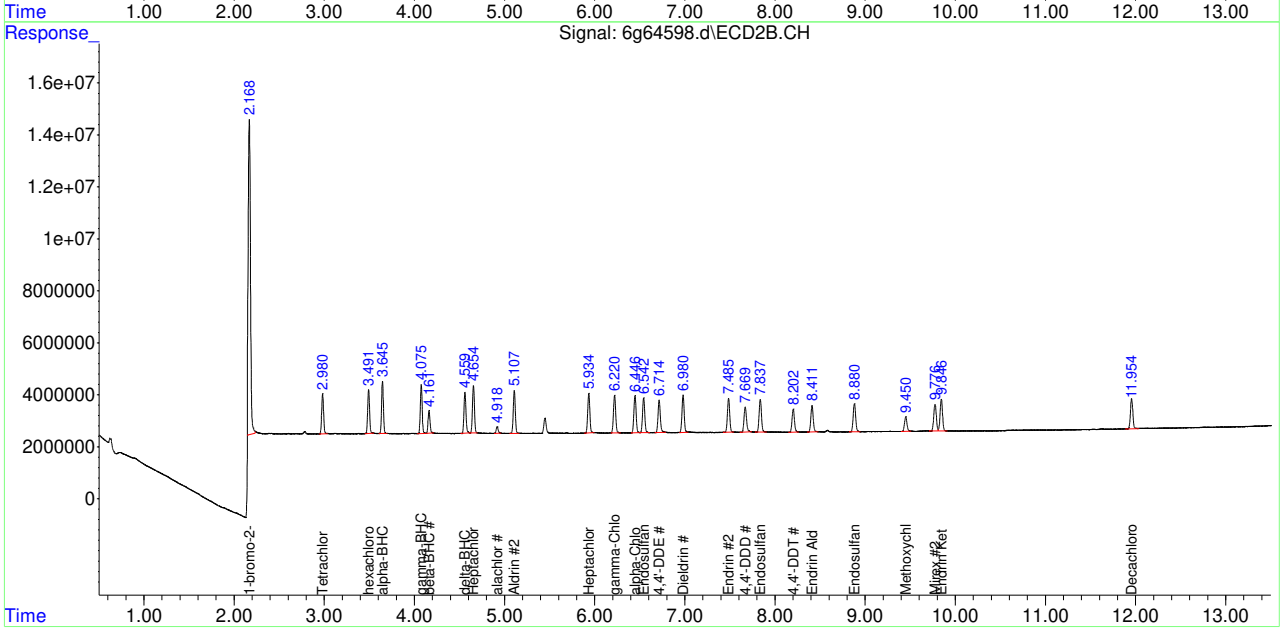
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:59:04
Operator : mailisih
Sample : ic1999-5
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:26 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number: G6G1999-IC1999
Lab FileID: 6G64598.D
Injection Time: 05/01/19 14:59
Method: SW846 8081B
Analyst approved: 05/02/19 08:59 Mailisi Heshuote
Supervisor approved: 05/03/19 14:18 Gwendolyn Burns

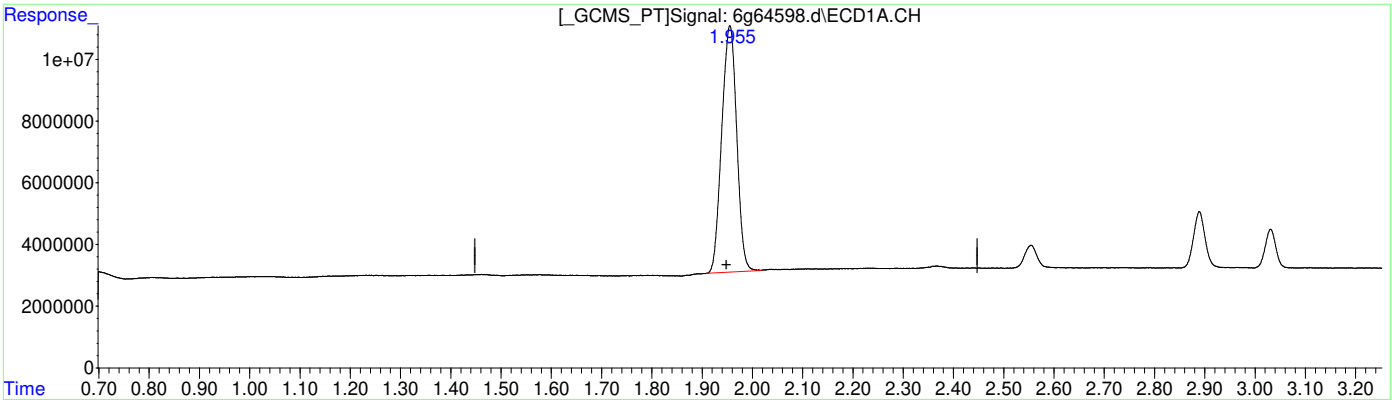
Parameter	CAS	Sig#	R.T. (min.)	Reason
1-Bromo-2-nitrobenzene	577-19-5	2	2.17	Poorly defined baseline
Alachlor	15972-60-8	1	4.32	Poorly defined baseline
Alachlor	15972-60-8	2	4.92	Poorly defined baseline

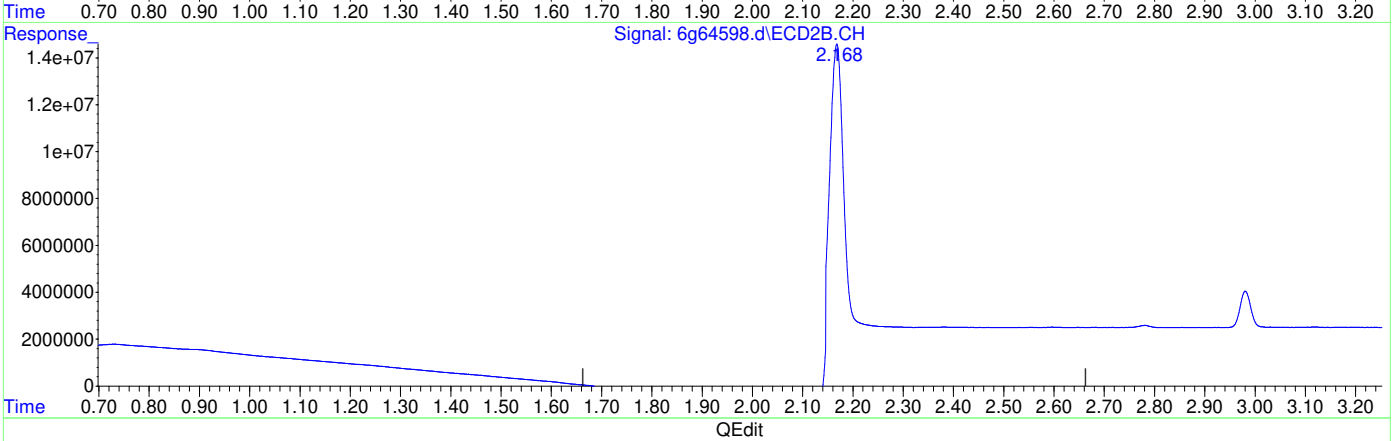
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:59:04
Operator : mailisih
Sample : ic1999-5
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:21:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(1) 1-bromo-2-nitrobenzene (I)

1.955min 50.000 PPB

response 164373524

(1) 1-bromo-2-nitrobenzene #2 (I)

2.168min 50.000 PPB

response 298410759

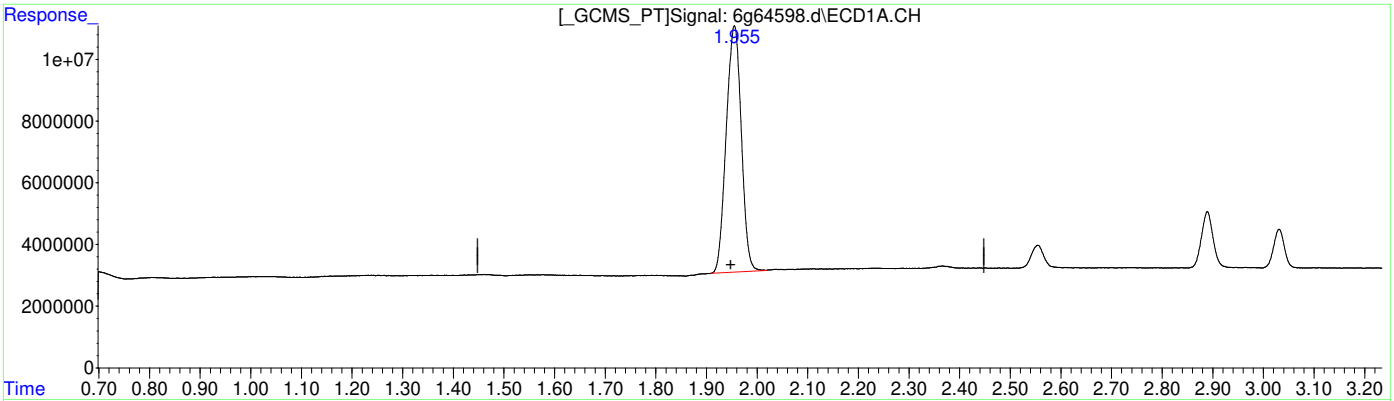
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:22:02 2019

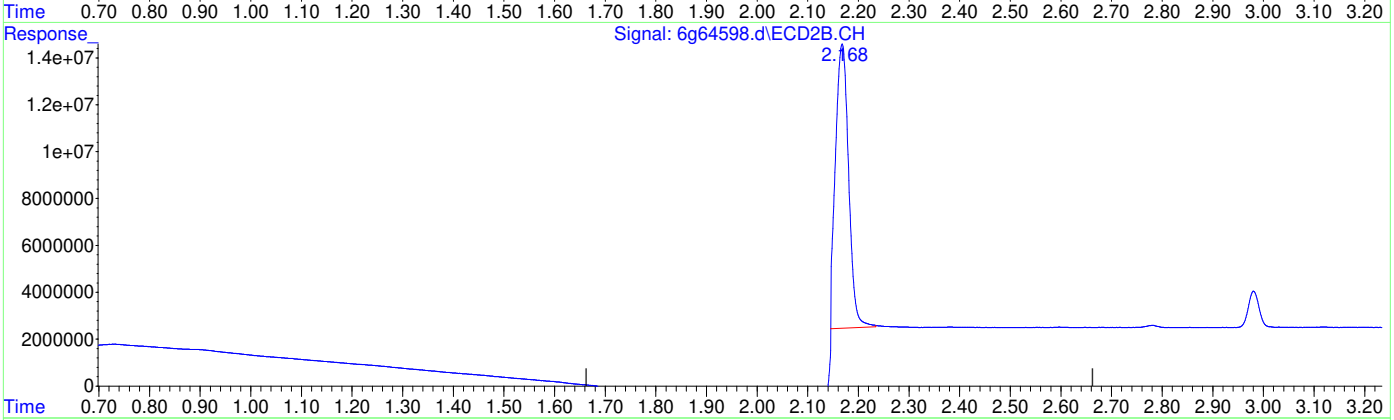
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:59:04
Operator : mailisih
Sample : ic1999-5
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:21:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(1) 1-bromo-2-nitrobenzene (I)

1.955min 50.000 PPB

response 164373524

(1) 1-bromo-2-nitrobenzene #2 (I)

2.168min 50.000 PPB m

response 217840489

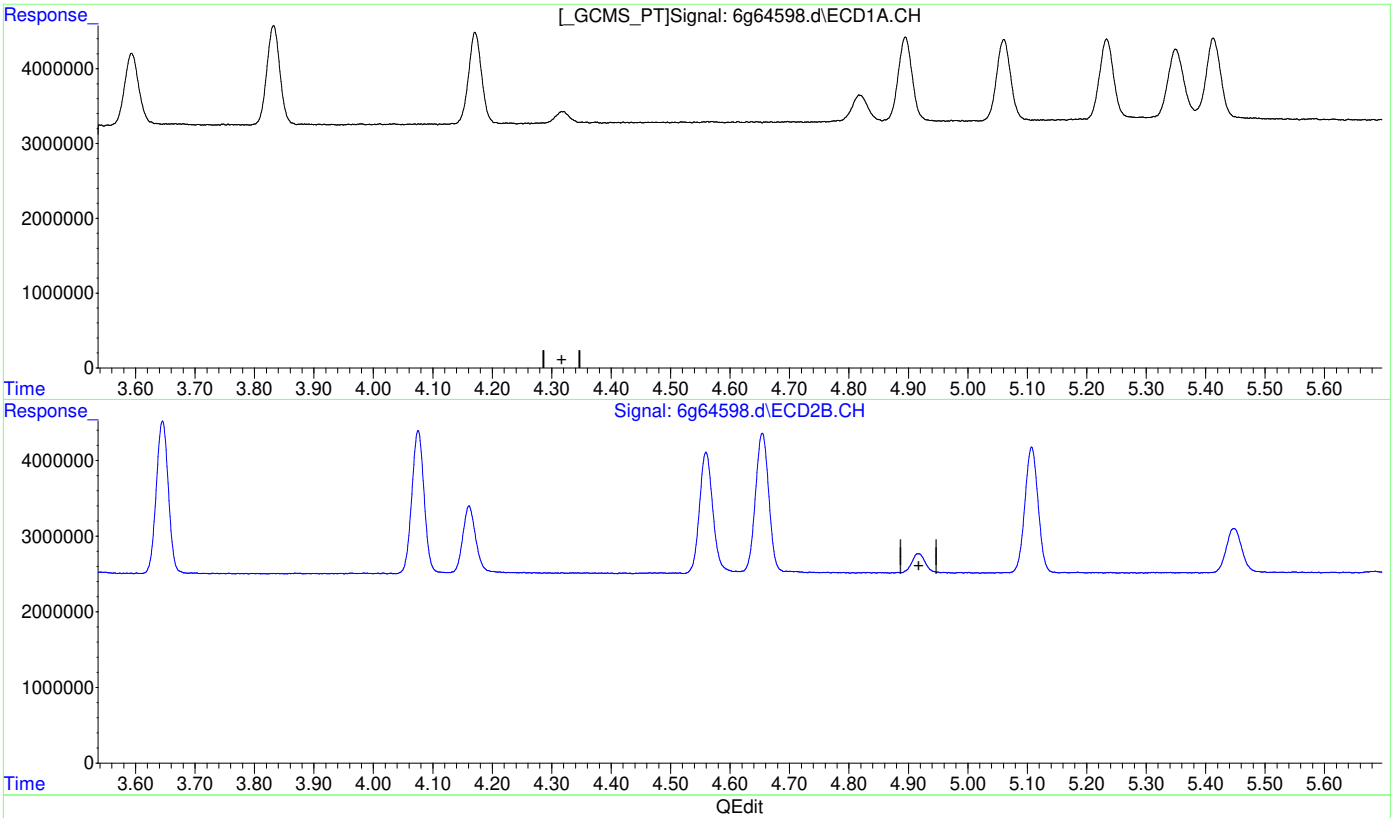
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:23:39 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:59:04
Operator : mailisih
Sample : ic1999-5
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:21:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(10) alachlor

0.000min 0.000 PPB

response 0

(10) alachlor #2

0.000min 0.000 PPB

response 0

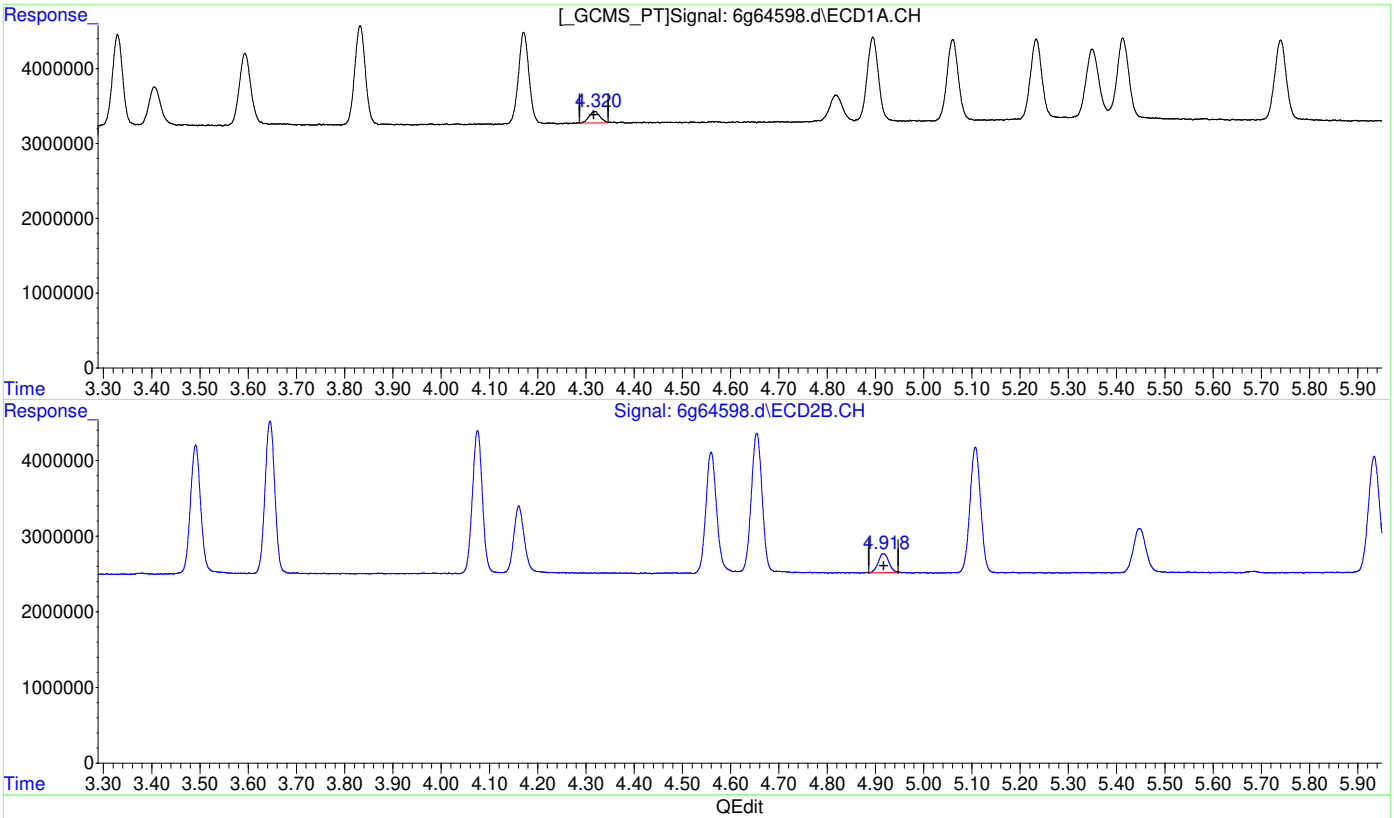
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:25:40 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 14:59:04
Operator : mailisih
Sample : ic1999-5
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 5 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:21:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(10) alachlor

4.320min 6.950 PPB m

response 2416836

(10) alachlor #2

4.918min 7.574 PPB m

response 3860578

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:25:55 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64599.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 15:17:20
Operator : mailisih
Sample : ic1999-10
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.955	2.168	167.8E6	229.8E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.554	2.981	24671262	43925125	14.183	13.542
	Spiked Amount 40.000	Range 30 - 150		Recovery =		35.46%	33.86%
26) SA	Decachlor...	9.972	11.955	46626400	39605965	13.753	14.527
	Spiked Amount 40.000			Recovery =		34.38%	36.32%
	Target Compounds						
3)	hexachlor...	2.889	3.491	57228690	47014151	13.717	13.478
4) A	alpha-BHC	3.031	3.645	37913347	56606878	11.959	13.033
5) MA	gamma-BHC	3.329	4.076	36938821	53000944	12.425	13.134
6) MA	Heptachlor	3.832	4.654	41536843	54116996	12.745	13.038
7) B	beta-BHC	3.405	4.162	17323104	25371708	13.613	13.609
8) B	delta-BHC	3.593	4.560	32677328	48527365	11.840	12.745
9) MB	Aldrin	4.171	5.107	37551859	49619425	12.496	13.275
10)	alachlor	4.316	4.918	5116469	7709167	14.416	14.338
11) B	Heptachlo...	4.895	5.934	37016898	48244192	12.746	13.382
12) B	gamma-Chl...	5.060	6.221	36144242	47660339	12.737	13.353
13) B	alpha-Chl...	5.233	6.447	35623631	47693644	12.930	13.575
14) A	Endosulfan I	5.413	6.542	37389157	44696240	12.902	13.437
15) B	4,4'-DDE	5.350	6.715	34448552	42762707	12.554	13.140
16) MA	Dieldrin	5.739	6.980	36522598	46880292	12.558	13.243
17) MA	Endrin	6.066	7.486	35100132	44789316	12.528	13.250
18) A	4,4'-DDD	6.199	7.669	24649648	36739608	12.464	13.219
19) B	Endosulfa...	6.393	7.837	34687419	43621361	13.097	13.540
20) MA	4,4'-DDT	6.618	8.202	25835117	33594721	12.296	13.125
21) B	Endrin Al...	7.026	8.411	29980618	35958705	13.505	13.761
22) B	Endosulfa...	7.715	8.881	30251346	39718864	12.572	13.383
23) A	Methoxychlor	7.417	9.450	17271064	21763571	13.210	13.716
24)	Mirex	7.561	9.775	33060600	38474766	13.719	14.048
25) B	Endrin Ke...	8.156	9.845	36060642	44560847	13.158	13.902
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000
	SemiQuant Compounds - Not Calibrated on this Instrument						

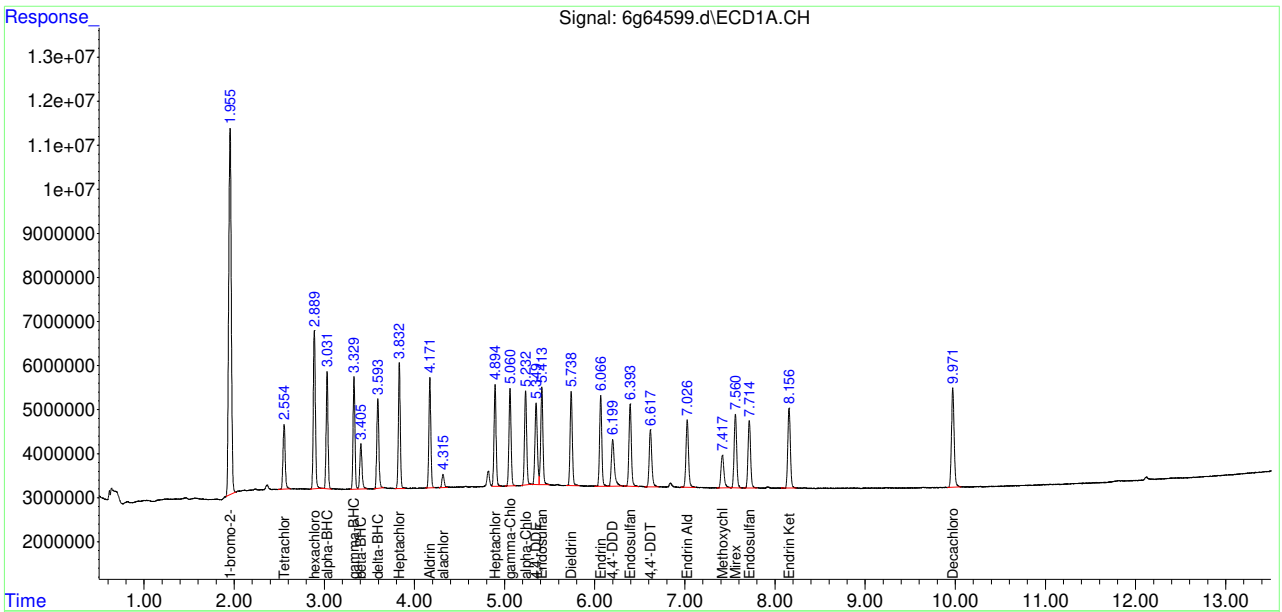
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

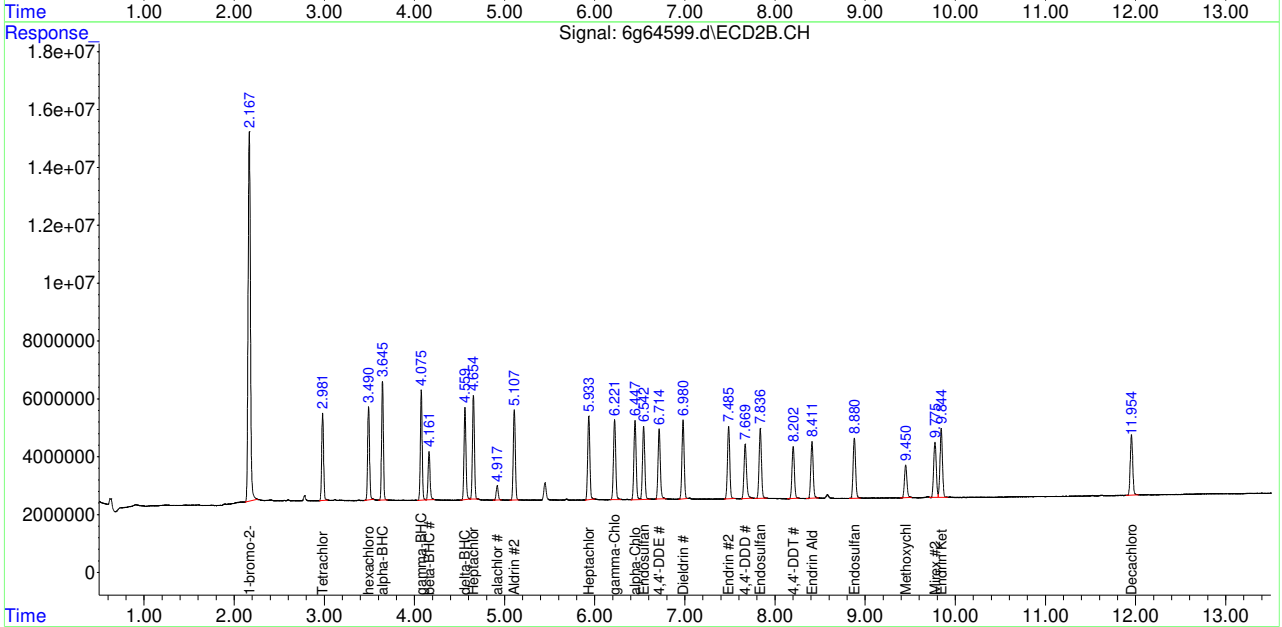
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64599.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 15:17:20
Operator : mailisih
Sample : ic1999-10
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 6 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:39 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64600.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 15:35:36
Operator : mailisih
Sample : icc1999-25
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		Internal Standards						
1)	I	1-bromo-2...	1.956	2.169	162.2E6	223.7E6	50.000	50.000
		System Monitoring Compounds						
2)	SAB	Tetrachlo...	2.555	2.982	61641937	107.1E6	36.654	33.927
		Spiked Amount 40.000	Range 30 - 150		Recovery =		91.64%	84.82%
26)	SA	Decachlor...	9.971	11.955	117.0E6	92386867	35.701	34.810
		Spiked Amount 40.000			Recovery =		89.25%	87.03%
		Target Compounds						
3)		hexachlor...	2.889	3.491	143.4E6	113.2E6	35.555	33.346
4)	A	alpha-BHC	3.032	3.646	106.5E6	144.8E6	34.755	34.245
5)	MA	gamma-BHC	3.330	4.076	102.0E6	134.0E6	35.502	34.110
6)	MA	Heptachlor	3.833	4.655	111.5E6	133.8E6	35.398	33.116
7)	B	beta-BHC	3.406	4.161	43515601	61742790	35.369	34.021
8)	B	delta-BHC	3.594	4.560	93226143	125.5E6	34.937	33.864
9)	MB	Aldrin	4.172	5.108	103.0E6	122.5E6	35.443	33.667
10)		alachlor	4.317	4.917	12475286	18599572	36.357	35.536
11)	B	Heptachlo...	4.895	5.934	98008817	118.0E6	34.905	33.627
12)	B	gamma-Chl...	5.060	6.220	96542853	115.5E6	35.190	33.250
13)	B	alpha-Chl...	5.233	6.447	95953283	114.5E6	36.022	33.470
14)	A	Endosulfan I	5.414	6.543	99024152	107.8E6	35.344	33.279
15)	B	4,4'-DDE	5.350	6.714	91420704	107.0E6	34.461	33.763
16)	MA	Dieldrin	5.740	6.980	99225392	115.2E6	35.289	33.433
17)	MA	Endrin	6.066	7.485	93851670	110.2E6	34.647	33.486
18)	A	4,4'-DDD	6.198	7.669	64757074	90782868	33.867	33.555
19)	B	Endosulfa...	6.393	7.836	90302624	105.2E6	35.266	33.529
20)	MA	4,4'-DDT	6.618	8.201	71115168	87762392	35.008	35.221
21)	B	Endrin Al...	7.026	8.410	76613840	86151672	35.695	33.869
22)	B	Endosulfa...	7.715	8.881	79019128	94942883	33.967	32.861
23)	A	Methoxychlor	7.414	9.450	45007095	54183814	35.605	35.078
24)		Mirex	7.560	9.775	81506052	88796396	34.982	33.305
25)	B	Endrin Ke...	8.156	9.844	96143493	109.1E6	36.286	34.964
		Sum Toxaphene			0	0	N.D.	N.D.
Average		Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

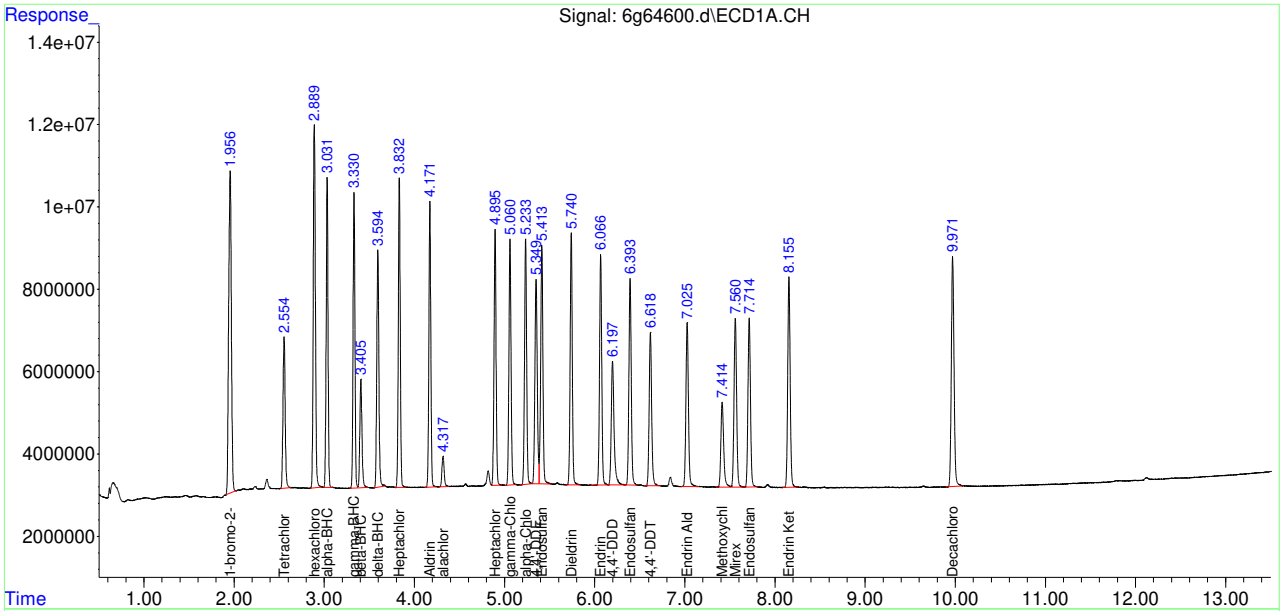
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

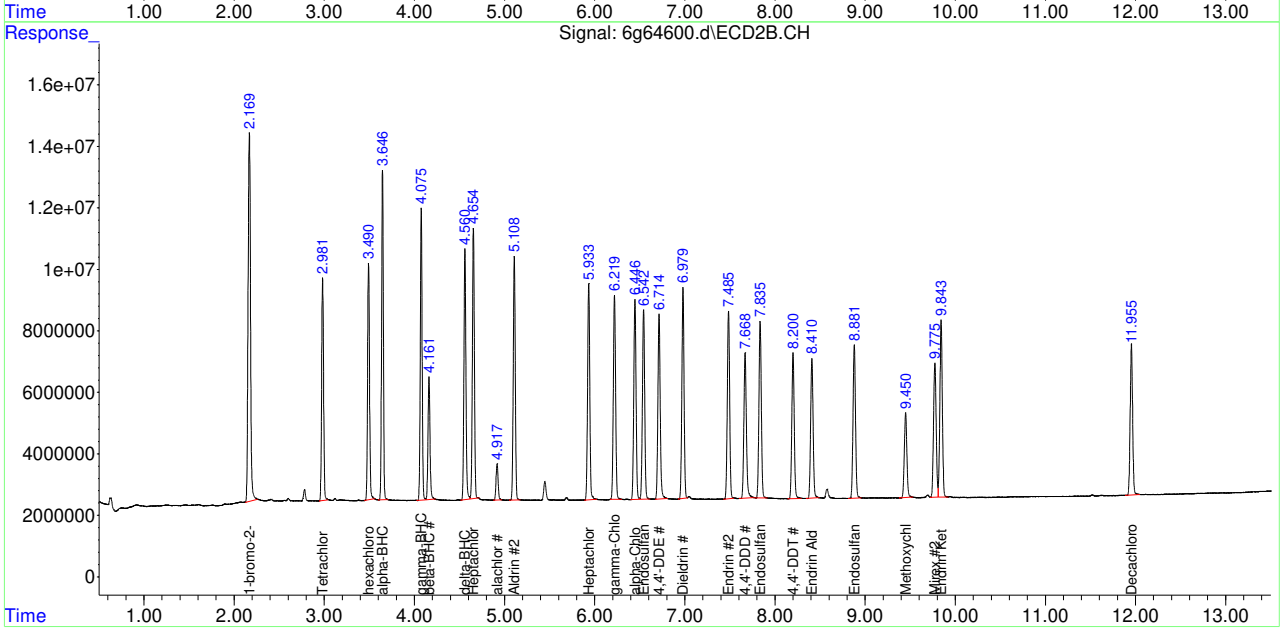
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64600.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 15:35:36
Operator : mailisih
Sample : icc1999-25
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 7 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 15:53:52
Operator : mailisih
Sample : ic1999-50
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

		Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
		Internal Standards						
1)	I	1-bromo-2...	1.956	2.169	166.3E6	228.7E6	50.000	50.000
		System Monitoring Compounds						
2)	SAB	Tetrachlo...	2.555	2.981	127.0E6	216.1E6	73.644	66.952
		Spiked Amount 40.000	Range 30 - 150		Recovery =		184.11%#	167.38%#
26)	SA	Decachlor...	9.973	11.955	238.7E6	176.7E6	71.028	65.116
		Spiked Amount 40.000			Recovery =		177.57%	162.79%
		Target Compounds						
3)		hexachlor...	2.890	3.491	295.4E6	225.1E6	71.439	64.836
4)	A	alpha-BHC	3.032	3.645	245.0E6	304.3E6	77.978	70.413
5)	MA	gamma-BHC	3.330	4.076	230.0E6	277.3E6	78.064	69.044
6)	MA	Heptachlor	3.833	4.655	245.0E6	274.7E6	75.829	66.497
7)	B	beta-BHC	3.406	4.161	90205761	122.1E6	71.518	65.811
8)	B	delta-BHC	3.593	4.559	215.4E6	262.3E6	78.726	69.220
9)	MB	Aldrin	4.171	5.109	228.3E6	249.7E6	76.659	67.121
10)		alachlor	4.318	4.917	24784384	35696336	70.456	66.716
11)	B	Heptachlo...	4.895	5.934	213.0E6	236.4E6	74.005	65.898
12)	B	gamma-Chl...	5.060	6.220	212.0E6	232.7E6	75.367	65.507
13)	B	alpha-Chl...	5.233	6.447	209.6E6	227.3E6	76.743	65.007
14)	A	Endosulfan I	5.414	6.543	213.2E6	215.5E6	74.235	65.094
15)	B	4,4'-DDE	5.348	6.714	199.6E6	220.5E6	73.383	68.072
16)	MA	Dieldrin	5.740	6.980	217.4E6	234.3E6	75.404	66.498
17)	MA	Endrin	6.066	7.485	205.1E6	220.9E6	73.852	65.671
18)	A	4,4'-DDD	6.197	7.668	143.9E6	184.6E6	73.420	66.738
19)	B	Endosulfa...	6.392	7.835	194.3E6	209.7E6	74.000	65.409
20)	MA	4,4'-DDT	6.617	8.201	157.6E6	180.5E6	75.672	70.857
21)	B	Endrin Al...	7.025	8.410	161.2E6	170.5E6	73.280	65.561
22)	B	Endosulfa...	7.714	8.880	168.4E6	186.2E6	70.630	63.048
23)	A	Methoxychlor	7.414	9.449	92388626	106.8E6	71.293	67.624
24)		Mirex	7.561	9.776	162.1E6	169.0E6	67.867	62.022
25)	B	Endrin Ke...	8.155	9.844	204.7E6	218.9E6	75.356	68.626
		Sum Toxaphene			0	0	N.D.	N.D.
Average		Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

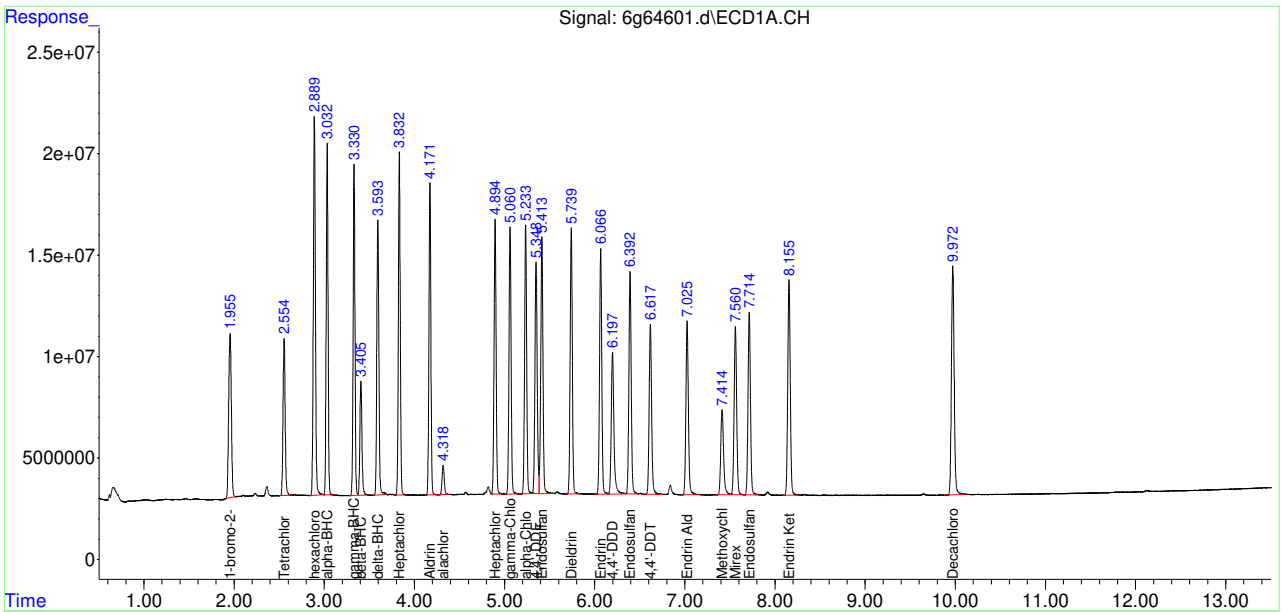
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

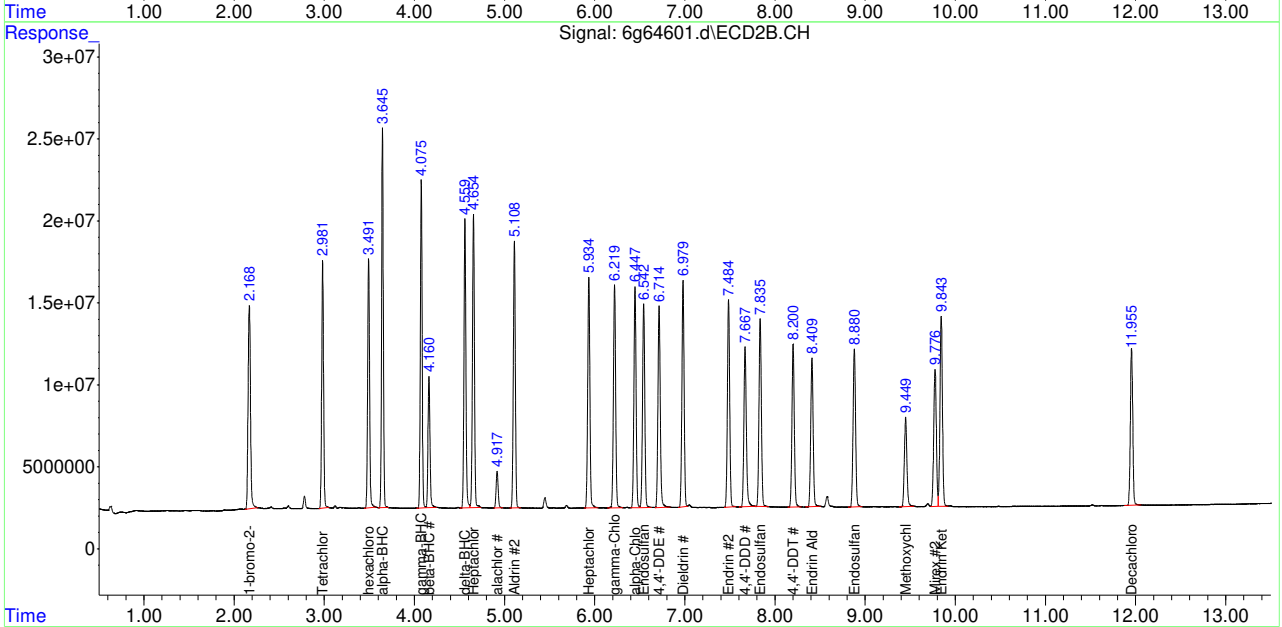
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64601.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 15:53:52
Operator : mailisih
Sample : ic1999-50
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 8 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:46:58 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64602.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:11:27
Operator : mailisih
Sample : ic1999-75
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1) I	1-bromo-2...	1.955	2.170	167.9E6	232.6E6	50.000	50.000
	System Monitoring Compounds						
2) SAB	Tetrachlo...	2.553	2.983	194.6E6	330.4E6	111.749	100.641
	Spiked Amount 40.000	Range 30 - 150		Recovery =	279.37%#	251.60%#	
26) SA	Decachlor...	9.971	11.954	364.2E6	261.6E6	107.312	94.808
	Spiked Amount 40.000			Recovery =	268.28%	237.02%	
	Target Compounds						
3)	hexachlor...	2.888	3.492	450.6E6	340.7E6	107.910	96.501
4) A	alpha-BHC	3.031	3.646	398.5E6	474.6E6	125.579	107.962
5) MA	gamma-BHC	3.328	4.076	369.5E6	428.4E6	124.192	104.891
6) MA	Heptachlor	3.831	4.655	391.0E6	420.8E6	119.853	100.161
7) B	beta-BHC	3.404	4.162	139.2E6	183.9E6	109.268	97.440
8) B	delta-BHC	3.592	4.560	354.9E6	410.5E6	128.474	106.516
9) MB	Aldrin	4.170	5.109	366.3E6	381.8E6	121.787	100.930
10)	alachlor	4.315	4.917	37210236	51907966	104.751	95.387
11) B	Heptachlo...	4.893	5.934	338.4E6	358.0E6	116.409	98.104
12) B	gamma-Chl...	5.059	6.221	337.5E6	352.6E6	118.830	97.615
13) B	alpha-Chl...	5.232	6.447	330.9E6	342.5E6	120.012	96.306
14) A	Endosulfan I	5.412	6.543	336.1E6	326.3E6	115.888	96.931
15) B	4,4'-DDE	5.347	6.714	314.4E6	336.3E6	114.485	102.092
16) MA	Dieldrin	5.738	6.980	348.6E6	357.8E6	119.772	99.856
17) MA	Endrin	6.064	7.486	329.8E6	336.5E6	117.611	98.360
18) A	4,4'-DDD	6.195	7.668	229.5E6	282.2E6	115.947	100.330
19) B	Endosulfa...	6.390	7.836	305.8E6	318.4E6	115.345	97.637
20) MA	4,4'-DDT	6.615	8.200	254.2E6	279.1E6	120.884	107.716
21) B	Endrin Al...	7.023	8.411	248.6E6	254.3E6	111.894	96.145
22) B	Endosulfa...	7.712	8.880	266.2E6	280.0E6	110.526	93.229
23) A	Methoxychlor	7.411	9.449	143.2E6	161.1E6	109.444	100.292
24)	Mirex	7.559	9.774	244.8E6	247.5E6	101.490	89.297
25) B	Endrin Ke...	8.154	9.844	321.6E6	331.3E6	117.240	102.137
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

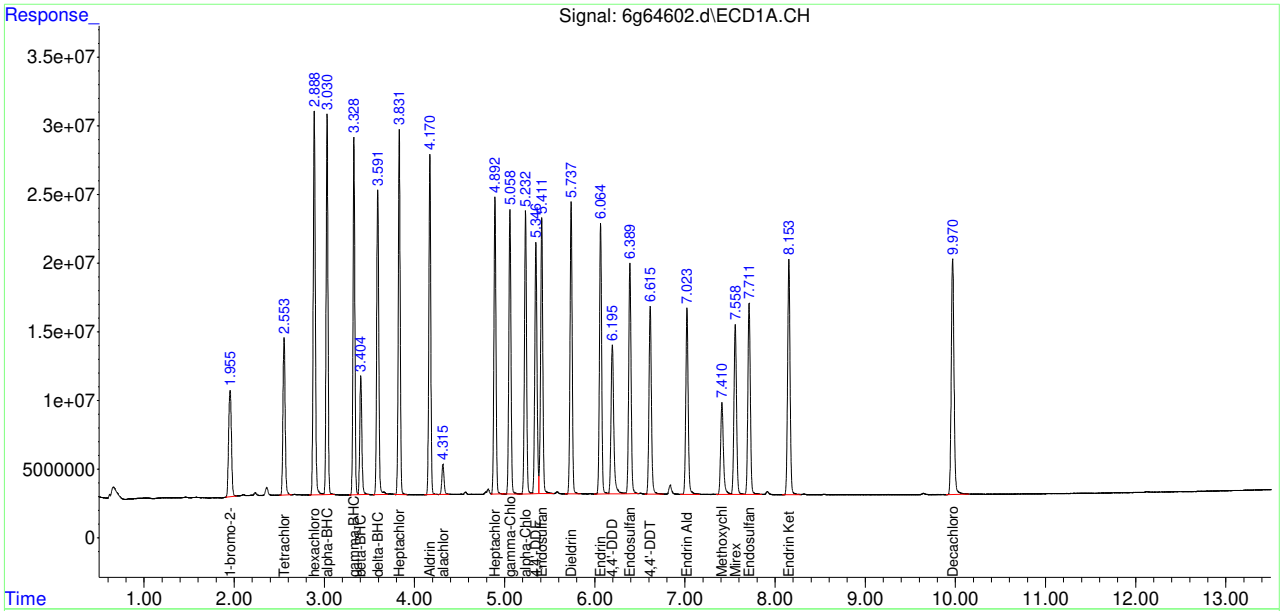
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

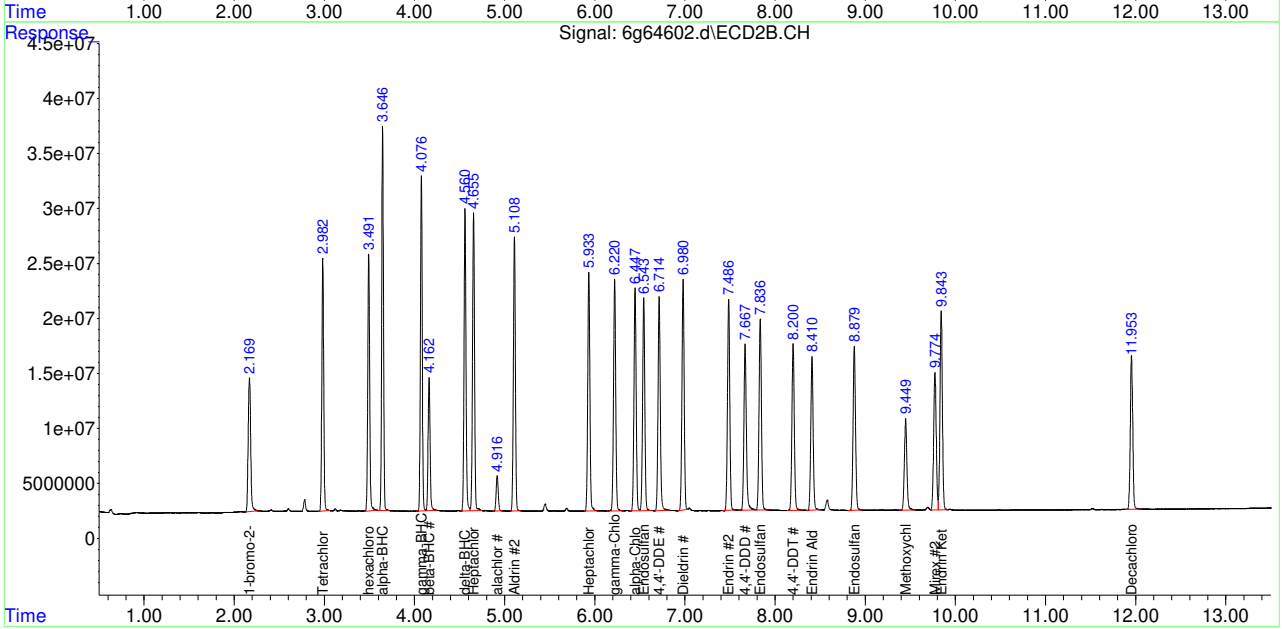
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64602.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:11:27
Operator : mailisih
Sample : ic1999-75
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 9 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:11 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:28:55
Operator : mailisih
Sample : ic1999-100
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.954	2.169	170.2E6	235.3E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.553	2.982	269.9E6	458.0E6	152.925	137.893
	Spiked Amount 40.000	Range 30 - 150		Recovery =	382.31%#	344.73%#	
26)	SA Decachlor...	9.969	11.955	502.4E6	351.9E6	146.030	126.057
	Spiked Amount 40.000			Recovery =	365.07%	315.14%	
	Target Compounds						
3)	hexachlor...	2.887	3.491	622.2E6	469.6E6	146.984	131.479
4)	A alpha-BHC	3.030	3.646	575.1E6	665.8E6	178.799	149.717
5)	MA gamma-BHC	3.327	4.076	529.9E6	597.5E6	175.675	144.597
6)	MA Heptachlor	3.829	4.655	559.7E6	583.0E6	169.253	137.166
7)	B beta-BHC	3.403	4.161	194.6E6	252.3E6	150.675	132.156
8)	B delta-BHC	3.591	4.559	508.3E6	572.6E6	181.510	146.874
9)	MB Aldrin	4.169	5.108	524.1E6	530.3E6	171.856	138.566
10)	alachlor	4.315	4.917	51047840	69271880	141.751	125.823
11)	B Heptachlo...	4.892	5.933	482.3E6	493.9E6	163.658	133.781
12)	B gamma-Chl...	5.057	6.220	483.0E6	486.8E6	167.752	133.191
13)	B alpha-Chl...	5.231	6.447	469.3E6	471.3E6	167.873	131.005
14)	A Endosulfan I	5.410	6.542	476.8E6	449.3E6	162.151	131.902
15)	B 4,4'-DDE	5.346	6.714	447.0E6	468.7E6	160.559	140.647
16)	MA Dieldrin	5.737	6.980	498.6E6	501.1E6	168.957	138.247
17)	MA Endrin	6.063	7.484	469.9E6	464.8E6	165.299	134.283
18)	A 4,4'-DDD	6.193	7.668	330.3E6	391.9E6	164.604	137.704
19)	B Endosulfa...	6.389	7.836	433.5E6	440.4E6	161.314	133.515
20)	MA 4,4'-DDT	6.614	8.200	366.9E6	391.1E6	172.086	149.204
21)	B Endrin Al...	7.023	8.409	350.4E6	353.7E6	155.569	132.191
22)	B Endosulfa...	7.711	8.880	379.4E6	383.6E6	155.401	126.236
23)	A Methoxychlor	7.410	9.449	199.8E6	221.0E6	150.571	135.994
24)	Mirex	7.558	9.774	336.6E6	332.6E6	137.635	118.587
25)	B Endrin Ke...	8.153	9.845	453.2E6	457.2E6	162.989	139.305
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

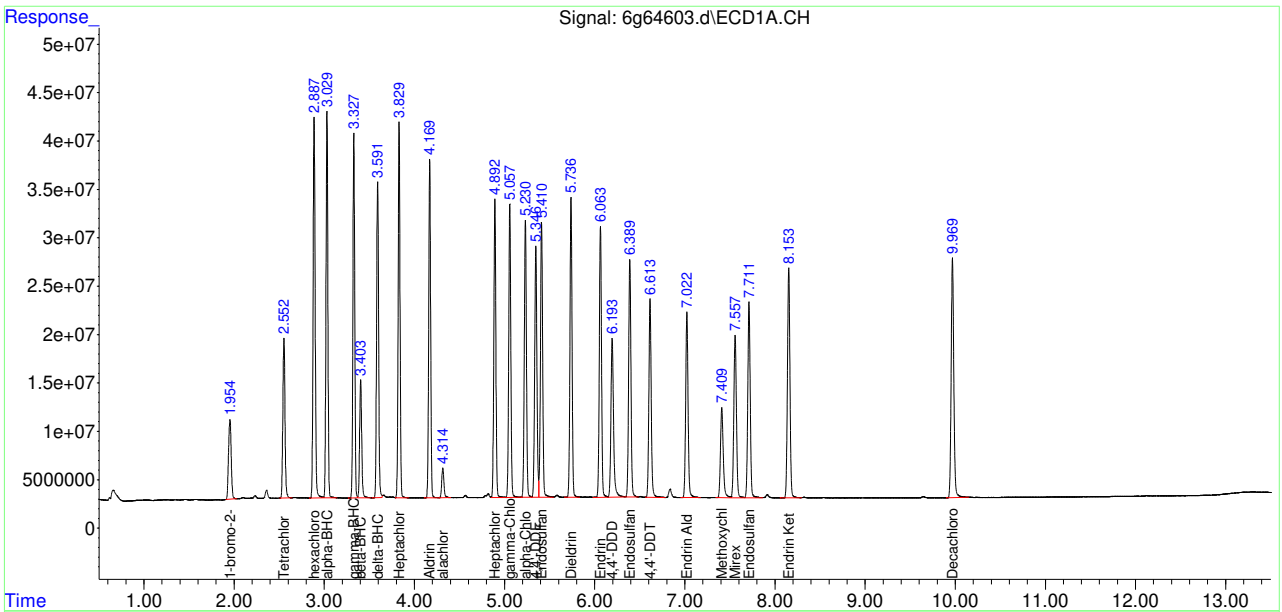
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

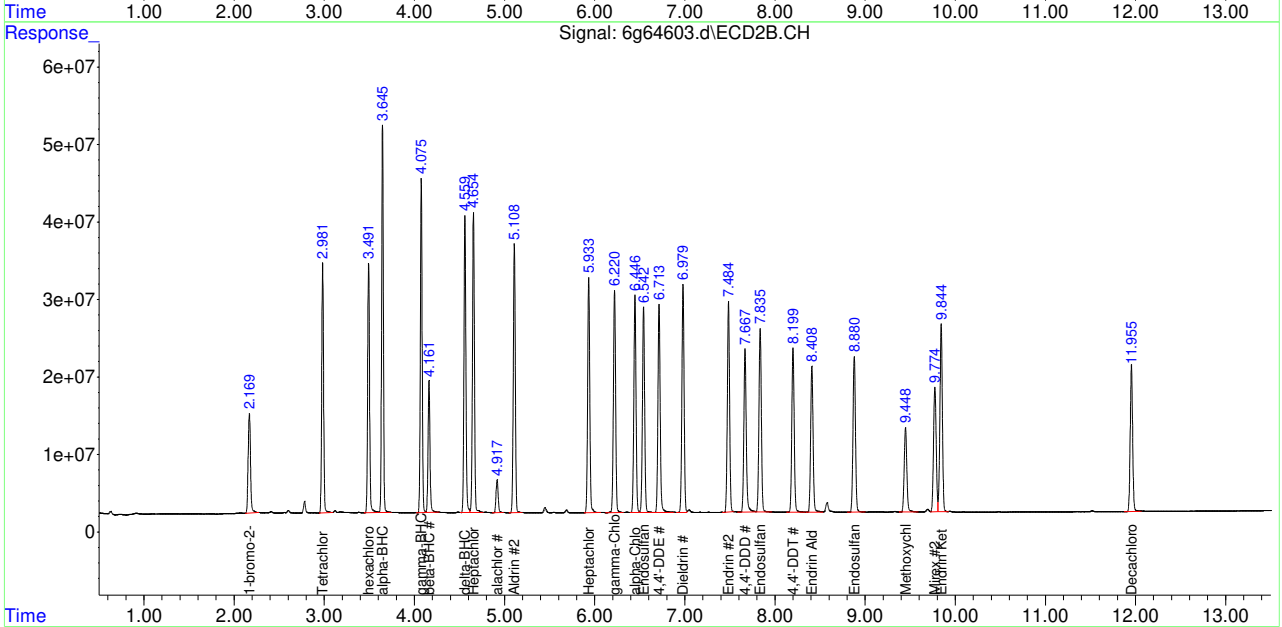
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64603.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:28:55
Operator : mailisih
Sample : ic1999-100
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 10 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:20 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/03/19 14:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:47:14
Operator : mailisih
Sample : ic1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
33) I	1-bromo-2...	1.953	2.167	172.1E6	236.8E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
34)	Chlordane...	3.832	4.655	129.7E6	157.9E6	697.113	697.765
35)	Chlordane...	4.317	5.303	79996713	89466789	698.925	686.617
36)	Chlordane...	5.061	6.221	290.7E6	292.0E6	705.321	685.730
37)	Chlordane...	5.227	6.447	462.0E6	488.7E6	704.556	679.762m
38)	Chlordane...	6.298	7.916	59208084	79342440	697.056	679.639
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

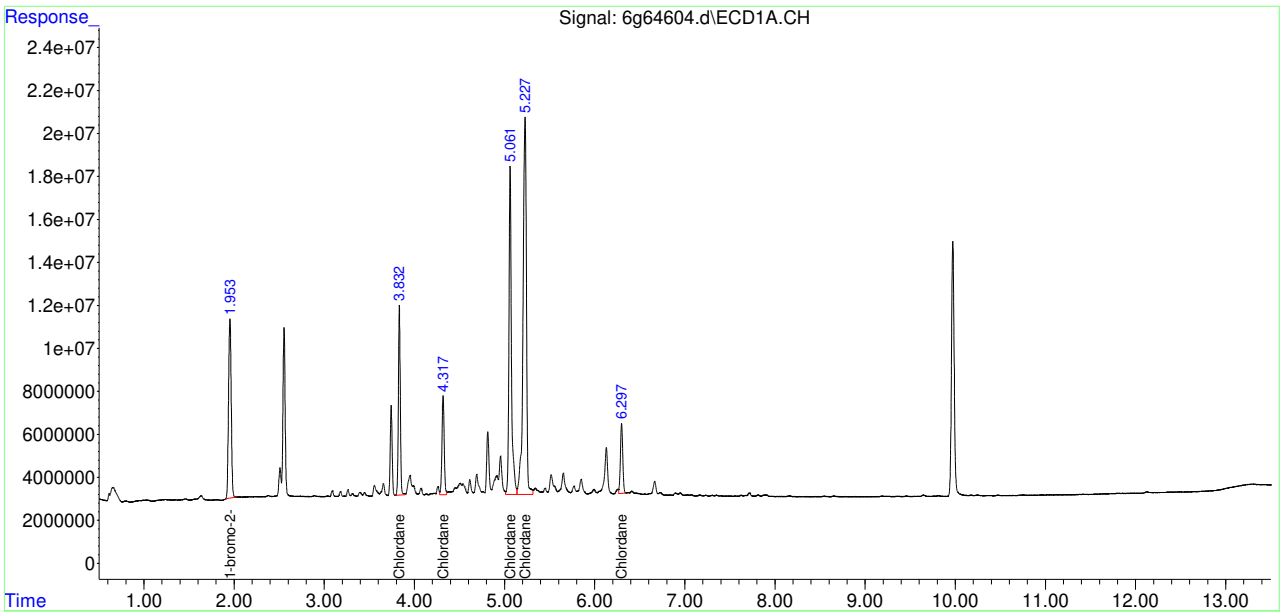
11.6.9 11

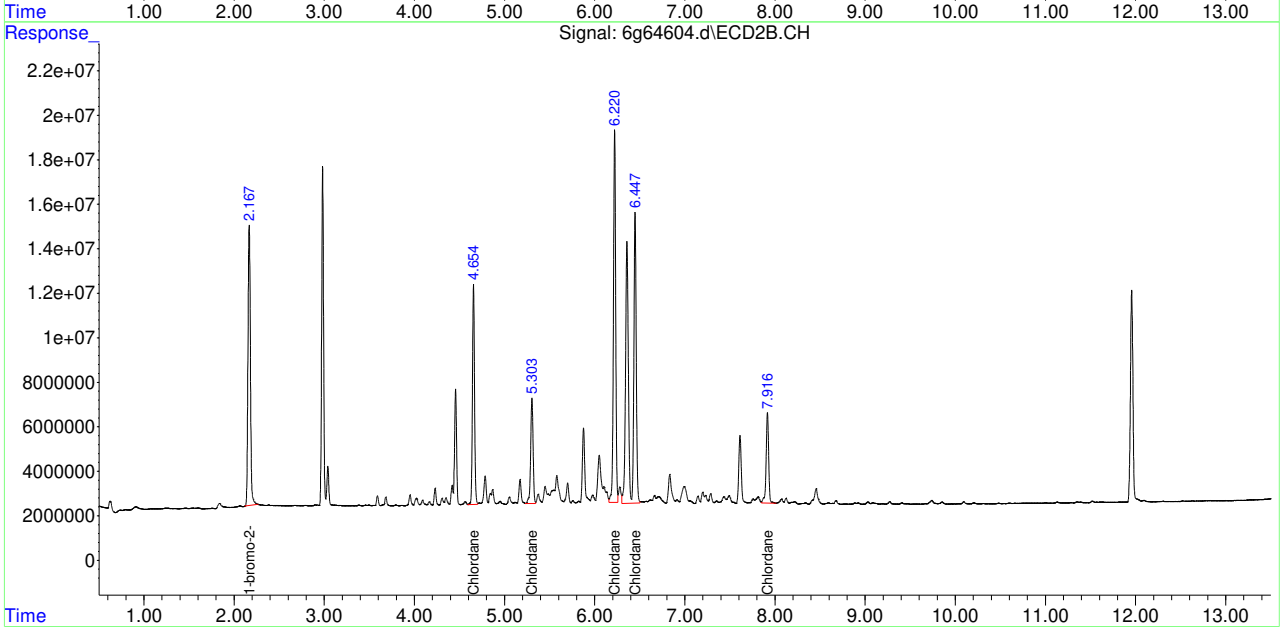
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:47:14
Operator : mailisih
Sample : ic1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number:	G6G1999-IC1999	**Method:**	SW846 8081B
Lab FileID:	6G64604.D	**Analyst approved:**	05/02/19 08:59 Mailisi Heshuote
Injection Time:	05/01/19 16:47	**Supervisor approved:**	05/03/19 14:18 Gwendolyn Burns

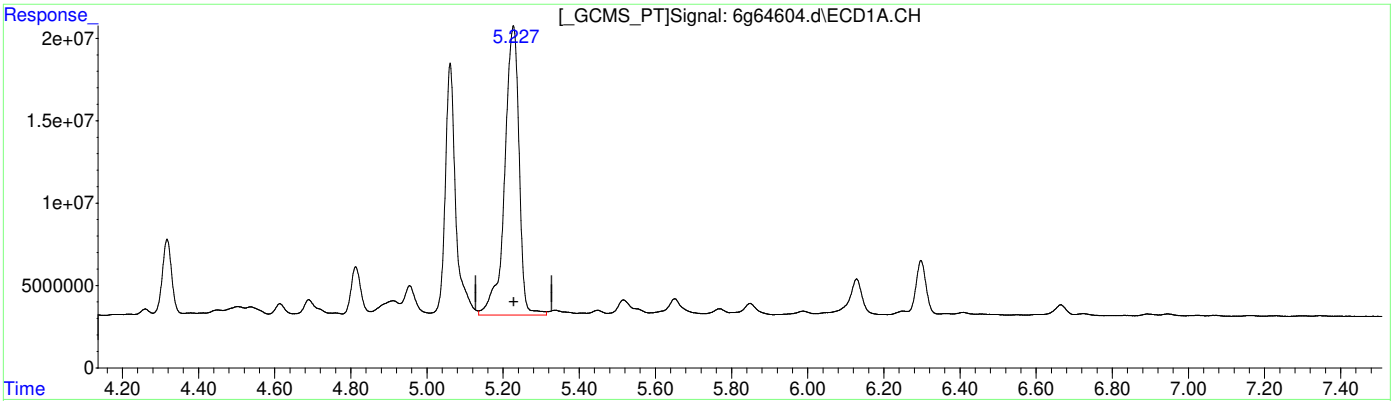
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	6.45	Split peak

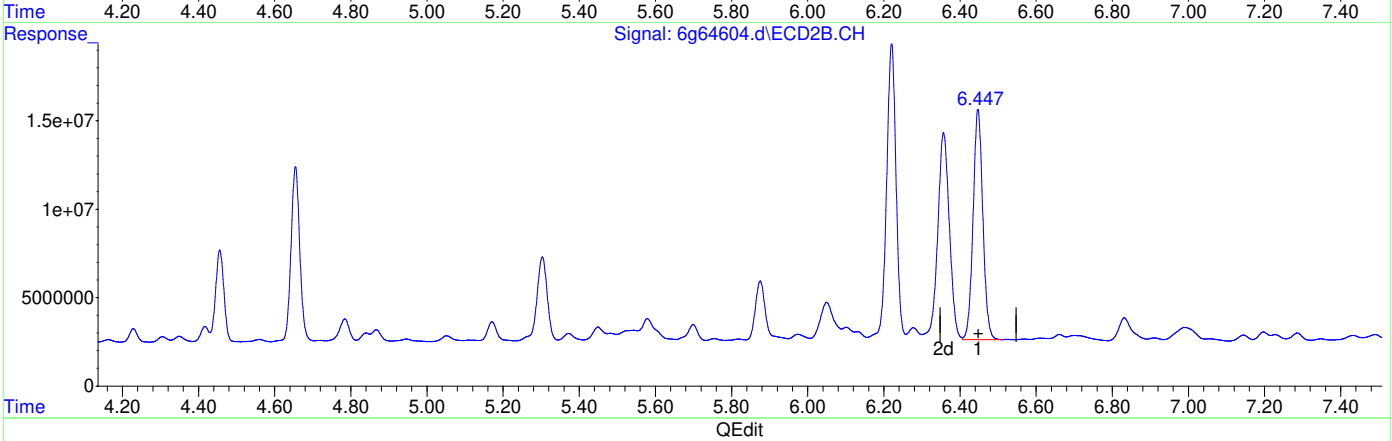
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:47:14
Operator : mailisih
Sample : ic1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:42:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(37) Chlordane {D}

5.227min 704.556 PPB

response 461976646

(37) Chlordane {D} #2

6.447min 322.466 PPB

response 231838882

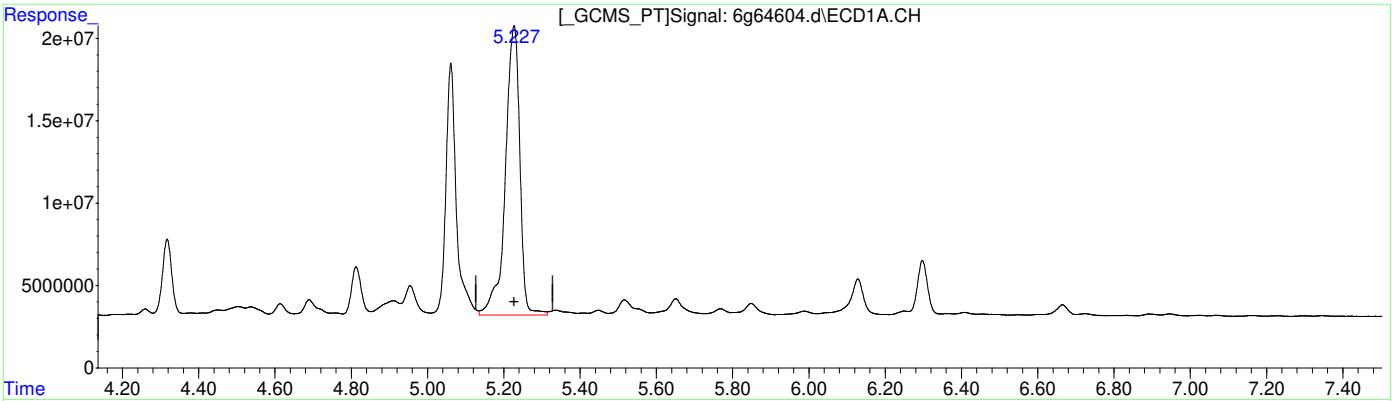
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:42:38 2019

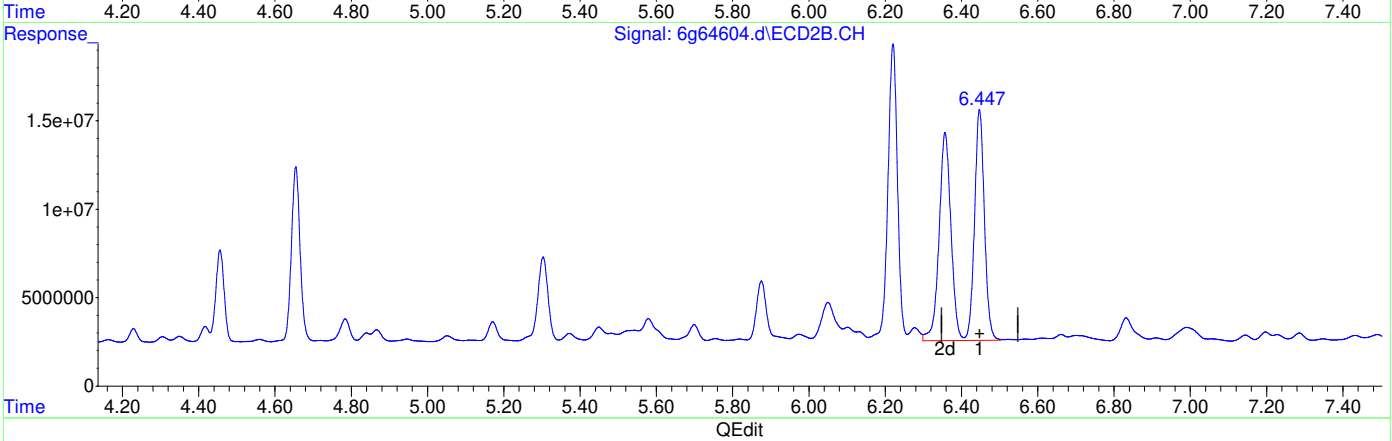
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64604.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 16:47:14
Operator : mailisih
Sample : ic1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 11 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:42:25 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(37) Chlordane {D}

5.227min 704.556 PPB

response 461976646

(37) Chlordane {D} #2

6.447min 679.762 PPB m

response 488719367

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:42:45 2019

11.6.9.3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64605.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:05:30
Operator : mailisih
Sample : ic1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
27) I	1-bromo-2...	1.955	2.169	173.9E6	240.7E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
28) L8	Toxaphene{A}	5.750	6.946	36314615	56717256	822.745	688.879
29) L8	Toxaphene{B}	6.381	7.807	85640855	69459544	753.155	630.864
30) L8	Toxaphene{C}	6.558	7.970	67505522	117.9E6	756.428	684.339
31) L8	Toxaphene{D}	6.902	8.409	51597975	72889468	565.610	691.802
32) L8	Toxaphene{E}	7.558	9.316	57351600	63322660	735.595	688.007
	Sum Toxaphene			298.4E6	380.3E6	N.D.	N.D.
Average	Toxaphene					726.707	676.778
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

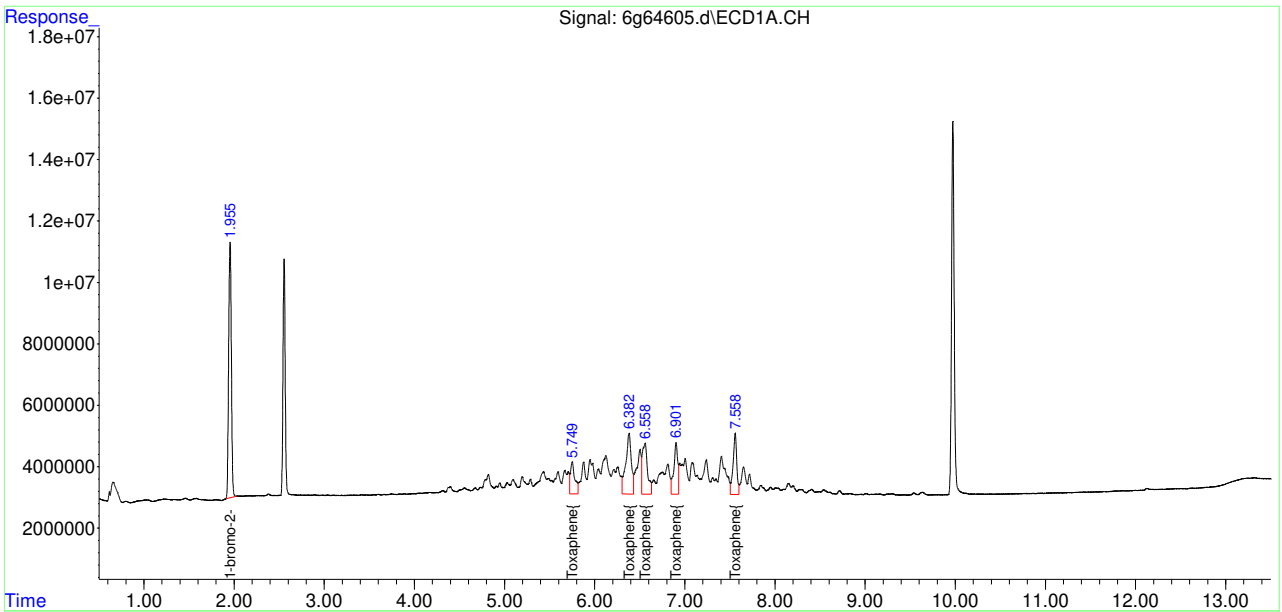
11.6.10 11

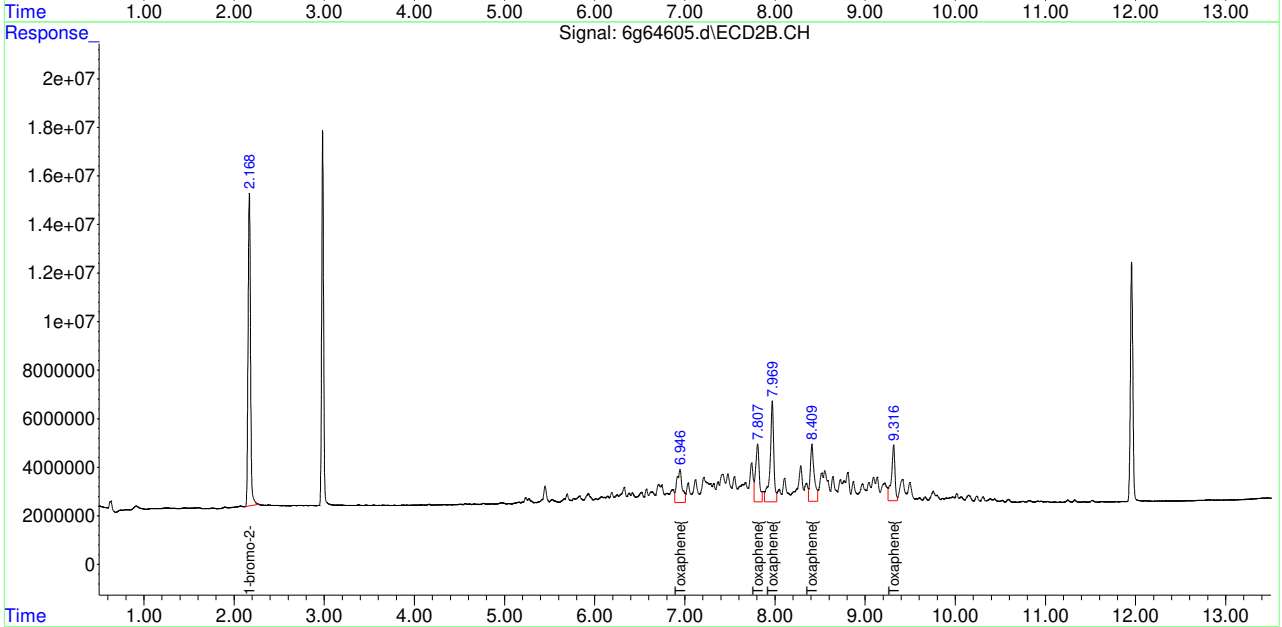
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64605.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:05:30
Operator : mailisih
Sample : ic1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 12 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:47:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Tue Apr 30 14:52:12 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64606.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:23:52
Operator : mailisih
Sample : icv1999-25
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:52:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.956	2.170	160.0E6	221.2E6	50.000	50.000
27)	I 1-bromo-2...	1.956	2.170	160.0E6	221.2E6	50.000	50.000
33)	I 1-bromo-2...	1.956	2.170	160.0E6	221.2E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.556	2.982	55064048	95049975	22.763	21.832
	Spiked Amount 40.000	Range 30 - 150		Recovery =		56.91%	54.58%
26)	SA Decachlor...	9.973	11.956	104.2E6	83762158	22.264	21.864
	Spiked Amount 40.000			Recovery =		55.66%	54.66%
	Target Compounds						
4)	A alpha-BHC	3.033	3.646	109.9E6	149.7E6	26.046	25.845
5)	MA gamma-BHC	3.330	4.076	104.3E6	137.3E6	26.000	25.535
6)	MA Heptachlor	3.833	4.655	113.2E6	135.4E6	25.546	24.667
7)	B beta-BHC	3.406	4.161	44562424	63548441	25.314	25.526
8)	B delta-BHC	3.594	4.561	96657410	129.8E6	26.081	26.188
9)	MB Aldrin	4.172	5.108	105.5E6	126.7E6	25.841	25.343
11)	B Heptachlo...	4.895	5.934	101.2E6	120.9E6	25.690	25.243
12)	B gamma-Chl...	5.061	6.221	100.4E6	119.7E6	26.051	25.367
13)	B alpha-Chl...	5.234	6.448	99634772	118.0E6	26.436	25.255
14)	A Endosulfan I	5.414	6.544	102.3E6	110.8E6	25.877	25.322
15)	B 4,4'-DDE	5.351	6.715	92431080	110.5E6	25.198	25.752
16)	MA Dieldrin	5.741	6.980	101.9E6	120.7E6	25.829	25.675
17)	MA Endrin	6.067	7.486	96400581	113.2E6	25.767	25.391
18)	A 4,4'-DDD	6.202	7.670	65842444	94581812	25.337	25.898
19)	B Endosulfa...	6.393	7.837	91608953	107.5E6	25.253	24.968
20)	MA 4,4'-DDT	6.620	8.204	71903851	89453084	25.859	26.441
21)	B Endrin Al...	7.026	8.412	80809889	90993624	26.557	26.077
22)	B Endosulfa...	7.716	8.881	77207472	96040678	24.377	24.737
23)	A Methoxychlor	7.419	9.451	42734381	52803040	24.140	25.111
24)	Mirex	7.561	9.776	66056679	74207448	20.135	20.354
25)	B Endrin Ke...	8.156	9.846	98930252	113.0E6	26.099	25.573
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

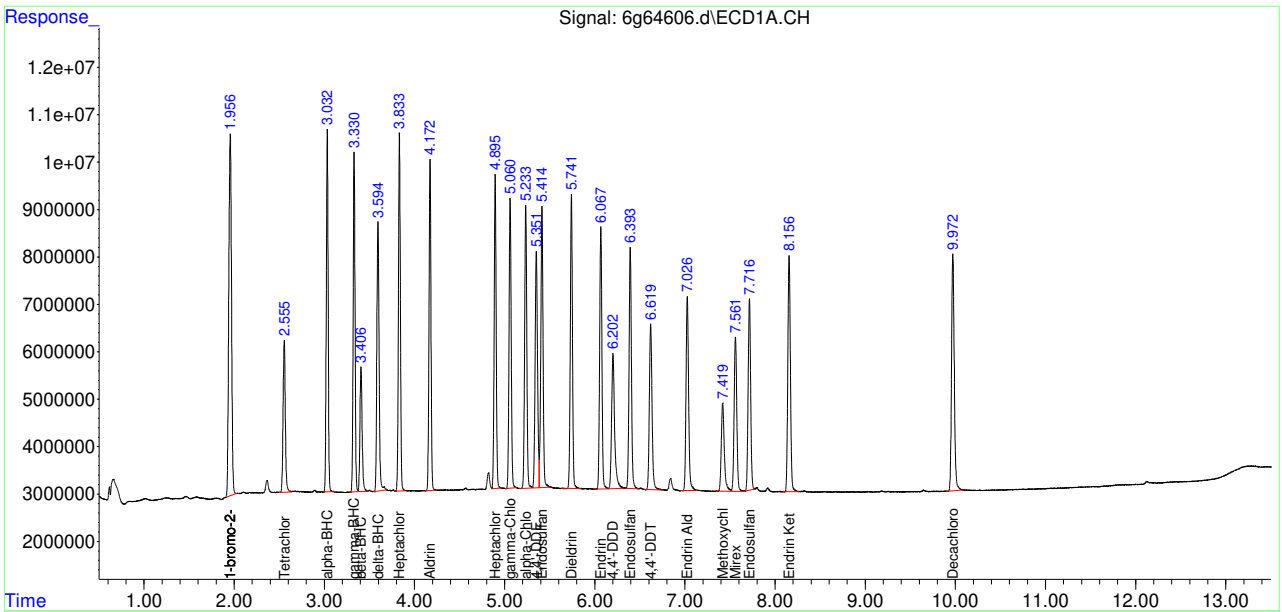
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

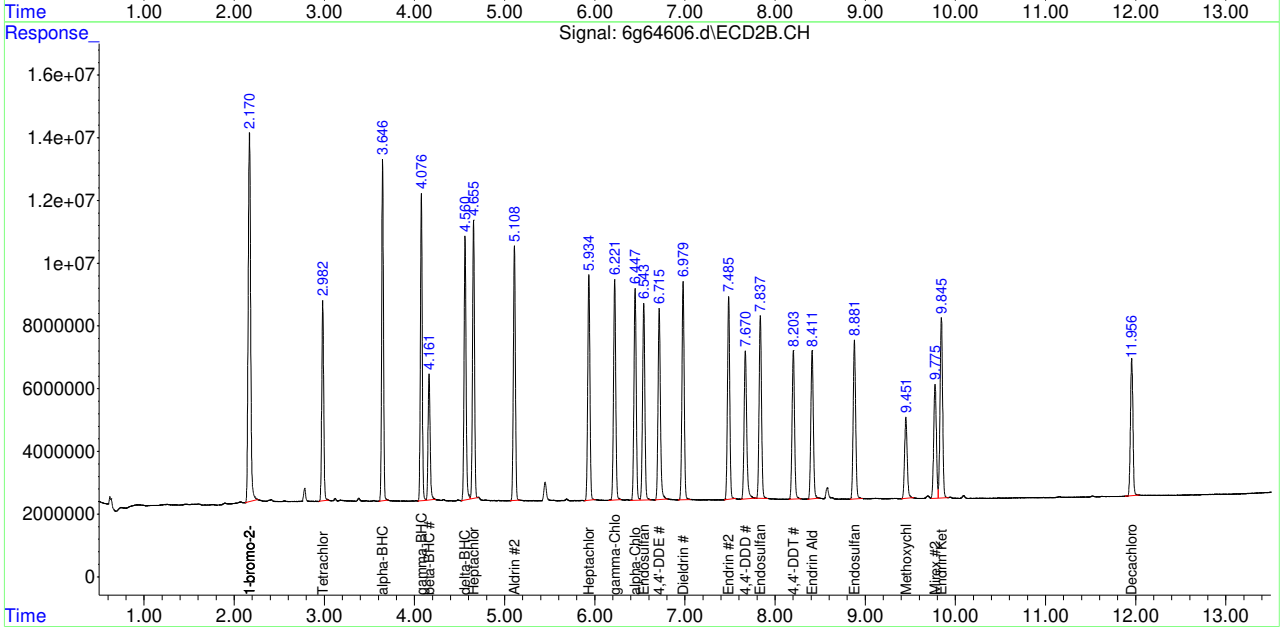
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64606.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:23:52
Operator : mailisih
Sample : icv1999-25
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 13 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:52:46 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/03/19 14:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64607.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:42:09
Operator : mailisih
Sample : icv1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:51:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.956	2.169	171.7E6	236.4E6	50.000	50.000
27)	I 1-bromo-2...	1.956	2.169	171.7E6	236.4E6	50.000	50.000
33)	I 1-bromo-2...	1.956	2.169	171.7E6	236.4E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.554	2.981	140.0E6	240.4E6	53.943	51.658
	Spiked Amount 40.000	Range 30 - 150		Recovery = 134.86%		129.15%	
26)	SA Decachlor...	9.974	11.956	267.4E6	200.8E6	53.224	49.036
	Spiked Amount 40.000			Recovery = 133.06%		122.59%	
	Target Compounds						
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
34)	Chlordane...	3.832	4.655	123.8E6	153.8E6	478.040	487.745
35)	Chlordane...	4.317	5.303	79409118	91573979	497.315	512.516
36)	Chlordane...	5.062	6.220	281.2E6	289.5E6	484.634	496.524
37)	Chlordane...	5.227	6.447	456.1E6	490.4E6	494.574	502.455m
38)	Chlordane...	6.299	7.916	61455196	80470329	520.009	507.841
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

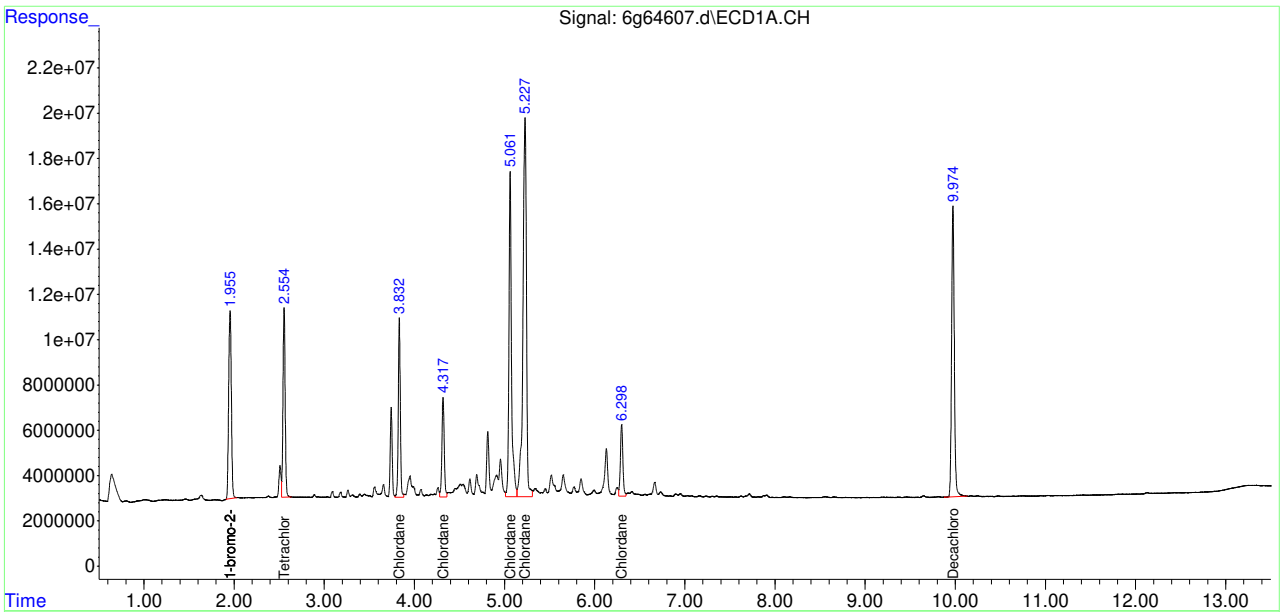
11.6.12 11

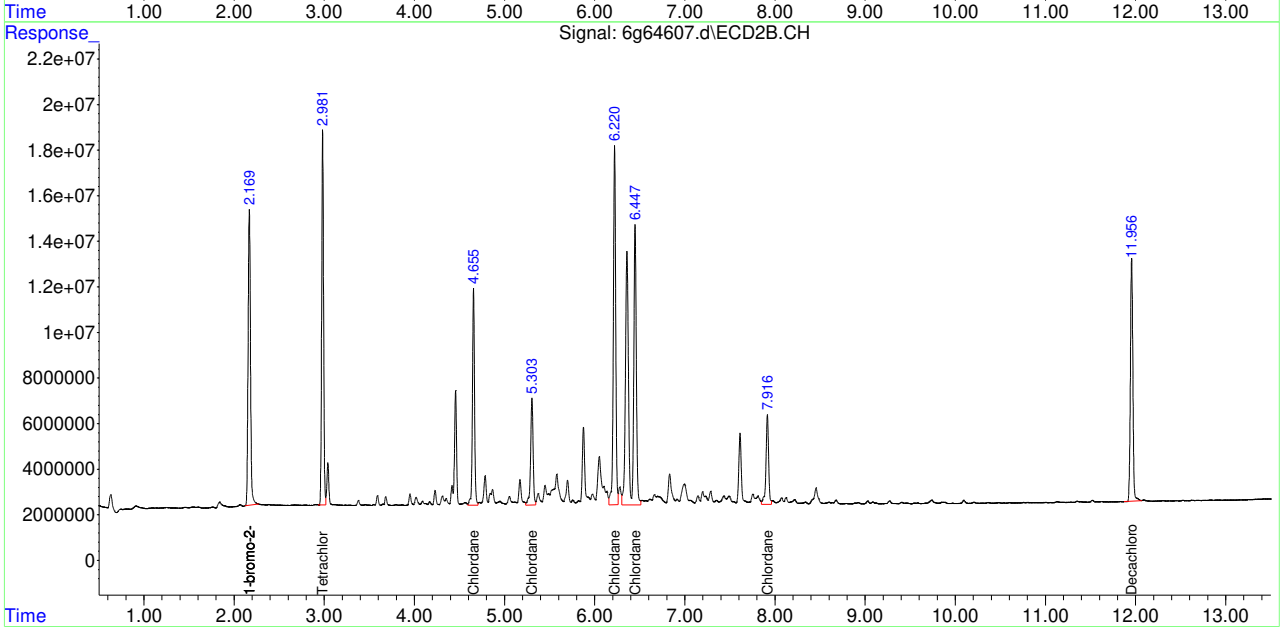
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64607.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:42:09
Operator : mailisih
Sample : icv1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:51:34 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integration Approval Summary

Sample Number:	G6G1999-ICV1999	**Method:**	SW846 8081B
Lab FileID:	6G64607.D	**Analyst approved:**	05/02/19 08:59 Mailisi Heshuote
Injection Time:	05/01/19 17:42	**Supervisor approved:**	05/03/19 14:18 Gwendolyn Burns

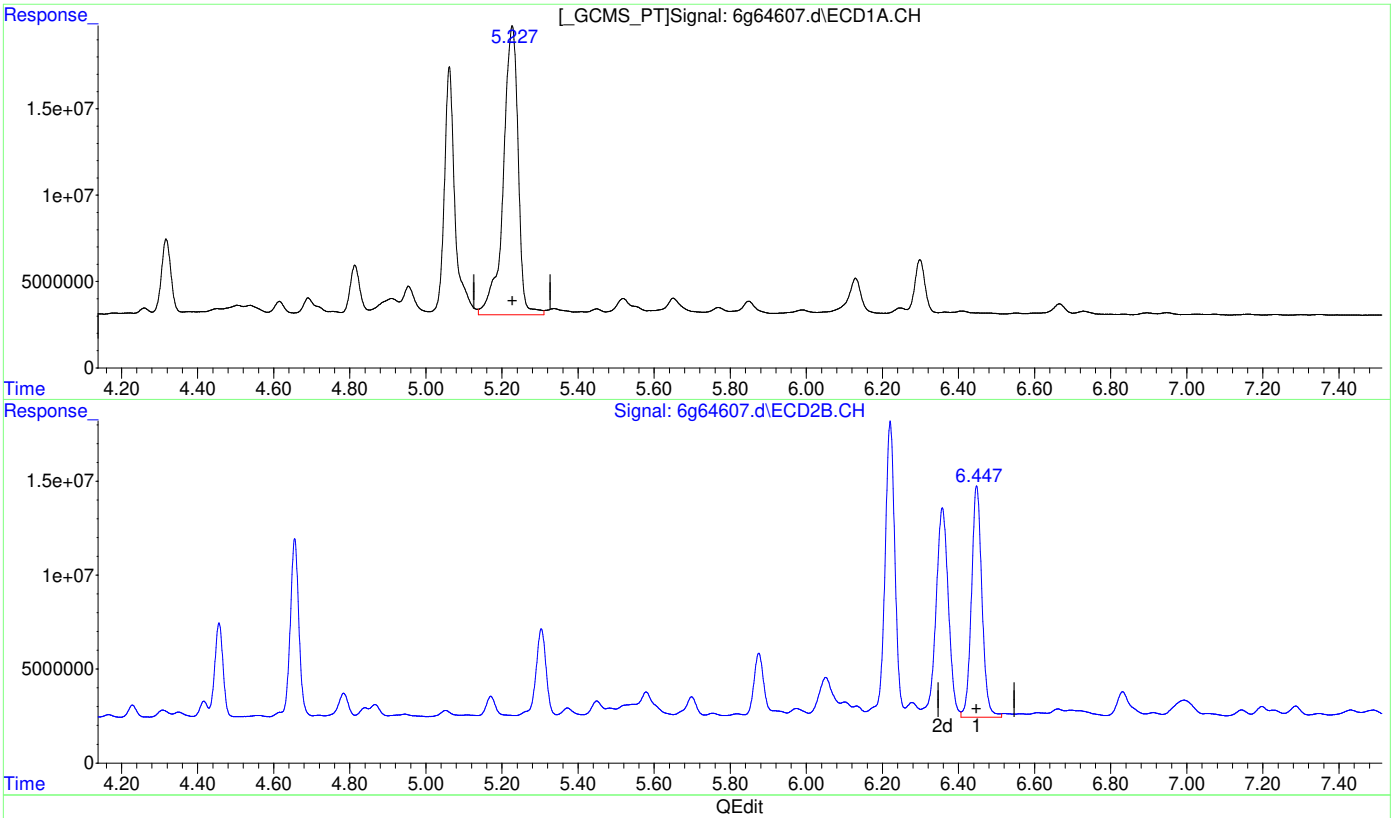
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	6.45	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64607.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:42:09
Operator : mailisih
Sample : icv1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:51:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(37) Chlordane {D}

5.227min 494.574 PPB

response 456056629

(37) Chlordane {D} #2

6.448min 241.046 PPB

response 235267465

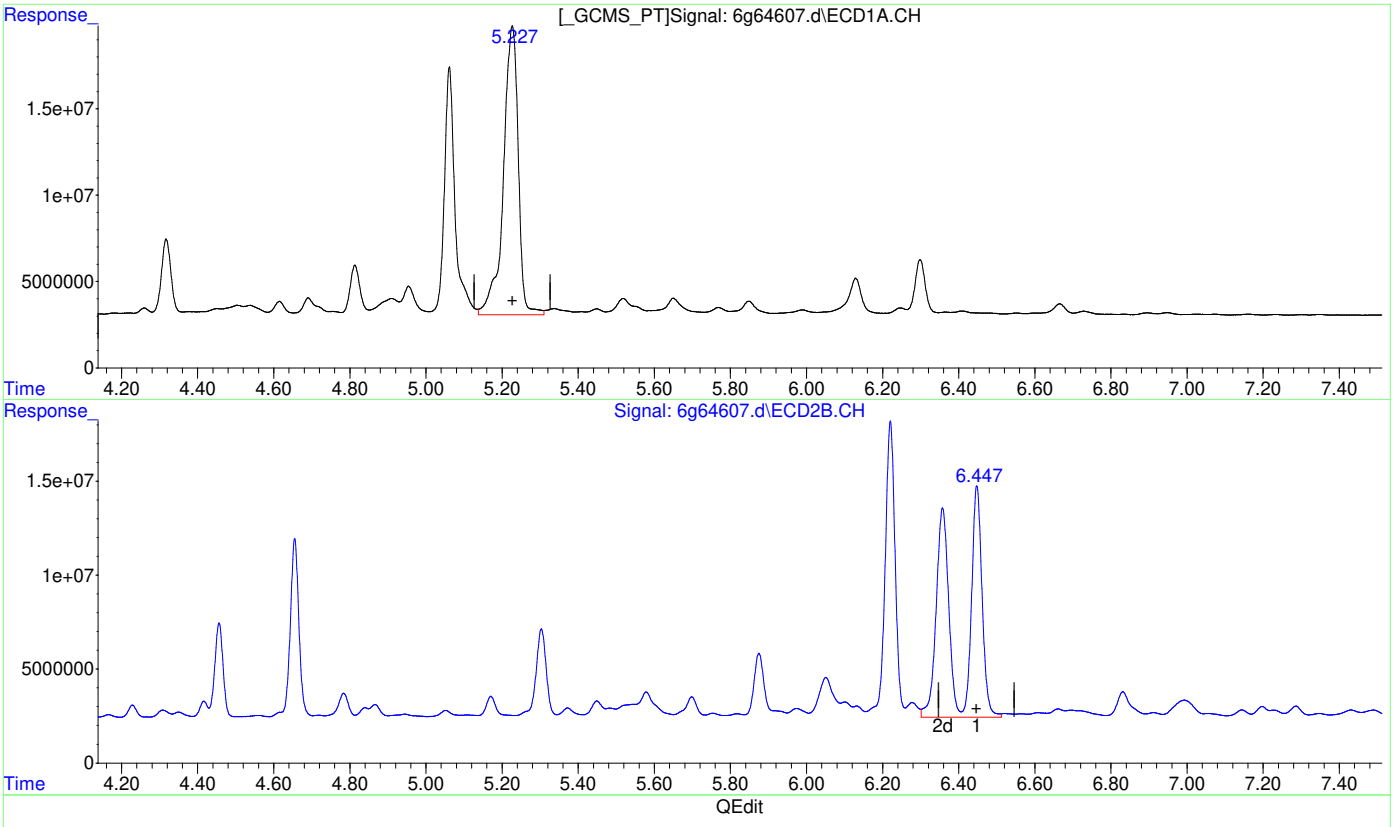
(+) = Expected Retention Time
6PST1999.M Thu May 02 08:51:19 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64607.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 17:42:09
Operator : mailisih
Sample : icv1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 14 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:51:04 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(37) Chlordane {D}

5.227min 494.574 PPB

response 456056629

(37) Chlordane {D} #2

6.447min 502.455 PPB m

response 490409548

(+) = Expected Retention Time
6PST1999.M Thu May 02 08:51:25 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64608.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 18:00:25
Operator : mailisih
Sample : icv1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:50:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.956	2.170	166.9E6	233.4E6	50.000	50.000
27)	I 1-bromo-2...	1.956	2.170	166.9E6	233.4E6	50.000	50.000
33)	I 1-bromo-2...	1.956	2.170	166.9E6	233.4E6	50.000	50.000
	System Monitoring Compounds						
2)	SAB Tetrachlo...	2.555	2.982	136.7E6	239.2E6	54.163	52.064
	Spiked Amount 40.000	Range 30 - 150		Recovery =		135.41%	130.16%
26)	SA Decachlor...	9.974	11.956	263.4E6	196.6E6	53.923	48.638
	Spiked Amount 40.000			Recovery =		134.81%	121.59%
	Target Compounds						
28)	L8 Toxaphene{A}	5.749	6.946	34369658	57102488	493.033	519.180
29)	L8 Toxaphene{B}	6.380	7.807	81564258	65815459	496.136	488.623
30)	L8 Toxaphene{C}	6.560	7.970	66165227	115.7E6	510.590	506.155
31)	L8 Toxaphene{D}	6.903	8.410	52109964	72176702	526.102	510.635
32)	L8 Toxaphene{E}	7.558	9.315	54329114	63021667	493.479	513.226
	Sum Toxaphene			288.5E6	373.8E6	2519.340	2537.821
Average Toxaphene						503.868	507.564

SemiQuant Compounds - Not Calibrated on this Instrument

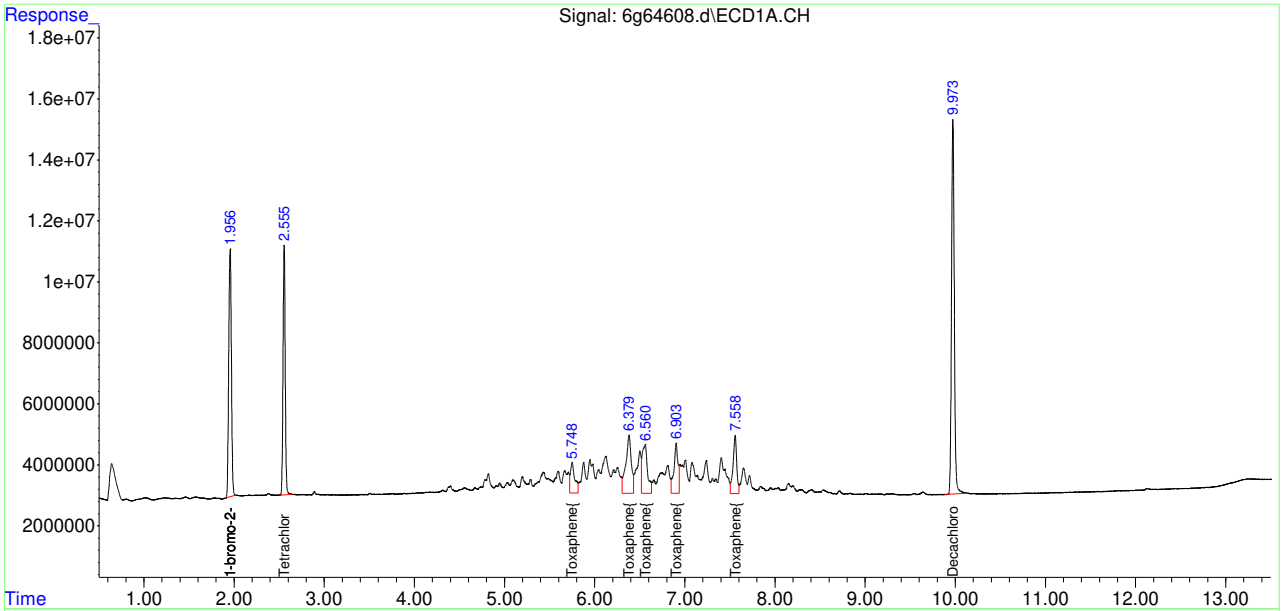
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

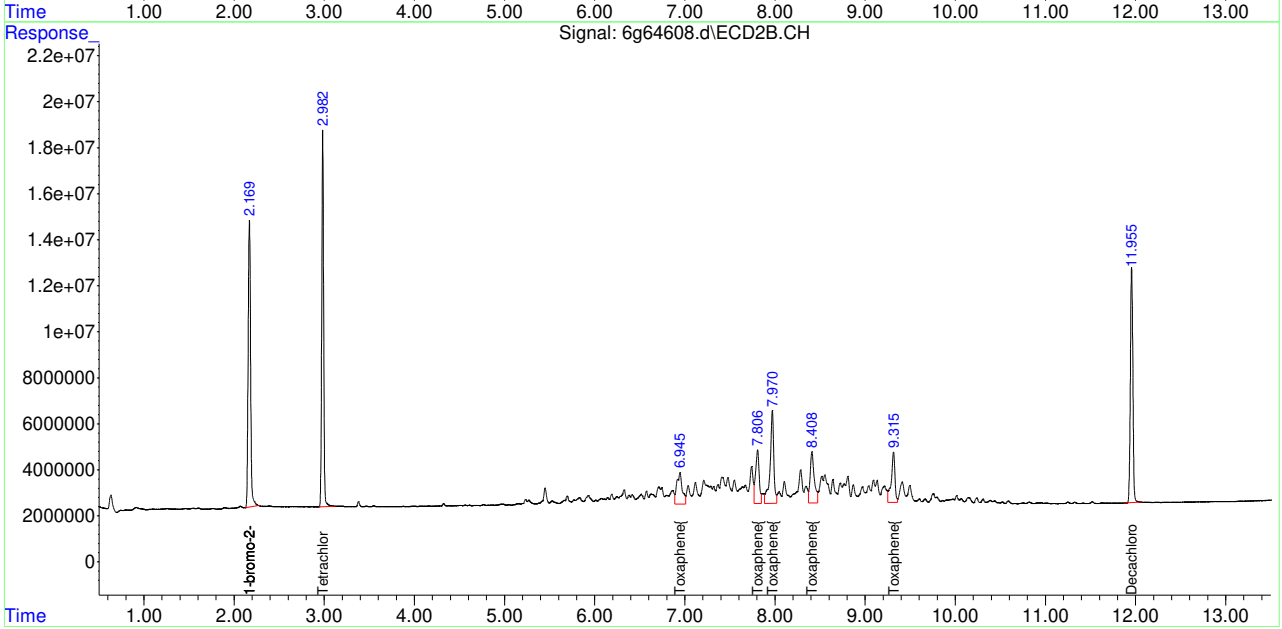
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64608.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 18:00:25
Operator : mailisih
Sample : icv1999-500
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 15 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:50:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 18:18:41
Operator : mailisih
Sample : icv1999-50
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:53:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.955	2.170	165.2E6	229.4E6	50.000	50.000
27)	I 1-bromo-2...	1.955	2.170	165.2E6	229.4E6	50.000	50.000
33)	I 1-bromo-2...	1.955	2.170	165.2E6	229.4E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
3)	hexachlor...	2.889	3.491	321.0E6	245.6E6	54.456	51.115
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

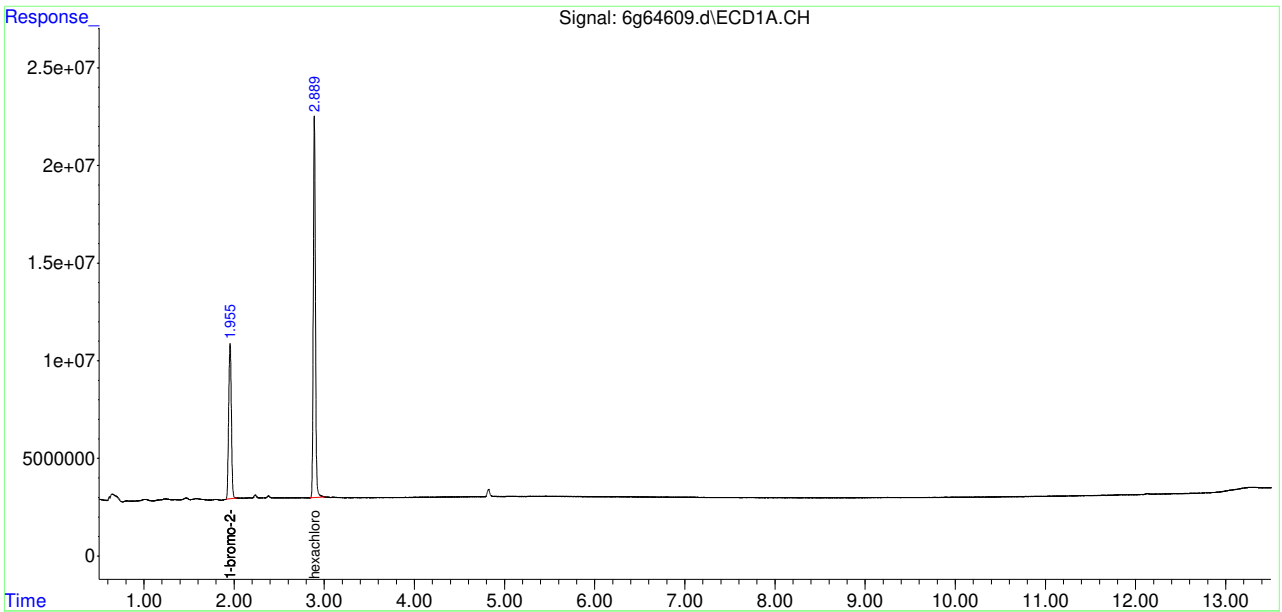
11.6.14 11

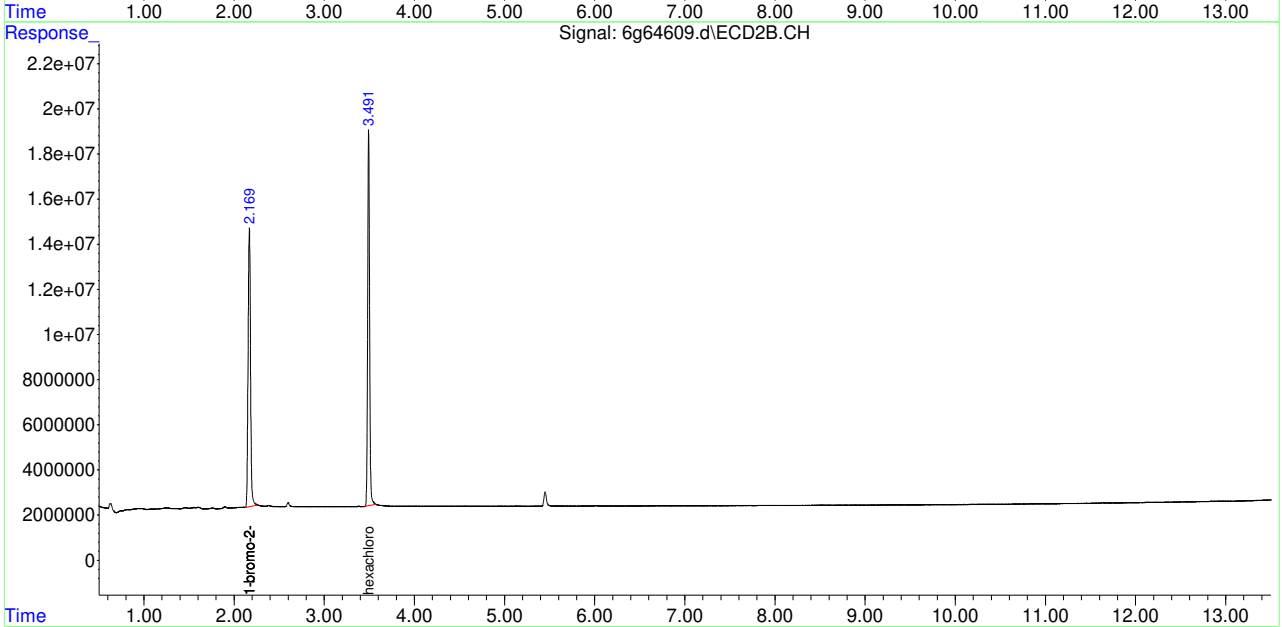
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 18:18:41
Operator : mailisih
Sample : icv1999-50
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 16 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:53:21 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64610.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 18:37:02
Operator : mailisih
Sample : icv1999-50
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:53:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	Internal Standards						
1)	I 1-bromo-2...	1.956	2.169	168.0E6	233.0E6	50.000	50.000
27)	I 1-bromo-2...	1.956	2.169	168.0E6	233.0E6	50.000	50.000
33)	I 1-bromo-2...	1.956	2.169	168.0E6	233.0E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
10)	alachlor	4.319	4.918	26846468	38633472	53.256	51.631
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000
	SemiQuant Compounds - Not Calibrated on this Instrument						

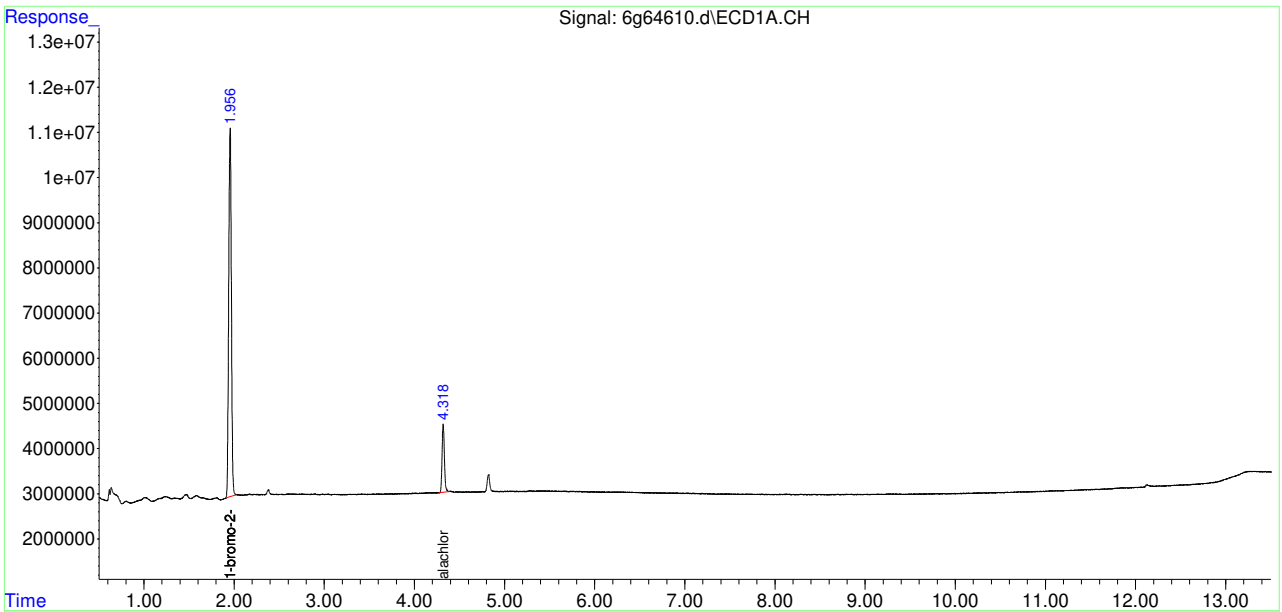
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

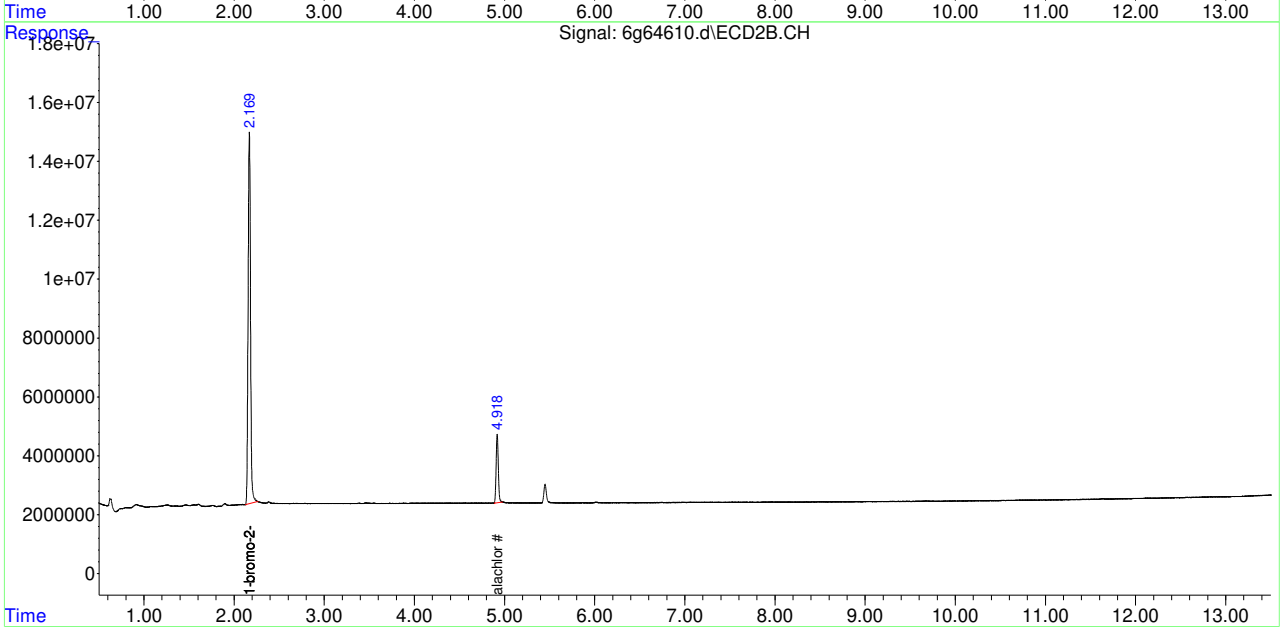
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1999\
Data File : 6g64610.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 01-May-19, 18:37:02
Operator : mailisih
Sample : icv1999-50
Misc : op19990,g6g1999,16.4,,,10,1
ALS Vial : 17 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 02 08:53:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Thu May 02 08:49:25 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integrations APPROVED
(compounds with "m" flag)
Gwendolyn Burns
05/06/19 07:45

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64642.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:53:11
Operator : mailisih
Sample : cc1999-50
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 20:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	Internal Standards							
1)	I 1-bromo-2...	1.954	2.168	111.1E6	209.0E6	50.000	50.000	
27)	I 1-bromo-2...	1.954	2.168	111.1E6	209.0E6	50.000	50.000	
33)	I 1-bromo-2...	1.954	2.168	111.1E6	209.0E6	50.000	50.000	
	System Monitoring Compounds							
2)	SAB Tetrachlo...	2.555	2.981	103.2E6	210.0E6	61.477	51.042	
	Spiked Amount 40.000	Range 30 - 150		Recovery =	153.69%#	127.61%		
26)	SA Decachlor...	9.972	11.954	153.9E6	168.2E6	47.360m	46.461	
	Spiked Amount 40.000			Recovery =	118.40%	116.15%		
	Target Compounds							
3)	hexachlor...	2.890	3.490	222.7E6	216.8E6	56.163	49.514	
4)	A alpha-BHC	3.033	3.644	178.0E6	293.1E6	60.785	53.536	
5)	MA gamma-BHC	3.330	4.074	157.9E6	267.4E6	56.724	52.626	
6)	MA Heptachlor	3.833	4.653	144.7E6	261.7E6	47.020	50.447	
7)	B beta-BHC	3.407	4.160	60778924	119.7E6	49.743	50.868	
8)	B delta-BHC	3.594	4.558	140.1E6	252.3E6	54.466	53.861	
9)	MB Aldrin	4.173	5.107	178.1E6	244.1E6	62.818	51.646	
10)	alachlor	4.317	4.915	14154382	36217655	42.473	53.965	#
11)	B Heptachlo...	4.896	5.932	143.4E6	230.9E6	52.468	51.004	
12)	B gamma-Chl...	5.062	6.219	154.6E6	229.1E6	57.810	51.368	
13)	B alpha-Chl...	5.235	6.445	157.0E6	224.0E6	60.021	50.716	
14)	A Endosulfan I	5.415	6.541	146.3E6	211.4E6	53.340	51.109	
15)	B 4,4'-DDE	5.349	6.711	137.9E6	217.1E6	54.167	53.507	
16)	MA Dieldrin	5.741	6.979	145.4E6	230.1E6	53.095	51.802	
17)	MA Endrin	6.068	7.484	127.3E6	217.4E6	49.007	51.584	
18)	A 4,4'-DDD	6.195	7.666	90893918	179.4E6	50.394	51.973	
19)	B Endosulfa...	6.392	7.835	128.3E6	204.1E6	50.952	50.175	
20)	MA 4,4'-DDT	6.617	8.200	99627974	176.6E6	51.621	55.236	
21)	B Endrin Al...	7.026	8.409	100.7E6	165.0E6	47.667	50.026	
22)	B Endosulfa...	7.715	8.879	111.6E6	182.8E6	50.788	49.816	
23)	A Methoxychlor	7.408	9.446	50534795	104.0E6	41.128	52.343	#
24)	Mirex	7.560	9.774	110.0E6	164.7E6	48.325	47.815	
25)	B Endrin Ke...	8.156	9.843	122.9E6	211.1E6	46.714	50.525	
	Sum Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

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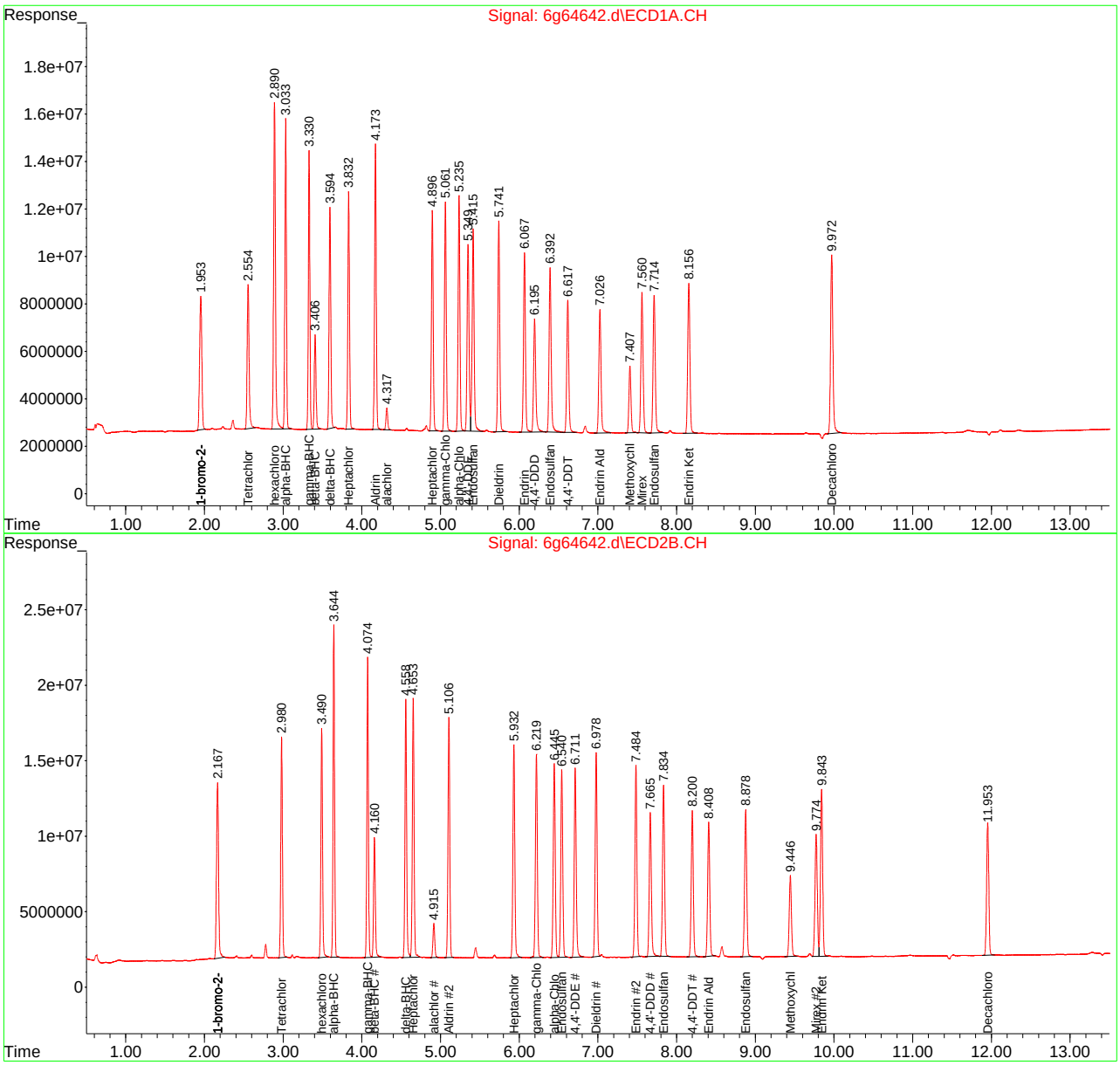
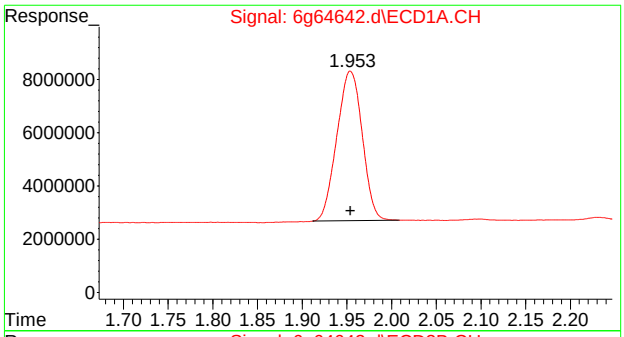
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64642.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:53:11
Operator : mailisih
Sample : cc1999-50
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 20:52:50 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

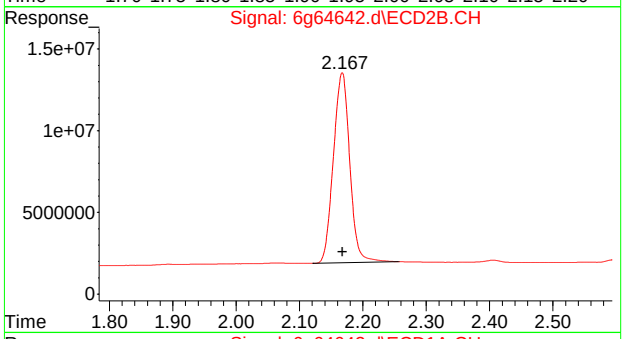
Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





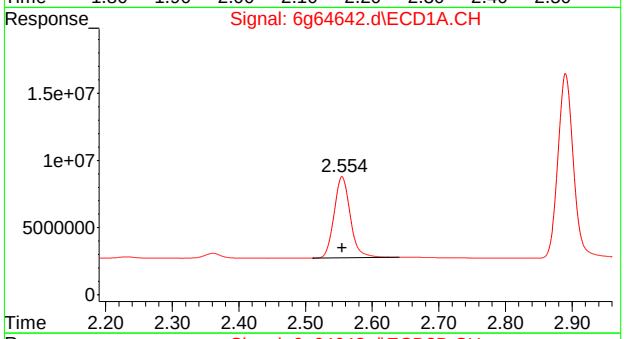
#1 1-bromo-2-nitrobenzene

R.T.: 1.954 min
Delta R.T.: 0.000 min
Response: 111078848
Conc: 50.00 PPB



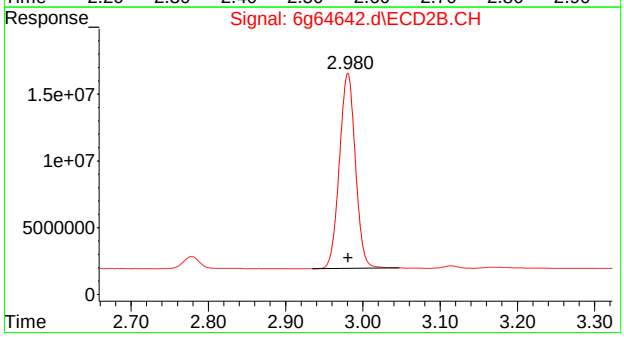
#1 1-bromo-2-nitrobenzene

R.T.: 2.168 min
Delta R.T.: 0.000 min
Response: 209003128
Conc: 50.00 PPB



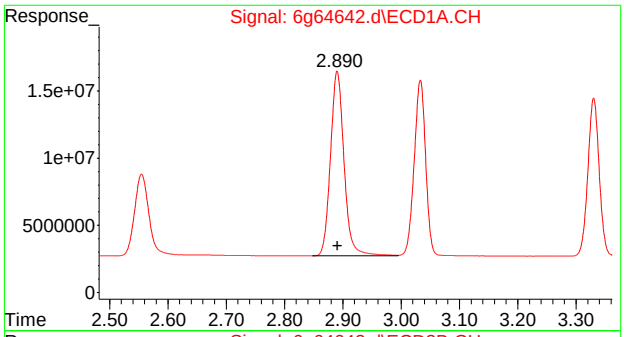
#2 Tetrachloro-m-xylene

R.T.: 2.555 min
Delta R.T.: 0.000 min
Response: 103221268
Conc: 61.48 PPB



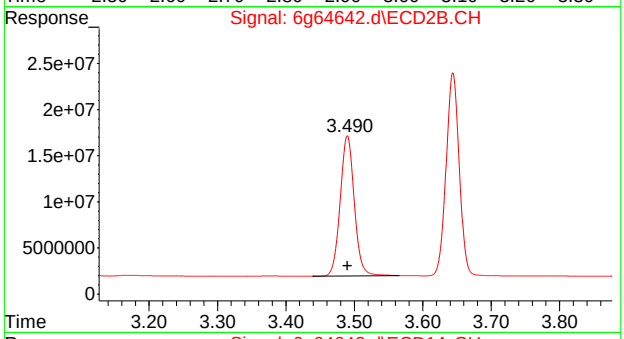
#2 Tetrachloro-m-xylene

R.T.: 2.981 min
Delta R.T.: 0.000 min
Response: 210004462
Conc: 51.04 PPB



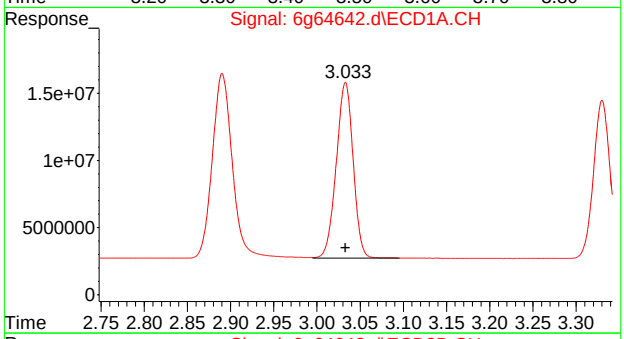
#3 hexachlorobenzene

R.T.: 2.890 min
Delta R.T.: 0.000 min
Response: 222659663
Conc: 56.16 PPB



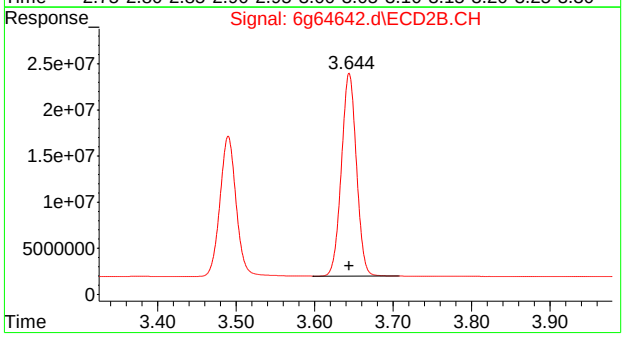
#3 hexachlorobenzene

R.T.: 3.490 min
Delta R.T.: 0.000 min
Response: 216796076
Conc: 49.51 PPB



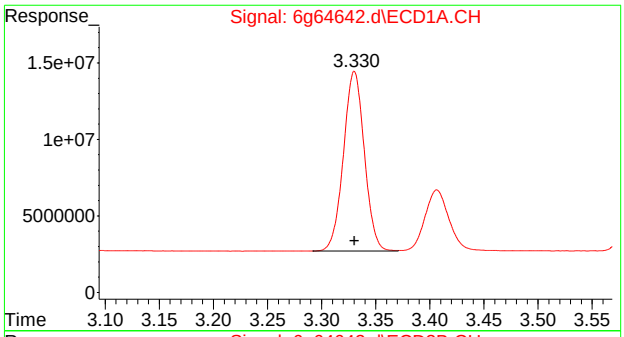
#4 alpha-BHC

R.T.: 3.033 min
Delta R.T.: 0.000 min
Response: 178019726
Conc: 60.78 PPB



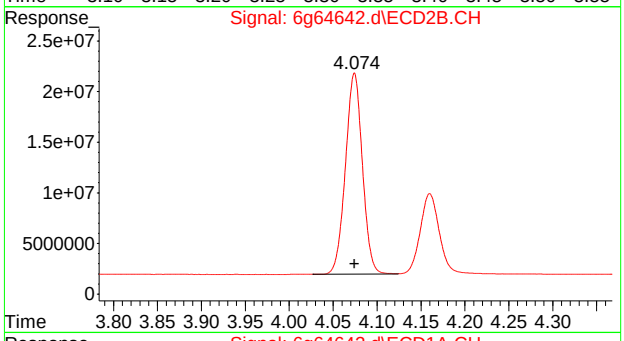
#4 alpha-BHC

R.T.: 3.644 min
Delta R.T.: 0.000 min
Response: 293052132
Conc: 53.54 PPB



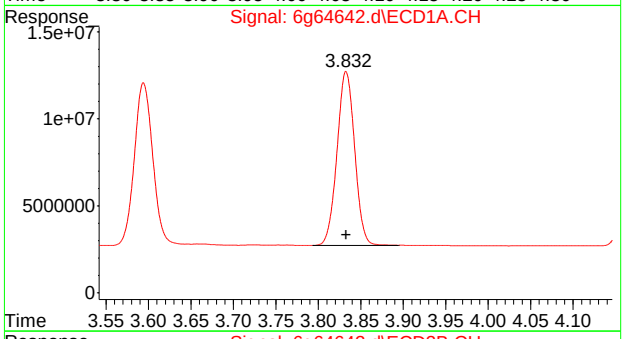
#5 gamma-BHC

R.T.: 3.330 min
Delta R.T.: 0.000 min
Response: 157883754
Conc: 56.72 PPB



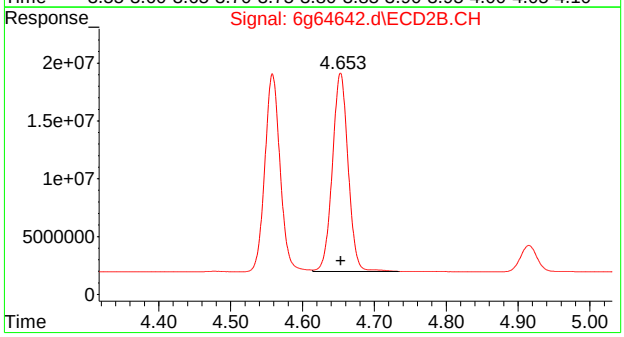
#5 gamma-BHC

R.T.: 4.074 min
Delta R.T.: 0.000 min
Response: 267439183
Conc: 52.63 PPB



#6 Heptachlor

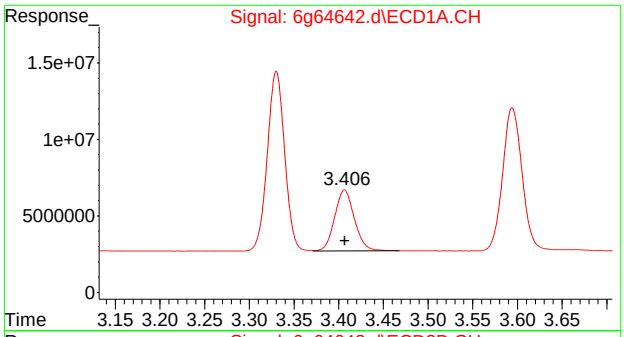
R.T.: 3.833 min
Delta R.T.: 0.000 min
Response: 144670256
Conc: 47.02 PPB



#6 Heptachlor

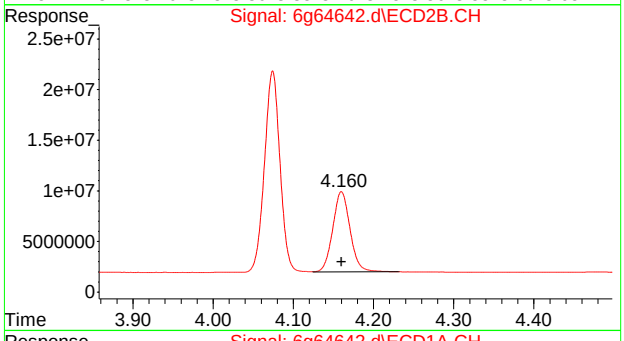
R.T.: 4.653 min
Delta R.T.: 0.000 min
Response: 261743013
Conc: 50.45 PPB

11.6.16 11



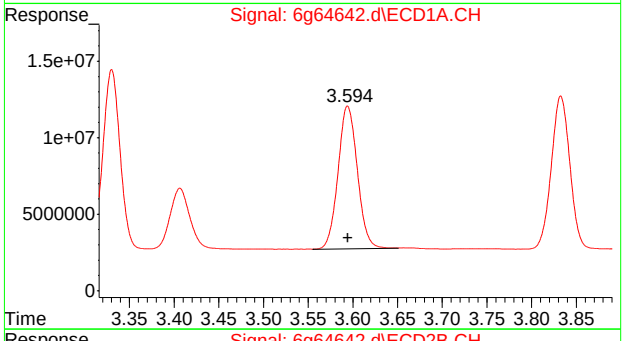
#7 beta-BHC

R.T.: 3.407 min
Delta R.T.: 0.000 min
Response: 60778924
Conc: 49.74 PPB



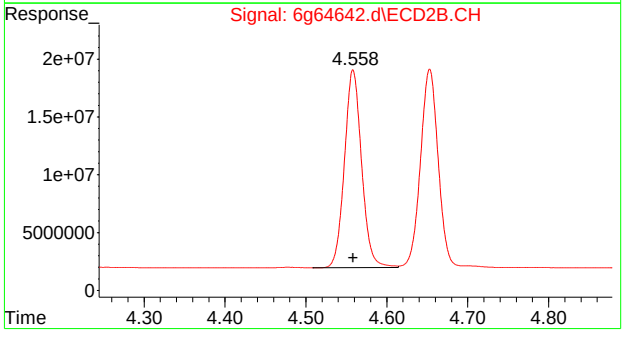
#7 beta-BHC

R.T.: 4.160 min
Delta R.T.: 0.000 min
Response: 119677423
Conc: 50.87 PPB



#8 delta-BHC

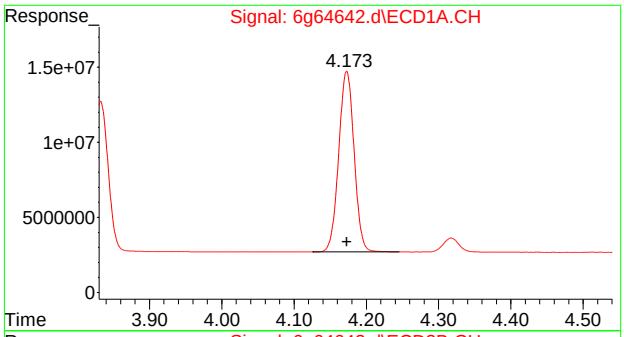
R.T.: 3.594 min
Delta R.T.: 0.000 min
Response: 140103303
Conc: 54.47 PPB



#8 delta-BHC

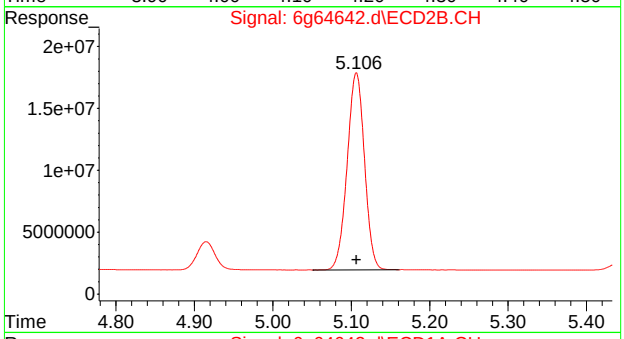
R.T.: 4.558 min
Delta R.T.: 0.000 min
Response: 252312530
Conc: 53.86 PPB

11.6.16
11



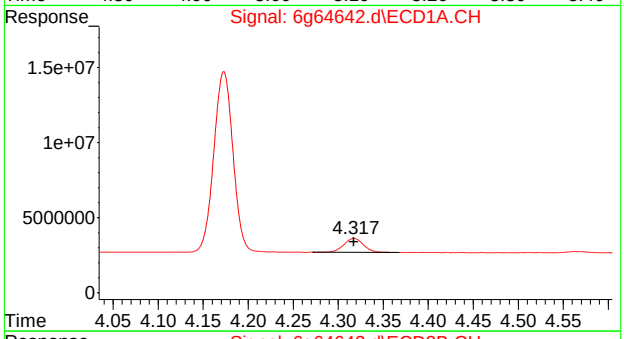
#9 Aldrin

R.T.: 4.173 min
Delta R.T.: 0.000 min
Response: 178080537
Conc: 62.82 PPB



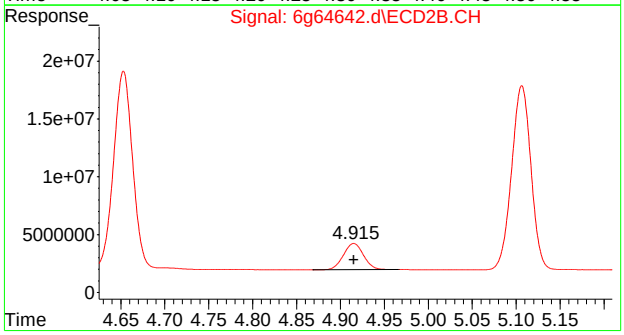
#9 Aldrin

R.T.: 5.107 min
Delta R.T.: 0.000 min
Response: 244062568
Conc: 51.65 PPB



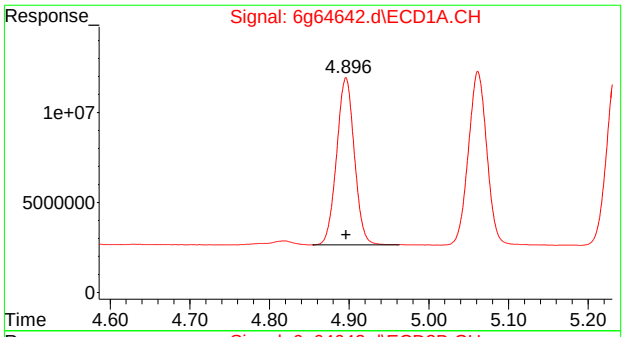
#10 alachlor

R.T.: 4.317 min
Delta R.T.: 0.000 min
Response: 14154382
Conc: 42.47 PPB



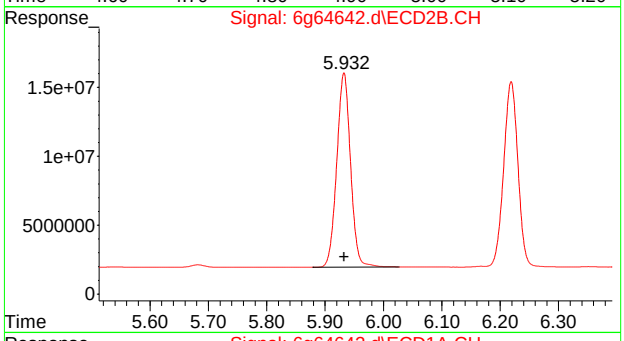
#10 alachlor

R.T.: 4.915 min
Delta R.T.: 0.000 min
Response: 36217655
Conc: 53.97 PPB



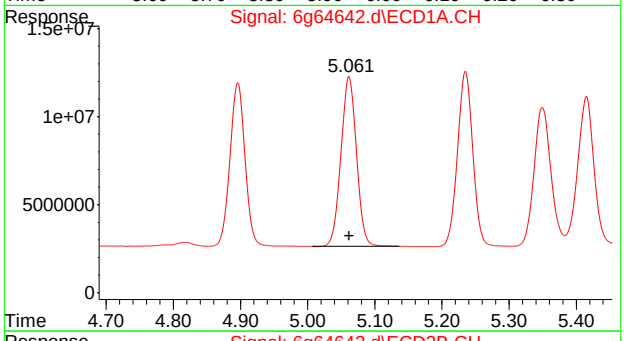
#11 Heptachlor Epoxide

R.T.: 4.896 min
Delta R.T.: 0.000 min
Response: 143394512
Conc: 52.47 PPB



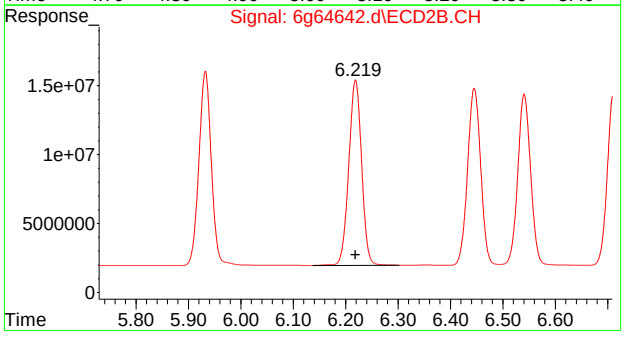
#11 Heptachlor Epoxide

R.T.: 5.932 min
Delta R.T.: 0.000 min
Response: 230918460
Conc: 51.00 PPB



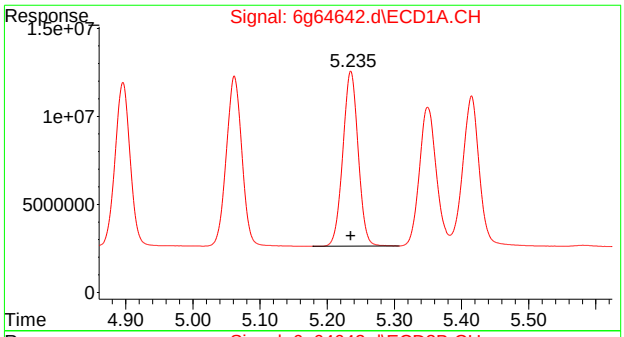
#12 gamma-Chlordane

R.T.: 5.062 min
Delta R.T.: 0.000 min
Response: 154577528
Conc: 57.81 PPB



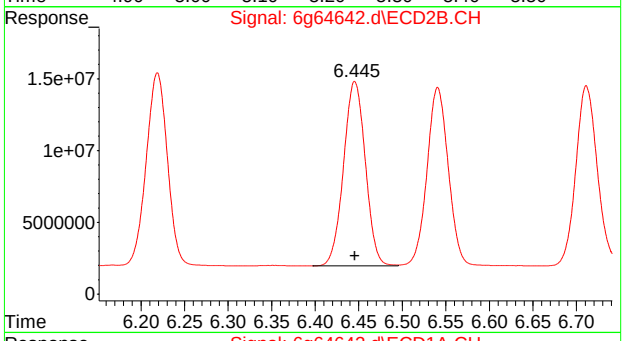
#12 gamma-Chlordane

R.T.: 6.219 min
Delta R.T.: 0.000 min
Response: 229098166
Conc: 51.37 PPB



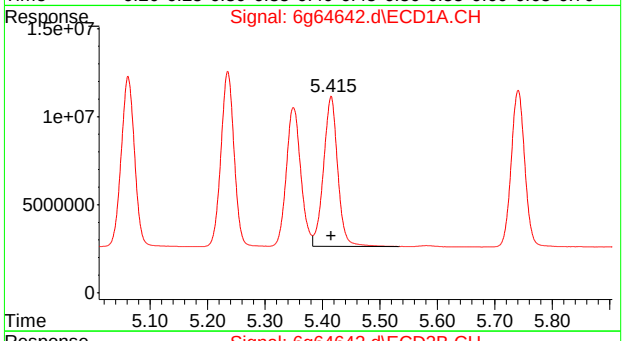
#13 alpha-Chlordane

R.T.: 5.235 min
Delta R.T.: 0.000 min
Response: 157013390
Conc: 60.02 PPB



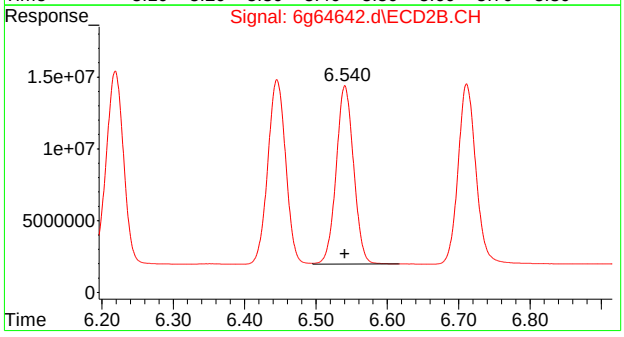
#13 alpha-Chlordane

R.T.: 6.445 min
Delta R.T.: 0.000 min
Response: 223972748
Conc: 50.72 PPB



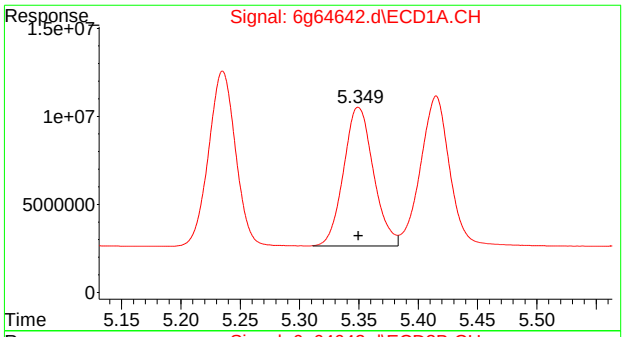
#14 Endosulfan I

R.T.: 5.415 min
Delta R.T.: 0.000 min
Response: 146338103
Conc: 53.34 PPB



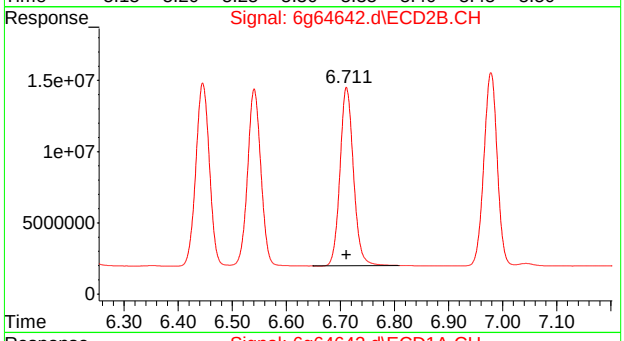
#14 Endosulfan I

R.T.: 6.541 min
Delta R.T.: 0.000 min
Response: 211396724
Conc: 51.11 PPB



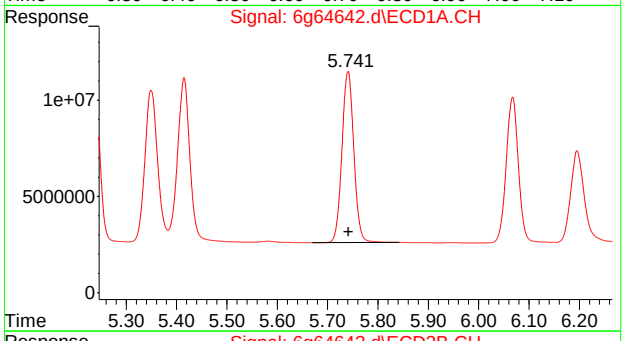
#15 4,4'-DDE

R.T.: 5.349 min
Delta R.T.: 0.000 min
Response: 137909576
Conc: 54.17 PPB



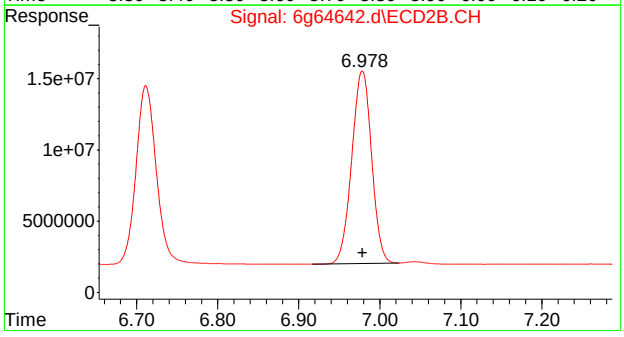
#15 4,4'-DDE

R.T.: 6.711 min
Delta R.T.: 0.000 min
Response: 217061440
Conc: 53.51 PPB



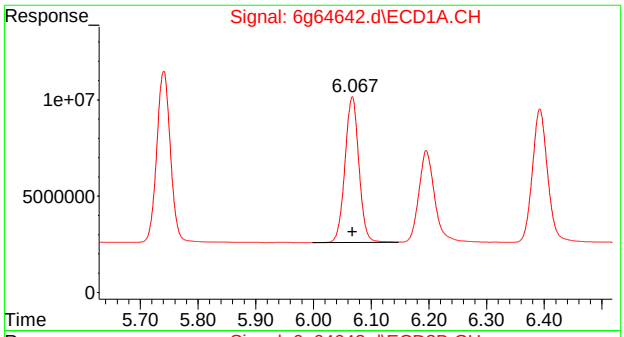
#16 Dieldrin

R.T.: 5.741 min
Delta R.T.: 0.000 min
Response: 145425229
Conc: 53.09 PPB



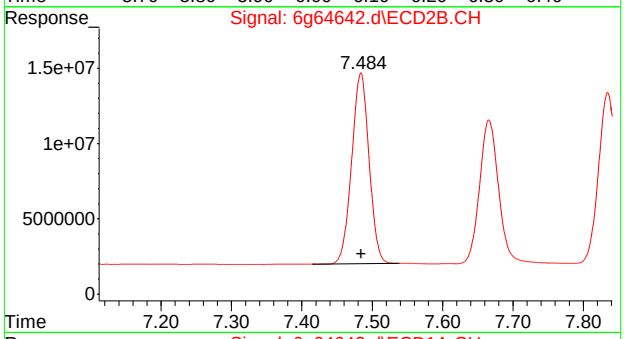
#16 Dieldrin

R.T.: 6.979 min
Delta R.T.: 0.000 min
Response: 230069163
Conc: 51.80 PPB



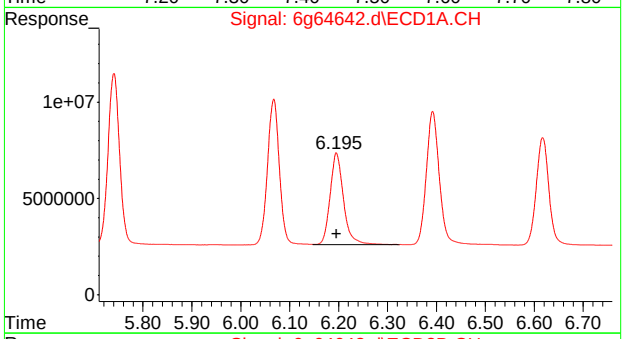
#17 Endrin

R.T.: 6.068 min
Delta R.T.: 0.000 min
Response: 127257635
Conc: 49.01 PPB



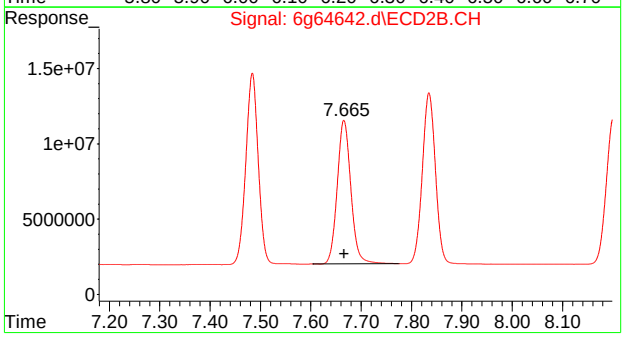
#17 Endrin

R.T.: 7.484 min
Delta R.T.: 0.000 min
Response: 217393780
Conc: 51.58 PPB



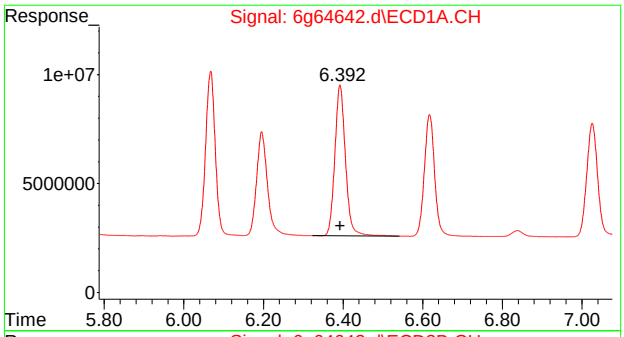
#18 4,4'-DDD

R.T.: 6.195 min
Delta R.T.: 0.000 min
Response: 90893918
Conc: 50.39 PPB



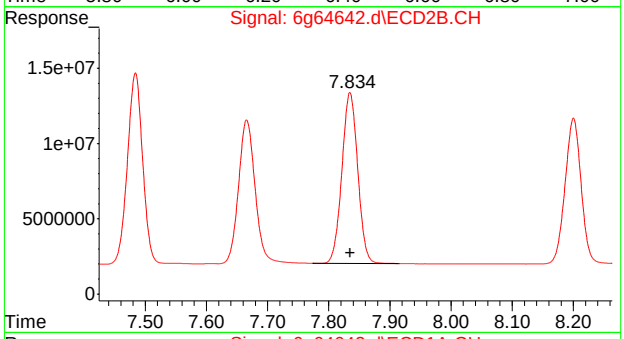
#18 4,4'-DDD

R.T.: 7.666 min
Delta R.T.: 0.000 min
Response: 179375262
Conc: 51.97 PPB



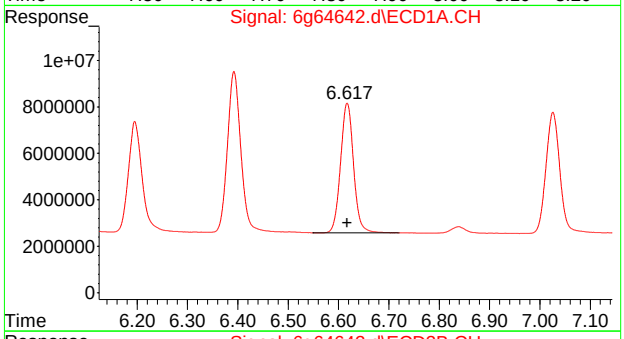
#19 Endosulfan II

R.T.: 6.392 min
Delta R.T.: 0.000 min
Response: 128292020
Conc: 50.95 PPB



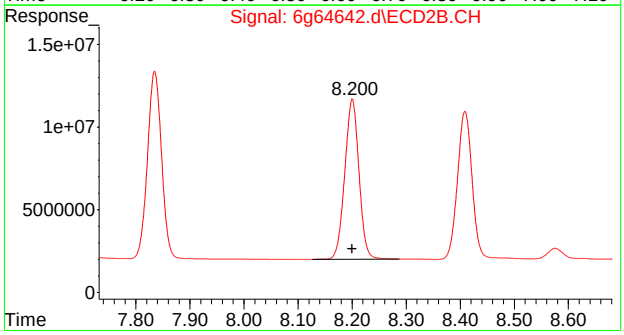
#19 Endosulfan II

R.T.: 7.835 min
Delta R.T.: 0.000 min
Response: 204067108
Conc: 50.17 PPB



#20 4,4'-DDT

R.T.: 6.617 min
Delta R.T.: 0.000 min
Response: 99627974
Conc: 51.62 PPB

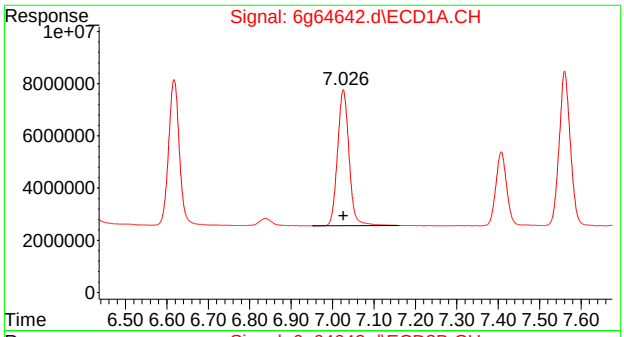


#20 4,4'-DDT

R.T.: 8.200 min
Delta R.T.: 0.000 min
Response: 176600393
Conc: 55.24 PPB

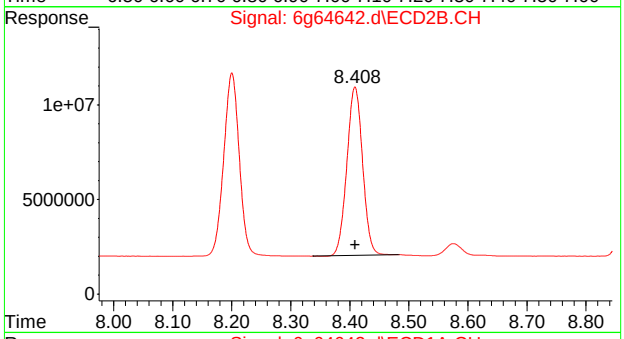
11.6.16

11



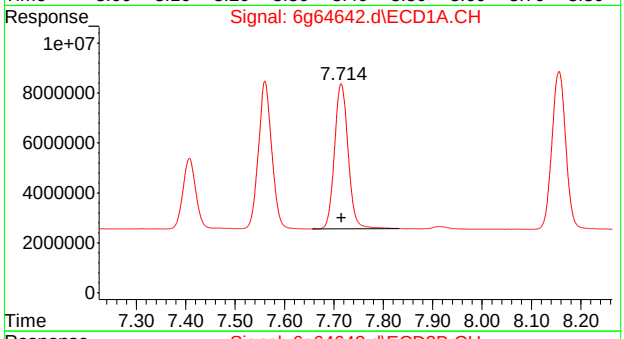
#21 Endrin Aldehyde

R.T.: 7.026 min
Delta R.T.: 0.000 min
Response: 100672867
Conc: 47.67 PPB



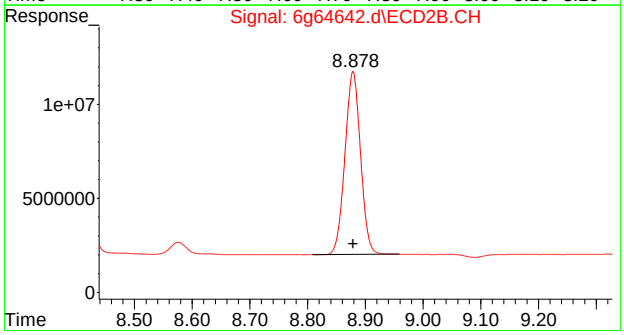
#21 Endrin Aldehyde

R.T.: 8.409 min
Delta R.T.: 0.000 min
Response: 164965628
Conc: 50.03 PPB



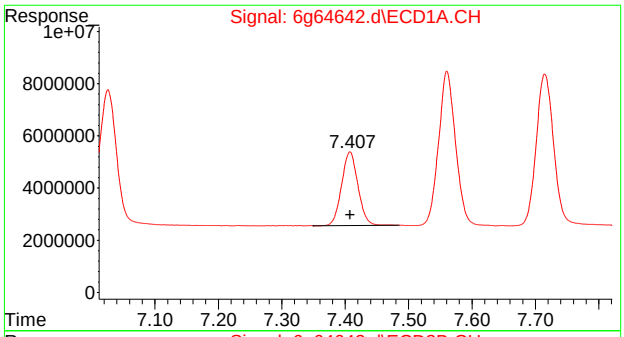
#22 Endosulfan Sulfate

R.T.: 7.715 min
Delta R.T.: 0.000 min
Response: 111649000
Conc: 50.79 PPB



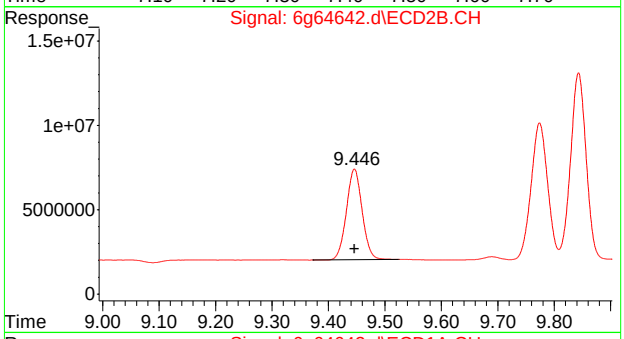
#22 Endosulfan Sulfate

R.T.: 8.879 min
Delta R.T.: 0.000 min
Response: 182774023
Conc: 49.82 PPB



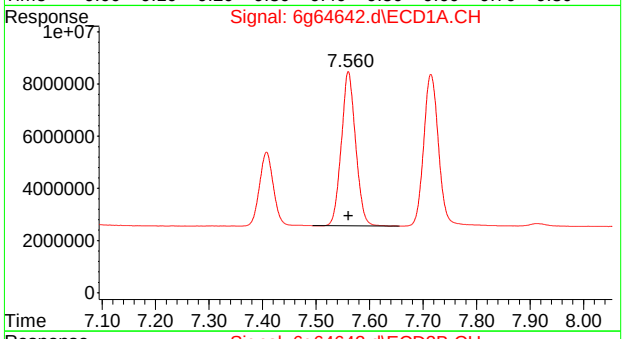
#23 Methoxychlor

R.T.: 7.408 min
Delta R.T.: 0.000 min
Response: 50534795
Conc: 41.13 PPB



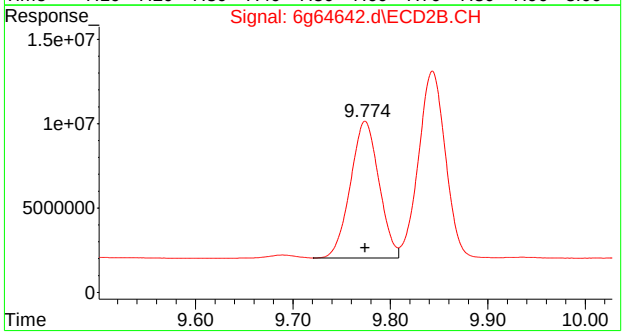
#23 Methoxychlor

R.T.: 9.446 min
Delta R.T.: 0.000 min
Response: 104015752
Conc: 52.34 PPB



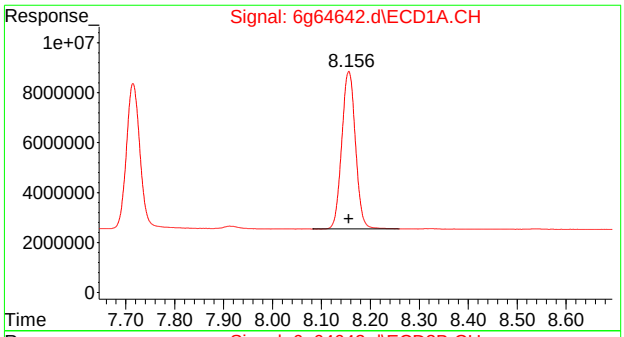
#24 Mirex

R.T.: 7.560 min
Delta R.T.: 0.000 min
Response: 110040544
Conc: 48.32 PPB



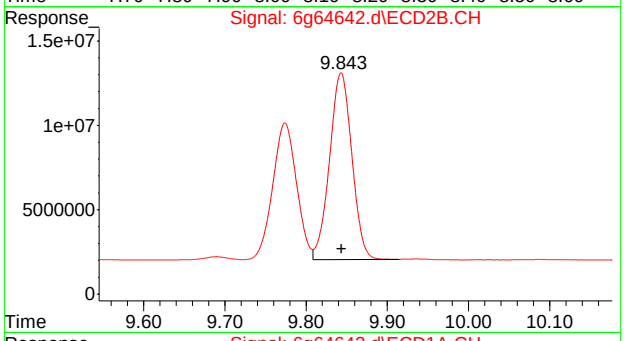
#24 Mirex

R.T.: 9.774 min
Delta R.T.: 0.000 min
Response: 164746801
Conc: 47.82 PPB



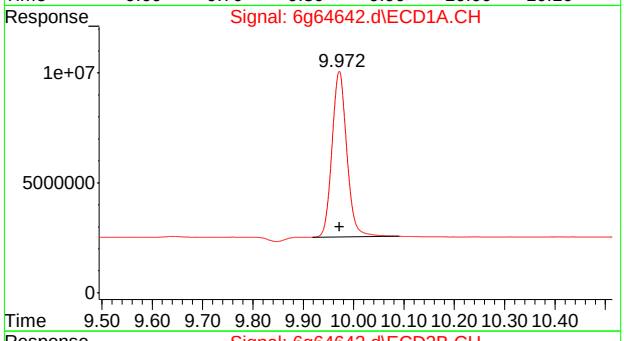
#25 Endrin Ketone

R.T.: 8.156 min
Delta R.T.: 0.000 min
Response: 122905615
Conc: 46.71 PPB



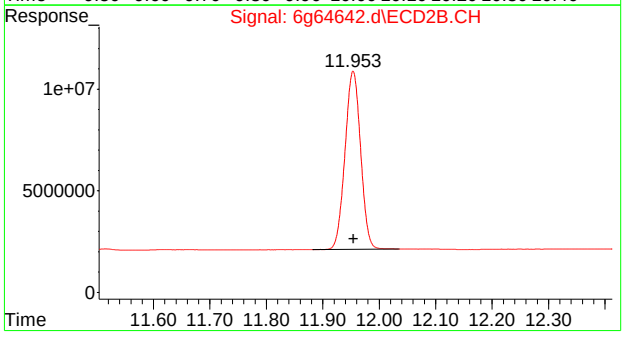
#25 Endrin Ketone

R.T.: 9.843 min
Delta R.T.: 0.000 min
Response: 211061399
Conc: 50.52 PPB



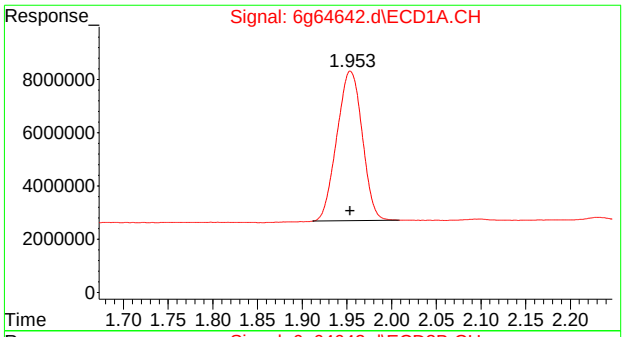
#26 Decachlorobiphenyl

R.T.: 9.972 min
Delta R.T.: 0.000 min
Response: 153912007
Conc: 47.36 PPB m



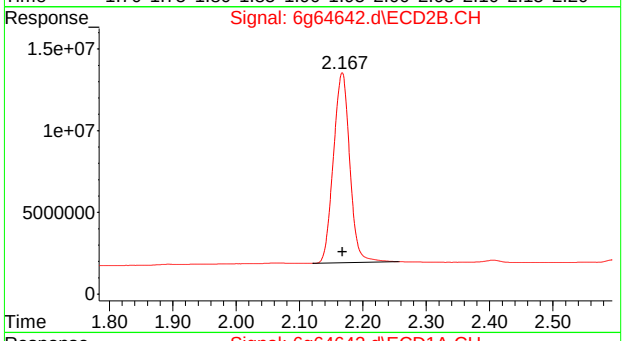
#26 Decachlorobiphenyl

R.T.: 11.954 min
Delta R.T.: 0.000 min
Response: 168205946
Conc: 46.46 PPB



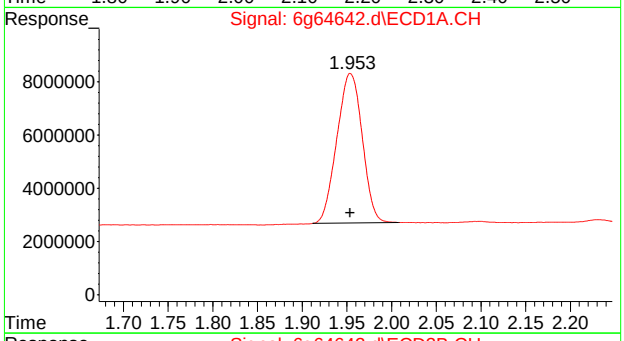
#27 1-bromo-2-nitrobenzeneA

R.T.: 1.954 min
Delta R.T.: 0.000 min
Response: 111078848
Conc: 50.00 PPB



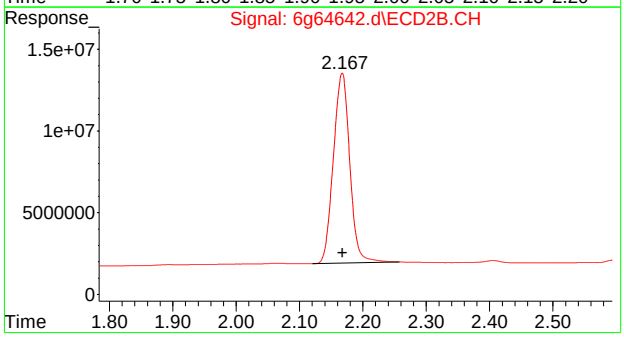
#27 1-bromo-2-nitrobenzeneA

R.T.: 2.168 min
Delta R.T.: 0.000 min
Response: 209003128
Conc: 50.00 PPB



#33 1-bromo-2-nitrobenzeneB

R.T.: 1.954 min
Delta R.T.: 0.000 min
Response: 111078848
Conc: 50.00 PPB



#33 1-bromo-2-nitrobenzeneB

R.T.: 2.168 min
Delta R.T.: 0.000 min
Response: 209003128
Conc: 50.00 PPB

Manual Integration Approval Summary

Sample Number:	G6G2001-CC1999	**Method:**	SW846 8081B
Lab FileID:	6G64642.D	**Analyst approved:**	05/06/19 00:43 Ann DeGuzman
Injection Time:	05/03/19 13:53	**Supervisor approved:**	05/06/19 07:45 Gwendolyn Burns

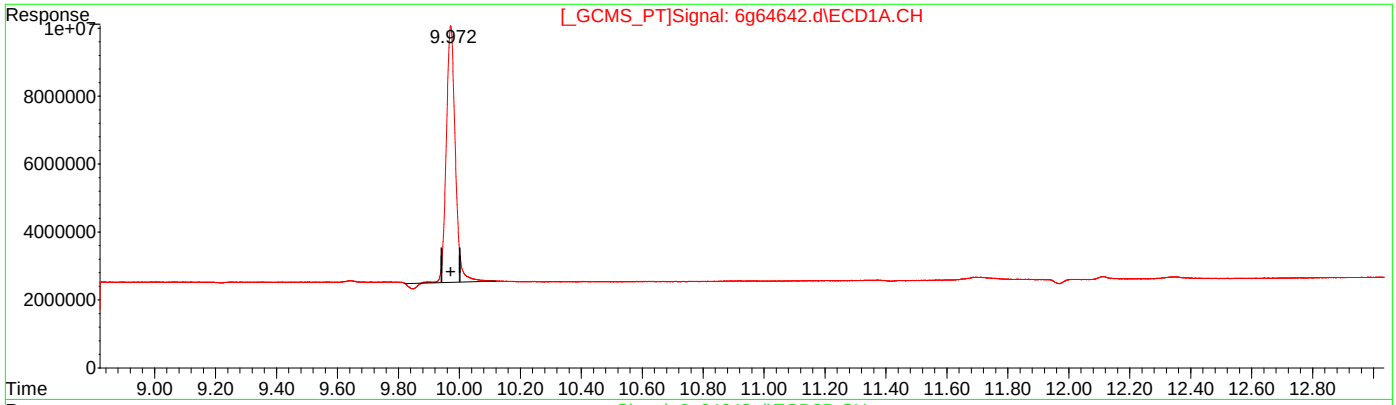
Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	1	9.97	Poor instrument integration

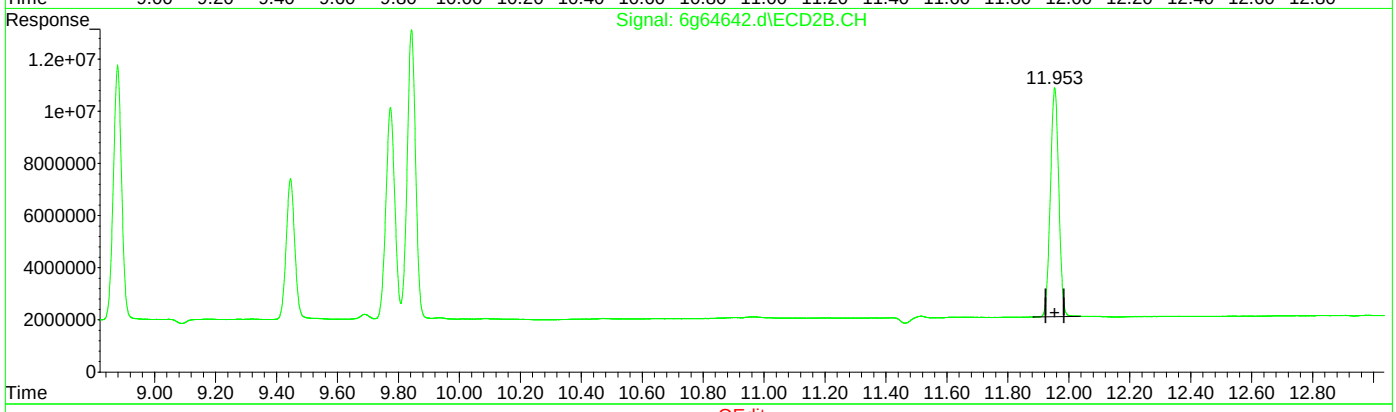
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64642.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:53:11
Operator : mailisih
Sample : cc1999-50
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 20:50:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.972min 47.459 PPB

response 154233672

(26) Decachlorobiphenyl #2 (SA)

11.954min 46.461 PPB

response 168205946

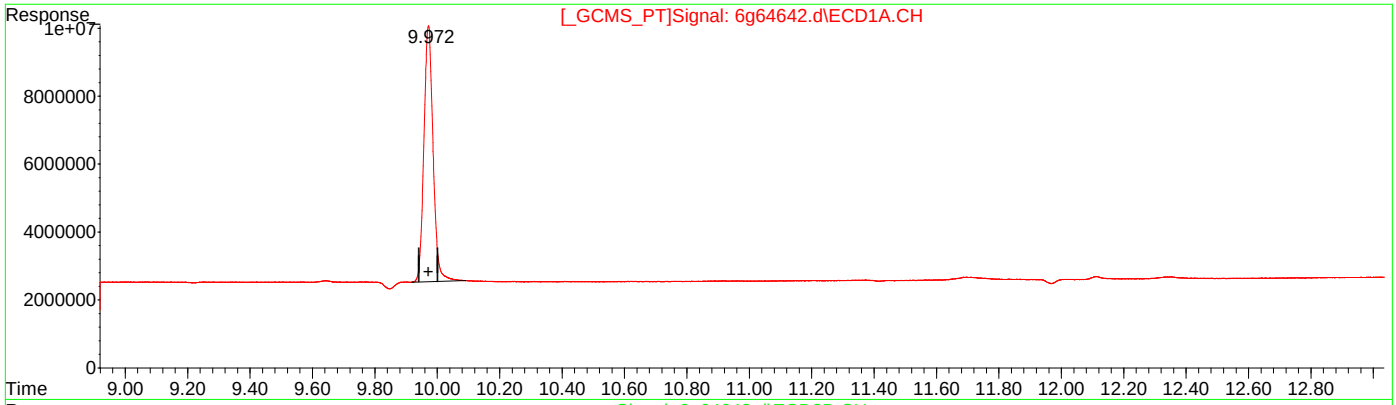
(+) = Expected Retention Time
6PST1999.M Sun May 05 20:51:47 2019

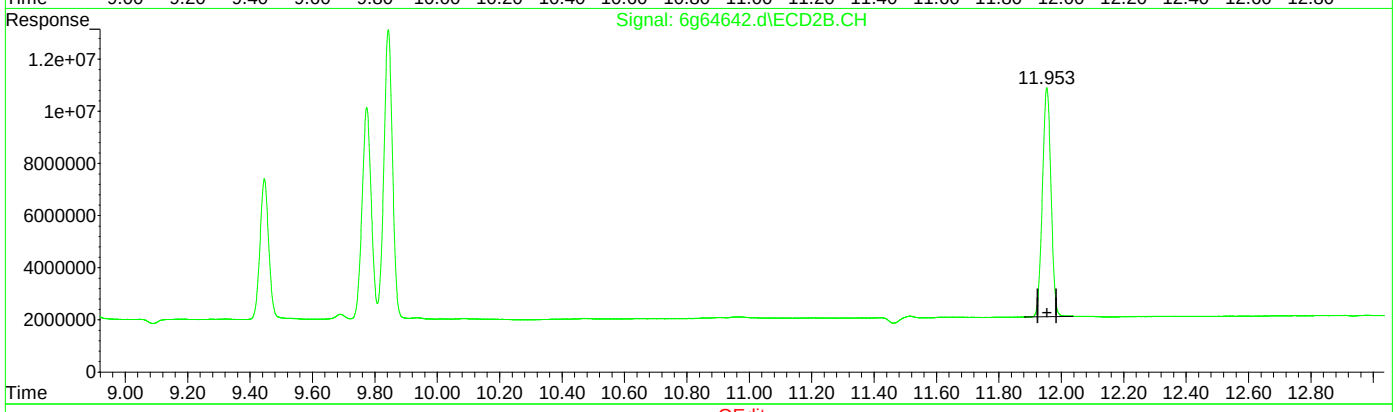
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64642.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 13:53:11
Operator : mailisih
Sample : cc1999-50
Misc : op20120,g6g2001,300,,,2,1
ALS Vial : 4 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 20:50:35 2019
Quant Method : C:\MSDCHEM\1\METHODS\6PST1999.M
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





QEdit

(26) Decachlorobiphenyl (SA)

9.972min 47.360 PPB m

response 153912007

(26) Decachlorobiphenyl #2 (SA)

11.954min 46.461 PPB

response 168205946

(+) = Expected Retention Time
6PST1999.M Sun May 05 20:52:59 2019

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64663.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 20:15:11
Operator : mailisih
Sample : cc1999-25
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 23:55:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB	
	Internal Standards							
1)	I 1-bromo-2...	1.950	2.165	158.8E6	239.1E6	50.000	50.000	
27)	I 1-bromo-2...	1.950	2.165	158.8E6	239.1E6	50.000	50.000	
33)	I 1-bromo-2...	1.950	2.165	158.8E6	239.1E6	50.000	50.000	
	System Monitoring Compounds							
2)	SAB Tetrachlo...	2.552	2.980	66562889	119.0E6	27.738	25.285	
	Spiked Amount 40.000	Range 30 - 150		Recovery =		69.34%	63.21%	
26)	SA Decachlor...	9.970	11.953	99847531	91526104	21.497	22.103	
	Spiked Amount 40.000			Recovery =		53.74%	55.26%	
	Target Compounds							
3)	hexachlor...	2.887	3.489	144.6E6	125.7E6	25.513	25.102	
4)	A alpha-BHC	3.030	3.644	113.0E6	161.6E6	27.005	25.815	
5)	MA gamma-BHC	3.328	4.074	106.4E6	149.0E6	26.756	25.639	
6)	MA Heptachlor	3.830	4.653	92996716	142.5E6	21.148	24.015	
7)	B beta-BHC	3.405	4.160	44670085	69563755	25.580	25.851	
8)	B delta-BHC	3.592	4.558	94542392	138.7E6	25.716	25.888	
9)	MB Aldrin	4.170	5.106	109.7E6	138.1E6	27.081	25.558	
10)	alachlor	4.315	4.915	10387224	21414320	21.808	27.897	#
11)	B Heptachlo...	4.893	5.932	97338932	131.8E6	24.920	25.448	
12)	B gamma-Chl...	5.058	6.219	100.5E6	130.0E6	26.286	25.481	
13)	B alpha-Chl...	5.232	6.446	100.5E6	128.6E6	26.886	25.457	
14)	A Endosulfan I	5.411	6.541	99647514	121.2E6	25.413	25.629	
15)	B 4,4'-DDE	5.346	6.713	89923138	120.3E6	24.712	25.935	
16)	MA Dieldrin	5.737	6.978	97266413	129.1E6	24.847	25.406	
17)	MA Endrin	6.064	7.483	83601437	116.6E6	22.526	24.190	
18)	A 4,4'-DDD	6.194	7.667	61786908	104.6E6	23.968	26.497	
19)	B Endosulfa...	6.390	7.835	84891584	116.7E6	23.590	25.077	
20)	MA 4,4'-DDT	6.614	8.199	58018424	91032244	21.034	24.893	
21)	B Endrin Al...	7.023	8.408	71459361	94480069	23.674	25.049	
22)	B Endosulfa...	7.711	8.879	75369692	102.3E6	23.988	24.383	
23)	A Methoxychlor	7.410	9.447	32798567	53532908	18.677	23.552	#
24)	Mirex	7.558	9.774	79396784	96233312	24.396	24.419	
25)	B Endrin Ke...	8.153	9.842	90191436	120.2E6	23.985	25.148	
	Sum Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	

SemiQuant Compounds - Not Calibrated on this Instrument

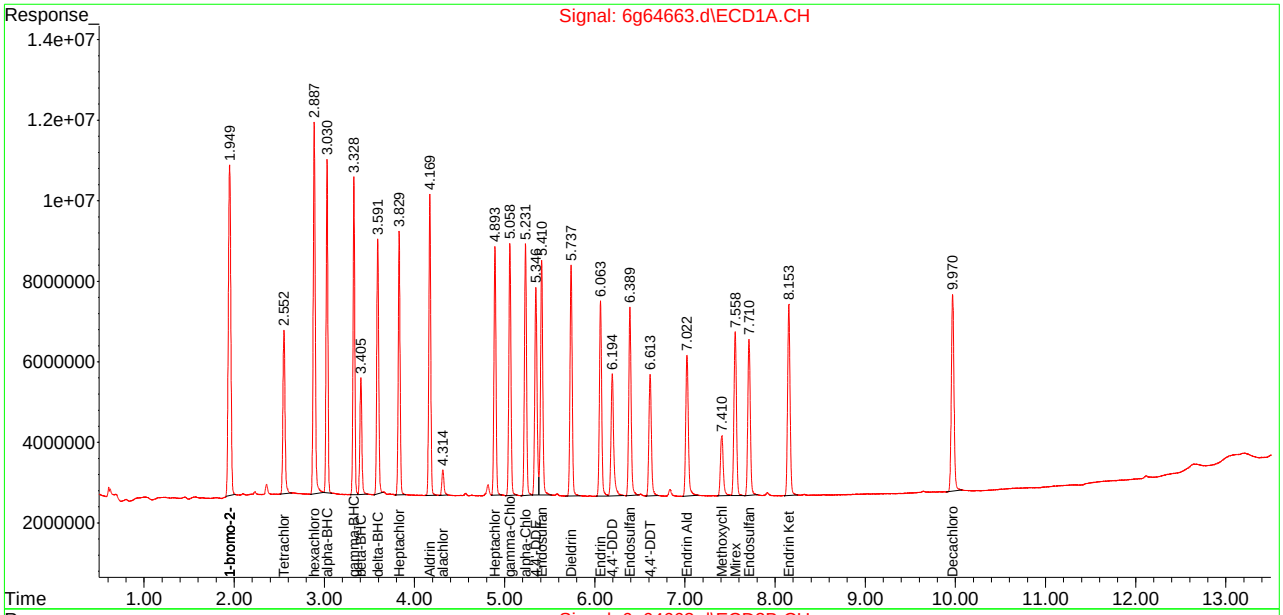
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

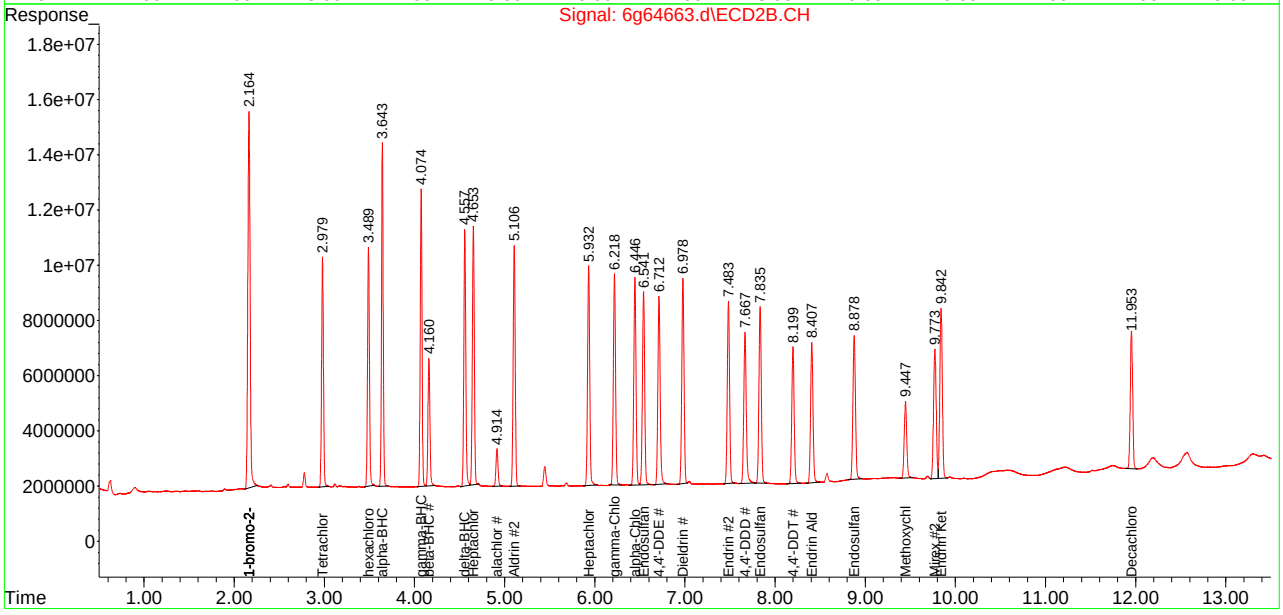
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\anndg\g6g2001\
Data File : 6g64663.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-May-19, 20:15:11
Operator : mailisih
Sample : cc1999-25
Misc : op20020,g6g2001,15.5,,,10,1
ALS Vial : 2 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 23:55:53 2019
Quant Method : C:\MSDCHEM\1\METHODS\6pst1999.m
Quant Title : PEST/PCB
QLast Update : Sun May 05 20:50:20 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um





Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:38:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.261f	4.037	23375659	21457992	1.251	1.694 #
	Spiked Amount 40.000			Recovery	=	3.13%	4.23%
51)	S Decachlor...	10.752f	12.646	28669980	22808940	1.550	1.942 #
	Spiked Amount 40.000			Recovery	=	3.88%	4.85%
	Target Compounds						
41)	AR1016-A	3.668f	4.728f	14820300	10680286	42.573	54.791 #
42)	AR1016-B	4.104f	5.306f	25942418	21698651	43.544	51.528
43)	AR1016-C	4.690f	5.965f	57986939	47775634	40.880	52.223m#
44)	AR1016-D	4.864f	6.160f	22088772	16576144	42.191	48.762
45)	AR1016-E	5.399f	6.837f	22688858	14674821	40.729	54.371 #
46)	AR1260-A	7.841f	9.487	44672109	44502169	29.560m	42.670m#
47)	AR1260-B	8.001f	9.608	25763740	31016090	39.367	54.688 #
48)	AR1260-C	8.347f	10.052	32183869	28568238	43.071	50.583
49)	AR1260-D	8.785f	10.395	57610021	69437410	32.266	48.585m#
50)	AR1260-E	9.185f	10.924f	70289454	75276634	40.159m	57.218m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

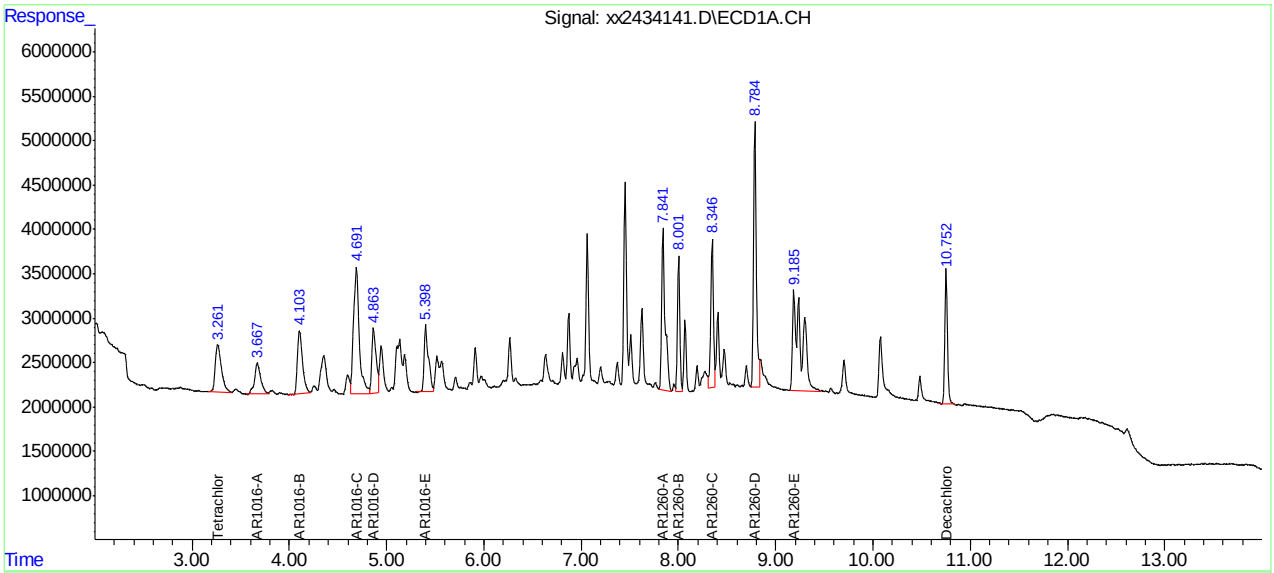
11.6.18 11

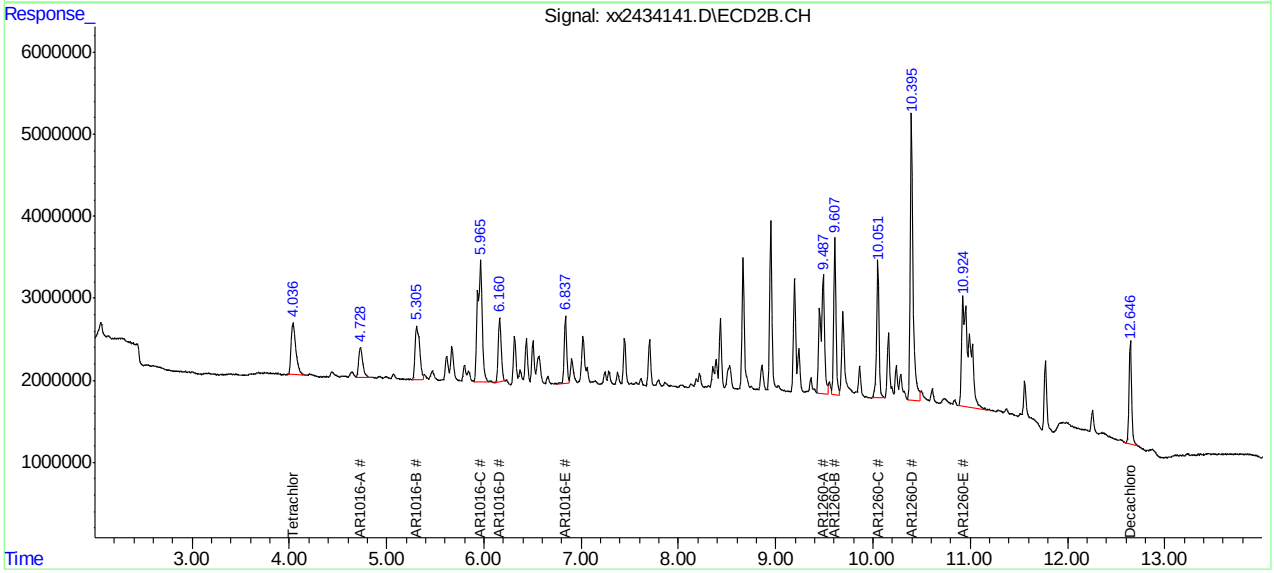
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:38:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A	
Lab FileID:	XX2434141.D	**Analyst approved:**	04/25/19 09:16	Summer Kotb
Injection Time:	04/24/19 15:15	**Supervisor approved:**	04/25/19 10:22	Gwendolyn Burns

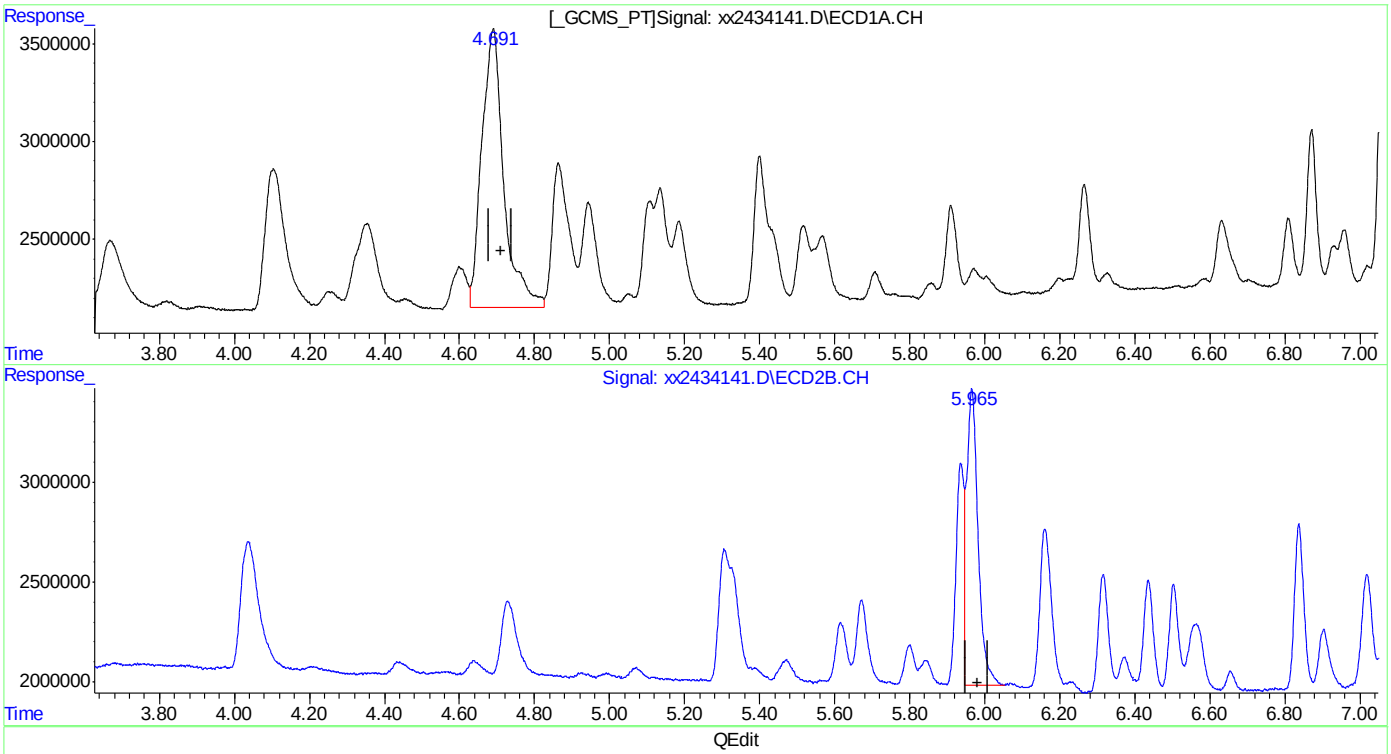
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-A		1	7.84	Split peak
AR1260-E		1	9.19	Split peak
AR1260-A		2	9.49	Split peak
AR1260-D		2	10.39	Split peak
AR1260-E		2	10.92	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.690min 40.880PPB
response 57986939

(43) AR1016-C #2
5.966min 33.960PPB
response 31067928

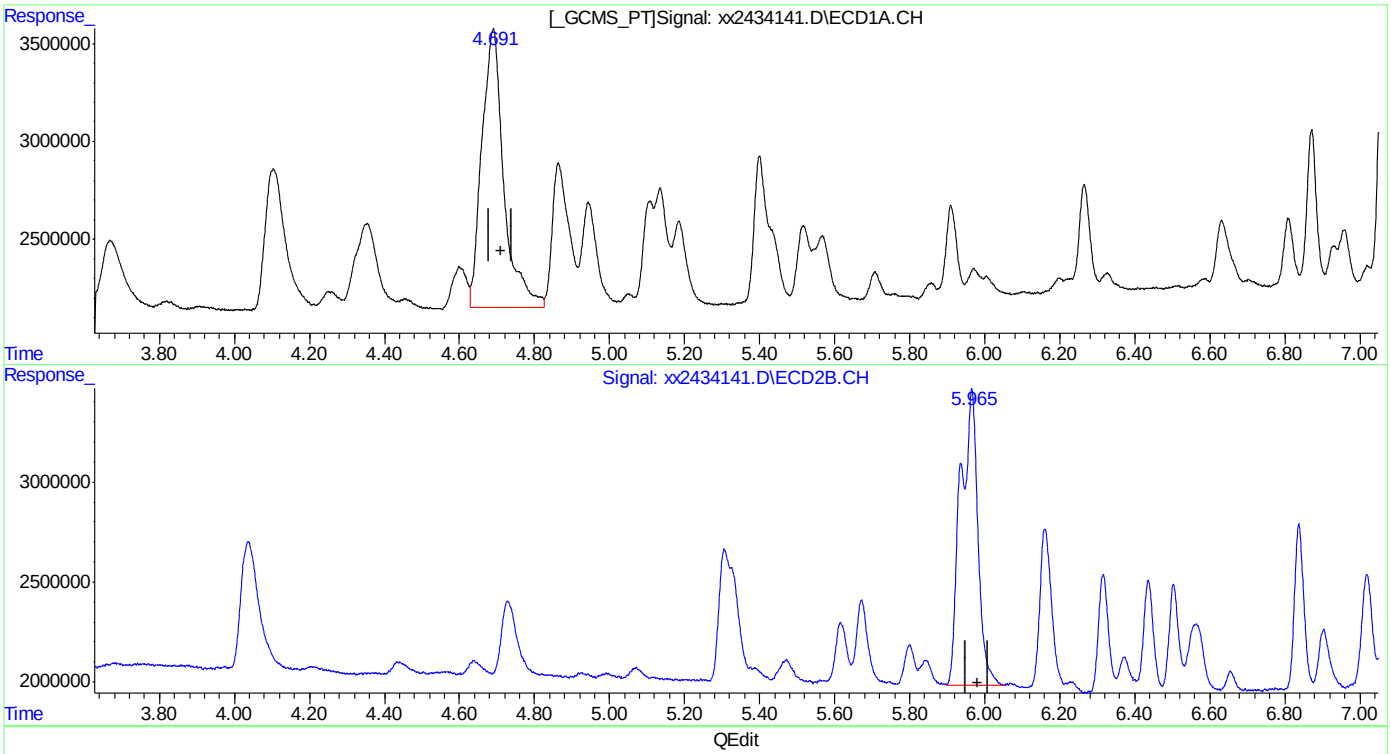
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:37:44 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.690min 40.880PPB
response 57986939

(43) AR1016-C #2
5.965min 52.223PPB m
response 47775634

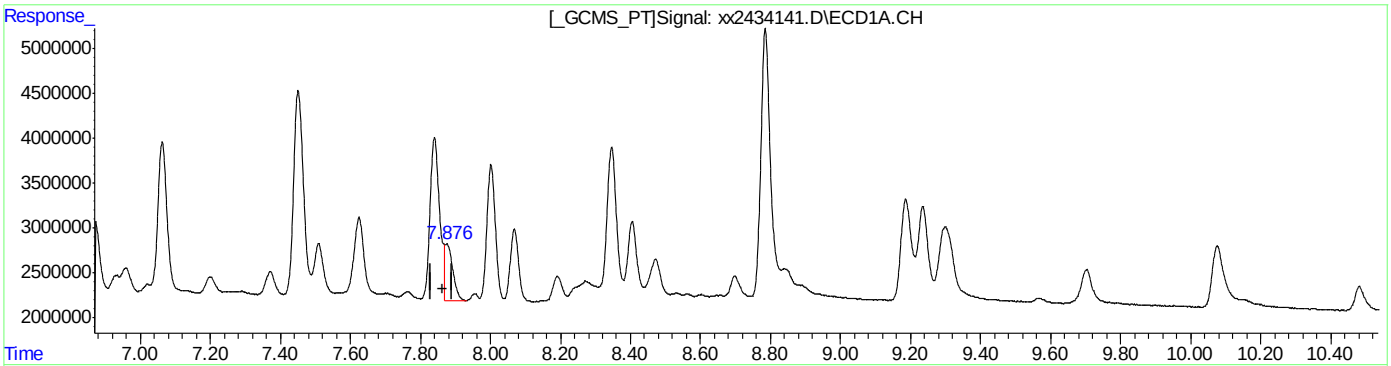
(+) = Expected Retention Time

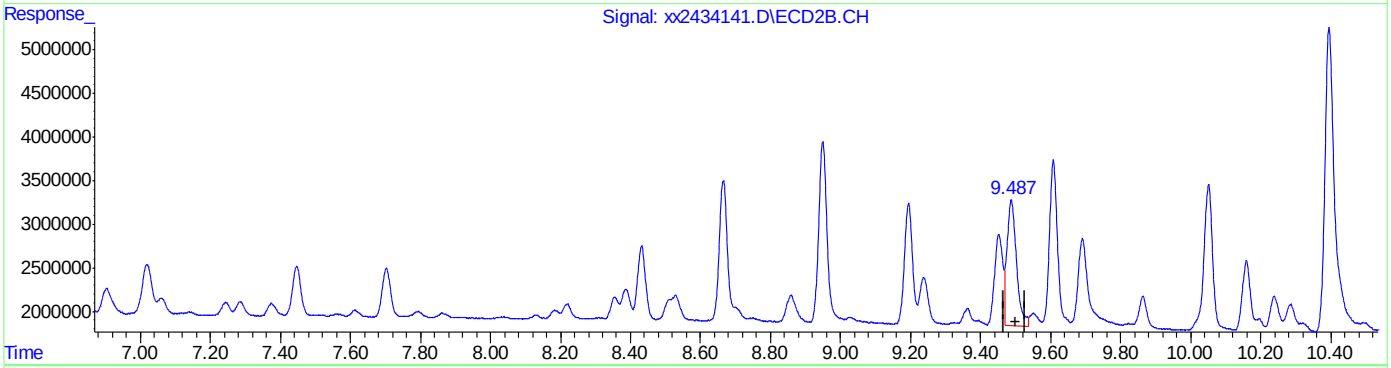
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A
7.875min 6.527PPB
response 9864180

(46) AR1260-A #2
9.488min 26.566PPB
response 27706968

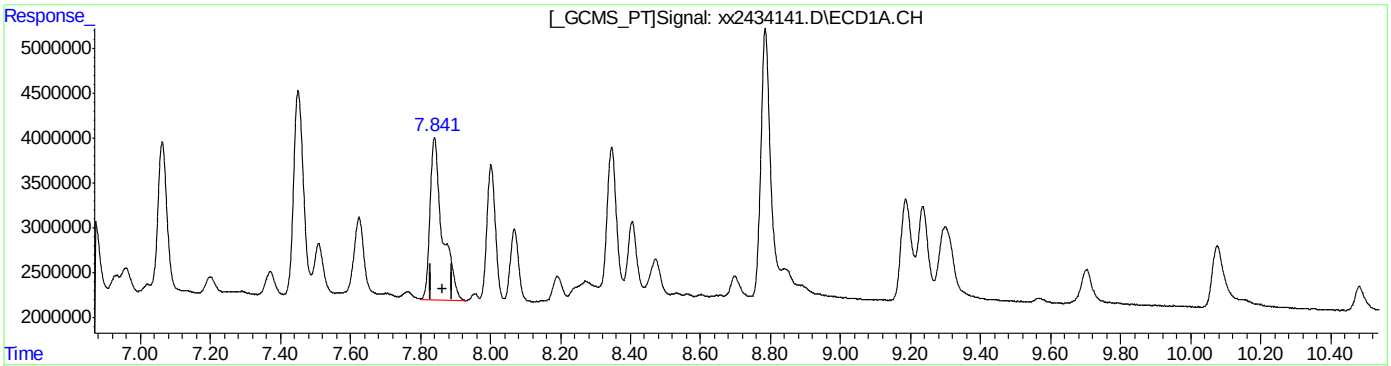
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.841min 29.560PPB m
response 44672109

(46) AR1260-A #2
9.487min 42.670PPB m
response 44502169

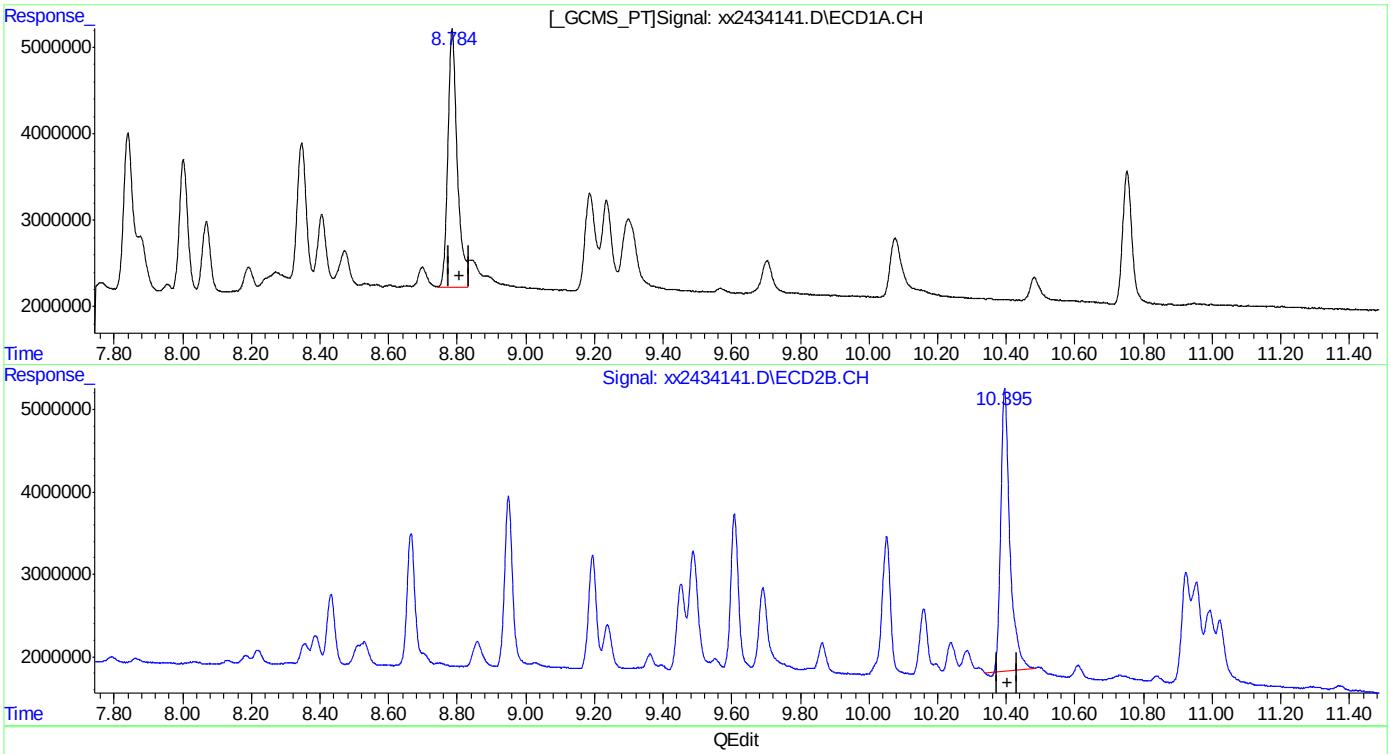
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(49) AR1260-D
8.785min 32.266PPB
response 57610021

(49) AR1260-D #2
10.395min 44.773PPB
response 63989582

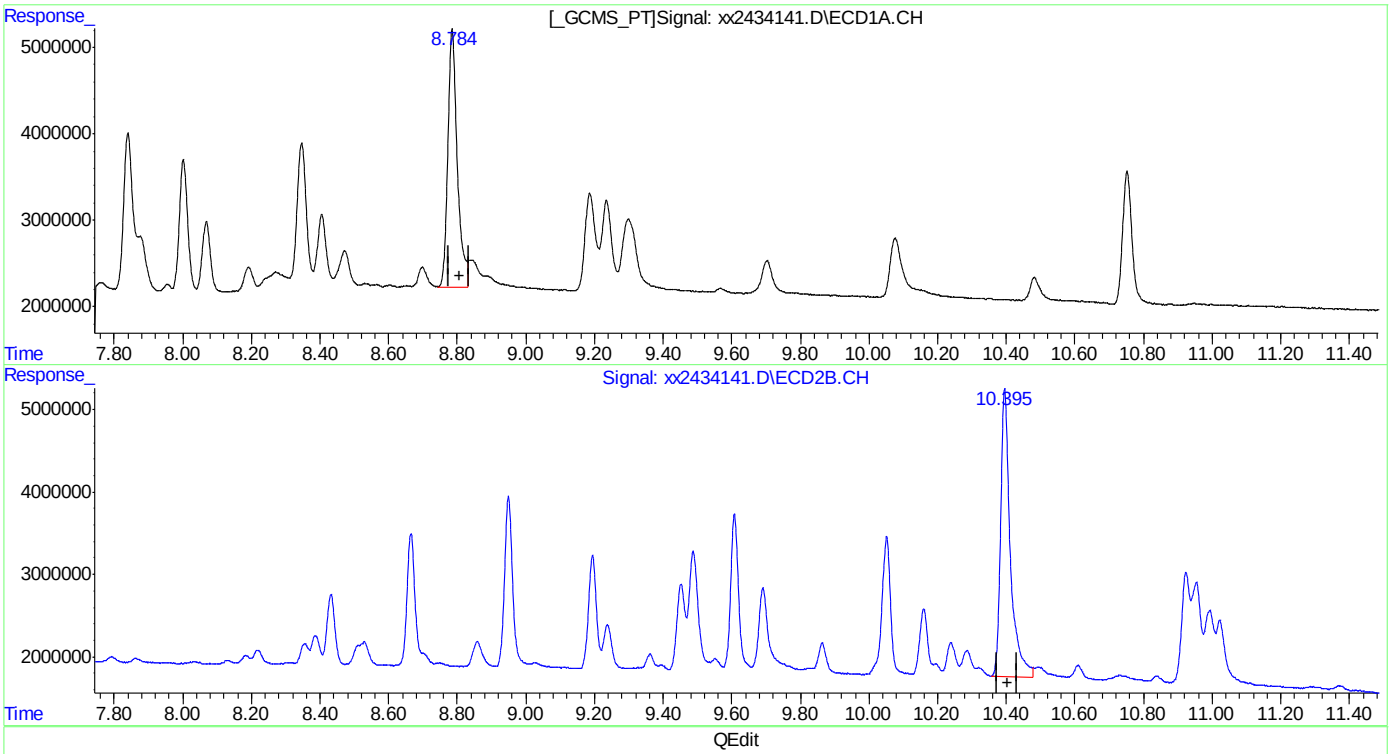
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(49) AR1260-D
8.785min 32.266PPB
response 57610021

(49) AR1260-D #2
10.395min 48.585PPB m
response 69437410

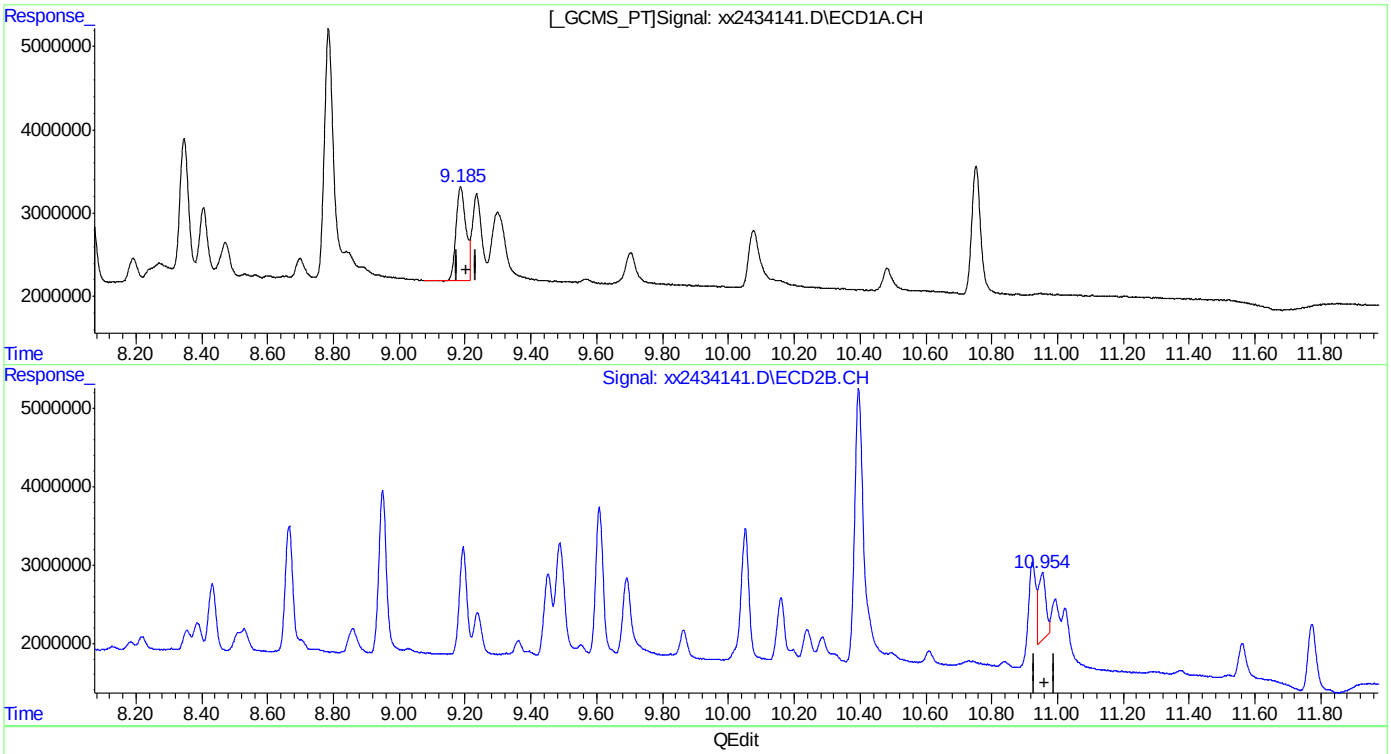
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.186min 13.233PPB
response 23160697

(50) AR1260-E #2
10.954min 10.106PPB
response 13295215

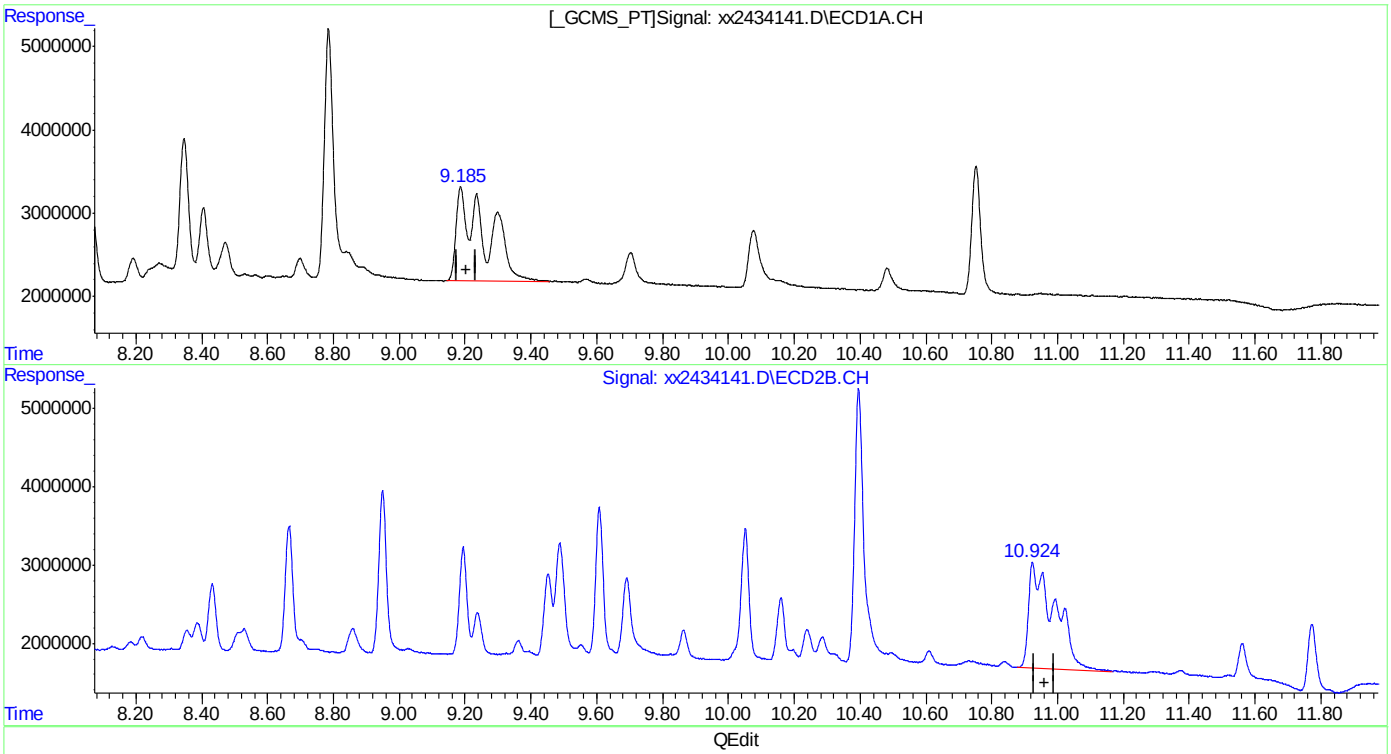
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434141.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:15 pm
Operator : summerk
Sample : ic6666-50
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:37:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.185min 40.159PPB m
response 70289454

(50) AR1260-E #2
10.924min 57.218PPB m
response 75276634

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:38:48 2019 Page: 1

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:14 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.264f	4.038	123.9E6	102.1E6	6.627	8.057
	Spiked Amount 40.000			Recovery	=	16.57%	20.14%
51)	S Decachlor...	10.753f	12.647	138.0E6	105.1E6	7.460	8.944
	Spiked Amount 40.000			Recovery	=	18.65%	22.36%
	Target Compounds						
41)	AR1016-A	3.671f	4.731f	71130127	48120617	204.331	246.863
42)	AR1016-B	4.105f	5.307f	127.6E6	99293633	214.199	235.794
43)	AR1016-C	4.692f	5.966	279.8E6	222.4E6	197.267	243.062m
44)	AR1016-D	4.866f	6.162f	105.6E6	83894424	201.623	246.790
45)	AR1016-E	5.401f	6.839	107.7E6	64852923	193.328	240.283
46)	AR1260-A	7.842f	9.489	229.3E6	212.1E6	151.756	203.383m#
47)	AR1260-B	8.003f	9.609	132.4E6	147.7E6	202.253	260.472 #
48)	AR1260-C	8.348f	10.052	150.1E6	137.0E6	200.916	242.618
49)	AR1260-D	8.787f	10.396	301.9E6	335.8E6	169.095	234.983 #
50)	AR1260-E	9.189f	10.923f	349.5E6	344.9E6	199.713m	262.123m#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

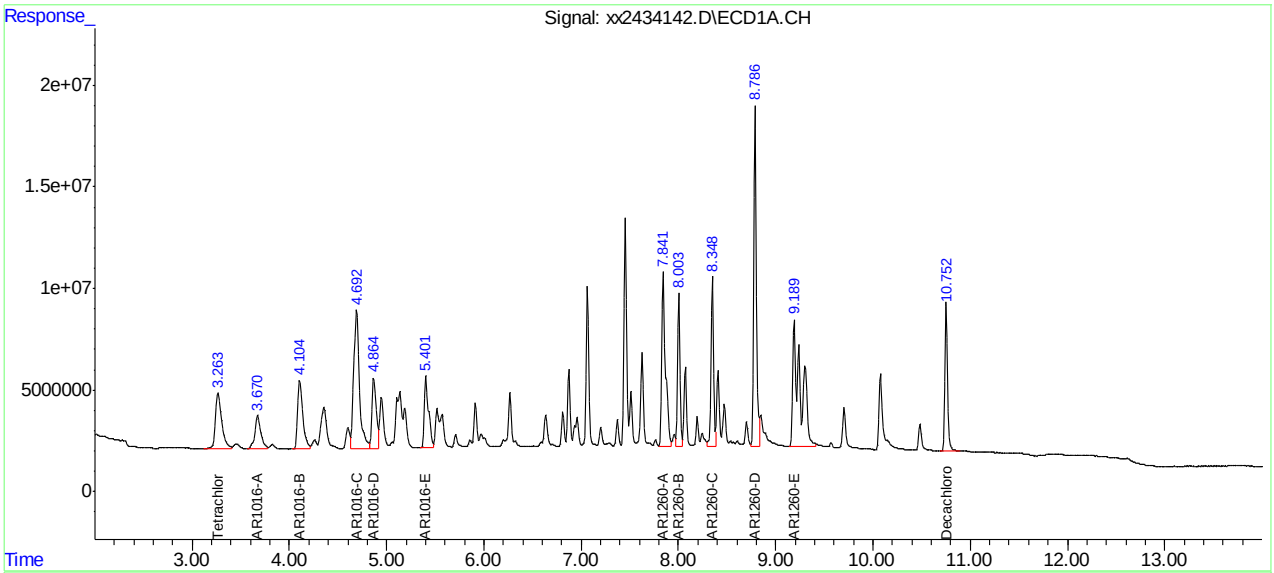
11.6.19 11

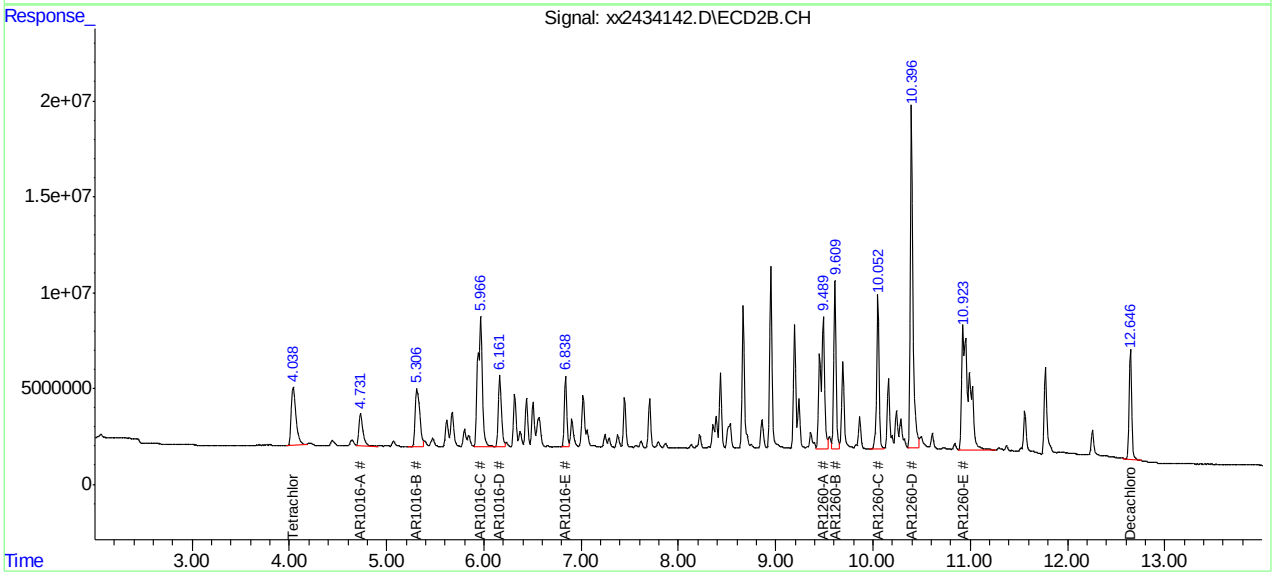
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:14 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A	
Lab FileID:	XX2434142.D	**Analyst approved:**	04/25/19 09:16	Summer Kotb
Injection Time:	04/24/19 15:33	**Supervisor approved:**	04/25/19 10:22	Gwendolyn Burns

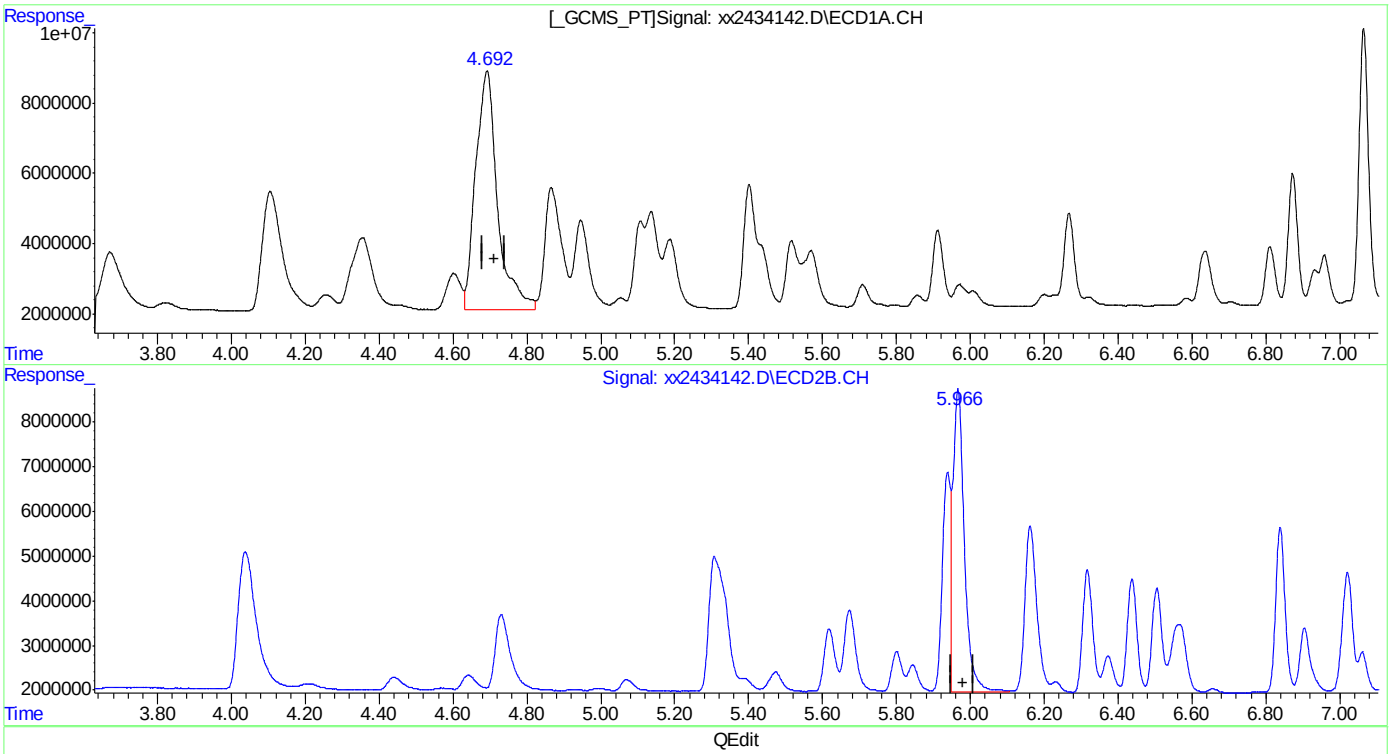
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-E		1	9.19	Split peak
AR1260-A		2	9.49	Split peak
AR1260-E		2	10.92	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:39:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(43) AR1016-C
4.692min 197.267PPB
response 279819468

(43) AR1016-C #2
5.967min 159.147PPB
response 145592683

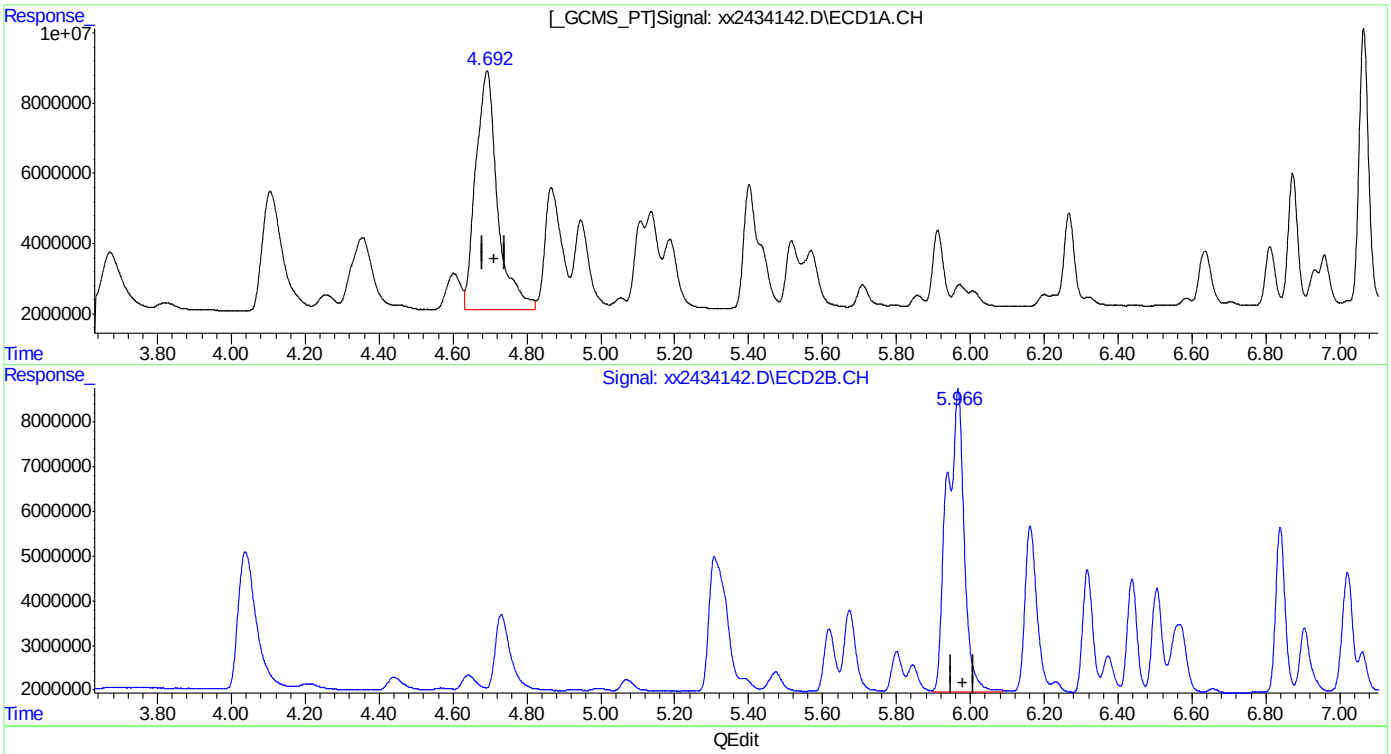
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:39:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(43) AR1016-C
4.692min 197.267PPB
response 279819468

(43) AR1016-C #2
5.966min 243.062PPB m
response 222360959

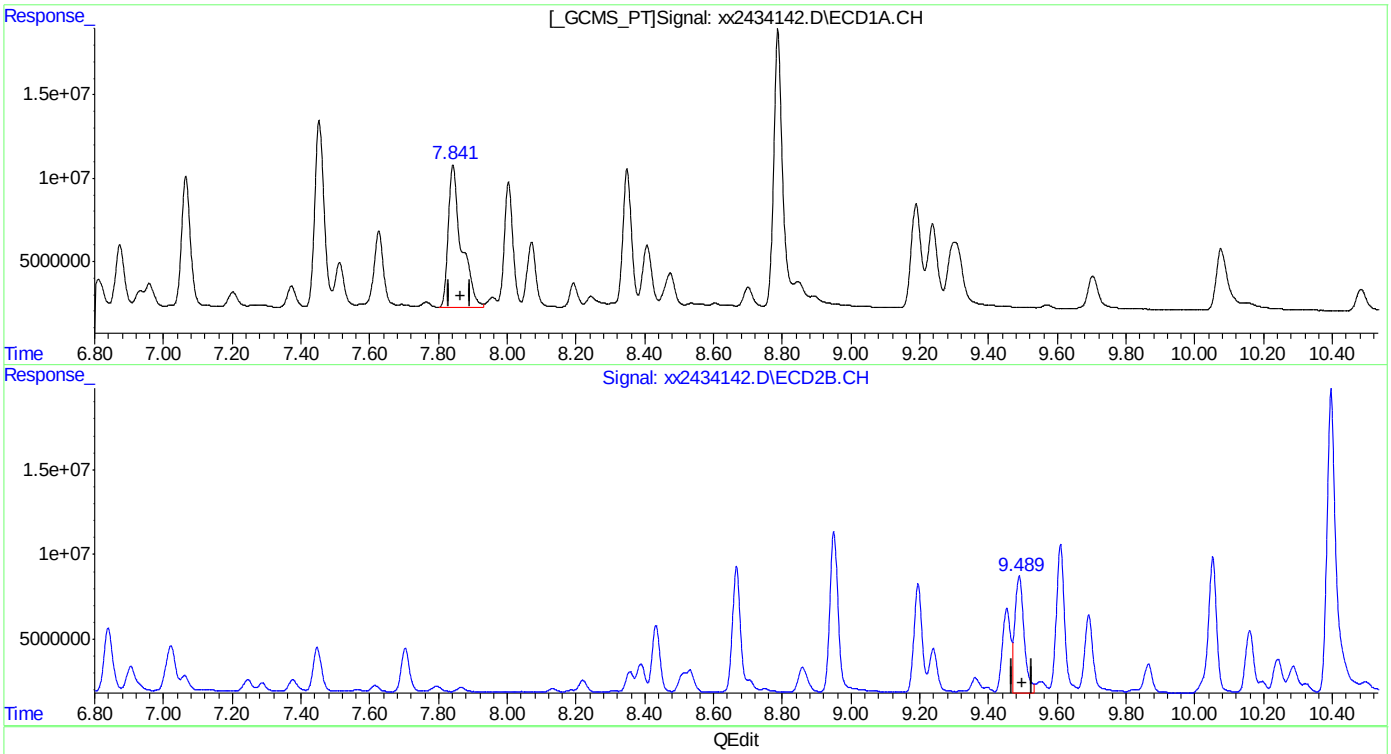
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:39:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.842min 151.756PPB
response 229338509

(46) AR1260-A #2
9.489min 124.935PPB
response 130300641

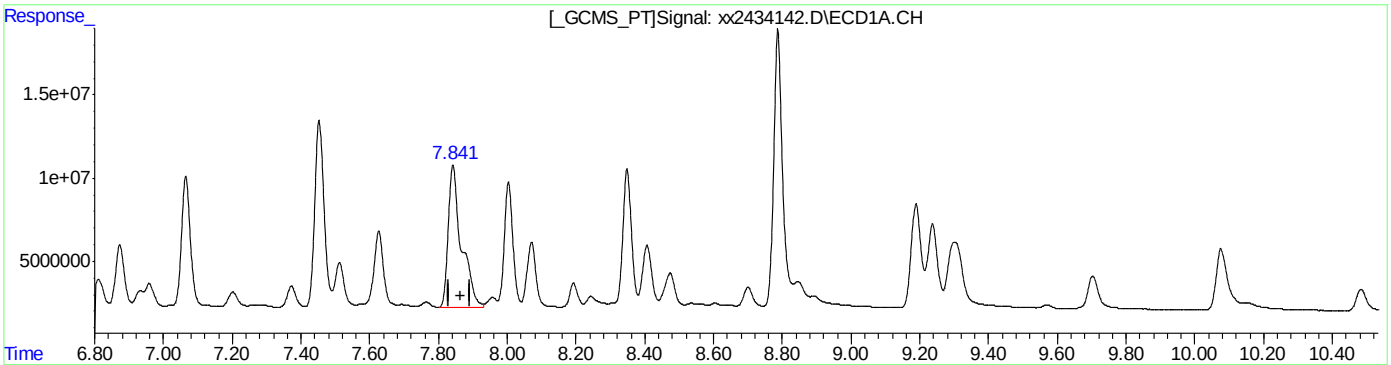
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:39:54 2019

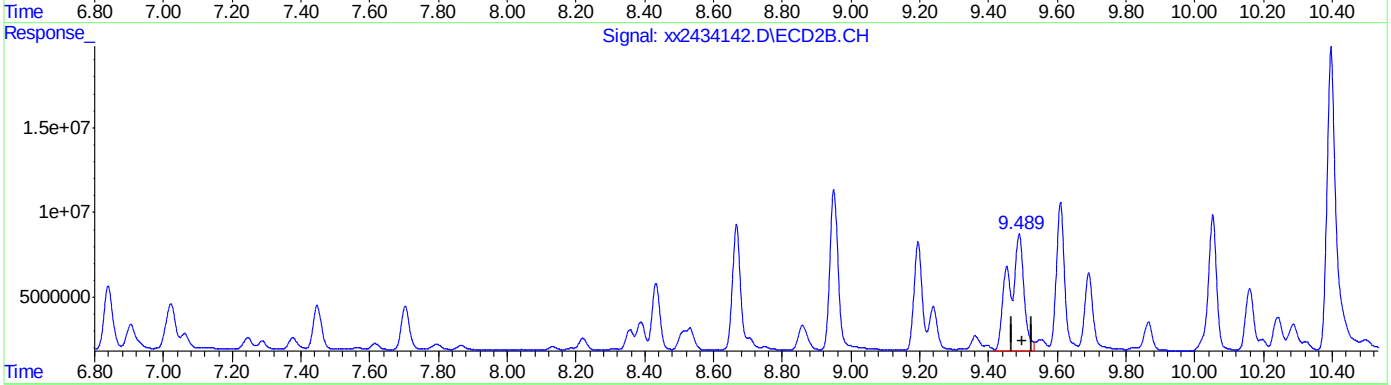
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:39:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A
7.842min 151.756PPB
response 229338509

(46) AR1260-A #2
9.489min 203.383PPB m
response 212117303

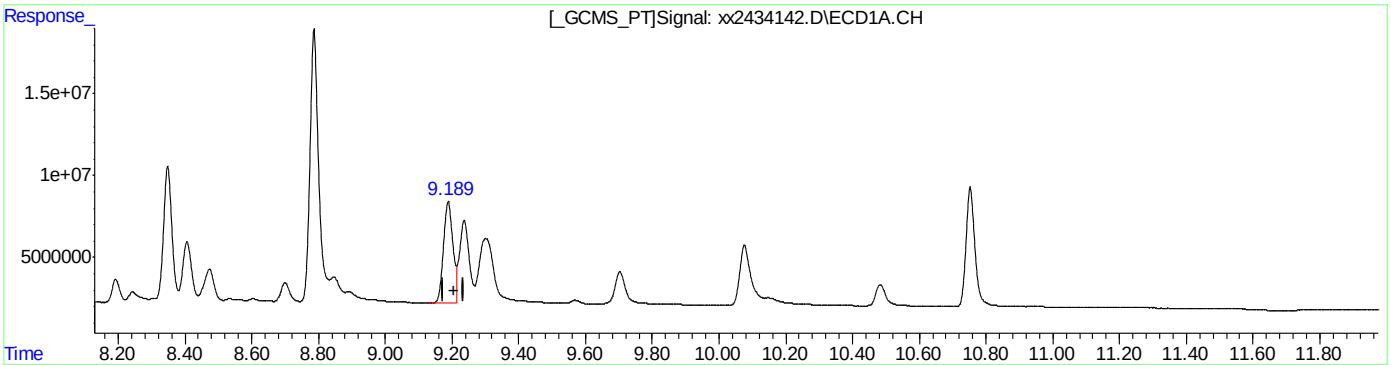
(+) = Expected Retention Time

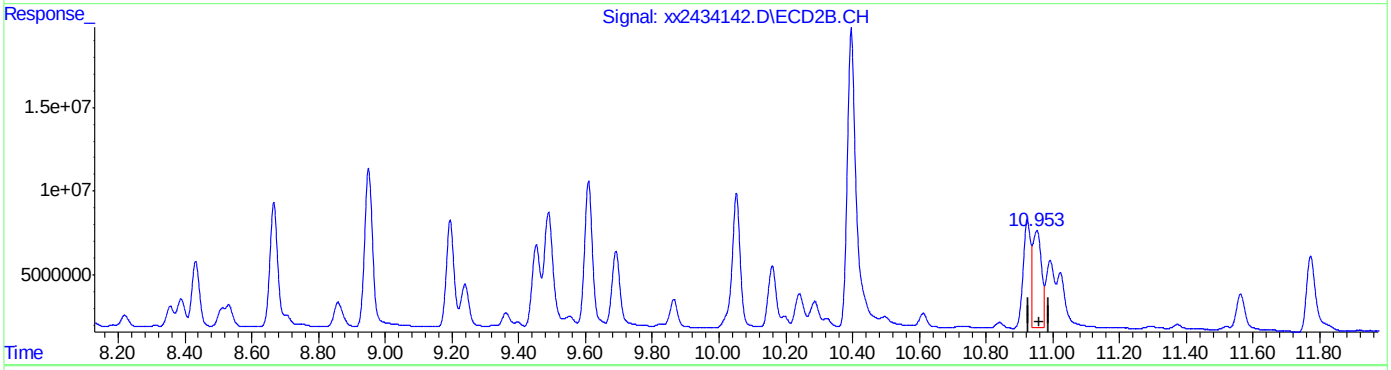
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:39:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E
9.189min 70.836PPB
response 123981209

(50) AR1260-E #2
10.952min 81.866PPB
response 107704278

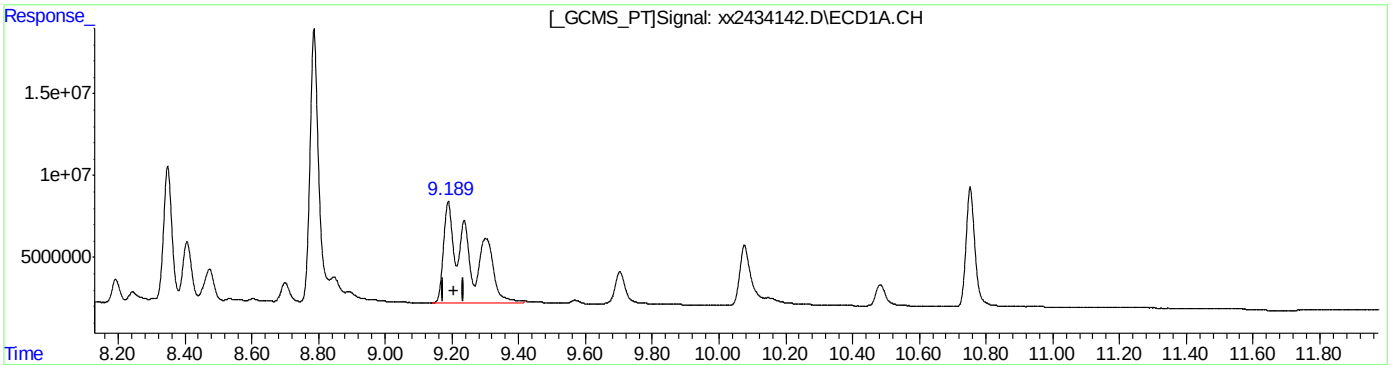
(+) = Expected Retention Time

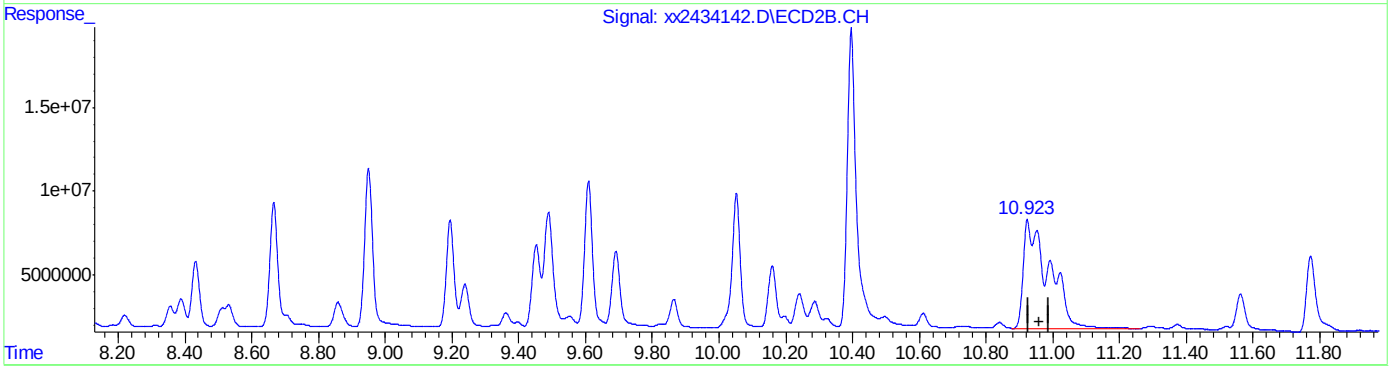
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434142.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:33 pm
Operator : summerk
Sample : ic6666-250
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:39:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E
9.189min 199.713PPB m
response 349549791

(50) AR1260-E #2
10.923min 262.123PPB m
response 344852335

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:40:17 2019

11.6.19.7
11

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:41:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265f	4.035f	253.2E6	211.2E6	13.545	16.671
	Spiked Amount 40.000			Recovery	=	33.86%	41.68%
51)	S Decachlor...	10.752f	12.647	276.0E6	210.5E6	14.921	17.922
	Spiked Amount 40.000			Recovery	=	37.30%	44.81%
	Target Compounds						
41)	AR1016-A	3.672f	4.730f	138.1E6	93947382	396.734	481.959
42)	AR1016-B	4.106f	5.309f	246.7E6	204.0E6	414.120	484.510
43)	AR1016-C	4.692f	5.966	559.8E6	436.4E6	394.672	477.002m
44)	AR1016-D	4.865f	6.162f	206.8E6	162.9E6	394.978	479.232
45)	AR1016-E	5.401f	6.839	211.8E6	129.6E6	380.123	480.218 #
46)	AR1260-A	7.842f	9.489	476.2E6	420.4E6	315.088	403.121m#
47)	AR1260-B	8.004f	9.609	270.4E6	292.0E6	413.190	514.813
48)	AR1260-C	8.348f	10.051	302.5E6	275.4E6	404.851	487.612
49)	AR1260-D	8.787f	10.396	632.4E6	689.1E6	354.199	482.146 #
50)	AR1260-E	9.186f	10.924f	731.4E6	686.0E6	417.862m	521.401m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

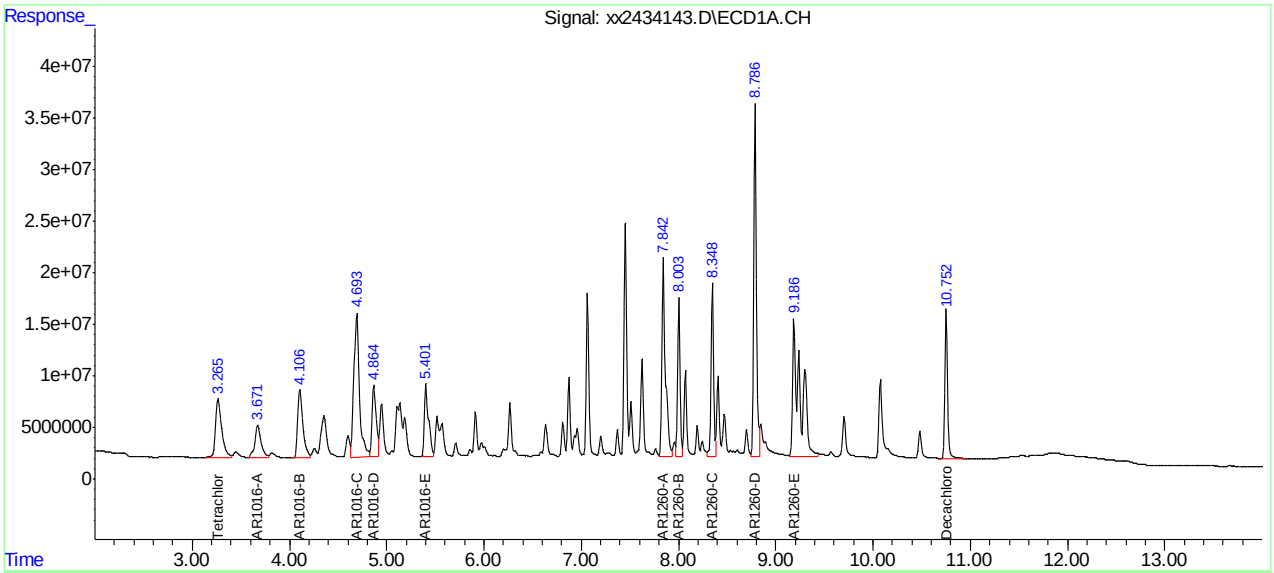
11.6.20 11

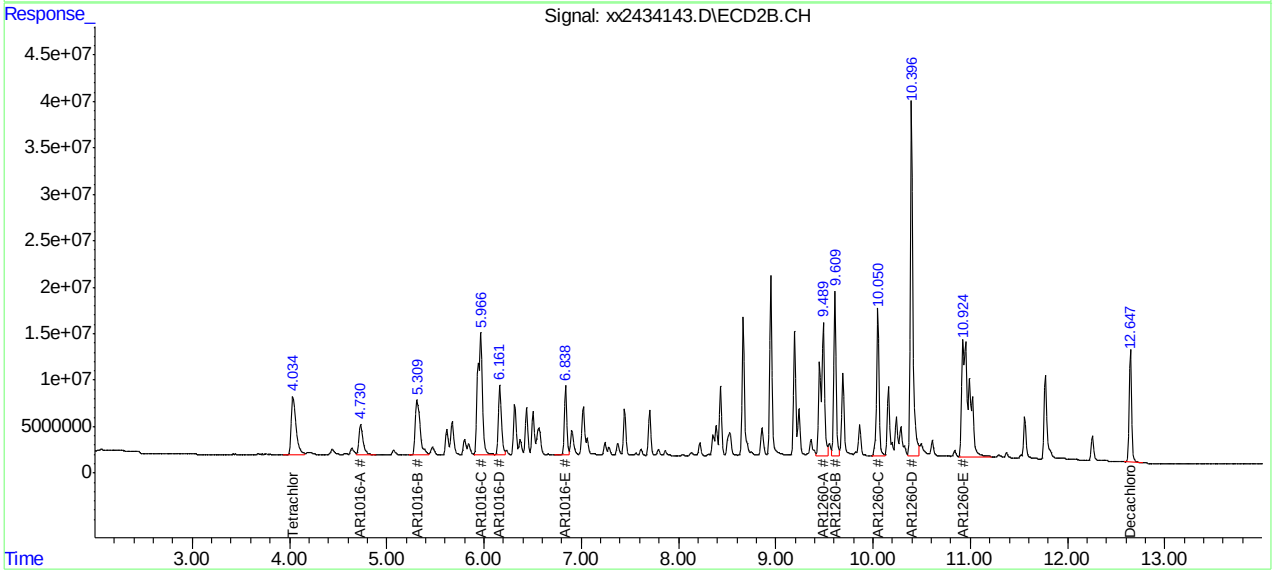
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:41:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434143.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 15:51	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

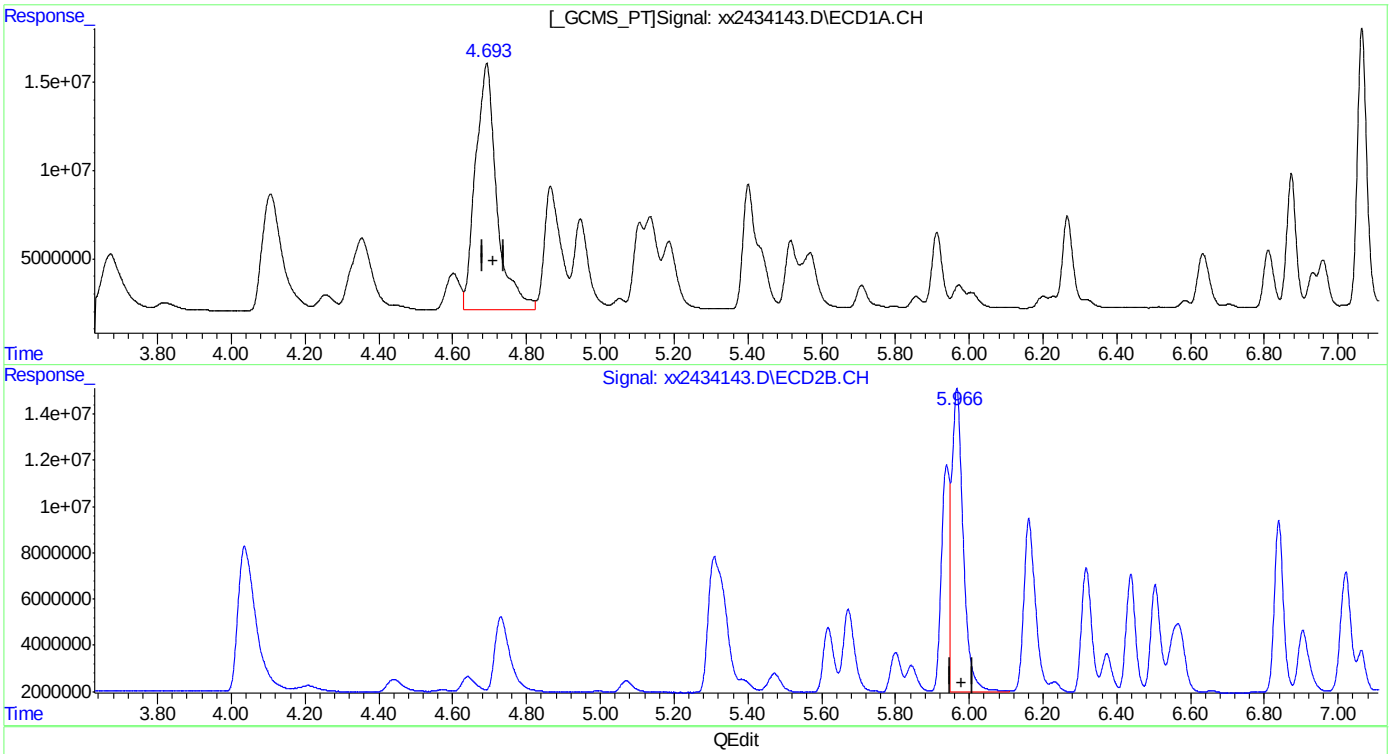
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-E		1	9.19	Split peak
AR1260-A		2	9.49	Split peak
AR1260-E		2	10.92	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.692min 394.672PPB
response 559836172

(43) AR1016-C #2
5.967min 308.297PPB
response 282039526

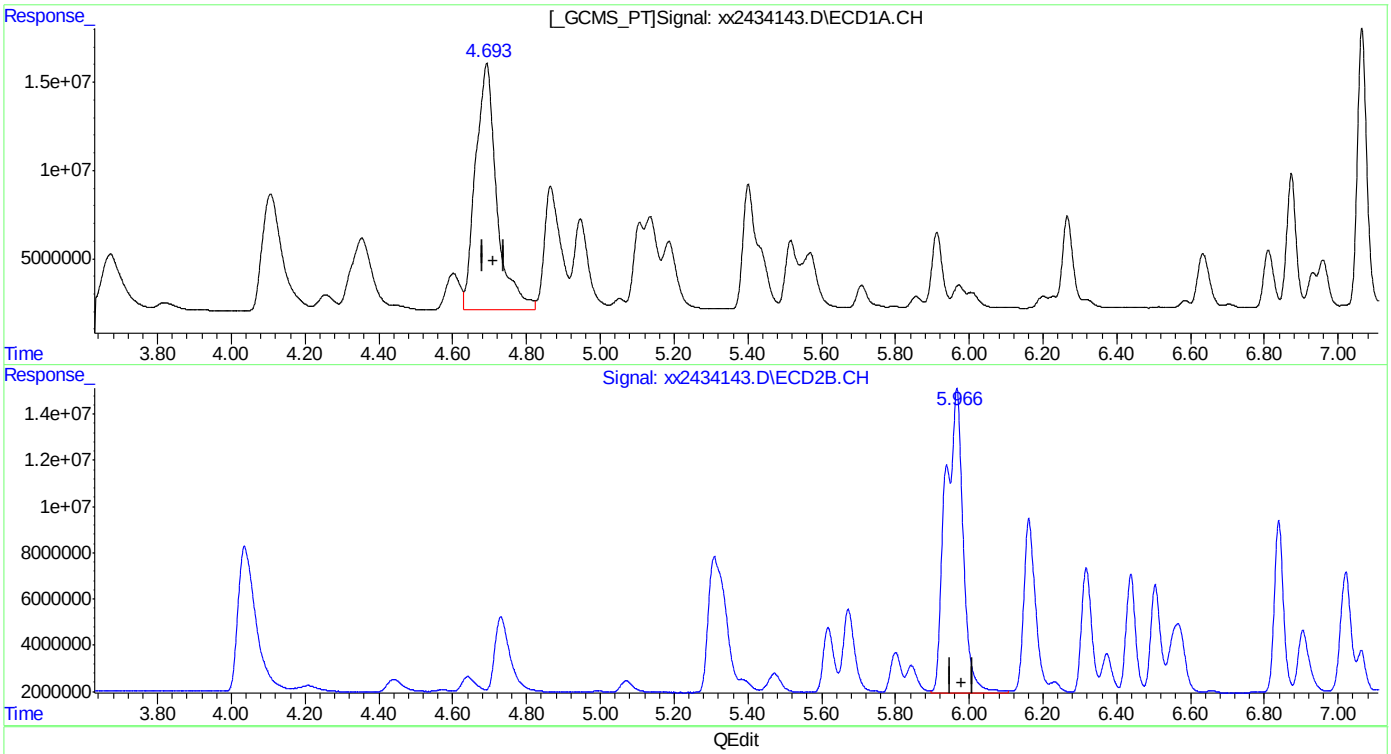
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.692min 394.672PPB
response 559836172

(43) AR1016-C #2
5.966min 477.002PPB m
response 436377054

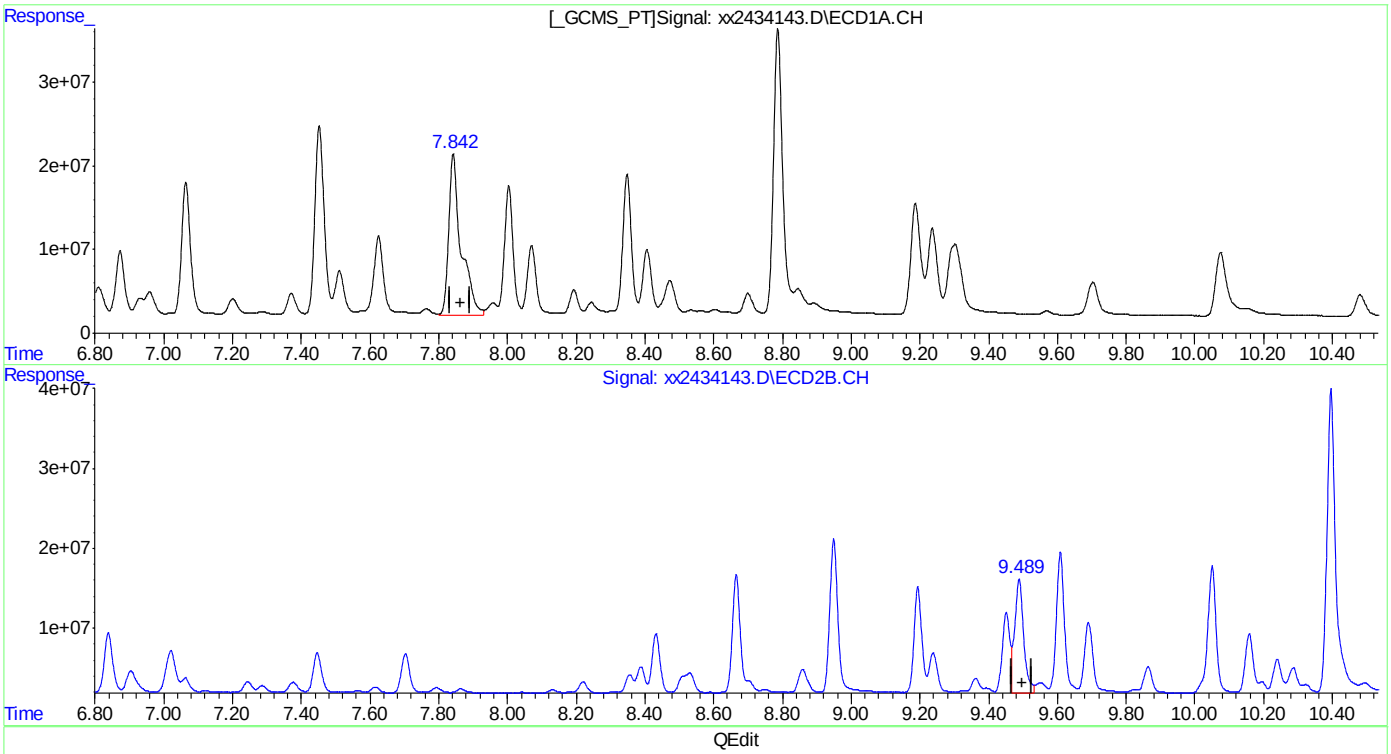
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(46) AR1260-A
7.842min 315.088PPB
response 476170374

(46) AR1260-A #2
9.489min 252.822PPB
response 263679985

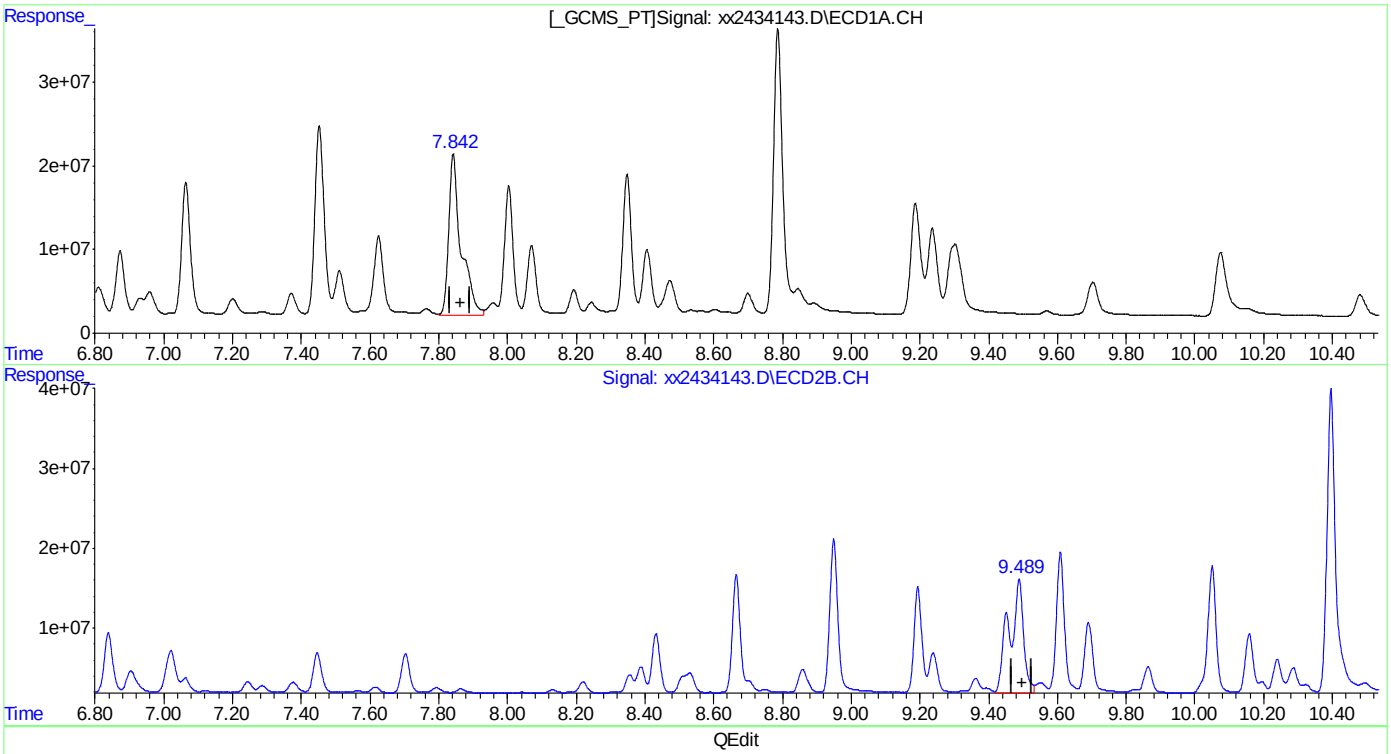
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:41:10 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(46) AR1260-A
7.842min 315.088PPB
response 476170374

(46) AR1260-A #2
9.489min 403.121PPB m
response 420433584

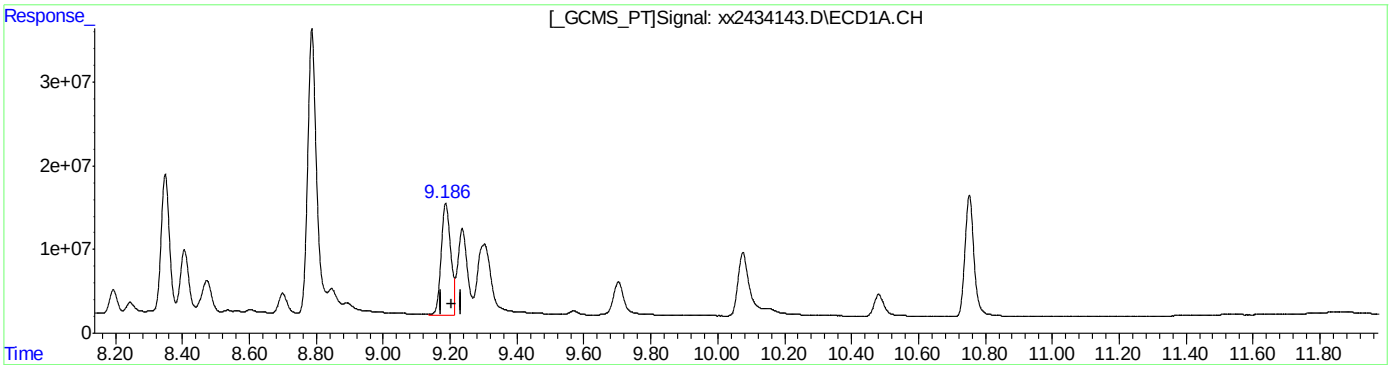
(+) = Expected Retention Time

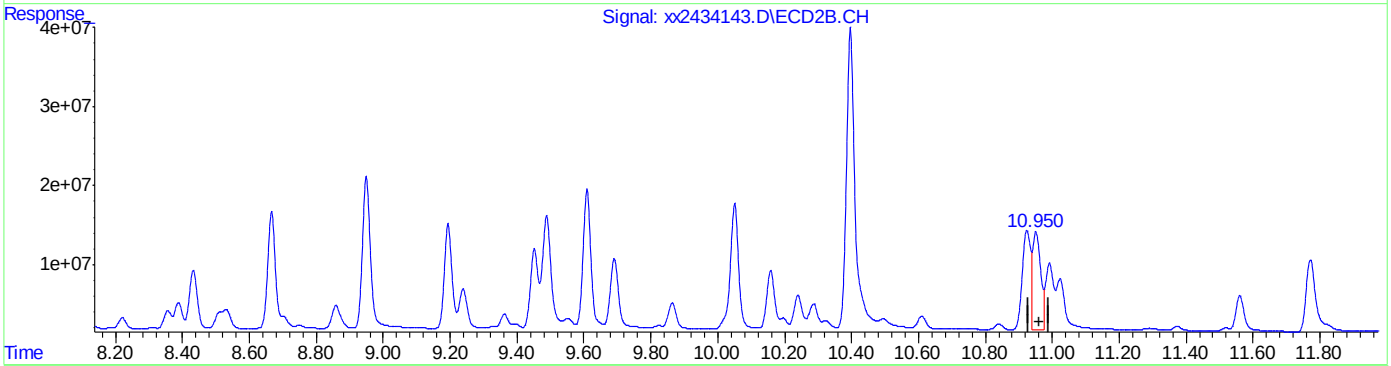
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E
9.187min 152.038PPB
response 266106382

(50) AR1260-E #2
10.951min 155.939PPB
response 205155260

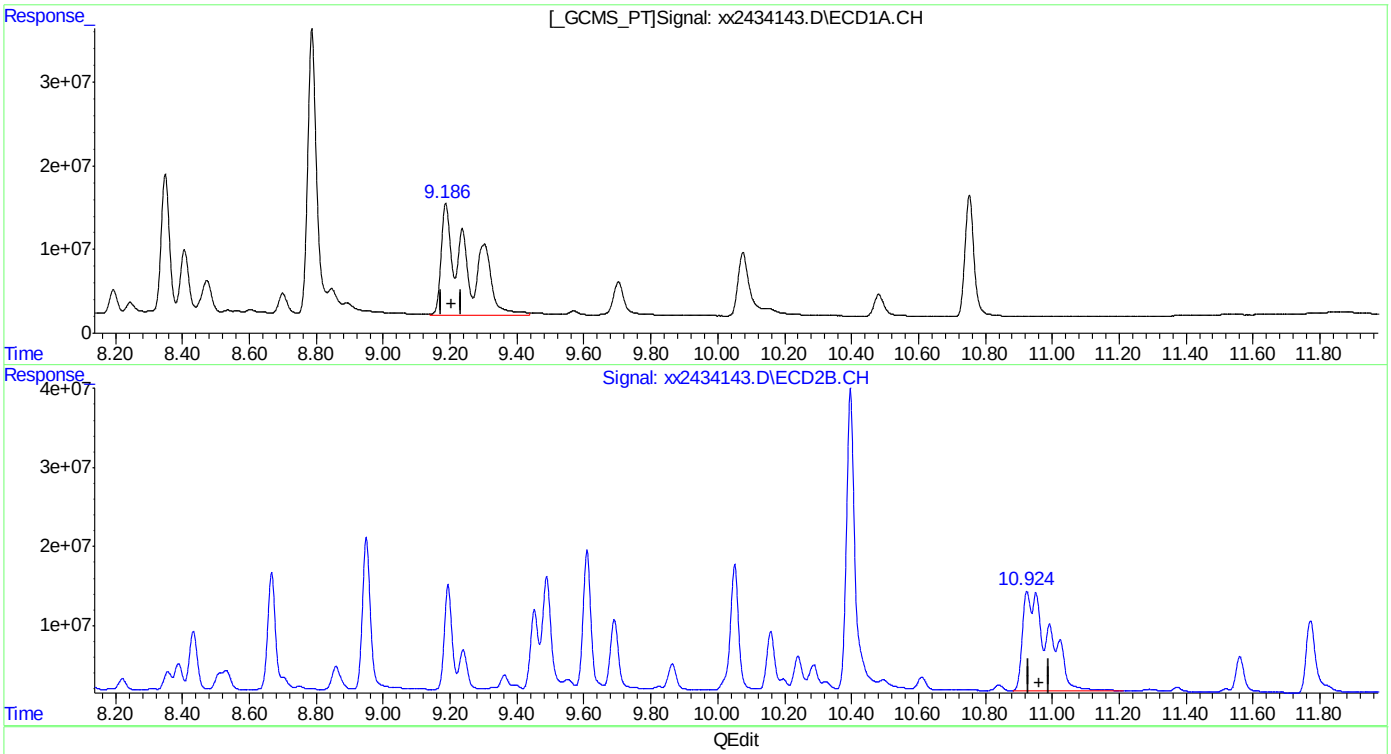
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:41:29 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434143.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 3:51 pm
Operator : summerk
Sample : ic6666-500
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:40:43 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(50) AR1260-E
9.186min 417.862PPB m
response 731368417

(50) AR1260-E #2
10.924min 521.401PPB m
response 685961670

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : T:\gctemp\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icc6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:07 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTX-CLP1 Signal #2 Phase: RTX-CLP2
Signal #1 Info : 30mx.32mmx.50um Signal #2 Info : 30mx.32mmx.25um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265f	4.039	531.3E6	433.2E6	28.426	34.196
	Spiked Amount 40.000			Recovery	=	71.06%	85.49%
51)	S Decachlor...	10.750f	12.645	556.7E6	427.9E6	30.094	36.427
	Spiked Amount 40.000			Recovery	=	75.24%	91.07%
	Target Compounds						
41)	AR1016-A	3.671f	4.728f	275.4E6	185.5E6	791.073	951.578
42)	AR1016-B	4.105f	5.307f	496.4E6	405.1E6	833.225	962.084
43)	AR1016-C	4.691f	5.968	1161.2E6	884.8E6	818.639	967.193m
44)	AR1016-D	4.865f	6.162f	419.8E6	329.0E6	801.925	967.729
45)	AR1016-E	5.401f	6.839	432.3E6	256.3E6	776.091	949.523
46)	AR1260-A	7.841f	9.488	1002.2E6	864.0E6	663.164	828.446m
47)	AR1260-B	8.003f	9.607	554.9E6	590.3E6	847.903	1040.868
48)	AR1260-C	8.347f	10.049	626.7E6	560.9E6	838.714	993.200
49)	AR1260-D	8.785f	10.394	1370.2E6	1425.4E6	767.415	997.342 #
50)	AR1260-E	9.185f	10.922f	1489.3E6	1396.6E6	850.917m	1061.530m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

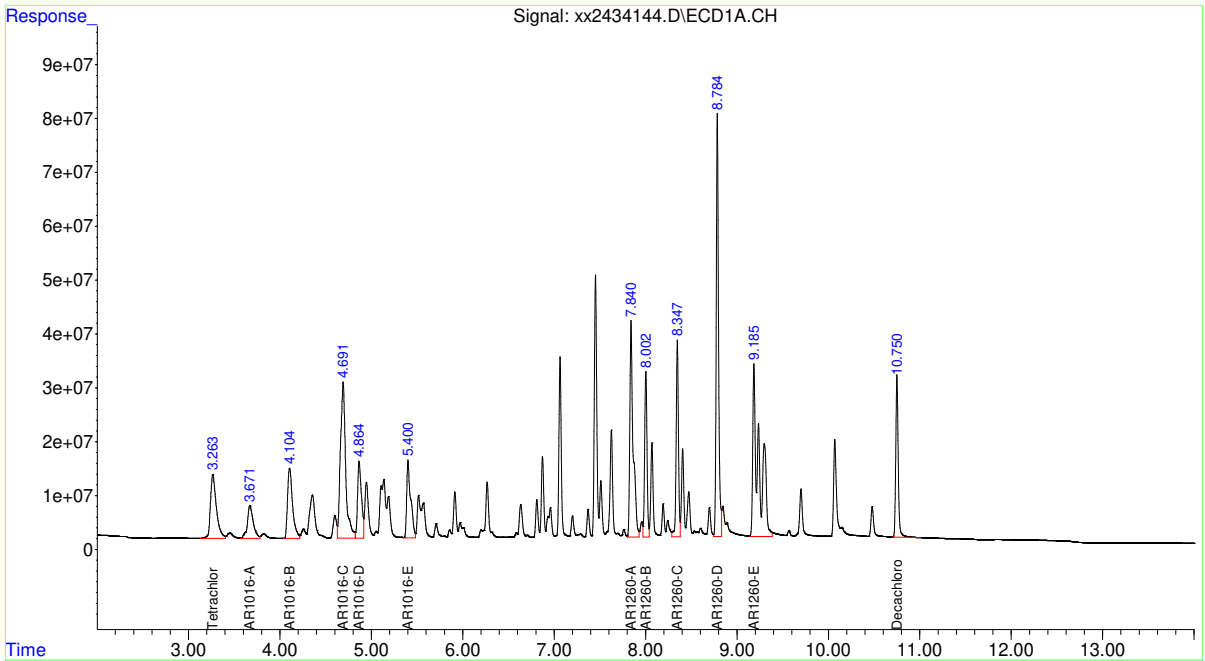
11.6.21 11

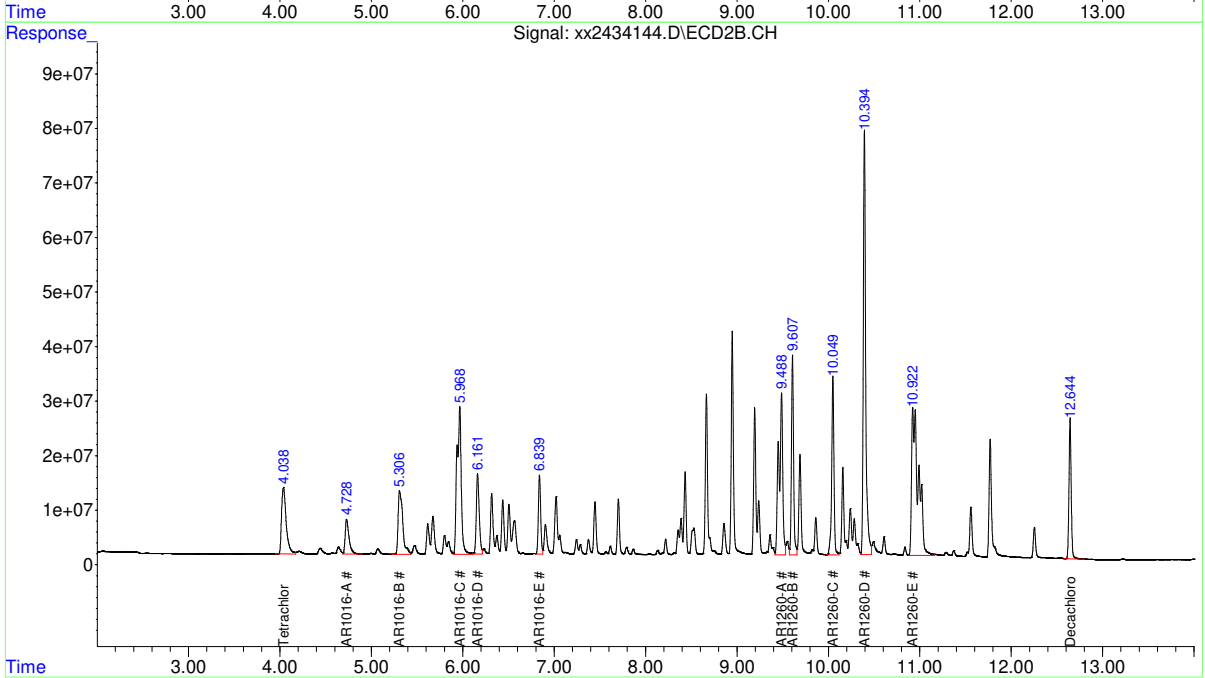
Quantitation Report (QT Reviewed)

Data Path : T:\gctemp\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icc6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:07 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : RTX-CLP1 Signal #2 Phase: RTX-CLP2
Signal #1 Info : 30mx.32mmx.50um Signal #2 Info : 30mx.32mmx.25um





Manual Integration Approval Summary

Sample Number:	GXX6666-ICC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434144.D	**Analyst approved:**	04/25/19 09:34 Summer Kotb
Injection Time:	04/24/19 16:10	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

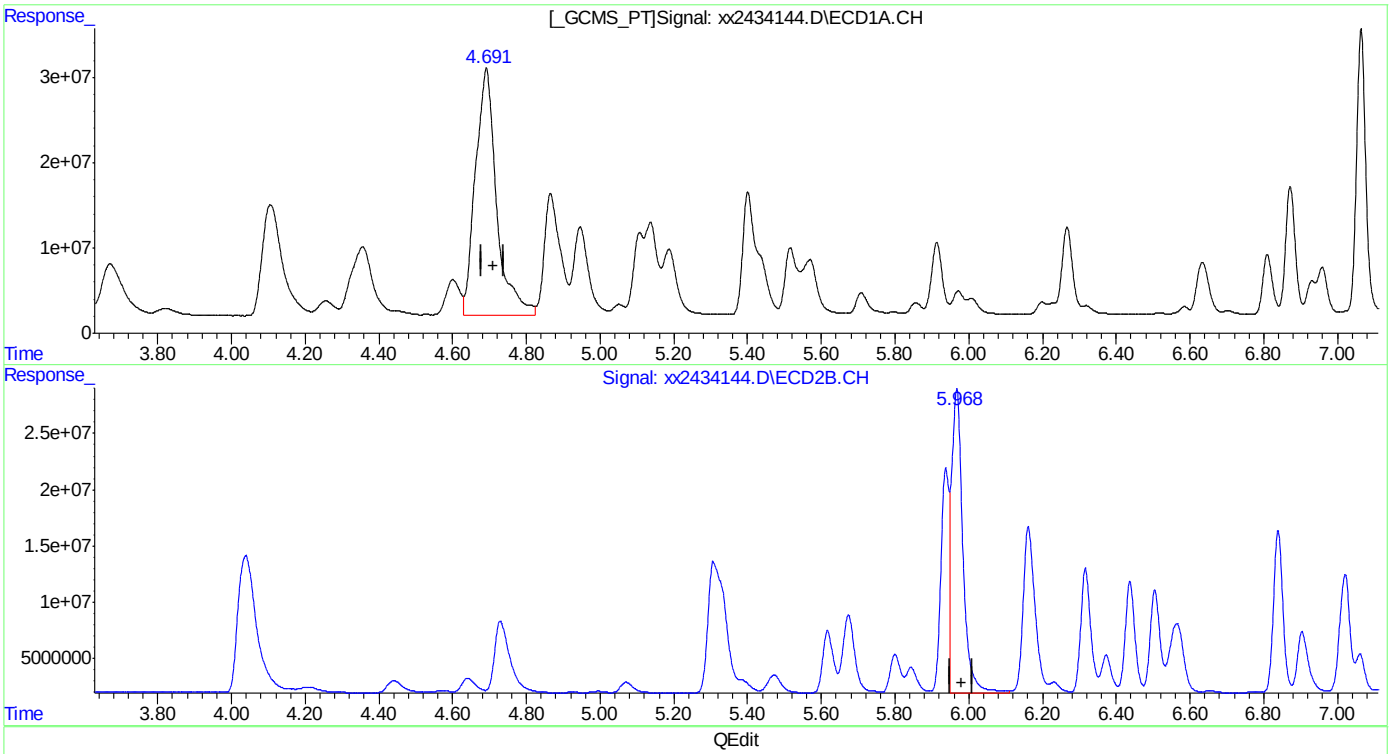
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-E		1	9.18	Split peak
AR1260-A		2	9.49	Split peak
AR1260-E		2	10.92	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:42:09 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.691min 818.639PPB
response 1161225621

(43) AR1016-C #2
5.968min 646.410PPB
response 591356573

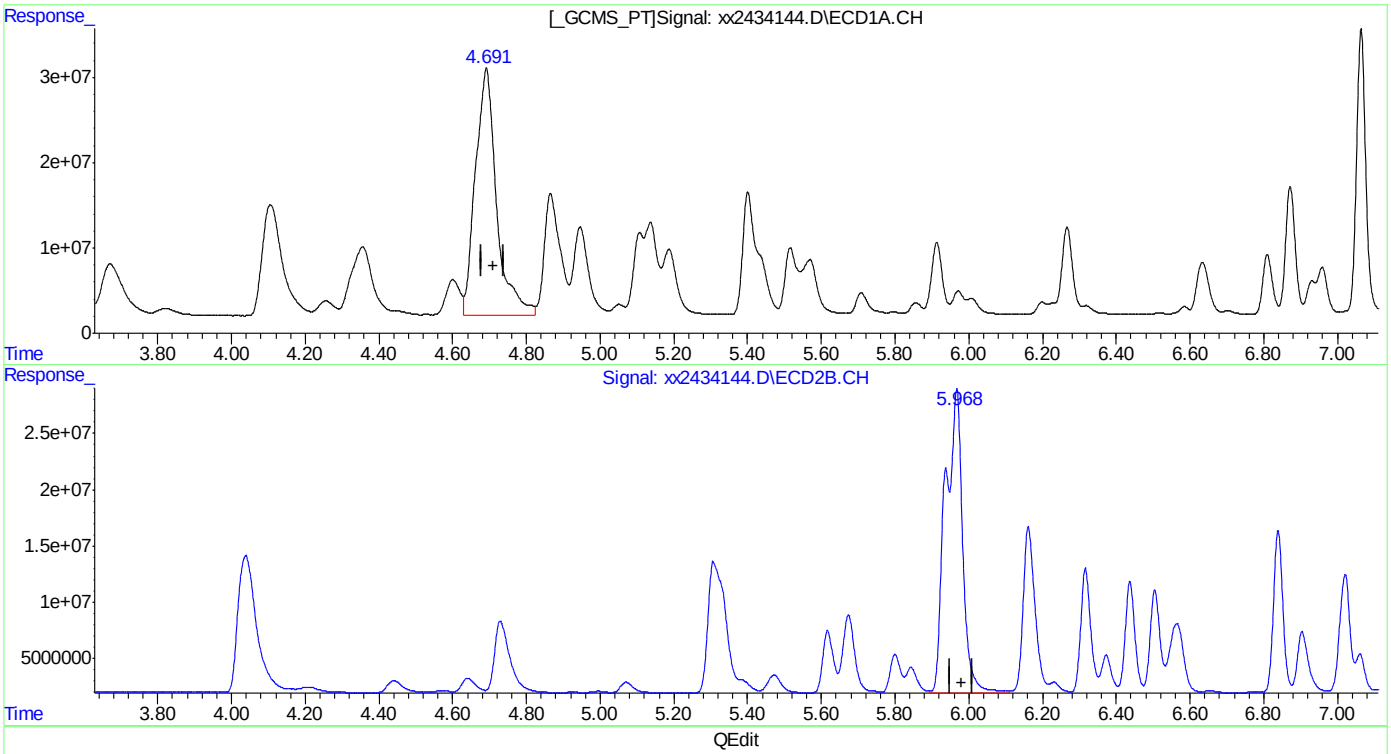
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:42:09 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.691min 818.639PPB
response 1161225621

(43) AR1016-C #2
5.968min 967.193PPB m
response 884819285

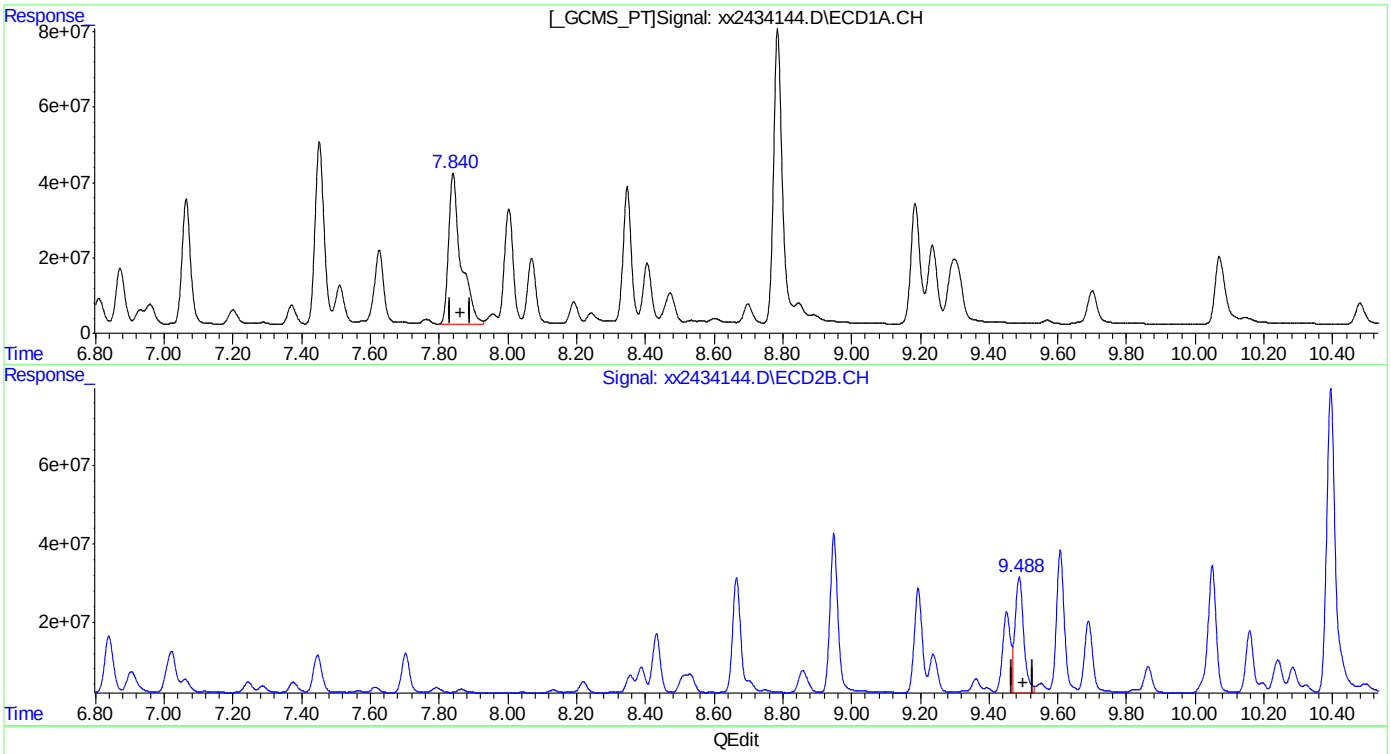
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:42:09 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.841min 663.164PPB
response 1002193873

(46) AR1260-A #2
9.488min 514.095PPB
response 536173384

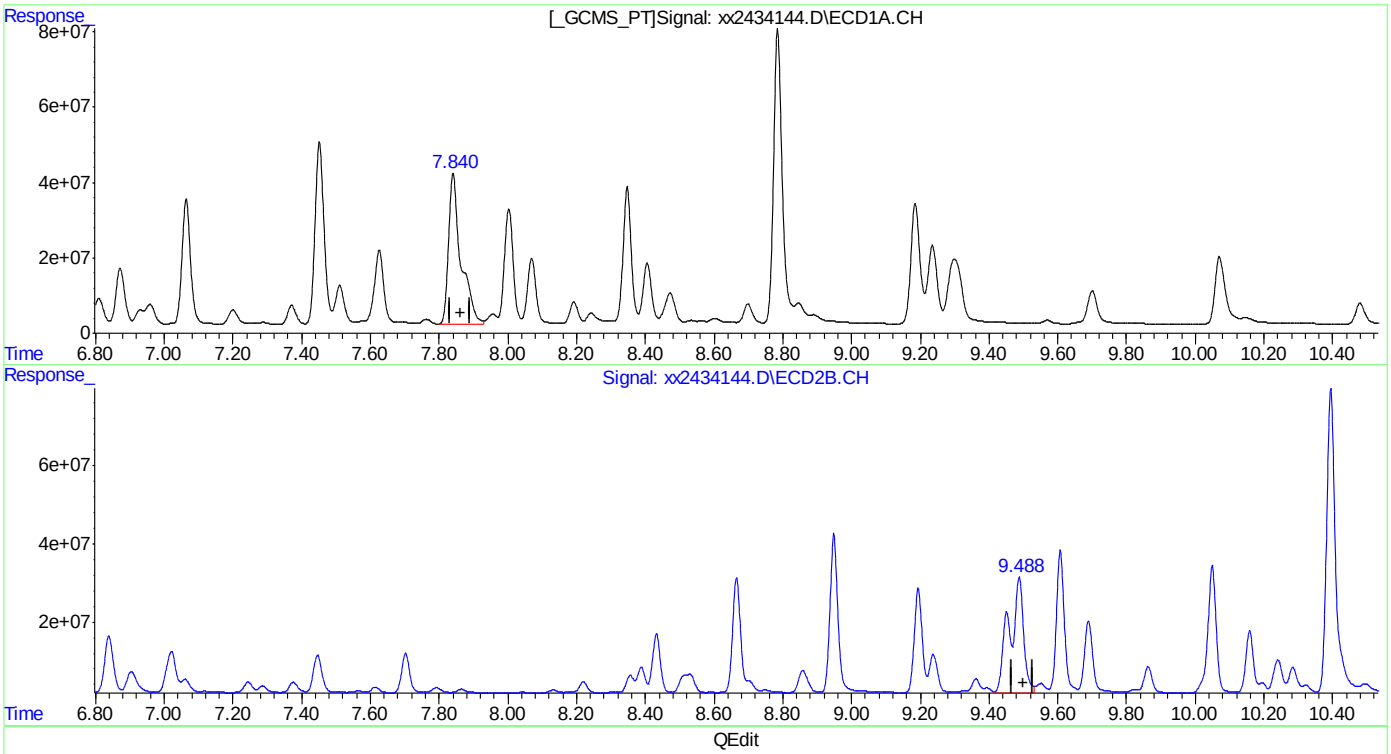
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:42:39 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:42:09 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.841min 663.164PPB
response 1002193873

(46) AR1260-A #2
9.488min 828.446PPB m
response 864023639

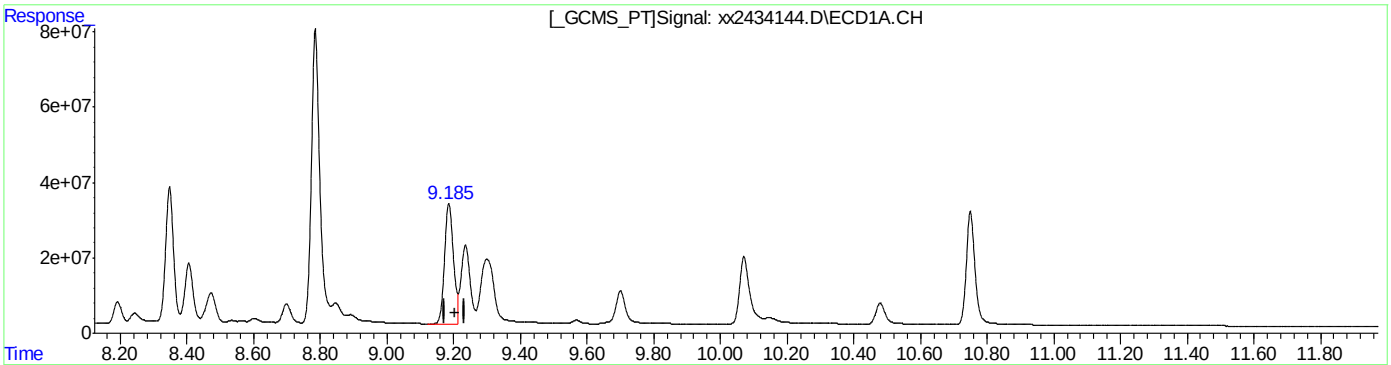
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:42:52 2019

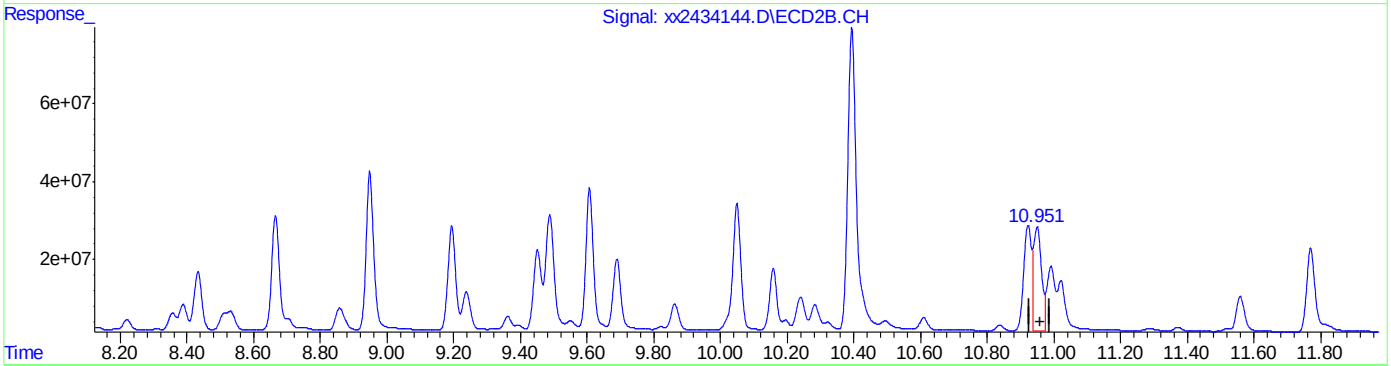
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:42:09 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E
9.185min 339.852PPB
response 594830070

(50) AR1260-E #2
10.951min 342.320PPB
response 450360633

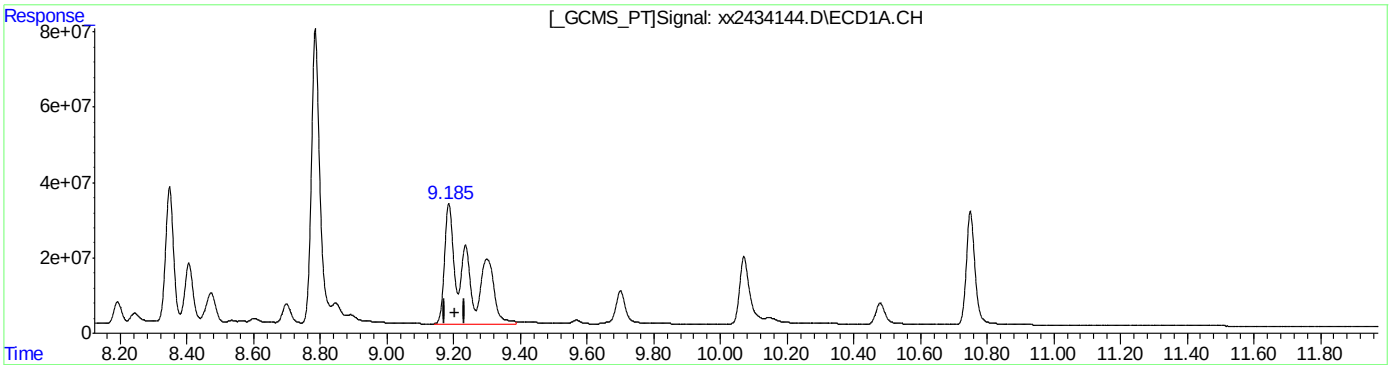
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:42:56 2019

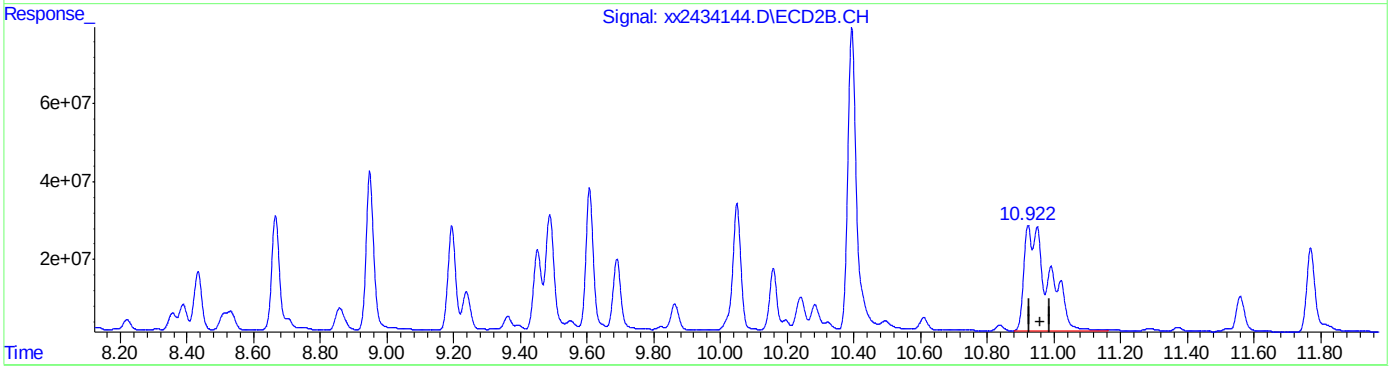
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434144.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:10 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:42:09 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E
9.185min 850.917PPB m
response 1489329970

(50) AR1260-E #2
10.922min 1061.530PPB m
response 1396563671

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:44:33 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.264f	4.037	1092.6E6	862.2E6	58.461	68.063
	Spiked Amount 40.000			Recovery	=	146.15%	170.16%
51)	S Decachlor...	10.748f	12.644	1131.3E6	856.1E6	61.156	72.887
	Spiked Amount 40.000			Recovery	=	152.89%	182.22%
	Target Compounds						
41)	AR1016-A	3.672f	4.731f	538.4E6	361.3E6	1546.662	1853.366
42)	AR1016-B	4.105f	5.307f	983.6E6	756.2E6	1650.998	1795.716
43)	AR1016-C	4.692f	5.968	2367.2E6	1751.9E6	1668.812	1914.984m
44)	AR1016-D	4.864f	6.162	852.8E6	646.7E6	1628.985	1902.265
45)	AR1016-E	5.401f	6.839	881.3E6	507.9E6	1582.027	1881.670
46)	AR1260-A	7.840f	9.488	2115.5E6	1740.5E6	1399.856	1668.803m
47)	AR1260-B	8.001f	9.608	1157.7E6	1180.4E6	1768.920	2081.264
48)	AR1260-C	8.346f	10.048	1308.7E6	1128.0E6	1751.452	1997.178
49)	AR1260-D	8.784f	10.395	2893.9E6	2877.5E6	1620.791	2013.338
50)	AR1260-E	9.182f	10.921f	3164.0E6	2798.2E6	1807.728m	2126.925m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

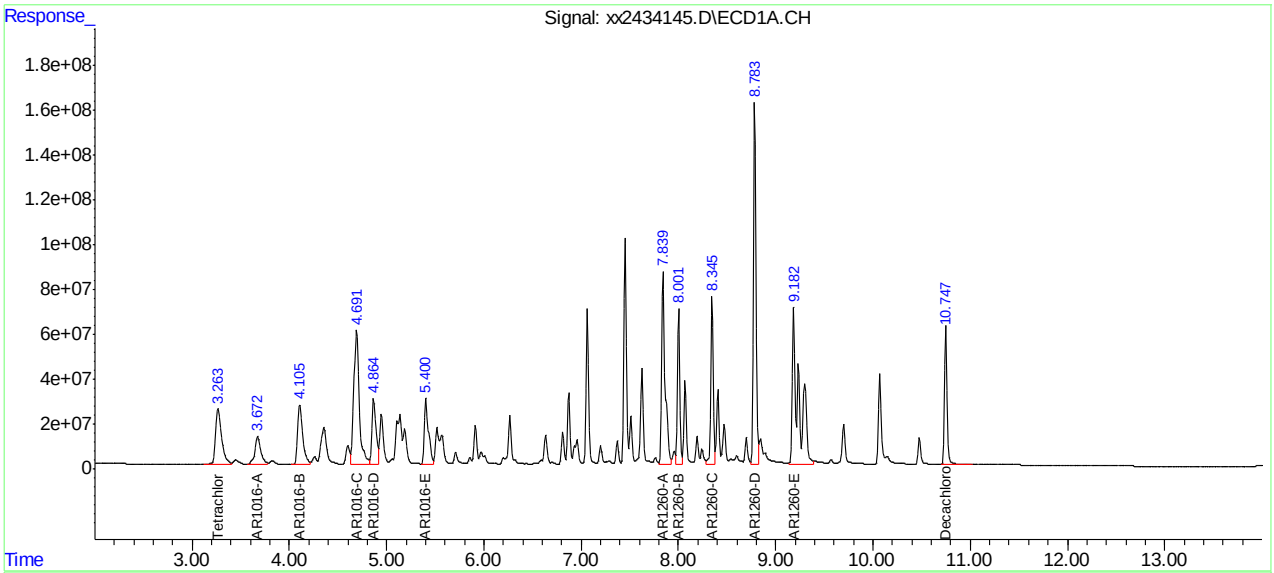
11.6.22 11

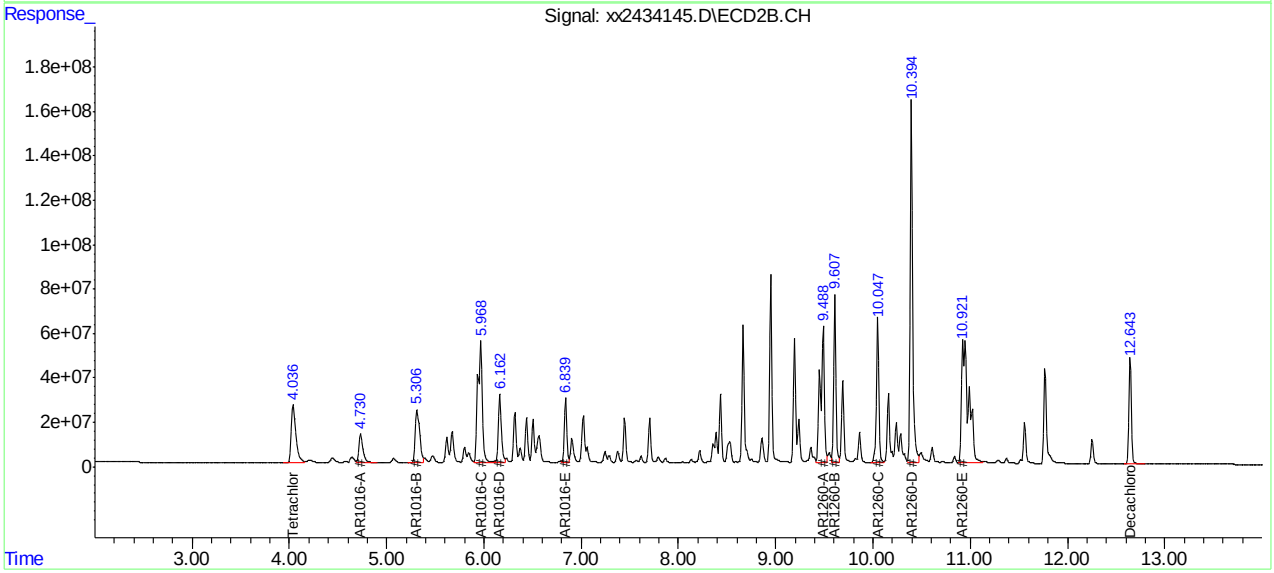
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:44:33 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434145.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 16:28	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

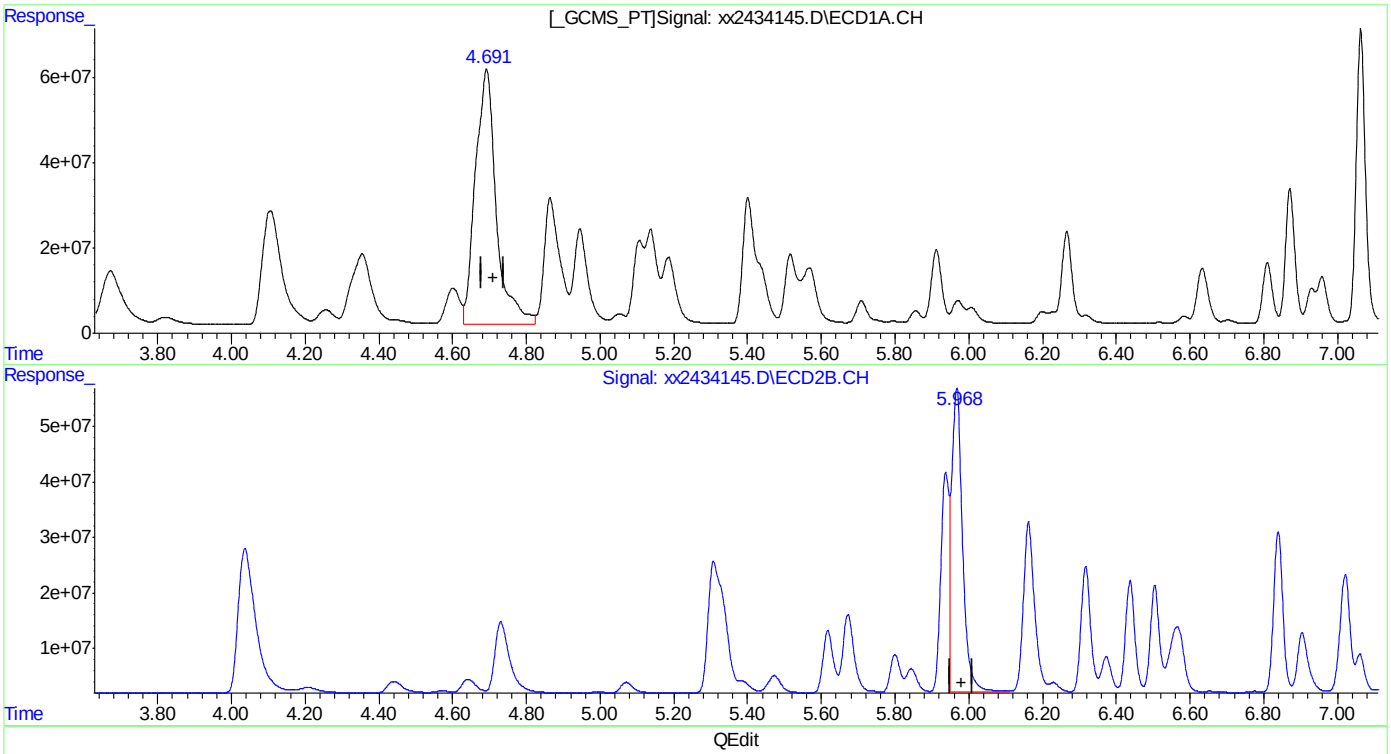
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-E		1	9.18	Split peak
AR1260-A		2	9.49	Split peak
AR1260-E		2	10.92	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.692min 1668.812PPB
response 2367182072

(43) AR1016-C #2
5.968min 1250.860PPB
response 1144326907

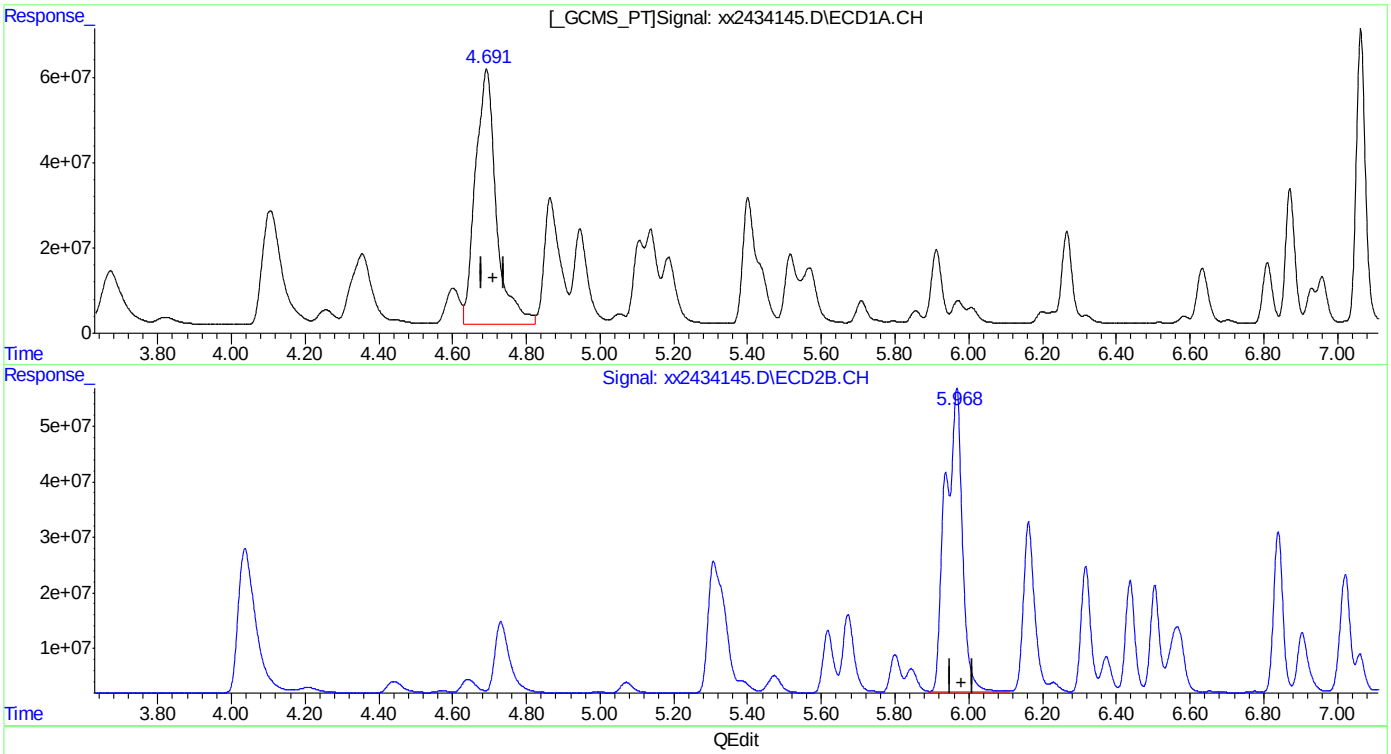
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:43:56 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.692min 1668.812PPB
response 2367182072

(43) AR1016-C #2
5.968min 1914.984PPB m
response 1751888137

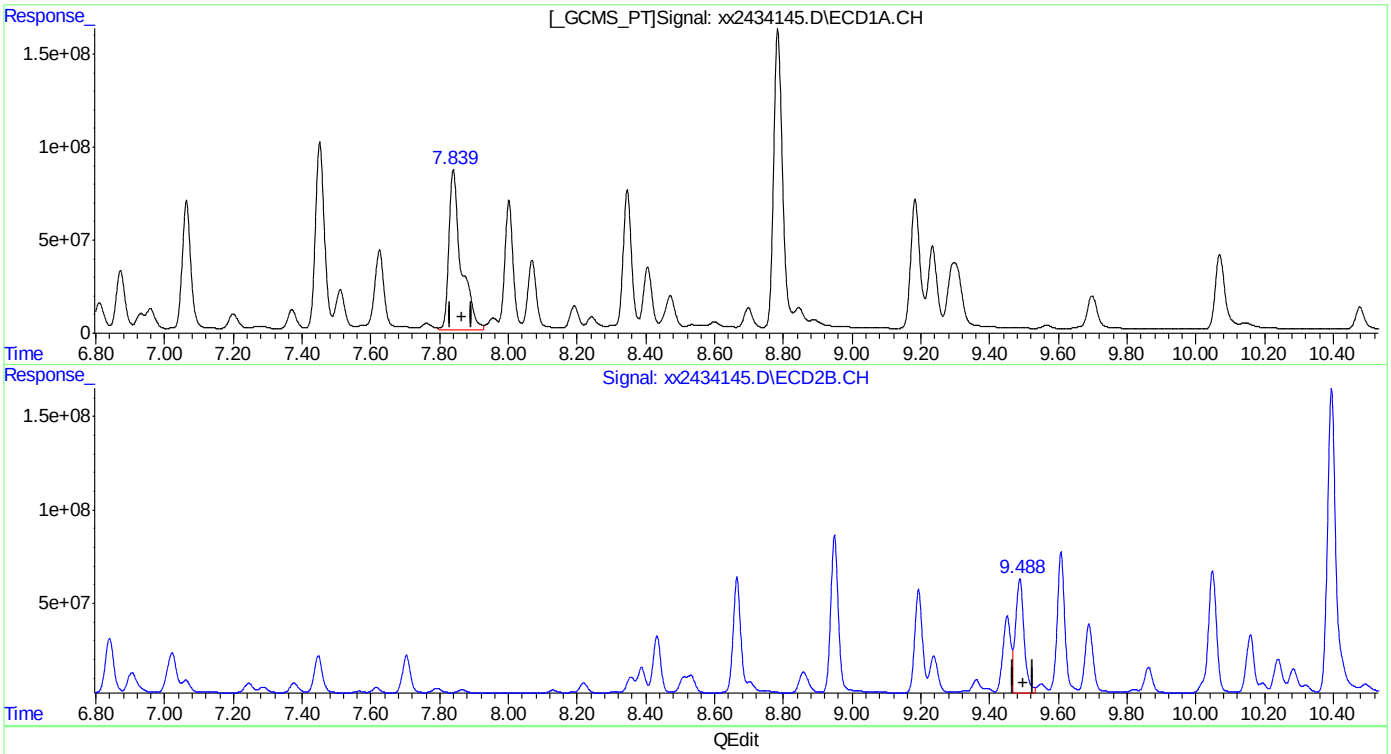
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.840min 1399.856PPB
response 2115505424

(46) AR1260-A #2
9.488min 1037.317PPB
response 1081864442

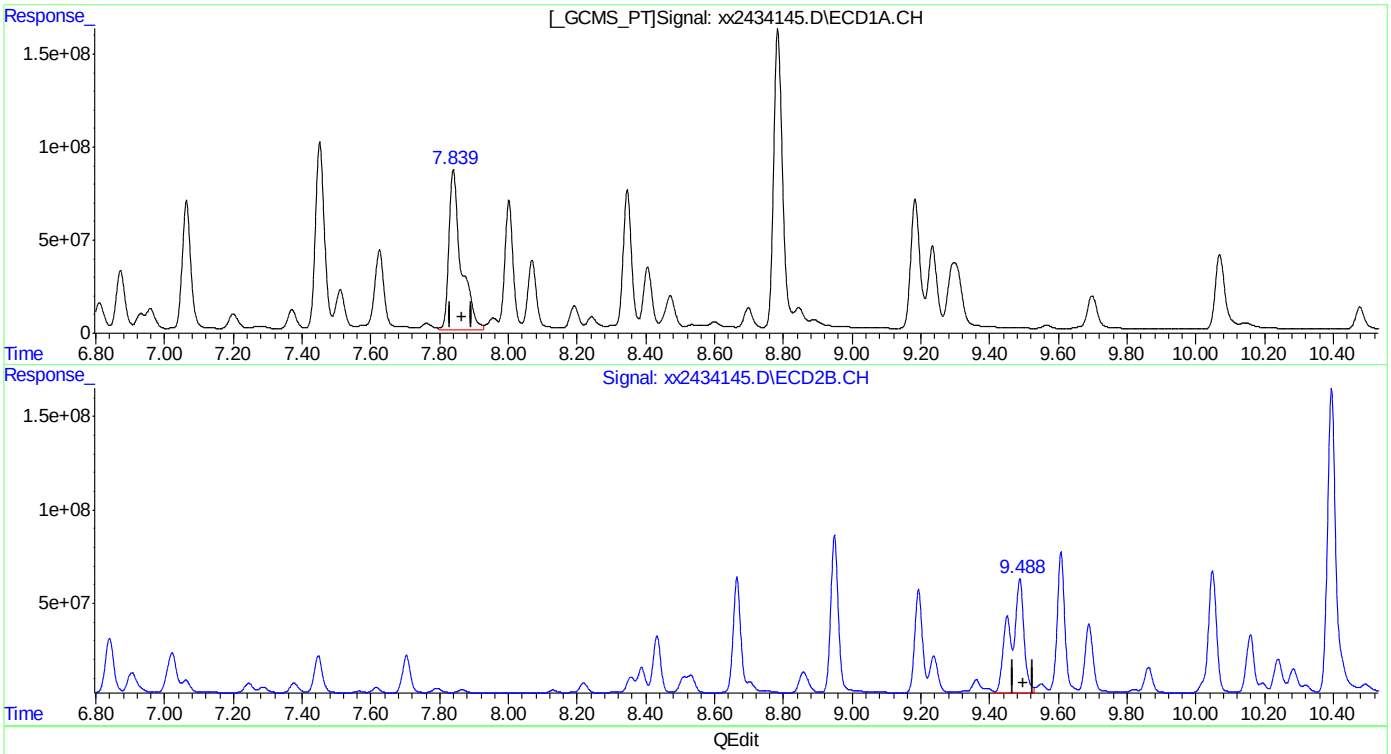
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:44:08 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.840min 1399.856PPB
response 2115505424

(46) AR1260-A #2
9.488min 1668.803PPB m
response 1740469496

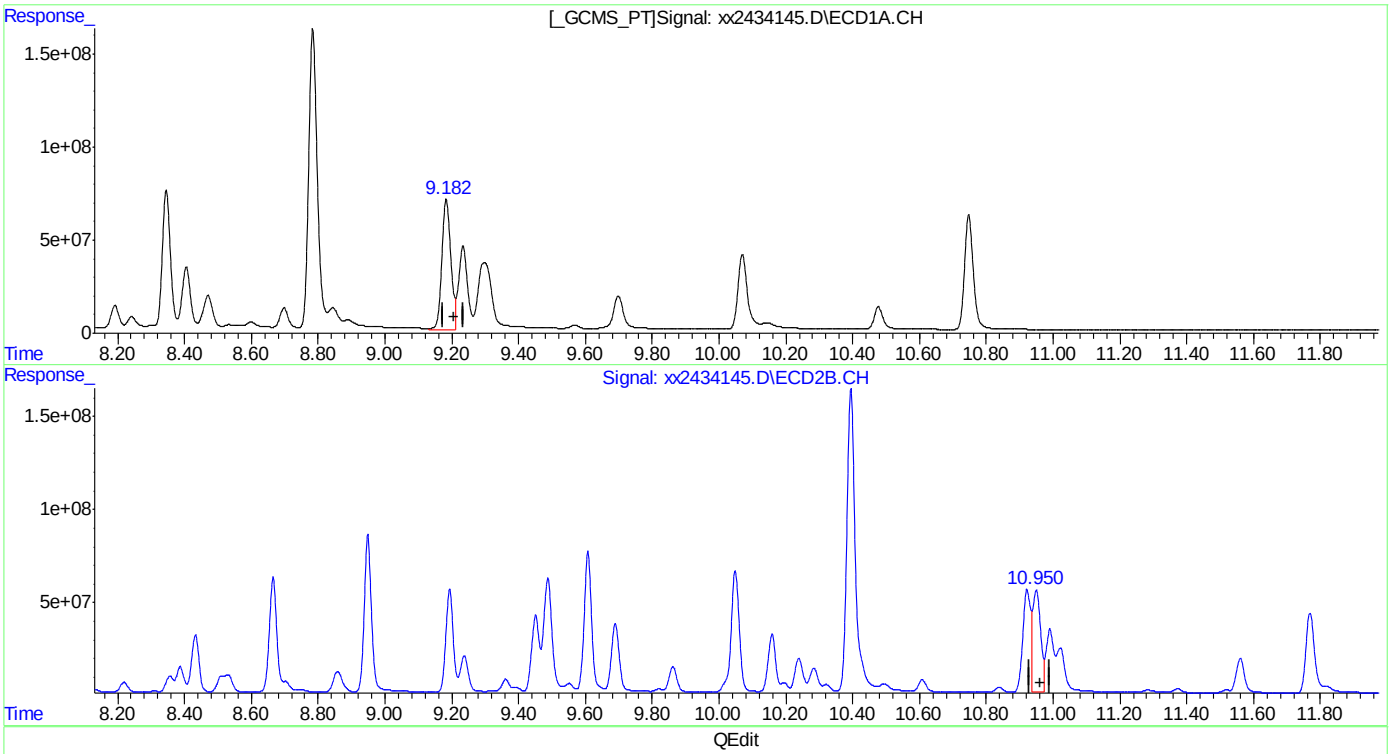
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.183min 745.308PPB
response 1304485489

(50) AR1260-E #2
10.950min 695.518PPB
response 915033018

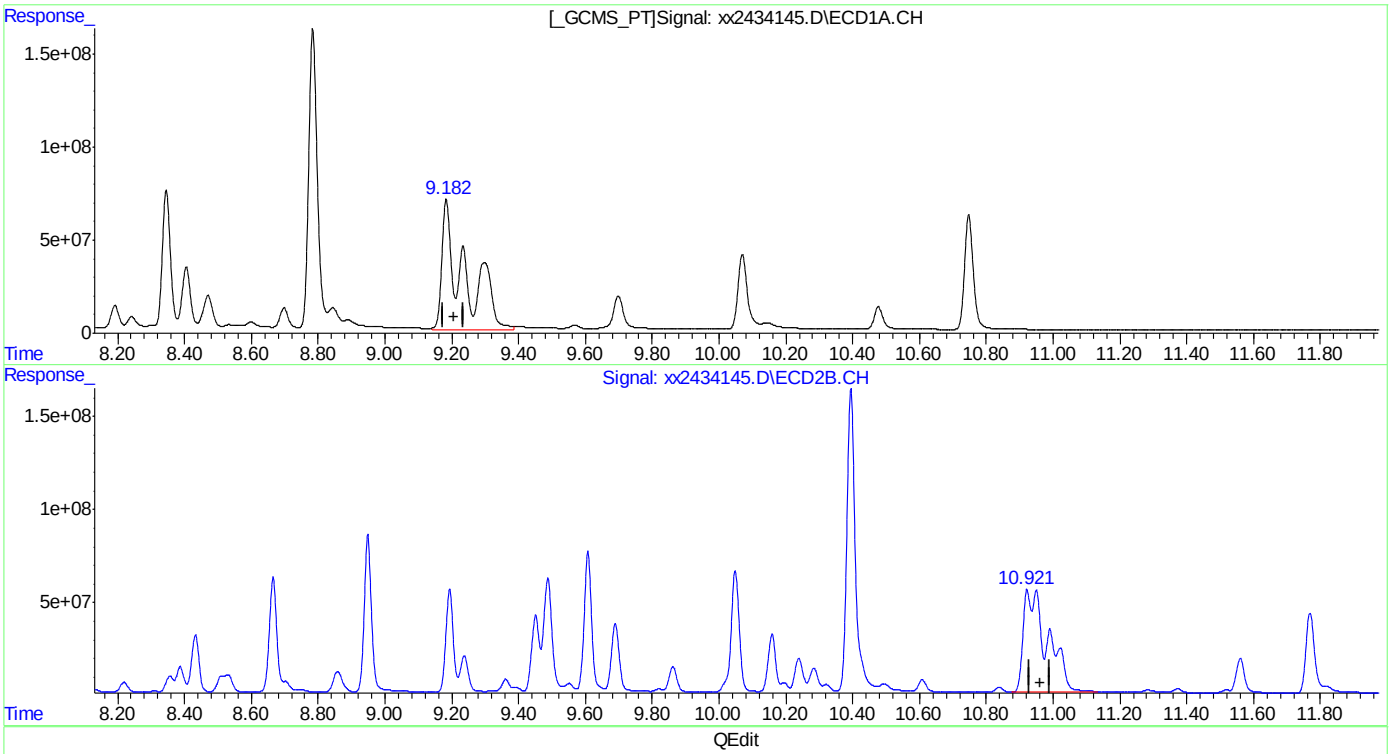
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:44:21 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434145.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:28 pm
Operator : summerk
Sample : ic6666-2000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:43:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.182min 1807.728PPB m
response 3164002737

(50) AR1260-E #2
10.921min 2126.925PPB m
response 2798211359

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:46:33 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265f	4.037	1661.4E6	1301.0E6	88.893	102.706
	Spiked Amount 40.000			Recovery	=	222.23%	256.76%
51)	S Decachlor...	10.749f	12.646	1715.5E6	1289.3E6	92.743	109.765
	Spiked Amount 40.000			Recovery	=	231.86%	274.41%
	Target Compounds						
41)	AR1016-A	3.670f	4.731f	795.5E6	535.3E6	2285.296	2746.236
42)	AR1016-B	4.108f	5.308f	1457.6E6	1127.7E6	2446.635	2677.906
43)	AR1016-C	4.692f	5.967	3542.8E6	2652.5E6	2497.626	2899.484m
44)	AR1016-D	4.867f	6.162f	1274.7E6	983.5E6	2434.827	2893.228
45)	AR1016-E	5.401f	6.840	1315.6E6	767.3E6	2361.618	2843.042
46)	AR1260-A	7.841f	9.488	3204.8E6	2634.9E6	2120.677	2526.439m
47)	AR1260-B	8.002f	9.608	1731.3E6	1761.9E6	2645.415	3106.687
48)	AR1260-C	8.347f	10.050	1970.5E6	1698.9E6	2637.069	3008.141
49)	AR1260-D	8.786f	10.394	4423.4E6	4304.5E6	2477.429	3011.799
50)	AR1260-E	9.184f	10.949	4794.4E6	4280.4E6	2739.215m	3253.511m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

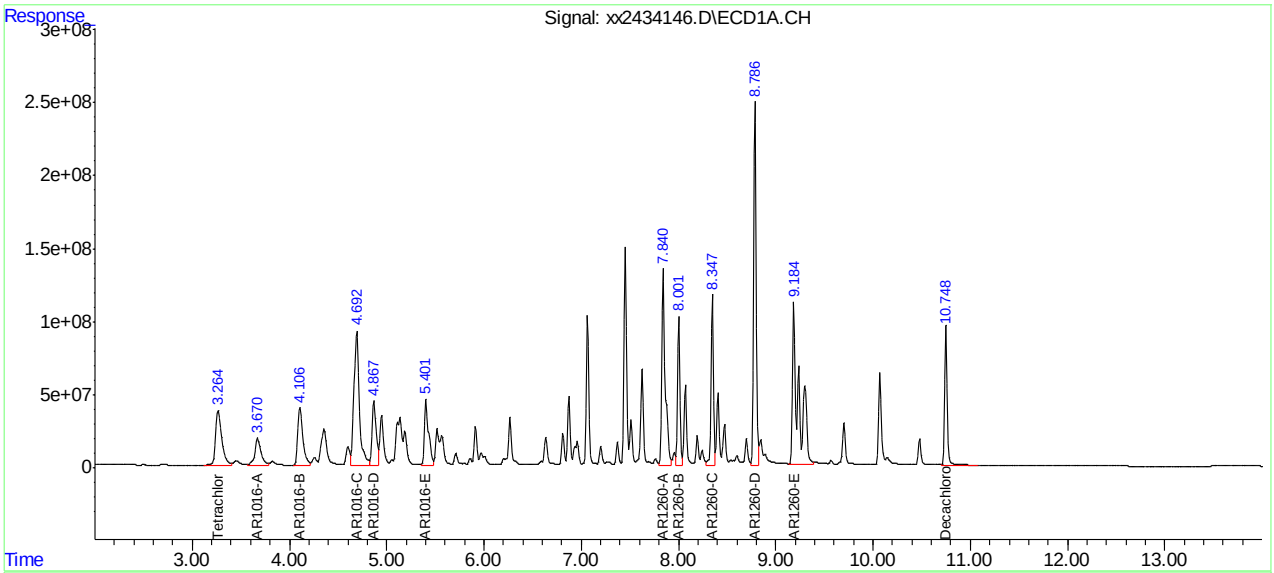
11.6.23
11

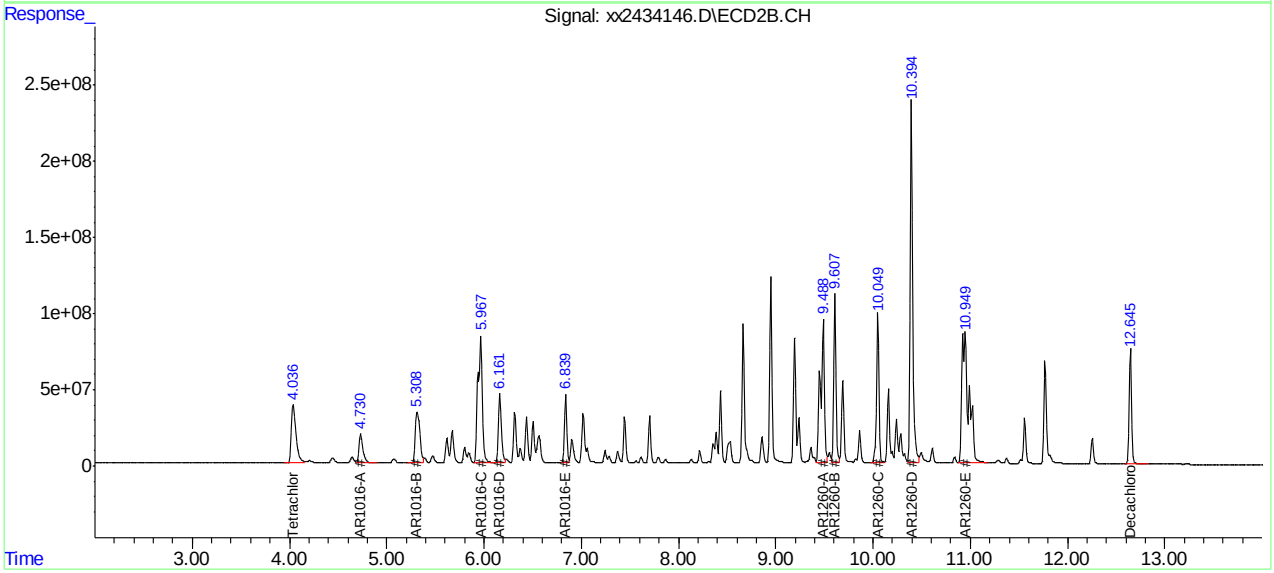
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:46:33 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434146.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 16:46	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

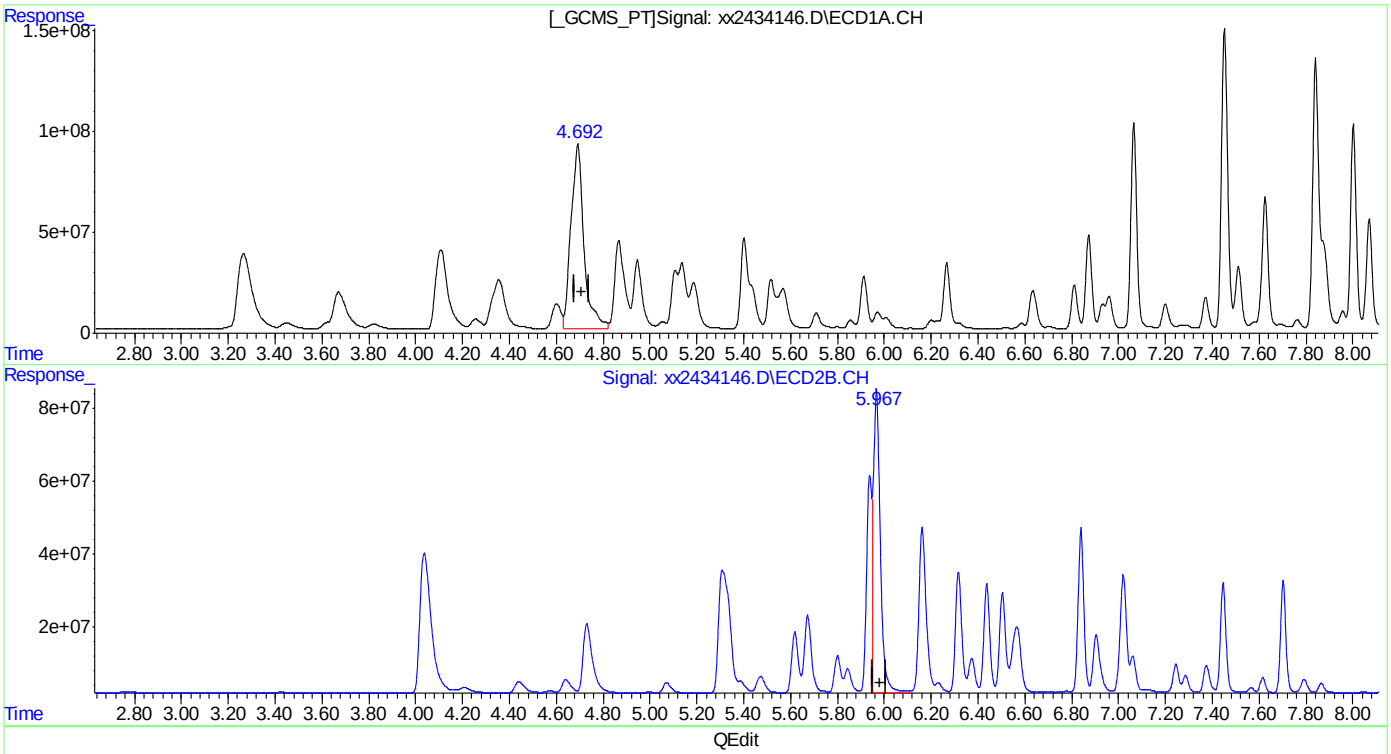
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-E		1	9.18	Split peak
AR1260-A		2	9.49	Split peak
AR1260-E		2	10.95	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:45:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.692min 2497.626PPB
response 3542840364

(43) AR1016-C #2
5.967min 1921.906PPB
response 1758221229

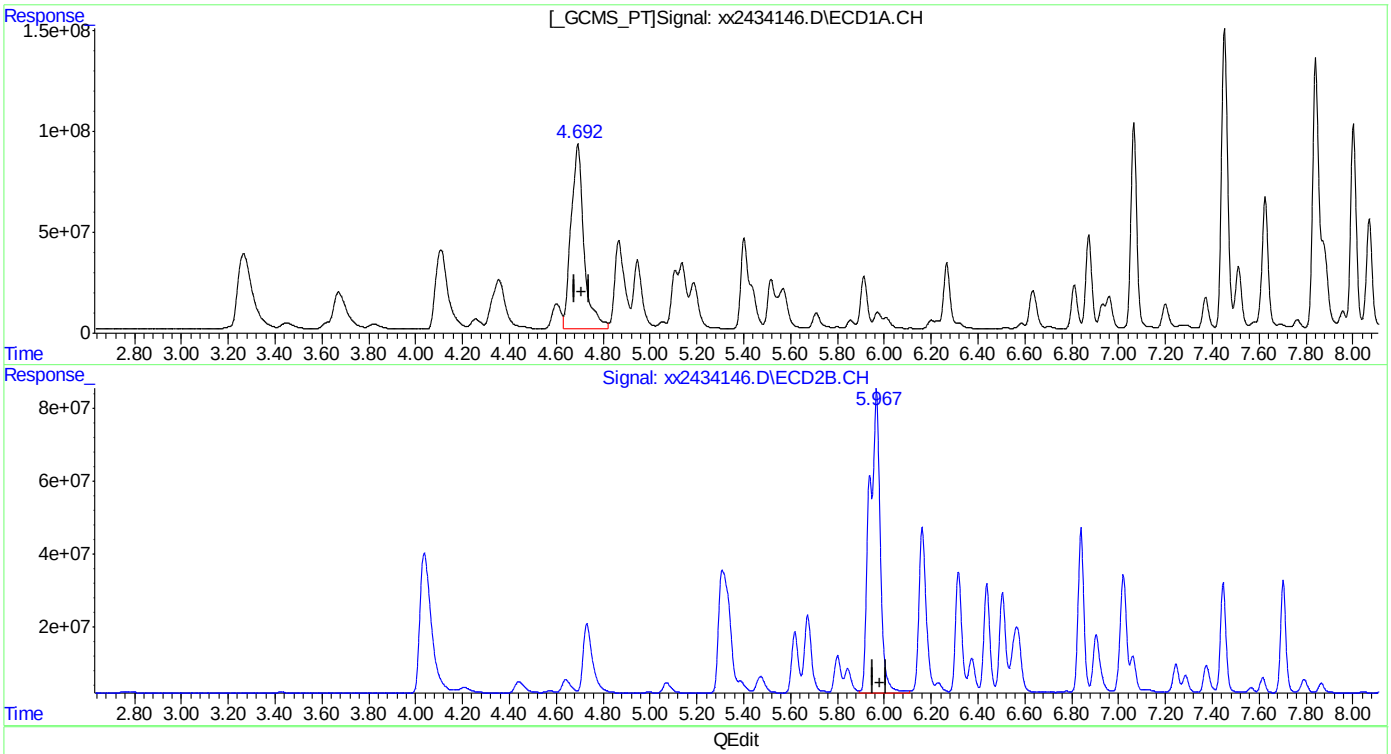
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:45:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.692min 2497.626PPB
response 3542840364

(43) AR1016-C #2
5.967min 2899.484PPB m
response 2652540620

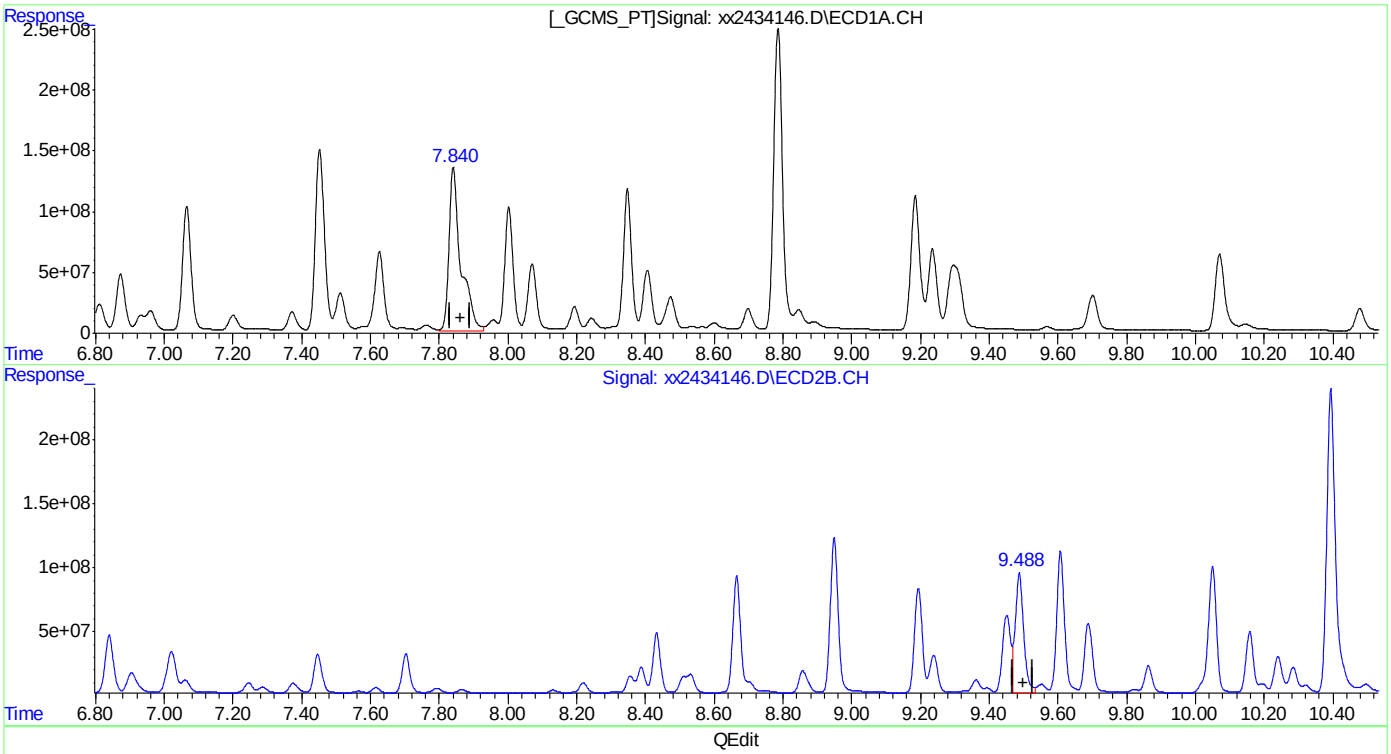
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:45:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(46) AR1260-A
7.841min 2120.677PPB
response 3204832105

(46) AR1260-A #2
9.488min 1561.875PPB
response 1628950374

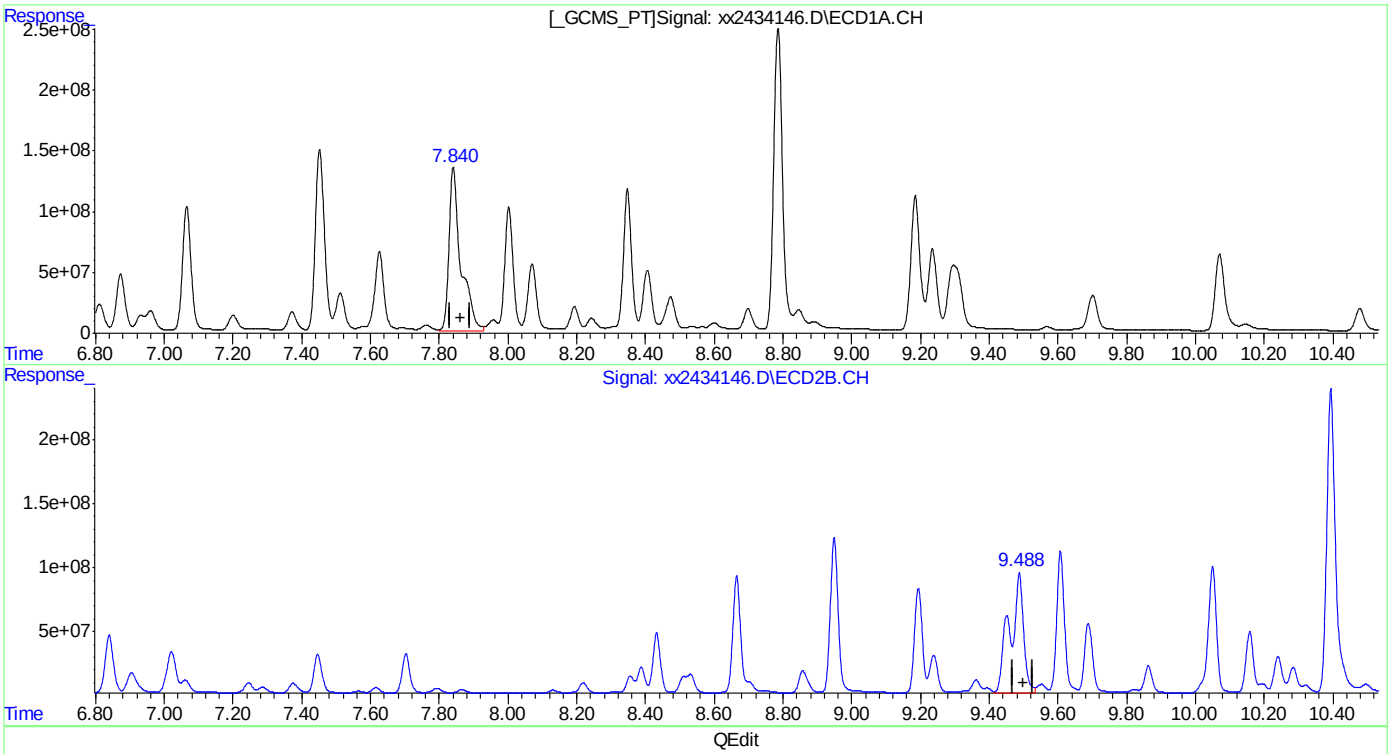
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:45:59 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:45:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.841min 2120.677PPB
response 3204832105

(46) AR1260-A #2
9.488min 2526.439PPB m
response 2634936898

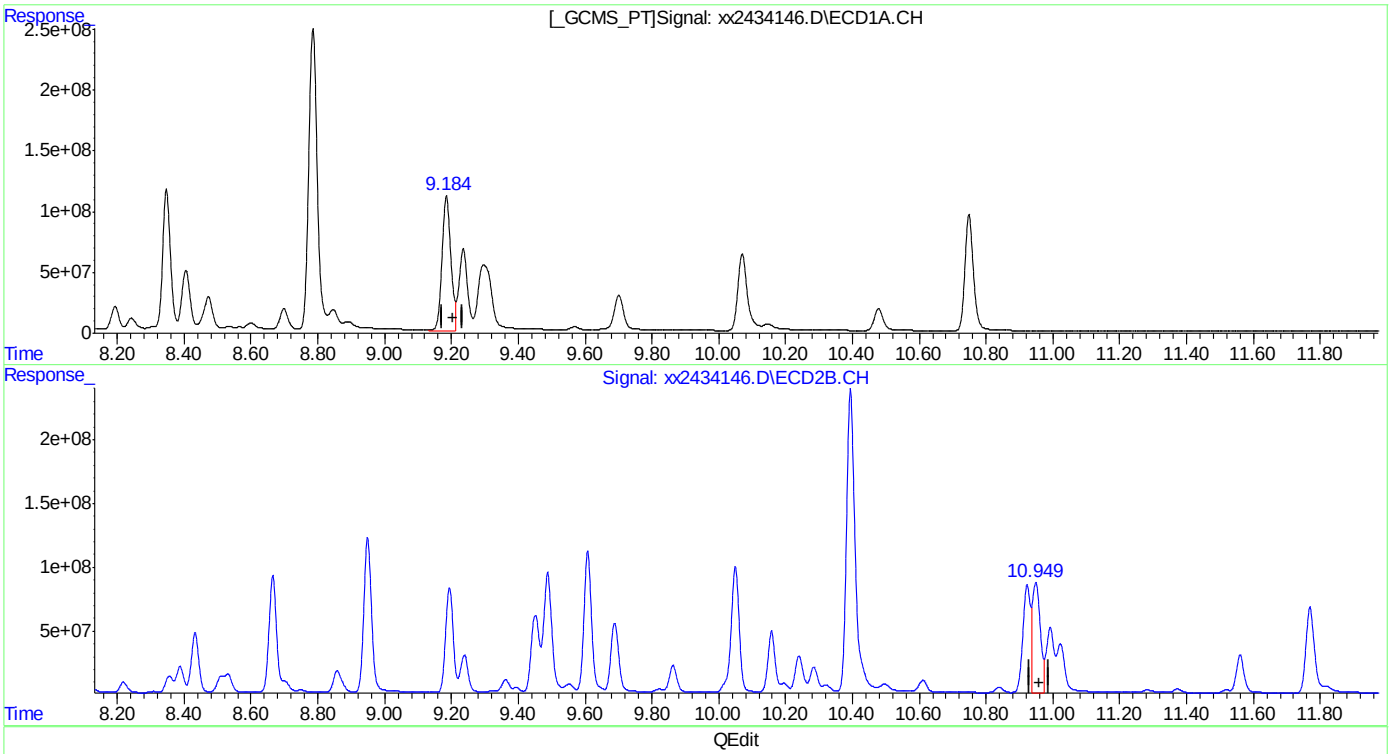
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:45:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.185min 1162.697PPB
response 2035026480

(50) AR1260-E #2
10.949min 1122.512PPB
response 1476791130

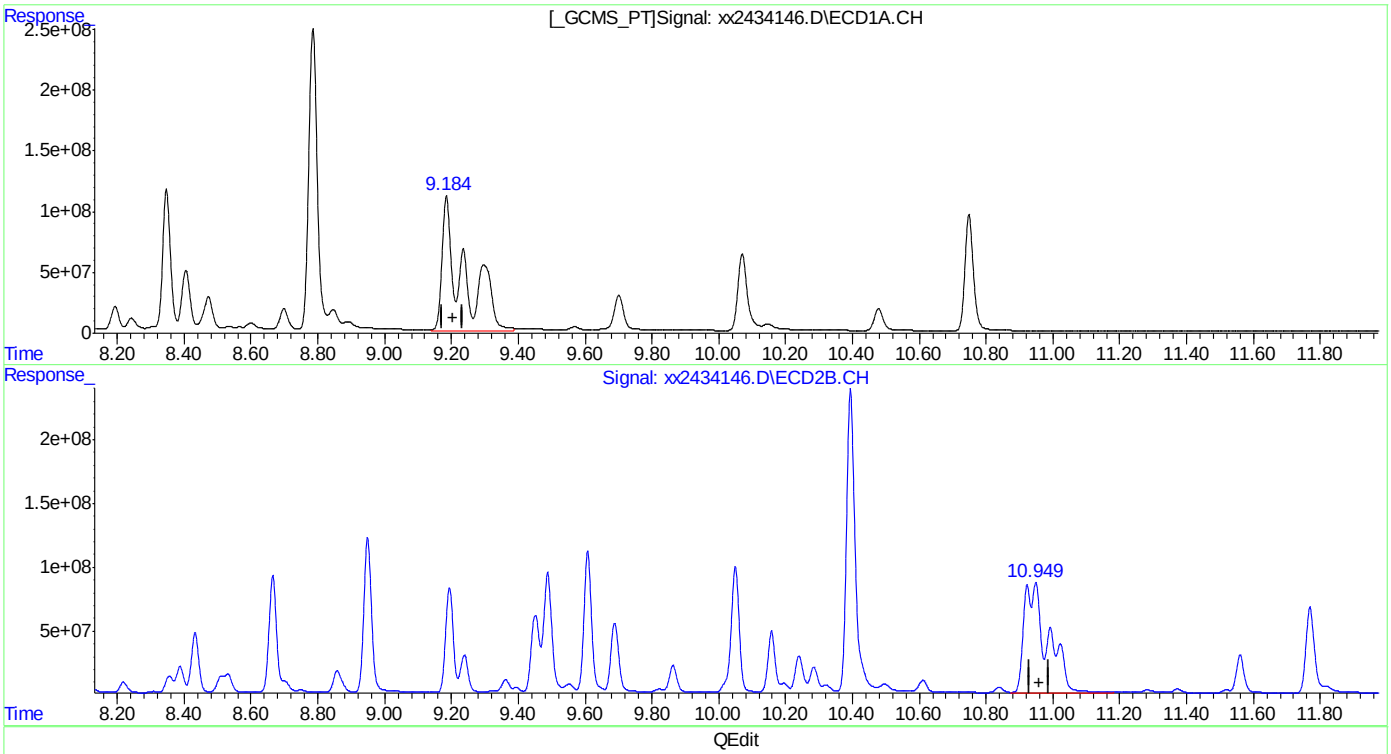
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:46:12 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434146.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 4:46 pm
Operator : summerk
Sample : ic6666-3000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:45:21 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Tue Mar 05 09:28:51 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.184min 2739.215PPB m
response 4794350125

(50) AR1260-E #2
10.949min 3253.511PPB m
response 4280363097

(+) = Expected Retention Time

XX2434147.D

Manual Integrations APPROVED
(compounds with "m" flag)
Gwendolyn Burns
04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:53:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.264	4.036	709.6E6	549.6E6	53.899	51.644	
	Spiked Amount 40.000			Recovery	=	134.75%	129.11%	
51)	S Decachlor...	10.753	12.646	765.3E6	583.9E6	54.474	54.252	
	Spiked Amount 40.000			Recovery	=	136.19%	135.63%	
	Target Compounds							
2)	AR1221-A	2.702f	3.425	114.4E6	81989444	879.276	1110.328	#
3)	AR1221-B	3.450	4.439	158.4E6	124.7E6	768.609	922.800	
4)	AR1221-C	3.670	4.728	493.9E6	308.2E6	797.771	948.486	
5)	AR1221-D	4.106	5.300	75173487	61360660	728.254m	928.644	#
6)	AR1221-E	4.259	5.390	82909603	36652426	728.741m	752.545	
24)	AR1254-A	5.912	7.446	424.8E6	420.4E6	761.628	953.945	#
25)	AR1254-B	6.265	7.702	867.6E6	460.9E6	730.593m	924.670	#
26)	AR1254-C	6.642	8.218	482.4E6	376.8E6	734.728	924.647	#
27)	AR1254-D	6.810	8.387	856.7E6	720.8E6	719.020	905.692	#
28)	AR1254-E	7.198	8.702	529.3E6	551.9E6	603.534	901.422	#
29)	AR1254-F	7.454	9.192	604.3E6	571.4E6	798.899	872.103m	
30)	AR1254-G	7.841	9.487	855.8E6	749.3E6	722.582	955.112m	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

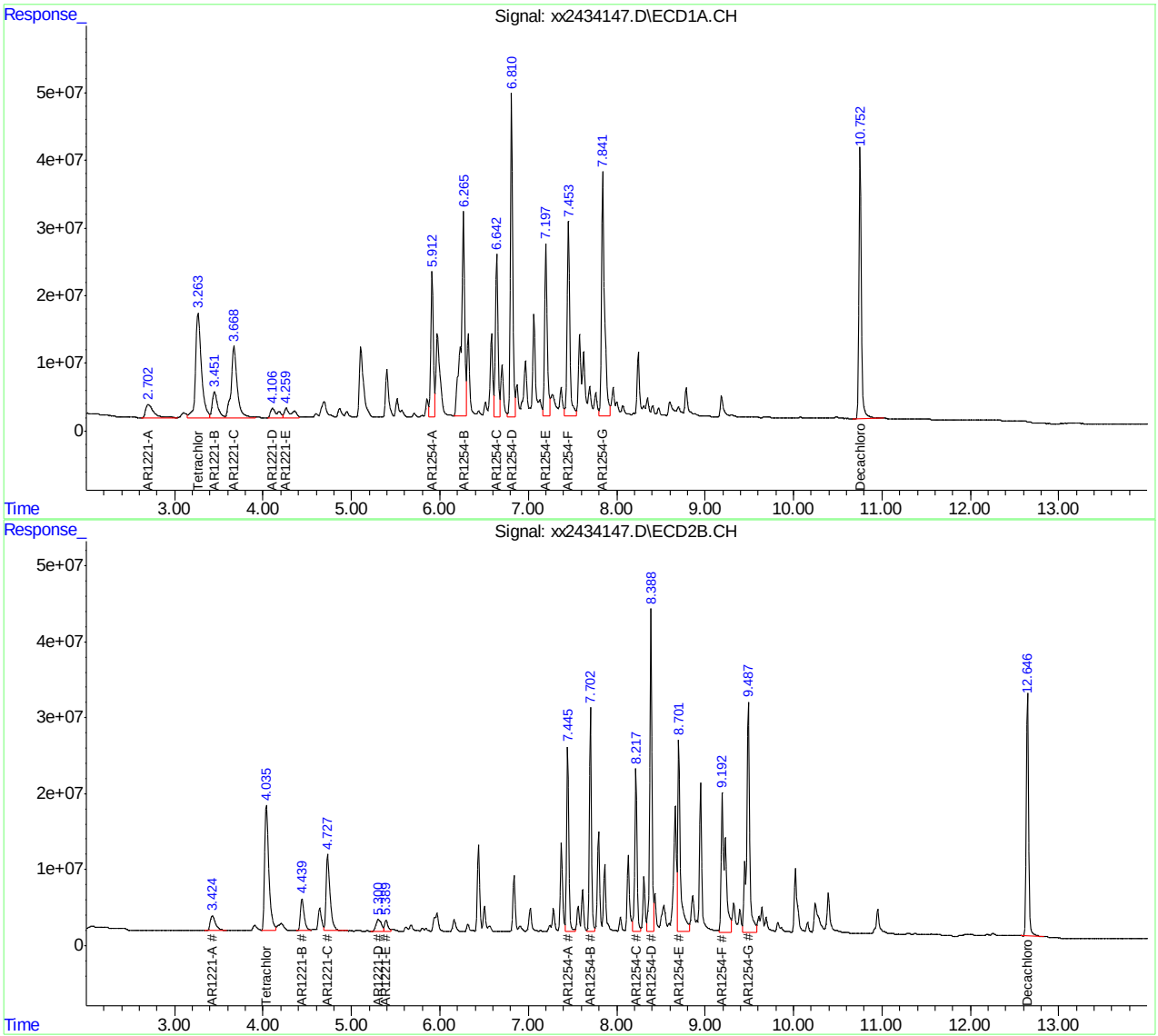
11.6.24
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:53:28 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



PCB6666.M Thu Apr 25 08:53:39 2019 Page: 2

11.6.24 11

Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434147.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 17:04	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

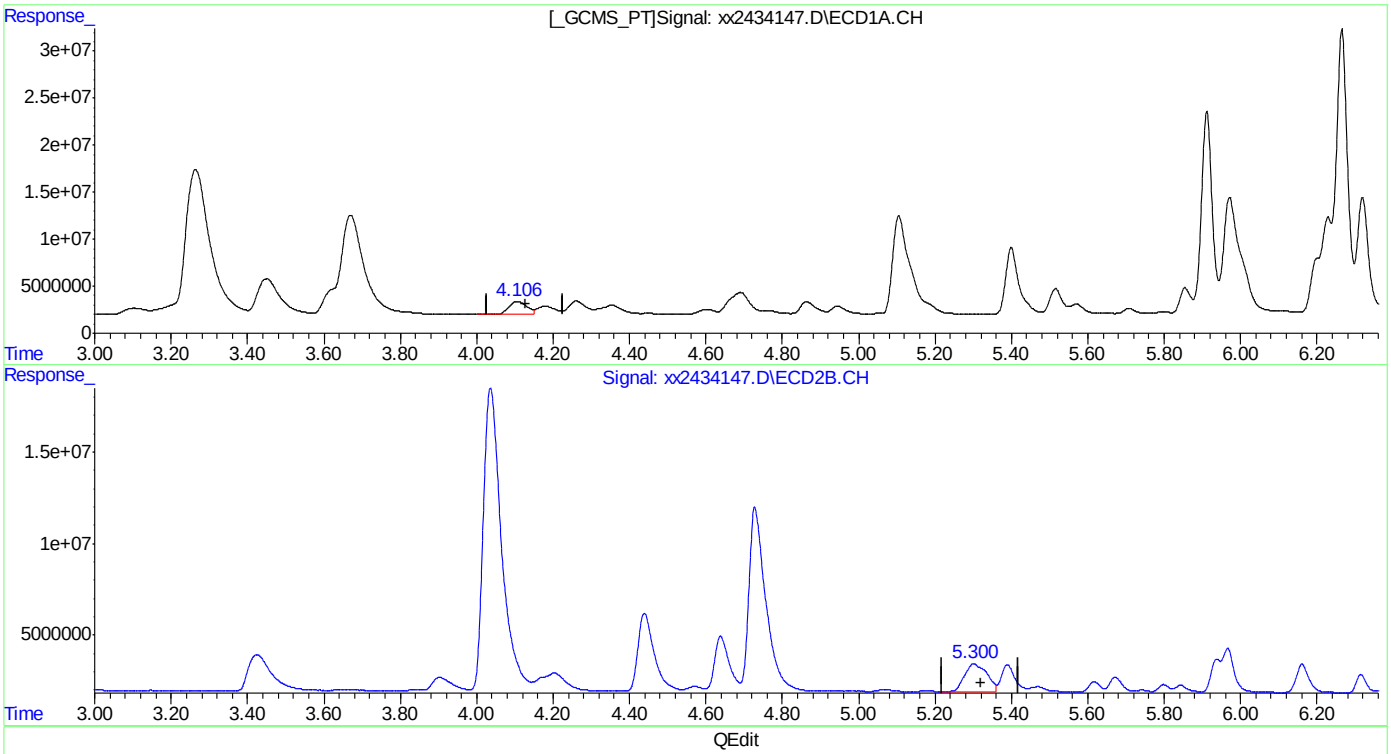
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	4.11	Split peak
AR1221-E		1	4.26	Split peak
AR1254-B		1	6.27	Split peak
AR1254-F		2	9.19	Split peak
Ar1254-G		2	9.49	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(5) AR1221-D
4.106min 449.965PPB
response 46447337

(5) AR1221-D #2
5.300min 928.644PPB
response 61360660

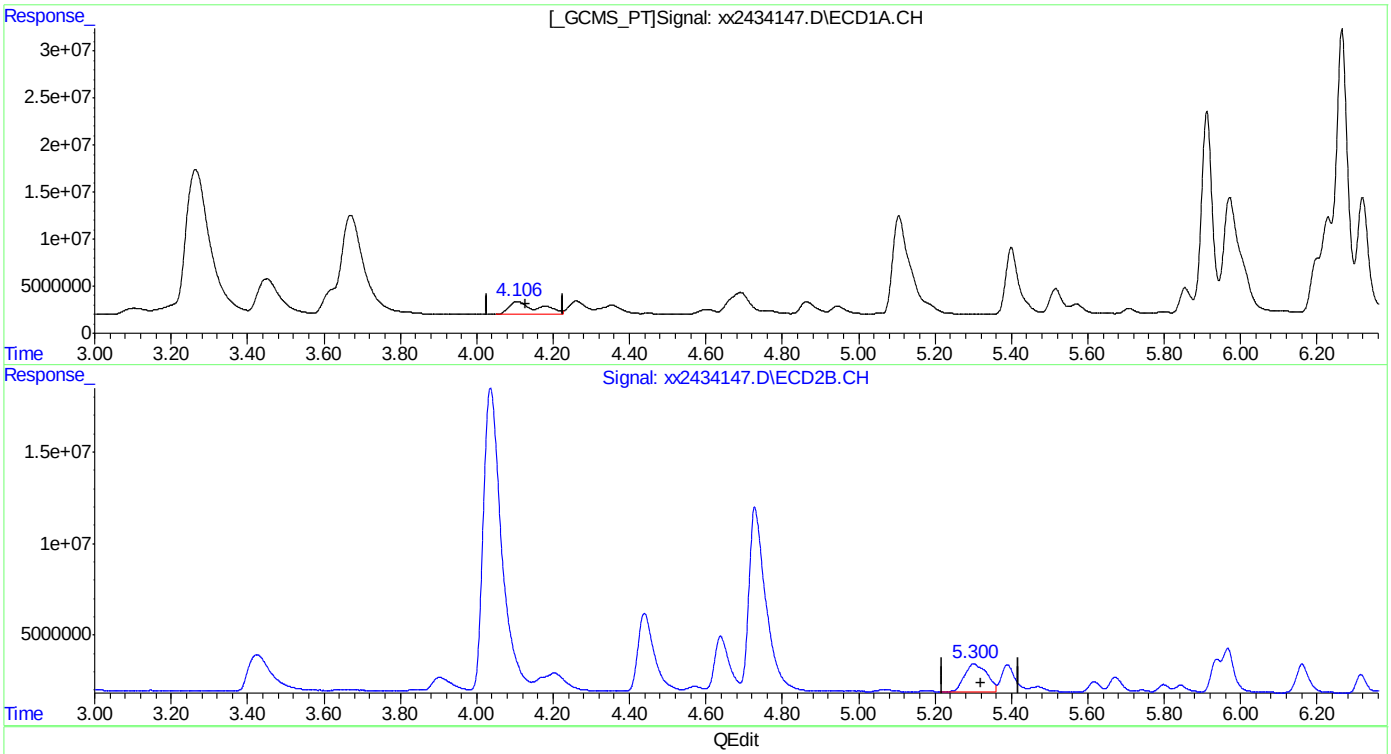
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:51:50 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(5) AR1221-D
4.106min 728.254PPB m
response 75173487

(5) AR1221-D #2
5.300min 928.644PPB
response 61360660

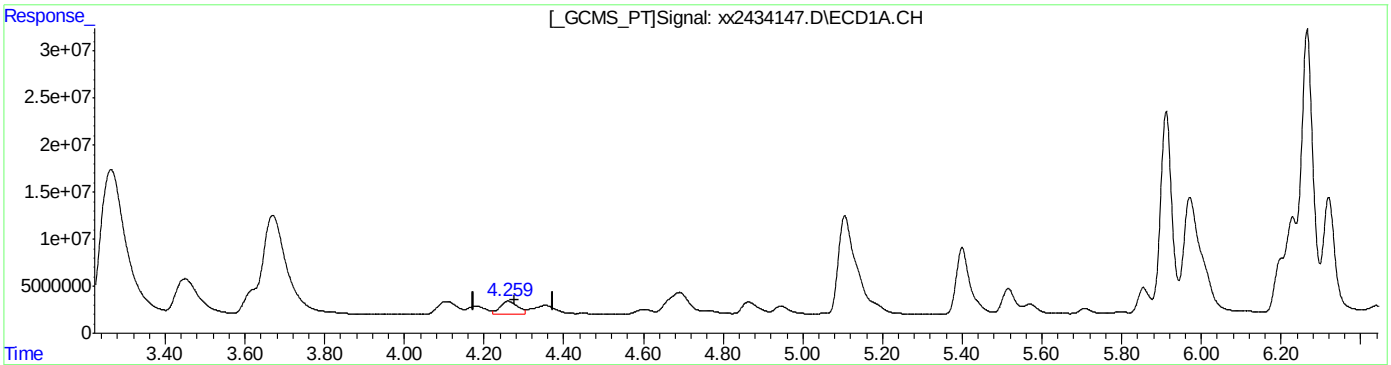
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:52:06 2019

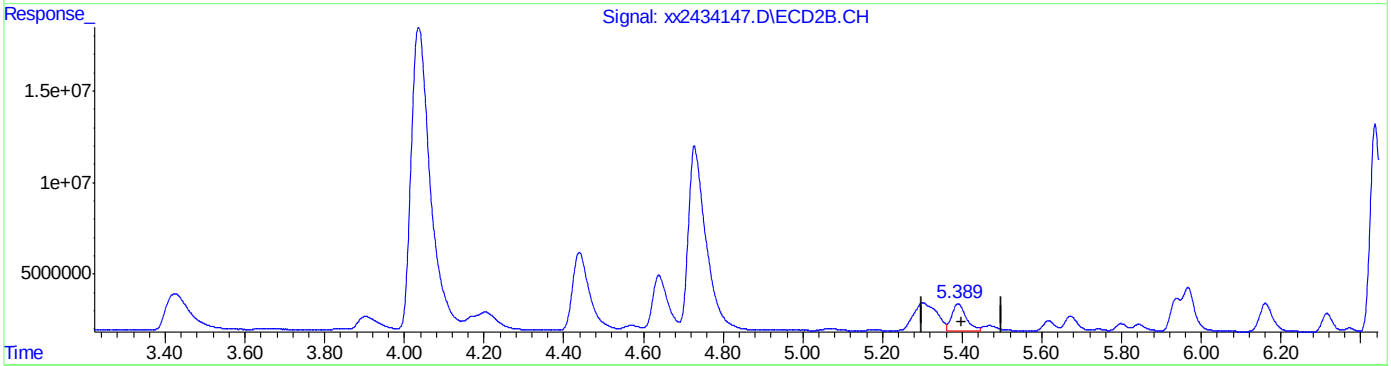
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(6) AR1221-E
4.260min 384.226PPB
response 43713816

(6) AR1221-E #2
5.390min 752.545PPB
response 36652426

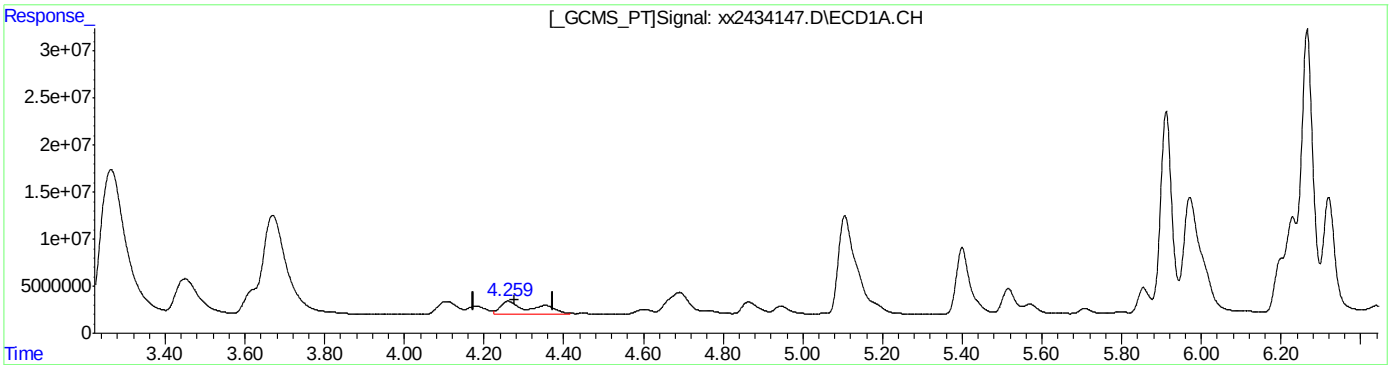
(+) = Expected Retention Time

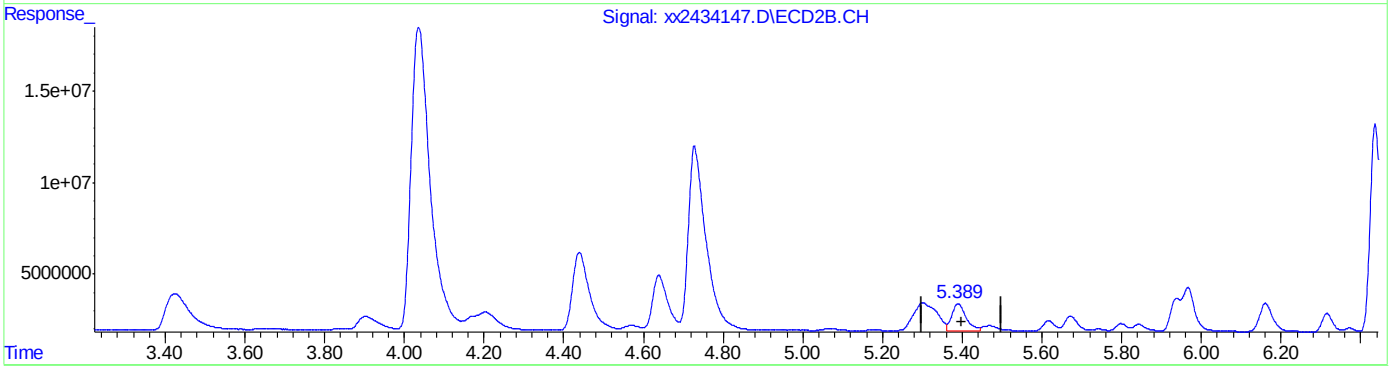
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(6) AR1221-E
4.259min 728.741PPB m
response 82909603

(6) AR1221-E #2
5.390min 752.545PPB
response 36652426

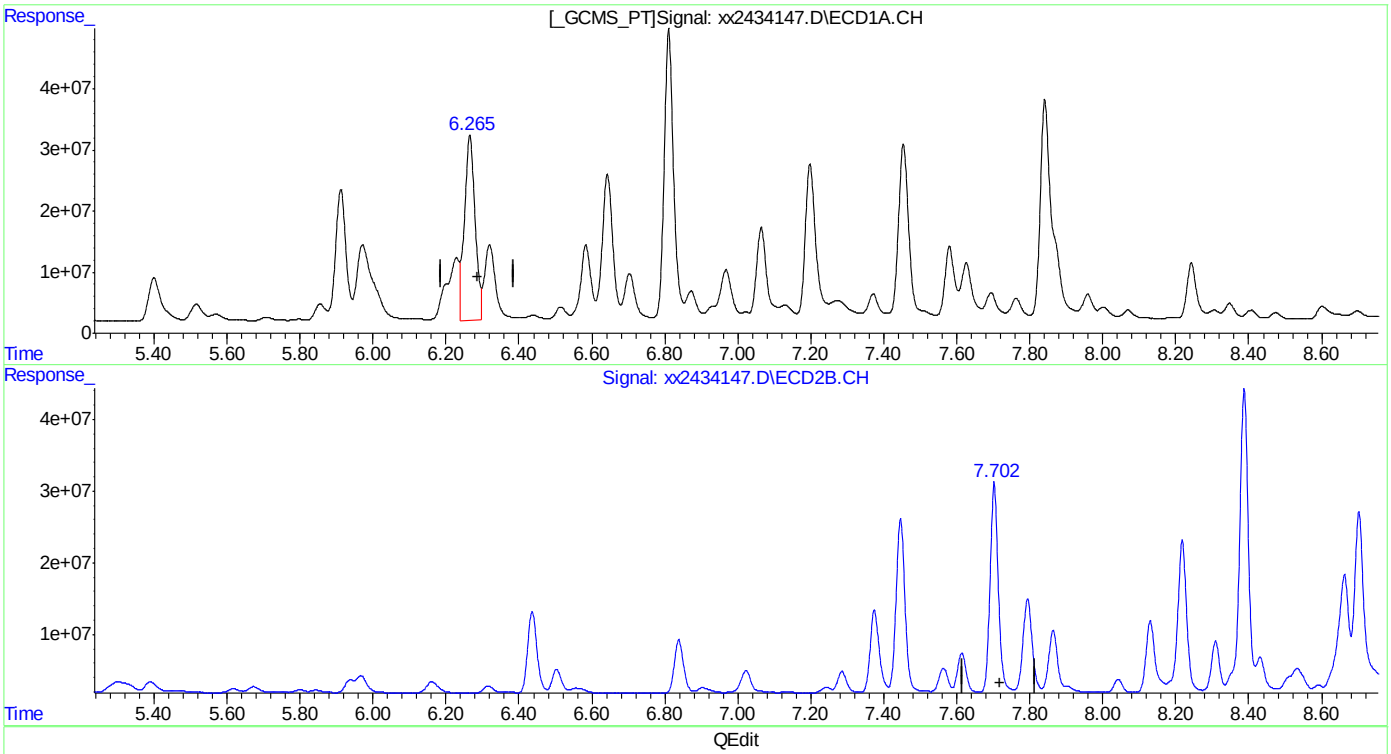
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:52:23 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B
6.265min 527.186PPB
response 626060831

(25) AR1254-B #2
7.702min 924.670PPB
response 460914565

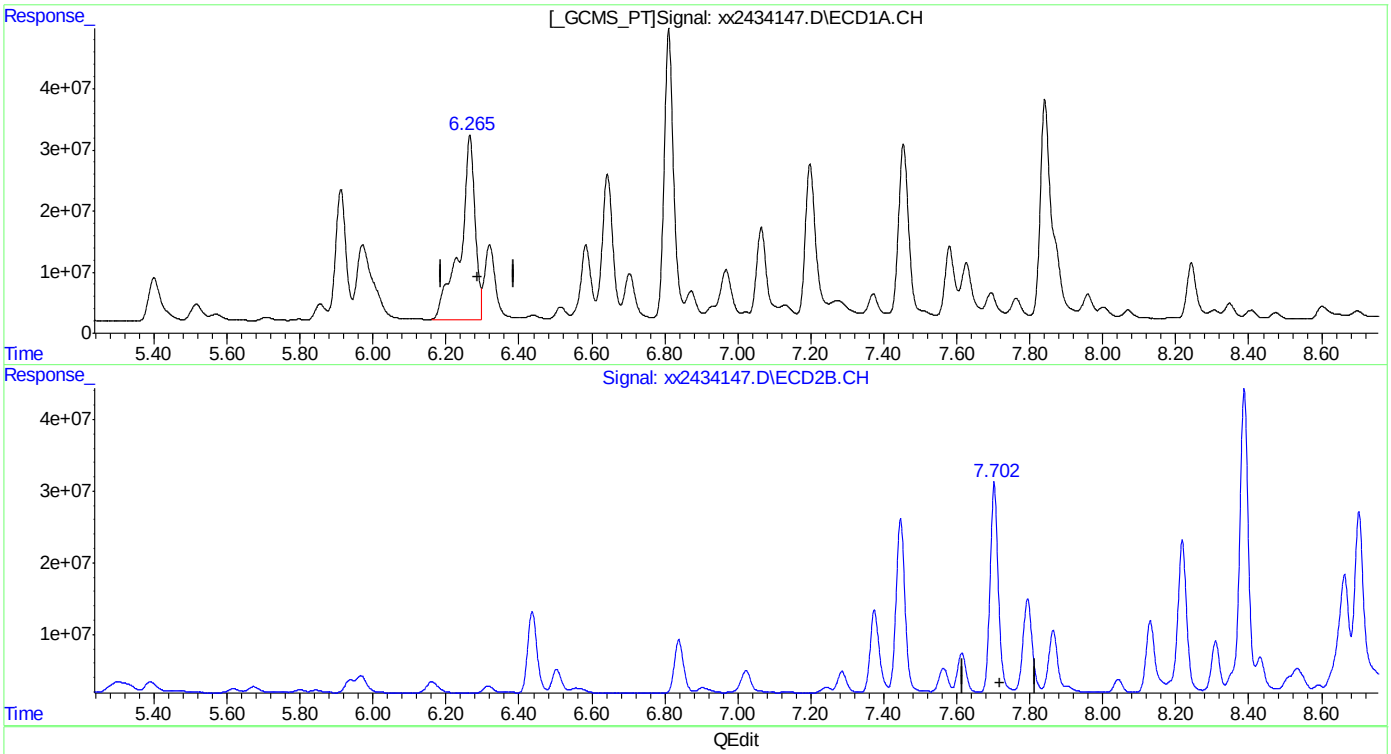
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:52:33 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(25) AR1254-B
6.265min 730.593PPB m
response 867616896

(25) AR1254-B #2
7.702min 924.670PPB
response 460914565

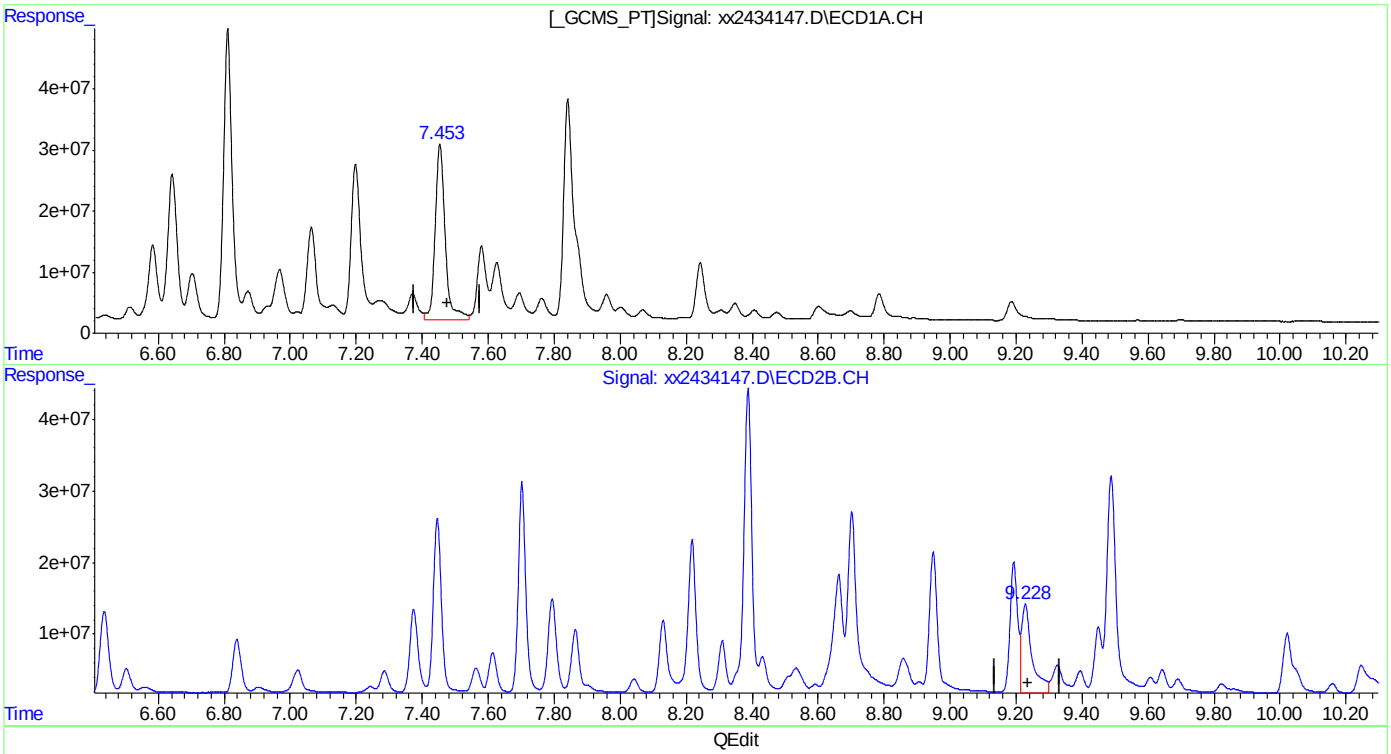
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:52:40 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F
7.454min 798.899PPB
response 604321852

(29) AR1254-F #2
9.228min 422.926PPB
response 277096101

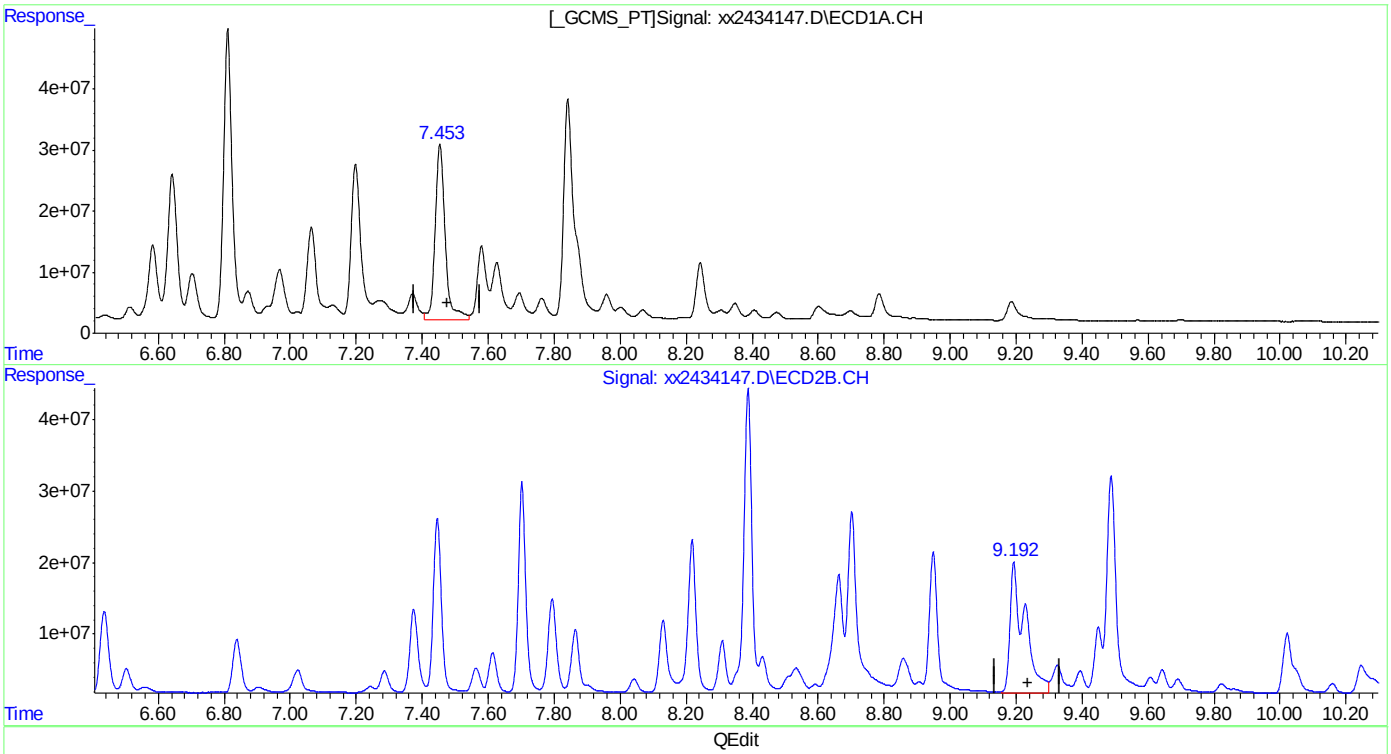
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:53:06 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(29) AR1254-F
7.454min 798.899PPB
response 604321852

(29) AR1254-F #2
9.192min 872.103PPB m
response 571391575

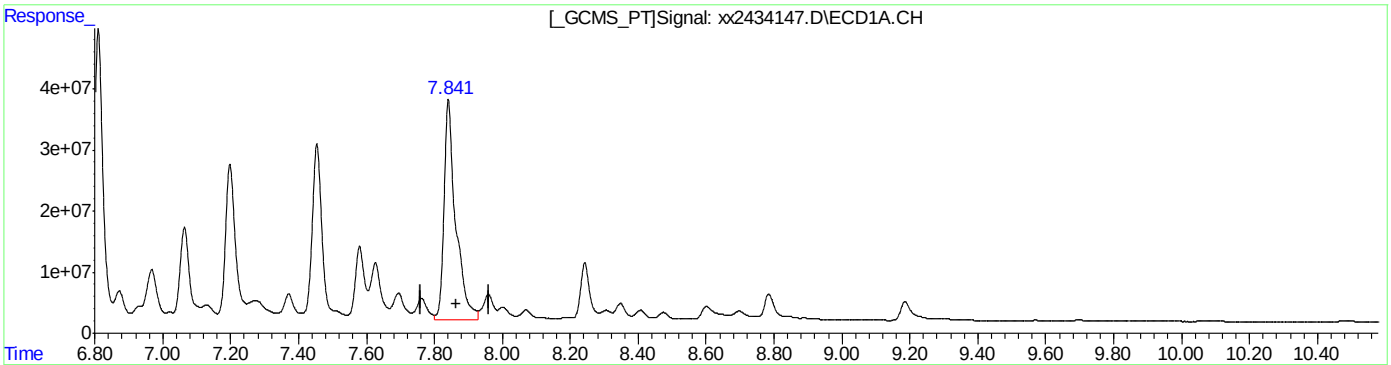
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:53:18 2019

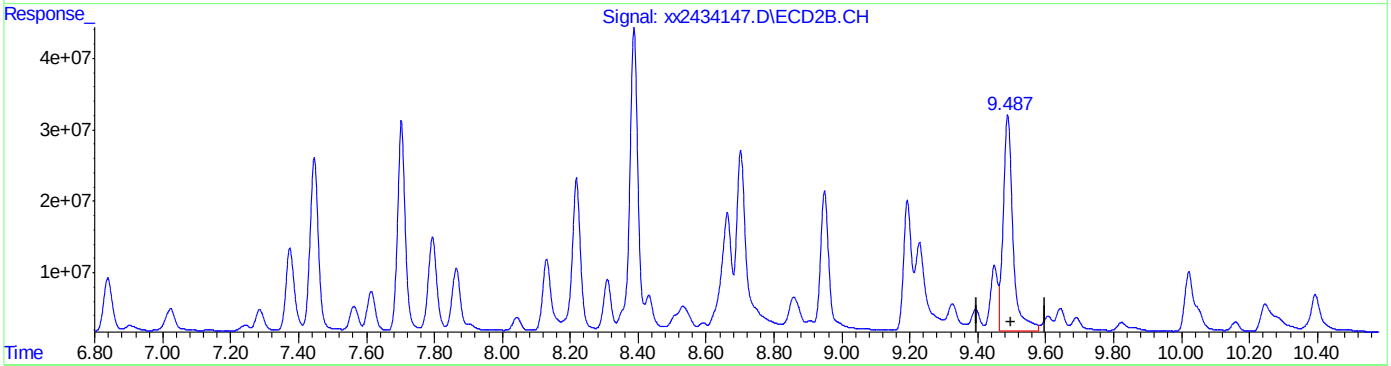
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(30) AR1254-G
7.841min 722.582PPB
response 855805123

(30) AR1254-G #2
9.488min 779.879PPB
response 611815904

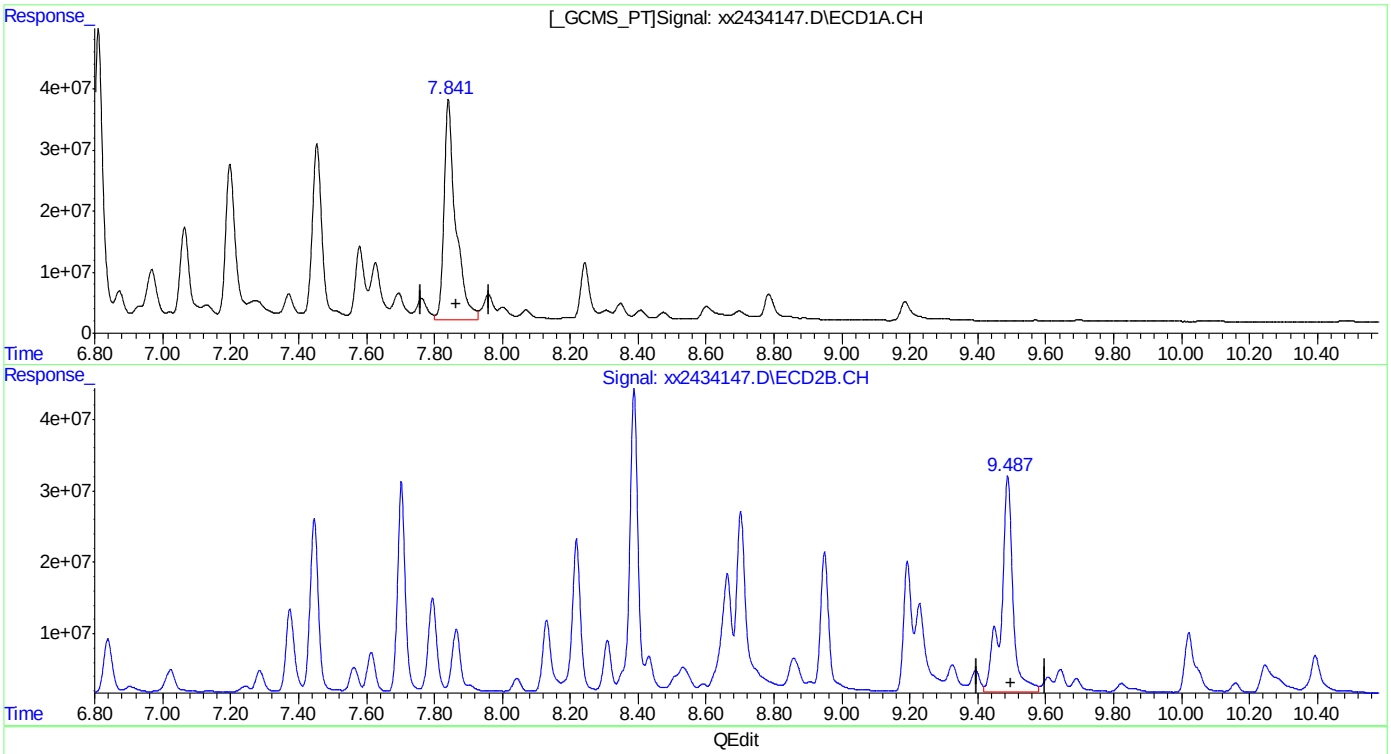
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:53:21 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434147.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:04 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:49:58 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(30) AR1254-G
7.841min 722.582PPB
response 855805123

(30) AR1254-G #2
9.487min 955.112PPB m
response 749286538

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:53:31 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:55:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265	4.036	621.5E6	489.7E6	47.204	46.010
	Spiked Amount 40.000			Recovery	= 118.01%	115.03%	
51)	S Decachlor...	10.751	12.646	690.2E6	510.9E6	49.130	47.467m
	Spiked Amount 40.000			Recovery	= 122.83%	118.67%	
	Target Compounds						
7)	AR1232-A	3.672	4.729	374.6E6	246.3E6	779.131	935.476
8)	AR1232-B	4.106	5.305	245.0E6	192.2E6	754.624	915.063
9)	AR1232-C	4.690	5.965	522.3E6	409.8E6	741.215	904.133m
10)	AR1232-D	4.865	6.161	194.8E6	156.7E6	743.044	902.106
11)	AR1232-E	5.400	6.837	190.8E6	111.7E6	748.116	902.432
31)	AR1262-A	7.451	8.950	644.7E6	538.6E6	721.549	930.712 #
32)	AR1262-B	8.002	9.608	851.8E6	870.4E6	779.752	947.350
33)	AR1262-C	8.347	10.050	816.8E6	698.1E6	774.771	946.310
34)	AR1262-D	8.786	10.396	1608.6E6	1622.1E6	694.361	905.540 #
35)	AR1262-E	9.236	10.924	2007.5E6	1847.2E6	779.755m	945.377m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

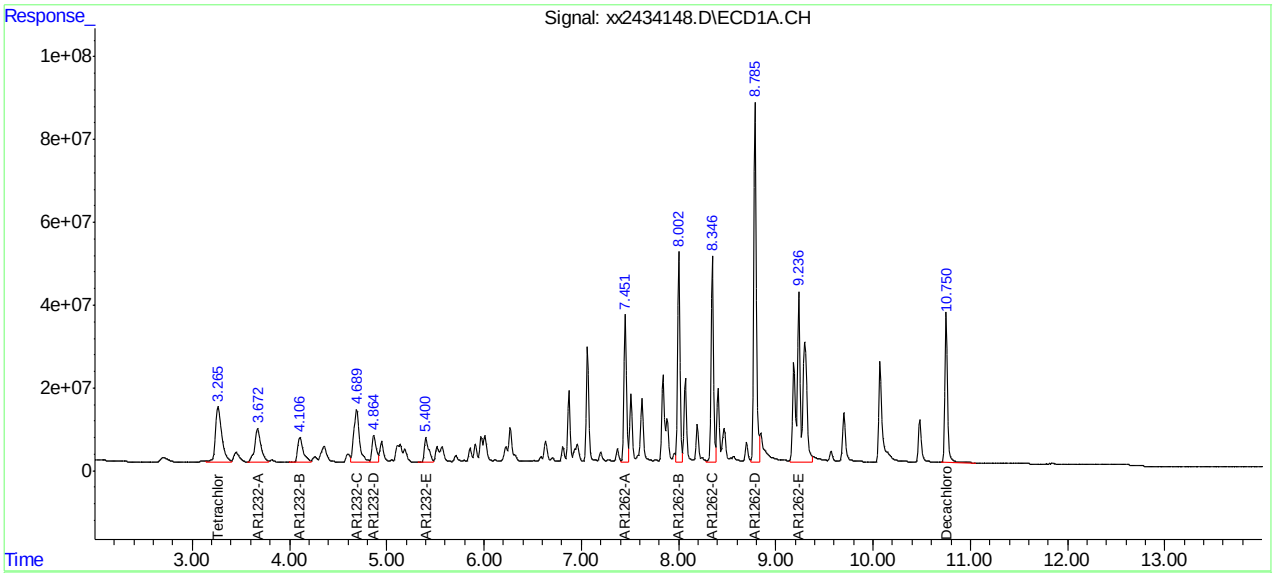
11.6.25 11

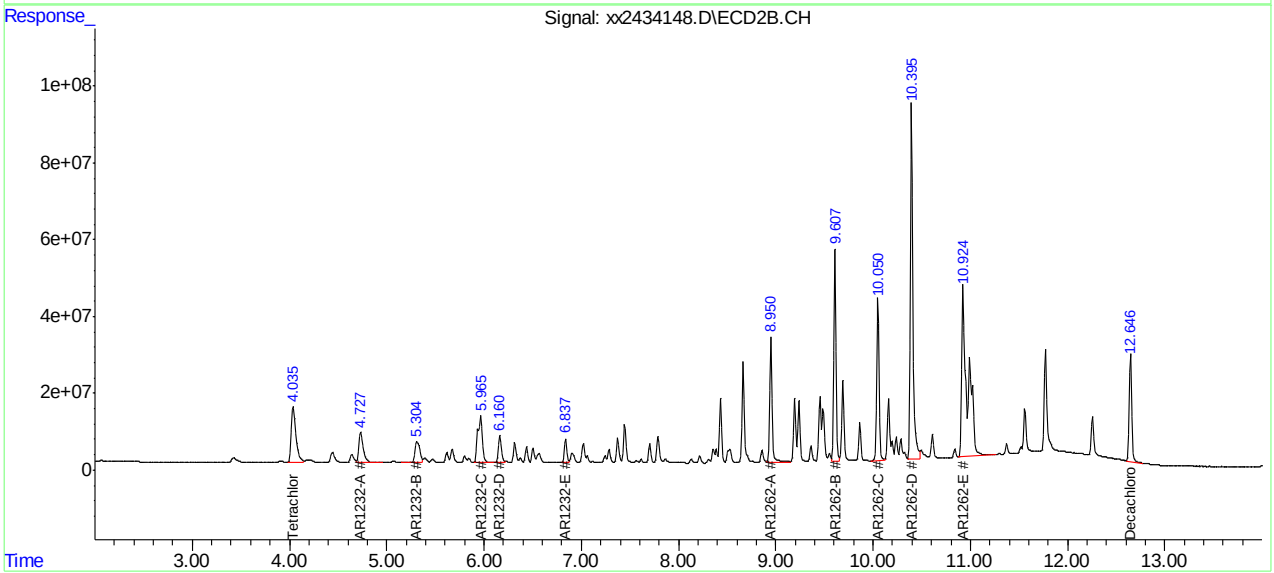
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:55:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434148.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 17:23	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

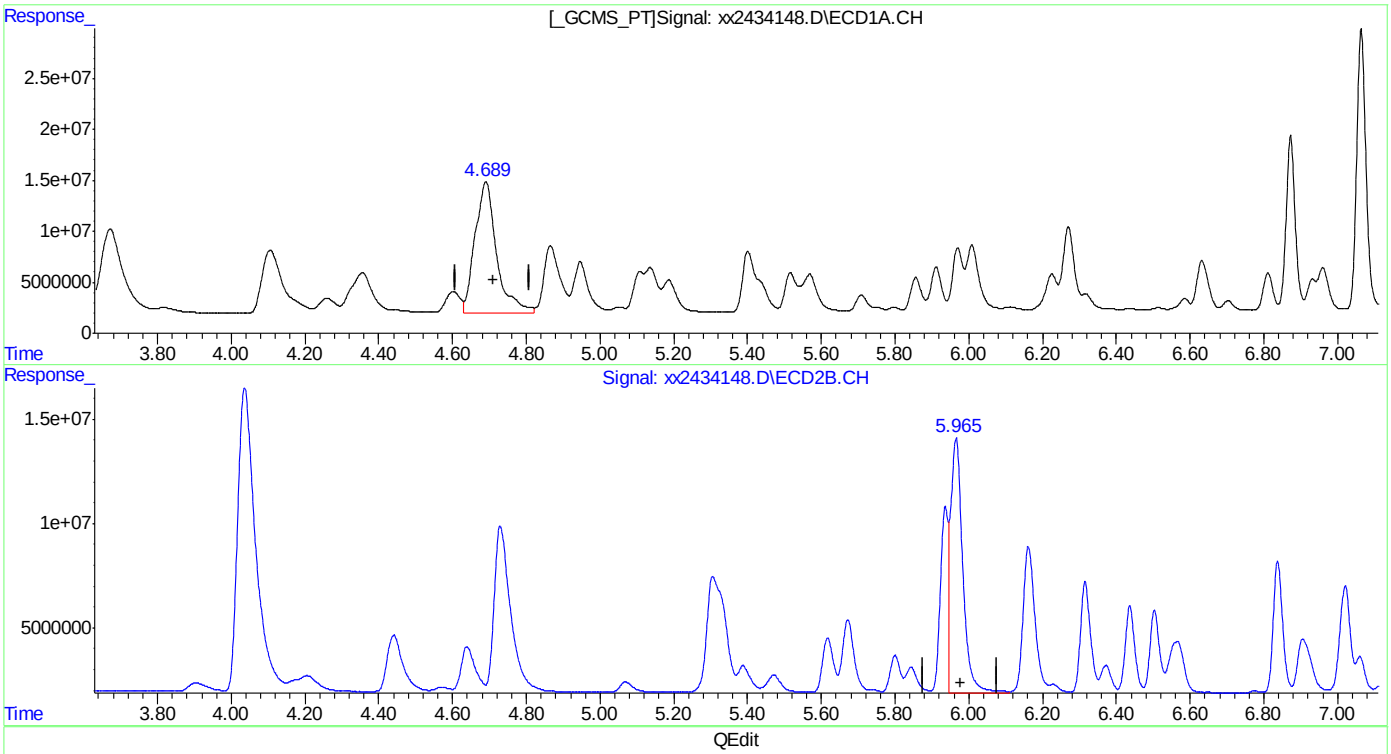
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1232-C		2	5.97	Split peak
AR1262-E		1	9.24	Split peak
AR1262-E		2	10.92	Split peak
Decachlorobiphenyl	2051-24-3	2	12.65	Poorly defined baseline

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:54:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(9) AR1232-C
4.690min 741.215PPB
response 522299535

(9) AR1232-C #2
5.966min 623.200PPB
response 282459140

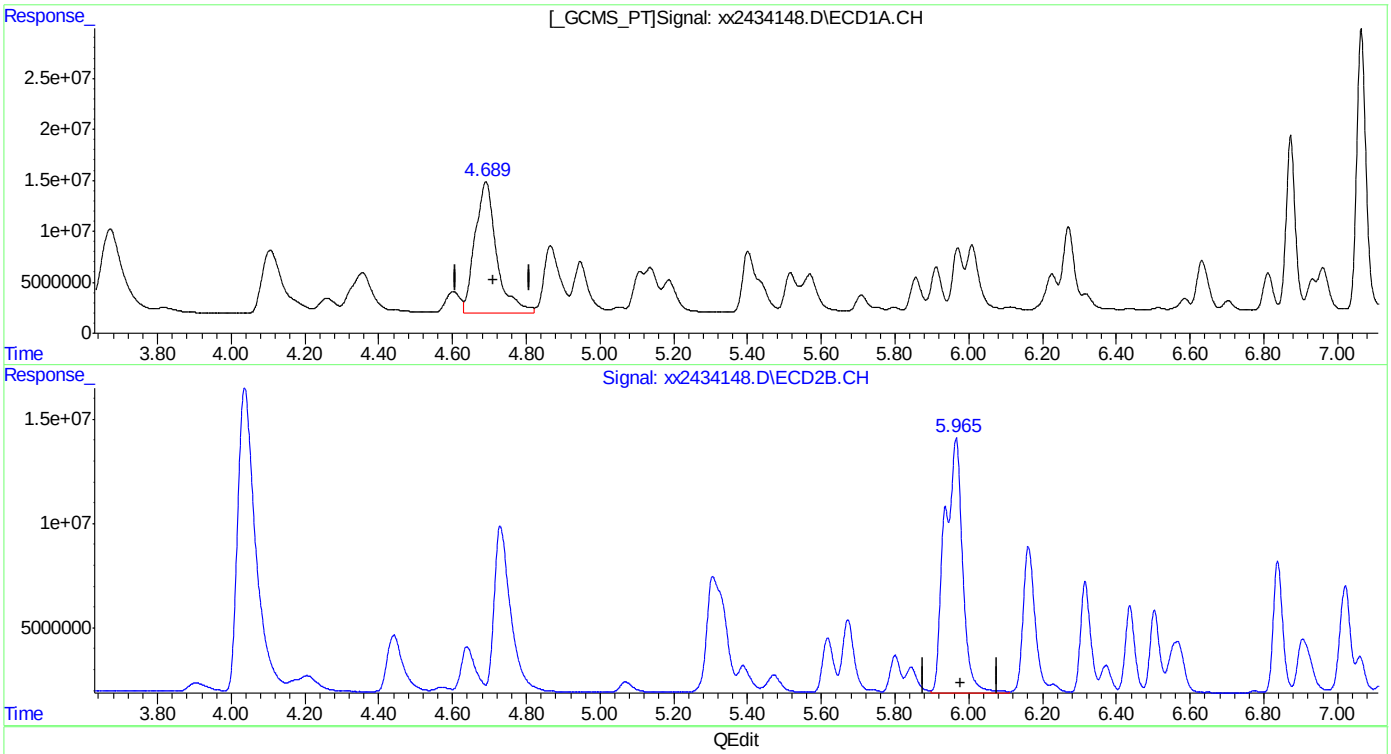
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:54:49 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:54:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(9) AR1232-C
4.690min 741.215PPB
response 522299535

(9) AR1232-C #2
5.965min 904.133PPB m
response 409789110

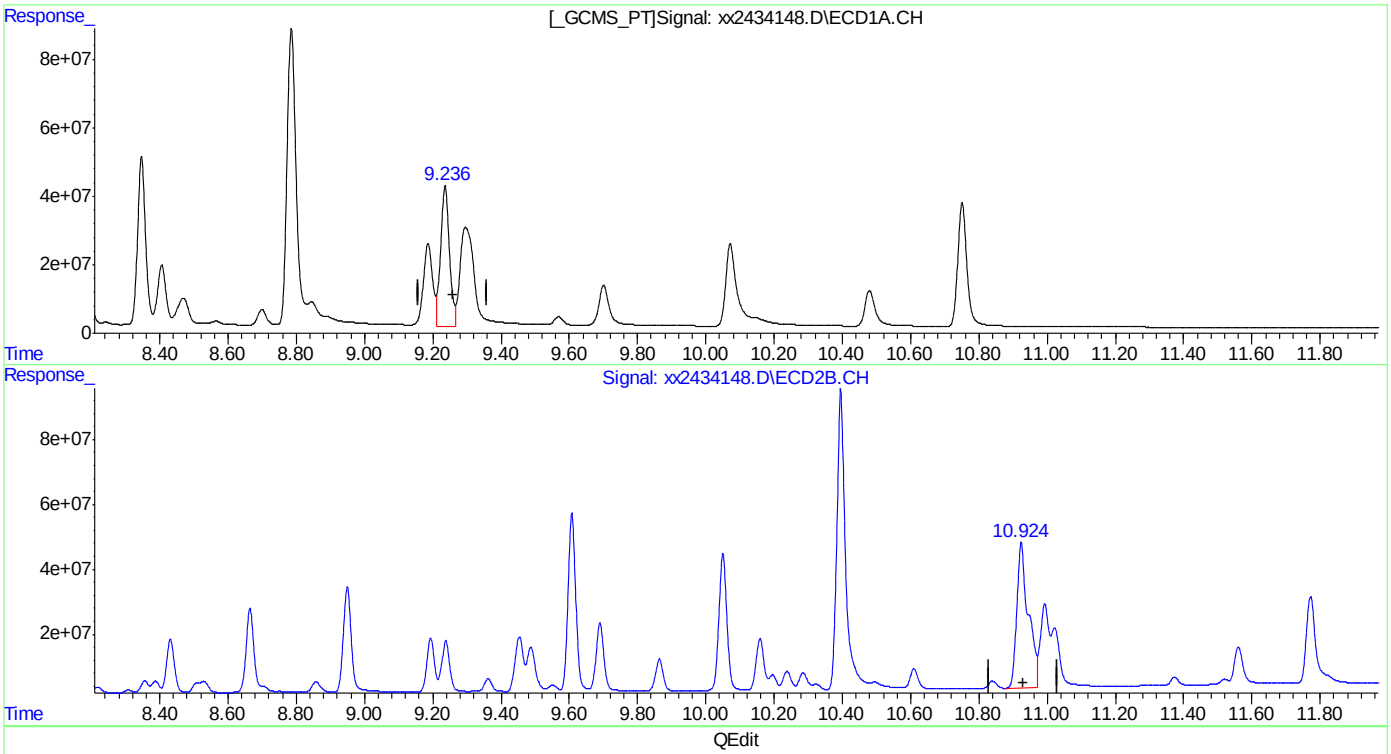
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:54:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(35) AR1262-E
9.236min 286.116PPB
response 736631051

(35) AR1262-E #2
10.924min 535.737PPB
response 1046810980

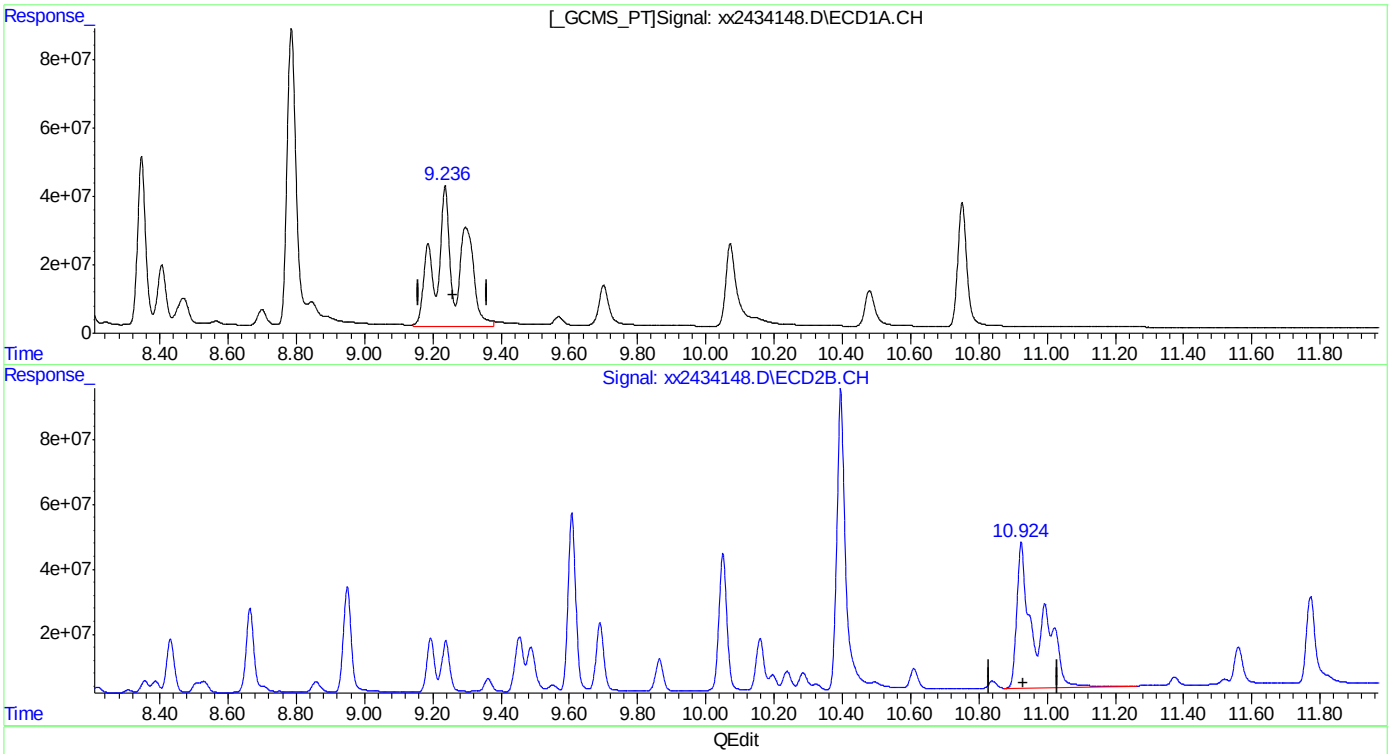
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:55:14 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:54:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(35) AR1262-E
9.236min 779.755PPB m
response 2007548520

(35) AR1262-E #2
10.924min 945.377PPB m
response 1847234777

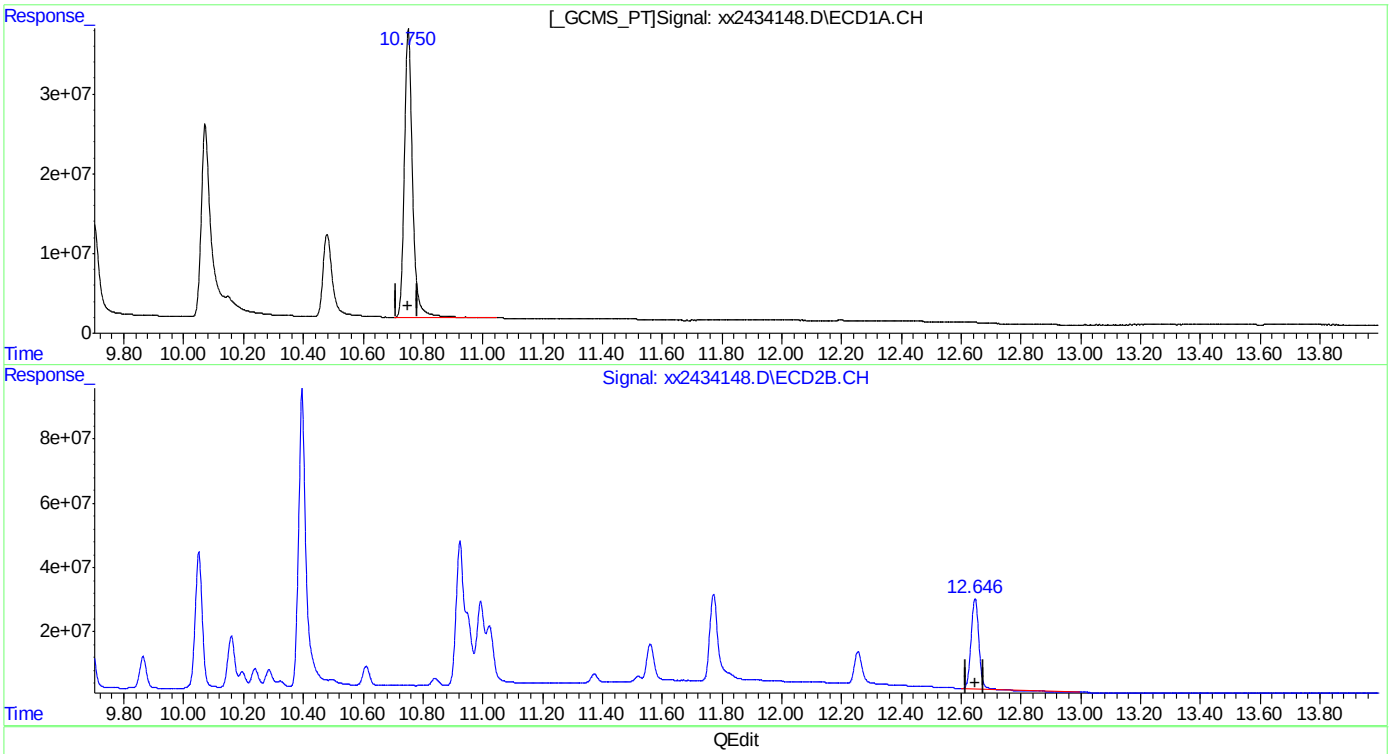
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:55:25 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:54:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(51) Decachlorobiphenyl (S)
10.751min 49.130ppb
response 690188328

(51) Decachlorobiphenyl #2 (S)
12.647min 46.452ppb
response 499969960

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:55:33 2019

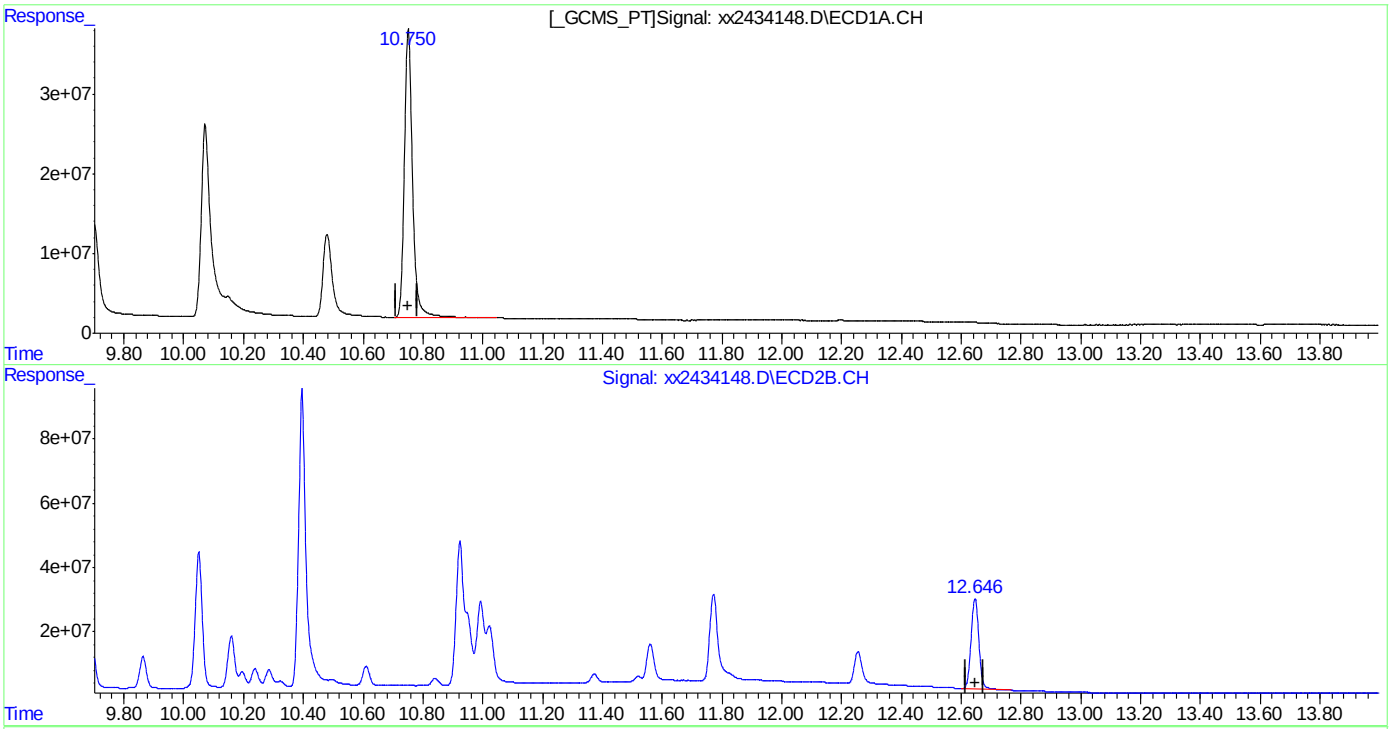
XX2434148.D edits: Decachlorobiphenyl

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434148.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:23 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:54:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(51) Decachlorobiphenyl (S)
10.751min 49.130ppb
response 690188328

(51) Decachlorobiphenyl #2 (S)
12.646min 47.467ppb m
response 510891378

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:55:39 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434149.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:41 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
1)	S Tetrachlo...	3.263	4.037	696.0E6	571.0E6	52.863	53.651	
	Spiked Amount 40.000			Recovery	=	132.16%	134.13%	
51)	S Decachlor...	10.748	12.644	2212.6E6	1604.7E6	157.499	149.088	
	Spiked Amount 40.000			Recovery	=	393.75%	372.72%	
	Target Compounds							
12)	AR1242-A	4.104	5.307	391.2E6	305.2E6	780.696	880.319	
13)	AR1242-B	4.690	5.967	897.0E6	688.1E6	764.616	922.623m	
14)	AR1242-C	4.865	6.161	331.2E6	259.5E6	768.127	926.123	
15)	AR1242-D	5.401	6.838	353.0E6	205.0E6	763.057	915.582	
16)	AR1242-E	6.008	7.448	532.9E6	260.2E6	725.695m	931.703	#
36)	AR1268-A	9.236	10.923	2081.0E6	2122.4E6	788.648	970.514	
37)	AR1268-B	9.292	10.991	2245.2E6	1972.6E6	853.539	998.878	
38)	AR1268-C	9.569	11.373	1739.8E6	1762.1E6	792.347	1033.448	#
39)	AR1268-D	10.070	11.769	717.1E6	677.1E6	806.714	973.055	
40)	AR1268-E	10.478	12.253	6573.5E6	5214.0E6	855.176	1037.722	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

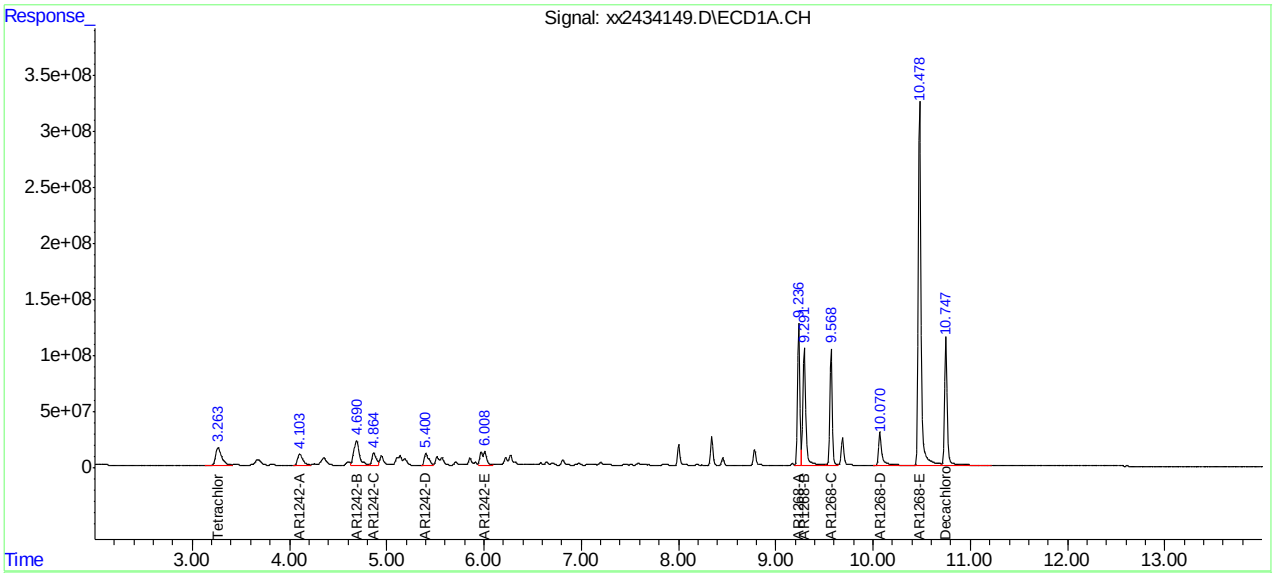
11.6.26 11

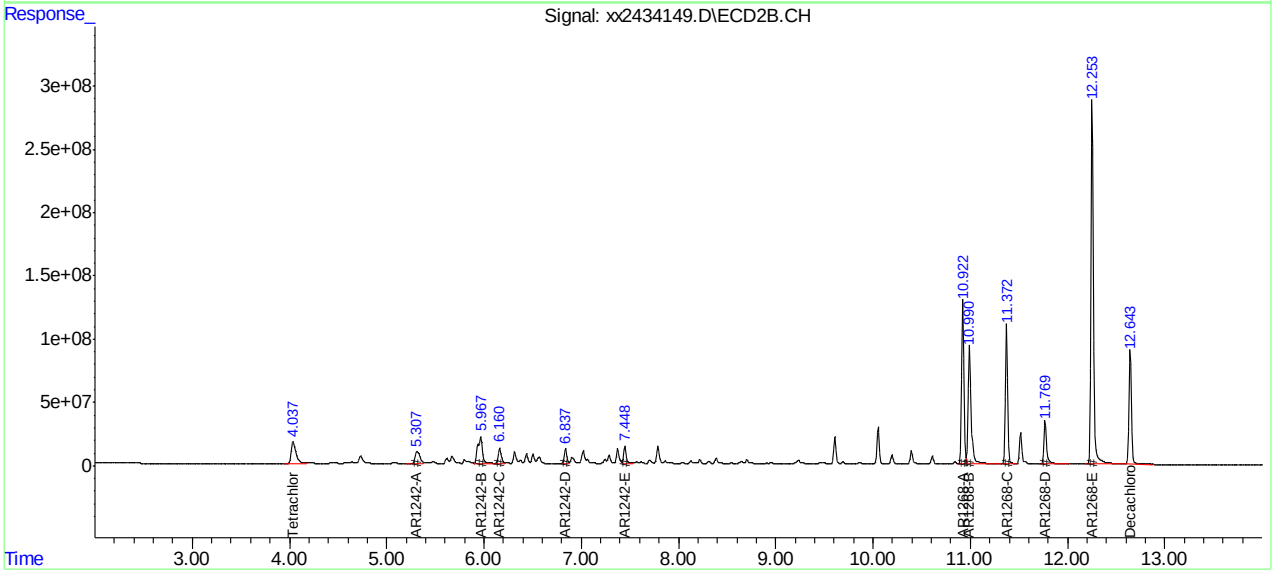
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434149.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:41 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434149.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 17:41	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

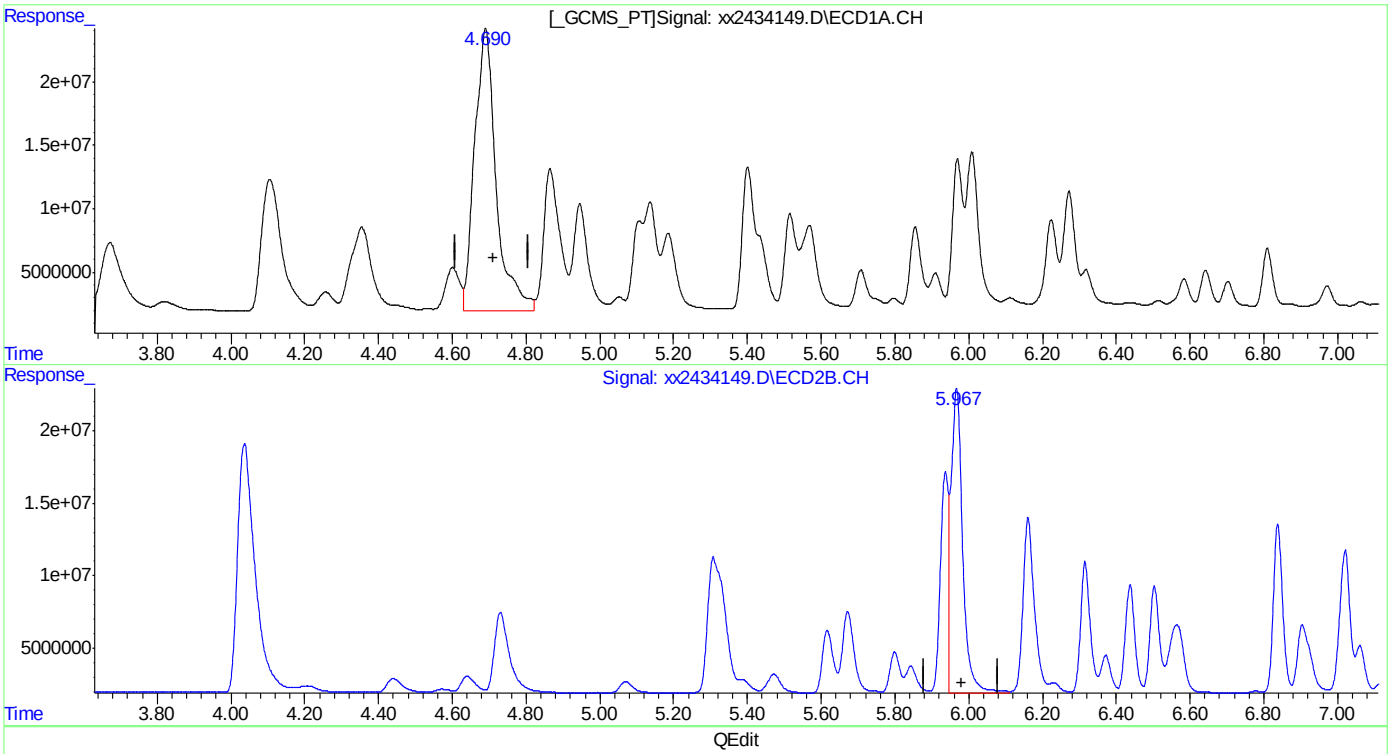
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1242-B		2	5.97	Split peak
AR1242-E		1	6.01	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434149.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:41 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:56:10 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(13) AR1242-B
4.690min 764.616PPB
response 896986560

(13) AR1242-B #2
5.967min 616.058PPB
response 459490724

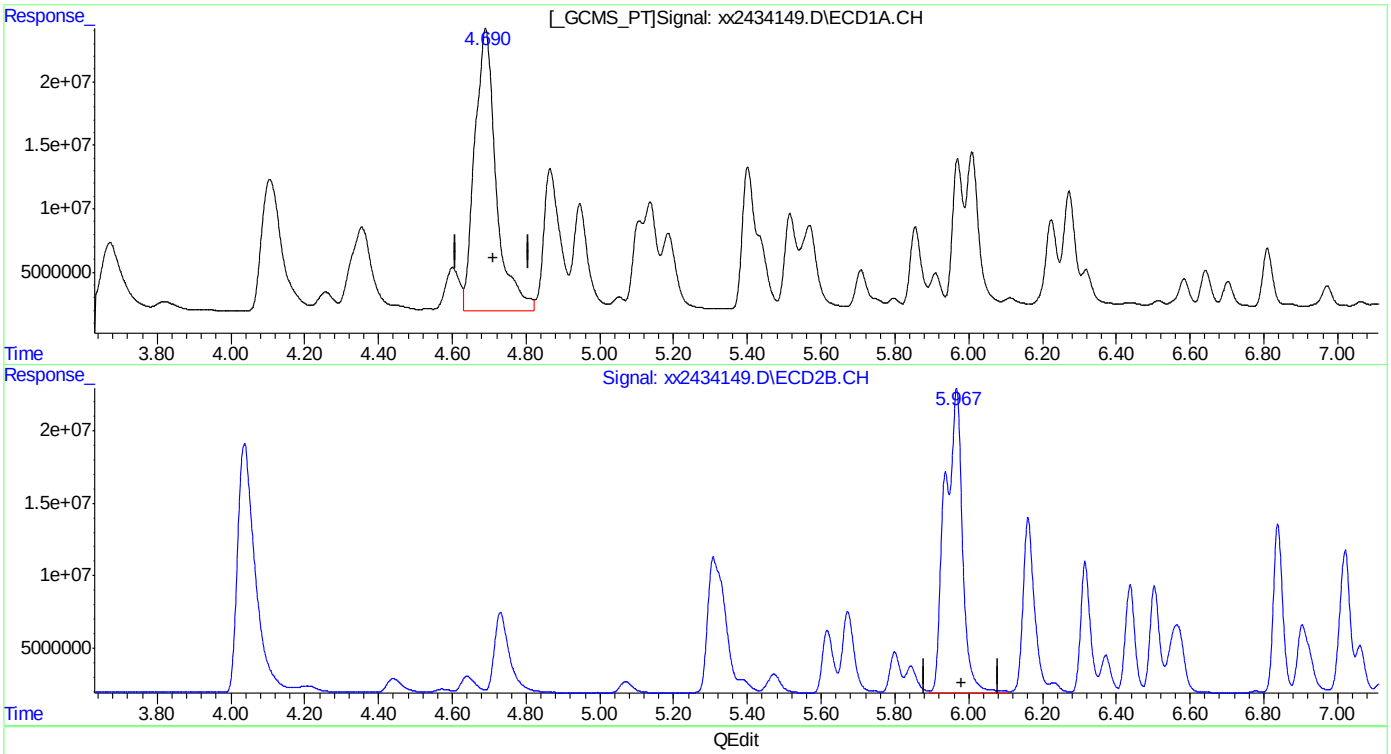
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434149.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:41 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:56:10 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(13) AR1242-B
4.690min 764.616PPB
response 896986560

(13) AR1242-B #2
5.967min 922.623PPB m
response 688143755

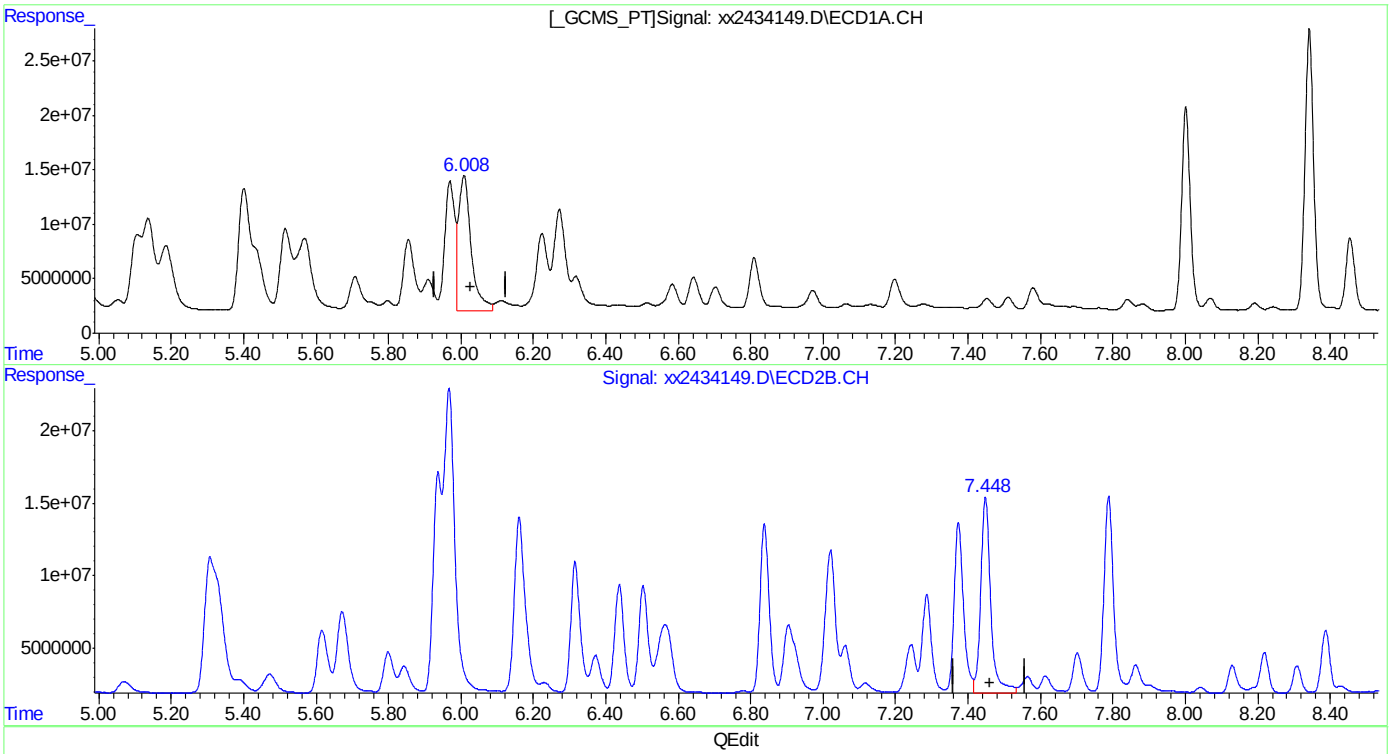
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:56:44 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434149.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:41 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:56:10 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(16) AR1242-E
6.008min 411.746PPB
response 302354763

(16) AR1242-E #2
7.448min 931.703PPB
response 260154476

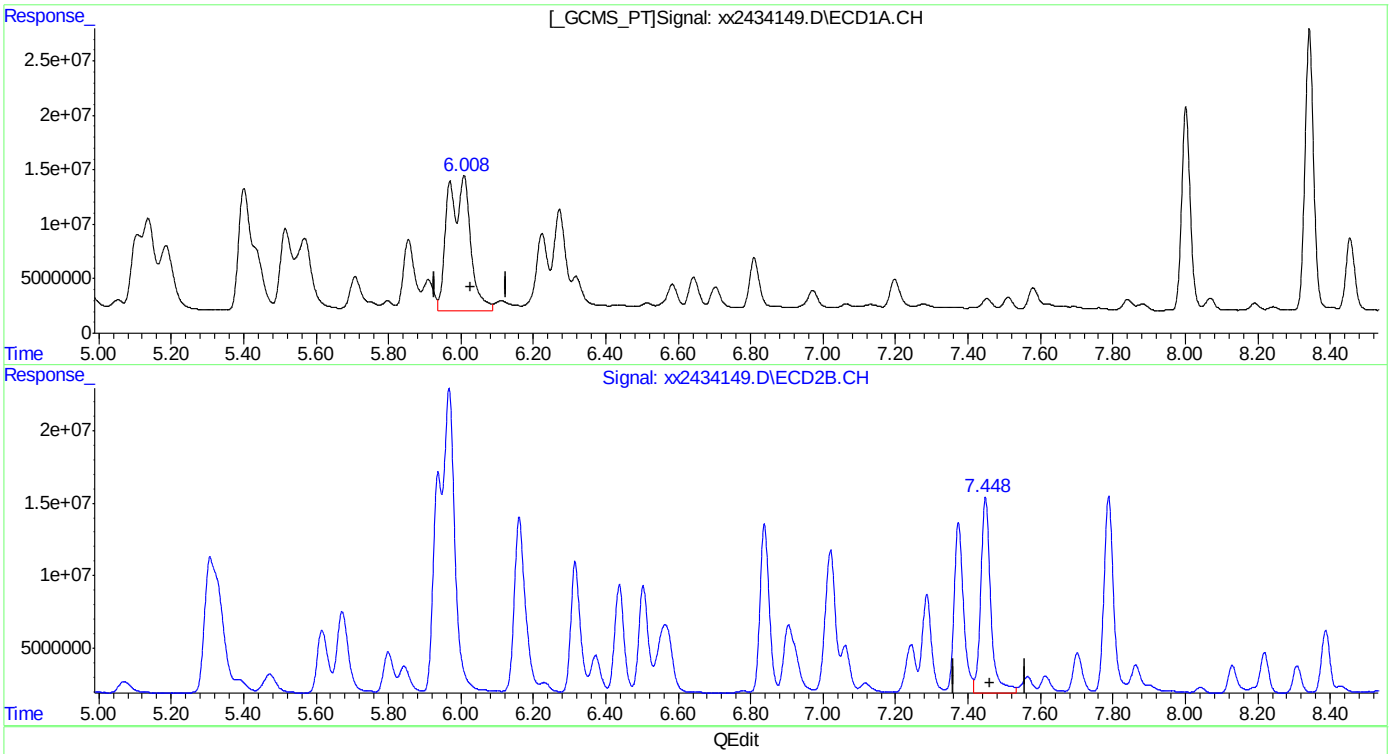
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434149.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:41 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:56:10 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(16) AR1242-E
6.008min 725.695PPB m
response 532894507

(16) AR1242-E #2
7.448min 931.703PPB
response 260154476

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:59:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.264	4.039	663.1E6	552.2E6	50.365	51.885
	Spiked Amount 40.000			Recovery	=	125.91%	129.71%
51) S	Decachlor...	10.752	12.647	762.1E6	582.3E6	54.246	54.098
	Spiked Amount 40.000			Recovery	=	135.62%	135.25%
	Target Compounds						
17)	AR1248-A	4.103	5.305	204.5E6	168.7E6	770.668	936.633
18)	AR1248-B	4.691	5.965	530.9E6	456.2E6	739.227	921.129m
19)	AR1248-C	5.104f	6.436	544.5E6	253.2E6	745.932m	921.882
20)	AR1248-D	5.401	6.838	560.2E6	341.5E6	762.797	926.121
21)	AR1248-E	5.517	7.019	509.0E6	378.5E6	762.697m	930.984m
22)	AR1248-F	5.969	7.447	921.4E6	466.2E6	722.055m	945.812 #
23)	AR1248-G	6.272	7.788	402.8E6	417.9E6	738.774	866.932

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

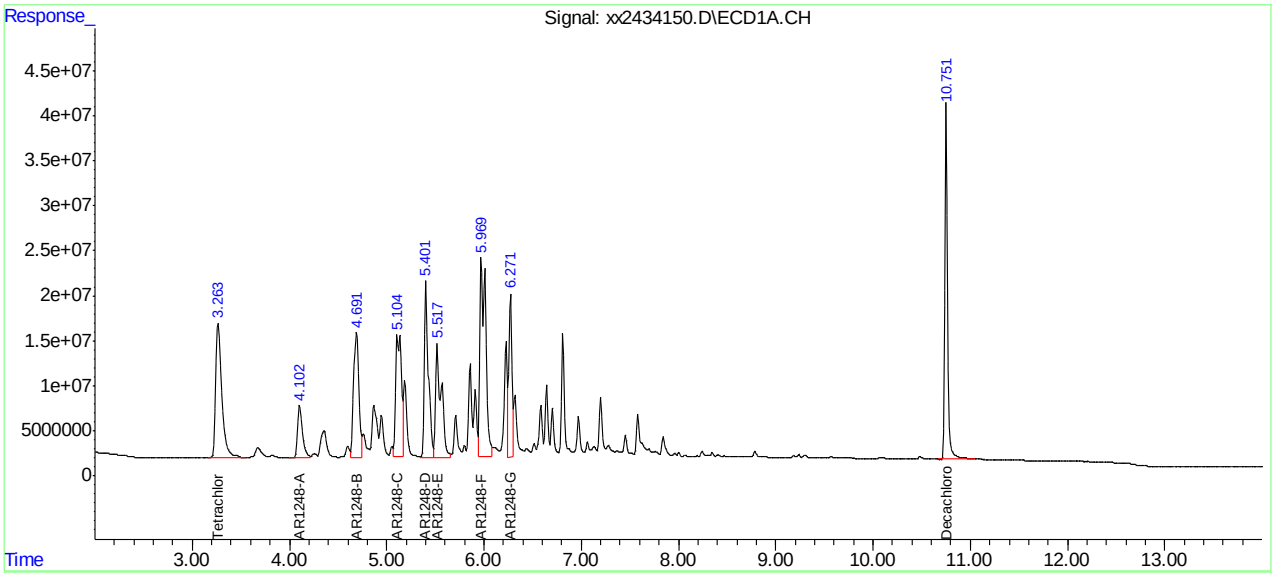
11.6.27 11

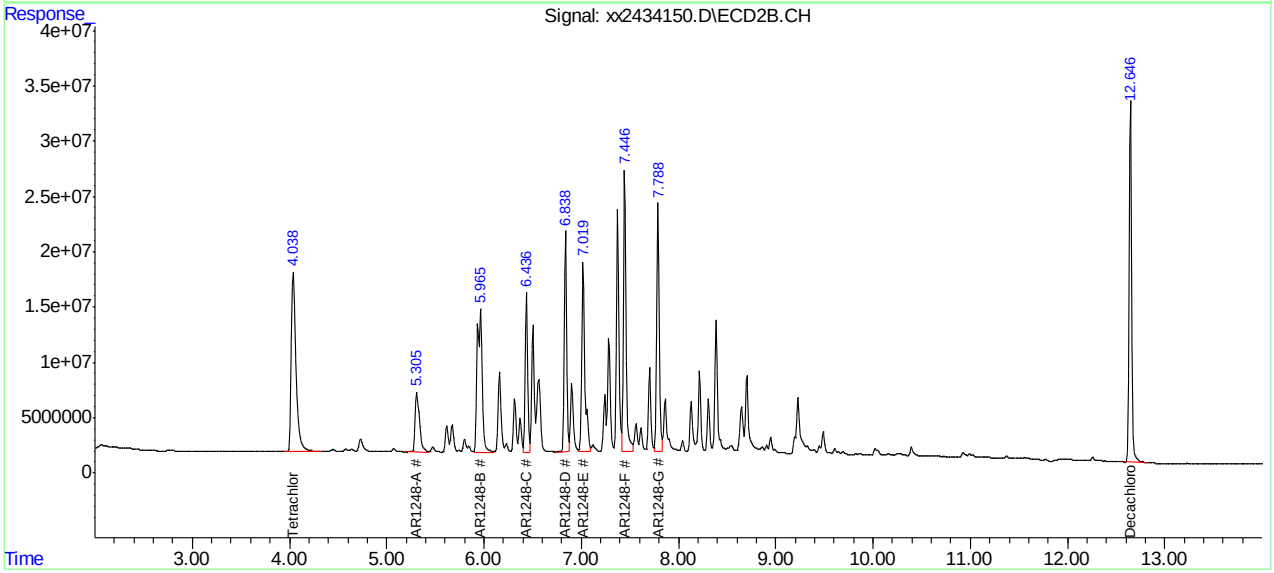
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:59:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-IC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434150.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 17:59	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

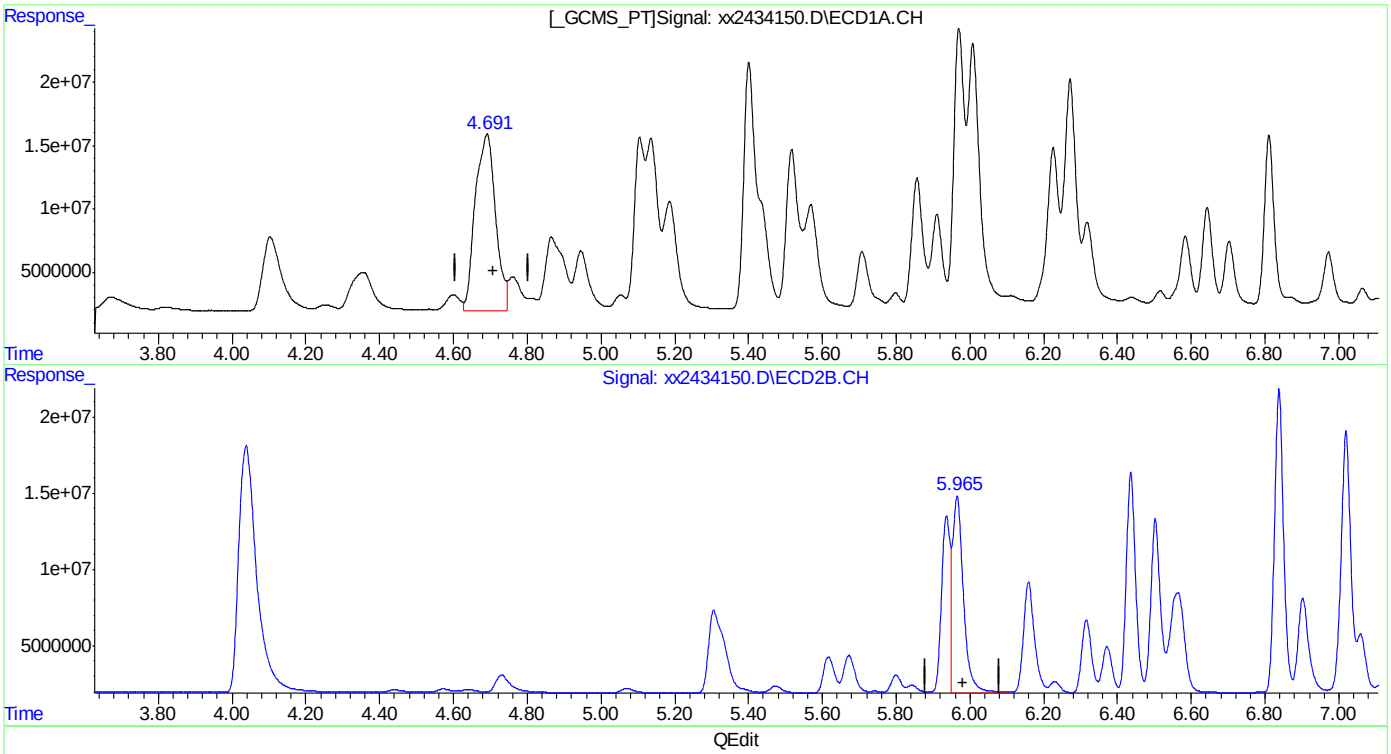
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1248-C		1	5.10	Split peak
AR1248-E		1	5.52	Split peak
AR1248-F		1	5.97	Split peak
AR1248-B		2	5.97	Split peak
AR1248-E		2	7.02	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(18) AR1248-B
4.691min 739.227PPB
response 530877595

(18) AR1248-B #2
5.966min 540.440PPB
response 267649104

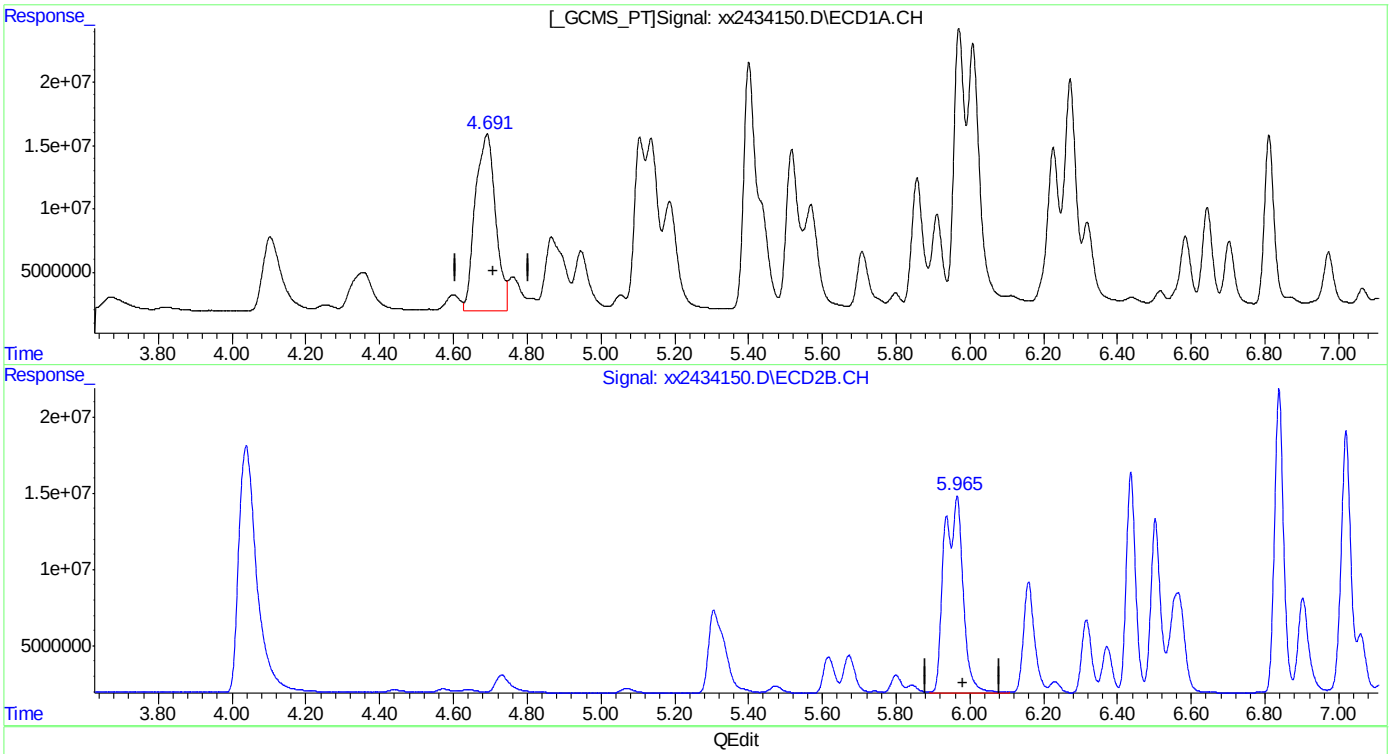
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(18) AR1248-B
4.691min 739.227PPB
response 530877595

(18) AR1248-B #2
5.965min 921.129PPB m
response 456182498

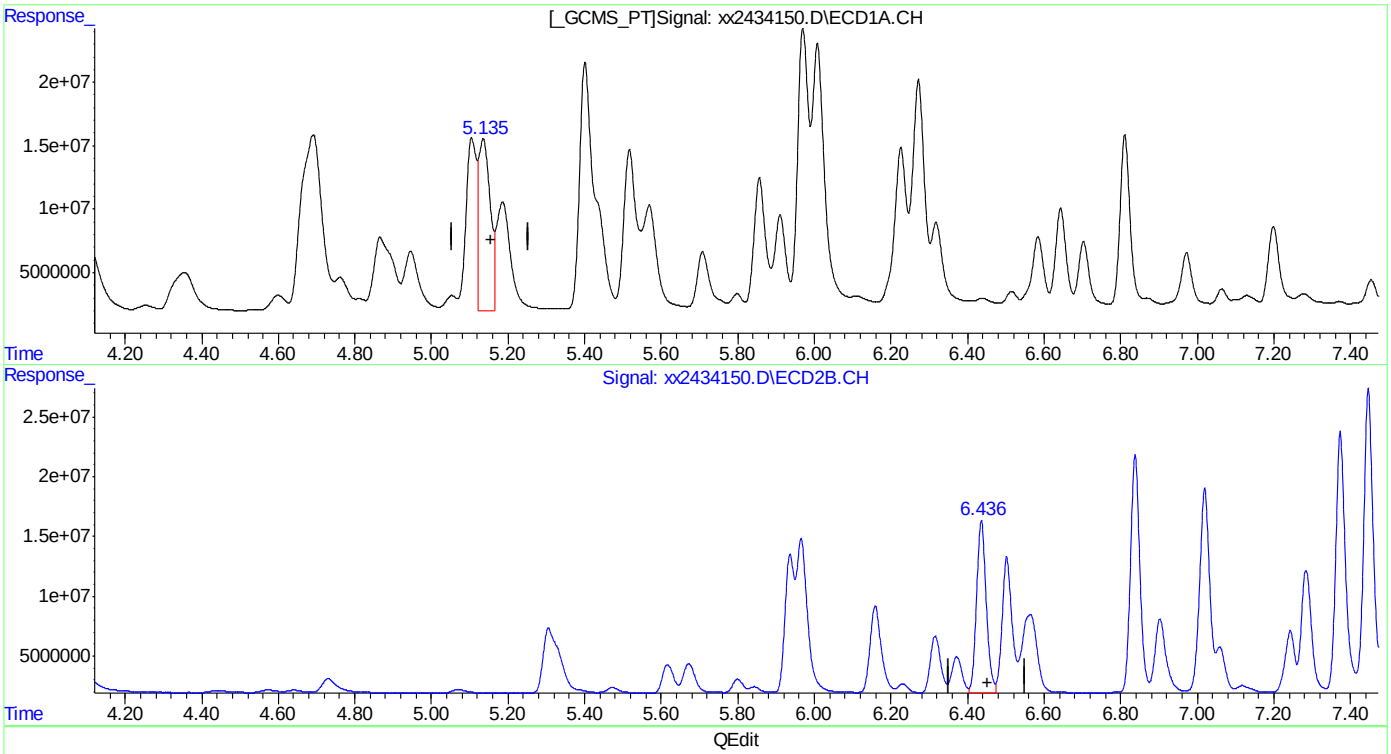
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(19) AR1248-C
5.135min 397.966PPB
response 290483614

(19) AR1248-C #2
6.436min 921.882PPB
response 253188117

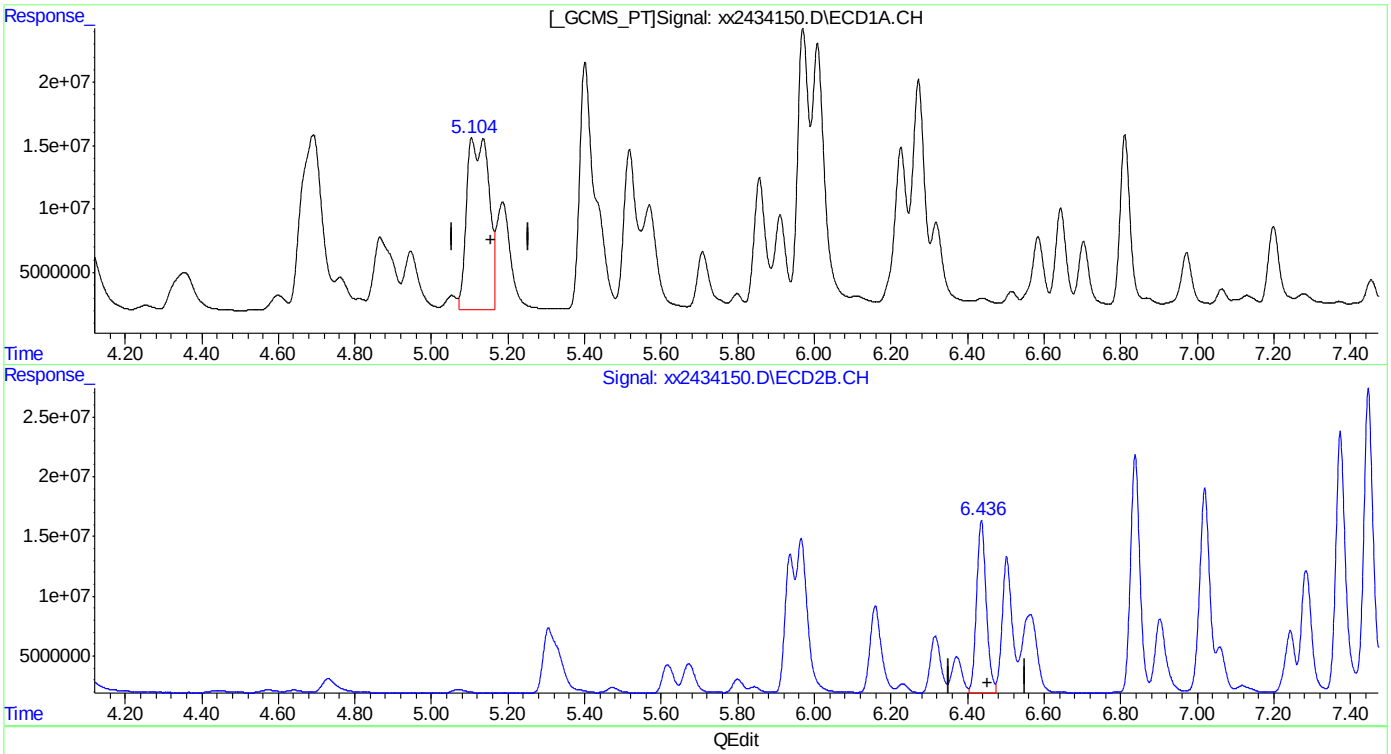
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(19) AR1248-C
5.104min 745.932PPB m
response 544471393

(19) AR1248-C #2
6.436min 921.882PPB
response 253188117

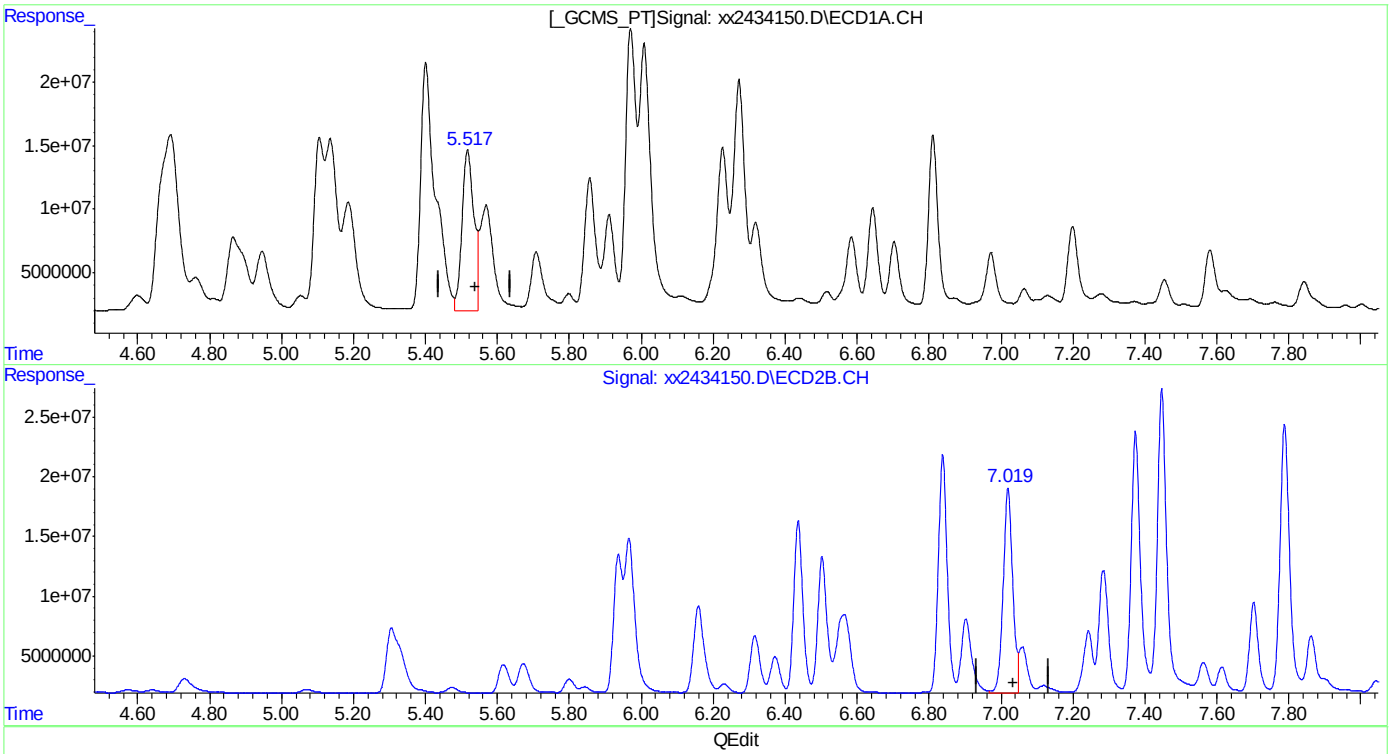
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(21) AR1248-E
5.517min 436.866PPB
response 291552154

(21) AR1248-E #2
7.019min 777.098PPB
response 315951715

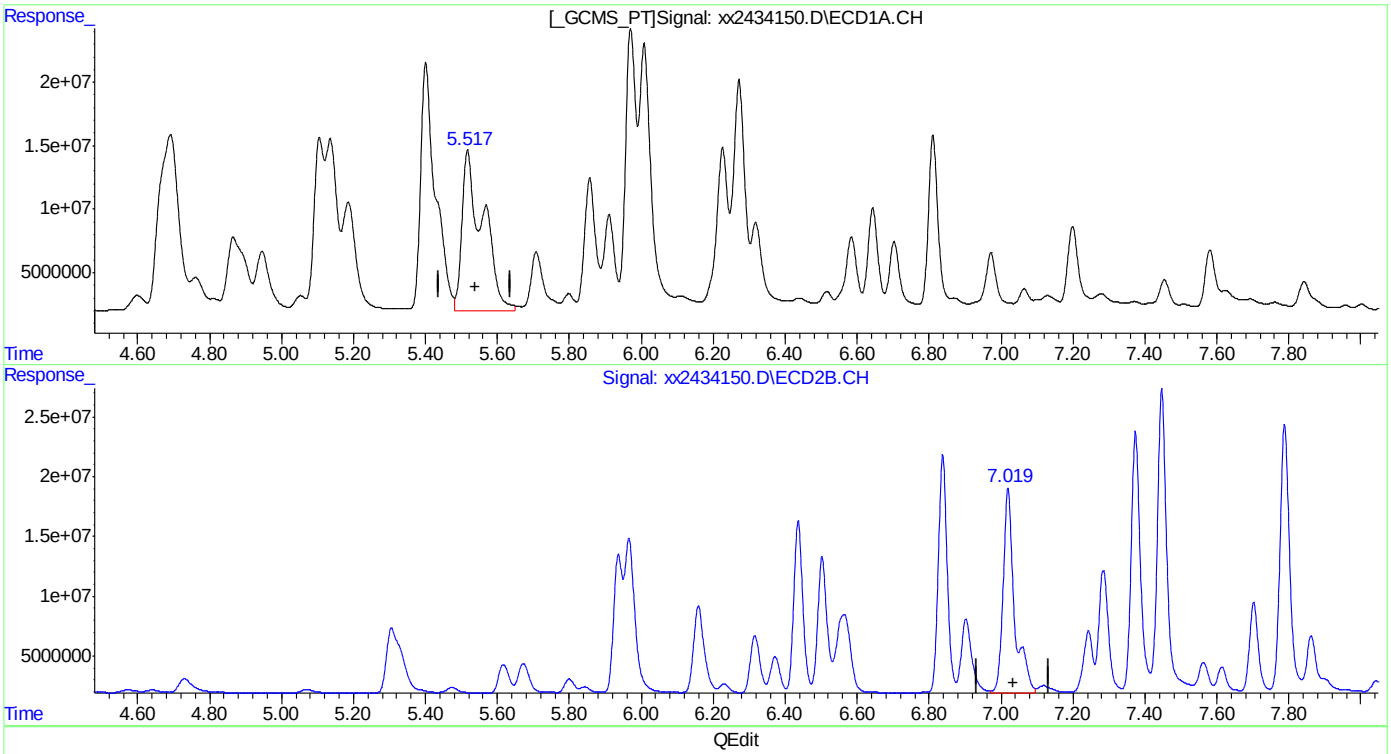
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(21) AR1248-E
5.517min 762.697PPB m
response 509003381

(21) AR1248-E #2
7.019min 930.984PPB m
response 378518280

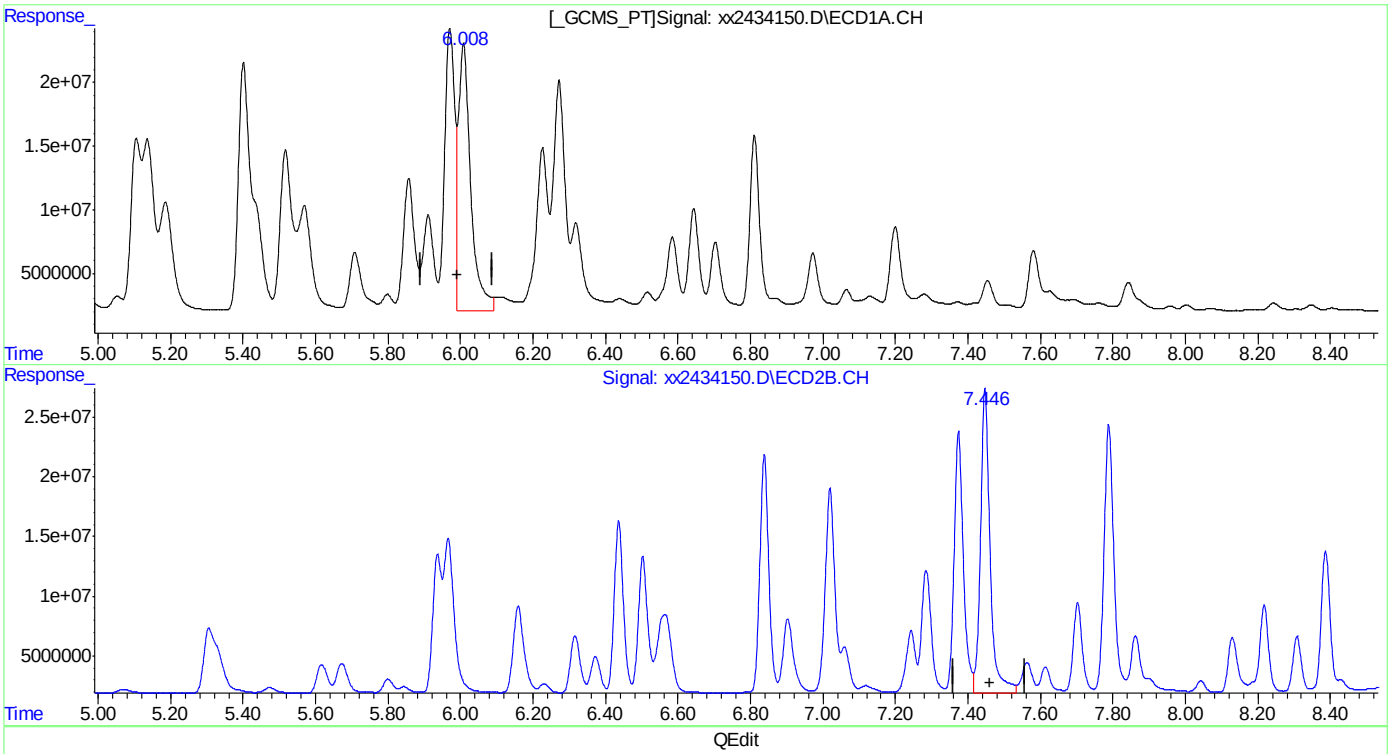
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(22) AR1248-F
6.008min 387.623PPB
response 494644579

(22) AR1248-F #2
7.447min 945.812PPB
response 466243846

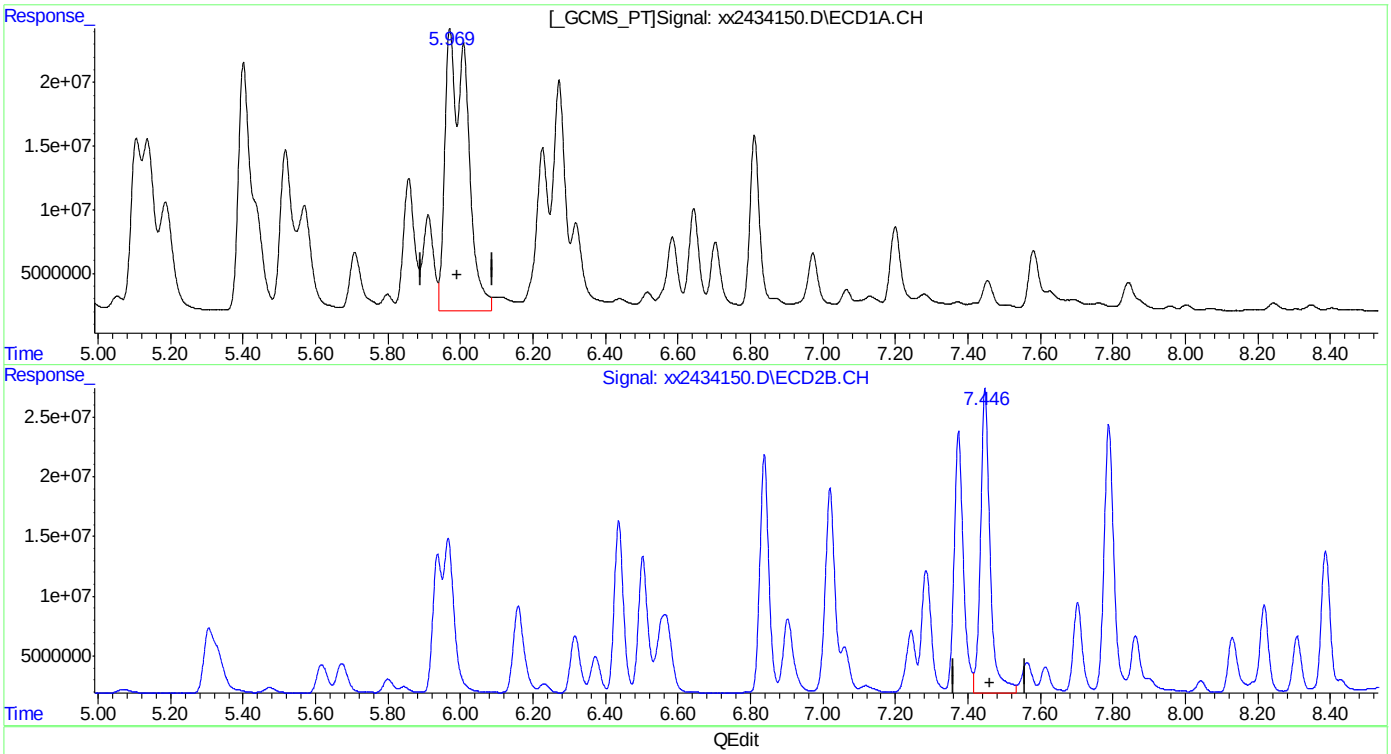
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434150.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 5:59 pm
Operator : summerk
Sample : ic6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 08:57:57 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 08:48:46 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(22) AR1248-F
5.969min 722.055PPB m
response 921411455

(22) AR1248-F #2
7.447min 945.812PPB
response 466243846

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 08:59:20 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.277	4.047	486.7E6	400.4E6	36.968	37.619
	Spiked Amount 40.000			Recovery	=	92.42%	94.05%
51) S	Decachlor...	10.751	12.645	570.1E6	442.3E6	40.579	41.096
	Spiked Amount 40.000			Recovery	=	101.45%	102.74%
	Target Compounds						
41)	AR1016-A	3.685	4.738	257.0E6	182.8E6	924.917	963.491
42)	AR1016-B	4.117	5.312	449.8E6	351.2E6	900.618	878.584
43)	AR1016-C	4.700	5.970	1023.0E6	796.1E6	886.437	890.746m
44)	AR1016-D	4.873	6.165	380.4E6	298.7E6	895.542	908.479
45)	AR1016-E	5.407	6.841	394.6E6	233.4E6	903.787	887.327
46)	AR1260-A	7.842	9.487	938.2E6	809.8E6	955.454	935.836m
47)	AR1260-B	8.004	9.608	542.9E6	573.2E6	988.186	965.247
48)	AR1260-C	8.348	10.049	612.3E6	542.4E6	970.049	968.131
49)	AR1260-D	8.786	10.394	1319.6E6	1407.5E6	1000.178	1004.282
50)	AR1260-E	9.186	10.952f	1388.2E6	1298.6E6	932.090m	918.884m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.28
11

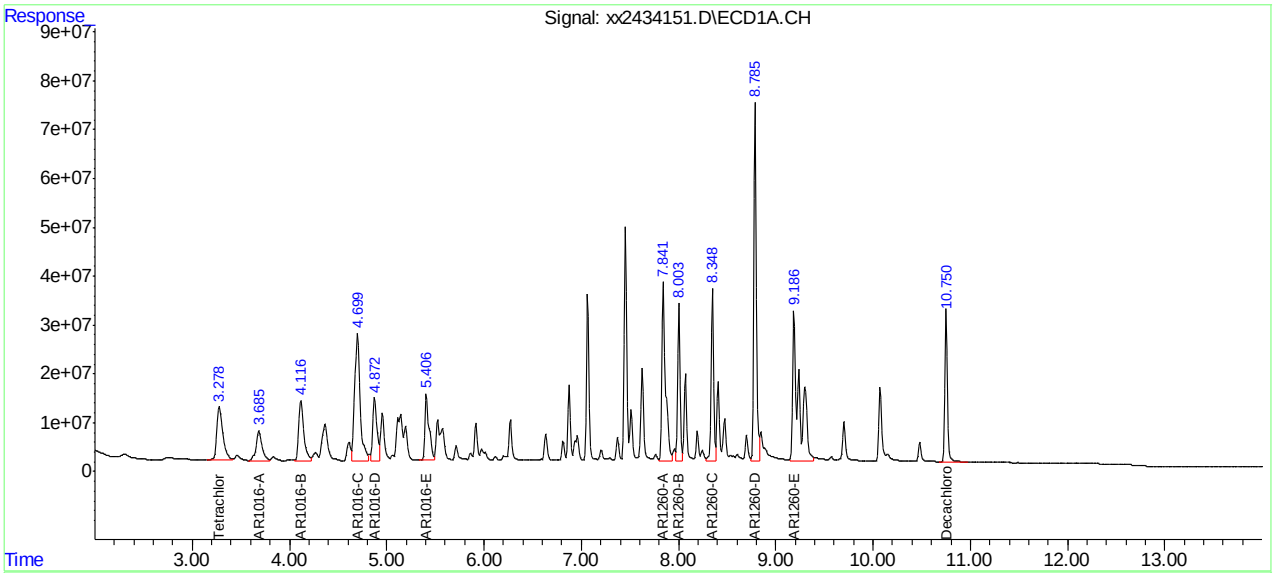
SGS JC86837

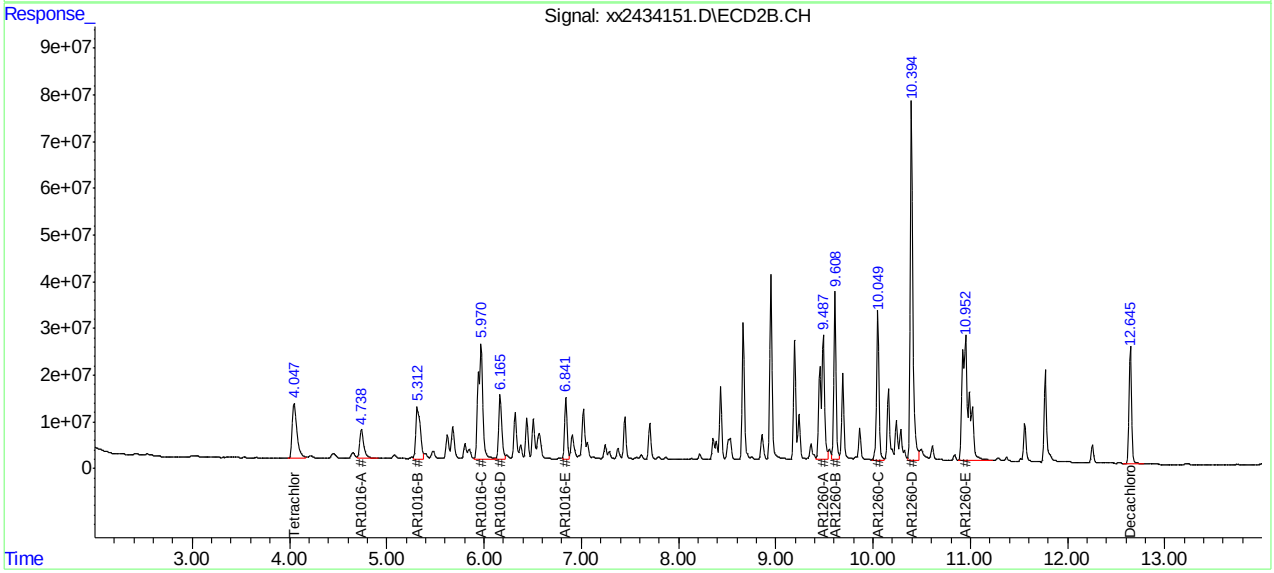
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:17 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-ICV6666	**Method:**	SW846 8082A
Lab FileID:	XX2434151.D	**Analyst approved:**	04/25/19 09:16 Summer Kotb
Injection Time:	04/24/19 18:18	**Supervisor approved:**	04/25/19 10:22 Gwendolyn Burns

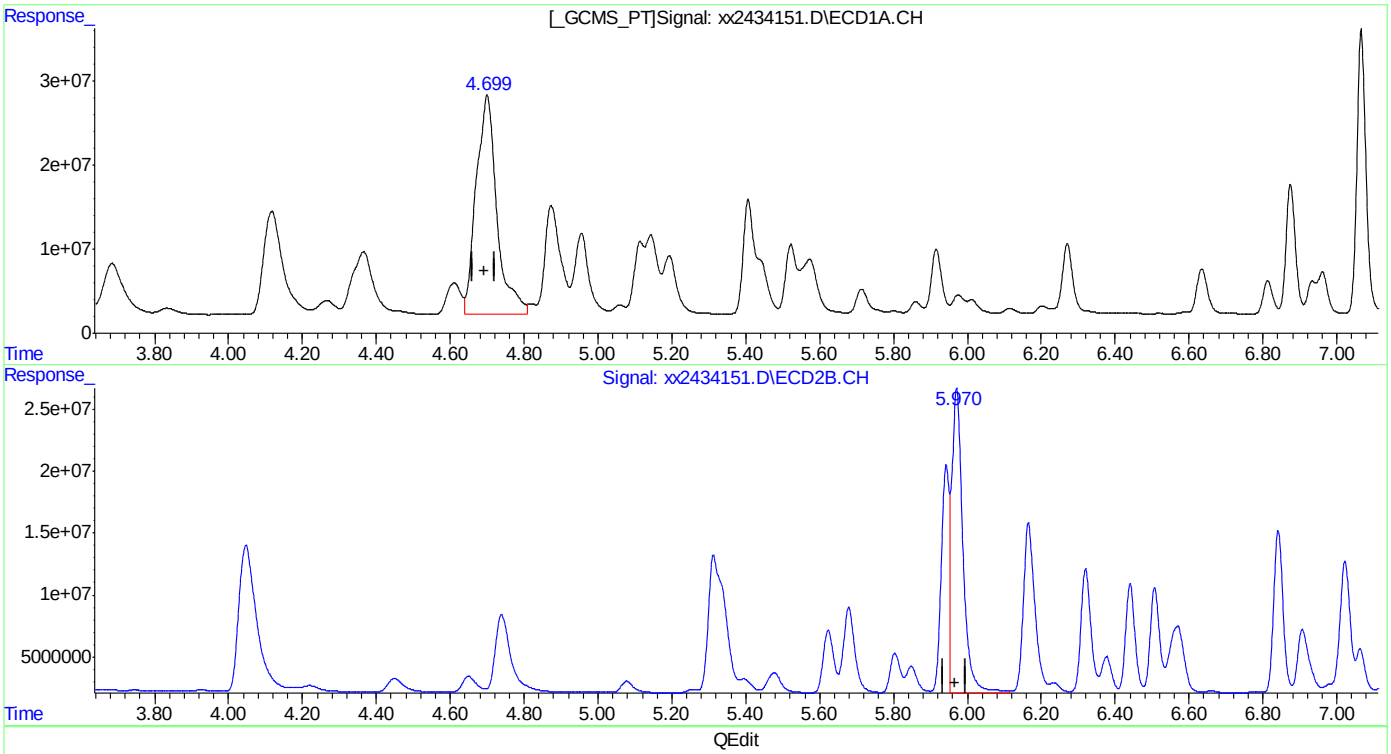
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Split peak
AR1260-E		1	9.19	Split peak
AR1260-A		2	9.49	Split peak
AR1260-E		2	10.95	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:03:22 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.700min 886.437PPB
response 1023015044

(43) AR1016-C #2
5.971min 583.573PPB
response 521583536

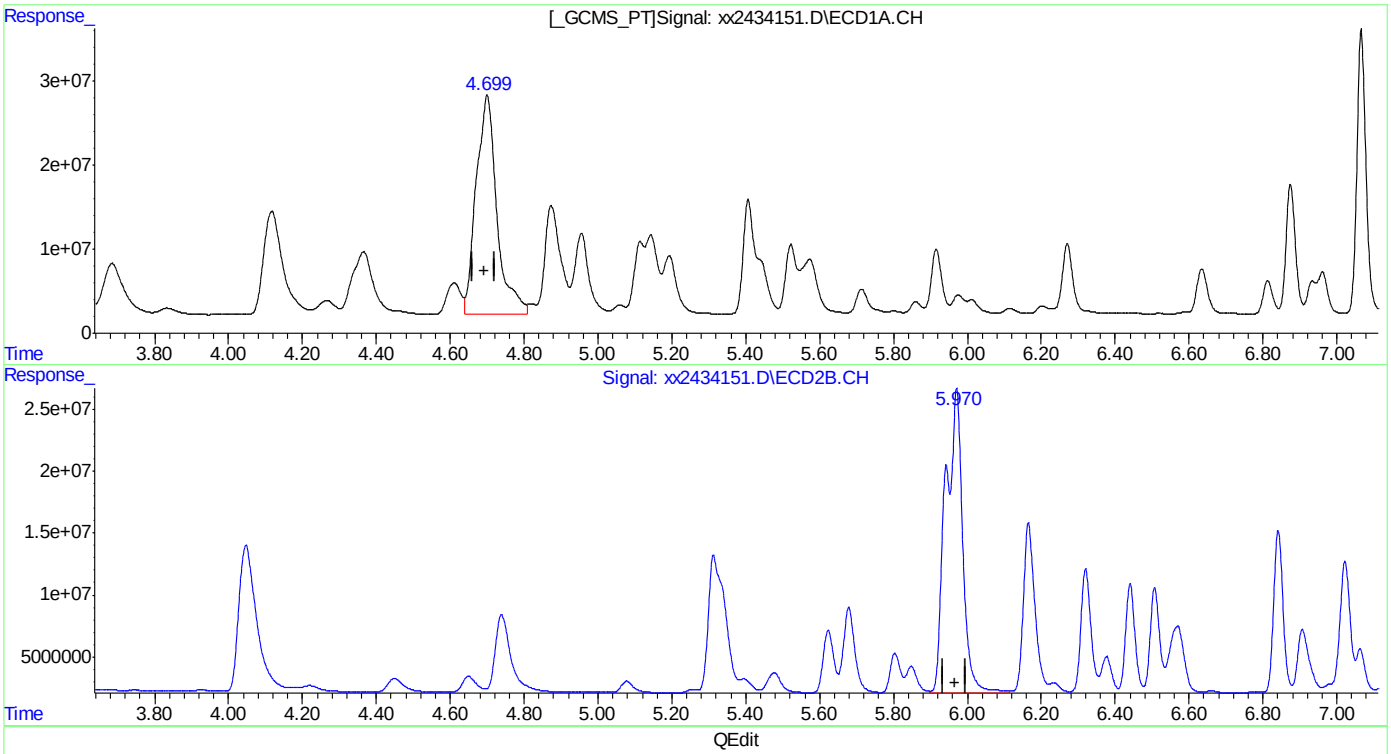
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:03:22 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C
4.700min 886.437PPB
response 1023015044

(43) AR1016-C #2
5.970min 890.746PPB m
response 796127362

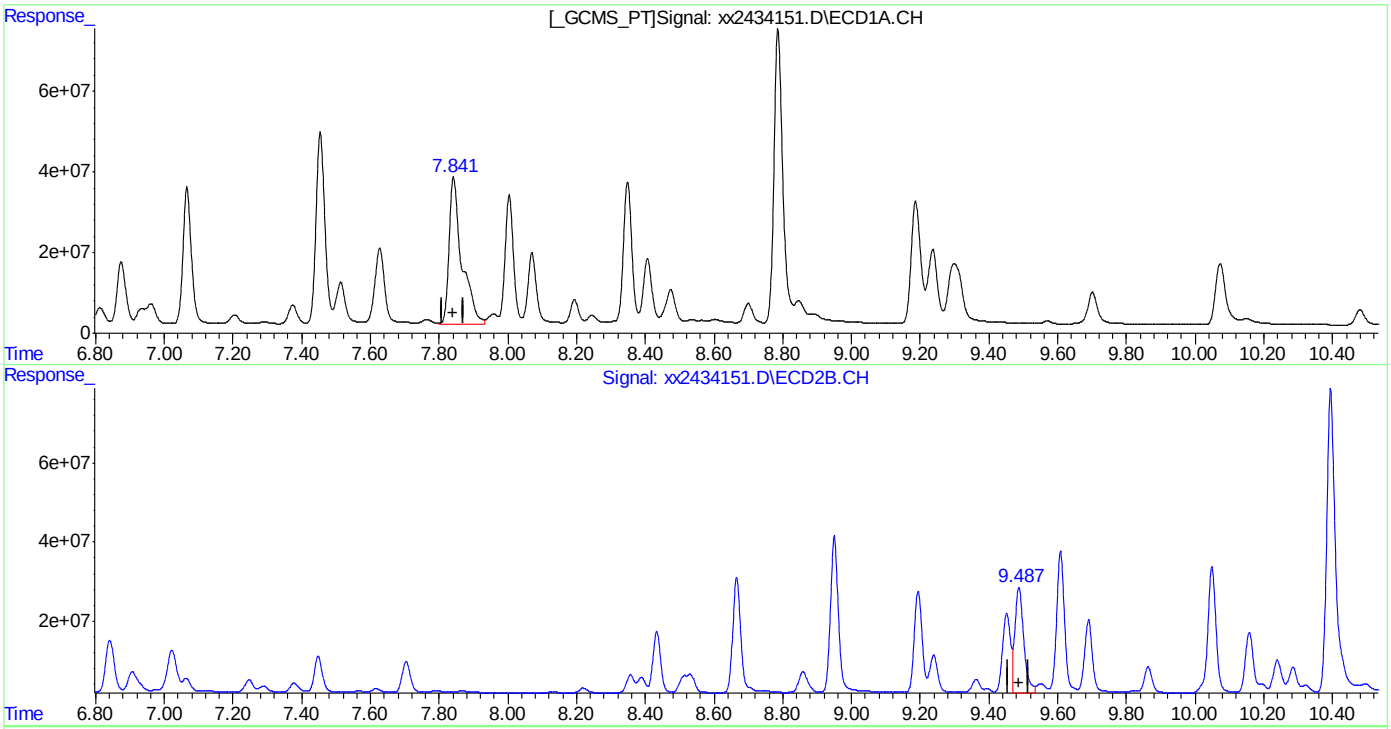
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:03:22 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.842min 955.454PPB
response 938154270

(46) AR1260-A #2
9.487min 563.350PPB
response 487480549

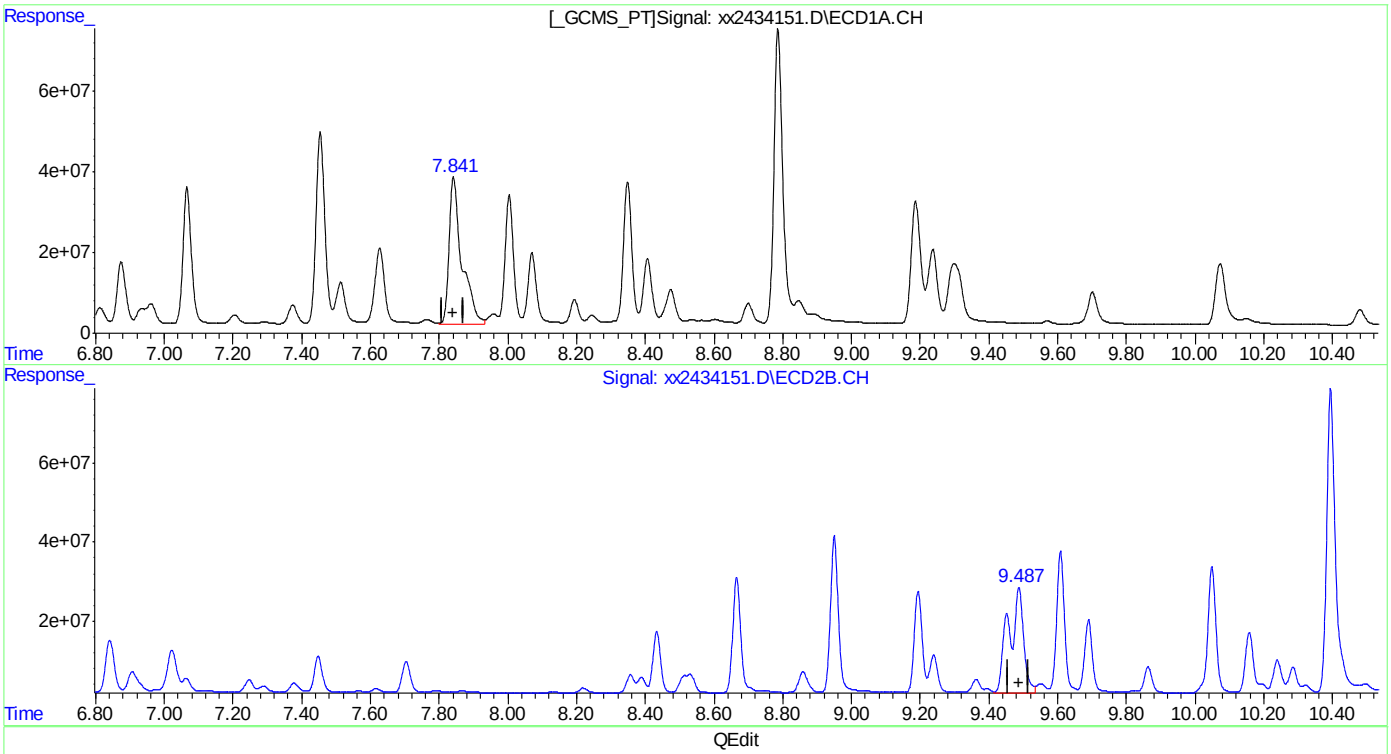
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:03:22 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(46) AR1260-A
7.842min 955.454PPB
response 938154270

(46) AR1260-A #2
9.487min 935.836PPB m
response 809802027

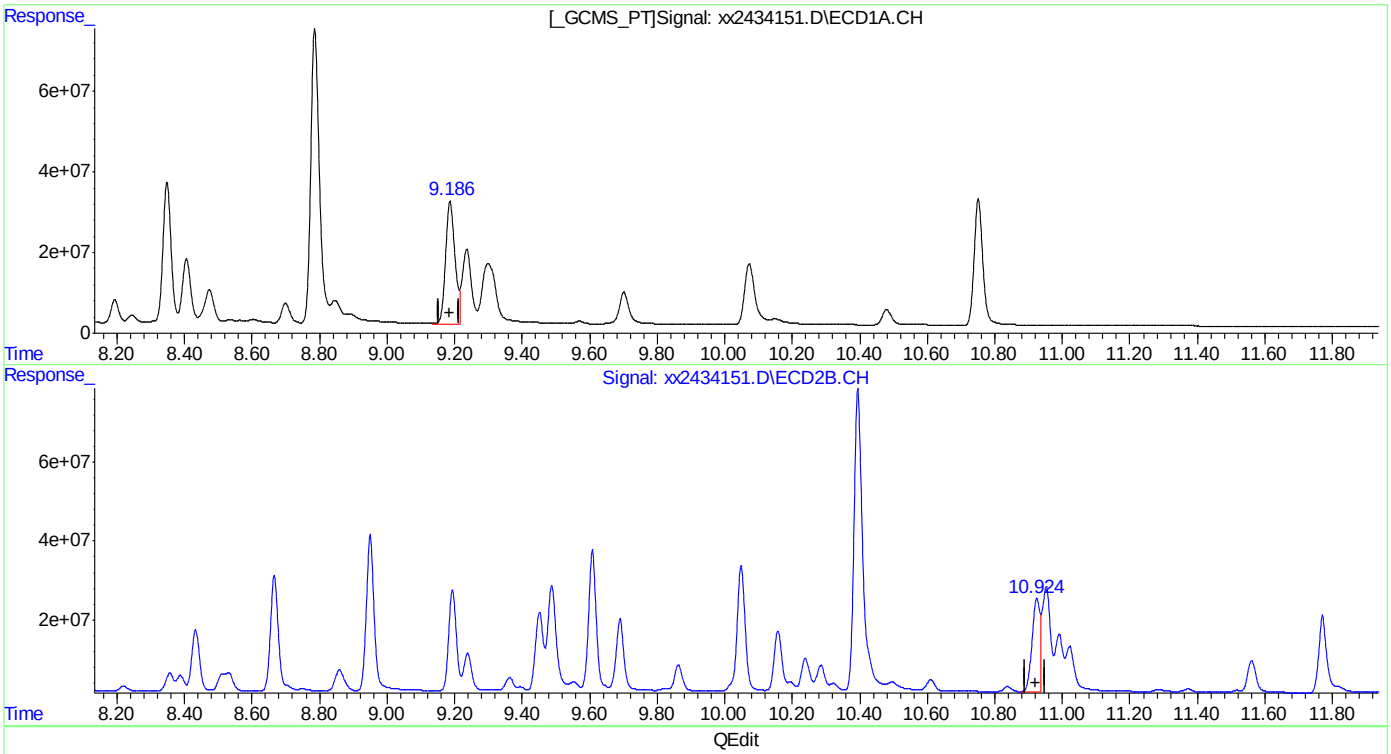
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:03:22 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.187min 396.449PPB
response 590455890

(50) AR1260-E #2
10.924min 269.242PPB
response 380498746

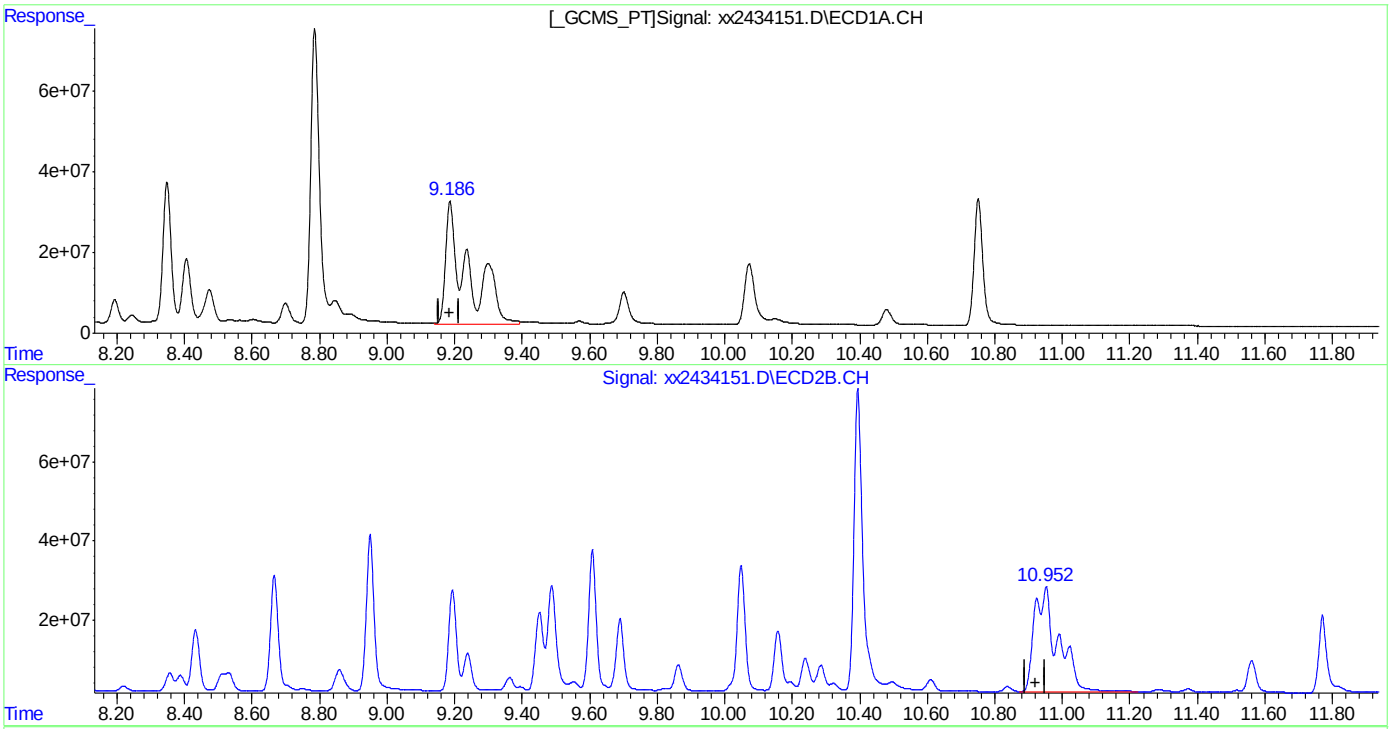
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434151.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:18 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:03:22 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(50) AR1260-E
9.186min 932.090PPB m
response 1388219780

(50) AR1260-E #2
10.952min 918.884PPB m
response 1298586000

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:05 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265	4.038	735.1E6	573.6E6	55.831	53.895
	Spiked Amount 40.000			Recovery	=	139.58%	134.74%
51)	S Decachlor...	10.750	12.644	794.2E6	609.9E6	56.534	56.666
	Spiked Amount 40.000			Recovery	=	141.33%	141.66%
	Target Compounds						
2)	AR1221-A	2.702	3.426	113.5E6	81220633	992.091	990.623
3)	AR1221-B	3.450	4.441	142.8E6	113.9E6	901.447	913.407
4)	AR1221-C	3.672	4.731	437.6E6	278.8E6	885.930	904.557
5)	AR1221-D	4.106	5.301	59865503	51268715	796.365m	835.531
6)	AR1221-E	4.263	5.391	71345091	35440189	860.517m	966.926
24)	AR1254-A	5.913	7.446	427.1E6	416.2E6	1005.364	990.197
25)	AR1254-B	6.266	7.701	879.0E6	458.2E6	1013.152m	994.027
26)	AR1254-C	6.643	8.218	484.0E6	374.5E6	1003.381	994.109
27)	AR1254-D	6.811	8.387	855.6E6	710.0E6	998.609	985.084
28)	AR1254-E	7.198	8.702	521.5E6	547.4E6	985.260	991.934
29)	AR1254-F	7.453	9.192	620.4E6	559.7E6	1026.595	979.623m
30)	AR1254-G	7.841	9.485	861.7E6	745.8E6	1006.920	995.379m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

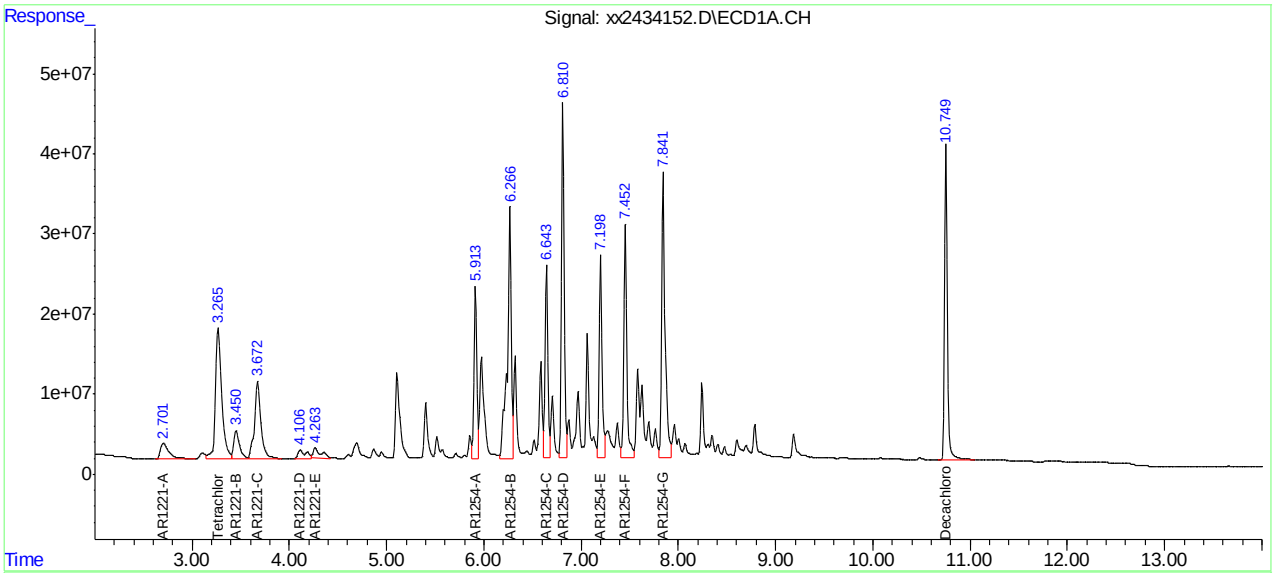
11.6.29 11

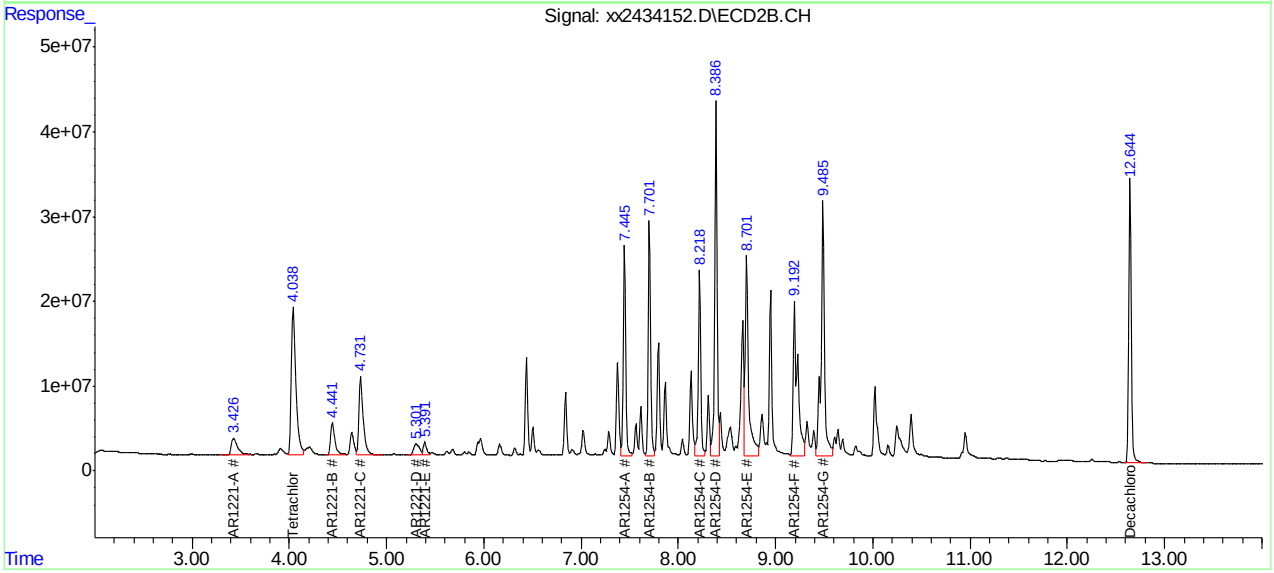
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:05 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-ICV6666	**Method:**	SW846 8082A	
Lab FileID:	XX2434152.D	**Analyst approved:**	04/25/19 09:16	Summer Kotb
Injection Time:	04/24/19 18:36	**Supervisor approved:**	04/25/19 10:22	Gwendolyn Burns

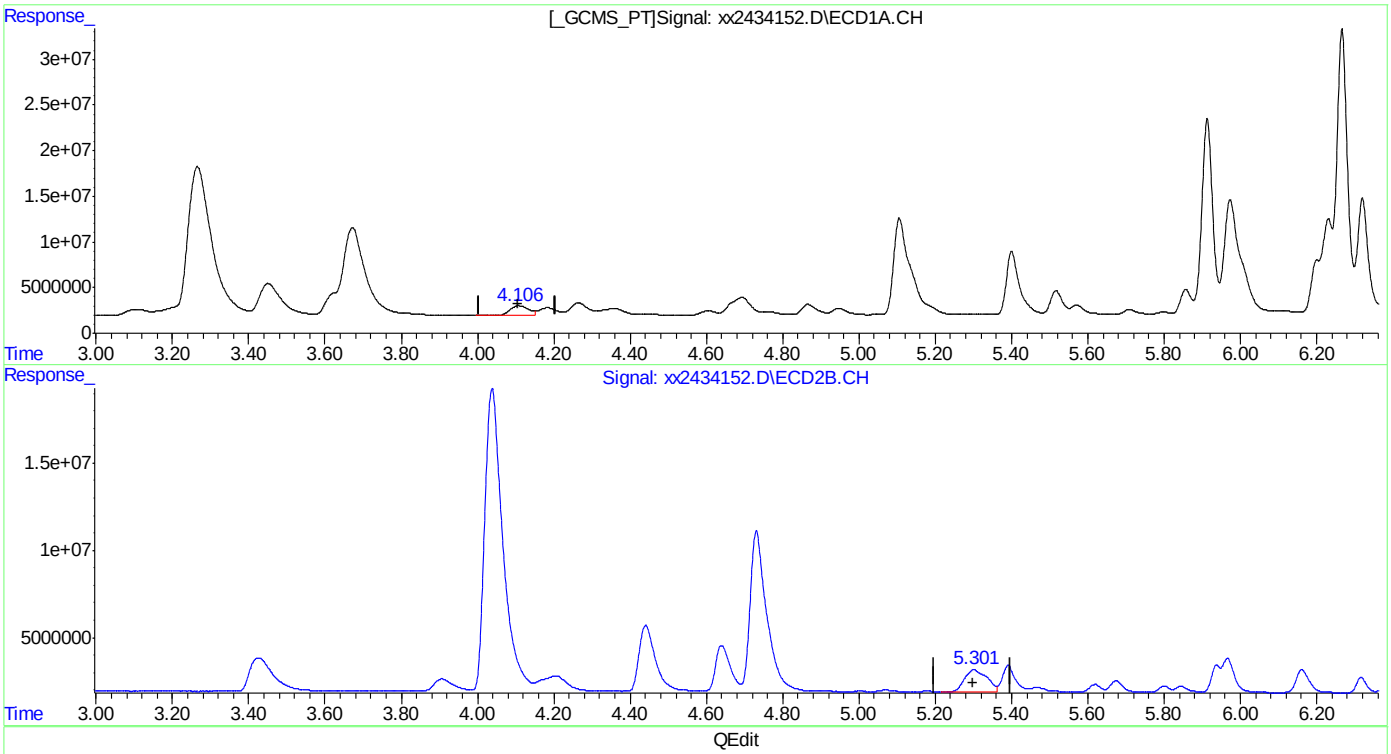
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	4.11	Split peak
AR1221-E		1	4.26	Split peak
AR1254-B		1	6.27	Split peak
AR1254-F		2	9.19	Split peak
Ar1254-G		2	9.49	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(5) AR1221-D
4.107min 459.876PPB
response 34570504

(5) AR1221-D #2
5.301min 835.531PPB
response 51268715

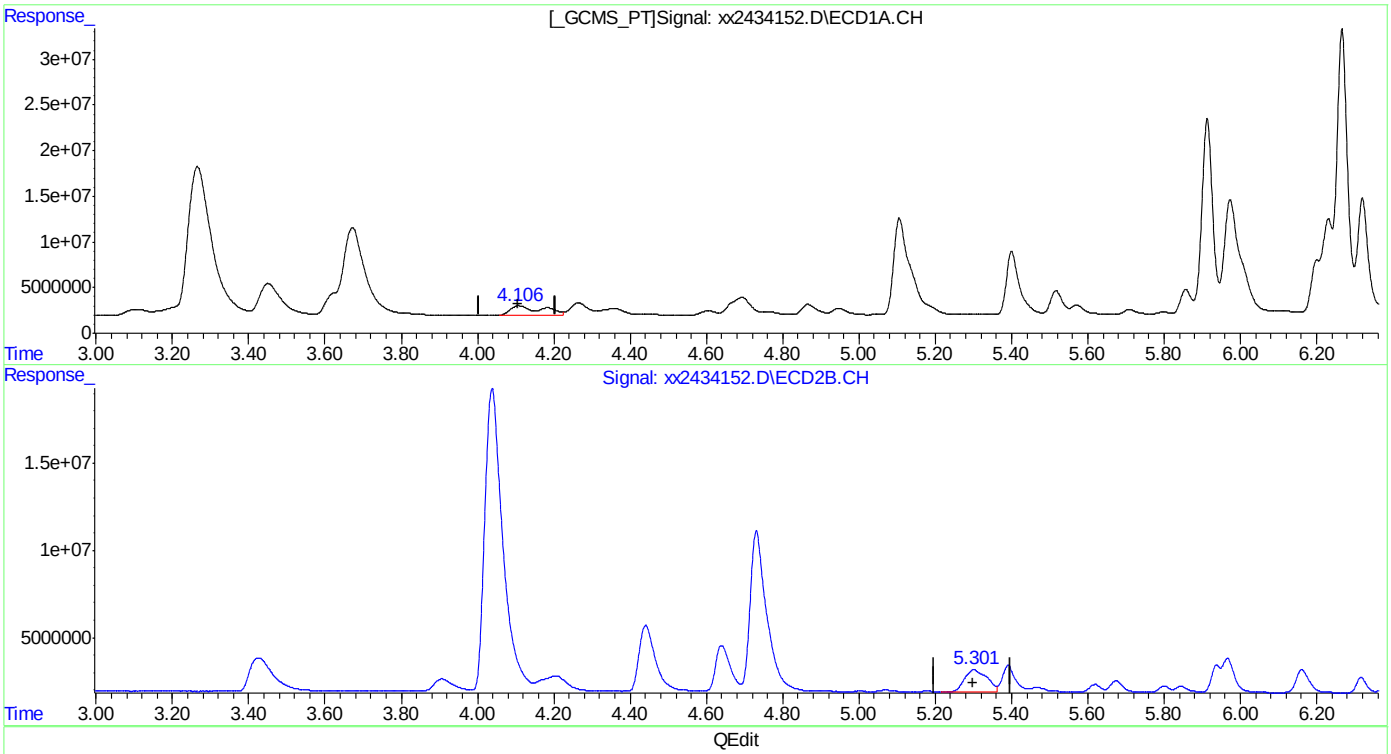
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(5) AR1221-D
4.106min 796.365PPB m
response 59865503

(5) AR1221-D #2
5.301min 835.531PPB
response 51268715

(+) = Expected Retention Time

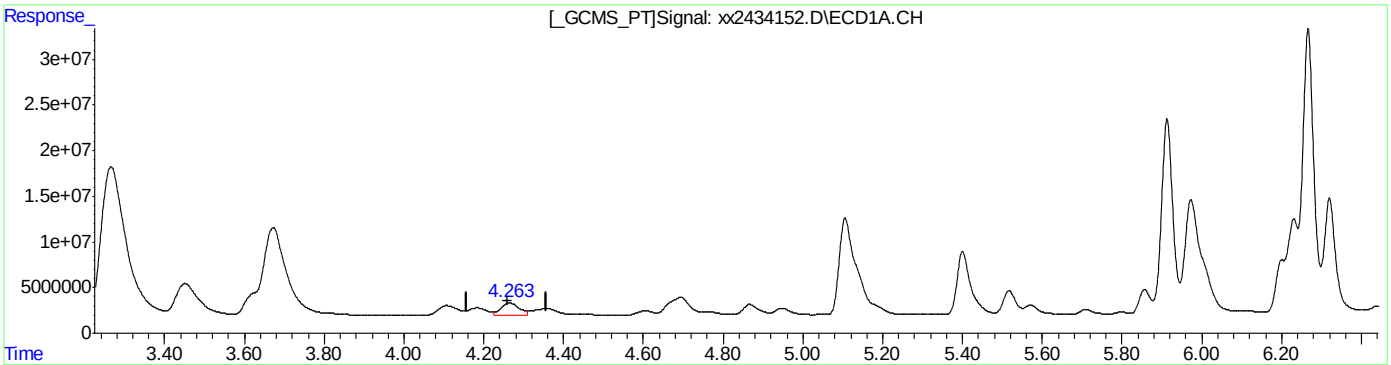
11.6.29.3 11

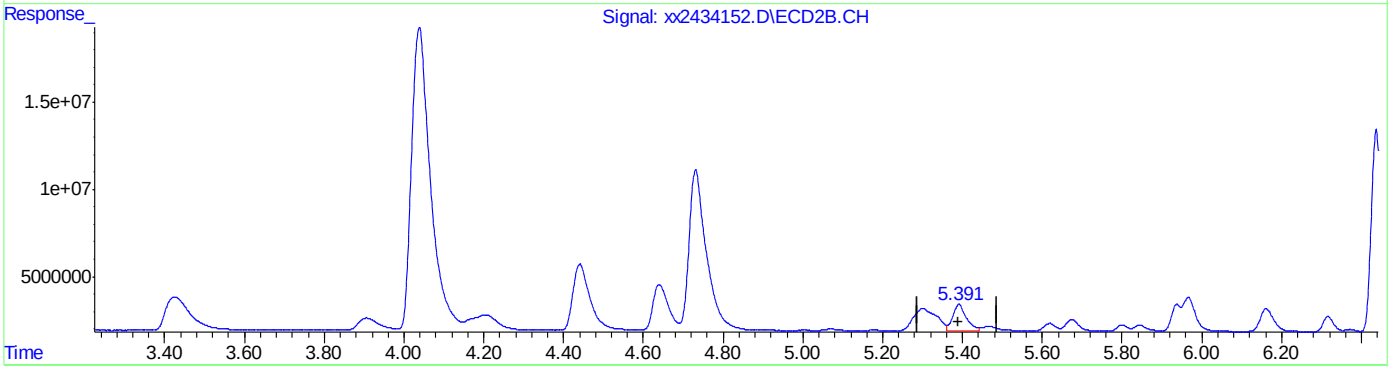
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(6) AR1221-E
4.264min 498.003PPB
response 41289191

(6) AR1221-E #2
5.391min 966.926PPB
response 35440189

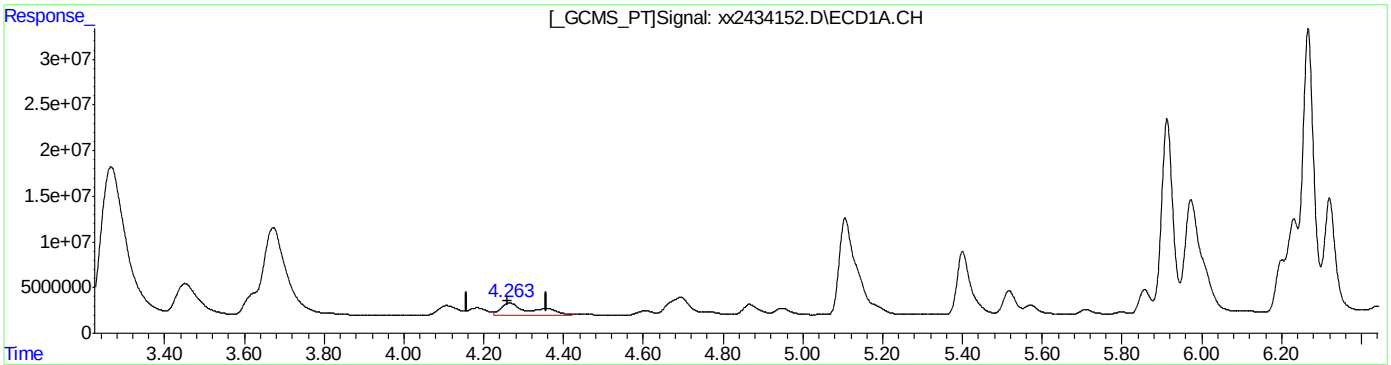
(+) = Expected Retention Time

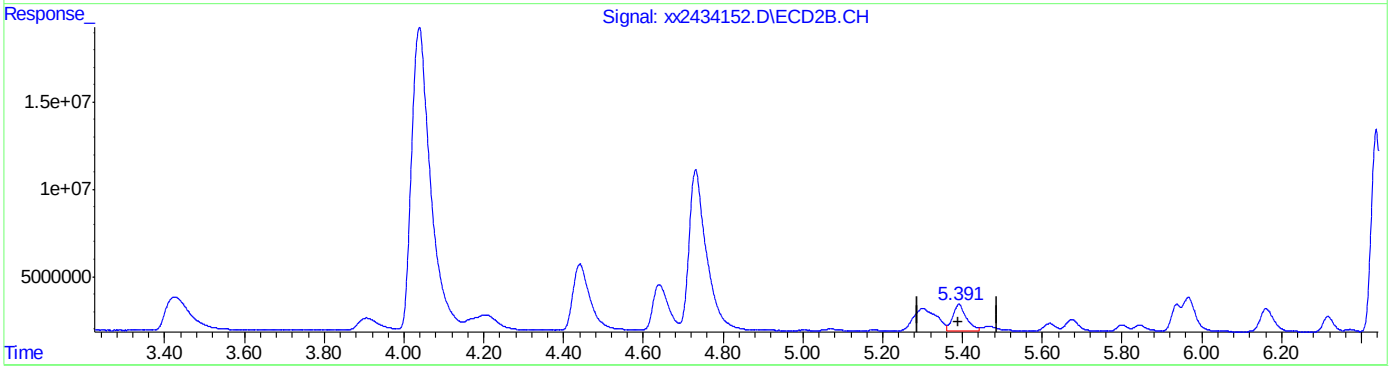
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(6) AR1221-E
4.263min 860.517PPB m
response 71345091

(6) AR1221-E #2
5.391min 966.926PPB
response 35440189

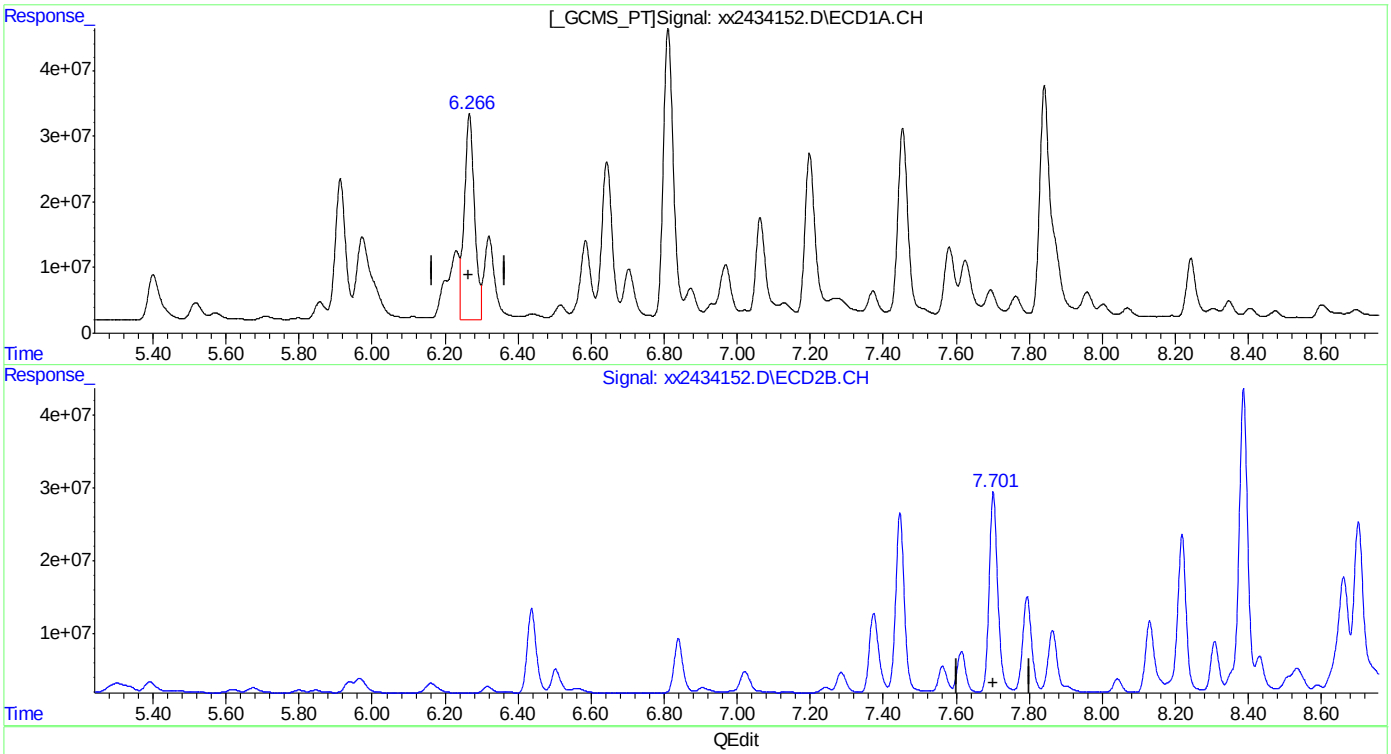
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:05:18 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(25) AR1254-B
6.267min 710.410PPB
response 616363692

(25) AR1254-B #2
7.701min 994.027PPB
response 458161531

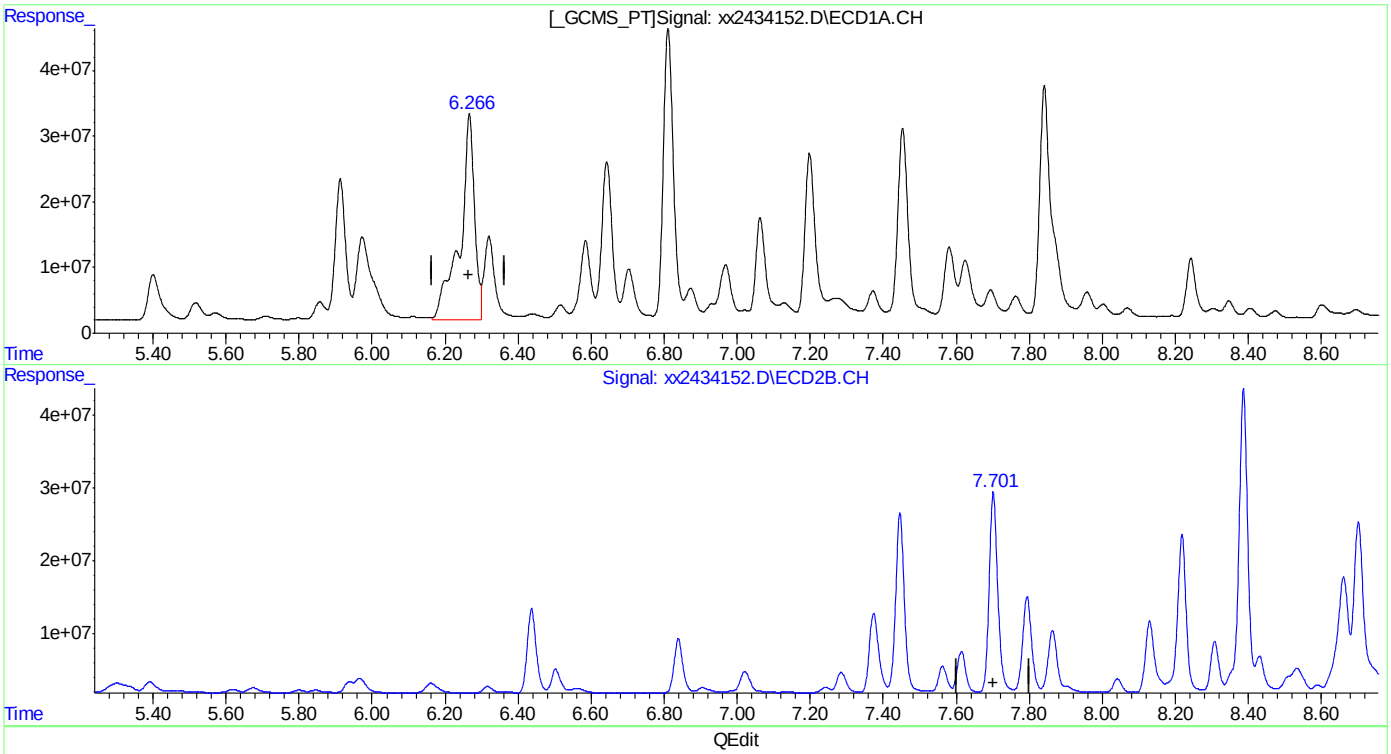
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(25) AR1254-B
6.266min 1013.152PPB m
response 879027945

(25) AR1254-B #2
7.701min 994.027PPB
response 458161531

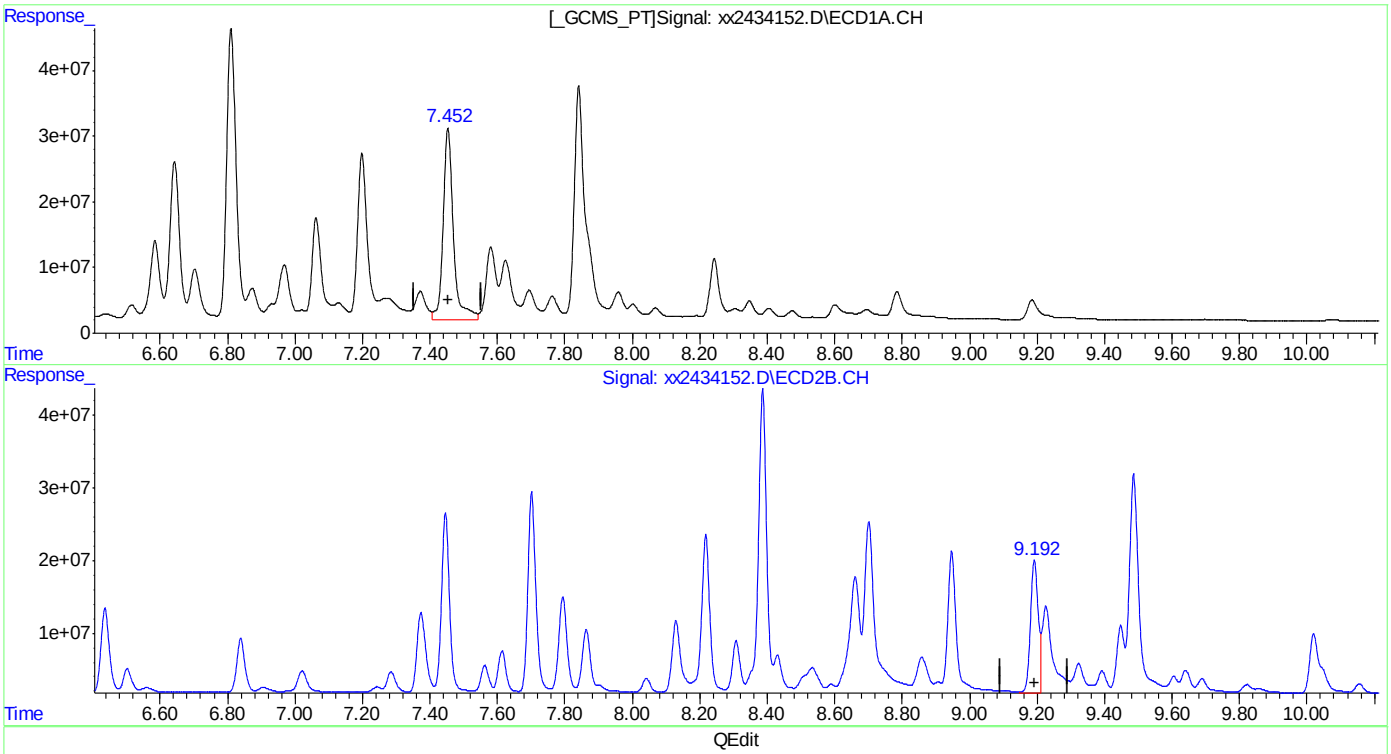
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F
7.453min 1026.595PPB
response 620394065

(29) AR1254-F #2
9.192min 514.283PPB
response 293856865

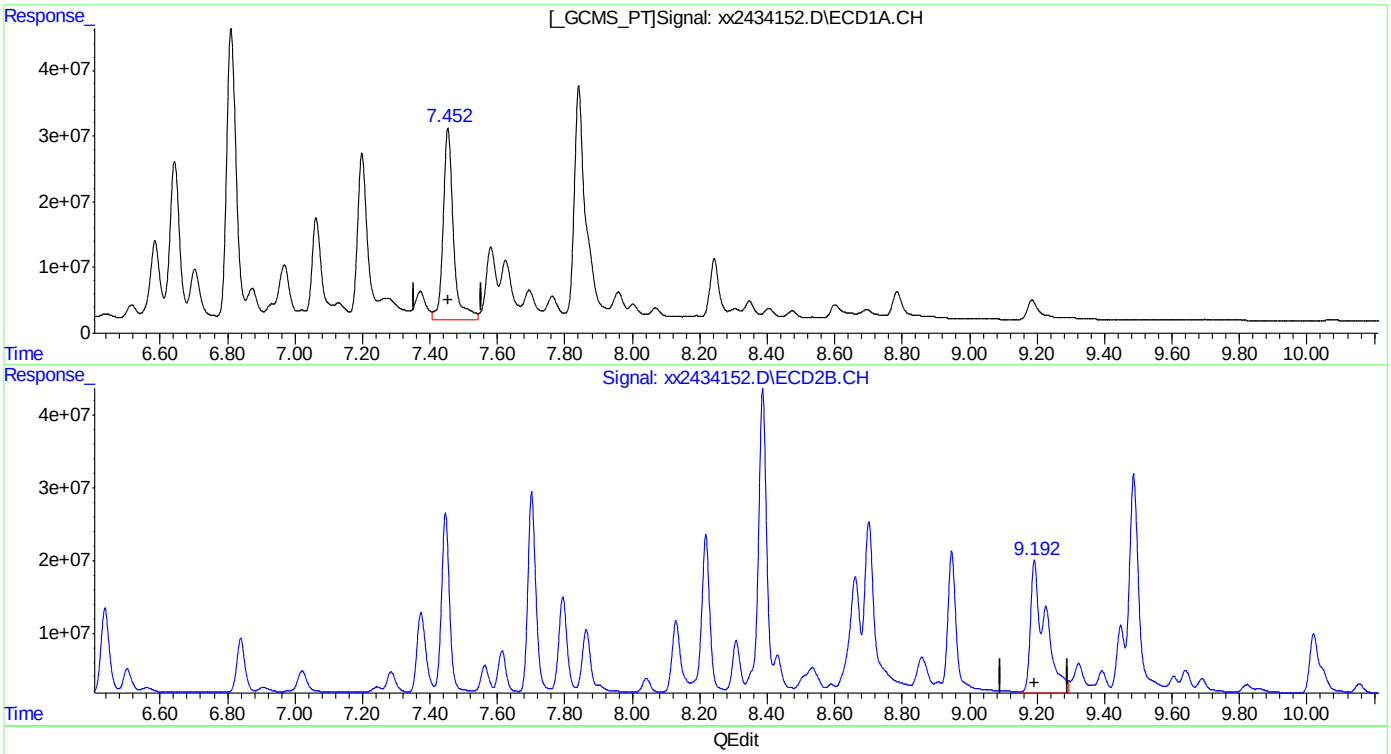
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(29) AR1254-F
7.453min 1026.595PPB
response 620394065

(29) AR1254-F #2
9.192min 979.623PPB m
response 559748371

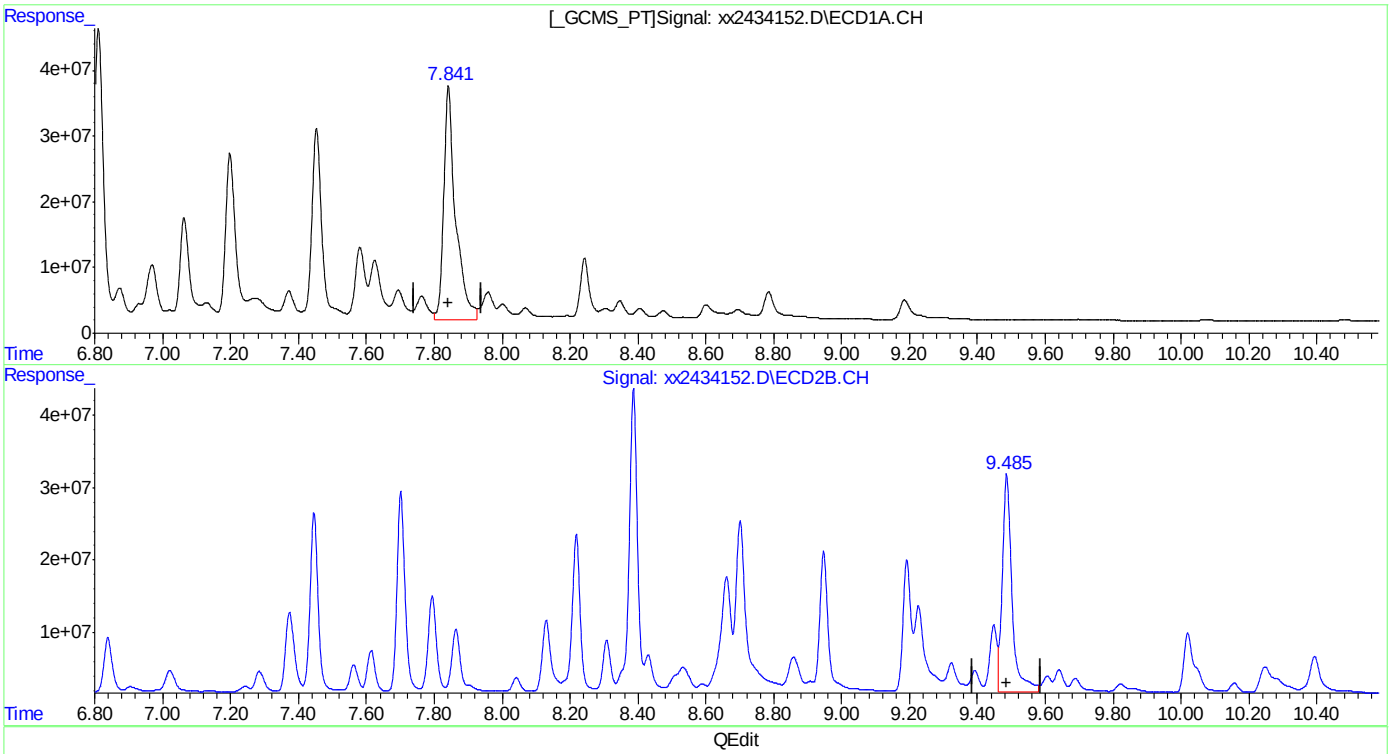
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:05:55 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(30) AR1254-G
7.841min 1006.920PPB
response 861726966

(30) AR1254-G #2
9.486min 805.305PPB
response 603404261

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:05:59 2019

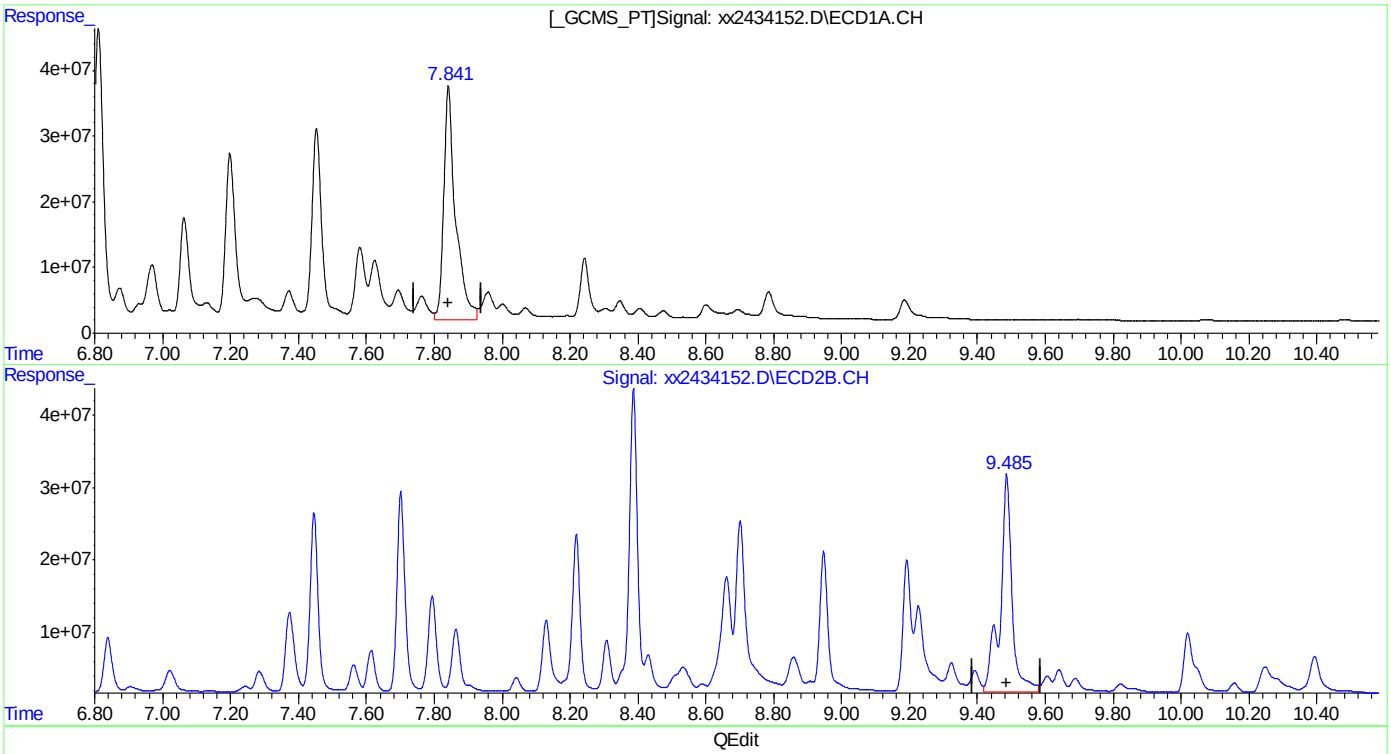
SGS JC86837

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434152.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:36 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:04:42 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(30) AR1254-G
7.841min 1006.920PPB
response 861726966

(30) AR1254-G #2
9.485min 995.379PPB m
response 745823941

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265	4.037	730.5E6	583.5E6	55.487	54.824
	Spiked Amount 40.000			Recovery	=	138.72%	137.06%
51)	S Decachlor...	10.749	12.642	813.4E6	624.8E6	57.904	58.050
	Spiked Amount 40.000			Recovery	=	144.76%	145.13%
	Target Compounds						
7)	AR1232-A	3.670	4.729	345.5E6	230.3E6	922.243	935.259
8)	AR1232-B	4.105	5.307	230.3E6	181.1E6	939.843	942.614
9)	AR1232-C	4.693	5.965	486.5E6	385.0E6	931.396	939.497m
10)	AR1232-D	4.865	6.163	180.8E6	147.4E6	928.254	940.786
11)	AR1232-E	5.402	6.839	173.2E6	105.2E6	907.472	942.256
31)	AR1262-A	7.451	8.949	652.3E6	555.7E6	1011.770	1031.642
32)	AR1262-B	8.002	9.607	867.2E6	894.3E6	1018.059	1027.471
33)	AR1262-C	8.346	10.049	829.5E6	722.5E6	1015.550	1034.881
34)	AR1262-D	8.785	10.394	1622.8E6	1683.0E6	1008.835	1037.580
35)	AR1262-E	9.233	10.920	2040.6E6	1942.7E6	1016.468m	1051.705m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

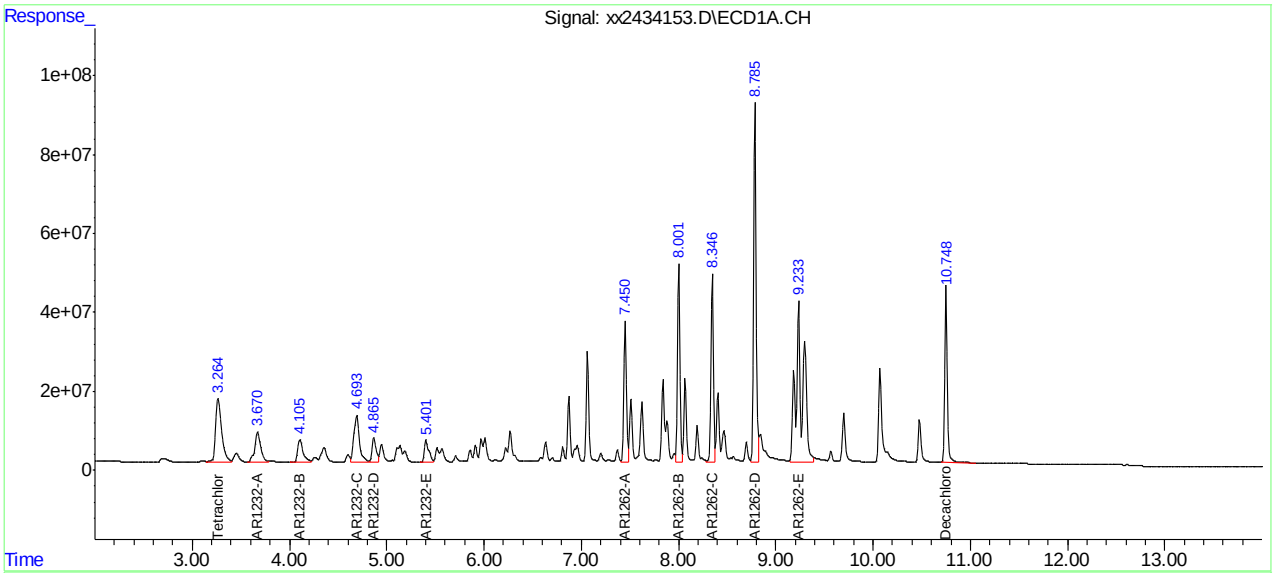
11.6.30 11

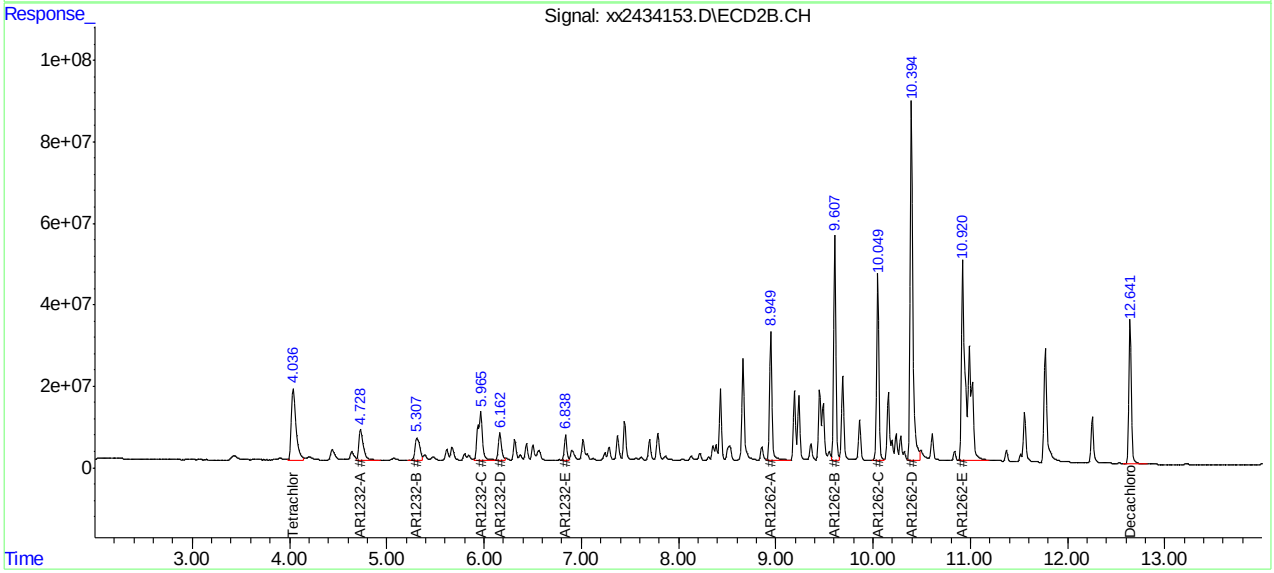
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:20 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-ICV6666	**Method:**	SW846 8082A	
Lab FileID:	XX2434153.D	**Analyst approved:**	04/25/19 09:16	Summer Kotb
Injection Time:	04/24/19 18:54	**Supervisor approved:**	04/25/19 10:22	Gwendolyn Burns

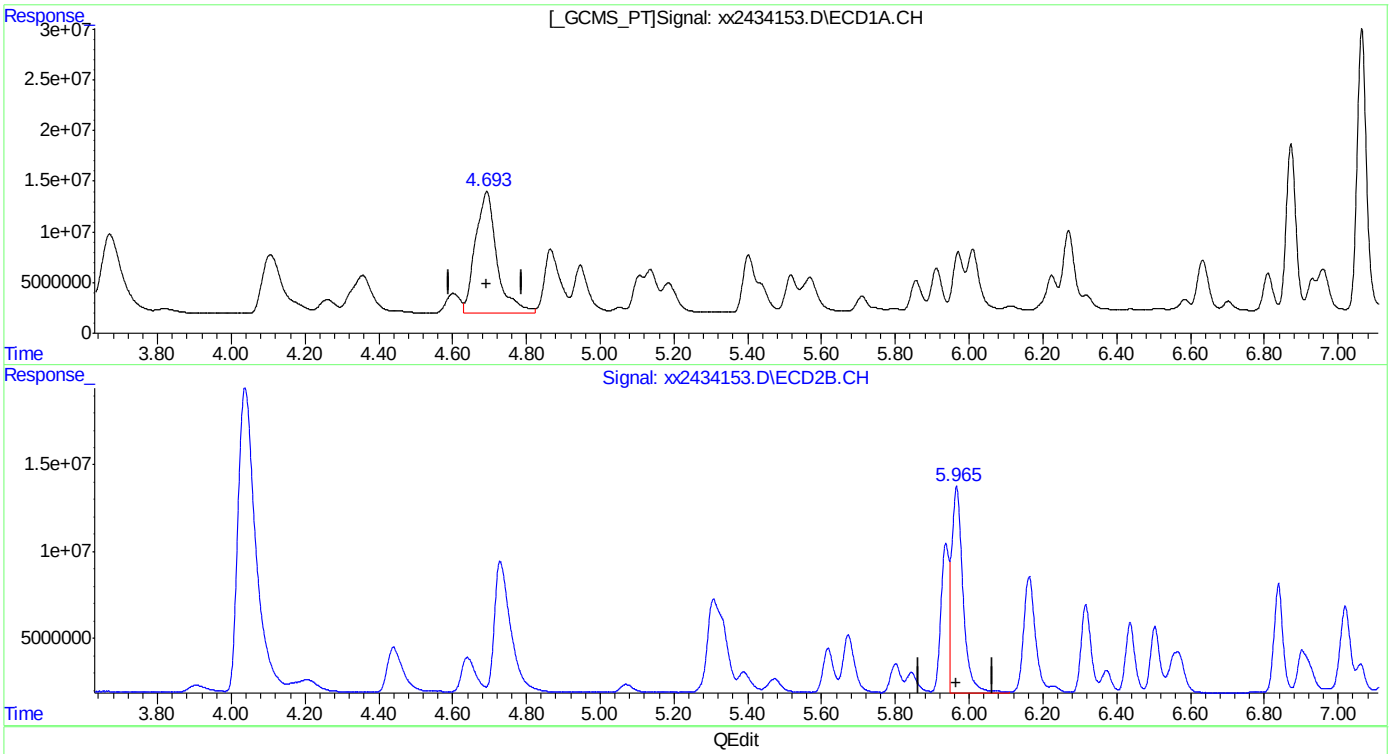
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1232-C		2	5.97	Split peak
AR1262-E		1	9.23	Split peak
AR1262-E		2	10.92	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(9) AR1232-C
4.693min 931.396PPB
response 486467485

(9) AR1232-C #2
5.966min 629.792PPB
response 258082090

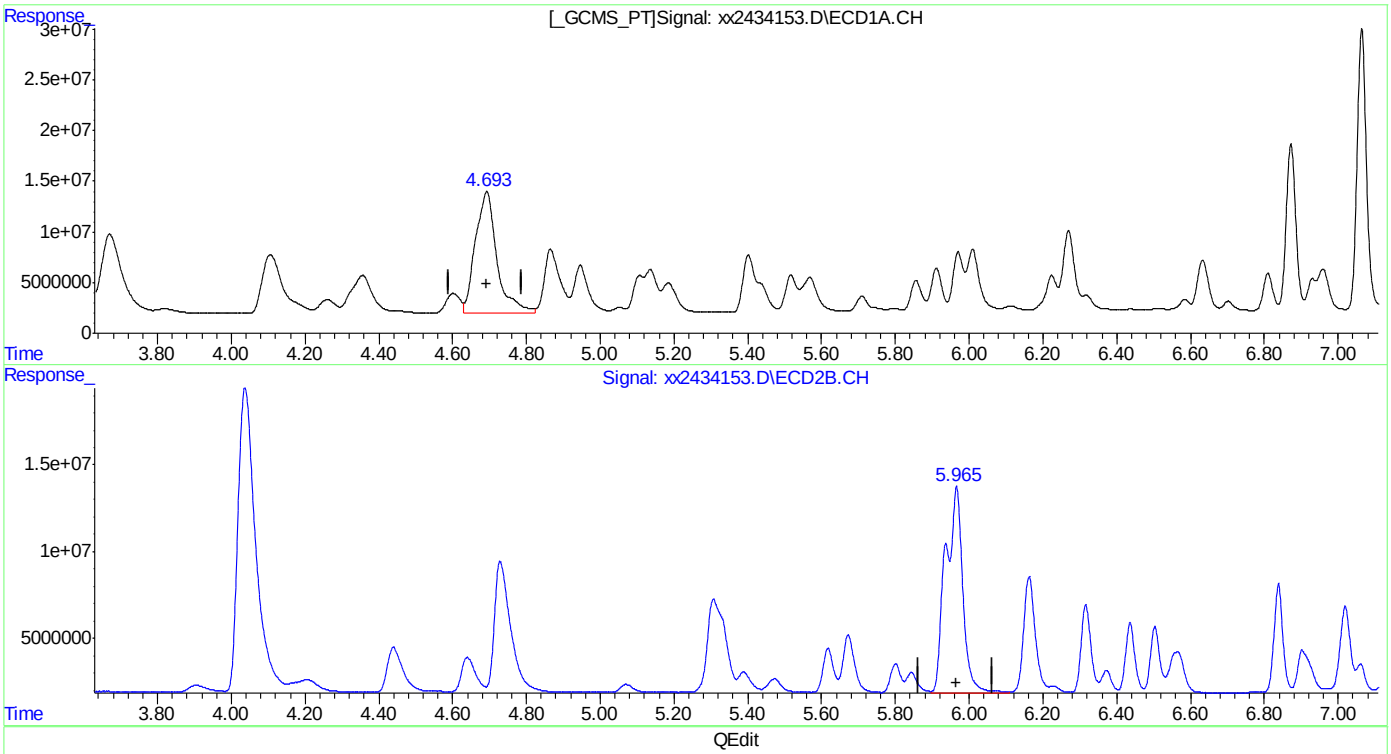
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(9) AR1232-C
4.693min 931.396PPB
response 486467485

(9) AR1232-C #2
5.965min 939.497PPB m
response 384995743

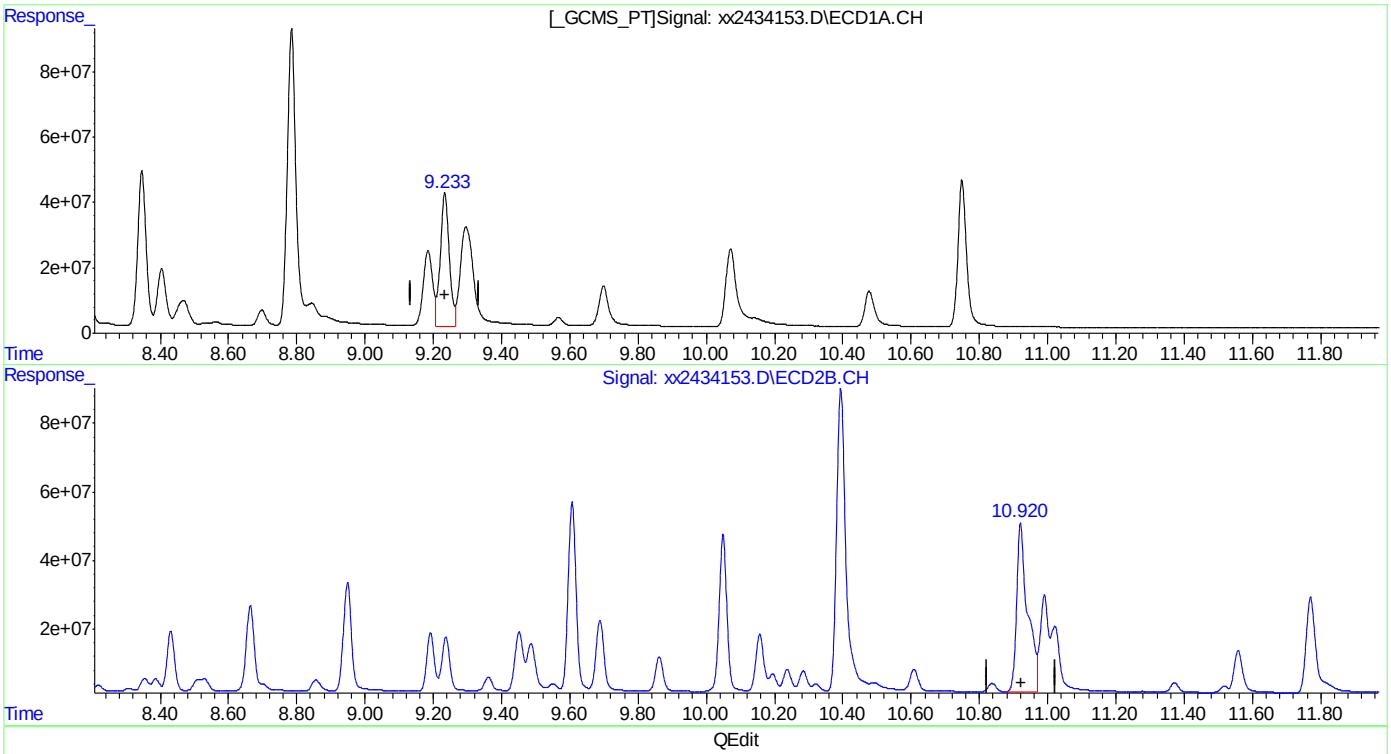
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1262-E
9.234min 372.347PPB
response 747504335

(35) AR1262-E #2
10.920min 594.188PPB
response 1097604808

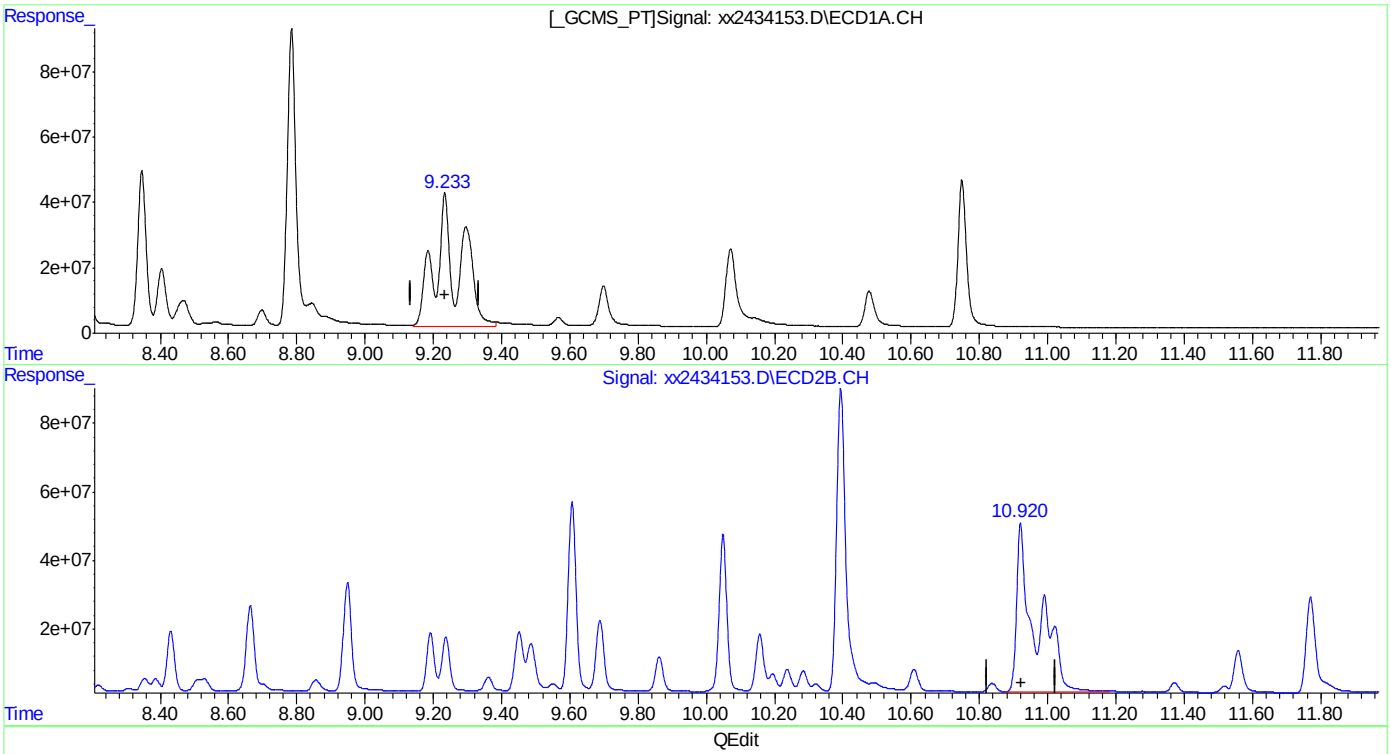
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434153.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 6:54 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:06:37 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(35) AR1262-E
9.233min 1016.468PPB m
response 2040607856

(35) AR1262-E #2
10.920min 1051.705PPB m
response 1942746827

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:14 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.268	4.039	734.5E6	599.4E6	55.786	56.321
	Spiked Amount 40.000			Recovery	=	139.47%	140.80%
51)	S Decachlor...	10.748	12.644	2189.5E6	1598.0E6	155.858	148.468
	Spiked Amount 40.000			Recovery	=	389.65%	371.17%
	Target Compounds						
12)	AR1242-A	4.106	5.310	402.2E6	317.7E6	1028.132	1041.110
13)	AR1242-B	4.693	5.967	924.6E6	721.4E6	1030.790	1048.282m
14)	AR1242-C	4.866	6.162	342.3E6	273.9E6	1033.592	1055.679
15)	AR1242-D	5.402	6.838	356.4E6	210.7E6	1009.436	1027.867
16)	AR1242-E	6.009	7.447	536.4E6	263.7E6	1006.563m	1013.503
36)	AR1268-A	9.236	10.922	2032.4E6	2086.7E6	976.634	983.189
37)	AR1268-B	9.291	10.992	2191.5E6	1937.4E6	976.090	982.149
38)	AR1268-C	9.569	11.372	1733.4E6	1728.0E6	996.315	980.676
39)	AR1268-D	10.069	11.769	693.6E6	657.8E6	967.339	971.514
40)	AR1268-E	10.478	12.254	6444.4E6	5123.5E6	980.375	982.647

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.31
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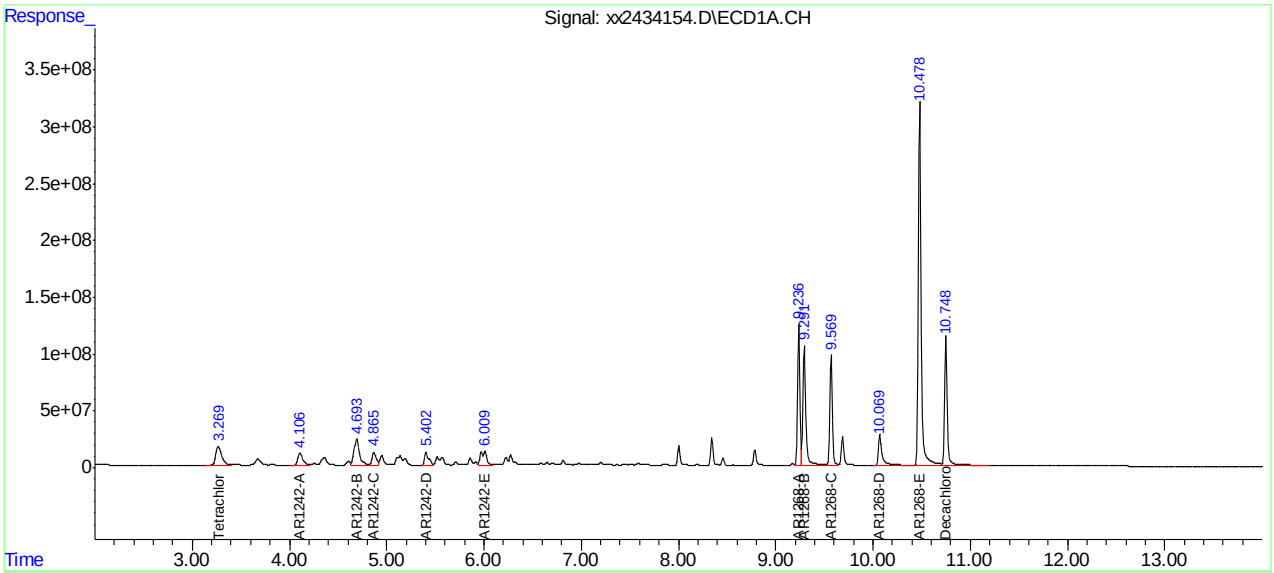
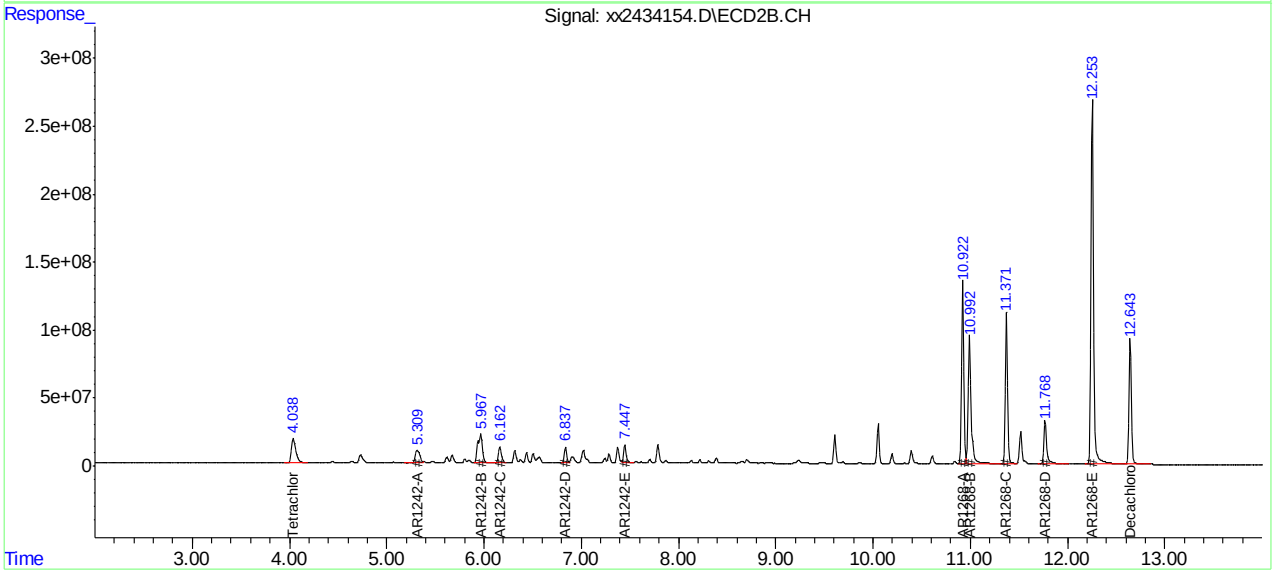
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:14 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-ICV6666	**Method:**	SW846 8082A	
Lab FileID:	XX2434154.D	**Analyst approved:**	04/25/19 09:16	Summer Kotb
Injection Time:	04/24/19 19:13	**Supervisor approved:**	04/25/19 10:22	Gwendolyn Burns

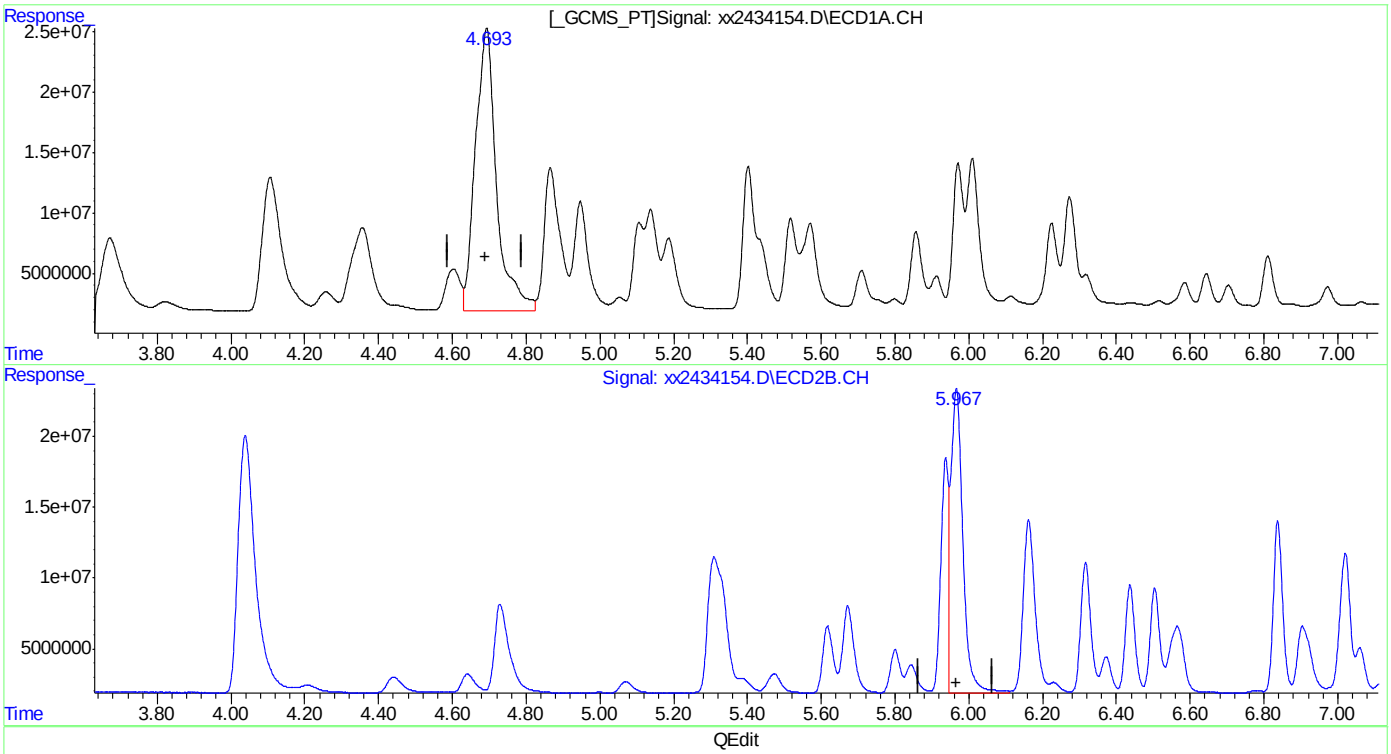
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1242-B		2	5.97	Split peak
AR1242-E		1	6.01	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:31 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(13) AR1242-B
4.693min 1030.790PPB
response 924604599

(13) AR1242-B #2
5.967min 700.484PPB
response 482033425

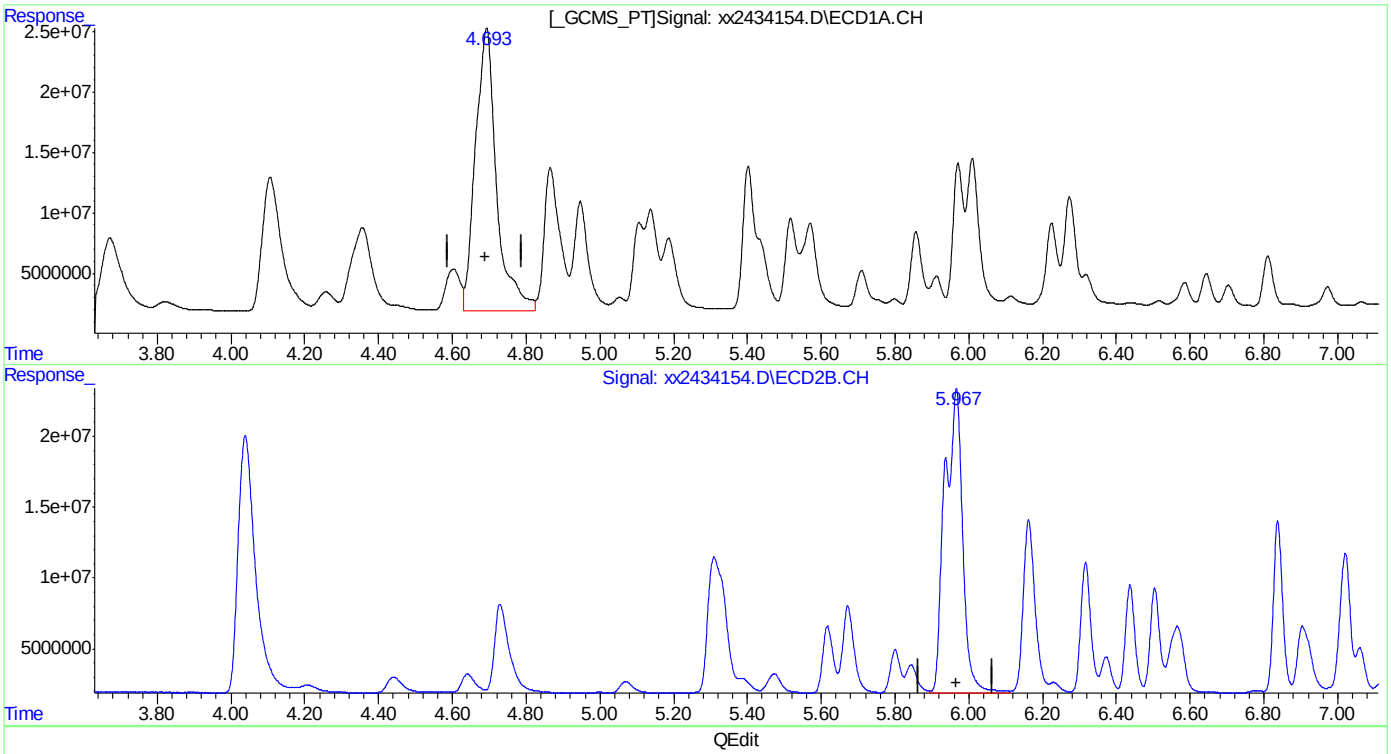
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:31 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(13) AR1242-B
4.693min 1030.790PPB
response 924604599

(13) AR1242-B #2
5.967min 1048.282PPB m
response 721368823

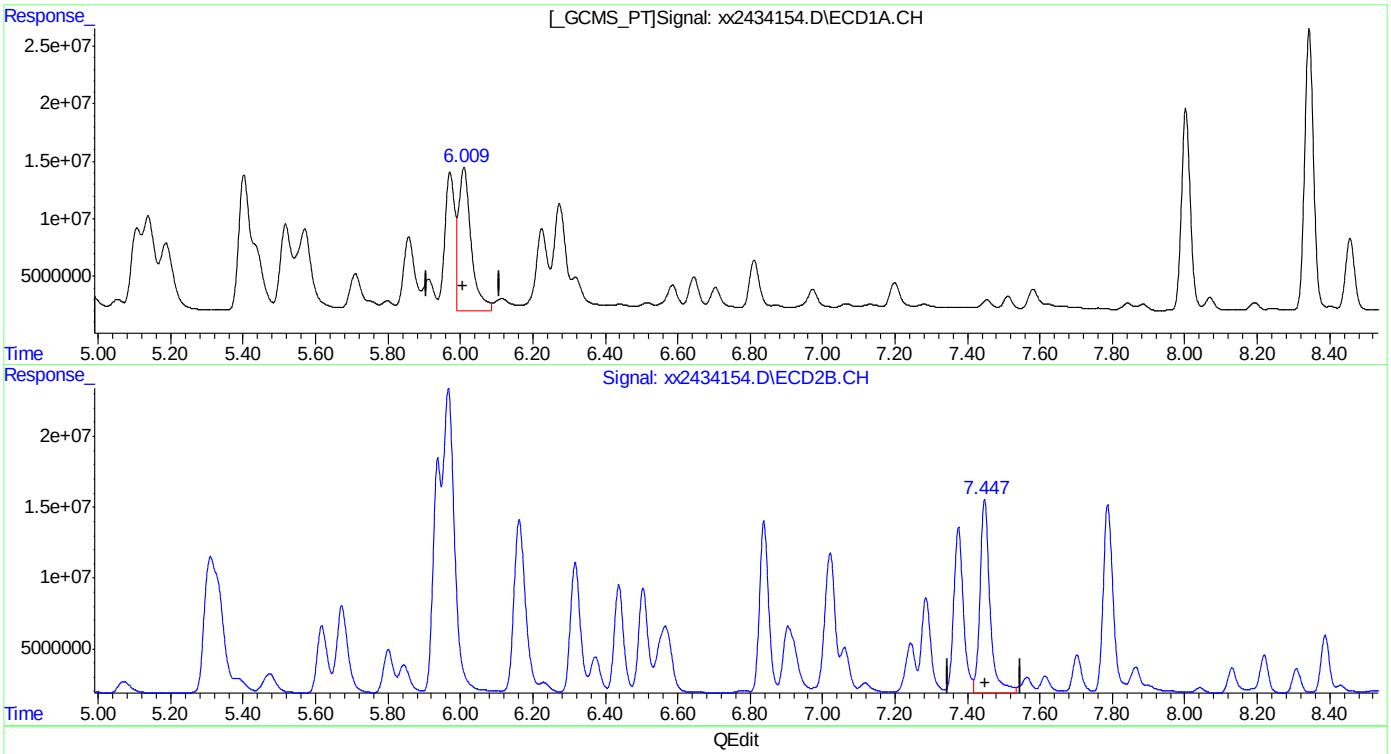
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:31 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(16) AR1242-E
6.010min 571.201PPB
response 304389863

(16) AR1242-E #2
7.447min 1013.503PPB
response 263667292

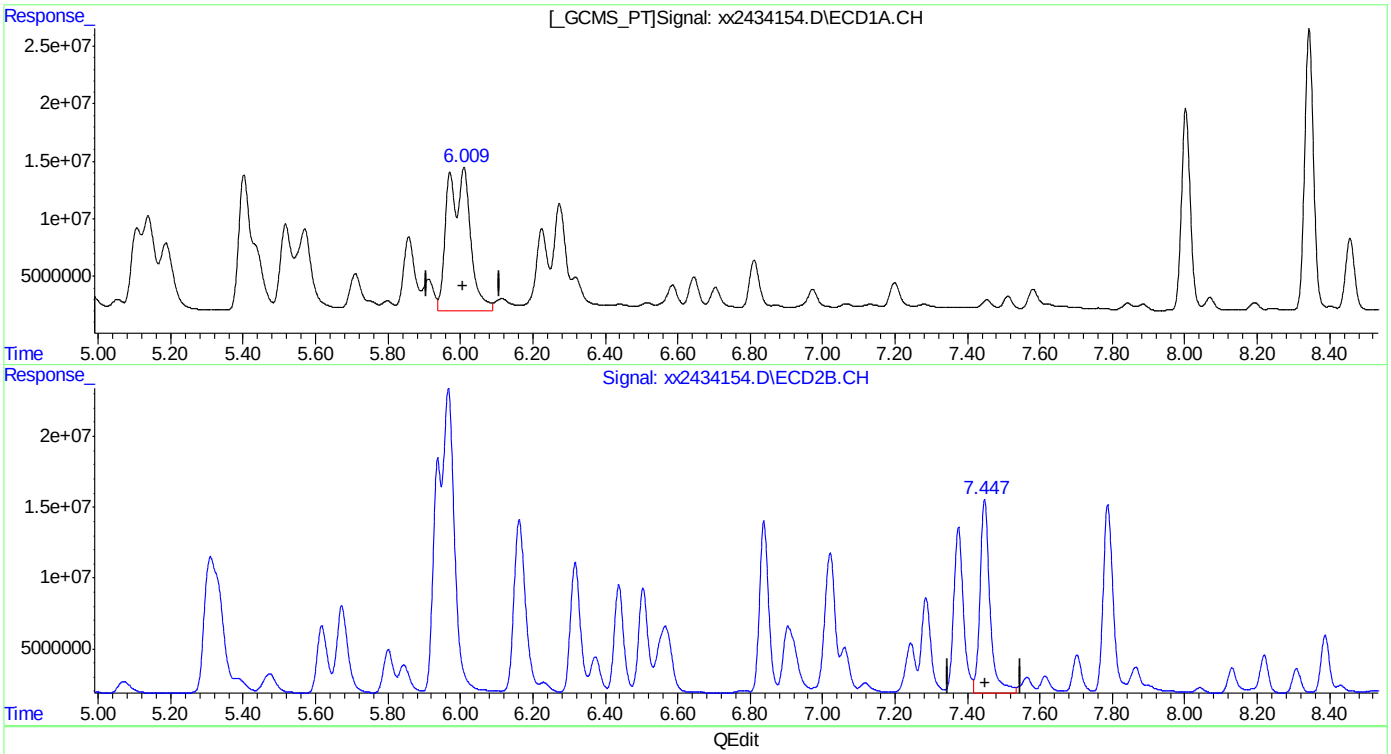
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:08:02 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434154.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:13 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:07:31 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(16) AR1242-E
6.009min 1006.563PPB m
response 536391821

(16) AR1242-E #2
7.447min 1013.503PPB
response 263667292

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 04/25/19 10:22

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:09:55 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.263	4.037	740.0E6	610.0E6	56.203	57.320
	Spiked Amount 40.000			Recovery	=	140.51%	143.30%
51) S	Decachlor...	10.750	12.644	834.8E6	640.6E6	59.425	59.521
	Spiked Amount 40.000			Recovery	=	148.56%	148.80%
	Target Compounds						
17)	AR1248-A	4.104	5.308	189.4E6	155.0E6	926.455	918.779
18)	AR1248-B	4.689	5.966	515.2E6	447.5E6	970.488	980.945m
19)	AR1248-C	5.106	6.437	558.1E6	254.9E6	1025.053m	1006.786
20)	AR1248-D	5.401	6.839	563.5E6	347.0E6	1005.909	1016.130
21)	AR1248-E	5.516	7.020	520.2E6	395.4E6	1021.899m	1044.684m
22)	AR1248-F	5.969	7.448	978.4E6	493.8E6	1061.824m	1059.164
23)	AR1248-G	6.272	7.788	420.0E6	446.9E6	1042.823	1069.399

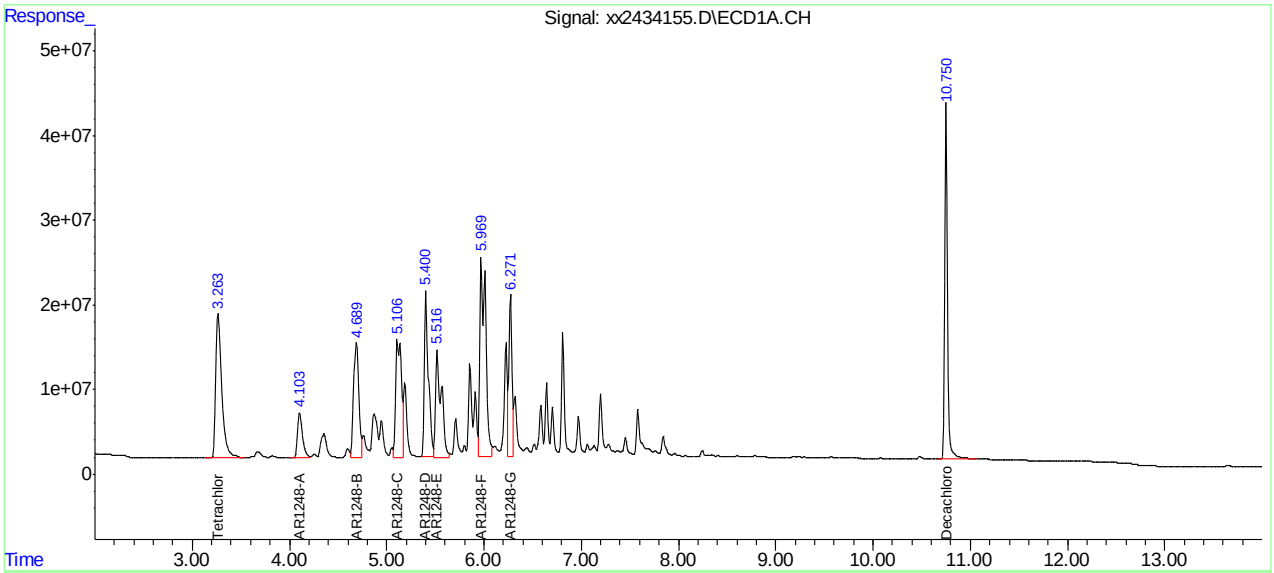
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

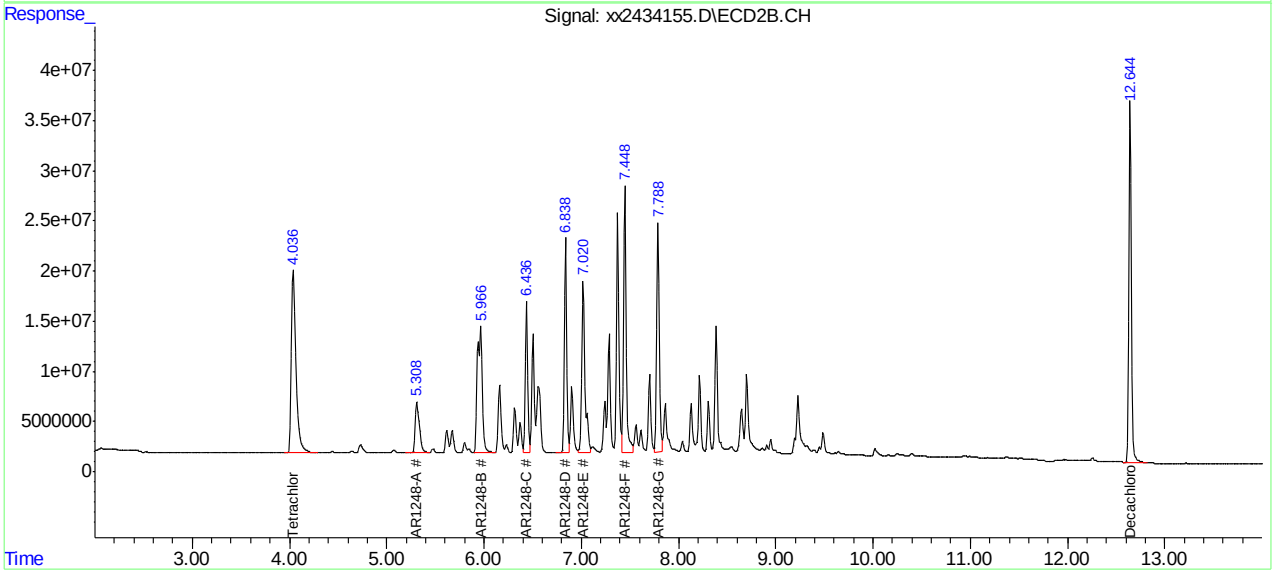
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:09:55 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6666-ICV6666	**Method:**	SW846 8082A	
Lab FileID:	XX2434155.D	**Analyst approved:**	04/25/19 09:16	Summer Kotb
Injection Time:	04/24/19 19:31	**Supervisor approved:**	04/25/19 10:22	Gwendolyn Burns

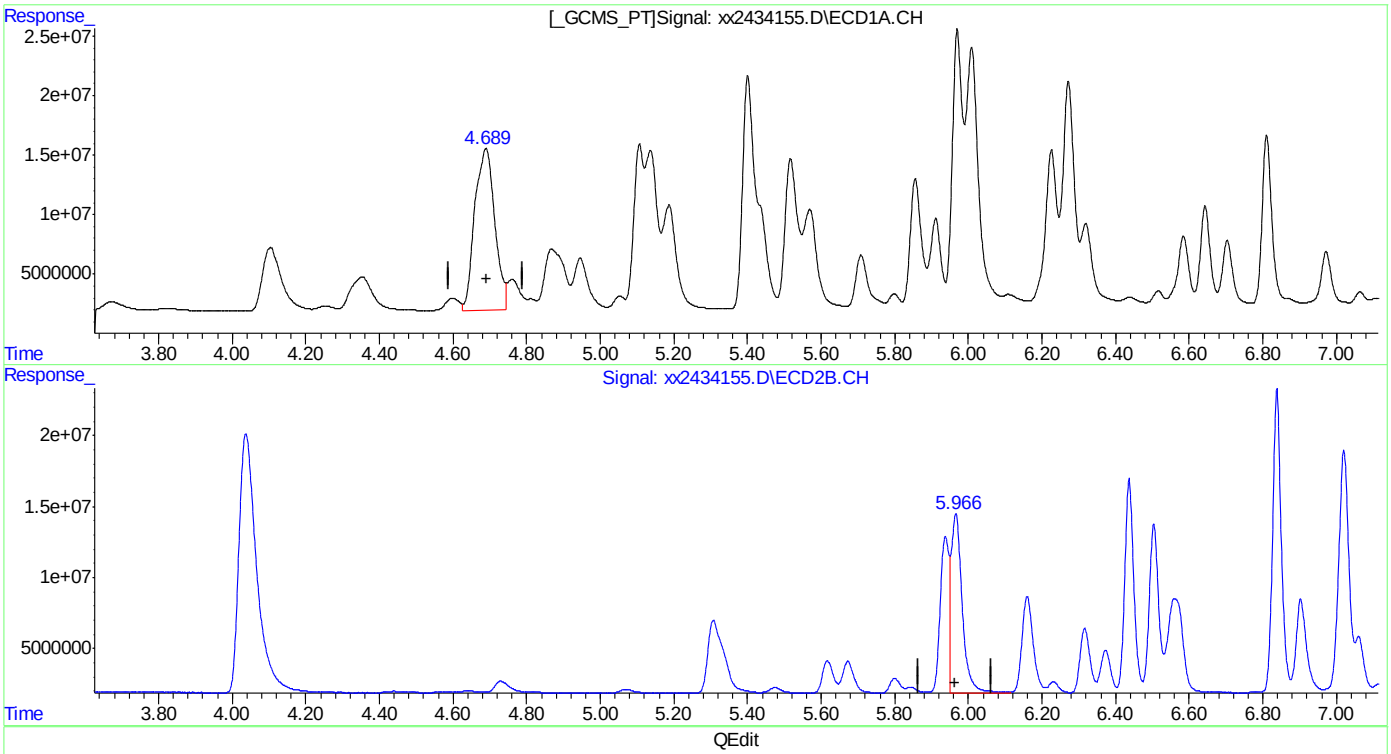
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1248-C		1	5.11	Split peak
AR1248-E		1	5.52	Split peak
AR1248-F		1	5.97	Split peak
AR1248-B		2	5.97	Split peak
AR1248-E		2	7.02	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(18) AR1248-B
4.689min 970.488PPB
response 515210164

(18) AR1248-B #2
5.966min 581.707PPB
response 265364721

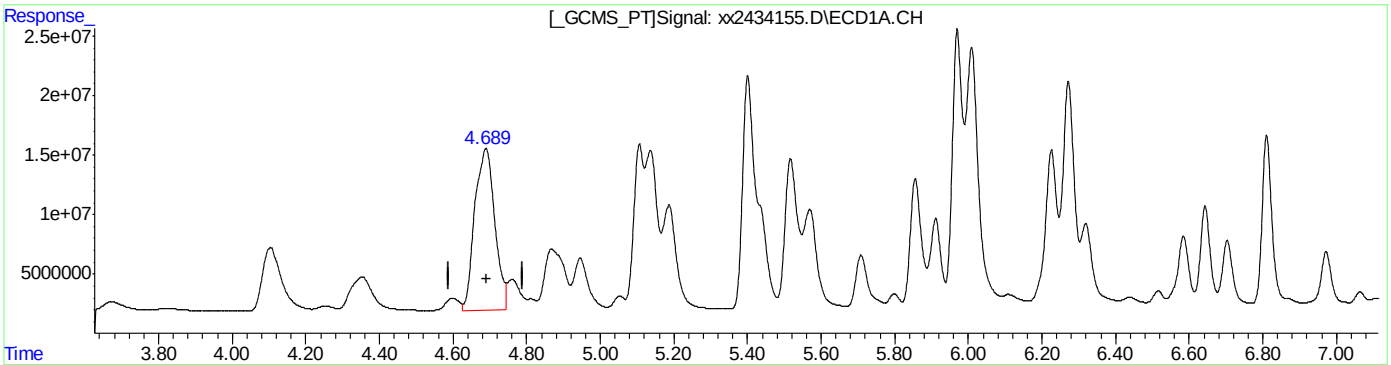
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:09:06 2019 Page: 1

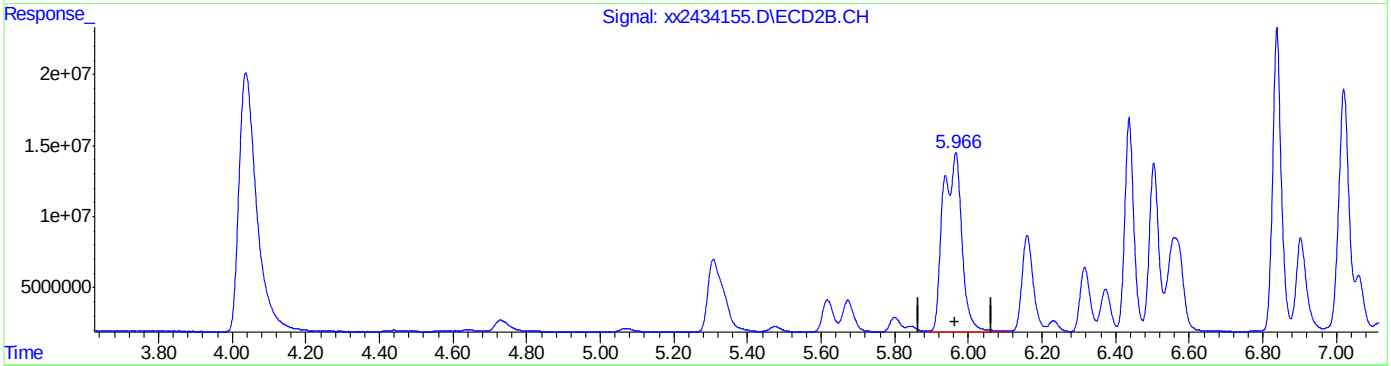
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(18) AR1248-B
4.689min 970.488PPB
response 515210164

(18) AR1248-B #2
5.966min 980.945PPB m
response 447490046

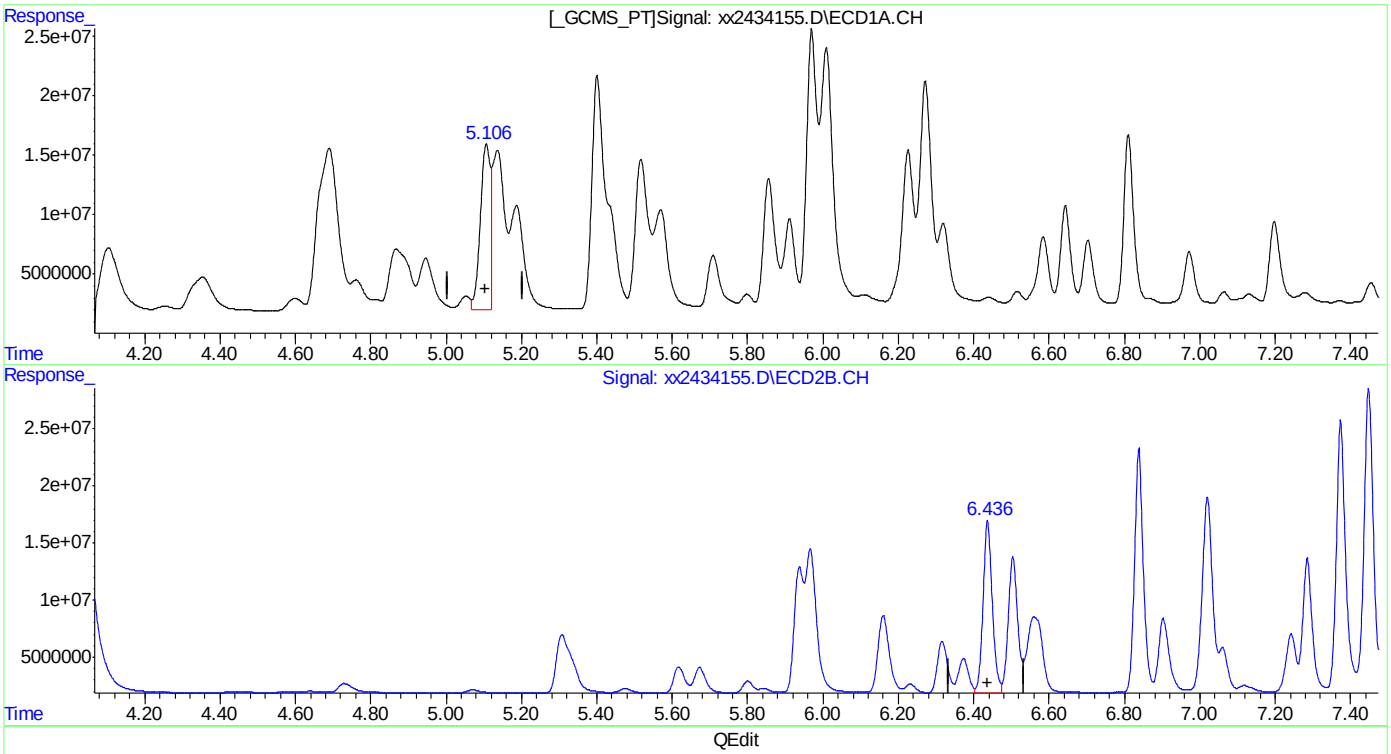
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:09:14 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(19) AR1248-C
5.107min 473.778PPB
response 257958382

(19) AR1248-C #2
6.437min 1006.786PPB
response 254906265

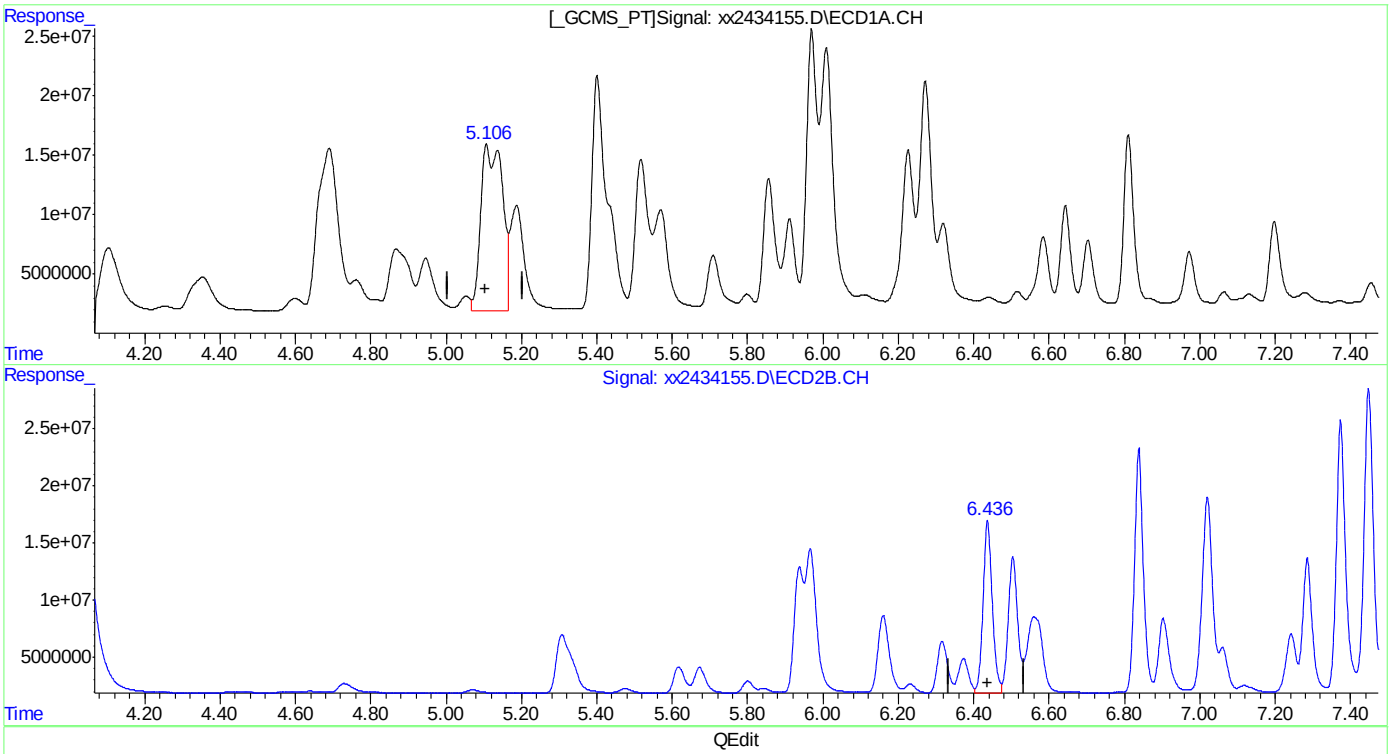
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(19) AR1248-C
5.106min 1025.053PPB m
response 558112093

(19) AR1248-C #2
6.437min 1006.786PPB
response 254906265

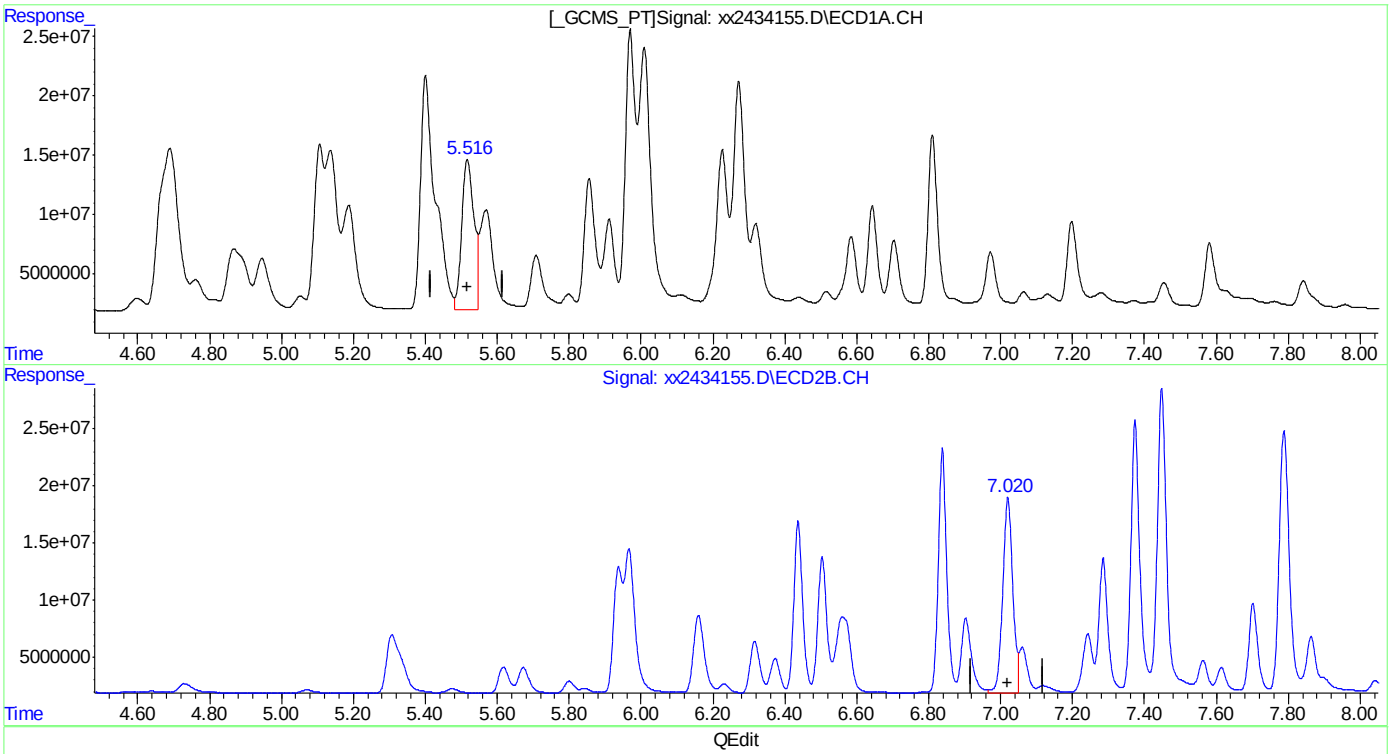
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(21) AR1248-E
5.517min 591.406PPB
response 301027556

(21) AR1248-E #2
7.020min 878.784PPB
response 332635711

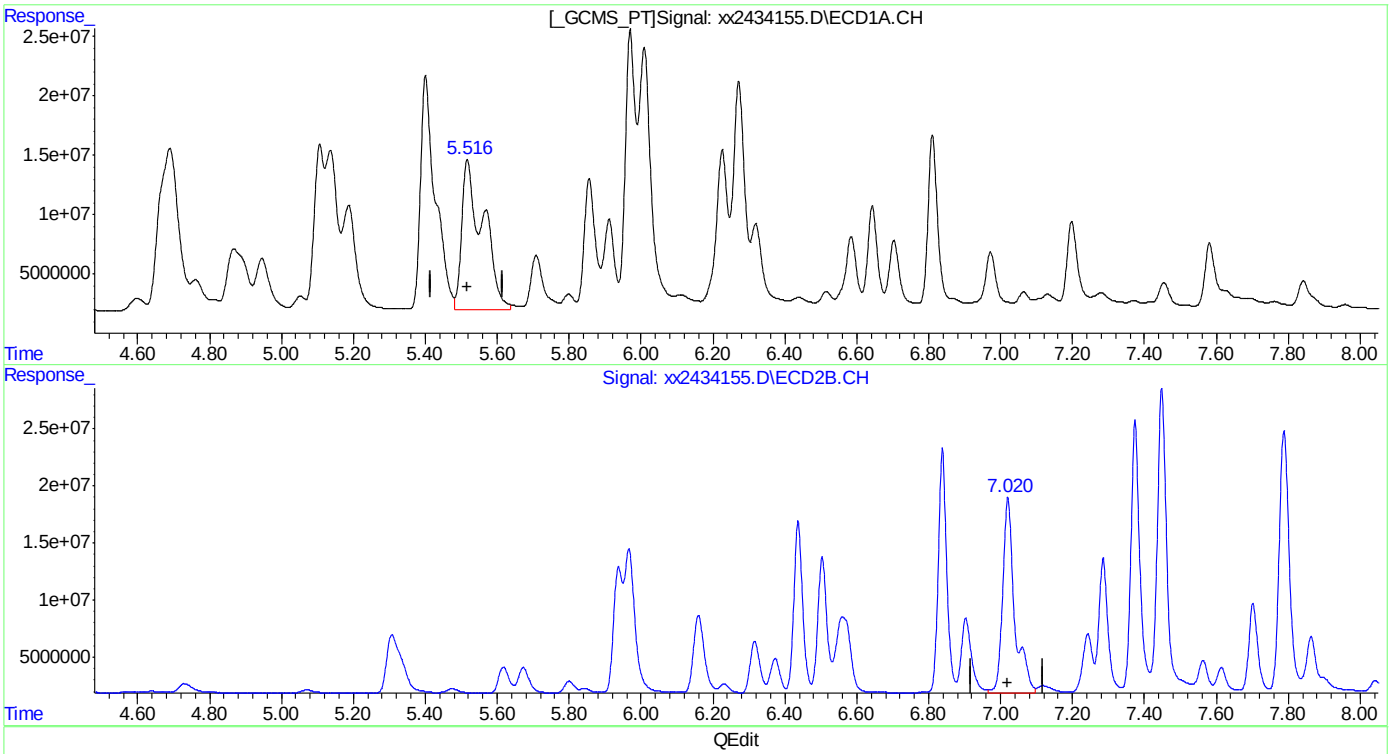
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(21) AR1248-E
5.516min 1021.899PPB m
response 520150141

(21) AR1248-E #2
7.020min 1044.684PPB m
response 395432010

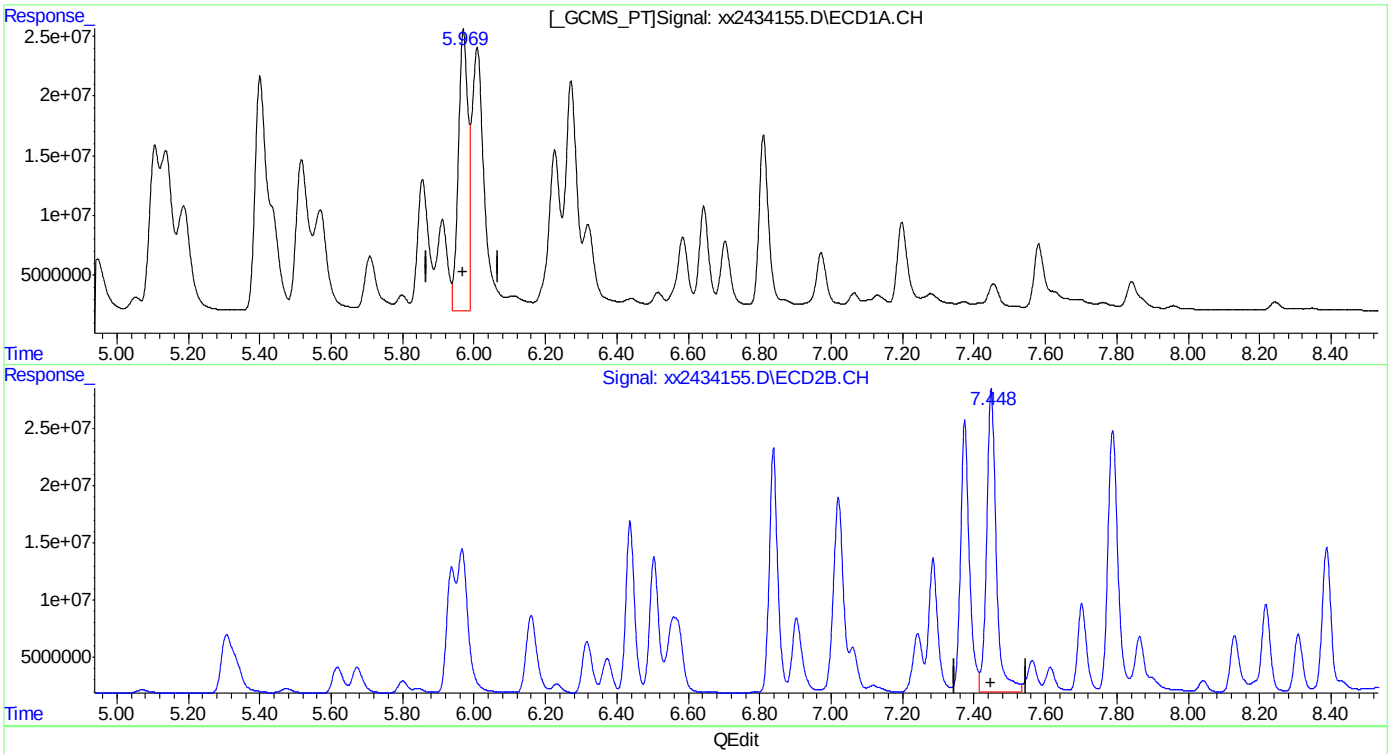
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:09:46 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(22) AR1248-F
5.970min 484.745PPB
response 446649378

(22) AR1248-F #2
7.448min 1059.164PPB
response 493828654

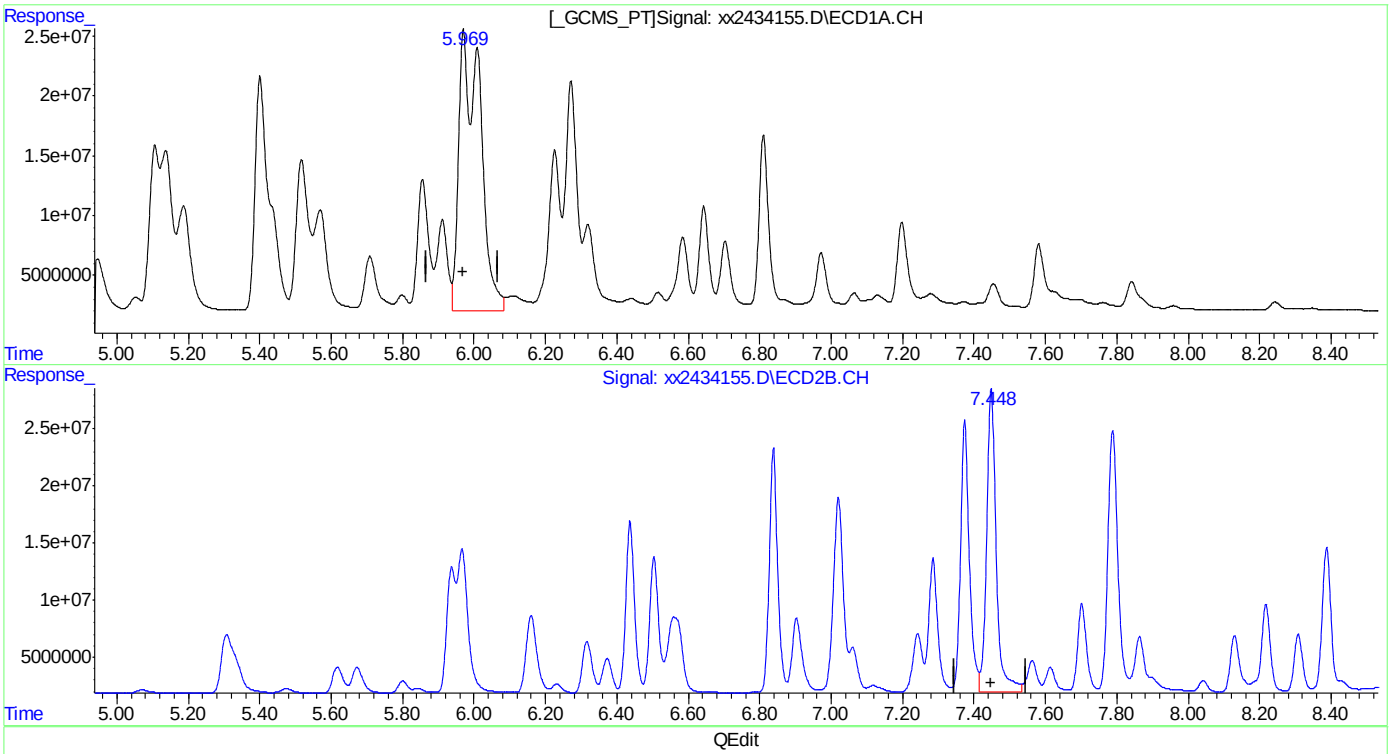
(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:09:50 2019 Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6666\
Data File : xx2434155.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 24 Apr 2019 7:31 pm
Operator : summerk
Sample : icv6666-1000
Misc : op19916,gxx6666,15.0,,,10,1
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 25 09:08:52 2019
Quant Method : C:\msdchem\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Thu Apr 25 09:02:33 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(22) AR1248-F
5.969min 1061.824PPB m
response 978377027

(22) AR1248-F #2
7.448min 1059.164PPB
response 493828654

(+) = Expected Retention Time
PCB6666.M Thu Apr 25 09:09:58 2019 Page: 1

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:24:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.263	4.037	230.3E6	201.6E6	17.490	18.939
	Spiked Amount 40.000			Recovery	=	43.72%	47.35%
51) S	Decachlor...	10.748	12.639	221.4E6	199.2E6	15.761	18.508
	Spiked Amount 40.000			Recovery	=	39.40%	46.27%
	Target Compounds						
41)	AR1016-A	3.670	4.731	119.8E6	88708375	431.277	467.481
42)	AR1016-B	4.106	5.310	218.7E6	184.8E6	437.877	462.306
43)	AR1016-C	4.692	5.966	485.2E6	416.0E6	420.430	465.405m
44)	AR1016-D	4.865	6.161	178.3E6	155.8E6	419.758	473.716
45)	AR1016-E	5.401	6.837	183.1E6	121.8E6	419.382	462.891
46)	AR1260-A	7.840	9.485	405.1E6	403.0E6	412.534	465.714m
47)	AR1260-B	8.001	9.604	227.6E6	275.1E6	414.176	463.274
48)	AR1260-C	8.346	10.046	256.1E6	262.6E6	405.747	468.645
49)	AR1260-D	8.784	10.391	539.4E6	656.9E6	408.787	468.734
50)	AR1260-E	9.182	10.946f	620.8E6	649.8E6	416.815m	459.783m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

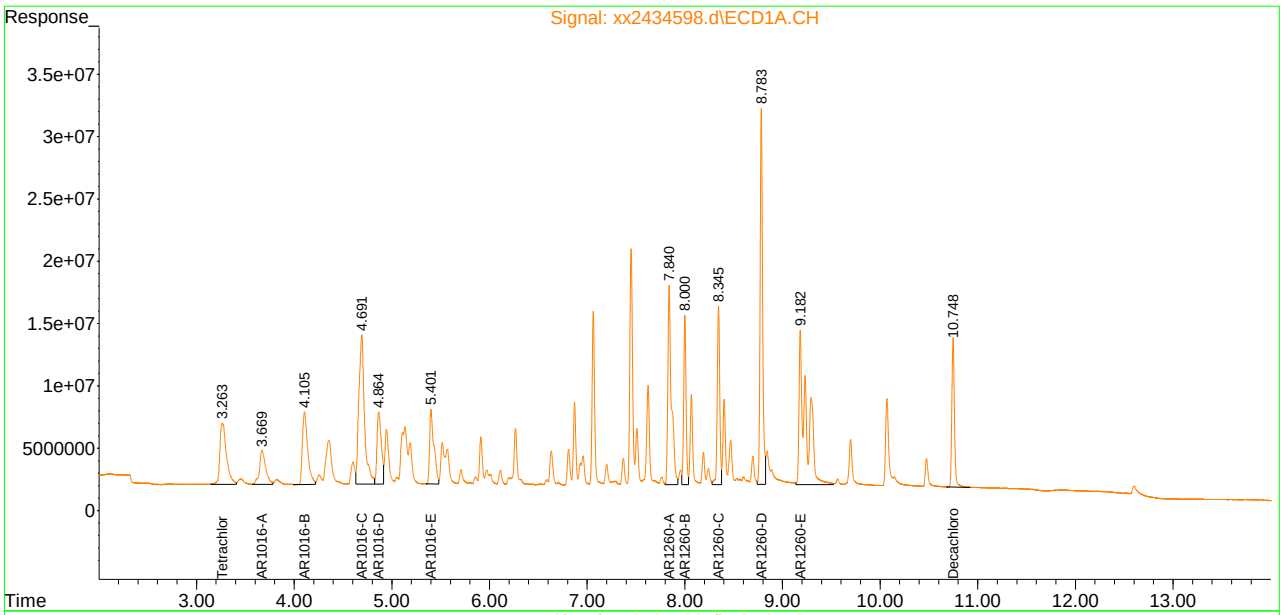
11.6.33 11

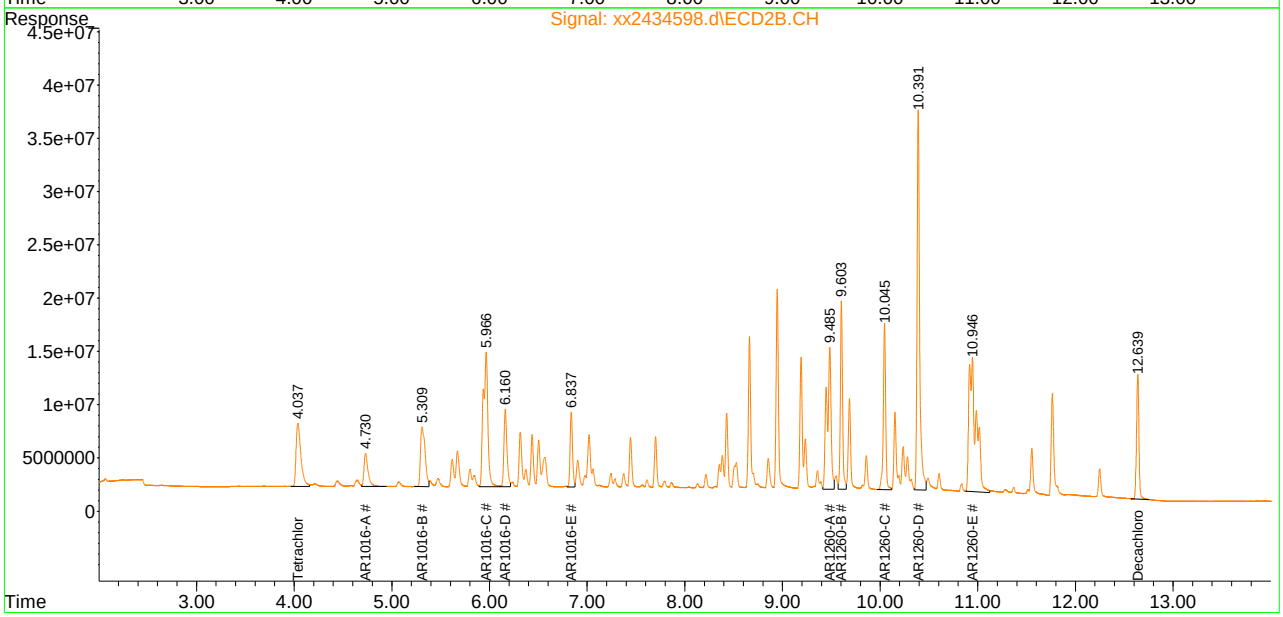
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:24:03 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6680-CC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434598.D	**Analyst approved:**	05/06/19 00:58 Syra Marie Pacheco
Injection Time:	05/04/19 10:08	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

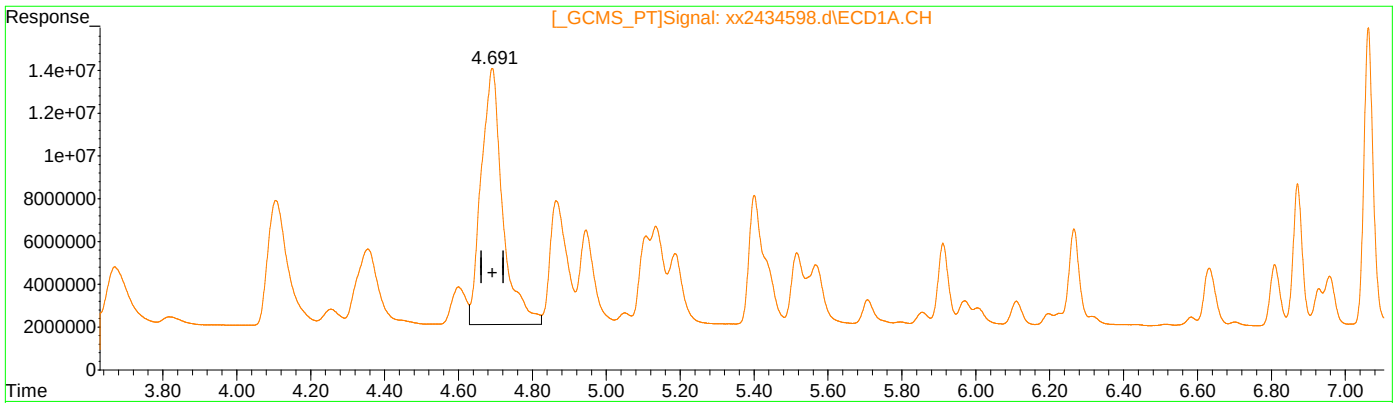
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Poorly defined baseline
AR1260-E		1	9.18	Poorly defined baseline
AR1260-A		2	9.48	Poorly defined baseline
AR1260-E		2	10.95	Poorly defined baseline

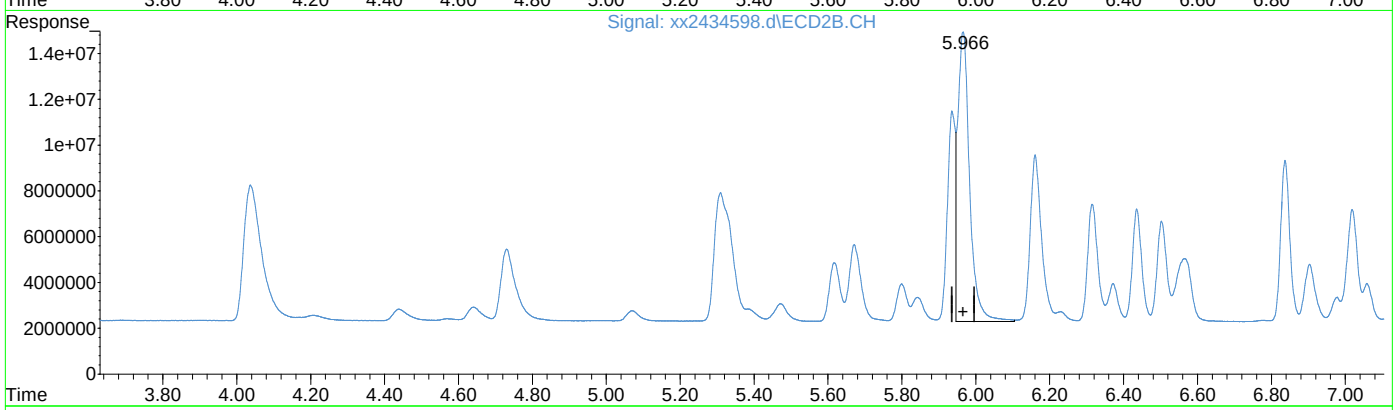
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.692min 420.430 PPB

response 485207663

(43) AR1016-C #2

5.966min 314.224 PPB

response 280845633

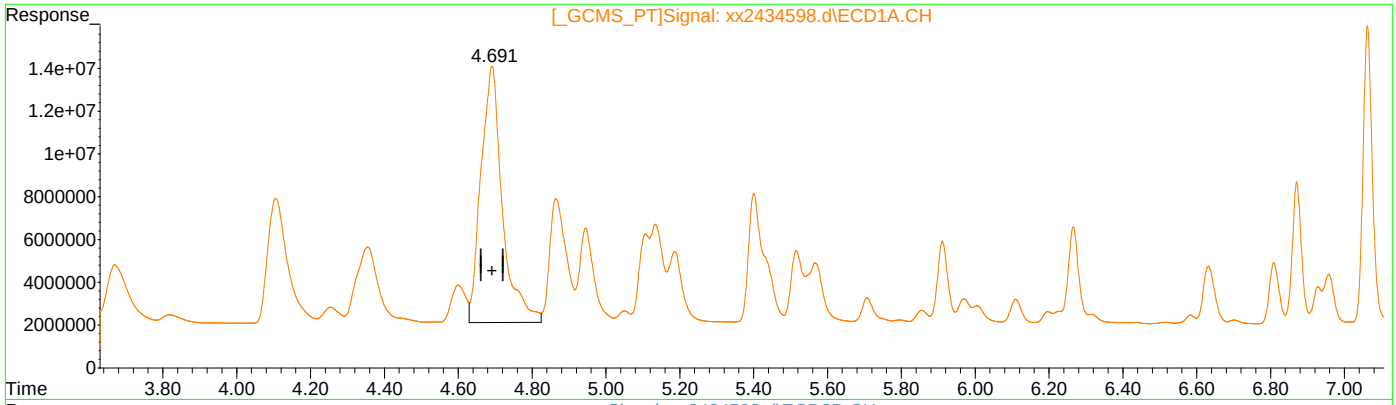
(+) = Expected Retention Time
PCB6666.M Sun May 05 21:21:38 2019

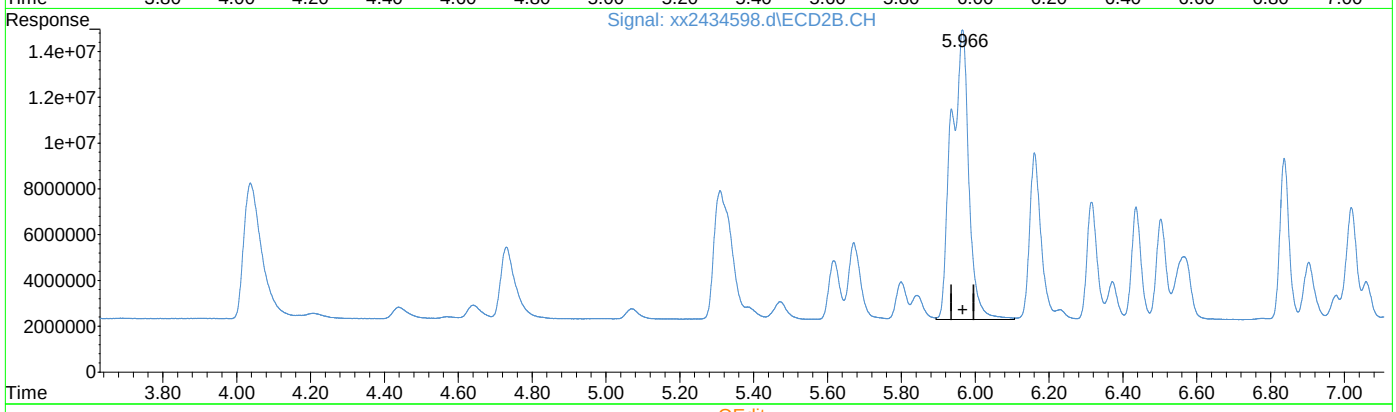
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.692min 420.430 PPB

response 485207663

(43) AR1016-C #2

5.966min 465.405 PPB m

response 415968057

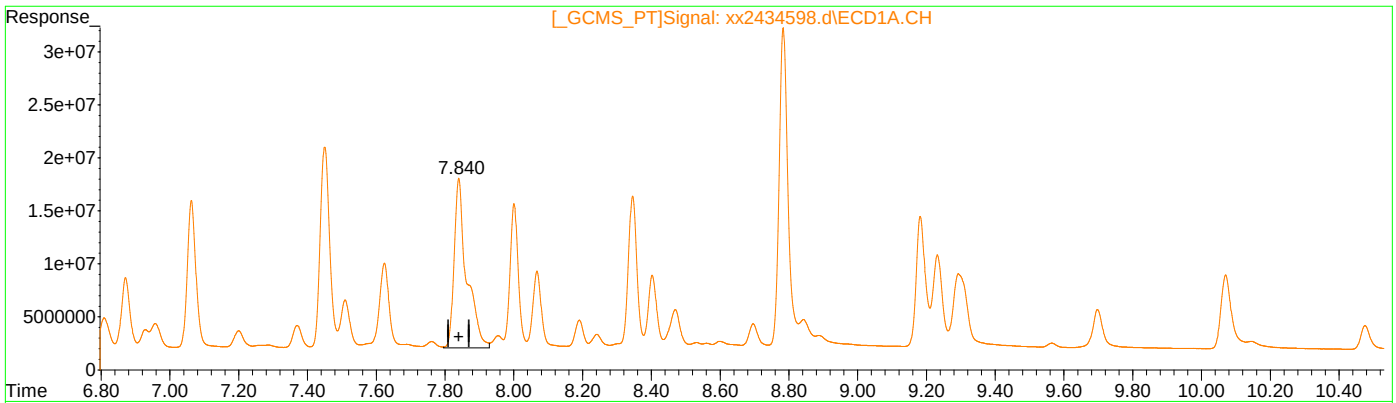
(+) = Expected Retention Time
PCB6666.M Sun May 05 21:22:32 2019

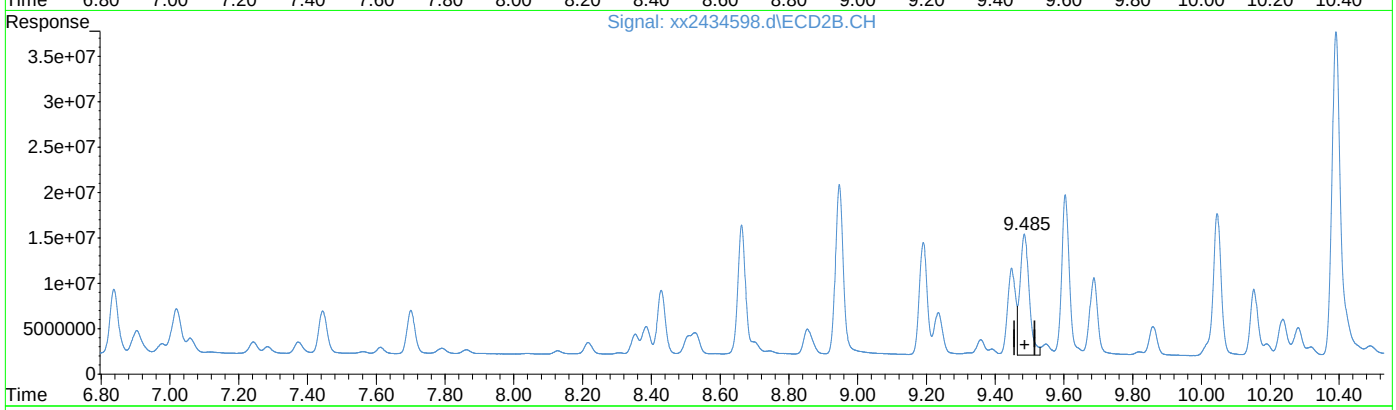
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 412.534 PPB

response 405064355

(46) AR1260-A #2

9.485min 286.397 PPB

response 247826664

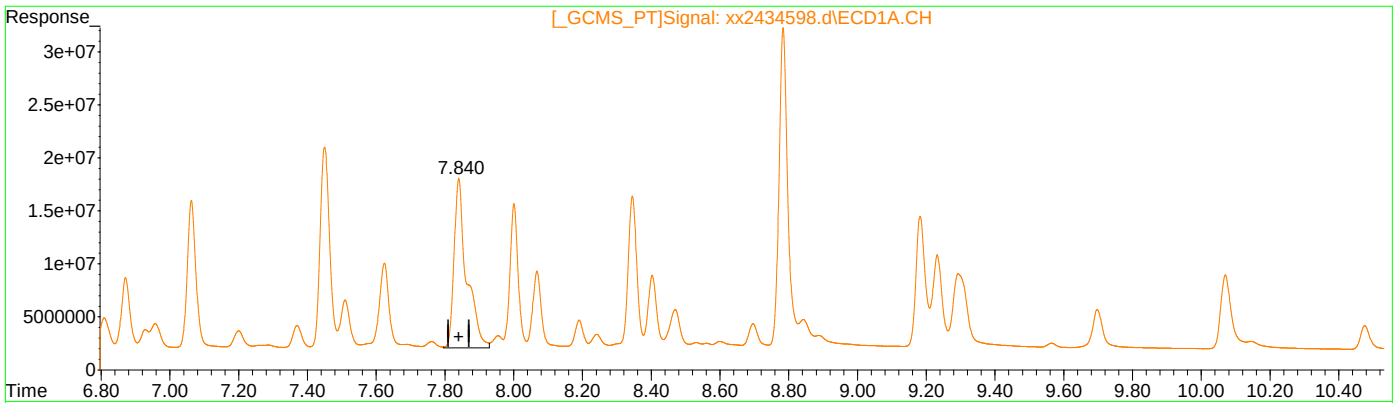
(+) = Expected Retention Time
PCB6666.M Sun May 05 21:22:50 2019

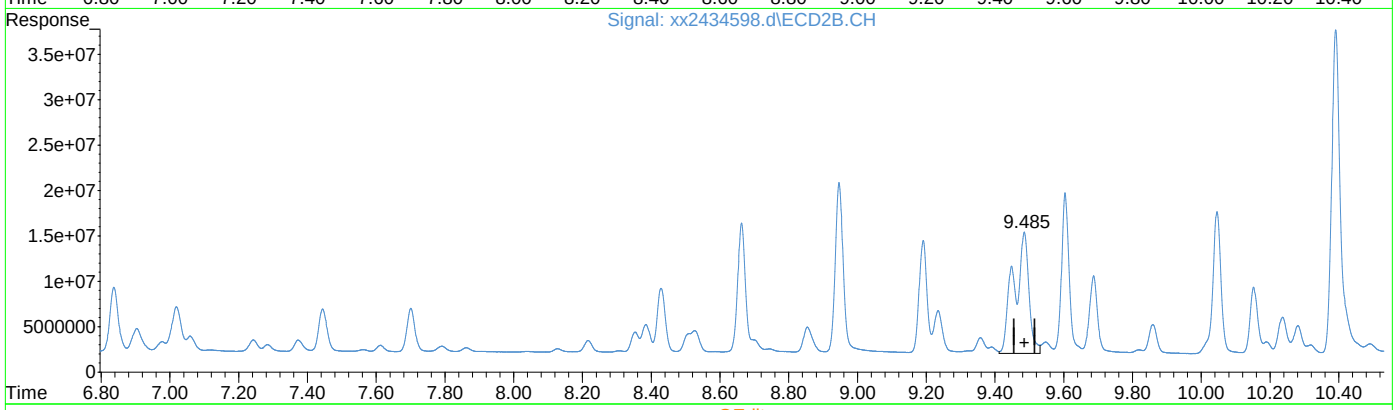
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 412.534 PPB

response 405064355

(46) AR1260-A #2

9.485min 465.714 PPB m

response 402993778

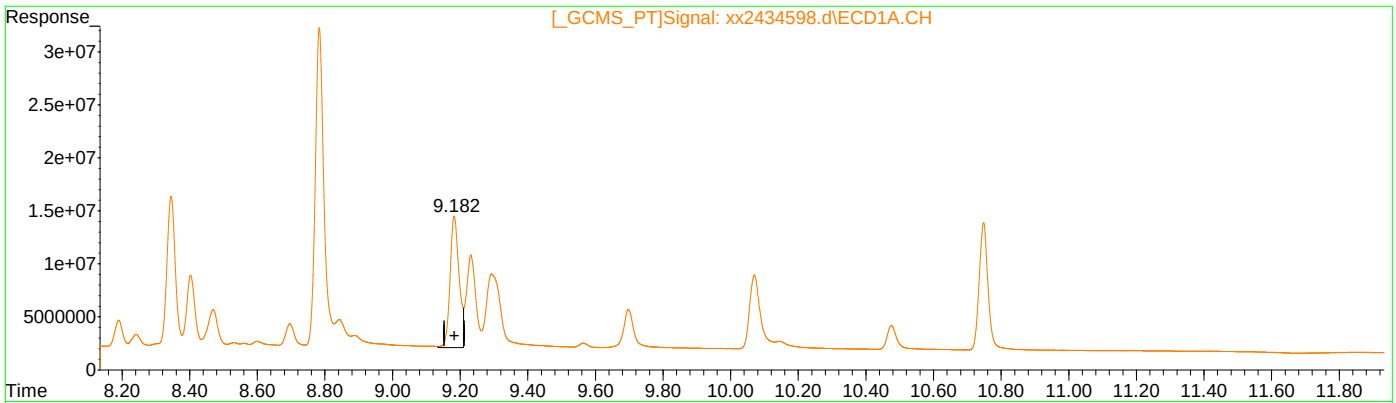
(+) = Expected Retention Time
PCB6666.M Sun May 05 21:23:13 2019

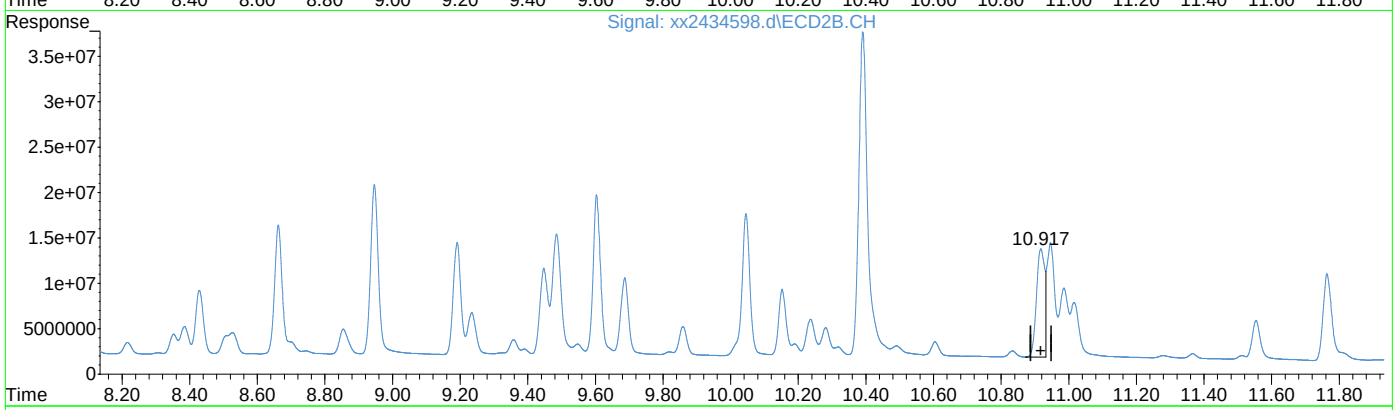
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.182min 154.835 PPB

response 230605906

(50) AR1260-E #2

10.918min 141.206 PPB

response 199555178

(+) = Expected Retention Time
PCB6666.M Sun May 05 21:23:24 2019

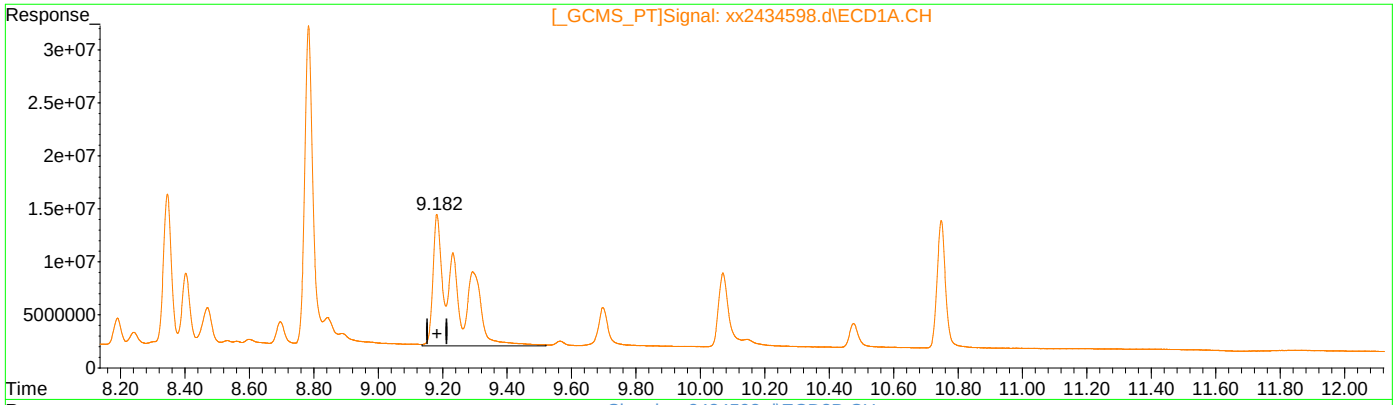
JC86837

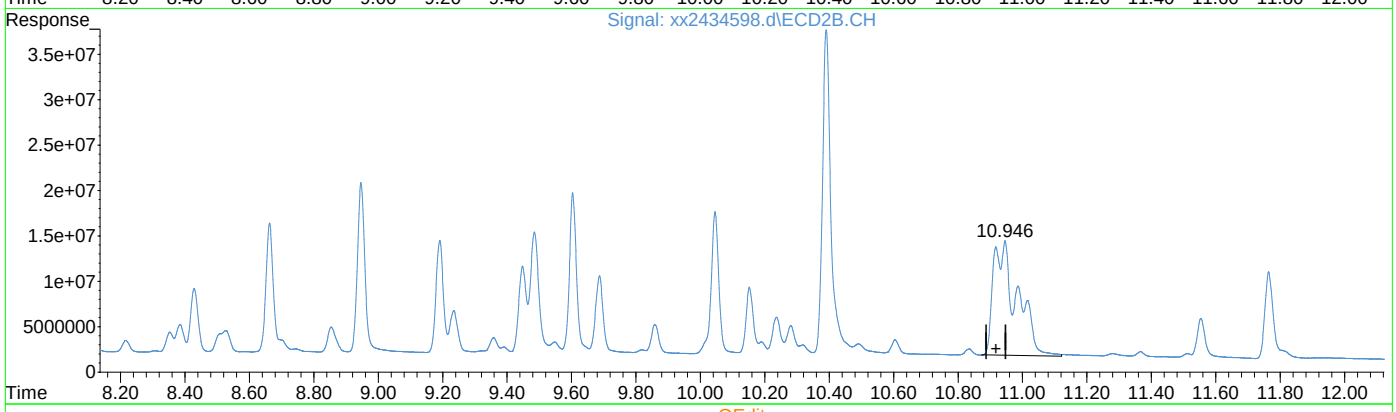
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434598.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 10:08 am
Operator : tianweir
Sample : cc6666-500
Misc : op20077,gxx6680,15.0,,,10,1
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:20:38 2019
Quant Method : C:\MSDCHEM\1\METHODS\PCB6666.M
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.182min 416.815 PPB m

response 620788753

(50) AR1260-E #2

10.946min 459.783 PPB m

response 649774401

(+) = Expected Retention Time
PCB6666.M Sun May 05 21:24:10 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:28:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.263	4.036	490.4E6	408.6E6	37.252	38.396
	Spiked Amount 40.000			Recovery	=	93.13%	95.99%
51)	S Decachlor...	10.747	12.639	452.9E6	388.1E6	32.236	36.056
	Spiked Amount 40.000			Recovery	=	80.59%	90.14%
	Target Compounds						
41)	AR1016-A	3.672	4.730	250.4E6	174.2E6	901.210	917.769
42)	AR1016-B	4.106	5.306	451.9E6	386.0E6	904.786	965.790
43)	AR1016-C	4.693	5.963	1028.7E6	837.7E6	891.340	937.223m
44)	AR1016-D	4.864	6.159	376.7E6	312.5E6	886.674	950.147
45)	AR1016-E	5.401	6.837	390.7E6	243.8E6	894.920	926.829
46)	AR1260-A	7.840	9.483	874.2E6	807.2E6	890.368	932.846m
47)	AR1260-B	8.001	9.602	486.6E6	552.3E6	885.640	930.040
48)	AR1260-C	8.346	10.044	546.2E6	527.3E6	865.373	941.127
49)	AR1260-D	8.784	10.389	1172.8E6	1317.2E6	888.907	939.849
50)	AR1260-E	9.183	10.944f	1326.4E6	1305.6E6	890.573m	923.855m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

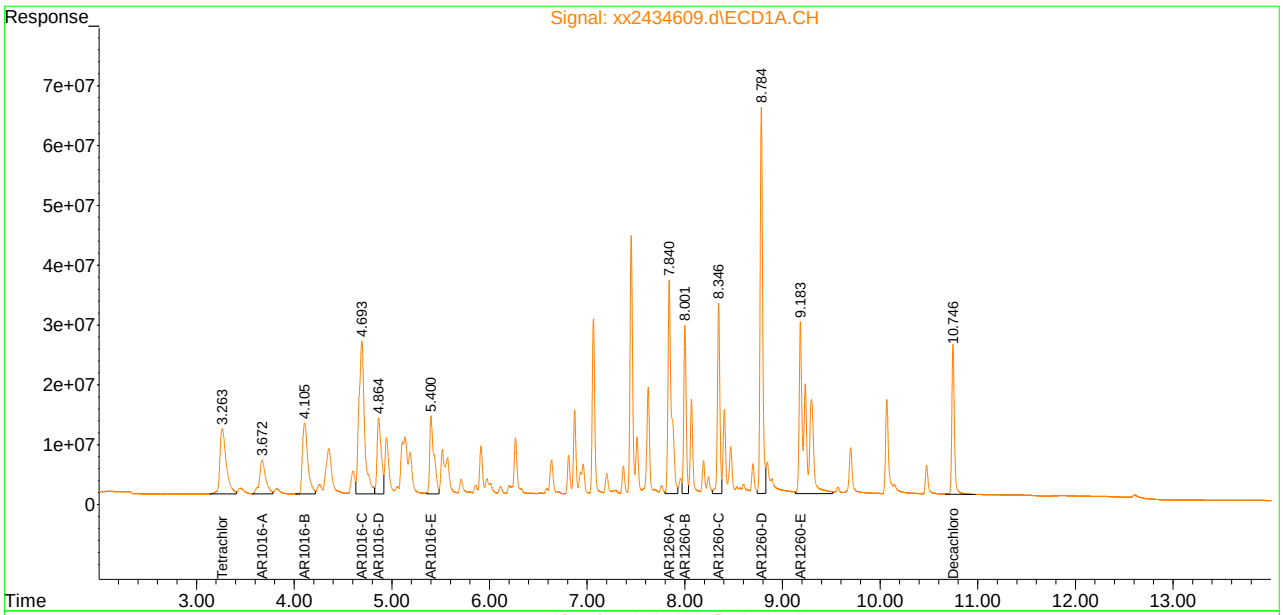
11.6.34
11

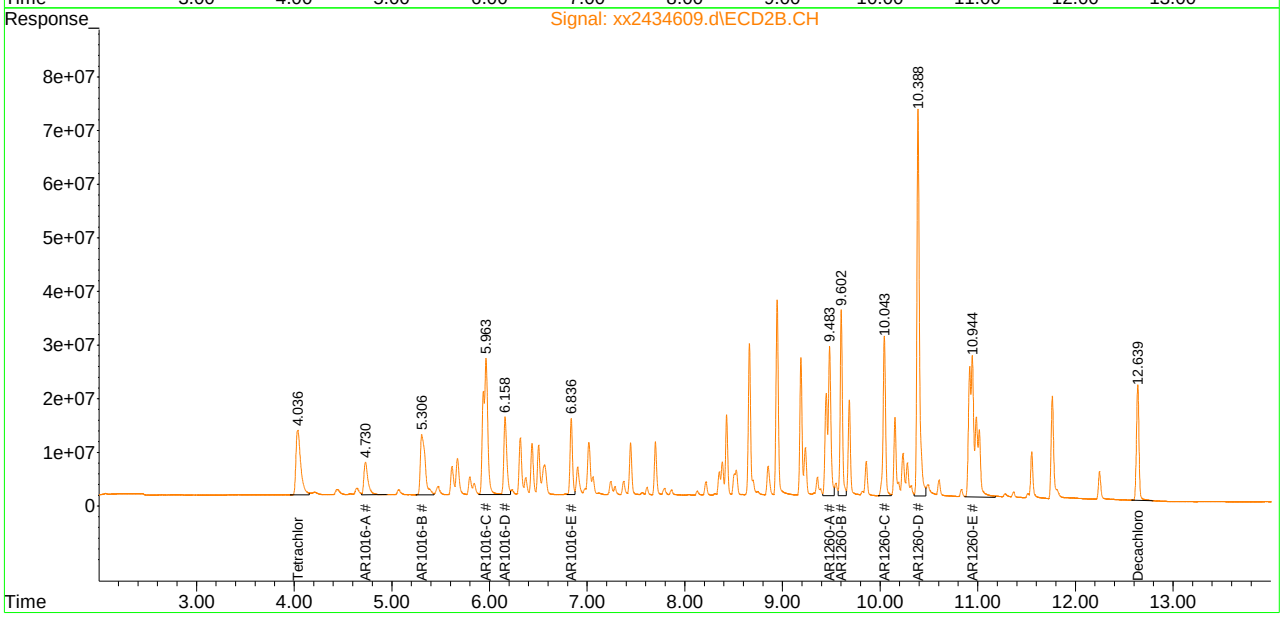
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:28:15 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6680-CC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434609.D	**Analyst approved:**	05/06/19 00:58 Syra Marie Pacheco
Injection Time:	05/04/19 13:30	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

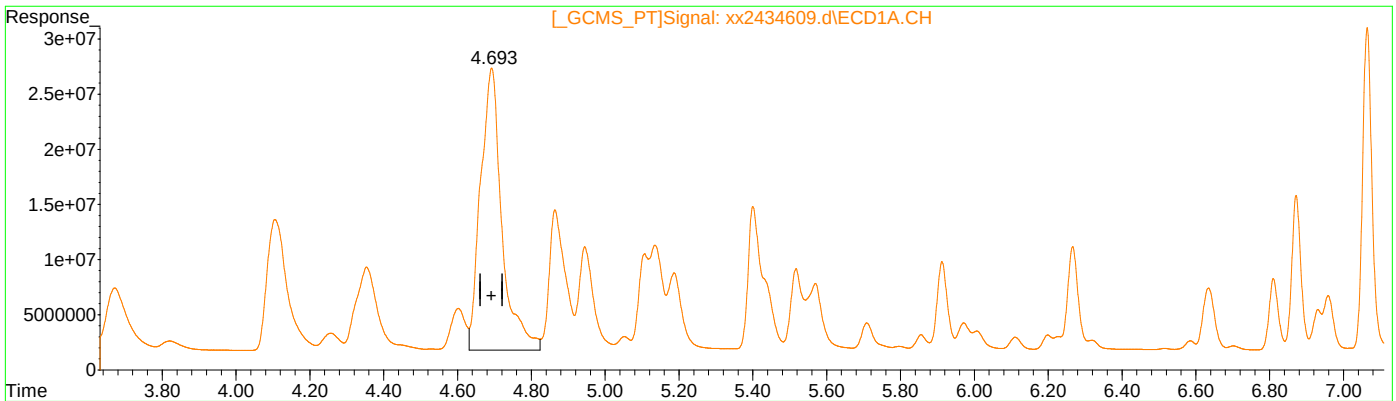
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.96	Poorly defined baseline
AR1260-E		1	9.18	Poorly defined baseline
AR1260-A		2	9.48	Poorly defined baseline
AR1260-E		2	10.94	Poorly defined baseline

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:25:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(43) AR1016-C

4.693min 891.340 PPB

response 1028673811

(43) AR1016-C #2

5.964min 616.714 PPB

response 551204088

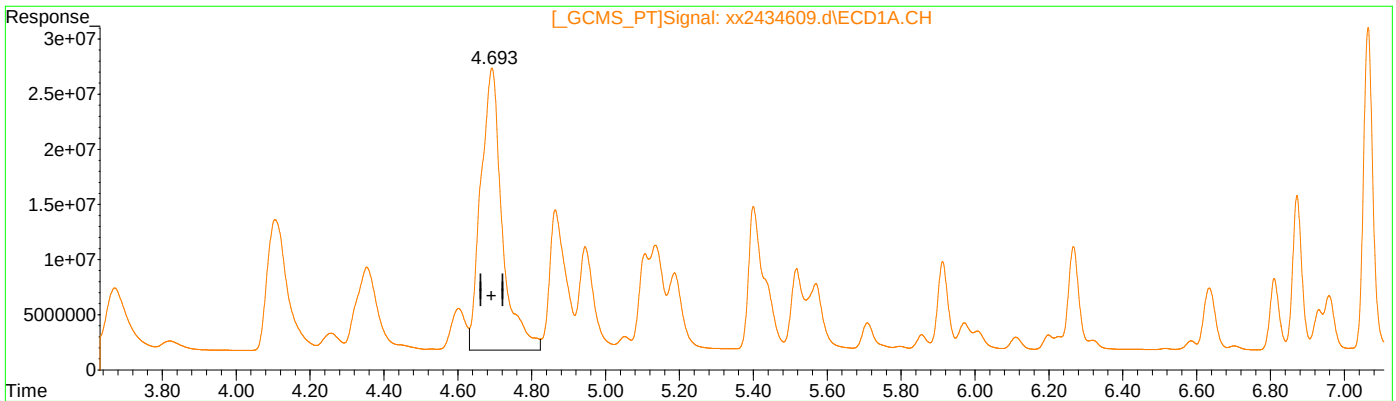
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:26:46 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:25:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



QEdit

(43) AR1016-C

4.693min 891.340 PPB

response 1028673811

(43) AR1016-C #2

5.963min 937.223 PPB m

response 837667356

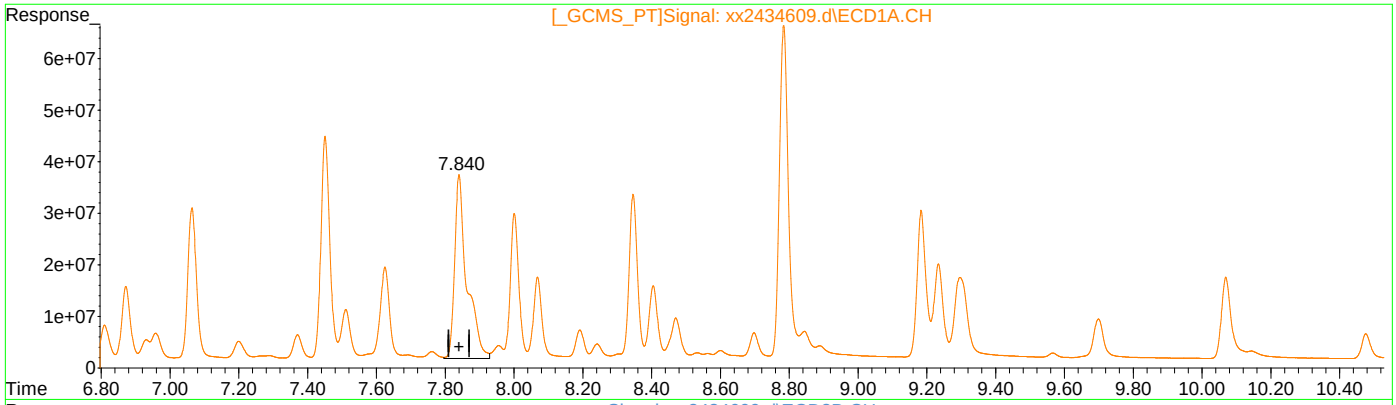
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:27:10 2019

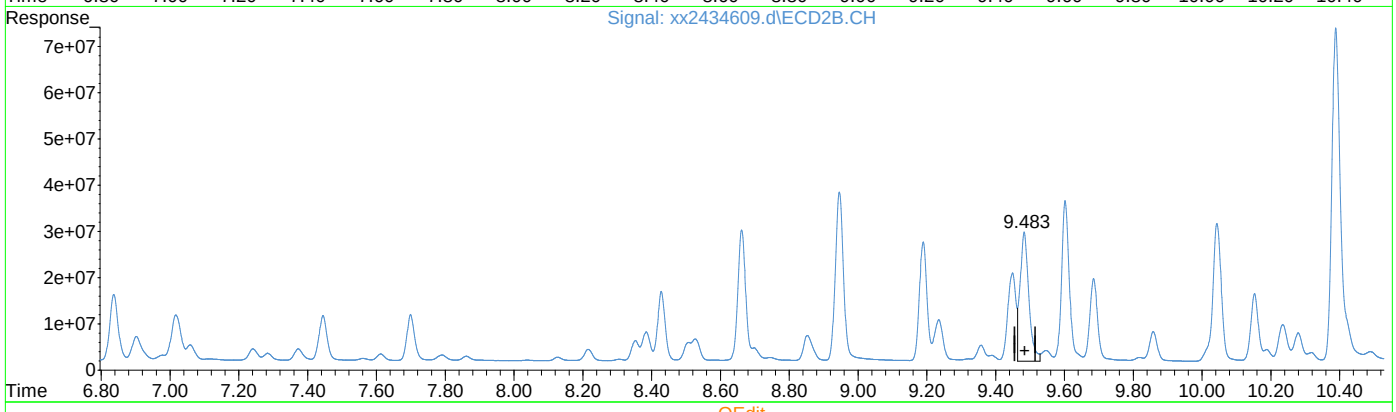
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:25:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 890.368 PPB

response 874246556

(46) AR1260-A #2

9.483min 574.424 PPB

response 497063528

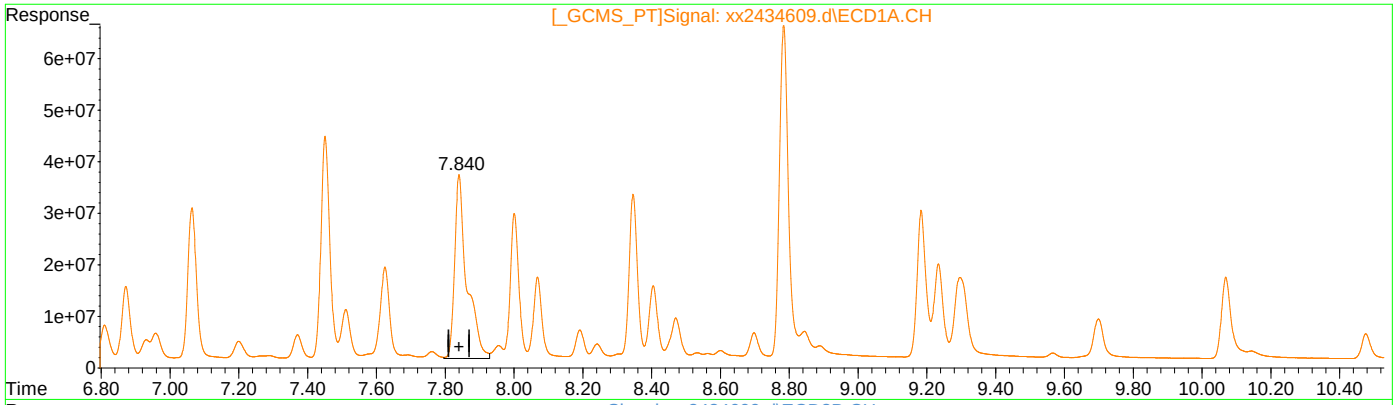
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:27:26 2019

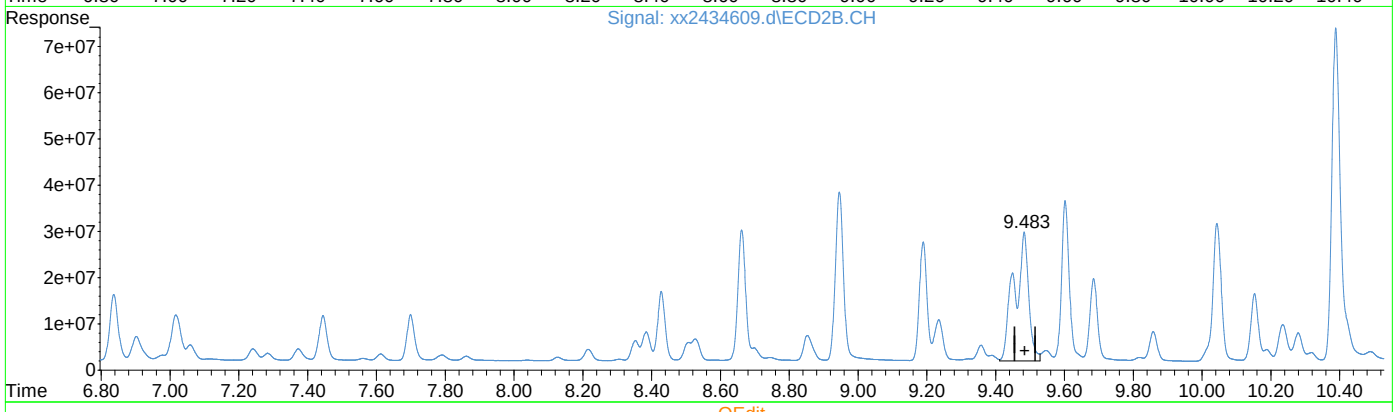
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:25:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 890.368 PPB

response 874246556

(46) AR1260-A #2

9.483min 932.846 PPB m

response 807215143

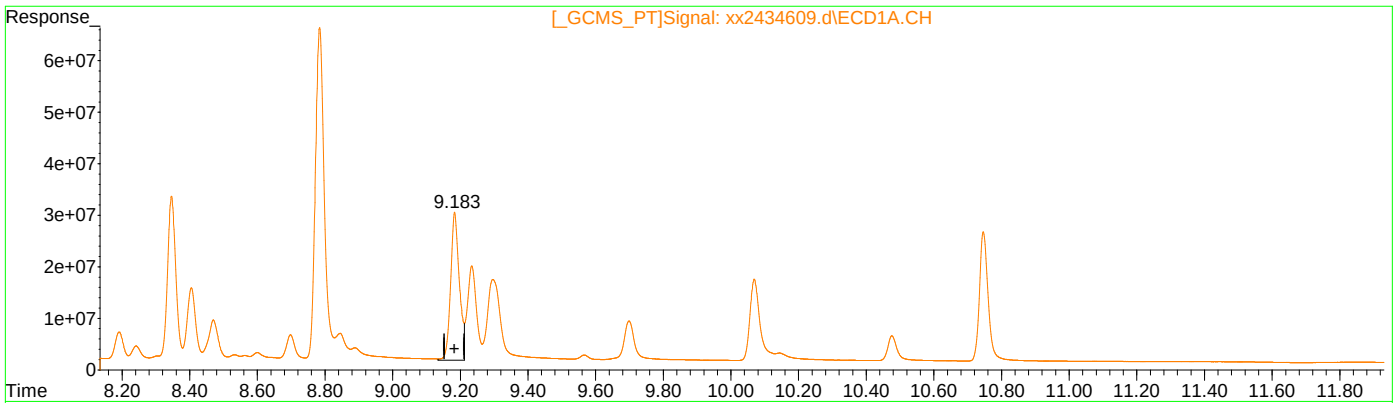
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:27:44 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:25:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(50) AR1260-E

9.184min 343.397 PPB

response 511443080

(50) AR1260-E #2

10.919min 276.154 PPB

response 390265872

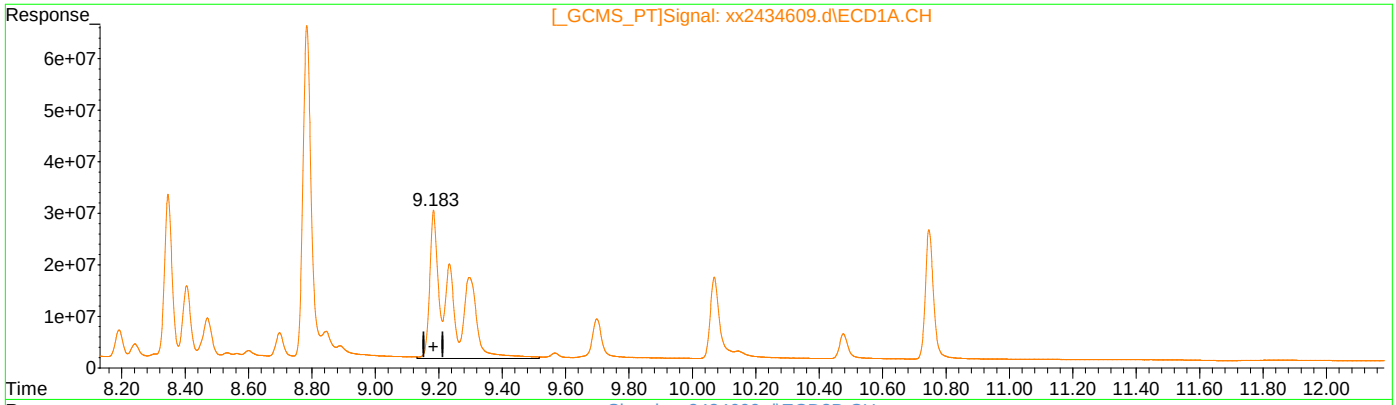
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:27:55 2019

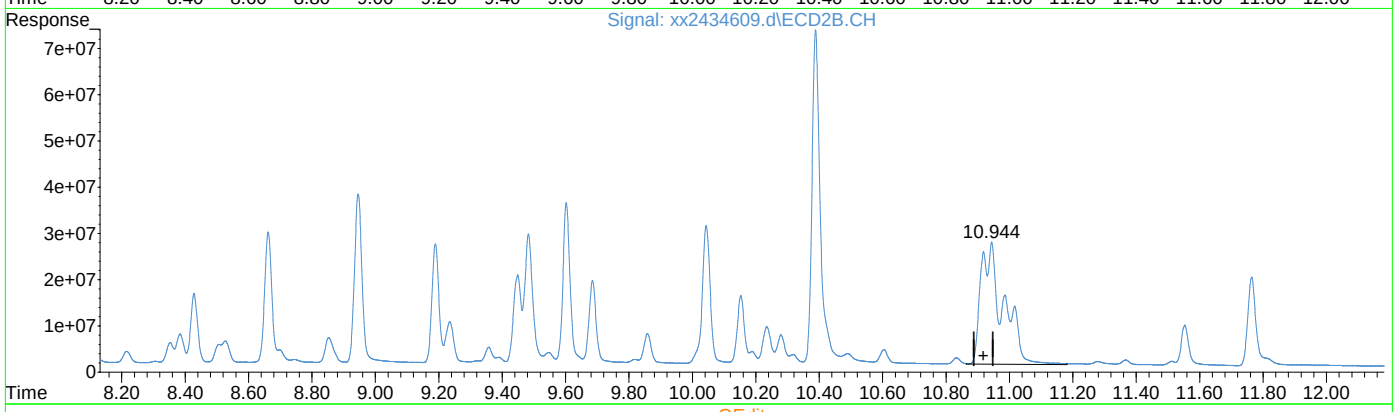
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434609.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 1:30 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:25:16 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.183min 890.573 PPB m

response 1326386200

(50) AR1260-E #2

10.944min 923.855 PPB m

response 1305610447

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:28:21 2019

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:32:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1)	S Tetrachlo...	3.265	4.038	250.4E6	201.7E6	19.018	18.950
	Spiked Amount 40.000			Recovery	=	47.55%	47.38%
51)	S Decachlor...	10.746	12.637	226.0E6	181.3E6	16.084	16.843
	Spiked Amount 40.000			Recovery	=	40.21%	42.11%
	Target Compounds						
41)	AR1016-A	3.672	4.730	134.0E6	88250676	482.291	465.069
42)	AR1016-B	4.105	5.306	238.2E6	194.7E6	476.801	487.035
43)	AR1016-C	4.693	5.967	523.5E6	414.3E6	453.588	463.498m
44)	AR1016-D	4.865	6.160	195.2E6	154.9E6	459.556	471.056
45)	AR1016-E	5.402	6.837	203.3E6	122.5E6	465.538	465.881
46)	AR1260-A	7.840	9.484	437.8E6	388.4E6	445.830	448.896m
47)	AR1260-B	8.001	9.604	246.7E6	265.9E6	449.013	447.727
48)	AR1260-C	8.345	10.045	275.3E6	252.3E6	436.202	450.378
49)	AR1260-D	8.783	10.389	584.9E6	621.2E6	443.331	443.255
50)	AR1260-E	9.184	10.945f	653.0E6	616.3E6	438.432m	436.076m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

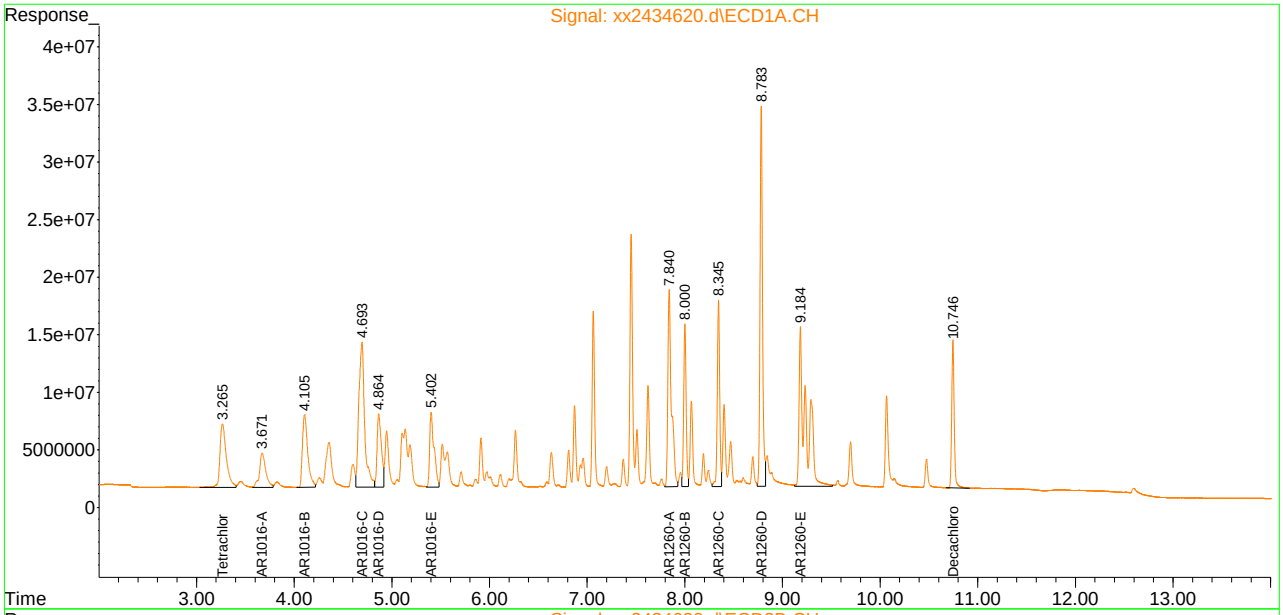
11.6.35 11

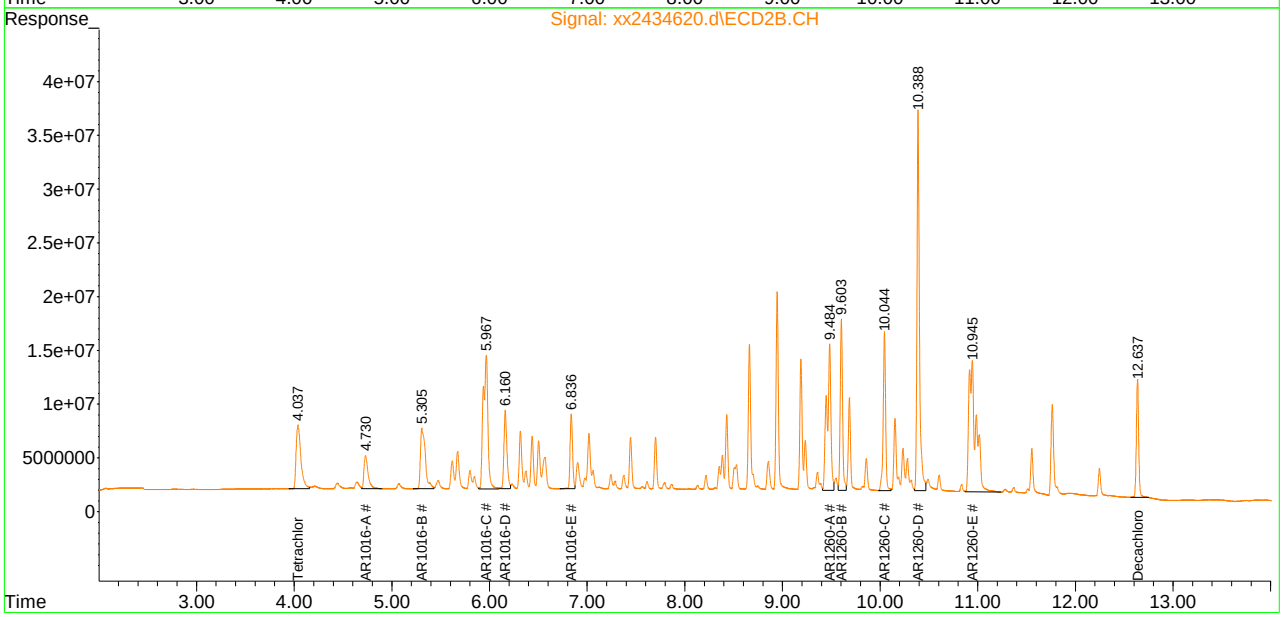
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:32:49 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6680-CC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434620.D	**Analyst approved:**	05/06/19 00:58 Syra Marie Pacheco
Injection Time:	05/04/19 16:52	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

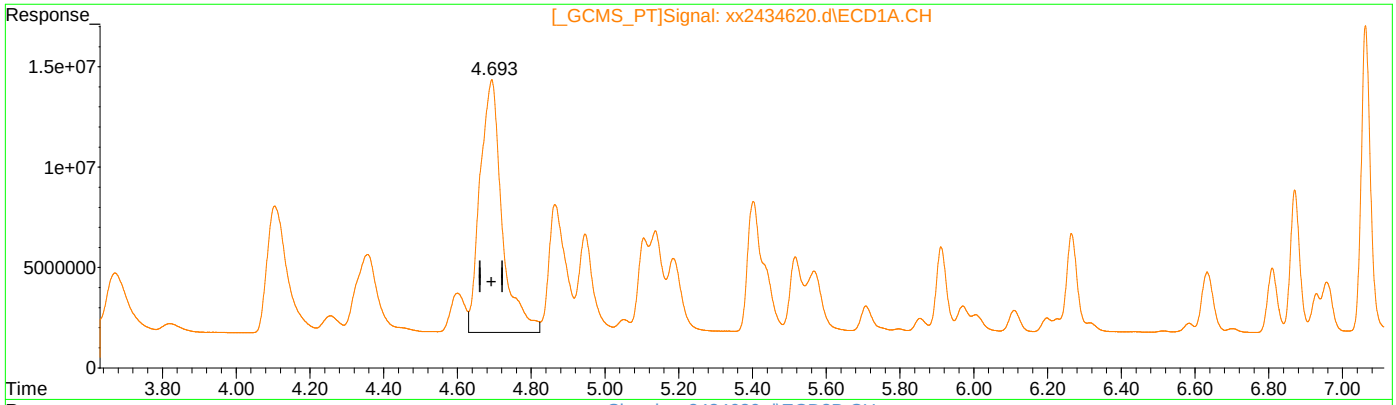
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Poorly defined baseline
AR1260-E		1	9.18	Poorly defined baseline
AR1260-A		2	9.48	Poorly defined baseline
AR1260-E		2	10.94	Poorly defined baseline

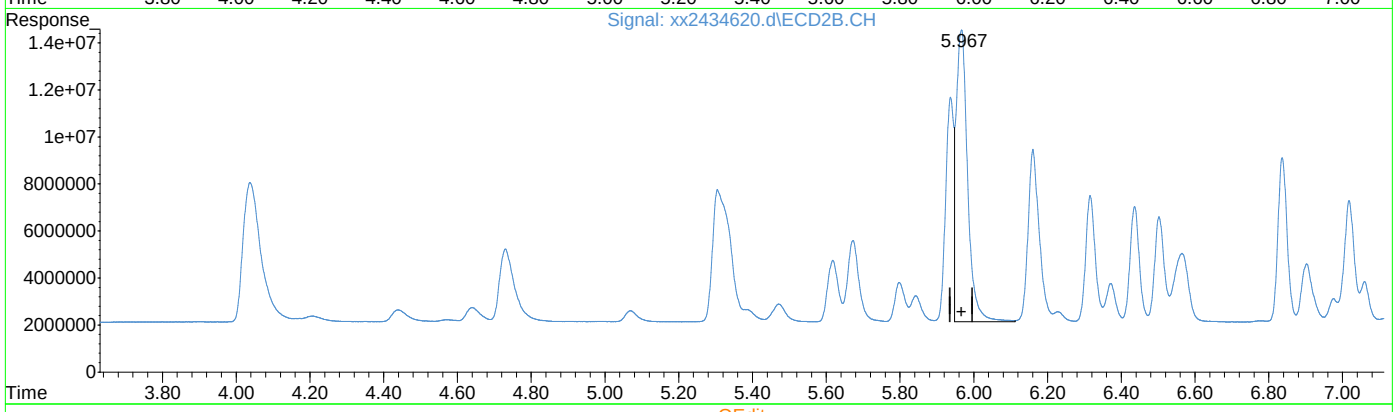
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:29:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.693min 453.588 PPB

response 523474842

(43) AR1016-C #2

5.967min 304.002 PPB

response 271709852

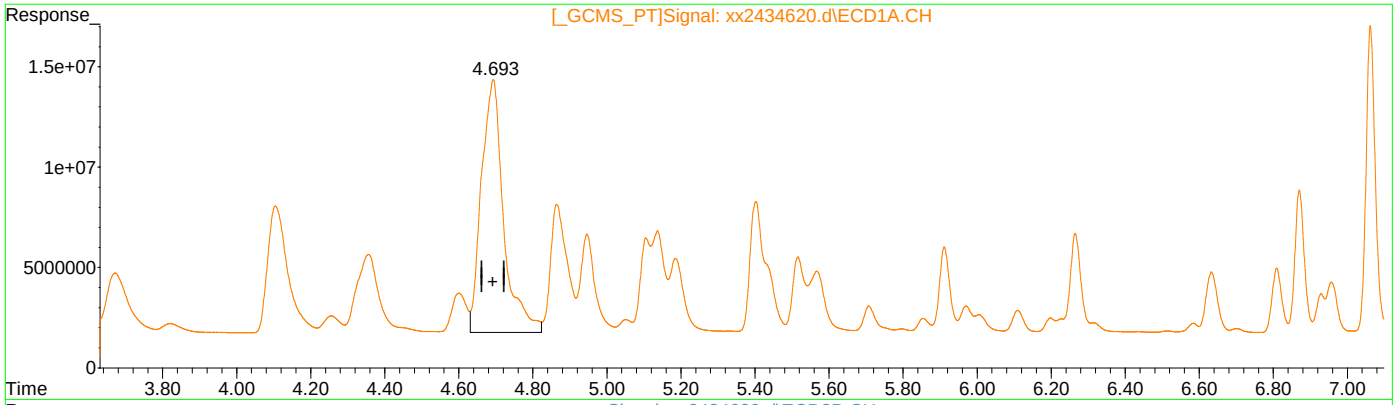
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:30:33 2019

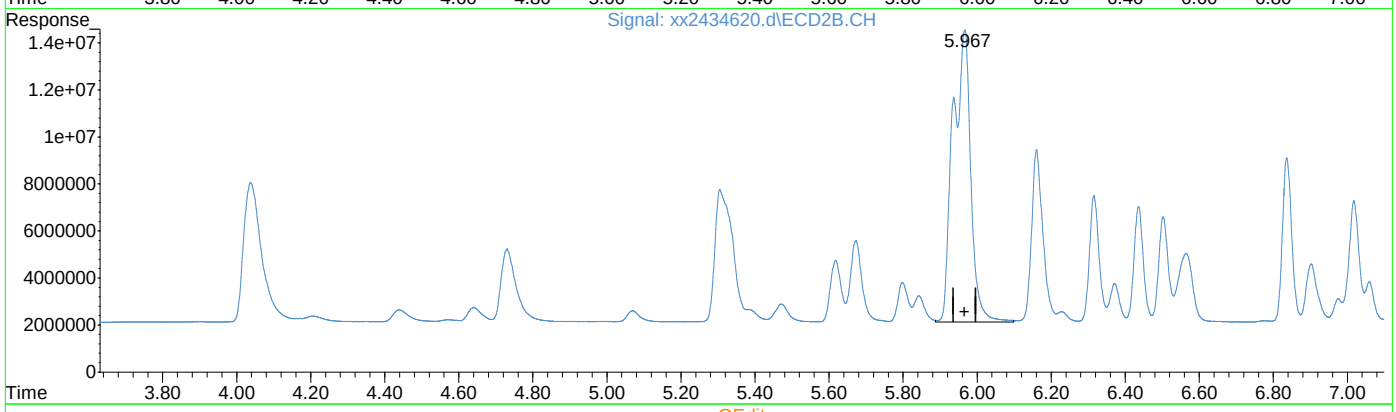
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:29:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.693min 453.588 PPB

response 523474842

(43) AR1016-C #2

5.967min 463.498 PPB m

response 414263614

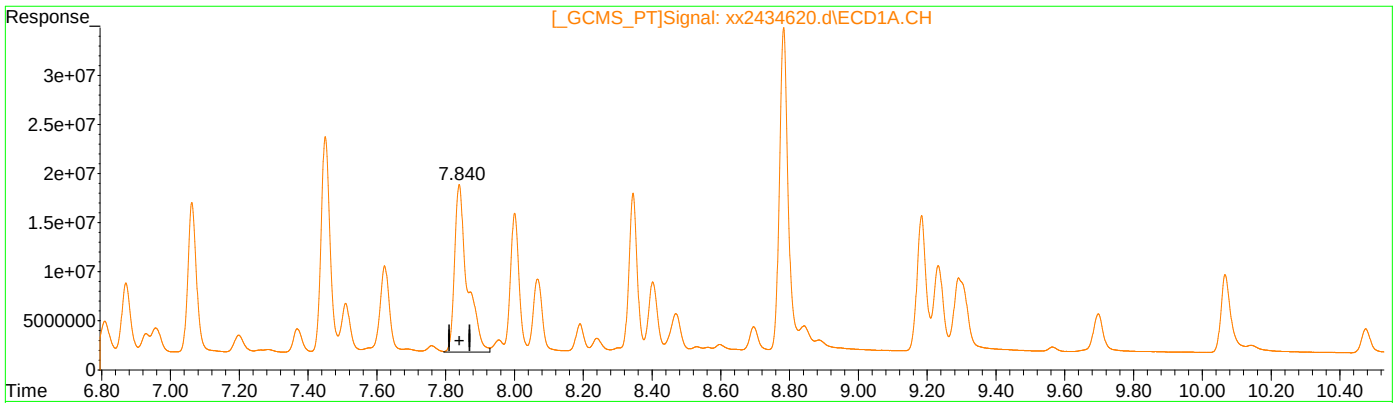
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:31:49 2019

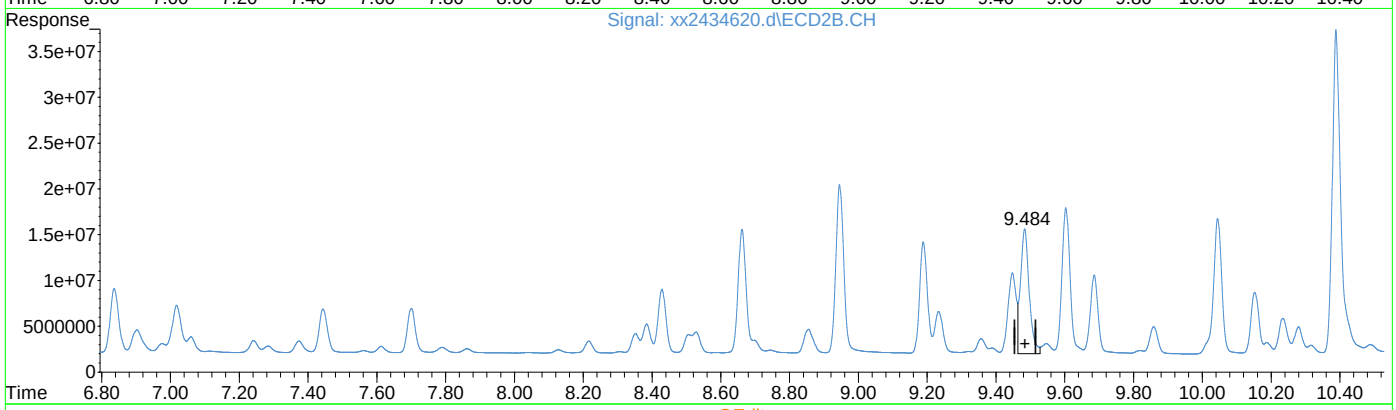
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:29:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 445.830 PPB

response 437757155

(46) AR1260-A #2

9.484min 279.379 PPB

response 241753489

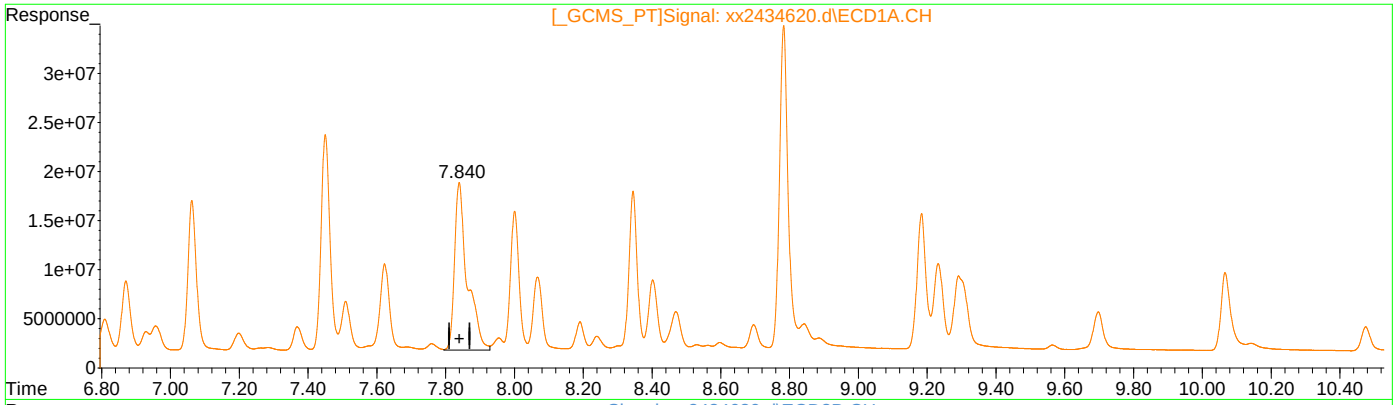
(+) = Expected Retention Time

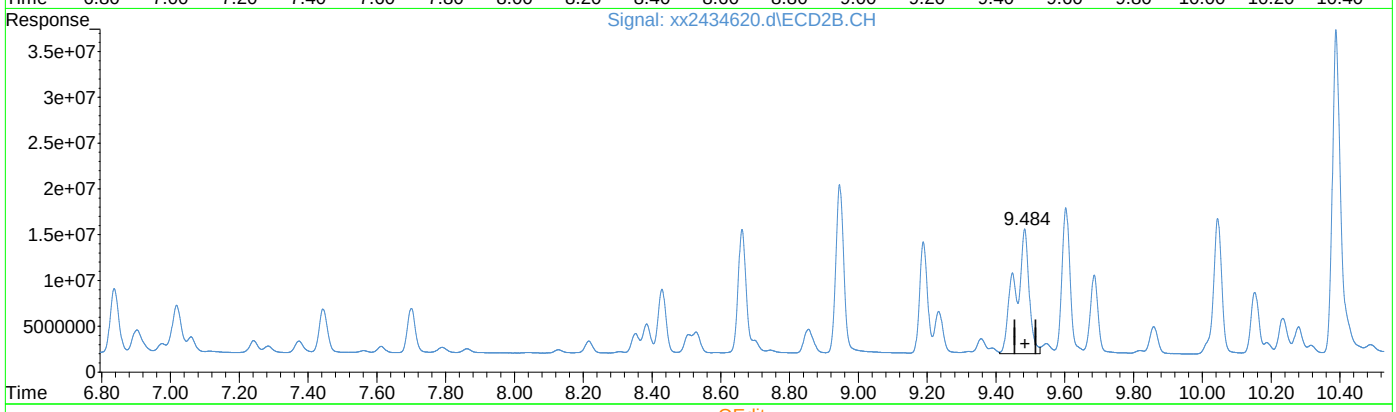
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:29:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(46) AR1260-A

7.840min 445.830 PPB

response 437757155

(46) AR1260-A #2

9.484min 448.896 PPB m

response 388441192

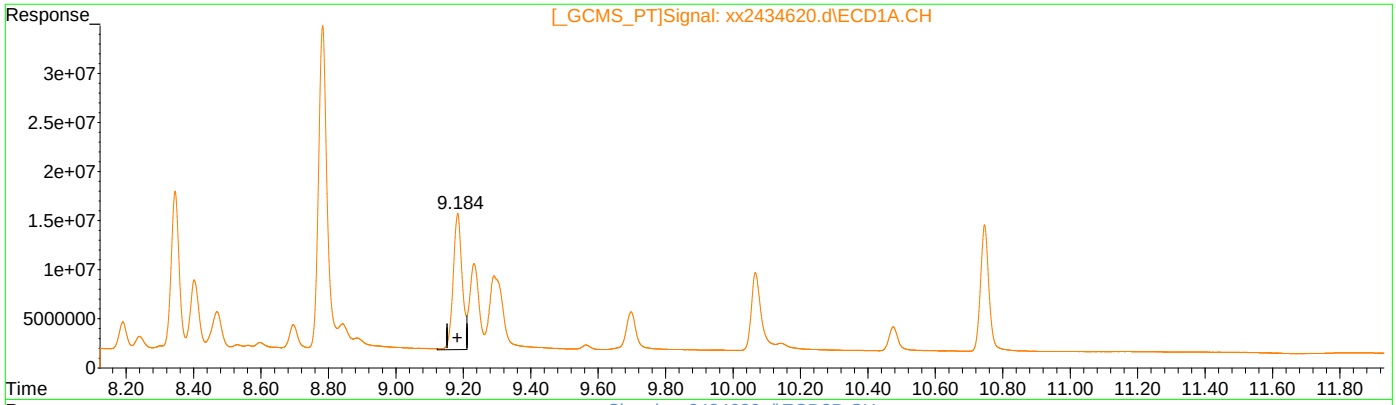
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:32:16 2019

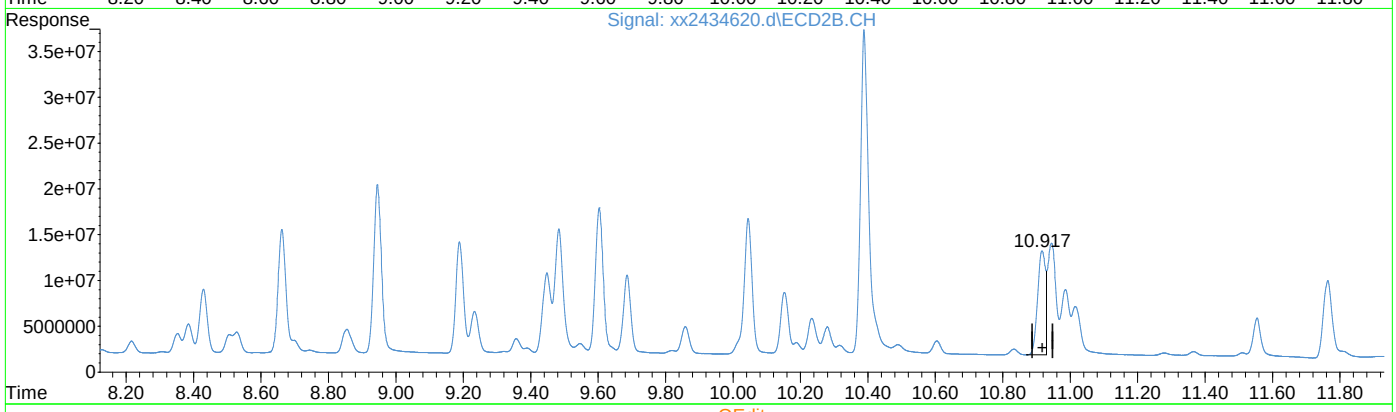
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:29:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.184min 171.030 PPB

response 254725687

(50) AR1260-E #2

10.917min 129.056 PPB

response 182384679

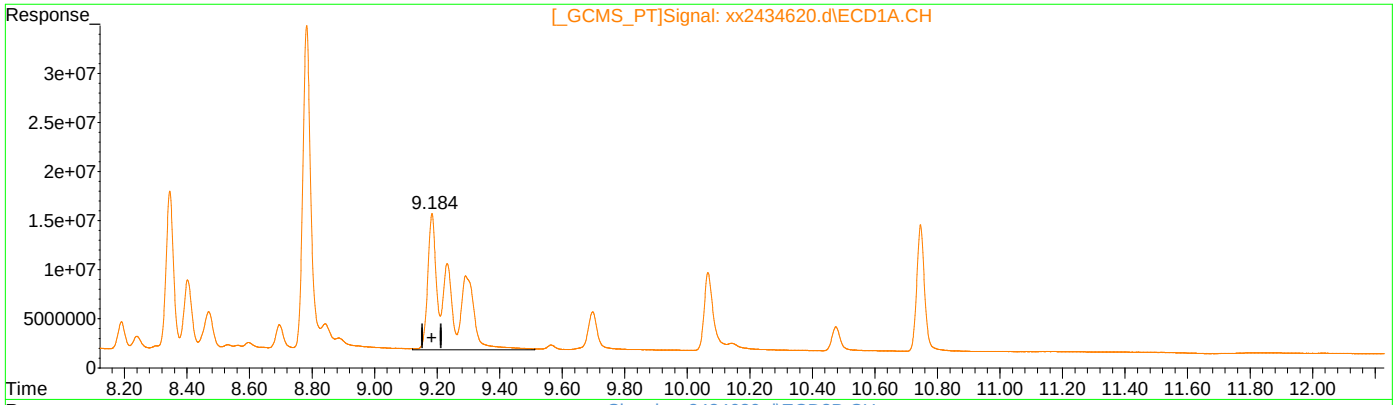
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:32:29 2019

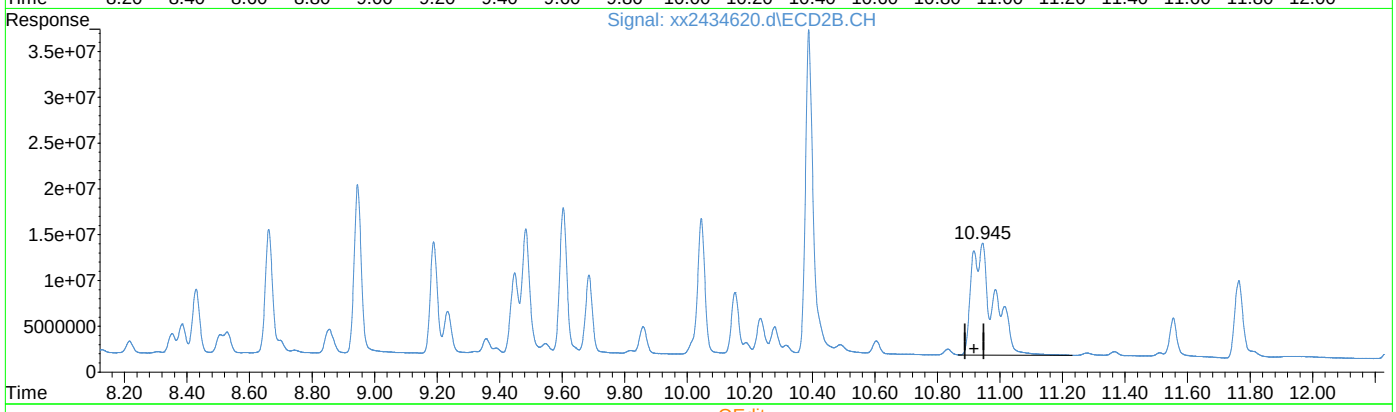
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434620.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 4:52 pm
Operator : tianweir
Sample : CC6666-500
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:29:42 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.184min 438.432 PPB m

response 652984278

(50) AR1260-E #2

10.945min 436.076 PPB m

response 616271130

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:32:57 2019

11.6.35.7

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/06/19 07:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:37:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
1) S	Tetrachlo...	3.268	4.038	525.8E6	414.9E6	39.935	38.980
	Spiked Amount 40.000			Recovery	=	99.84%	97.45%
51) S	Decachlor...	10.745	12.638	468.5E6	380.5E6	33.352	35.353
	Spiked Amount 40.000			Recovery	=	83.38%	88.38%
	Target Compounds						
41)	AR1016-A	3.674	4.730	267.9E6	177.2E6	964.368	933.889
42)	AR1016-B	4.110	5.308	480.5E6	370.9E6	961.946	928.012
43)	AR1016-C	4.693	5.967	1096.3E6	850.8E6	949.913	951.877m
44)	AR1016-D	4.867	6.160	401.3E6	316.1E6	944.603	961.300
45)	AR1016-E	5.402	6.837	416.7E6	248.3E6	954.485	944.149
46)	AR1260-A	7.838	9.482	935.3E6	809.2E6	952.598	935.096m
47)	AR1260-B	8.000	9.603	513.1E6	547.2E6	933.858	921.471
48)	AR1260-C	8.345	10.045	577.5E6	521.5E6	914.955	930.763
49)	AR1260-D	8.782	10.389	1272.9E6	1310.3E6	964.786	934.868
50)	AR1260-E	9.182	10.944f	1374.4E6	1267.8E6	922.807m	897.129m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

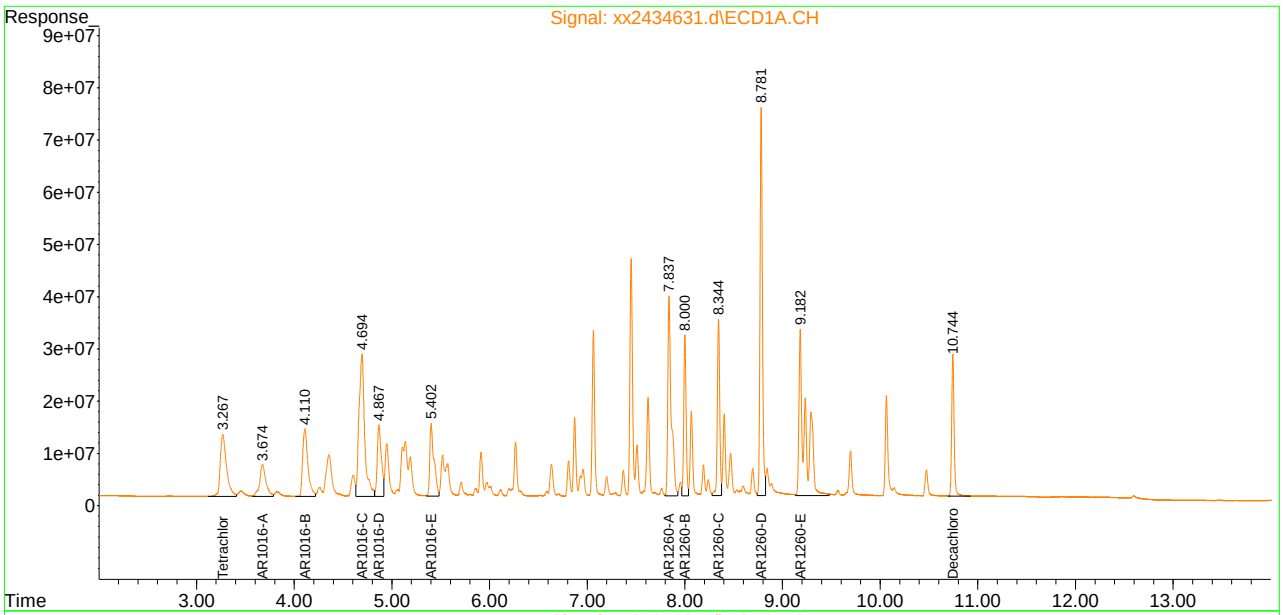
11.6.36 11

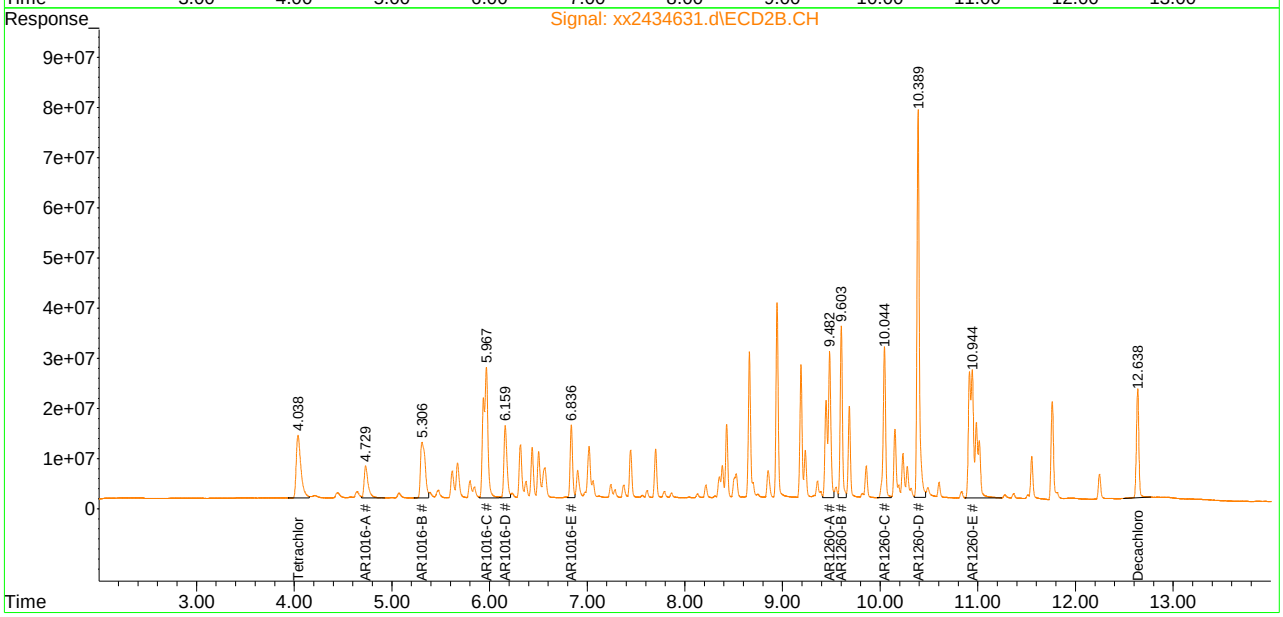
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:37:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





Manual Integration Approval Summary

Sample Number:	GXX6680-CC6666	**Method:**	SW846 8082A
Lab FileID:	XX2434631.D	**Analyst approved:**	05/06/19 00:58 Syra Marie Pacheco
Injection Time:	05/04/19 20:14	**Supervisor approved:**	05/06/19 07:09 Gwendolyn Burns

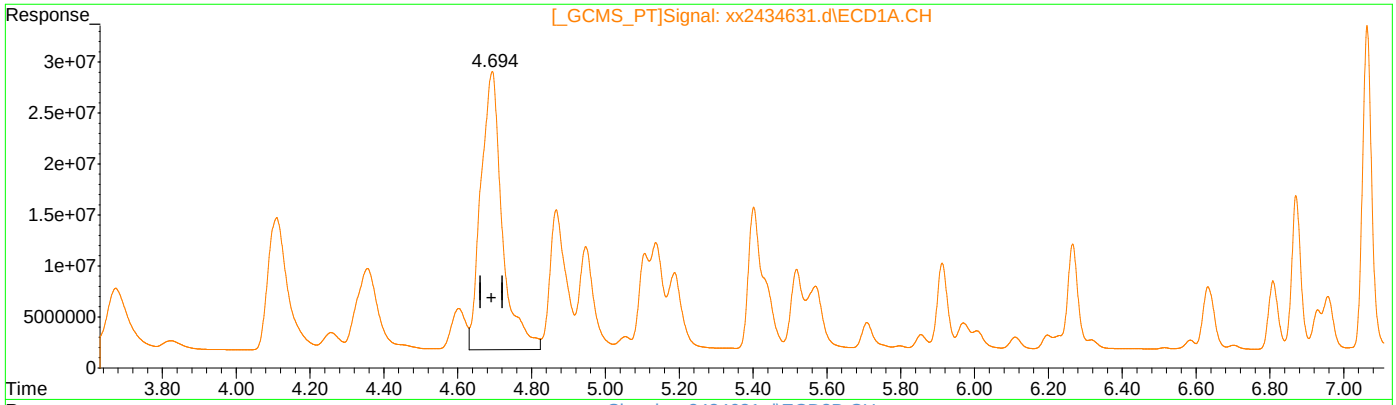
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		2	5.97	Poorly defined baseline
AR1260-E		1	9.18	Poorly defined baseline
AR1260-A		2	9.48	Poorly defined baseline
AR1260-E		2	10.94	Poorly defined baseline

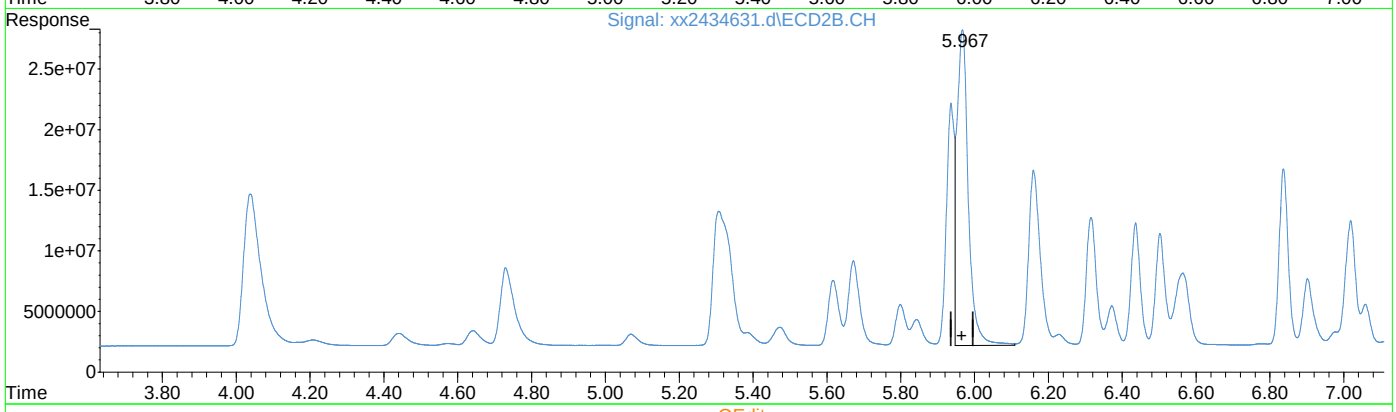
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.693min 949.913 PPB

response 1096271668

(43) AR1016-C #2

5.967min 622.301 PPB

response 556197523

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:36:00 2019

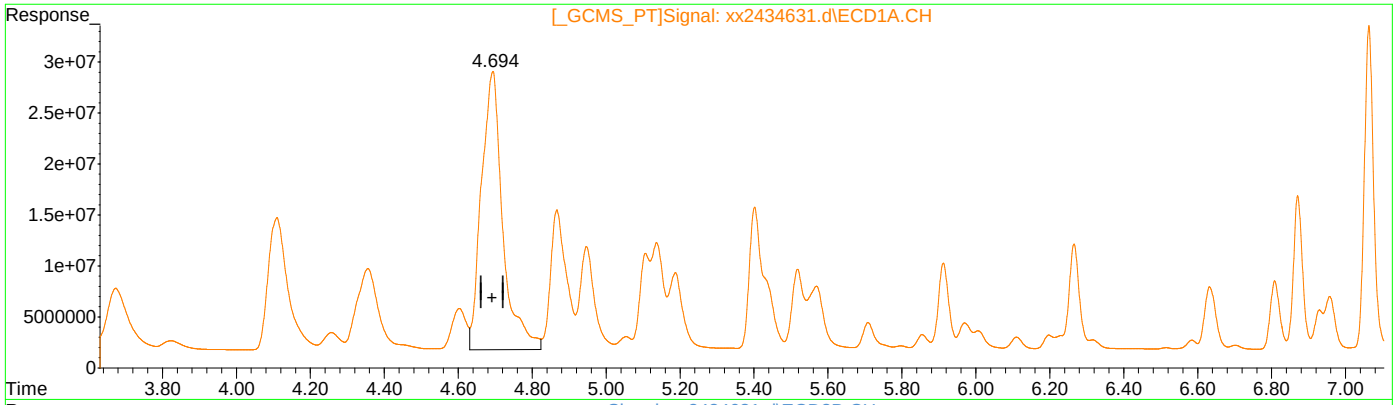
11.6.36.2

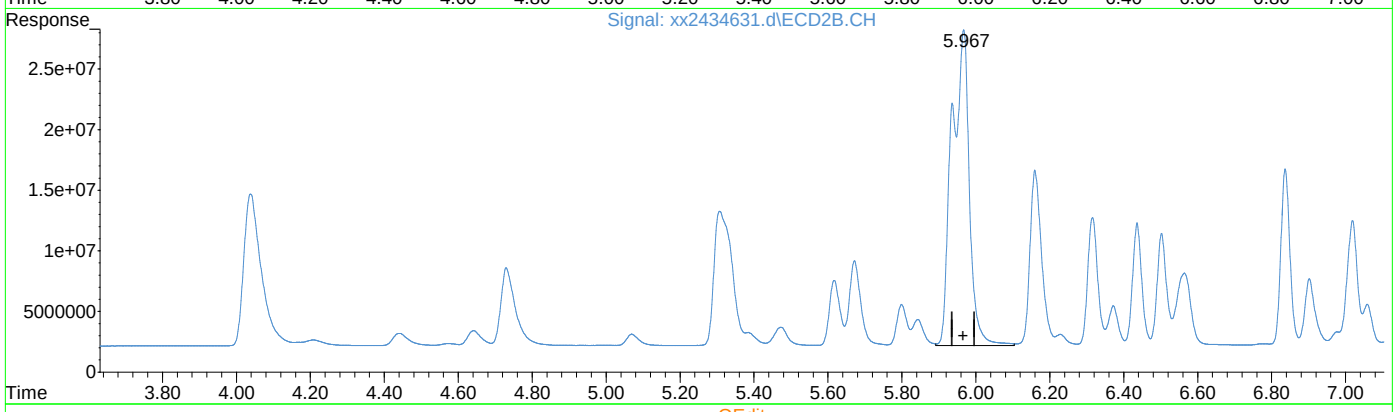
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(43) AR1016-C

4.693min 949.913 PPB

response 1096271668

(43) AR1016-C #2

5.967min 951.877 PPB m

response 850764257

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:36:17 2019

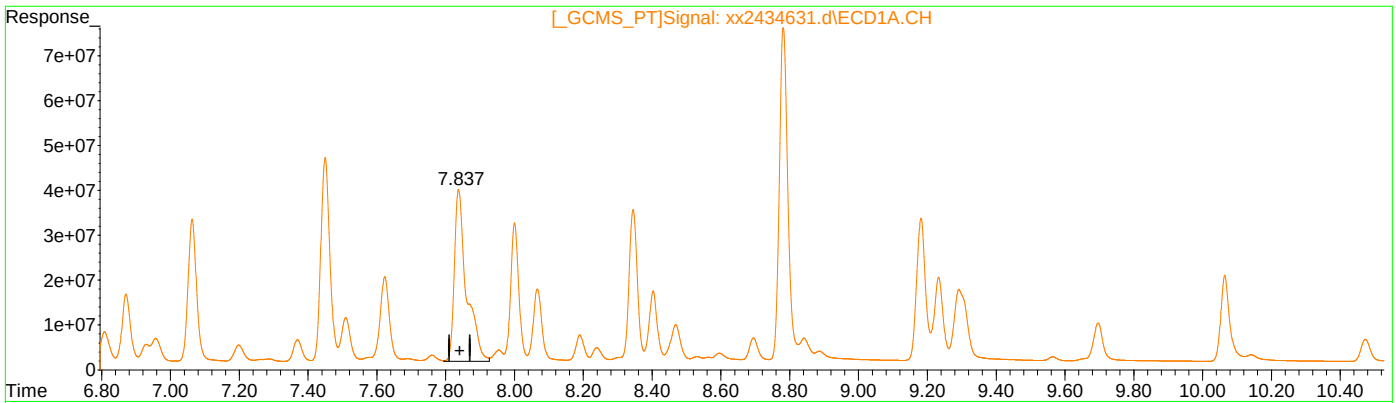
11.6.36.3

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(46) AR1260-A

7.838min 952.598 PPB

response 935349853

(46) AR1260-A #2

9.483min 575.949 PPB

response 498383262

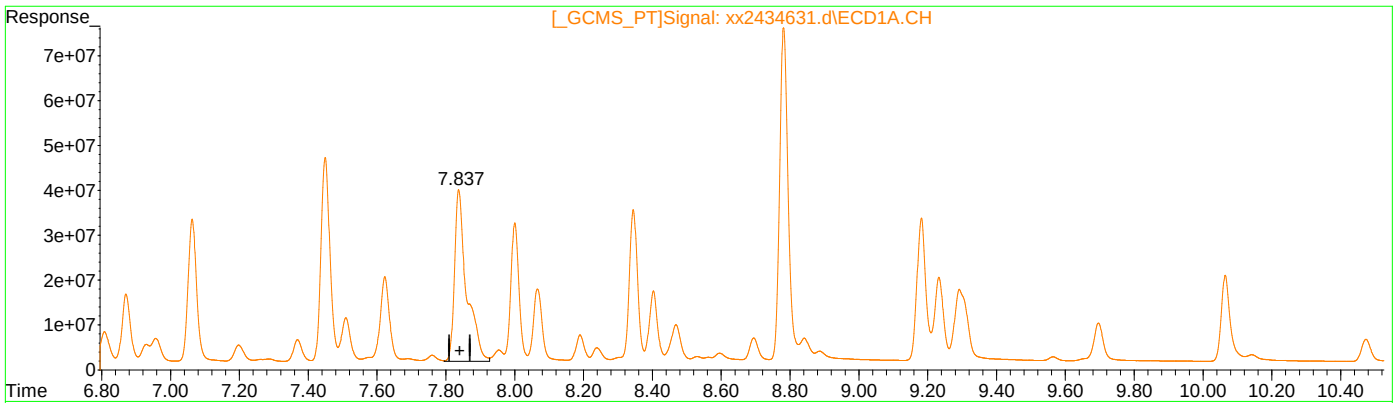
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:36:32 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(46) AR1260-A

7.838min 952.598 PPB

response 935349853

(46) AR1260-A #2

9.482min 935.096 PPB m

response 809162104

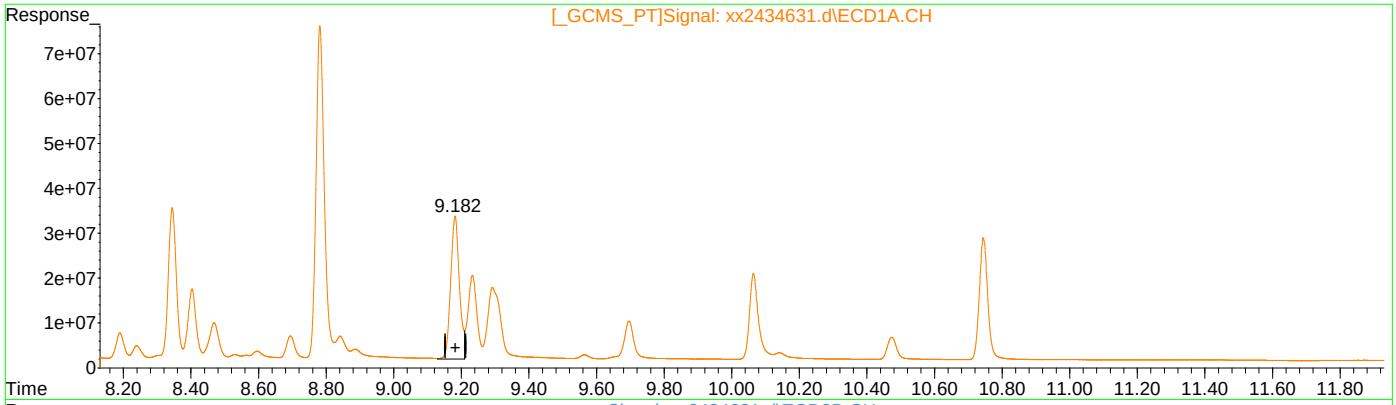
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:36:53 2019

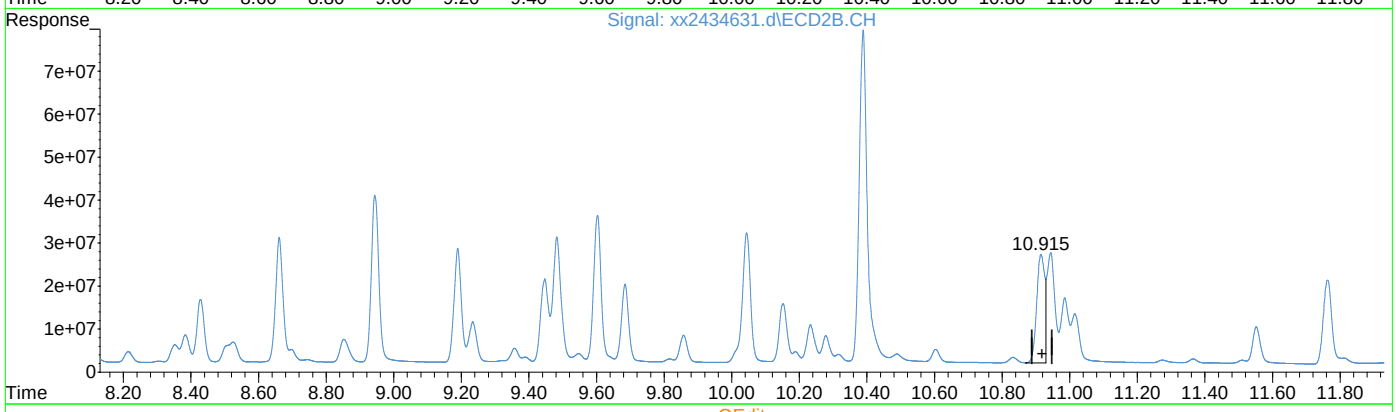
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.182min 384.130 PPB

response 572108968

(50) AR1260-E #2

10.915min 285.559 PPB

response 403557964

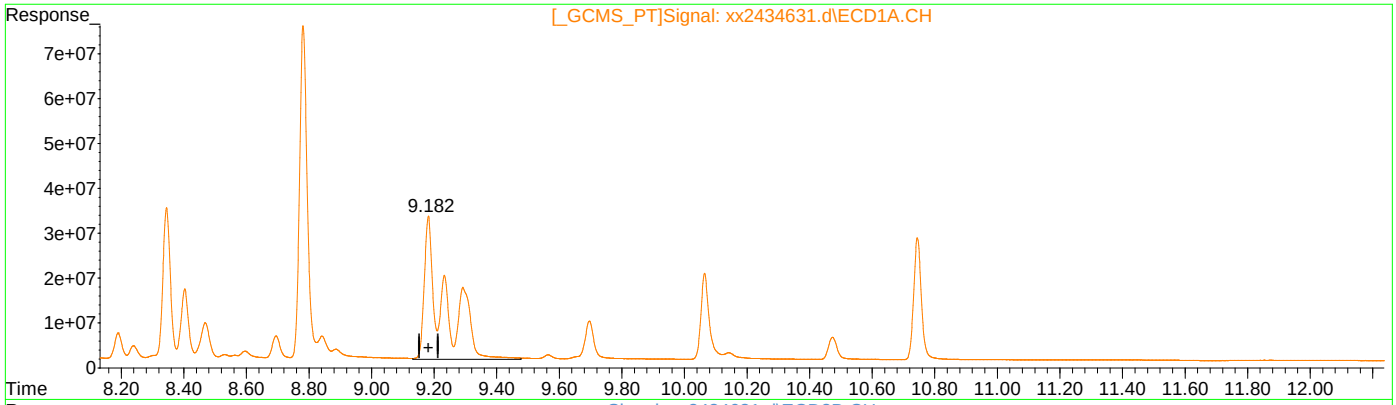
(+) = Expected Retention Time
pcb6666.m Sun May 05 21:37:04 2019

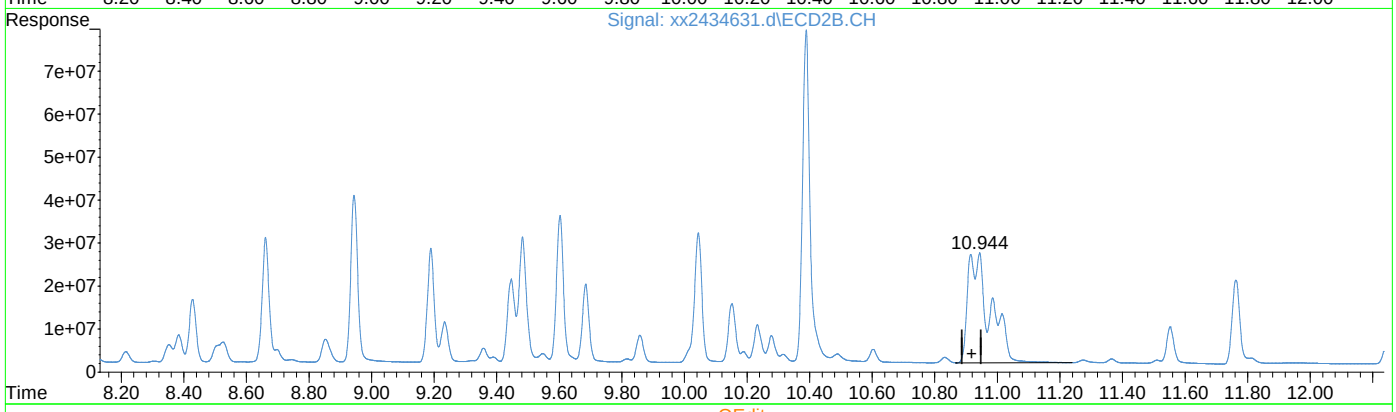
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\syrap\gxx6680\
Data File : xx2434631.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 May 2019 8:14 pm
Operator : tianweir
Sample : CC6666-1000
Misc : op20019,GXX6680,15.0,,,10,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 05 21:34:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\pcb6666.m
Quant Title :
QLast Update : Sun May 05 21:20:18 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1ul
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)





QEdit

(50) AR1260-E

9.182min 922.807 PPB m

response 1374393282

(50) AR1260-E #2

10.944min 897.129 PPB m

response 1267840461

(+) = Expected Retention Time
pcb6666.m Sun May 05 21:37:25 2019

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G6G1999

Print Analyst Name: Mailisi Heshmote

Date: 5/1/19

Analyst Signature: MH

Columns: ZBCIDI / ZBCIPII

Method 8081.608

Initial Cal. Method 6PST1999

Injection Volume: 1.0ul

Date Archived:

Standard Data

Lot #	Description	Conc.
SV 19.2581-01	Pest Mix	1 ppb
-02		2
-03		5
-04		10
-18		25
-19		50
-20		75

Standard Data

Lot #	Description	Conc.
SV 19.2581-21	Pest mix	100ppb
-23	IB	20ppb
-31	Pest ISTD	5ppm
-29	CHL	500ppb
-30	Tox	500ppb
SV 18.2534-59	PEM	50:50ppb
190683	Hexane (Fisher)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: Date: 5/3/19

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	G6G1594	DDT				1			/	OK	
	595	IB				2			/	OK	
	596	IC1999-1	Pest Mix	1st Source		3			/	OK	
	597	-2				4			/	OK	
	598	-5				5			/	OK	
	599	-10				6			/	OK	
	600	ICC1999-25				7			/	OK	
	601	IC1999-50				8			/	OK	
	602	-75				9			/	OK	
	603	-100				10			/	OK	
	604	-500	CHL			11			/	OK	
	605	-500	Tox			12			/	OK	
	606	ICV1999-25	Pest.	2nd Source		13			/	OK	SV 18.2534-147@250ppb
	607	-500	CHL			14			/	OK	-144@500ppb
	608	-500	Tox			15			/	OK	-145@500ppb
	609	-50	Hexa			16			/	OK	-142@100ppb
	610	-50	ALC			17			/	OK	-143@100ppb

MTX = Matrix . Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.
Sample volume/weight refer to extraction log.
All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09
Rev. Date: 5/25/17

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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G6G2001

Print Analyst Name: CHRISTINE PHILLIPS

Date: 5/3/19

Analyst Signature: CNP

Columns: ZBCLPI / ZBCLPII

Method 8081, 608

Initial Cal. Method 60PST1999

Injection Volume: 1.0 µl

Date Archived:

Standard Data

Lot #	Description	Conc.
SV 14-2581-33	IB	20ppb
·31	PEST ISTD	5ppm
SV 14-2534-94	PEM	50-250ppb
·146A	PEST MIX	25ppb
·146B	PEST MIX	50ppb
190683	HEXANE (FISHER)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 5/6/19

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	G6G0630	ddt				1				not using	argon contamination
	631	cc1999·25				2					
	632	IB				3					
	633	DDT				1					
	634	DDT				1					
	639	DDT				1					
	640	DDT				1					
	641	DDT				1				OK	
	642	cc1999-50				4 3 RK Stds				OK	
	643	IB				3				OK	
	644	OP20020-MB1	20020	8081	S	18				OK	
	645	-BS1				19				OK	
	646	JC86768-1				20				OK	
	647	OP20020-MS				21				OK	
	648	-MSD				22				OK	
	649	JC86768-2				23				OK	
	650	-3				24				↓	RX. low surrogate
	651	-4				25				OK	
	652	-5				26				OK	

MTX = Matrix . Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.
Sample volume/weight refer to extraction log.
All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09
Rev. Date: 5/25/17

JUL

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G6G2001

Print Analyst Name: Mailisi Hoshuoto

Date: 5/3/19

Analyst Signature: MH

Columns: ZBCIPI/ZBCIPII

Method 8081.608

Initial Cal. Method 6PST1999

Injection Volume: 1.0ml

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV 18-284-54	PEM	50-200ppb
-166A	Pest Mix	25ppb
-166B	Pest Mix	50ppb
SV 19-258-23	IB	20ppb
-31	Pest ISTD	5ppm
190683	Hexane (Fisher)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature]

Date: 5/6/19

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	6664653	JC86768-6	20020	tcl 8081	S	27				OK	
	654	-7				28				OK	
	655	JC86763-7				29				OK	RR1:5
	656	-8				30				OK	RR1:5
	657	-9				31				OK	RR1:5
	658	-10				32				OK	RR1:5
	659	JC86837-1				33				OK	
	660	JC86903-1		tsl		34				ok	
	662/661	Hexane				100				ok	
	663	CC1999-25				2				ok	
	664	IB				3				ok	
	665	JC86903-2	20020	tsl		35				ok	
	666	-3				36				ok	
	667	-4				37				ok	
	668	JC86916-1		tcl		38				OK	
	669	-2				39				ok	
	670	-3				40				ok	
	671	-4				41				ok	

MTX = Matrix . Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.
Sample volume/weight refer to extraction log.
All strikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09
Rev. Date: 5/25/17

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11.7.2 11

JJJ

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6666

Print Analyst Name: Summer Kolb

Date: 4/24/19

Analyst Signature: SK

Columns: ZBCLPI/ZBCLPII

Method 8082.608

Initial Cal. Method ICB6666

Injection Volume: 1.0uL

Date Archived:

Standard Data

Lot #	Description	Conc.
SV-18-2484.88	AR1221/1254	100ppb
.89	AR1232/1262	↓
90	AR1242/1268	
95	AR1248	

Standard Data

Lot #	Description	Conc.
SV-18-2534.83A	AR1016/1260	50ppb
.83B		250ppb
.83C		500ppb
.83D		1000ppb
.83E		2000ppb
.83F		3000ppb
.26	ICB	20ppb

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 4/26/19

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	XX2434140	ICB				2				ok	
	141	ICC6666-50		1st source		3				ok	
	142	-250				4				ok	
	143	-500				5				ok	
	144	ICC6666-1000				6				ok	
	145	ICC6666-2000				7				ok	
	146	-3000				8				ok	
	147	-1000	1221/1254			9				ok	
	148	-1000	1232/1260			10				ok	
	149	-1000	1242/1268			11				ok	
	150	-1000	1248			12				ok	
	151	ICV6666-100	1016/1260	2nd source		13				ok	SV-18-2484.51 @100ppb
	152	-100	1221/1254			14				ok	SV-18-2584.92 @100ppb
	153	-100	1232/1262			15				ok	.93 @100ppb
	154	-100	1242/1268			16				ok	.94 @100ppb
	155	-100	1248			17				ok	.91 @100ppb
	156	PostMax				18				ok	.20 @ 50ppb

MTX = Matrix . Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.
Sample volume/weight refer to extraction log.
All strikeouts must be initialed, dated, and reason applied if not transcription error

SK 4/25

Form: OR016-09
Rev. Date: 5/25/17

SGS JC86837

11.7.3 11

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6680

Print Analyst Name: Tamara Low

Analyst Signature:

Date: 5/4/19

Columns: ZBCLP1 / ZBCLP2

Method 8082, 6008

Initial Cal. Method PCB6666

Injection Volume: 1.0 uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
192881078	AP1016/1260	500ppb
068	↓	1000ppb
23	IB	2 ppb
190683	hexane (Hxlec)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: Date: 5/6/19

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	XX243598	cc6666-500				1				ok	1260C, DCB↓ 1st
	599	IB				2				ok	
	600	OP20019-MB1	20019	8082	S	4				ok	
	601	-BS1				5				ok	
	602	Jc86768-1				6				ok	
	603	OP20019-MS				7				ok	
	604	-MSD				8				ok	
	605	Jc86763-7				9				ok	
	606	-8				10				ok	
	607/608	hexane				100				ok	
	609	cc6666-1000				11				ok	
	610	IB				2				ok	
	611	Jc86763-9				12				ok	
	612	-10				13				ok	
	613	Jc86768-2				14				ok	
	614	-3				15				ok	low surrogat
	615	-4				16				ok	
	616	-5				17				ok	
	617	-6				18				ok	

MTX = Matrix . Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.

Sample volume/weight refer to extraction log.

All strikeouts must be initialed, dated, and reason applied if not transcription error

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Form: OR016-09

Rev. Date: 5/25/17

Manila 599 → 617

11.7.4 11

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6680

Print Analyst Name: [illegible]

Date: 5/4/19

Analyst Signature: TR

Columns: ZBcap1 / ZBcap5

Method 8081A, 608

Initial Cal. Method pc86666

Injection Volume: 1.0uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
Sv 92581-08A	AR1016/1260	500ppb
-05B	↓	1000ppb
Sv 82581-26	1B	20 ppb
190683	Hexane (Fisher)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 5/6/19

R	Data File	Sample ID	Ext. Batch	Test	MTX	AIS #	Dilution	IS	SU	Status (Data)	Comments
	XX43618	Hexane				100				ok	
	619	Hexane				100				ok	
	620	cc6666-500				1S				ok	
	621	1B				2				ok	
	622	JC86768-7				20				ok	
	623	JC86837-1				21				ok	
	624	JC86903-1				22				ok	
	625	-2				23				ok	
	626	-3				24				ok	
	627	-4				25				ok	
	628	JC86916-1				26				ok	
	629/630	Hexane				100				ok	
	631	cc6666-1000				27				ok	
	632	1B				2				ok	
	633	JC86916-2				28				ok	
	634	-3				29				ok	
	635	-4				30				ok	
	636/637	Hexane				100				ok	
	638	cc6666-500				31				ok	
	639	1B				2				ok	

MTX = Matrix . Designate W for water, S for soil, O for oil.. IS = Internal Standard Area. (if used) SU = Surrogate.
Sample volume/weight refer to extraction log.
All strikeouts must be initialed, dated, and reason applied if not transcription error

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Form: OR016-09
Rev. Date: 5/25/17 Manila 618→639

11.7.4 11

LOGBOOK ID: 9-2392

Pest / PCB Extraction Log - Soils

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 √ Sonication SW3550C _____
Waste Dilution SW3580A _____ Soxhlet SW3540 _____

Date Started: 5.2.19 Time Started: 1030
Date Finished: 5.2.19 Time Finished: 1515

Special Client Spike Instructions					
QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:

Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD:
Final Volume: due 5/6 HT 5/16
Other:

	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)	Extract Cleanup H2SO4	Florisil	Cu	KMnO4	GPC	Comment
	MB1	PCB		SOIL	15.0				12	CLEAR	10.0	/		/			
	BS1			SOIL	15.1				12	CLEAR	10.0	/		/			
	JC86768-1 MS		1	SOIL	15.2				12	LYELLOW	10.2	/		/			
	MSD		1	SOIL	15.7				12	LYELLOW	10.2	/		/			
	BS																
	MS																
	MSD																
1	JC86763-7	PCB	1	SOIL	15.1		—		12	LYELLOW	10.0	/		/			
2	-8		1	SOIL	15.7		—		12	MEDIUM	10.0	/		/			
3	-9		1	SOIL	15.2		—		12	LYELLOW	10.2	/		/			
4	-10		1	SOIL	16.1		—		12	CLEAR	10.2	/		/			
5	JC86768-1		1	SOIL	15.5		—		12	LYELLOW	10.0	/		/			
6	-2		1	SOIL	15.0		—		12	LYELLOW	10.2	/		/			
7	-3		1	SOIL	15.1		—		12	BROWN	10.2	/		/			
8	-4		1	SOIL	15.2		—		12	LYELLOW	10.2	/		/			
9	-5		1	SOIL	16.3		—		12	BROWN	10.2	/		/			
10	-6		1	SOIL	15.7		—		12	LYELLOW	10.2	/		/			
11	-7		1	SOIL	15.0		—		12	LYELLOW	10.2	/		/			
12	JC86837-1		1	SOIL	15.7		—		12	YELLOW	10.2	/		/			
13	JC86903-1		1	SOIL	16.2		—		12	BROWN	10.2	/		/			
14	-2		1	SOIL	15.8		—		12	LYELLOW	10.2	/		/			
15	-3		1	SOIL	15.5		—		12	BROWN	10.2	/		/			
16	-4		1	SOIL	15.6		—		12	LYELLOW	10.2	/		/			
17	JC86916-1		2	SOIL	16.8		—		12	BROWN	10.2	/		/			
18	-2		1	SOIL	16.1		—		12	LYELLOW	10.2	/		/			
19	-3		1	CLAY	16.6		—		12	YELLOW	10.2	/		/			
20	-4		2	SOIL	16.1		—		12	YELLOW	10.2	/		/			

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

SGS
Form: OP018A-09
Rev Date: 8/2/17

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BATCH # GC 20019 RACK# HCB-15

Weighed by:	SH
Extracted by:	CC/MT
Concentrated by:	MT, CC
Final Vol. Top-up:	
Vialed by:	MT, CC
Supervisor Review:	aj 5/2/19

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)	4	65	—	—	dlc
Buchi Chiller	B4	11	—	—	dlc
Waterbath (70-80°C)					
Waterbath Chiller (GPM)					
NEVAP (32-38°C, LPM)					
Balance	B16	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppb)	AMT (mL)
PPCB	19.2336 105	400	1.0
PPCB LL			

WITNESS SIGN: CC SPIKE SIGN: MT

MATRIX SPIKE	LOT #	CONC	AMT (mL)
PEST			
PEST LL			
PCB	19.2336 57	2	1.0
PCB LL			

WITNESS SIGN: CC SPIKE SIGN: MT

SOLVENT	LOT #	BRAND	AMT (mL)
2:1 HEXANE/ ACETONE	173527 / 174411	FISHER	30.0
1:1 METH CHLOR/ ACETONE			
HEXANE			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	64355092	2-22-19	AGILENT
SODIUM SULFATE	184524	12-20-18	FISHER
FILTER PAPER	16366462		FISHER
FLORISIL			
1:1 SULFURIC ACID	280553		RICCA
COPPER	42336112.0		ALDRICH
PERMANG(KMnO4)			
HYDROXYLAMINE			

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	38E1205ICL7A	1-5-19	FISHER

LOGBOOK ID:

Pest / PCB Extraction Log - Soils

Date Started: 5.2.19 Time Started: 1025
Date Finished: 5.2.19 Time Finished: 1530

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Microwave SW3546 ✓ Sonication SW3550C _____
Waste Dilution SW3580A _____ Soxhlet SW3540 _____

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS
Rx Reason:
Spiking:
Weights/Volumes:
Required MS/MSD:
Final Volume: dlw 5/6 HT 5/6
Other:

SGS
Form: OP018A-09
Rev Date: 8/2/17

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	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)	Extract Cleanup H2SO4	Florisil	Cu	KMnO4	GPC	Comment
	MB1	pest		conc.	15.0				12	clear	10.0		✓	✓			
	BS1			conc.	15.0				12	clear	10.0		✓	✓			
	JC86768-1 MS		1	soil	15.4		✓		12	clear	10.0		✓	✓			
	MSD		1	soil	15.5		✓		12	clear	10.0		✓	✓			
	BS																
	MS																
	MSD																
6	JC86763-7	pest	1	soil	15.1		—		12	yellow	10.0		✓	✓			
7	-8		1	soil	15.7		—			yellow	10.0		✓	✓			
8	-9		1	soil	15.2		—			yellow	10.0		✓	✓			
9	-10		1	soil	16.1		—			yellow	10.0		✓	✓			
1	JC86768-1		1	soil	15.5		—			clear	10.0		✓	✓			
2	-2		1	soil	15.0		—			yellow	10.0		✓	✓			
3	-3		1	soil	15.1		—			yellow	10.0		✓	✓			
4	-4		1	soil	15.2		—			clear	10.0		✓	✓			
5	-5		1	soil	16.3		—			yellow	10.0		✓	✓			
6	-6		1	soil	15.7		—			clear	10.0		✓	✓			
7	-7		1	soil	15.0		—			clear	10.0		✓	✓			
12	JC86837-1		1	soil	15.7		—			yellow	10.0		✓	✓			
13	JC86903-1		1	soil	16.2		—			clear	10.0		✓	✓			
14	-2		1	soil	15.6		—			clear	10.0		✓	✓			
15	-3		1	soil	15.5		—			yellow	10.0		✓	✓			
16	-4		1	soil	15.6		—			yellow	10.0		✓	✓			
17	JC86916-1		2	soil	16.5		—			yellow	10.0		✓	✓			
18	-2		1	soil	16.1		—			clear	10.0		✓	✓			
19	-3		1	clay	16.6		—			yellow	10.0		✓	✓			
20	-4		2	soil	16.1		—			yellow	10.0		✓	✓			

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

BATCH # GC 20020 RACK# PEST-B

Weighed by:	SH
Extracted by:	CC/NT
Concentrated by:	NT/CC
Final Vol. Top-up:	
Vialed by:	CC
Supervisor Review:	ag 5/2/19

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)	4	65	—	—	ok
Buchi Chiller	B4	11	—	—	ok
Waterbath (70-80°C)					
Waterbath Chiller (GPM)					
NEVAP (32-38°C, LPM)					
Balance	B45	N/A	N/A	N/A	N/A

SURROGATE	LOT #	CONC (ppb)	AMT (mL)
PPCB	19.2336-105	400	1.0
PPCB LL			

WITNESS SIGN: CC SPIKE SIGN: NT

MATRIX SPIKE	LOT #	CONC	AMT (mL)
PEST	19.2336-108	250	1.0
PEST LL			
PCB			
PCB LL			

WITNESS SIGN: CC SPIKE SIGN: NT

SOLVENT	LOT #	BRAND	AMT (mL)
2:1 HEXANE/ ACETONE	175317 / 174411	EMD	500
1:1 METH CHLOR/ ACETONE			
HEXANE			

REAGENT	LOT #	BAKE BATCH #	BRAND
HYDROMATRIX	64355092	2.22.19	AGILENT
SODIUM SULFATE	174524	12.21.19	EMD
FILTER PAPER	1636462		FISHER
FLORISIL	549-000632		PHENOMENEX
1:1 SULFURIC ACID			
COPPER	192356120		ACROS
PERMANG(KMnO4)			
HYDROXYLAMINE			

MATRIX	LOT #	BAKE BATCH #	BRAND
SAND	218-1865-A-7A	1.5.19	FISHER

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46581
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:34	MA46581-STD1	1		B=1.1430e-004, C=-4.1172e-002, Rho=0.9997935
10:35	MA46581-STD2	1		STDB
10:37	MA46581-STD3	1		STDC
10:38	MA46581-STD4	1		STDD
10:40	MA46581-STD5	1		STDE
10:41	MA46581-STD6	1		STDF
10:49	MA46581-ICV1	1		
10:51	MA46581-ICB1	1		
10:53	MA46581-CCV1	1		
10:54	MA46581-CCB1	1		
10:56	MA46581-CRI1	1		
11:10	MA46581-CCV2	1		
11:11	MA46581-CCB2	1		
11:14	MP14565-MB1	1		
11:16	MP14565-B1	1		
11:17	MP14565-S1	1		
11:19	MP14565-S2	1		
11:21	JC86837-10	1		
11:22	JC86837-1	1		
11:24	JC86837-2	1		
11:26	JC86837-3	1		
11:27	JC86837-4	1		
11:29	MA46581-CCV3	1		
11:31	MA46581-CCB3	1		
11:33	JC86837-5	1		
11:34	JC86837-6	1		
11:36	JC86837-7	1		
11:38	JC86837-8	1		
11:39	JC86837-9	1		
11:41	JC86837-11	1		
11:43	JC86837-12	1		
---------->	Last reportable sample/prep for job JC86837			
11:44	ZZZZZZ	1		
11:46	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46581
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:48	MA46581-CCV4	1		
11:49	MA46581-CCB4	1		
11:51	ZZZZZZ	1		
11:52	ZZZZZZ	1		
11:54	ZZZZZZ	1		
11:55	ZZZZZZ	1		
11:57	ZZZZZZ	1		
11:58	ZZZZZZ	1		
12:00	MP14566-MB1	1		
12:02	MP14566-B1	1		
12:04	MP14566-S1	1		
12:05	MA46581-CCV5	1		
12:07	MA46581-CCB5	1		
12:09	MP14566-S2	1		
12:10	JC86864-1	1		(sample used for QC only; not part of login JC86837)
12:12	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:15	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:22	MA46581-CCV6	1		
12:23	MA46581-CCB6	1		
12:25	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:33	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46581
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:38	MA46581-CCV7	1		
12:39	MA46581-CCB7	1		
12:41	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:43	ZZZZZZ	1		
12:45	MA46581-CRI2	1		
12:46	MA46581-CCV8	1		
12:48	MA46581-CCB8	1		

----------> Last reportable CCB for job JC86837
Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46581
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
10:49	MA46581-ICV1	1	X
10:51	MA46581-ICB1	1	X
10:53	MA46581-CCV1	1	X
10:54	MA46581-CCB1	1	X
10:56	MA46581-CRI1	1	X
11:10	MA46581-CCV2	1	X
11:11	MA46581-CCB2	1	X
11:14	MP14565-MB1	1	X
11:16	MP14565-B1	1	X
11:17	MP14565-S1	1	X
11:19	MP14565-S2	1	X
11:21	JC86837-10	1	X
11:22	JC86837-1	1	X
11:24	JC86837-2	1	X
11:26	JC86837-3	1	X
11:27	JC86837-4	1	X
11:29	MA46581-CCV3	1	X
11:31	MA46581-CCB3	1	X
11:33	JC86837-5	1	X
11:34	JC86837-6	1	X
11:36	JC86837-7	1	X
11:38	JC86837-8	1	X
11:39	JC86837-9	1	X
11:41	JC86837-11	1	X
11:43	JC86837-12	1	X
11:44	ZZZZZZ	1	
11:46	ZZZZZZ	1	
11:48	MA46581-CCV4	1	X
11:49	MA46581-CCB4	1	X
11:51	ZZZZZZ	1	
11:52	ZZZZZZ	1	
11:54	ZZZZZZ	1	
11:55	ZZZZZZ	1	
		Element:	Hg

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46581
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
11:57	ZZZZZZ	1		
11:58	ZZZZZZ	1		
12:00	MP14566-MB1	1	X	
12:02	MP14566-B1	1	X	
12:04	MP14566-S1	1	X	
12:05	MA46581-CCV5	1	X	
12:07	MA46581-CCB5	1	X	
12:09	MP14566-S2	1	X	
12:10	JC86864-1	1	X	(a)
12:12	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:15	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:22	MA46581-CCV6	1	X	
12:23	MA46581-CCB6	1	X	
12:25	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:33	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	MA46581-CCV7	1	X	
12:39	MA46581-CCB7	1	X	
12:41	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:43	ZZZZZZ	1		
12:45	MA46581-CRI2	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
Analyst: LL Run ID: MA46581
Parameters: Hg

Time	Sample Description	Dilution	Element: Hg
12:46	MA46581-CCV8	1	X
12:48	MA46581-CCB8	1	X

(a) Sample used for QC only; not part of login JC86837.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46581 Units: ug/l

Time: / Sample ID:			10:51 ICB1		10:54 CCB1		11:11 CCB2		11:31 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.02	-0.0220	<0.20	-0.0259	<0.20	-0.0280	<0.20	-0.0259	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46581 Units: ug/l

Time:			11:49		12:07		12:23		12:39	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.02	-0.0369	<0.20	-0.0238	<0.20	-0.0331	<0.20	-0.0393	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA46581 Units: ug/l

Time:			12:48	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	0.20	.02	-0.0263	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46581 Units: ug/l

Time:		10:49			10:53			11:10	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.22	107.3	2.5	2.53	101.2	2.5	2.48	99.2

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46581 Units: ug/l

Time:		11:29			11:48			12:05	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.45	98.0	2.5	2.45	98.0	2.5	2.46	98.4

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA46581 Units: ug/l

Time:		12:22			12:38			12:46	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.43	97.2	2.5	2.41	96.4	2.5	2.48	99.2

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8042519S1.CSV Date Analyzed: 04/25/19 Methods: SW846 7471B
QC Limits: 70 to 130 % Recovery Run ID: MA46581 Units: ug/l

Time:			10:56		12:45	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.196	98.0	0.147	73.5

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:20	MA46628-STD1	1		STDA
12:25	MA46628-STD2	1		STDB
12:30	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:41	MA46628-ICV1	1		
12:46	MA46628-ICB1	1		
12:54	MA46628-ICCV1	1		
13:03	MA46628-CCB1	1		
13:08	MA46628-CRI1	1		
13:13	MA46628-CRID1	1		
13:18	MA46628-ICSA1	1		
13:23	MA46628-ICSAB1	1		
13:28	MA46628-HSTD1	1		
13:34	MA46628-HSTD2	1		
13:40	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:50	ZZZZZZ	1		
13:56	MA46628-CCV1	1		
14:01	MA46628-CCB2	1		
14:06	ZZZZZZ	1		
14:11	MP14600-B1	1		
14:16	MP14600-S1	1		Needs post straight for Ca
14:21	MP14600-S2	1		
14:26	JC86989-3	1		(sample used for QC only; not part of login JC86837)
14:31	MP14600-SD1	5		
14:37	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:52	MA46628-CCV2	1		
14:57	MA46628-CCB3	1		
15:02	ZZZZZZ	1		
15:07	MP14600-S1	10		Needs post spike for Sb on dilution
15:12	MP14600-S2	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:17	JC86989-3	10		(sample used for QC only; not part of login JC86837)
15:22	MP14600-SD1	50		
15:27	ZZZZZZ	10		
15:32	ZZZZZZ	10		
15:37	ZZZZZZ	10		
15:42	ZZZZZZ	10		
15:47	MA46628-CCV3	1		
15:52	MA46628-CCB4	1		
15:57	ZZZZZZ	5		
16:02	ZZZZZZ	5		
16:07	MP14617-B1	1		
16:12	ZZZZZZ	1		
16:17	MP14617-S1	2		
16:22	MP14617-S2	2		
16:27	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:37	ZZZZZZ	1		
16:42	MA46628-CCV4	1		
16:47	MA46628-CCB5	1		
16:53	MA46628-ICSA2	1		
16:58	MA46628-ICSAB2	1		
17:03	ZZZZZZ	1		
17:08	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:19	ZZZZZZ	1		
17:24	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:40	MA46628-CCV5	1		
17:45	MA46628-CCB6	1		
17:50	ZZZZZZ	1		
17:55	ZZZZZZ	1		
18:01	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:06	ZZZZZZ	1		
18:11	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:21	MP14579-B1	1		
18:26	MP14579-MB1	1		
18:31	MP14579-S1	1		needs post spike for Sb, ca
18:36	MA46628-CCV6	1		
18:41	MA46628-CCB7	1		
18:47	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:57	ZZZZZZ	1		
19:02	ZZZZZZ	1		
19:07	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:18	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:33	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:44	ZZZZZZ	1		
19:49	MA46628-CCV7	1		
19:54	MA46628-CCB8	1		
19:59	MP14579-S2	1		
20:04	ZZZZZZ	1		
20:09	MP14579-SD1	5		
20:14	JC86837-1	1		Fe, Pb high
20:20	JC86837-2	1		(rerun in MA46640) and results confirmed)
20:25	JC86837-3	1		
20:30	JC86837-4	1		Pb high
20:35	JC86837-5	1		
20:40	JC86837-6	1		(rerun in MA46640 and results confirmed)
20:45	MA46628-CCV8	1		
20:50	MA46628-CCB9	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
20:55	JC86837-7	1		
21:00	JC86837-8	1		
21:05	JC86837-9	1		bad reading on Y3600
21:10	JC86837-10	1		
21:15	JC86837-11	1		
21:20	JC86837-12	1		bad readings
---------->	Last reportable sample/prep for job JC86837			
21:26	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:36	ZZZZZZ	1		
21:42	MA46628-CCV9	1		
21:47	MA46628-CCB10	1		
---------->	Last reportable CCB for job JC86837			
21:52	MP14636-B1	1		
21:57	MP14636-MB1	1		
22:02	MP14636-S1	1		needs post spike for Sb, Mg
22:07	MP14636-S2	1		
22:12	JC86916-6	1		(sample used for QC only; not part of login JC86837)
22:18	MP14636-SD1	5		
22:23	ZZZZZZ	1		
22:28	ZZZZZZ	1		
22:33	ZZZZZZ	1		
22:38	MA46628-CCV10	1		
22:43	MA46628-CCB11	1		
22:48	ZZZZZZ	1		
22:53	ZZZZZZ	1		
22:59	ZZZZZZ	1		
23:04	ZZZZZZ	1		
23:09	ZZZZZZ	1		
23:14	ZZZZZZ	1		
23:20	ZZZZZZ	1		
23:25	ZZZZZZ	1		
23:30	ZZZZZZ	1		
23:35	ZZZZZZ	1		
23:40	MA46628-CCV11	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
23:45	MA46628-CCB12	1		
23:50	MP14600-MB1	1		
23:55	ZZZZZZ	1		
00:00	ZZZZZZ	1		
00:05	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:16	ZZZZZZ	1		
00:21	ZZZZZZ	1		
00:26	ZZZZZZ	1		
00:31	ZZZZZZ	1		
00:36	ZZZZZZ	1		
00:41	MA46628-CCV12	1		
00:46	MA46628-CCB13	1		
00:52	ZZZZZZ	1		
00:57	ZZZZZZ	1		
01:02	ZZZZZZ	1		
01:07	ZZZZZZ	1		
01:12	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:28	ZZZZZZ	1		
01:33	MA46628-CCV13	1		
01:38	MA46628-CCB14	1		
01:43	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:53	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:03	ZZZZZZ	1		
02:09	MP14678-B1	1		
02:14	MP14678-MB1	1		CR high
02:19	MP14678-S1	1		
02:24	MP14678-S2	1		
02:29	JC87038-2	1		(sample used for QC only; not part of login JC86837)

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
02:34	MA46628-CCV14	1		
02:39	MA46628-CCB15	1		
02:44	MP14678-SD1	5		
02:49	ZZZZZZ	1		
02:54	ZZZZZZ	1		
02:59	ZZZZZZ	1		
03:04	ZZZZZZ	1		
03:09	ZZZZZZ	1		
03:14	ZZZZZZ	1		
03:19	ZZZZZZ	1		
03:24	ZZZZZZ	1		
03:29	ZZZZZZ	1		
03:34	MA46628-CCV15	1		
03:39	MA46628-CCB16	1		
03:45	ZZZZZZ	1		
03:50	ZZZZZZ	1		
03:55	ZZZZZZ	1		
04:00	ZZZZZZ	1		
04:05	ZZZZZZ	1		
04:10	ZZZZZZ	1		
04:15	ZZZZZZ	1		
04:20	ZZZZZZ	1		
04:25	ZZZZZZ	1		
04:30	ZZZZZZ	1		
04:35	MA46628-CCV16	1		
04:40	MA46628-CCB17	1		
04:45	ZZZZZZ	1		
04:50	ZZZZZZ	1		
04:56	ZZZZZZ	1		
05:01	ZZZZZZ	1		
05:06	ZZZZZZ	1		
05:11	ZZZZZZ	1		
05:17	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
05:22	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:38	MA46628-CCV17	1		
05:43	MA46628-CCB18	1		
05:48	ZZZZZZ	1		
05:53	ZZZZZZ	1		
05:58	ZZZZZZ	1		
06:03	ZZZZZZ	1		
06:09	ZZZZZZ	1		
06:14	ZZZZZZ	1		
06:19	MA46628-CCV18	1		
06:24	MA46628-CCB19	1		
07:53	ZZZZZZ	5		
07:58	ZZZZZZ	5		
08:06	ZZZZZZ	5		
08:11	MA46628-CCV19	1		
08:15	MA46628-CCB20	1		
08:25	JC86916-5	1		(sample used for QC only; not part of login JC86837)
08:31	MA46628-CCV20	1		
08:37	MA46628-CCB21	1		
09:12	JC87038-2	1		(sample used for QC only; not part of login JC86837)
09:17	MA46628-CCV21	1		
09:26	MA46628-CCB22	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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	
12:30	ZZZZZZ	1																							
12:35	ZZZZZZ	1																							
12:41	MA46628-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:46	MA46628-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12:54	MA46628-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:03	MA46628-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:08	MA46628-CRI1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:13	MA46628-CRID1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:18	MA46628-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:23	MA46628-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:28	MA46628-HSTD1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:34	MA46628-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
13:40	ZZZZZZ	1																							
13:45	ZZZZZZ	1																							
13:50	ZZZZZZ	1																							
13:56	MA46628-CCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:01	MA46628-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:06	ZZZZZZ	1																							
14:11	MP14600-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:16	MP14600-S1	1	X			X	X		X		X				X		X	X			X				
14:21	MP14600-S2	1	X			X	X		X		X				X		X	X			X				
14:26	JC86989-3	1				X																			(a)
14:31	MP14600-SD1	5	X			X	X		X		X				X		X	X			X				
14:37	ZZZZZZ	1																							
14:42	ZZZZZZ	1																							
14:47	ZZZZZZ	1																							
14:52	MA46628-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
14:57	MA46628-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
15:02	ZZZZZZ	1																							
15:07	MP14600-S1	10		X	X			X		X		X	X	X		X			X	X		X	X	X	
15:12	MP14600-S2	10		X	X			X		X		X	X	X		X			X	X		X	X	X	
15:17	JC86989-3	10			X			X		X				X					X	X					(a)
15:22	MP14600-SD1	50		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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
15:27	ZZZZZZ	10																						
15:32	ZZZZZZ	10																						
15:37	ZZZZZZ	10																						
15:42	ZZZZZZ	10																						
15:47	MA46628-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:52	MA46628-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:57	ZZZZZZ	5																						
16:02	ZZZZZZ	5																						
16:07	MP14617-B1	1								X		X				X					X			X
16:12	ZZZZZZ	1																						
16:17	MP14617-S1	2											X											
16:22	MP14617-S2	2											X											
16:27	ZZZZZZ	1																						
16:32	ZZZZZZ	1																						
16:37	ZZZZZZ	1																						
16:42	MA46628-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:47	MA46628-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:53	MA46628-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:58	MA46628-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:03	ZZZZZZ	1																						
17:08	ZZZZZZ	1																						
17:14	ZZZZZZ	1																						
17:19	ZZZZZZ	1																						
17:24	ZZZZZZ	1																						
17:29	ZZZZZZ	1																						
17:35	ZZZZZZ	1																						
17:40	MA46628-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:45	MA46628-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:50	ZZZZZZ	1																						
17:55	ZZZZZZ	1																						
18:01	ZZZZZZ	1																						
18:06	ZZZZZZ	1																						
18:11	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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: / Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn
18:16	ZZZZZZ	1																						
18:21	MP14579-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:26	MP14579-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:31	MP14579-S1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:36	MA46628-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:41	MA46628-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:47	ZZZZZZ	1																						
18:52	ZZZZZZ	1																						
18:57	ZZZZZZ	1																						
19:02	ZZZZZZ	1																						
19:07	ZZZZZZ	1																						
19:13	ZZZZZZ	1																						
19:18	ZZZZZZ	1																						
19:23	ZZZZZZ	1																						
19:28	ZZZZZZ	1																						
19:33	ZZZZZZ	1																						
19:39	ZZZZZZ	1																						
19:44	ZZZZZZ	1																						
19:49	MA46628-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:54	MA46628-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:59	MP14579-S2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:04	ZZZZZZ	1																						
20:09	MP14579-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:14	JC86837-1	1	X	X		X	X	X	X	X				X		X	X			X		X	X
20:20	JC86837-2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:25	JC86837-3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:30	JC86837-4	1	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
20:35	JC86837-5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:40	JC86837-6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:45	MA46628-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:50	MA46628-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:55	JC86837-7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:00	JC86837-8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	
21:05	JC86837-9	1	X	X	X	X	X	X	X		X		X	X	X		X	X	X		X	X		X	
21:10	JC86837-10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:15	JC86837-11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:20	JC86837-12	1		X	X		X		X	X	X		X		X	X		X		X	X	X	X	X	
21:26	ZZZZZZ	1																							
21:31	ZZZZZZ	1																							
21:36	ZZZZZZ	1																							
21:42	MA46628-CCV9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:47	MA46628-CCB10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:52	MP14636-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
21:57	MP14636-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:02	MP14636-S1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:07	MP14636-S2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:12	JC86916-6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(a)
22:18	MP14636-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:23	ZZZZZZ	1																							
22:28	ZZZZZZ	1																							
22:33	ZZZZZZ	1																							
22:38	MA46628-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:43	MA46628-CCB11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
22:48	ZZZZZZ	1																							
22:53	ZZZZZZ	1																							
22:59	ZZZZZZ	1																							
23:04	ZZZZZZ	1																							
23:09	ZZZZZZ	1																							
23:14	ZZZZZZ	1																							
23:20	ZZZZZZ	1																							
23:25	ZZZZZZ	1																							
23:30	ZZZZZZ	1																							
23:35	ZZZZZZ	1																							
23:40	MA46628-CCV11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:45	MA46628-CCB12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
23:50	MP14600-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn	

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
23:55	ZZZZZZ	1																						
00:00	ZZZZZZ	1																						
00:05	ZZZZZZ	1																						
00:10	ZZZZZZ	1																						
00:16	ZZZZZZ	1																						
00:21	ZZZZZZ	1																						
00:26	ZZZZZZ	1																						
00:31	ZZZZZZ	1																						
00:36	ZZZZZZ	1																						
00:41	MA46628-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
00:46	MA46628-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
00:52	ZZZZZZ	1																						
00:57	ZZZZZZ	1																						
01:02	ZZZZZZ	1																						
01:07	ZZZZZZ	1																						
01:12	ZZZZZZ	1																						
01:18	ZZZZZZ	1																						
01:23	ZZZZZZ	1																						
01:28	ZZZZZZ	1																						
01:33	MA46628-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
01:38	MA46628-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
01:43	ZZZZZZ	1																						
01:48	ZZZZZZ	1																						
01:53	ZZZZZZ	1																						
01:58	ZZZZZZ	1																						
02:03	ZZZZZZ	1																						
02:09	MP14678-B1	1			X	X		X		X			X	X					X	X				
02:14	MP14678-MB1	1			X	X		X		X			X	X					X	X				
02:19	MP14678-S1	1			X	X		X		X			X	X					X	X				
02:24	MP14678-S2	1			X	X		X		X			X	X					X	X				
02:29	JC87038-2	1																						
02:34	MA46628-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
02:39	MA46628-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
02:44	MP14678-SD1	5			X	X		X		X			X	X					X	X				
02:49	ZZZZZZ	1																						
02:54	ZZZZZZ	1																						
02:59	ZZZZZZ	1																						
03:04	ZZZZZZ	1																						
03:09	ZZZZZZ	1																						
03:14	ZZZZZZ	1																						
03:19	ZZZZZZ	1																						
03:24	ZZZZZZ	1																						
03:29	ZZZZZZ	1																						
03:34	MA46628-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:39	MA46628-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:45	ZZZZZZ	1																						
03:50	ZZZZZZ	1																						
03:55	ZZZZZZ	1																						
04:00	ZZZZZZ	1																						
04:05	ZZZZZZ	1																						
04:10	ZZZZZZ	1																						
04:15	ZZZZZZ	1																						
04:20	ZZZZZZ	1																						
04:25	ZZZZZZ	1																						
04:30	ZZZZZZ	1																						
04:35	MA46628-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:40	MA46628-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:45	ZZZZZZ	1																						
04:50	ZZZZZZ	1																						
04:56	ZZZZZZ	1																						
05:01	ZZZZZZ	1																						
05:06	ZZZZZZ	1																						
05:11	ZZZZZZ	1																						
05:17	ZZZZZZ	1																						
05:22	ZZZZZZ	1																						
05:27	ZZZZZZ	1																						
		Element:	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	K	Se	Ag	Na	Tl	V	Zn

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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	
05:32	ZZZZZZ	1																							
05:38	MA46628-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
05:43	MA46628-CCB18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
05:48	ZZZZZZ	1																							
05:53	ZZZZZZ	1																							
05:58	ZZZZZZ	1																							
06:03	ZZZZZZ	1																							
06:09	ZZZZZZ	1																							
06:14	ZZZZZZ	1																							
06:19	MA46628-CCV18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
06:24	MA46628-CCB19	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
07:53	ZZZZZZ	5																							
07:58	ZZZZZZ	5																							
08:06	ZZZZZZ	5																							
08:11	MA46628-CCV19	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
08:15	MA46628-CCB20	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
08:25	JC86916-5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(a)
08:31	MA46628-CCV20	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
08:37	MA46628-CCB21	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
09:12	JC87038-2	1											X	X											(a)
09:17	MA46628-CCV21	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
09:26	MA46628-CCB22	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 JC86837.

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:20	MA46628-STD1	5967 R	147250 R	23863 R	9951 R
12:25	MA46628-STD2	5640	136600	24025	8965
12:30	ZZZZZZ	5682	138340	23796	9027
12:35	ZZZZZZ	6056	149740	24710	10055
12:41	MA46628-ICV1	5745	138610	23879	9108
12:46	MA46628-ICB1	6029	149200	24620	10023
12:54	MA46628-ICCV1	5686	137850	23741	9038
13:03	MA46628-CCB1	5910	145940	23974	9858
13:08	MA46628-CRI1	5874	145250	24337	9605
13:13	MA46628-CRID1	5926	145370	23900	9837
13:18	MA46628-ICSA1	5251	126400	22994	8263
13:23	MA46628-ICSAB1	5254	126540	23038	8295
13:28	MA46628-HSTD1	5754	142990	24347	9708
13:34	MA46628-HSTD2	5276	127350	22971	8218
13:40	ZZZZZZ	5803	144610	24119	9824
13:45	ZZZZZZ	5783	147420	24070	9924
13:50	ZZZZZZ	5959	146980	24310	9930
13:56	MA46628-CCV1	5614	136220	23525	8950
14:01	MA46628-CCB2	5863	145440	23815	9797
14:06	ZZZZZZ	6012	149420	24668	9967
14:11	MP14600-B1	5770	142340	24070	9242
14:16	MP14600-S1	5722	141060	25073	10003
14:21	MP14600-S2	5699	139340	24866	9892
14:26	JC86989-3	5817	140970	25034	10121
14:31	MP14600-SD1	5859	142070	23899	9645
14:37	ZZZZZZ	5916	143380	25126	9834
14:42	ZZZZZZ	5844	141230	24493	10044
14:47	ZZZZZZ	5858	142280	25094	10109
14:52	MA46628-CCV2	5630	137240	23325	8942
14:57	MA46628-CCB3	5897	145730	23459	9796
15:02	ZZZZZZ	5922	142790	24835	9852
15:07	MP14600-S1	5843	142390	23675	9501
15:12	MP14600-S2	5885	142650	23516	9528

INTERNAL STANDARD SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:17	JC86989-3	5874	144160	23584	9586
15:22	MP14600-SD1	5903	146620	23751	9689
15:27	ZZZZZZ	5893	144090	23651	9570
15:32	ZZZZZZ	5877	143420	23490	9592
15:37	ZZZZZZ	5848	143080	23568	9549
15:42	ZZZZZZ	5896	144520	23565	9613
15:47	MA46628-CCV3	5606	135700	22956	8874
15:52	MA46628-CCB4	5881	144960	23395	9744
15:57	ZZZZZZ	5873	142840	23707	9505
16:02	ZZZZZZ	5892	143480	23554	9553
16:07	MP14617-B1	5711	139300	23364	9092
16:12	ZZZZZZ	5958	147360	23544	9829
16:17	MP14617-S1	5940	144680	24647	9160
16:22	MP14617-S2	5951	144560	24179	9209
16:27	ZZZZZZ	6252	150610	25773	9238
16:32	ZZZZZZ	6030	145840	24482	9366
16:37	ZZZZZZ	6050	148550	24787	9579
16:42	MA46628-CCV4	5692	138110	23105	8944
16:47	MA46628-CCB5	5975	146680	23089	9858
16:53	MA46628-ICSA2	5219	124530	22412	8148
16:58	MA46628-ICSAB2	5166	124140	22222	8116
17:03	ZZZZZZ	6235	999999 !a	25680	9157
17:08	ZZZZZZ	5807	141190	23959	9550
17:14	ZZZZZZ	6206	149580	25535	9265
17:19	ZZZZZZ	6289	150710	26040	8988
17:24	ZZZZZZ	5992	143900	24606	9184
17:29	ZZZZZZ	5857	141920	24358	9065
17:35	ZZZZZZ	6330	151980	26215	9308
17:40	MA46628-CCV5	5609	136340	22917	8834
17:45	MA46628-CCB6	5910	146110	23410	9755
17:50	ZZZZZZ	6072	145650	24846	9187
17:55	ZZZZZZ	6135	147310	25031	9255
18:01	ZZZZZZ	6210	149320	25259	9214

INTERNAL STANDARD SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:06	ZZZZZZ	6207	148680	25329	9244
18:11	ZZZZZZ	6298	151280	25684	9186
18:16	ZZZZZZ	6235	152830	25905	9147
18:21	MP14579-B1	5691	139380	23294	9022
18:26	MP14579-MB1	5968	148030	23834	9805
18:31	MP14579-S1	5829	142260	24137	9002
18:36	MA46628-CCV6	5634	136610	23202	8852
18:41	MA46628-CCB7	5886	145460	23504	9692
18:47	ZZZZZZ	5913	145530	23365	9693
18:52	ZZZZZZ	5900	144950	23323	9665
18:57	ZZZZZZ	5878	145440	23461	9675
19:02	ZZZZZZ	5894	145170	23318	9673
19:07	ZZZZZZ	5885	145020	23435	9636
19:13	ZZZZZZ	5929	145900	23522	9683
19:18	ZZZZZZ	5858	144380	23213	9621
19:23	ZZZZZZ	5889	145020	23573	9757
19:28	ZZZZZZ	5739	129340	23507	8724
19:33	ZZZZZZ	5404	132240	22656	8419
19:39	ZZZZZZ	5936	146210	23394	9729
19:44	ZZZZZZ	5894	142880	23572	9677
19:49	MA46628-CCV7	5615	136580	22848	8803
19:54	MA46628-CCB8	5874	145220	23367	9649
19:59	MP14579-S2	5798	140580	23918	8951
20:04	ZZZZZZ	12987 !	303370 !	40145 !	20451 !
20:09	MP14579-SD1	5946	145600	23501	9539
20:14	JC86837-1	5818	142020	24061	9053
20:20	JC86837-2	6215	148620	25467	9102
20:25	JC86837-3	5954	145860	23932	9461
20:30	JC86837-4	5946	144580	23866	9361
20:35	JC86837-5	5950	144460	23931	9353
20:40	JC86837-6	6052	147720	24724	9194
20:45	MA46628-CCV8	5629	136570	22993	8823
20:50	MA46628-CCB9	5895	146640	23532	9672

INTERNAL STANDARD SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
20:55	JC86837-7	6068	147640	24524	9311
21:00	JC86837-8	6086	146400	24398	9349
21:05	JC86837-9	6009	999999 !a	24323	9368
21:10	JC86837-10	5870	142560	23908	9161
21:15	JC86837-11	6122	149490	24841	9278
21:20	JC86837-12	6027	145690	999999 !a	9322
21:26	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:31	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:36	ZZZZZZ	No results reported for the elements associated with this internal standard.			
21:42	MA46628-CCV9	5587	135410	22863	8726
21:47	MA46628-CCB10	5861	144270	23348	9590
21:52	MP14636-B1	5690	139400	23264	8959
21:57	MP14636-MB1	5948	147310	23908	9711
22:02	MP14636-S1	5816	141580	24247	8917
22:07	MP14636-S2	5854	142770	24146	8982
22:12	JC86916-6	6003	146330	24642	9200
22:18	MP14636-SD1	5893	144180	23470	9369
22:23	ZZZZZZ	6069	147650	24696	9046
22:28	ZZZZZZ	5933	143550	24318	9295
22:33	ZZZZZZ	6035	145920	25215	8856
22:38	MA46628-CCV10	5585	134690	22679	8712
22:43	MA46628-CCB11	5865	145240	23072	9579
22:48	ZZZZZZ	5960	146390	24234	9153
22:53	ZZZZZZ	6137	149590	25253	9158
22:59	ZZZZZZ	6144	999999 !a	25319	9153
23:04	ZZZZZZ	6280	149990	25578	9144
23:09	ZZZZZZ	5900	144080	24590	8953
23:14	ZZZZZZ	5980	144540	24421	8958
23:20	ZZZZZZ	6148	149410	24765	9238
23:25	ZZZZZZ	6027	144760	24274	9184
23:30	ZZZZZZ	5888	143920	23988	9368
23:35	ZZZZZZ	6031	146830	24577	9347
23:40	MA46628-CCV11	5622	136760	22987	8741

INTERNAL STANDARD SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
23:45	MA46628-CCB12	5905	146020	23343	9607
23:50	MP14600-MB1	5979	148030	23758	9675
23:55	ZZZZZZ	6177	151070	999999 !a	9533
00:00	ZZZZZZ	6131	149920	24300	9505
00:05	ZZZZZZ	6153	145080	24876	8954
00:10	ZZZZZZ	6007	144150	24316	9188
00:16	ZZZZZZ	6025	142400	24421	9106
00:21	ZZZZZZ	6138	147670	24660	9067
00:26	ZZZZZZ	6163	147230	25321	9060
00:31	ZZZZZZ	6225	150880	25510	9169
00:36	ZZZZZZ	6427	156270	26353	8941
00:41	MA46628-CCV12	5640	137100	22846	8729
00:46	MA46628-CCB13	5859	143720	22945	9504
00:52	ZZZZZZ	6245	149510	999999 !a	9149
00:57	ZZZZZZ	6053	146070	24906	8940
01:02	ZZZZZZ	6273	151380	25714	9110
01:07	ZZZZZZ	No results reported for the elements associated with this internal standard.			
01:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
01:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
01:23	ZZZZZZ	5884	146340	23665	9539
01:28	ZZZZZZ	5681	138430	22932	8866
01:33	MA46628-CCV13	5544	134290	22677	8593
01:38	MA46628-CCB14	5856	145800	23216	9494
01:43	ZZZZZZ	5858	143020	23579	9282
01:48	ZZZZZZ	5902	999999 !a	23657	9363
01:53	ZZZZZZ	6003	145980	24202	9178
01:58	ZZZZZZ	6016	146820	24245	9061
02:03	ZZZZZZ	5820	142180	23751	8964
02:09	MP14678-B1	5748	142850	23225	8936
02:14	MP14678-MB1	5985	148540	23957	9636
02:19	MP14678-S1	5716	138980	23253	8784
02:24	MP14678-S2	5785	139440	23228	8886
02:29	JC87038-2	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
02:34	MA46628-CCV14	5587	135980	22663	8629
02:39	MA46628-CCB15	5867	144860	22978	9484
02:44	MP14678-SD1	5890	144160	23157	9349
02:49	ZZZZZZ	5918	999999 !a	23691	9240
02:54	ZZZZZZ	6062	146830	24221	9160
02:59	ZZZZZZ	6055	147790	24086	9179
03:04	ZZZZZZ	6104	146270	23994	9314
03:09	ZZZZZZ	6065	145700	24098	9130
03:14	ZZZZZZ	6024	146270	24249	9186
03:19	ZZZZZZ	6029	147570	24134	9147
03:24	ZZZZZZ	6082	147340	24318	9175
03:29	ZZZZZZ	6049	147700	24465	9124
03:34	MA46628-CCV15	5603	135950	22610	8639
03:39	MA46628-CCB16	5851	144560	22935	9459
03:45	ZZZZZZ	6104	147750	24254	9126
03:50	ZZZZZZ	5951	144750	23710	9234
03:55	ZZZZZZ	5926	144310	23714	9227
04:00	ZZZZZZ	6050	145600	24007	9110
04:05	ZZZZZZ	6025	145640	24128	9213
04:10	ZZZZZZ	5944	142910	23835	9041
04:15	ZZZZZZ	6046	139820	23998	8991
04:20	ZZZZZZ	6124	147260	24560	9051
04:25	ZZZZZZ	5861	145980	23362	9438
04:30	ZZZZZZ	5670	138460	22927	8798
04:35	MA46628-CCV16	5615	135760	22591	8637
04:40	MA46628-CCB17	5868	144100	22905	9472
04:45	ZZZZZZ	5910	146190	23254	9495
04:50	ZZZZZZ	5434	132930	22377	8274
04:56	ZZZZZZ	5462	133220	22550	8314
05:01	ZZZZZZ	5483	133320	22673	8342
05:06	ZZZZZZ	5390	131710	22419	8190
05:11	ZZZZZZ	5111	124260	22014	7624
05:17	ZZZZZZ	5371	131470	22603	8150

INTERNAL STANDARD SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA46628
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
05:22	ZZZZZZ	5260	128650	22257	7935
05:27	ZZZZZZ	5787	141120	23259	9014
05:32	ZZZZZZ	5796	141100	23212	8898
05:38	MA46628-CCV17	5611	136150	22422	8647
05:43	MA46628-CCB18	5866	144920	23092	9473
05:48	ZZZZZZ	5612	138280	23210	8623
05:53	ZZZZZZ	5457	134520	22867	8355
05:58	ZZZZZZ	5881	146160	23192	9459
06:03	ZZZZZZ	4920	117990	21273	7313
06:09	ZZZZZZ	5079	123580	22199	7585
06:14	ZZZZZZ	5934	146830	23309	9534
06:19	MA46628-CCV18	5581	135890	22690	8611
06:24	MA46628-CCB19	5843	144900	22774	9437
07:53	ZZZZZZ	5723	139110	22075	8909
07:58	ZZZZZZ	5727	140050	22038	8939
08:06	ZZZZZZ	5880	146210	22842	9467
08:11	MA46628-CCV19	5525	134460	21831	8558
08:15	MA46628-CCB20	5760	141850	22064	9355
08:25	JC86916-5	5915	143180	23024	9194
08:31	MA46628-CCV20	5572	136490	22072	8607
08:37	MA46628-CCB21	5863	144390	22469	9476
09:12	JC87038-2	5904	142210	22499	9173
09:17	MA46628-CCV21	5576	134220	21678	8620
09:26	MA46628-CCB22	5813	143570	22224	9432

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46628 Units: ug/l

Time: / Sample ID:			12:46 ICB1		13:03 CCB1		14:01 CCB2		14:57 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	-3.10	<200	-5.70	<200	-2.10	<200	5.20	<200
Antimony	6.0	1.4	0.500	<6.0	-0.300	<6.0	1.10	<6.0	-0.200	<6.0
Arsenic	3.0	1.5	-0.400	<3.0	-0.200	<3.0	1.00	<3.0	-0.700	<3.0
Barium	200	.5	-0.400	<200	-0.200	<200	0.00	<200	0.00	<200
Beryllium	1.0	.1	0.00	<1.0	0.00	<1.0	0.00	<1.0	-0.100	<1.0
Bismuth	20	1.8								
Boron	100	.8								
Cadmium	3.0	.3	0.00	<3.0	0.100	<3.0	0.100	<3.0	-0.100	<3.0
Calcium	5000	3.9	-3.30	<5000	-0.500	<5000	-1.90	<5000	-6.30	<5000
Chromium	10	.3	-0.300	<10	-0.300	<10	-0.100	<10	-0.200	<10
Cobalt	50	.3	0.100	<50	0.100	<50	0.100	<50	0.00	<50
Copper	10	.6	0.400	<10	0.500	<10	0.500	<10	0.400	<10
Iron	100	2.6	1.40	<100	2.70	<100	1.30	<100	0.500	<100
Lead	3.0	1.6	0.100	<3.0	-0.400	<3.0	-0.100	<3.0	0.00	<3.0
Lithium	50	2.1								
Magnesium	5000	16	8.30	<5000	11.0	<5000	6.40	<5000	8.20	<5000
Manganese	15	.1	0.00	<15	0.100	<15	0.00	<15	0.00	<15
Molybdenum	20	.4								
Nickel	10	.5	0.00	<10	0.400	<10	-0.100	<10	0.300	<10
Phosphorus	50	1.9								
Potassium	10000	79	168	<10000	42.3	<10000	196	<10000	303	<10000
Selenium	10	3	-0.900	<10	0.100	<10	-1.60	<10	-1.60	<10
Silicon	200	1.2								
Silver	10	.5	0.00	<10	0.00	<10	0.200	<10	-0.200	<10
Sodium	10000	9.9	40.9	<10000	-2.70	<10000	38.1	<10000	23.7	<10000
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	0.600	<10	0.00	<10	-0.200	<10	-0.800	<10
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	0.200	<50	-0.300	<50	0.300	<50	-0.100	<50
Zinc	20	.2	-0.600	<20	-0.600	<20	-0.500	<20	-0.600	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46628 Units: ug/l

Time:			12:46		13:03		14:01		14:57	
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46628 Units: ug/l

Time: / Sample ID:			15:52 CCB4		16:47 CCB5		17:45 CCB6		18:41 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	1.30	<200	-17.7	<200	-6.10	<200	-2.10	<200
Antimony	6.0	1.4	0.600	<6.0	-0.800	<6.0	-0.400	<6.0	-0.100	<6.0
Arsenic	3.0	1.5	-0.500	<3.0	0.200	<3.0	-0.200	<3.0	0.200	<3.0
Barium	200	.5	0.100	<200	0.100	<200	0.00	<200	0.00	<200
Beryllium	1.0	.1	-0.100	<1.0	-0.100	<1.0	-0.200	<1.0	0.00	<1.0
Bismuth	20	1.8								
Boron	100	.8								
Cadmium	3.0	.3	-0.100	<3.0	0.00	<3.0	0.00	<3.0	0.100	<3.0
Calcium	5000	3.9	-4.10	<5000	-7.10	<5000	-6.00	<5000	-6.40	<5000
Chromium	10	.3	-0.300	<10	-0.200	<10	0.00	<10	0.00	<10
Cobalt	50	.3	0.00	<50	0.00	<50	-0.200	<50	0.00	<50
Copper	10	.6	0.400	<10	-0.100	<10	0.300	<10	0.200	<10
Iron	100	2.6	-0.100	<100	1.10	<100	1.20	<100	0.900	<100
Lead	3.0	1.6	0.100	<3.0	-0.700	<3.0	0.200	<3.0	-0.500	<3.0
Lithium	50	2.1								
Magnesium	5000	16	20.6	<5000	13.8	<5000	12.5	<5000	14.5	<5000
Manganese	15	.1	0.00	<15	0.00	<15	0.00	<15	0.100	<15
Molybdenum	20	.4								
Nickel	10	.5	0.00	<10	-0.100	<10	0.100	<10	-0.100	<10
Phosphorus	50	1.9								
Potassium	10000	79	125	<10000	297	<10000	192	<10000	245	<10000
Selenium	10	3	0.300	<10	0.400	<10	0.300	<10	-1.10	<10
Silicon	200	1.2								
Silver	10	.5	0.200	<10	-0.400	<10	0.00	<10	-0.100	<10
Sodium	10000	9.9	-20.7	<10000	9.40	<10000	2.70	<10000	8.50	<10000
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	-0.700	<10	0.200	<10	0.500	<10	-0.100	<10
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	0.100	<50	-0.100	<50	-0.200	<50	0.00	<50
Zinc	20	.2	-0.600	<20	-0.500	<20	-0.600	<20	-0.500	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46628 Units: ug/l

Time: / Sample ID:			15:52 CCB4		16:47 CCB5		17:45 CCB6		18:41 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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46628 Units: ug/l

Time:			19:54		20:50		21:47	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	14	-2.60	<200	-5.00	<200	-7.20	<200
Antimony	6.0	1.4	-0.600	<6.0	0.200	<6.0	0.100	<6.0
Arsenic	3.0	1.5	0.200	<3.0	0.200	<3.0	-0.800	<3.0
Barium	200	.5	0.100	<200	-0.200	<200	-0.100	<200
Beryllium	1.0	.1	-0.100	<1.0	-0.100	<1.0	-0.100	<1.0
Bismuth	20	1.8						
Boron	100	.8						
Cadmium	3.0	.3	0.00	<3.0	-0.100	<3.0	0.100	<3.0
Calcium	5000	3.9	-6.10	<5000	-6.30	<5000	-5.60	<5000
Chromium	10	.3	-0.200	<10	-0.100	<10	0.00	<10
Cobalt	50	.3	-0.100	<50	-0.200	<50	0.100	<50
Copper	10	.6	0.300	<10	0.00	<10	0.400	<10
Iron	100	2.6	0.800	<100	1.20	<100	2.00	<100
Lead	3.0	1.6	-0.600	<3.0	0.200	<3.0	0.600	<3.0
Lithium	50	2.1						
Magnesium	5000	16	13.5	<5000	1.70	<5000	19.2	<5000
Manganese	15	.1	0.00	<15	0.100	<15	0.100	<15
Molybdenum	20	.4						
Nickel	10	.5	0.100	<10	0.00	<10	0.200	<10
Phosphorus	50	1.9						
Potassium	10000	79	183	<10000	230	<10000	243	<10000
Selenium	10	3	-1.10	<10	-0.400	<10	-0.900	<10
Silicon	200	1.2						
Silver	10	.5	0.200	<10	-0.100	<10	0.100	<10
Sodium	10000	9.9	-1.10	<10000	5.80	<10000	-1.20	<10000
Strontium	10	.3						
Sulfur	50	3.5						
Thallium	10	1.3	-1.10	<10	-0.400	<10	-0.300	<10
Tin	10	.7						
Titanium	10	.5						
Tungsten	50	1.7						
Vanadium	50	.5	-0.300	<50	0.00	<50	0.200	<50
Zinc	20	.2	-0.700	<20	-0.700	<20	-0.600	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA46628 Units: ug/l

Time:			19:54		20:50		21:47	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.3						

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46628 Units: ug/l

Time:		12:54	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	40400	101.0
Antimony	2000	1990	99.5
Arsenic	2000	1980	99.0
Barium	2000	2030	101.5
Beryllium	2000	2080	104.0
Bismuth			
Boron			
Cadmium	2000	2020	101.0
Calcium	40000	40800	102.0
Chromium	2000	2030	101.5
Cobalt	2000	2040	102.0
Copper	2000	2010	100.5
Iron	40000	40700	101.8
Lead	2000	2040	102.0
Lithium			
Magnesium	40000	40800	102.0
Manganese	2000	2030	101.5
Molybdenum			
Nickel	2000	2040	102.0
Phosphorus			
Potassium	40000	40300	100.8
Selenium	2000	2010	100.5
Silicon			
Silver	250	253	101.2
Sodium	40000	40700	101.8
Strontium			
Sulfur			
Thallium	2000	2090	104.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	2020	101.0
Zinc	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA46628 Units: ug/l

Time:		12:54	
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		12:41			13:56			14:52	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40100	100.3	40000	41000	102.5	40000	41000	102.5
Antimony	2000	1970	98.5	2000	2020	101.0	2000	2040	102.0
Arsenic	2000	1960	98.0	2000	2010	100.5	2000	2030	101.5
Barium	2000	2000	100.0	2000	2040	102.0	2000	2070	103.5
Beryllium	2000	2070	103.5	2000	2100	105.0	2000	2100	105.0
Bismuth									
Boron									
Cadmium	2000	2000	100.0	2000	2040	102.0	2000	2060	103.0
Calcium	40000	40400	101.0	40000	41100	102.8	40000	41200	103.0
Chromium	2000	2020	101.0	2000	2050	102.5	2000	2070	103.5
Cobalt	2000	2020	101.0	2000	2060	103.0	2000	2090	104.5
Copper	2000	2000	100.0	2000	2030	101.5	2000	2060	103.0
Iron	40000	40500	101.3	40000	41000	102.5	40000	41400	103.5
Lead	2000	2020	101.0	2000	2060	103.0	2000	2080	104.0
Lithium									
Magnesium	40000	40400	101.0	40000	41000	102.5	40000	41100	102.8
Manganese	2000	2040	102.0	2000	2070	103.5	2000	2080	104.0
Molybdenum									
Nickel	2000	2020	101.0	2000	2060	103.0	2000	2090	104.5
Phosphorus									
Potassium	40000	40200	100.5	40000	41100	102.8	40000	41400	103.5
Selenium	2000	1990	99.5	2000	2040	102.0	2000	2060	103.0
Silicon									
Silver	250	251	100.4	250	255	102.0	250	257	102.8
Sodium	40000	40300	100.8	40000	41100	102.8	40000	41300	103.3
Strontium									
Sulfur									
Thallium	2000	2050	102.5	2000	2120	106.0	2000	2130	106.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2000	100.0	2000	2040	102.0	2000	2050	102.5
Zinc	2000	2020	101.0	2000	2070	103.5	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		12:41			13:56			14:52	
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		15:47			16:42			17:40	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41100	102.8	40000	40300	100.8	40000	40600	101.5
Antimony	2000	2040	102.0	2000	2020	101.0	2000	2040	102.0
Arsenic	2000	2040	102.0	2000	2020	101.0	2000	2030	101.5
Barium	2000	2070	103.5	2000	2050	102.5	2000	2050	102.5
Beryllium	2000	2110	105.5	2000	2080	104.0	2000	2100	105.0
Bismuth									
Boron									
Cadmium	2000	2070	103.5	2000	2030	101.5	2000	2060	103.0
Calcium	40000	41400	103.5	40000	40800	102.0	40000	41000	102.5
Chromium	2000	2080	104.0	2000	2060	103.0	2000	2070	103.5
Cobalt	2000	2090	104.5	2000	2070	103.5	2000	2090	104.5
Copper	2000	2070	103.5	2000	2050	102.5	2000	2070	103.5
Iron	40000	41700	104.3	40000	41200	103.0	40000	41600	104.0
Lead	2000	2090	104.5	2000	2080	104.0	2000	2090	104.5
Lithium									
Magnesium	40000	41200	103.0	40000	40700	101.8	40000	40900	102.3
Manganese	2000	2090	104.5	2000	2050	102.5	2000	2060	103.0
Molybdenum									
Nickel	2000	2100	105.0	2000	2090	104.5	2000	2110	105.5
Phosphorus									
Potassium	40000	41600	104.0	40000	40800	102.0	40000	40900	102.3
Selenium	2000	2070	103.5	2000	2050	102.5	2000	2070	103.5
Silicon									
Silver	250	259	103.6	250	257	102.8	250	258	103.2
Sodium	40000	41500	103.8	40000	41000	102.5	40000	41200	103.0
Strontium									
Sulfur									
Thallium	2000	2130	106.5	2000	2090	104.5	2000	2100	105.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2060	103.0	2000	2030	101.5	2000	2040	102.0
Zinc	2000	2090	104.5	2000	2050	102.5	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		15:47			16:42			17:40	
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		18:36			19:49			20:45	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40200	100.5	40000	40600	101.5	40000	40400	101.0
Antimony	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Arsenic	2000	2030	101.5	2000	2030	101.5	2000	2020	101.0
Barium	2000	2030	101.5	2000	2060	103.0	2000	2050	102.5
Beryllium	2000	2080	104.0	2000	2110	105.5	2000	2110	105.5
Bismuth									
Boron									
Cadmium	2000	2050	102.5	2000	2050	102.5	2000	2040	102.0
Calcium	40000	40700	101.8	40000	41200	103.0	40000	41100	102.8
Chromium	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Cobalt	2000	2080	104.0	2000	2090	104.5	2000	2080	104.0
Copper	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0
Iron	40000	41200	103.0	40000	42000	105.0	40000	41800	104.5
Lead	2000	2090	104.5	2000	2090	104.5	2000	2080	104.0
Lithium									
Magnesium	40000	40500	101.3	40000	41000	102.5	40000	40800	102.0
Manganese	2000	2060	103.0	2000	2060	103.0	2000	2070	103.5
Molybdenum									
Nickel	2000	2100	105.0	2000	2110	105.5	2000	2100	105.0
Phosphorus									
Potassium	40000	40500	101.3	40000	41000	102.5	40000	40800	102.0
Selenium	2000	2070	103.5	2000	2080	104.0	2000	2070	103.5
Silicon									
Silver	250	258	103.2	250	259	103.6	250	258	103.2
Sodium	40000	40600	101.5	40000	41300	103.3	40000	41000	102.5
Strontium									
Sulfur									
Thallium	2000	2100	105.0	2000	2090	104.5	2000	2090	104.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2040	102.0	2000	2030	101.5	2000	2030	101.5
Zinc	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		18:36			19:49			20:45	
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		21:42	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Aluminum	40000	40900	102.3
Antimony	2000	2050	102.5
Arsenic	2000	2050	102.5
Barium	2000	2080	104.0
Beryllium	2000	2140	107.0
Bismuth			
Boron			
Cadmium	2000	2060	103.0
Calcium	40000	41500	103.8
Chromium	2000	2100	105.0
Cobalt	2000	2110	105.5
Copper	2000	2110	105.5
Iron	40000	42400	106.0
Lead	2000	2110	105.5
Lithium			
Magnesium	40000	41100	102.8
Manganese	2000	2090	104.5
Molybdenum			
Nickel	2000	2130	106.5
Phosphorus			
Potassium	40000	41200	103.0
Selenium	2000	2100	105.0
Silicon			
Silver	250	262	104.8
Sodium	40000	41500	103.8
Strontium			
Sulfur			
Thallium	2000	2100	105.0
Tin			
Titanium			
Tungsten			
Vanadium	2000	2050	102.5
Zinc	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA46628 Units: ug/l

Time:		21:42	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46628 Units: ug/l

Time:		13:28			13:34	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				300000	322000	107.3
Antimony	8000	8310	103.9			
Arsenic	8000	8150	101.9			
Barium	8000	8100	101.3			
Beryllium	8000	8100	101.3			
Bismuth						
Boron						
Cadmium	8000	8060	100.8			
Calcium				200000	204000	102.0
Chromium	8000	8290	103.6			
Cobalt	8000	8100	101.3			
Copper	8000	8070	100.9			
Iron				200000	203000	101.5
Lead	8000	8250	103.1			
Lithium						
Magnesium				300000	311000	103.7
Manganese	8000	8060	100.8			
Molybdenum						
Nickel	8000	8100	101.3			
Phosphorus						
Potassium				200000	207000	103.5
Selenium	8000	8140	101.8			
Silicon						
Silver	625	634	101.4			
Sodium				200000	199000	99.5
Strontium						
Sulfur						
Thallium	8000	8260	103.3			
Tin						
Titanium						
Tungsten						
Vanadium	8000	8080	101.0			
Zinc	8000	8350	104.4			

HIGH STANDARD CHECK SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA46628 Units: ug/l

Time:		13:28			13:34	
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46628 Units: ug/l

Time:				13:08		13:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	210	105.0	96.2	96.2
Antimony	6.0	20	3.0	6.80	113.3		
Arsenic	8.0	20	3.0	7.50	93.8	2.50	83.3
Barium	200		4.0	206	103.0	3.80	95.0
Beryllium	2.0		1.0	2.00	100.0	0.900	90.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	3.10	103.3	1.00	100.0
Calcium	5000	2000	1000	5250	105.0	1060	106.0
Chromium	10		2.0	10.6	106.0	2.00	100.0
Cobalt	50		3.0	52.7	105.4	3.10	103.3
Copper	10		2.0	10.1	101.0		
Iron	100	500		107	107.0		
Lead	3.0	20	2.5	3.20	106.7		
Lithium	50						
Magnesium	5000	2000	100	5400	108.0		
Manganese	15		3.0	16.2	108.0	3.20	106.7
Molybdenum	20						
Nickel	10		4.0	10.6	106.0	4.30	107.5
Phosphorus	50						
Potassium	5000		2000	5280	105.6	2060	103.0
Selenium	10	20	5.0	11.2	112.0		
Silicon	200						
Silver	5.0		2.0	4.70	94.0		
Sodium	5000		1000	5360	107.2	1060	106.0
Strontium	10						
Sulfur	50						
Thallium	10		2.0	10.4	104.0		
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	52.2	104.4	2.10	105.0
Zinc	20		10	20.8	104.0	10.1	101.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA46628 Units: ug/l

Time:				13:08		13:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46628 Units: ug/l

Time:			13:18		13:23		16:53		16:58	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	512000	102.4	508000	101.6	511000	102.2	519000	103.8
Antimony		1000	0.700		1090	109.0	-1.00		1110	111.0
Arsenic		1000	-0.200		1080	108.0	0.700		1100	110.0
Barium		500	0.600		525	105.0	0.400		531	106.2
Beryllium		500	0.00		519	103.8	0.00		524	104.8
Bismuth		500	0.300		515	103.0	-1.10		529	105.8
Boron		500	-2.20		495	99.0	-2.30		505	101.0
Cadmium		1000	0.300		1040	104.0	0.100		1060	106.0
Calcium	400000	400000	390000	97.5	385000	96.3	386000	96.5	390000	97.5
Chromium		500	-1.00		501	100.2	-1.20		511	102.2
Cobalt		500	0.900		502	100.4	0.800		510	102.0
Copper		500	-8.20		510	102.0	-7.10		523	104.6
Iron	200000	200000	190000	95.0	198000	99.0	196000	98.0	204000	102.0
Lead		1000	-0.200		972	97.2	-0.700		989	98.9
Lithium		500	-7.00		547	109.4	-13.3		538	107.6
Magnesium	500000	500000	501000	100.2	509000	101.8	501000	100.2	512000	102.4
Manganese		500	3.40		524	104.8	3.40		528	105.6
Molybdenum		500	0.300		490	98.0	0.200		495	99.0
Nickel		1000	-0.100		994	99.4	-0.200		1010	101.0
Phosphorus		500	17.0		570	114.0	29.4		473	94.6
Potassium			373		310		488		433	
Selenium		1000	-1.90		1080	108.0	-2.00		1090	109.0
Silicon		500	6.10		510	102.0	1.00		520	104.0
Silver		1000	3.40		1090	109.0	1.90		1110	111.0
Sodium			133		131		66.0		67.1	
Strontium		500	-0.400		533	106.6	-0.100		547	109.4
Sulfur		500	-8.50		513	102.6	-4.70		508	101.6
Thallium		1000	-1.30		994	99.4	-1.70		985	98.5
Tin		500	-2.10		482	96.4	-3.30		483	96.6
Titanium		500	-1.60		507	101.4	-1.90		514	102.8
Tungsten		500	2.50		479	95.8	0.600		490	98.0
Vanadium		500	-3.50		507	101.4	-3.20		512	102.4
Zinc		1000	-1.70		986	98.6	-1.40		998	99.8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC050119M1.ICP Date Analyzed: 05/01/19 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA46628 Units: ug/l

Time:			13:18		13:23		16:53		16:58	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	0.900		494	98.8	1.00		501	100.2

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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	JC86837-1	2		
14:24	JC86837-4	5		
14:29	MA46638-CCV3	1		
14:34	MA46638-CCB3	1		
14:39	JC86837-9	1		
14:44	JC86837-12	1		

----------> Last reportable sample/prep for job JC86837

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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		
---------->	Last reportable CCB for job JC86837			
17:29	ZZZZZZ	1		
17:34	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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 JC86837)
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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:19	JC87093-7	1		(sample used for QC only; not part of login JC86837)
23:24	MP14721-SD1	5		
23:29	ZZZZZZ	1		
23:34	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:44	ZZZZZZ	1		
23:50	MA46638-CCV13	1		
23:55	MA46638-CCB13	1		
00:00	ZZZZZZ	1		
00:05	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:15	ZZZZZZ	1		
00:21	ZZZZZZ	1		
00:26	ZZZZZZ	1		
00:31	ZZZZZZ	1		
00:36	ZZZZZZ	1		
00:41	ZZZZZZ	1		
00:46	MA46638-CCV14	1		
00:51	MA46638-CCB14	1		
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 JC86837)
02:02	MP14726-SD1	25		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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 JC86837)
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 JC86837)
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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V
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
12:23	MA46638-ICB1	1	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
12:33	MA46638-CCB1	1	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
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
13:05	MA46638-ICSAB1	1	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
13:16	MA46638-HSTD2	1	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
13:37	MA46638-CCB2	1	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
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	JC86837-1	2			X					X	X	X		X		X	X	X	
14:24	JC86837-4	5											X						
14:29	MA46638-CCV3	1	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
14:39	JC86837-9	1								X	X			X			X		X
14:44	JC86837-12	1	X			X	X	X			X		X		X		X		
14:49	ZZZZZZ	2																	
14:54	ZZZZZZ	3																	
		Element:	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V
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
15:31	MA46638-CCB4	1	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
16:28	MA46638-CCB5	1	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
16:53	MA46638-ICSAB2	1	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
17:14	MP14667-B2	1	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
17:24	MA46638-CCB6	1	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	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V
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
18:22	MA46638-CCB7	1	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
19:18	MA46638-CCB8	1	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
20:31	MA46638-CCB9	1	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	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V	
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	
21:11	MA46638-CCB10	1	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	
22:13	MA46638-CCB11	1	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	
22:54	MA46638-CCB12	1	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	
23:04	MP14721-B1	1	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	
23:14	MP14721-S2	1	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	(a)
23:24	MP14721-SD1	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		Element:	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V	

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V	
23:29	ZZZZZZ	1																		
23:34	ZZZZZZ	1																		
23:39	ZZZZZZ	1																		
23:44	ZZZZZZ	1																		
23:50	MA46638-CCV13	1	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	
00:00	ZZZZZZ	1																		
00:05	ZZZZZZ	1																		
00:10	ZZZZZZ	1																		
00:15	ZZZZZZ	1																		
00:21	ZZZZZZ	1																		
00:26	ZZZZZZ	1																		
00:31	ZZZZZZ	1																		
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	
00:51	MA46638-CCB14	1	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			
01:32	MP14726-B1	5			X	X			X			X				X	X			
01:37	MP14726-S1	5			X	X			X			X				X	X			
01:42	MP14726-S2	5			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	
01:52	MA46638-CCB15	1	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			(a)
02:02	MP14726-SD1	25			X	X			X			X				X	X			
02:07	MP14724-MB1	1		X					X		X			X				X	X	
02:12	MP14724-B1	1		X					X		X			X				X	X	
		Element:	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V	

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Element: Dilution	Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V	
02:17	MP14724-S1	1		X					X		X			X				X	X	
02:22	MP14724-S2	1		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	
02:38	MP14724-S3	1		X					X		X			X				X	X	
02:43	MP14724-S4	1		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	
02:54	MA46638-CCB16	1	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	
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	
03:51	MA46638-CCB17	1	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	
04:52	MA46638-CCB18	1	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	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V	

REPORTED ELEMENTS SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

Time	Sample Description	Dilution	Element: Al	Sb	As	Ba	Be	Ca	Cr	Cu	Fe	Pb	Mg	Mn	K	Se	Ag	Tl	V
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
05:54	MA46638-CCB19	1	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
06:45	MA46638-CCB20	1	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
08:24	MA46638-CCB21	1	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 JC86837.

Element: Al Sb As Ba Be Ca Cr Cu Fe Pb Mg Mn K Se Ag Tl V

INTERNAL STANDARD SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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	JC86837-1	6385	156010	25075	9497
14:24	JC86837-4	6550	160000	24842	9953
14:29	MA46638-CCV3	6174	149100	24042	9140
14:34	MA46638-CCB3	6444	158090	24278	10011
14:39	JC86837-9	6570	159780	25136	9710
14:44	JC86837-12	6720	160200	25710	9835

INTERNAL STANDARD SUMMARY

Login Number: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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	ZZZZZZ	6545	159920	25860	9747
23:34	ZZZZZZ	6665	163160	26339	9638
23:39	ZZZZZZ	6461	999999 !a	25138	9783
23:44	ZZZZZZ	6720	162830	26523	9574
23:50	MA46638-CCV13	6185	151070	23968	9277
23:55	MA46638-CCB13	6433	162260	24139	10110
00:00	ZZZZZZ	6667	161800	26076	9615
00:05	ZZZZZZ	6157	156650	24931	9445
00:10	ZZZZZZ	6344	155440	24924	9875
00:15	ZZZZZZ	6770	162250	26335	9472
00:21	ZZZZZZ	7008	170870	27674	9494
00:26	ZZZZZZ	6468	162990	25357	9625
00:31	ZZZZZZ	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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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,Ca,Cr,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Tl,V

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: JC86837
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: / Sample ID:			12:23 ICB1		12:33 CCB1		13:37 CCB2		14:34 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	anr							
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	anr							
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	anr							
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	anr							
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	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
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: JC86837
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	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	14	-4.50	<200	1.30	<200	4.30	<200
Antimony	6.0	1.4	-1.80	<6.0	0.700	<6.0	-0.600	<6.0
Arsenic	3.0	1.5	0.600	<3.0	1.20	<3.0	1.20	<3.0
Barium	200	.5	0.100	<200	0.100	<200	0.600	<200
Beryllium	1.0	.1	0.100	<1.0	0.200	<1.0	0.400	<1.0
Bismuth	20	1.8						
Boron	100	.8						
Cadmium	3.0	.3	anr					
Calcium	5000	3.9	-0.300	<5000	1.20	<5000	6.10	<5000
Chromium	10	.3	0.100	<10	0.500	<10	0.400	<10
Cobalt	50	.3	anr					
Copper	10	.6	0.200	<10	0.500	<10	0.300	<10
Iron	100	2.6	1.20	<100	4.90	<100	6.90	<100
Lead	3.0	1.6	0.700	<3.0	0.700	<3.0	0.600	<3.0
Lithium	50	2.1						
Magnesium	5000	16	8.10	<5000	4.50	<5000	1.80	<5000
Manganese	15	.1	0.100	<15	0.300	<15	0.500	<15
Molybdenum	20	.4						
Nickel	10	.5	anr					
Phosphorus	50	1.9						
Potassium	10000	79	-110	<10000	-30.4	<10000	36.3	<10000
Selenium	10	3	-1.70	<10	-0.500	<10	-0.900	<10
Silicon	200	1.2						
Silver	10	.5	-0.200	<10	-0.100	<10	-0.300	<10
Sodium	10000	9.9	anr					
Strontium	10	.3						
Sulfur	50	3.5						
Thallium	10	1.3	0.900	<10	1.00	<10	-0.100	<10
Tin	10	.7						
Titanium	10	.5						
Tungsten	50	1.7						
Vanadium	50	.5	0.300	<50	0.500	<50	1.00	<50
Zinc	20	.2	anr					

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC86837
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	
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
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	anr								
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	anr								
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	anr								
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	anr								
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	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
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: JC86837
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	anr								
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	anr								
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	anr								
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	anr								
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	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
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: JC86837
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	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Aluminum	40000	40100	100.3
Antimony	2000	2020	101.0
Arsenic	2000	2020	101.0
Barium	2000	2050	102.5
Beryllium	2000	2100	105.0
Bismuth			
Boron			
Cadmium	anr		
Calcium	40000	39800	99.5
Chromium	2000	2040	102.0
Cobalt	anr		
Copper	2000	2040	102.0
Iron	40000	40900	102.3
Lead	2000	2060	103.0
Lithium			
Magnesium	40000	40200	100.5
Manganese	2000	2040	102.0
Molybdenum			
Nickel	anr		
Phosphorus			
Potassium	40000	40200	100.5
Selenium	2000	2040	102.0
Silicon			
Silver	250	249	99.6
Sodium	anr		
Strontium			
Sulfur			
Thallium	2000	2110	105.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	2000	100.0
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC86837
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	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC86837
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	anr					
Calcium				200000	197000	98.5
Chromium	8000	8150	101.9			
Cobalt	anr					
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	anr					
Phosphorus						
Potassium				200000	198000	99.0
Selenium	8000	8070	100.9			
Silicon						
Silver	625	621	99.4			
Sodium						
Strontium						
Sulfur						
Thallium	8000	8350	104.4			
Tin						
Titanium						
Tungsten						
Vanadium	8000	7860	98.3			
Zinc	anr					

HIGH STANDARD CHECK SUMMARY

Login Number: JC86837
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: JC86837
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	anr			
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	anr			
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	anr			
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	anr			
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	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC86837
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: JC86837
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: JC86837
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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14565 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/25/19

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0033	.015	-0.0029	<0.033

Associated samples MP14565: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14565 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/25/19

Metal	JC86837-10 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.44	0.74	0.34	88.3	80-120

Associated samples MP14565: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14565 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/25/19

Metal	JC86837-10 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.44	0.62	0.333	54.1N(a)	17.6	20

Associated samples MP14565: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14565
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 04/25/19

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.30	0.333	90.0	80-120

Associated samples MP14565: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/26/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	49	1.4	7.9	3.8	<49
Antimony	2.0	.14	.4	0.0098	<2.0
Arsenic	2.0	.15	.27	0.029	<2.0
Barium	20	.049	1.9	0.0098	<20
Beryllium	0.20	.0098	.078	0.0098	<0.20
Bismuth	2.0	.18	.51		
Boron	9.8	.078	1.4		
Cadmium	0.49	.029	.069	0.020	<0.49
Calcium	490	.38	43	7.7	<490
Chromium	0.98	.029	.36	0.17	<0.98
Cobalt	4.9	.029	.27	0.020	<4.9
Copper	2.5	.059	.82	0.12	<2.5
Iron	49	.25	19	8.5	<49
Lead	2.0	.16	.4	0.029	<2.0
Lithium	4.9	.21	.9		
Magnesium	490	1.6	13	4.4	<490
Manganese	1.5	.0098	.4	0.13	<1.5
Molybdenum	2.0	.039	.31		
Nickel	3.9	.049	.34	0.15	<3.9
Phosphorus	20	.19	3.2		
Potassium	980	7.7	31	18.3	<980
Selenium	2.0	.29	.64	0.0098	<2.0
Silicon	20	.12	10		
Silver	0.49	.049	.17	0.020	<0.49
Sodium	980	.97	76	9.3	<980
Strontium	4.9	.029	.18		
Sulfur	9.8	.34	9.2		
Thallium	0.98	.13	.57	-0.0098	<0.98
Tin	20	.069	3.7		
Titanium	0.98	.049	.33		
Tungsten	4.9	.17	1.7		
Vanadium	4.9	.049	.19	0.029	<4.9
Zinc	4.9	.02	2.3	0.87	<4.9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/26/19

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.029	.23		

Associated samples MP14579: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/26/19

Metal	JC86916-5 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	5780	10000	2990	141.3N(a	75-125
Antimony	2.3	174	239	71.9N(a)	75-125
Arsenic	105	316	239	88.3	75-125
Barium	249	313	239	26.8N(a)	75-125
Beryllium	0.59	252	239	105.2	75-125
Bismuth					
Boron					
Cadmium	2.7	244	239	101.0	75-125
Calcium	2650	4590	2990	65.0N(a)	75-125
Chromium	15.2	260	239	102.5	75-125
Cobalt	5.6	256	239	104.8	75-125
Copper	134	367	239	97.5	75-125
Iron	17200	17500	2990	10.0 (b)	75-125
Lead	329	538	239	87.5	75-125
Lithium					
Magnesium	1100	4070	2990	99.4	75-125
Manganese	229	444	239	90.0	75-125
Molybdenum					
Nickel	18.7	269	239	104.8	75-125
Phosphorus					
Potassium	651	3900	2990	108.8	75-125
Selenium	0.66	241	239	100.6	75-125
Silicon					
Silver	0.0	30.9	29.9	103.5	75-125
Sodium	72.3	3100	2990	101.4	75-125
Strontium					
Sulfur					
Thallium	0.0	251	239	105.1	75-125
Tin					
Titanium					
Tungsten					
Vanadium	19.5	261	239	101.1	75-125
Zinc	774	472	239	-126.4Na	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/26/19

Metal	JC86916-5 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP14579: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/26/19

Metal	JC86916-5 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	5780	10700	2990	164.7N(a	6.8	20
Antimony	2.3	163	239	67.3N(a)	6.5	20
Arsenic	105	315	239	87.9	0.3	20
Barium	249	317	239	28.5N(a)	1.3	20
Beryllium	0.59	250	239	104.4	0.8	20
Bismuth						
Boron						
Cadmium	2.7	241	239	99.7	1.2	20
Calcium	2650	4970	2990	77.7	7.9	20
Chromium	15.2	259	239	102.0	0.4	20
Cobalt	5.6	253	239	103.6	1.2	20
Copper	134	380	239	103.0	3.5	20
Iron	17200	15500	2990	-56.9(b)	12.1	20
Lead	329	537	239	87.1	0.2	20
Lithium						
Magnesium	1100	4180	2990	103.1	2.7	20
Manganese	229	456	239	95.0	2.7	20
Molybdenum						
Nickel	18.7	268	239	104.3	0.4	20
Phosphorus						
Potassium	651	3930	2990	109.8	0.8	20
Selenium	0.66	239	239	99.8	0.8	20
Silicon						
Silver	0.0	30.7	29.9	102.8	0.6	20
Sodium	72.3	3070	2990	100.4	1.0	20
Strontium						
Sulfur						
Thallium	0.0	246	239	103.0	2.0	20
Tin						
Titanium						
Tungsten						
Vanadium	19.5	258	239	99.8	1.2	20
Zinc	774	512	239	-109.7Na	8.1	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 04/26/19

Metal	JC86916-5 Original	Spikelot MSD MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP14579: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/26/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2420	2380	101.6	80-120
Antimony	192	190	100.8	80-120
Arsenic	192	190	100.8	80-120
Barium	198	190	104.0	80-120
Beryllium	204	190	107.1	80-120
Bismuth				
Boron				
Cadmium	198	190	104.0	80-120
Calcium	2460	2380	103.3	80-120
Chromium	200	190	105.0	80-120
Cobalt	201	190	105.5	80-120
Copper	201	190	105.5	80-120
Iron	2490	2380	104.6	80-120
Lead	202	190	106.1	80-120
Lithium				
Magnesium	2440	2380	102.5	80-120
Manganese	200	190	105.0	80-120
Molybdenum				
Nickel	203	190	106.6	80-120
Phosphorus				
Potassium	2440	2380	102.5	80-120
Selenium	197	190	103.4	80-120
Silicon				
Silver	24.9	23.8	104.6	80-120
Sodium	2460	2380	103.3	80-120
Strontium				
Sulfur				
Thallium	206	190	108.2	80-120
Tin				
Titanium				
Tungsten				
Vanadium	194	190	101.9	80-120
Zinc	201	190	105.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 04/26/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP14579: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 04/26/19

Metal	JC86916-5 Original	SDL 1:5	%DIF	QC Limits
Aluminum	48400	48500	0.2	0-10
Antimony	19.0	20.2	6.3	0-10
Arsenic	883	874	1.0	0-10
Barium	2080	2070	0.8	0-10
Beryllium	4.90	5.30	8.2	0-10
Bismuth				
Boron				
Cadmium	22.3	23.5	5.4	0-10
Calcium	22200	22900	2.9	0-10
Chromium	127	129	1.5	0-10
Cobalt	47.2	47.2	0.0	0-10
Copper	1120	1070	4.6	0-10
Iron	144000	153000	6.2	0-10
Lead	2750	2770	0.6	0-10
Lithium				
Magnesium	9210	9870	7.2	0-10
Manganese	1920	1980	3.3	0-10
Molybdenum				
Nickel	156	158	0.8	0-10
Phosphorus				
Potassium	5450	5830	7.0	0-10
Selenium	5.50	0.00	100.0(a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	605	563	7.0	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	163	167	2.2	0-10
Zinc	6480	6700	3.5	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 04/26/19

	JC86916-5		QC
Metal	Original SDL 1:5	%DIF	Limits
Zirconium			

Associated samples MP14579: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 04/26/19

Metal	Sample ml	Final ml	JC86916-5 Raw	JC86916-5 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20	19	18.2875	2030	0.2	200	2000	100.6	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium	19.25	20	22210	21377.13	45260	0.1	5000	25000	95.5	80-120
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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP14579
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 04/26/19

Metal	Sample ml	Final ml	JC86916-5 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP14579: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11, JC86837-12

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: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: LEEMANHG8 **Effective Date:** 01/31/19

Analyte	IDL ug/l
Mercury	.0201

The above applies to the following instrument runs:
MA46581

Instrument Detection Limits

Job Number: JC86837
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:
MA46628,MA46638

Instrument Linear Ranges

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: LEEMANHG8 **Effective Date:** 03/10/17

Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA46581

Instrument Linear Ranges

Job Number: JC86837
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:
MA46628,MA46638

Metals Analysis

Raw Data

MA46581

Method: ACCUTEST Operator: Admin Date of Analysis: 25 Apr 2019 10:01:27

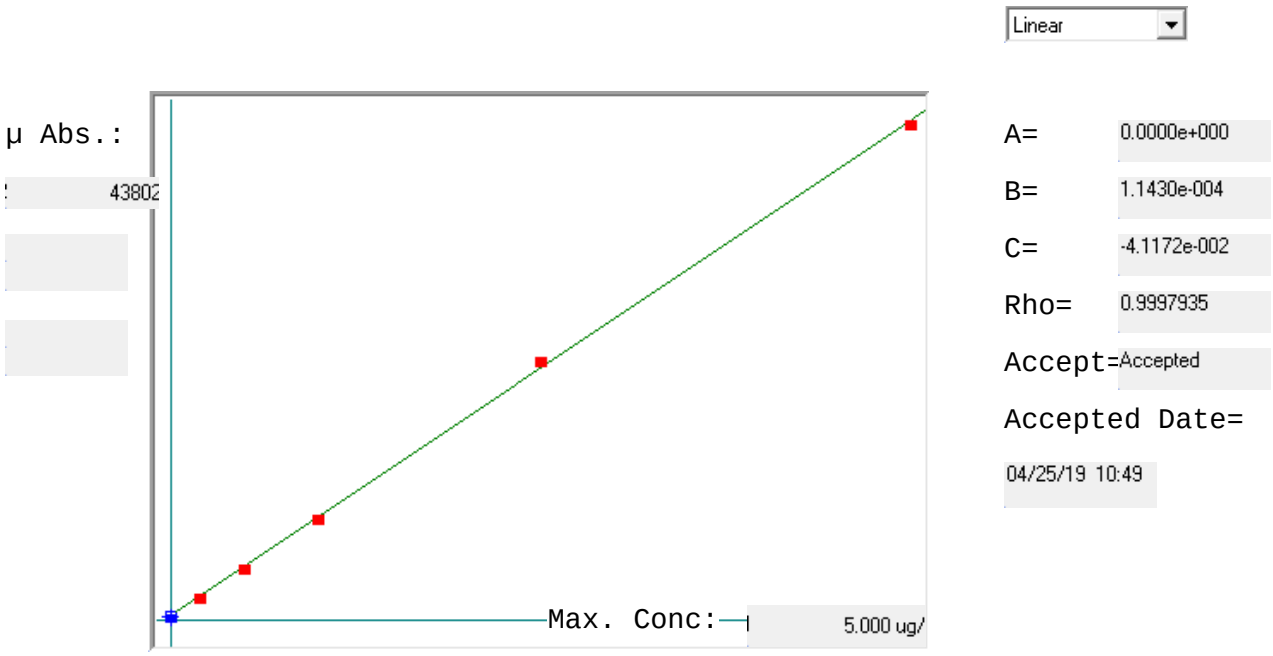
Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
STDA - 1	25 Apr 2019 10:34:26	Std	ug/l	-	375	1.000	1.000
STDB - 1	25 Apr 2019 10:35:44	Std	ug/l	-	2018	1.000	1.000
STDC - 1	25 Apr 2019 10:37:05	Std	ug/l	-	4552	1.000	1.000
STDD - 1	25 Apr 2019 10:38:35	Std	ug/l	-	9009	1.000	1.000
STDE - 1	25 Apr 2019 10:40:11	Std	ug/l	-	22895	1.000	1.000
STDF - 1	25 Apr 2019 10:41:52	Std	ug/l	-	43802	1.000	1.000
ICV - 1	25 Apr 2019 10:49:54	CK STND	ug/l	107.3% 3.2189	28522	1.000	1.000
ICB - 1	25 Apr 2019 10:51:12	CK STND	ug/l	-0.0220	168	1.000	1.000
CCV - 1	25 Apr 2019 10:53:03	CK STND	ug/l	101.1% 2.5267	22466	1.000	1.000
CCB - 1	25 Apr 2019 10:54:23	CK STND	ug/l	-0.0259	134	1.000	1.000
CRI - 1	25 Apr 2019 10:56:11	CK STND	ug/l	98.0% 0.1960	2075	1.000	1.000
CCV - 1	25 Apr 2019 11:10:08	CK STND	ug/l	99.1% 2.4778	22038	1.000	1.000
CCB - 1	25 Apr 2019 11:11:26	CK STND	ug/l	-0.0280	115	1.000	1.000
MP14565-MB1 - 1	25 Apr 2019 11:14:44	SMPL	ug/l	-0.0175	207	1.000	1.000
MP14565-B1 - 1	25 Apr 2019 11:16:00	SMPL	ug/l	1.7960	16073	1.000	1.000
MP14565-S1 - 1	25 Apr 2019 11:17:19	SMPL	ug/l	4.3353	38289	1.000	1.000
MP14565-S2 - 1	25 Apr 2019 11:19:05	SMPL	ug/l	3.7192	32899	1.000	1.000
JC86837-10 - 1	25 Apr 2019 11:21:00	SMPL	ug/l	2.4823	22078	1.000	1.000
JC86837-1 - 1	25 Apr 2019 11:22:53	SMPL	ug/l	1.8494	16540	1.000	1.000
JC86837-2 - 1	25 Apr 2019 11:24:44	SMPL	ug/l	0.0136	479	1.000	1.000
JC86837-3 - 1	25 Apr 2019 11:26:31	SMPL	ug/l	1.0968	9956	1.000	1.000
JC86837-4 - 1	25 Apr 2019 11:27:51	SMPL	ug/l	3.8176	33760	1.000	1.000
CCV - 1	25 Apr 2019 11:29:34	CK STND	ug/l	98.1% 2.4523	21815	1.000	1.000
CCB - 1	25 Apr 2019 11:31:29	CK STND	ug/l	-0.0259	134	1.000	1.000
JC86837-5 - 1	25 Apr 2019 11:33:17	SMPL	ug/l	0.1270	1471	1.000	1.000
JC86837-6 - 1	25 Apr 2019 11:34:37	SMPL	ug/l	4.9931	44044	1.000	1.000
JC86837-7 - 1	25 Apr 2019 11:36:04	SMPL	ug/l	0.2371	2435	1.000	1.000
JC86837-8 - 1	25 Apr 2019 11:38:08	SMPL	ug/l	4.0239	35565	1.000	1.000
JC86837-9 - 1	25 Apr 2019 11:39:40	SMPL	ug/l	0.1912	2033	1.000	1.000
JC86837-11 - 1	25 Apr 2019 11:41:40	SMPL	ug/l	1.1026	10007	1.000	1.000
JC86837-12 - 1	25 Apr 2019 11:43:11	SMPL	ug/l	1.8769	16781	1.000	1.000
JC86633-4 - 1	25 Apr 2019 11:44:52	SMPL	ug/l	0.3673	3574	1.000	1.000
JC86771-1 - 1	25 Apr 2019 11:46:38	SMPL	ug/l	0.1606	1765	1.000	1.000
CCV - 1	25 Apr 2019 11:48:11	CK STND	ug/l	98.0% 2.4498	21793	1.000	1.000
CCB - 1	25 Apr 2019 11:49:41	CK STND	ug/l	-0.0369	37	1.000	1.000
JC86771-2 - 1	25 Apr 2019 11:51:29	SMPL	ug/l	-0.0097	275	1.000	1.000
JC86771-3 - 1	25 Apr 2019 11:52:49	SMPL	ug/l	0.0799	1059	1.000	1.000
JC86793-1 - 1	25 Apr 2019 11:54:08	SMPL	ug/l	0.0807	1066	1.000	1.000
JC86821-9 - 1	25 Apr 2019 11:55:33	SMPL	ug/l	1.0238	9317	1.000	1.000
JC86821-11 - 1	25 Apr 2019 11:57:00	SMPL	ug/l	4.9974	44082	1.000	1.000
JC86821-12 - 1	25 Apr 2019 11:58:42	SMPL	ug/l	2.9032	25760	1.000	1.000
MP14566-MB1 - 1	25 Apr 2019 12:00:50	SMPL	ug/l	-0.0747	-293	1.000	1.000
MP14566-B1 - 1	25 Apr 2019 12:02:43	SMPL	ug/l	1.7515	15684	1.000	1.000
MP14566-S1 - 1	25 Apr 2019 12:04:02	SMPL	ug/l	1.6185	14520	1.000	1.000
CCV - 1	25 Apr 2019 12:05:49	CK STND	ug/l	98.6% 2.4642	21919	1.000	1.000
CCB - 1	25 Apr 2019 12:07:37	CK STND	ug/l	-0.0238	152	1.000	1.000
MP14566-S2 - 1	25 Apr 2019 12:09:26	SMPL	ug/l	1.6585	14870	1.000	1.000
JC86864-1 - 1	25 Apr 2019 12:10:45	SMPL	ug/l	-0.0452	-35	1.000	1.000
JC86864-2 - 1	25 Apr 2019 12:12:33	SMPL	ug/l	-0.0224	164	1.000	1.000
JC86864-3 - 1	25 Apr 2019 12:13:52	SMPL	ug/l	-0.0008	353	1.000	1.000
JC86864-4 - 1	25 Apr 2019 12:15:11	SMPL	ug/l	-0.0166	215	1.000	1.000
JC86864-5 - 1	25 Apr 2019 12:16:31	SMPL	ug/l	0.0672	948	1.000	1.000
JC86864-6 - 1	25 Apr 2019 12:17:51	SMPL	ug/l	0.1145	1362	1.000	1.000
JC86864-7 - 1	25 Apr 2019 12:19:15	SMPL	ug/l	0.3822	3704	1.000	1.000
JC86864-8 - 1	25 Apr 2019 12:20:40	SMPL	ug/l	0.1168	1382	1.000	1.000
CCV - 1	25 Apr 2019 12:22:12	CK STND	ug/l	97.3% 2.4326	21643	1.000	1.000
CCB - 1	25 Apr 2019 12:23:38	CK STND	ug/l	-0.0331	71	1.000	1.000
JC86864-9 - 1	25 Apr 2019 12:25:26	SMPL	ug/l	0.6142	5734	1.000	1.000
JC86864-10 - 1	25 Apr 2019 12:26:46	SMPL	ug/l	0.4101	3948	1.000	1.000
JC86813-8 - 1	25 Apr 2019 12:28:23	SMPL	ug/l	-0.0022	341	1.000	1.000
JC86813-9 - 1	25 Apr 2019 12:29:56	SMPL	ug/l	0.0111	457	1.000	1.000
JC86813-10 - 1	25 Apr 2019 12:31:16	SMPL	ug/l	0.0463	765	1.000	1.000
JC86813-11 - 1	25 Apr 2019 12:32:36	SMPL	ug/l	0.1521	1691	1.000	1.000
JC86813-12 - 1	25 Apr 2019 12:33:56	SMPL	ug/l	0.0052	406	1.000	1.000
JC86813-13 - 1	25 Apr 2019 12:35:24	SMPL	ug/l	0.0041	396	1.000	1.000
JC86813-14 - 1	25 Apr 2019 12:36:44	SMPL	ug/l	0.0319	639	1.000	1.000
CCV - 1	25 Apr 2019 12:38:04	CK STND	ug/l	96.2% 2.4050	21401	1.000	1.000
CCB - 1	25 Apr 2019 12:39:25	CK STND	ug/l	-0.0393	16	1.000	1.000
JC86815-3 - 1	25 Apr 2019 12:41:13	SMPL	ug/l	0.0338	656	1.000	1.000

MA46581

Method: ACCUTEST Operator: Admin Date of Analysis: 25 Apr 2019 10:01:27

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
JC86815-9 - 1	25 Apr 2019 12:42:34	SMPL	ug/l	0.0507	804	1.000	1.000
JC86815-13 - 1	25 Apr 2019 12:43:55	SMPL	ug/l	0.0299	622	1.000	1.000
CRI - 1	25 Apr 2019 12:45:17	CK STND	ug/l	73.5% 0.1470	1646	1.000	1.000
CCV - 1	25 Apr 2019 12:46:36	CK STND	ug/l	99.2% 2.4796	22054	1.000	1.000
CCB - 1	25 Apr 2019 12:48:03	CK STND	ug/l	-0.0263	130	1.000	1.000

ACCUTEST



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	0.002	0.002	375	0.000	375				
STDB	0.200	0.189	-0.011	2018	0.0 %	2018				
STDC	0.500	0.479	-0.021	4552	0.0 %	4552				
STDD	1.000	0.989	-0.011	9009	0.0 %	9009				
STDE	2.500	2.576	0.076	22895	0.0 %	22895				
STDF	5.000	4.965	-0.035	43802	0.0 %	43802				

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 5/1/2019 12:20:28 Type: Cal
Method: SGS 3 NO Valve(v328) 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	**.0149**	**-.0004**	**.0005**	**-.0001**	**-.0001**	**.0028**	**.0001**	**-.0001**	**-.0002**
Stddev	.0005	.0001	.0004	.0001	.0000	.0001	.0000	.0002	.0000
%RSD	3.103	30.12	69.88	116.9	73.03	3.518	39.35	123.3	12.88
#1	.0150	-.0003	.0003	-.0000	-.0000	.0028	.0001	-.0000	-.0002
#2	.0144	-.0005	.0009	-.0000	-.0001	.0029	.0002	-.0003	-.0002
#3	.0153	-.0003	.0003	-.0001	-.0001	.0027	.0001	-.0000	-.0002

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	**.0003**	**.0006**	**-.0001**	**-.0001**	**.0008**	**.0000**	**.0008**	**.0004**	**.0057**
Stddev	.0000	.0002	.0000	.0000	.0002	.0000	.0004	.0003	.0002
%RSD	2.824	34.34	38.75	31.72	25.91	79.62	43.87	87.67	3.729
#1	.0003	.0006	-.0001	-.0001	.0008	.0001	.0006	.0006	.0055
#2	.0003	.0005	-.0001	-.0000	.0009	.0000	.0006	.0000	.0059
#3	.0003	.0009	-.0000	-.0001	.0005	.0000	.0012	.0005	.0057

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**	**-.0001**	**.0006**	**-.0077**	**.0013**	**-.0009**	**.0028**	**.0004**	**-.0017**
Stddev	.0000	.0000	.0006	.0007	.0001	.0001	.0004	.0001	.0003
%RSD	26.95	46.30	97.83	9.173	9.157	7.651	13.26	31.36	16.02
#1	.0001	-.0002	-.0001	-.0084	.0014	-.0008	.0026	.0005	-.0020
#2	.0001	-.0001	.0010	-.0070	.0012	-.0009	.0032	.0005	-.0014
#3	.0001	-.0001	.0010	-.0079	.0012	-.0010	.0026	.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**	**.0007**	**-.0004**	**-.0005**	**.0002**	**.0021**	**-.0031**
Stddev	.0001	.0002	.0000	.0001	.0002	.0008	.0000
%RSD	71.64	34.12	5.458	10.51	133.4	37.43	.6729
#1	.0000	.0008	-.0004	-.0005	-.0001	.0029	-.0031
#2	.0002	.0005	-.0004	-.0006	.0004	.0023	-.0031
#3	.0001	.0009	-.0005	-.0005	.0002	.0013	-.0030

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 5/1/2019 12:20:28 Type: Cal
Method: SGS 3 NO Valve(v328) 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	**147250.**	**23863.**	**5967.1**	**9951.4**
Stddev	315.	677.	13.2	17.0
%RSD	.21359	2.8391	.22172	.17044
#1	147500.	23106.	5972.4	9954.0
#2	146890.	24411.	5952.1	9933.3
#3	147350.	24072.	5976.9	9966.9

◀ Zoom In ▶ Zoom Out

Sample Name: STDb Acquired: 5/1/2019 12:25:29 Type: Cal
Method: SGS 3 NO Valve(v328) 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	**7.703**	**12.46**	**5.092**	**3.029**	**.6697**	**1.077**	**3.831**	**2.409**	**.0823**
Stddev	.018	.09	.013	.003	.0018	.003	.014	.003	.0002
%RSD	.2405	.7285	.2505	.0917	.2746	.2540	.3659	.1232	.2216
#1	7.719	12.37	5.078	3.026	.6715	1.080	3.827	2.406	.0825
#2	7.708	12.55	5.095	3.028	.6696	1.077	3.820	2.409	.0822
#3	7.683	12.45	5.102	3.032	.6679	1.075	3.847	2.412	.0822

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	**.9802**	**7.474**	**.5389**	**.2809**	**1.070**	**.4023**	**.7065**	**3.230**	**8.930**
Stddev	.0019	.013	.0019	.0011	.001	.0012	.0009	.006	.018
%RSD	.1926	.1753	.3479	.4053	.0784	.3071	.1231	.2022	.1966
#1	.9819	7.462	.5371	.2796	1.069	.4009	.7055	3.235	8.947
#2	.9805	7.470	.5387	.2817	1.070	.4027	.7068	3.233	8.933
#3	.9781	7.488	.5409	.2815	1.071	.4033	.7072	3.223	8.912

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	**4.933**	**.9832**	**1.803**	**7.471**	**1.096**	**3.488**	**2.443**	**1.054**	**13.79**
Stddev	.009	.0018	.005	.025	.003	.009	.006	.002	.18
%RSD	.1825	.1822	.2858	.3412	.2295	.2478	.2530	.1818	1.287
#1	4.942	.9853	1.808	7.497	1.094	3.478	2.437	1.052	13.97
#2	4.934	.9824	1.805	7.468	1.095	3.492	2.444	1.055	13.61
#3	4.924	.9820	1.798	7.446	1.099	3.495	2.449	1.055	13.79

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	**.7583**	**1.692**	**2.230**	**.2296**	**.7236**	**2.163**	**.1922**
Stddev	.0011	.002	.018	.0014	.0009	.005	.0013
%RSD	.1431	.1102	.8184	.5962	.1210	.2146	.6913
#1	.7591	1.690	2.235	.2280	.7226	2.166	.1907
#2	.7588	1.693	2.244	.2302	.7240	2.165	.1927
#3	.7571	1.694	2.209	.2305	.7243	2.158	.1931

◀ Zoom In ▶ Zoom Out

Sample Name: STDb Acquired: 5/1/2019 12:25:29 Type: Cal
Method: SGS 3 NO Valve(v328) 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	**136600.**	**24025.**	**5640.1**	**8965.3**
Stddev	402.	118.	11.5	13.0
%RSD	.29410	.49136	.20423	.14465
#1	136190.	23902.	5651.6	8977.8
#2	136610.	24138.	5640.1	8966.3
#3	136990.	24036.	5628.5	8951.9

Zoom In Zoom Out

Sample Name: CCVCONF Acquired: 5/1/2019 12:30:54 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.020**	**2.075**	**2.018**	**2.043**	**2.032**	**2.012**	**2.027**	**2.049**	**.2527**
Stddev	.002	.001	.001	.001	.005	.005	.019	.000	.0005
%RSD	.1047	.0610	.0529	.0694	.2586	.2512	.9470	.0210	.2037
#1	2.022	2.077	2.017	2.042	2.031	2.013	2.049	2.049	.2530
#2	2.019	2.074	2.019	2.043	2.038	2.017	2.020	2.048	.2530
#3	2.019	2.075	2.019	2.045	2.028	2.007	2.013	2.049	.2521
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	**2.015**	**2.040**	**1.992**	**2.086**	**2.042**	**2.014**	**1.994**	**40.19**	**40.65**
Stddev	.003	.002	.007	.016	.002	.006	.001	.06	.07
%RSD	.1251	.0839	.3698	.7567	.1134	.3143	.0711	.1383	.1843
#1	2.015	2.042	1.984	2.071	2.040	2.009	1.995	40.25	40.73
#2	2.017	2.040	1.998	2.085	2.042	2.011	1.994	40.14	40.59
#3	2.012	2.039	1.995	2.102	2.045	2.021	1.992	40.17	40.62
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**	**40.72**	**40.32**	**40.57**	**2.044**	**2.006**	**5.002**	**2.032**	**2.059**
Stddev	.06	.07	.04	.08	.001	.002	.001	.003	.000
%RSD	.1398	.1748	.0991	.2080	.0574	.1096	.0242	.1465	.0141
#1	40.80	40.78	40.31	40.66	2.043	2.004	5.003	2.031	2.059
#2	40.69	40.64	40.36	40.51	2.045	2.008	5.003	2.030	2.058
#3	40.75	40.73	40.29	40.53	2.045	2.007	5.001	2.035	2.059
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: 5/1/2019 12:30:54 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**1.961**	**1.997**	**2.016**	**2.027**	**2.034**	**2.030**
Stddev	.001	.002	.004	.011	.002	.004	.005
%RSD	.0631	.0822	.1750	.5330	.0747	.2083	.2620
#1	2.003	1.962	1.997	2.005	2.026	2.038	2.027
#2	2.005	1.961	2.000	2.018	2.027	2.030	2.027
#3	2.002	1.959	1.993	2.026	2.029	2.033	2.036
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	**138340.**	**23796.**	**5681.5**	**9027.3**
Stddev	230.	238.	15.0	11.5
%RSD	.16635	1.0014	.26319	.12707
#1	138250.	23593.	5673.7	9023.1
#2	138170.	24058.	5672.0	9018.6
#3	138600.	23738.	5698.7	9040.3

Zoom In Zoom Out

Sample Name: CCBCONF Acquired: 5/1/2019 12:35:57 Type: QC
Method: SGS 3 NO Valve(v328) 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	**-.0003**	**-.0000**	**.0000**	**-.0001**	**.0000**	**.0003**	**.0000**	**-.0002**
Stddev	.0002	.0001	.0000	.0002	.0001	.0002	.0000	.0002
%RSD	62.93	400.2	56.91	163.1	368.8	88.86	112.7	72.13
#1	-.0003	-.0001	.0000	.0001	-.0001	.0002	.0000	-.0004
#2	-.0001	.0001	.0001	-.0002	.0001	.0005	.0001	-.0002
#3	-.0004	-.0000	.0000	-.0002	.0001	.0001	-.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**-.0005**	**.0006**	**-.0011**	**.0003**	**-.0012**	**-.0001**
Stddev	.0001	.0003	.0001	.0004	.0012	.0006	.0009	.0011
%RSD	82.61	709.0	18.19	75.81	107.5	194.9	79.59	1442.
#1	.0003	-.0003	-.0005	.0007	-.0009	-.0004	-.0001	.0011
#2	.0000	.0003	-.0006	.0010	-.0000	.0005	-.0019	-.0001
#3	.0002	.0002	-.0004	.0001	-.0024	.0008	-.0014	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0079**	**-.0033**	**.0018**	**.0126**	**.2311**	**.0655**	**.0014**	**.0003**
Stddev	.0074	.0023	.0029	.0009	.0389	.0147	.0003	.0004
%RSD	94.65	70.37	156.6	7.192	16.82	22.41	19.73	158.6
#1	-.0054	-.0060	.0001	.0128	.2461	.0720	.0014	-.0001
#2	-.0162	-.0015	.0002	.0117	.2603	.0759	.0012	.0007
#3	-.0019	-.0026	.0052	.0135	.1870	.0487	.0017	.0001
Check ?	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: 5/1/2019 12:35:57 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0005**	**-.0003**	**-.0001**	**-.0001**	**.0009**	**.0001**	**.0019**	**.0004**
Stddev	.0008	.0001	.0001	.0001	.0009	.0002	.0011	.0004
%RSD	145.8	28.40	121.6	156.8	100.4	214.5	55.97	100.6
#1	.0008	-.0003	-.0002	-.0001	.0015	.0002	.0028	.0009
#2	.0012	-.0003	.0000	-.0001	.0013	.0001	.0023	.0001
#3	-.0003	-.0002	-.0001	.0000	-.0001	-.0001	.0007	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0105**	**.0007**
Stddev	.0004	.0022
%RSD	3.681	321.8
#1	-.0104	.0006
#2	-.0102	-.0014
#3	-.0110	.0029
Check ?	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	**149740.**	**24710.**	**6055.8**	**10055.**
Stddev	278.	45.	1.7	9.
%RSD	.18535	.18177	.02849	.09165
#1	149550.	24697.	6054.9	10058.
#2	149610.	24760.	6057.8	10045.
#3	150060.	24674.	6054.7	10063.

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 5/1/2019 12:41:05 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.001**	**2.068**	**2.002**	**2.022**	**2.021**	**2.001**	**2.036**	**2.024**	**.2508**
Stddev	.005	.005	.001	.001	.006	.005	.016	.001	.0004
%RSD	.2567	.2368	.0394	.0406	.3114	.2404	.7798	.0261	.1780
#1	2.006	2.069	2.001	2.021	2.023	2.005	2.044	2.023	.2513
#2	1.996	2.072	2.002	2.022	2.026	2.003	2.046	2.024	.2508
#3	2.000	2.062	2.002	2.022	2.014	1.995	2.017	2.024	.2504
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**	**2.018**	**1.958**	**2.053**	**2.021**	**1.986**	**1.972**	**40.13**	**40.42**
Stddev	.004	.003	.004	.009	.001	.004	.001	.12	.11
%RSD	.2145	.1517	.1885	.4529	.0522	.2060	.0509	.3059	.2820
#1	2.009	2.015	1.954	2.047	2.021	1.984	1.972	40.21	40.47
#2	2.005	2.021	1.959	2.064	2.021	1.991	1.972	40.20	40.50
#3	2.000	2.017	1.961	2.049	2.020	1.984	1.973	39.99	40.29
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	**40.51**	**40.39**	**40.24**	**40.34**	**2.018**	**1.988**	**4.972**	**2.004**	**2.038**
Stddev	.07	.05	.05	.11	.003	.001	.003	.004	.003
%RSD	.1777	.1198	.1232	.2845	.1429	.0559	.0574	.2207	.1373
#1	40.56	40.42	40.28	40.47	2.015	1.987	4.972	1.999	2.041
#2	40.55	40.42	40.25	40.30	2.018	1.989	4.969	2.008	2.036
#3	40.43	40.34	40.18	40.26	2.021	1.988	4.974	2.006	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: icv 1 Acquired: 5/1/2019 12:41:05 Type: QC
Method: SGS 3 NO Valve(v328) 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	**1.981**	**1.933**	**1.985**	**1.960**	**1.998**	**2.015**	F **1.765**
Stddev	.004	.003	.003	.005	.004	.005	.009
%RSD	.2172	.1283	.1354	.2425	.2236	.2706	.4897
#1	1.985	1.931	1.987	1.955	2.000	2.017	1.760
#2	1.980	1.934	1.986	1.965	1.992	2.020	1.761
#3	1.977	1.935	1.982	1.961	2.000	2.009	1.775
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
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	**138610.**	**23879.**	**5745.3**	**9107.5**
Stddev	551.	100.	16.1	22.7
%RSD	.39728	.41696	.28021	.24965
#1	138480.	23808.	5760.2	9127.1
#2	138140.	23836.	5728.2	9082.6
#3	139210.	23993.	5747.6	9112.8

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 5/1/2019 12:46:06 Type: QC
Method: SGS 3 NO Valve(v328) 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	**-.0004**	**-.0000**	**.0000**	**.0001**	**-.0003**	**.0004**	**-.0000**	**.0000**
Stddev	.0004	.0000	.0001	.0001	.0003	.0003	.0000	.0001
%RSD	101.3	86.59	389.9	178.5	97.95	78.11	135.4	418.3
#1	.0001	-.0001	-.0001	.0001	-.0004	.0001	.0000	.0000
#2	-.0006	-.0001	.0001	.0001	-.0006	.0006	-.0000	-.0001
#3	-.0006	-.0000	.0000	-.0001	.0000	.0004	-.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0002**	**-.0006**	**-.0004**	**.0006**	**.0001**	**-.0009**	**.0005**
Stddev	.0003	.0004	.0000	.0003	.0017	.0008	.0010	.0012
%RSD	1338.	277.8	7.168	78.70	291.4	692.5	116.7	230.2
#1	-.0003	-.0000	-.0005	-.0005	.0021	-.0005	.0002	-.0008
#2	.0003	-.0002	-.0006	-.0001	-.0013	-.0002	-.0018	.0015
#3	-.0001	.0007	-.0005	-.0007	.0010	.0010	-.0011	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0031**	**-.0033**	**.0014**	**.0083**	**.1675**	**.0409**	**.0011**	**.0001**
Stddev	.0054	.0011	.0021	.0035	.0342	.0008	.0006	.0001
%RSD	175.5	33.37	147.2	42.83	20.40	1.878	59.86	116.7
#1	-.0000	-.0045	.0037	.0123	.1759	.0405	.0018	.0002
#2	-.0093	-.0028	.0011	.0069	.1966	.0417	.0009	.0000
#3	.0001	-.0025	-.0005	.0056	.1299	.0403	.0005	.0000
Check ?	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: 5/1/2019 12:46:06 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0015**	**-.0001**	**.0000**	**-.0002**	**.0005**	**-.0001**	**.0008**	**-.0005**
Stddev	.0007	.0008	.0000	.0001	.0007	.0001	.0013	.0013
%RSD	48.40	1103.	237.6	80.18	143.0	116.3	158.0	289.9
#1	.0007	-.0009	.0000	-.0002	-.0001	.0000	.0017	.0007
#2	.0015	.0007	-.0000	-.0000	.0012	-.0001	.0013	-.0002
#3	.0022	.0000	.0001	-.0003	.0003	-.0002	-.0006	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0097**	**.0015**
Stddev	.0014	.0039
%RSD	13.97	262.6
#1	-.0090	-.0000
#2	-.0088	.0059
#3	-.0112	-.0014
Check ?	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	**149200.**	**24620.**	**6028.9**	**10023.**
Stddev	586.	321.	12.7	15.
%RSD	.39292	1.3033	.21137	.15301
#1	149100.	24262.	6042.2	10035.
#2	149840.	24883.	6016.9	10006.
#3	148680.	24714.	6027.6	10029.

Zoom In Zoom Out

Sample Name: iccv 1 Acquired: 5/1/2019 12:54:39 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.026**	**2.076**	**2.016**	**2.042**	**2.032**	**2.010**	**2.027**	**2.044**	**.2525**
Stddev	.001	.002	.003	.002	.004	.004	.008	.002	.0005
%RSD	.0324	.0824	.1321	.0972	.1935	.1908	.4032	.0909	.2113
#1	2.027	2.076	2.017	2.044	2.035	2.014	2.018	2.044	.2526
#2	2.026	2.074	2.016	2.041	2.034	2.011	2.026	2.045	.2532
#3	2.027	2.076	2.019	2.043	2.026	2.005	2.028	2.045	.2520
#4	2.026	2.078	2.013	2.039	2.032	2.011	2.038	2.041	.2523
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.019**	**2.039**	**1.984**	**2.091**	**2.039**	**2.012**	**1.993**	**40.43**	**40.76**
Stddev	.002	.001	.002	.006	.002	.003	.005	.05	.04
%RSD	.0976	.0707	.0975	.2806	.0965	.1225	.2516	.1282	.1032
#1	2.021	2.040	1.985	2.097	2.040	2.015	1.999	40.47	40.78
#2	2.018	2.037	1.981	2.094	2.040	2.014	1.990	40.35	40.70
#3	2.016	2.040	1.985	2.088	2.041	2.010	1.994	40.43	40.77
#4	2.019	2.040	1.982	2.085	2.036	2.011	1.987	40.45	40.79
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: 5/1/2019 12:54:39 Type: QC
Method: SGS 3 NO Valve(v328) 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	**40.67**	**40.75**	**40.32**	**40.67**	**2.037**	**2.008**	**4.991**	**2.030**	**2.055**
Stddev	.05	.01	.06	.02	.002	.002	.004	.001	.001
%RSD	.1249	.0220	.1421	.0471	.1059	.1130	.0739	.0415	.0682
#1	40.72	40.74	40.36	40.70	2.040	2.010	4.995	2.029	2.055
#2	40.61	40.75	40.27	40.66	2.036	2.007	4.988	2.029	2.054
#3	40.66	40.76	40.27	40.66	2.036	2.009	4.994	2.030	2.053
#4	40.70	40.74	40.38	40.67	2.038	2.005	4.989	2.031	2.056
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	**1.999**	**1.957**	**1.998**	**2.011**	**2.021**	**2.031**	**2.012**
Stddev	.002	.002	.002	.006	.006	.002	.016
%RSD	.1002	.0917	.1142	.2779	.3106	.0780	.7960
#1	2.002	1.959	1.998	2.016	2.029	2.033	2.028
#2	1.998	1.955	1.998	2.013	2.021	2.029	2.010
#3	1.997	1.958	1.994	2.011	2.023	2.031	2.018
#4	1.998	1.957	1.999	2.003	2.013	2.031	1.991
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: 5/1/2019 12:54:39 Type: QC
Method: SGS 3 NO Valve(v328) 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	**137850.**	**23741.**	**5685.8**	**9037.6**
Stddev	483.	109.	17.4	18.5
%RSD	.35031	.45759	.30633	.20485
#1	137190.	23600.	5699.9	9055.2
#2	138330.	23817.	5693.5	9042.2
#3	138020.	23713.	5689.4	9041.4
#4	137870.	23835.	5660.5	9011.5

Zoom In Zoom Out

Sample Name: ccb 7 Acquired: 5/1/2019 13:03:37 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**-.0003**	**.0005**	**.0001**	**.0004**	**-.0000**
Stddev	.0006	.0000	.0001	.0004	.0001	.0004	.0000	.0004	.0005
%RSD	287.3	189.4	92.95	269.1	28.21	81.38	29.99	92.75	2527.
#1	-.0006	-.0000	.0001	.0005	-.0004	.0001	.0001	.0003	.0003
#2	.0005	.0000	.0002	-.0002	-.0003	.0005	.0001	.0001	-.0005
#3	-.0005	.0001	.0000	.0001	-.0002	.0010	.0001	.0008	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0006**	**-.0002**	**.0000**	**-.0004**	**.0001**	**-.0003**	**-.0057**	**-.0005**
Stddev	.0002	.0000	.0010	.0004	.0002	.0010	.0006	.0145	.0022
%RSD	72.16	3.777	477.2	1241.	41.16	1103.	221.4	253.0	413.2
#1	-.0003	-.0006	.0001	-.0004	-.0003	-.0001	-.0009	-.0220	-.0031
#2	-.0001	-.0005	.0006	.0002	-.0006	-.0008	-.0002	.0060	.0006
#3	-.0005	-.0005	-.0013	.0002	-.0004	.0012	.0003	-.0012	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**.0110**	**.0423**	**-.0027**	**.0012**	**.0001**	**.0012**	**.0000**	**.0001**
Stddev	.0014	.0108	.0169	.0057	.0006	.0001	.0006	.0008	.0001
%RSD	51.39	98.34	40.04	212.8	53.32	71.45	52.71	1941.	164.1
#1	.0016	.0012	.0241	-.0088	.0015	.0000	.0015	-.0002	.0000
#2	.0042	.0092	.0451	.0025	.0016	.0002	.0005	.0009	-.0000
#3	.0022	.0227	.0576	-.0018	.0005	.0002	.0016	-.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 7 Acquired: 5/1/2019 13:03:37 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**.0005**	**-.0001**	**-.0019**	**-.0016**	**-.0031**	**-.0001**
Stddev	.0004	.0008	.0001	.0003	.0012	.0003	.0011
%RSD	764.7	142.8	110.5	13.42	73.23	9.056	942.1
#1	-.0004	.0000	.0000	-.0016	-.0027	-.0032	-.0014
#2	.0004	.0001	-.0001	-.0020	-.0004	-.0034	.0005
#3	.0002	.0014	-.0002	-.0021	-.0016	-.0028	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**145940.**	**23974.**	**5909.7**	**9857.8**
Stddev	193.	706.	2.6	4.1
%RSD	.13226	2.9465	.04360	.04192
#1	146140.	24482.	5911.1	9855.8
#2	145750.	23168.	5906.8	9855.2
#3	145940.	24273.	5911.3	9862.6

Zoom In Zoom Out

Sample Name: CRI Acquired: 5/1/2019 13:08:01 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2058**	**.0020**	**.0031**	**.0527**	**.0106**	**.0101**	**.0162**	**.0106**	**.0047**
Stddev	.0007	.0000	.0002	.0001	.0003	.0005	.0000	.0002	.0002
%RSD	.3166	1.024	7.254	.2122	3.201	4.712	.1230	1.467	3.533
#1	.2064	.0021	.0029	.0528	.0108	.0101	.0162	.0107	.0046
#2	.2059	.0020	.0030	.0528	.0102	.0105	.0162	.0105	.0047
#3	.2051	.0021	.0033	.0526	.0109	.0096	.0161	.0104	.0049
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	**.0522**	**.0208**	**.0075**	**.0104**	**.0032**	**.0112**	**.0068**	**.2104**	**5.254**
Stddev	.0002	.0001	.0015	.0017	.0008	.0028	.0011	.0050	.011
%RSD	.3900	.7204	20.28	16.40	23.90	24.86	16.74	2.377	.2108
#1	.0525	.0208	.0087	.0100	.0034	.0094	.0064	.2160	5.248
#2	.0521	.0207	.0081	.0088	.0038	.0144	.0059	.2065	5.246
#3	.0521	.0210	.0058	.0122	.0023	.0098	.0081	.2086	5.266
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	**.1065**	**5.401**	**5.280**	**5.358**	**.1033**	**.0212**	**.2139**	**.0111**	**.0105**
Stddev	.0007	.024	.005	.024	.0006	.0001	.0014	.0008	.0001
%RSD	.6530	.4522	.1032	.4426	.5517	.4916	.6427	7.082	.9631
#1	.1066	5.387	5.283	5.382	.1035	.0212	.2152	.0117	.0106
#2	.1057	5.386	5.284	5.355	.1026	.0212	.2125	.0102	.0105
#3	.1071	5.429	5.274	5.335	.1037	.0210	.2141	.0113	.0104
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: 5/1/2019 13:08:01 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**.0524**	**.0106**	**.0523**	**.0217**	**.0553**	**.0488**
Stddev	.0003	.0005	.0001	.0012	.0006	.0012	.0017
%RSD	2.671	.8942	.6583	2.293	2.557	2.242	3.480
#1	.0107	.0519	.0107	.0522	.0211	.0553	.0496
#2	.0102	.0529	.0106	.0512	.0217	.0540	.0468
#3	.0103	.0524	.0106	.0536	.0222	.0565	.0499
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	**145250.**	**24337.**	**5873.9**	**9605.4**
Stddev	469.	194.	10.4	24.4
%RSD	.32275	.79650	.17732	.25428
#1	145130.	24544.	5866.6	9578.6
#2	144850.	24160.	5885.8	9626.3
#3	145760.	24307.	5869.4	9611.3

Zoom In Zoom Out

Sample Name: CRID Acquired: 5/1/2019 13:13:04 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0038**	**.0009**	**.0010**	**.0031**	**.0020**	F **.0006**	**.0032**	**.0043**
Stddev	.0002	.0001	.0001	.0001	.0003	.0002	.0000	.0000
%RSD	5.606	5.719	10.35	2.475	14.79	24.74	.3601	.6747
#1	.0038	.0010	.0011	.0030	.0021	.0007	.0032	.0043
#2	.0036	.0009	.0011	.0031	.0017	.0004	.0032	.0043
#3	.0040	.0009	.0009	.0032	.0023	.0007	.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**	**.0021**	**.0101**	**.0025**	F **.0014**	F **-.0004**	F **.0038**	F **-.0008**
Stddev	.0004	.0000	.0001	.0005	.0013	.0010	.0016	.0007
%RSD	107.8	2.345	.5766	21.44	96.07	283.6	41.24	82.07
#1	.0000	.0021	.0100	.0020	.0014	.0003	.0055	-.0005
#2	.0007	.0020	.0101	.0024	.0027	.0002	.0036	-.0004
#3	.0003	.0021	.0102	.0031	.0001	-.0015	.0023	-.0016
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	**.0962**	**1.058**	**.0018**	F **.1205**	**2.060**	**1.056**	**-.0005**	**-.0001**
Stddev	.0031	.003	.0009	.0058	.027	.013	.0005	.0002
%RSD	3.219	.2448	49.13	4.773	1.299	1.268	90.61	154.9
#1	.0945	1.059	.0025	.1259	2.046	1.043	-.0011	.0001
#2	.0998	1.055	.0020	.1144	2.043	1.056	-.0003	-.0002
#3	.0943	1.060	.0008	.1212	2.091	1.070	-.0002	-.0002
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value				.1000				
Range				20.00%				

Zoom In Zoom Out

Sample Name: CRID Acquired: 5/1/2019 13:13:04 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0013**	**-.0005**	**-.0001**	**.0001**	**-.0000**	**-.0002**	**-.0004**	**-.0011**
Stddev	.0009	.0001	.0001	.0001	.0005	.0001	.0012	.0023
%RSD	69.16	17.84	187.0	71.94	1890.	29.60	328.6	218.1
#1	.0008	-.0004	-.0002	.0001	-.0006	-.0002	.0010	-.0026
#2	.0008	-.0005	.0000	.0001	.0002	-.0003	-.0013	-.0022
#3	.0023	-.0005	-.0000	.0002	.0004	-.0002	-.0007	.0016
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0050**	**-.0022**
Stddev	.0028	.0017
%RSD	56.56	75.26
#1	-.0034	-.0004
#2	-.0033	-.0026
#3	-.0082	-.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	**145370.**	**23900.**	**5926.4**	**9837.4**
Stddev	319.	145.	17.3	14.0
%RSD	.21919	.60733	.29224	.14259
#1	145730.	23878.	5917.0	9831.7
#2	145220.	24054.	5915.9	9827.0
#3	145150.	23766.	5946.4	9853.3

Zoom In Zoom Out

Sample Name: ICSA Acquired: 5/1/2019 13:18:10 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**.0003**	**.0009**	**-.0010**	**-.0082**	**.0034**	**-.0001**	**.0034**
Stddev	.0003	.0000	.0002	.0001	.0006	.0005	.0001	.0003	.0002
%RSD	43.43	133.1	75.09	14.25	62.09	5.560	1.841	180.3	5.198
#1	.0008	.0000	.0004	.0010	-.0003	-.0087	.0033	-.0004	.0033
#2	.0003	-.0000	.0004	.0008	-.0012	-.0080	.0034	.0002	.0034
#3	.0008	-.0000	.0000	.0010	-.0014	-.0078	.0033	-.0002	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0035**	**-.0017**	**-.0002**	**-.0013**	**-.0002**	**-.0019**	**.0007**	**511.9**	**390.4**
Stddev	.0001	.0001	.0016	.0018	.0019	.0010	.0004	1.1	3.9
%RSD	1.583	6.171	907.3	130.7	1226.	52.61	53.83	.2069	.9896
#1	-.0034	-.0017	.0016	-.0023	-.0019	-.0007	.0011	510.9	386.0
#2	-.0035	-.0016	-.0014	-.0024	.0019	-.0025	.0005	513.0	392.7
#3	-.0035	-.0018	-.0008	.0007	-.0005	-.0024	.0005	511.8	392.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**189.8**	**501.0**	**.3725**	**.1332**	**-.0022**	**.0003**	**.0061**	**-.0021**	**-.0004**
Stddev	.8	.5	.0931	.0133	.0009	.0004	.0039	.0005	.0001
%RSD	.4071	.0924	25.00	9.976	41.19	136.5	64.24	25.96	30.96
#1	189.0	501.4	.2752	.1193	-.0012	.0003	.0069	-.0025	-.0003
#2	190.5	501.2	.3816	.1345	-.0030	.0006	.0096	-.0022	-.0005
#3	190.0	500.5	.4608	.1458	-.0025	-.0001	.0018	-.0015	-.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: ICSA Acquired: 5/1/2019 13:18:10 Type: QC
Method: SGS 3 NO Valve(v328) 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	**-.0016**	**.0025**	**.0009**	**-.0085**	**.0003**	**-.0070**	**.0170**
Stddev	.0002	.0010	.0001	.0010	.0022	.0018	.0016
%RSD	14.42	39.85	15.02	12.27	837.5	25.99	9.400
#1	-.0017	.0020	.0009	-.0078	-.0020	-.0049	.0160
#2	-.0013	.0018	.0011	-.0097	.0004	-.0079	.0162
#3	-.0017	.0036	.0008	-.0080	.0024	-.0082	.0188
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	**126400.**	**22994.**	**5250.8**	**8262.9**
Stddev	164.	51.	24.8	21.3
%RSD	.12936	.22367	.47136	.25718
#1	126330.	23012.	5251.0	8271.7
#2	126280.	22936.	5226.0	8238.7
#3	126590.	23035.	5275.5	8278.4

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 5/1/2019 13:23:32 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5249**	**.5187**	**1.039**	**.5018**	**.5011**	**.5097**	**.5242**	**.9944**	**1.088**
Stddev	.0004	.0002	.002	.0001	.0010	.0009	.0008	.0003	.002
%RSD	.0806	.0304	.2144	.0268	.2029	.1778	.1533	.0297	.1575
#1	.5247	.5188	1.040	.5016	.5021	.5102	.5248	.9946	1.090
#2	.5246	.5185	1.041	.5019	.5013	.5087	.5244	.9945	1.088
#3	.5254	.5187	1.037	.5019	.5001	.5104	.5233	.9941	1.086
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	**.5067**	**.9863**	**1.084**	**.9936**	**.9720**	**1.077**	**1.087**	**507.6**	**385.4**
Stddev	.0007	.0023	.002	.0031	.0020	.003	.002	12.6	7.4
%RSD	.1467	.2300	.1490	.3166	.2105	.3123	.1593	2.476	1.918
#1	.5076	.9887	1.084	.9972	.9716	1.081	1.089	511.9	378.3
#2	.5064	.9859	1.083	.9922	.9743	1.074	1.086	517.4	393.1
#3	.5063	.9843	1.086	.9913	.9703	1.078	1.086	493.4	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	**197.9**	**508.8**	**.3097**	**.1308**	**.4953**	**.4896**	**.5098**	**.4818**	**.5330**
Stddev	2.6	.1	.0359	.0047	.0022	.0011	.0010	.0013	.0007
%RSD	1.339	.0195	11.60	3.600	.4389	.2263	.2021	.2621	.1284
#1	198.4	508.7	.3170	.1254	.4955	.4908	.5089	.4823	.5335
#2	195.1	508.9	.2707	.1338	.4931	.4885	.5096	.4828	.5322
#3	200.3	508.7	.3415	.1333	.4974	.4895	.5110	.4804	.5334
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: 5/1/2019 13:23:32 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.5067**	**.4794**	**.4943**	**.5126**	**.5150**	**.5471**	**.5696**
Stddev	.0012	.0010	.0007	.0038	.0024	.0010	.0019
%RSD	.2347	.2006	.1471	.7331	.4605	.1877	.3367
#1	.5071	.4790	.4950	.5167	.5177	.5481	.5710
#2	.5076	.4805	.4942	.5094	.5133	.5461	.5703
#3	.5053	.4787	.4936	.5116	.5139	.5470	.5674
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	**126540.**	**23038.**	**5253.8**	**8294.6**
Stddev	349.	152.	12.3	10.5
%RSD	.27568	.66174	.23452	.12690
#1	126580.	23198.	5240.5	8282.5
#2	126180.	22895.	5256.0	8300.8
#3	126880.	23022.	5264.9	8300.6

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/1/2019 13:28:50 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**8.098**	**8.057**	**8.095**	**8.285**	**8.073**	**8.062**	**8.101**	**.6336**
Stddev	.031	.129	.021	.011	.023	.101	.037	.008	.0009
%RSD	.3801	1.598	.2579	.1367	.2785	1.257	.4587	.0987	.1389
#1	8.125	8.112	8.043	8.087	8.282	8.146	8.050	8.095	.6345
#2	8.113	8.220	8.047	8.090	8.310	8.115	8.103	8.098	.6337
#3	8.067	7.962	8.081	8.107	8.264	7.957	8.033	8.110	.6327
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	**8.083**	**8.345**	**8.148**	**8.258**	**8.246**	**8.142**	**8.313**	**.1659**	**.0035**
Stddev	.085	.026	.002	.075	.012	.006	.026	.0163	.0129
%RSD	1.049	.3100	.0250	.9043	.1496	.0745	.3112	9.812	371.8
#1	8.177	8.336	8.146	8.293	8.239	8.142	8.295	.1493	-.0083
#2	8.060	8.325	8.150	8.308	8.238	8.148	8.301	.1818	.0172
#3	8.012	8.374	8.148	8.172	8.260	8.136	8.342	.1665	.0015
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	**-.0027**	**.0246**	**.5361**	**.1085**	**8.258**	**8.368**	**26.43**	**8.556**	**8.150**
Stddev	.0072	.0226	.0546	.0072	.025	.013	.09	.000	.091
%RSD	265.0	91.65	10.18	6.669	.3038	.1521	.3484	.0016	1.123
#1	-.0087	.0014	.4758	.1003	8.244	8.359	26.37	8.556	8.236
#2	.0052	.0465	.5503	.1142	8.243	8.362	26.38	8.556	8.054
#3	-.0047	.0261	.5822	.1109	8.287	8.383	26.53	8.556	8.159
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: 5/1/2019 13:28:50 Type: QC
Method: SGS 3 NO Valve(v328) 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	**8.208**	**8.506**	**8.017**	**97.48**	**8.422**	**8.132**	**8.264**
Stddev	.041	.015	.019	.86	.013	.016	.081
%RSD	.4995	.1753	.2405	.8821	.1513	.1966	.9811
#1	8.186	8.507	8.022	97.73	8.416	8.151	8.284
#2	8.255	8.491	8.034	98.18	8.413	8.124	8.334
#3	8.183	8.521	7.996	96.52	8.437	8.123	8.175
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	**142990.**	**24347.**	**5754.1**	**9707.5**
Stddev	741.	102.	30.6	28.5
%RSD	.51842	.41994	.53095	.29396
#1	142490.	24229.	5761.4	9713.1
#2	142640.	24402.	5780.3	9732.8
#3	143850.	24411.	5720.5	9676.5

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/1/2019 13:34:52 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: ` 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**	**.0006**	**.0002**	**.0011**	**-.0011**	**-.0069**	**.0043**	**.0005**	**.0038**
Stddev	.0002	.0000	.0000	.0003	.0002	.0008	.0001	.0001	.0005
%RSD	29.20	2.893	17.14	22.81	16.88	11.20	3.214	19.39	13.15
#1	.0010	.0005	.0002	.0009	-.0013	-.0061	.0042	.0005	.0042
#2	.0005	.0006	.0002	.0010	-.0009	-.0070	.0045	.0004	.0039
#3	.0009	.0006	.0003	.0014	-.0011	-.0076	.0043	.0005	.0033
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	**-.0037**	**-.0007**	**.0003**	**-.0011**	**.0004**	**-.0023**	**.0010**	**322.0**	**204.0**
Stddev	.0005	.0001	.0011	.0011	.0011	.0024	.0033	4.7	.9
%RSD	12.70	8.622	314.9	101.1	292.7	103.1	313.2	1.470	.4656
#1	-.0033	-.0007	.0008	-.0023	.0005	-.0017	.0006	319.5	203.1
#2	-.0042	-.0008	.0010	-.0011	.0015	-.0003	.0045	318.9	203.9
#3	-.0037	-.0007	-.0009	-.0000	-.0008	-.0049	-.0020	327.4	205.0
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	**203.4**	**310.7**	**207.0**	**199.0**	**.0022**	**.0004**	**.0091**	**-.0019**	**-.0002**
Stddev	1.5	1.6	1.2	2.5	.0005	.0003	.0009	.0001	.0001
%RSD	.7500	.5156	.5936	1.280	22.02	89.02	10.09	4.661	26.91
#1	201.9	310.1	207.3	199.0	.0017	-.0000	.0098	-.0018	-.0001
#2	204.9	312.5	208.0	201.6	.0021	.0005	.0093	-.0019	-.0002
#3	203.4	309.5	205.6	196.5	.0027	.0006	.0081	-.0019	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: HSTD Acquired: 5/1/2019 13:34:52 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**.0025**	**.0018**	**-.0057**	**.0001**	**.0007**	**.0075**
Stddev	.0002	.0011	.0001	.0019	.0016	.0015	.0022
%RSD	21.40	45.79	5.220	33.09	1931.	202.8	29.65
#1	-.0010	.0014	.0017	-.0036	.0020	.0023	.0058
#2	-.0007	.0036	.0019	-.0062	-.0011	.0006	.0067
#3	-.0011	.0024	.0019	-.0073	-.0006	-.0007	.0100
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	**127350.**	**22971.**	**5276.0**	**8218.4**
Stddev	370.	129.	7.9	10.7
%RSD	.29080	.56110	.14939	.13037
#1	127700.	23117.	5273.7	8211.8
#2	127380.	22875.	5269.4	8212.7
#3	126970.	22921.	5284.7	8230.8

Zoom In Zoom Out

Sample Name: FECONF Acquired: 5/1/2019 13:40:27 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**.0002**	**.0009**	**-.0014**	**-.0076**	**.0043**	**.0003**
Stddev	.0002	.0000	.0001	.0000	.0001	.0003	.0002	.0003
%RSD	223.8	38.40	45.45	5.088	7.947	4.480	4.176	79.17
#1	.0003	-.0001	.0001	.0009	-.0013	-.0080	.0041	.0002
#2	-.0001	-.0001	.0001	.0008	-.0013	-.0074	.0045	.0002
#3	.0001	-.0001	.0003	.0009	-.0015	-.0075	.0044	.0006

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**-.0038**	**-.0011**	**-.0023**	F **-.0030**	**-.0005**	**-.0035**	**.0039**
Stddev	.0003	.0001	.0001	.0009	.0005	.0006	.0011	.0012
%RSD	15.65	2.700	8.056	39.89	16.21	120.9	30.53	30.58
#1	.0018	-.0037	-.0012	-.0021	-.0026	-.0011	-.0030	.0053
#2	.0024	-.0039	-.0012	-.0034	-.0029	.0000	-.0047	.0035
#3	.0019	-.0038	-.0010	-.0015	-.0036	-.0003	-.0027	.0030

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0023**	**.0064**	**195.7**	**-.0008**	**.3195**	**.1283**	**-.0000**	**.0001**
Stddev	.0111	.0025	3.2	.0006	.0429	.0104	.0007	.0002
%RSD	486.7	39.60	1.632	77.53	13.44	8.075	1998.	235.7
#1	-.0081	.0043	195.4	-.0005	.3485	.1360	.0004	-.0001
#2	-.0093	.0057	199.0	-.0014	.3399	.1324	.0004	.0001
#3	.0105	.0093	192.7	-.0004	.2702	.1165	-.0009	.0003

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055**	**.0000**	**.0000**	**-.0000**	**.0001**	**.0013**	**-.0012**	**.0064**
Stddev	.0012	.0005	.0001	.0002	.0009	.0001	.0017	.0012
%RSD	21.37	1855.	413.3	613.5	778.0	9.440	145.2	19.60
#1	.0042	.0003	.0000	-.0001	-.0001	.0012	-.0031	.0077
#2	.0058	-.0006	-.0001	.0002	-.0007	.0013	.0003	.0062
#3	.0064	.0003	.0001	-.0002	.0012	.0014	-.0008	.0052

Zoom In Zoom Out

Sample Name: FECONF Acquired: 5/1/2019 13:40:27 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0205**	**-.0017**
Stddev	.0002	.0004
%RSD	1.042	20.92
#1	-.0205	-.0019
#2	-.0206	-.0013
#3	-.0202	-.0020

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**144610.**	**24119.**	**5802.9**	**9824.2**
Stddev	2130.	128.	14.2	11.5
%RSD	1.4730	.52993	.24514	.11753
#1	143480.	24108.	5786.6	9811.1
#2	143280.	24252.	5812.9	9832.9
#3	147060.	23997.	5809.0	9828.6

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 5/1/2019 13:45:41 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	F **10.09**	**.0001**	**-.0015**	**-.0001**	**.0000**
Stddev	.0002	.0000	.0003	.0002	.11	.0001	.0000	.0001	.0001
%RSD	58.53	13.01	1152.	32.84	1.108	45.86	1.767	262.4	630.9
#1	.0001	-.0001	.0001	-.0006	9.986	.0001	-.0015	-.0002	.0000
#2	.0004	-.0001	-.0004	-.0003	10.07	.0001	-.0016	.0000	.0001
#3	.0005	-.0001	.0002	-.0006	10.21	.0002	-.0015	.0001	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0050**	**.0022**	**.0005**	**-.0012**	**.0001**	**.0004**	**.0016**	**-.0013**	**.0173**
Stddev	.0011	.0001	.0004	.0021	.0008	.0014	.0038	.0037	.0025
%RSD	21.99	4.634	89.65	169.4	883.6	388.7	238.3	295.2	14.40
#1	-.0061	.0021	.0010	-.0013	.0010	-.0012	.0051	-.0042	.0145
#2	-.0049	.0023	.0002	.0009	-.0000	.0015	.0021	.0030	.0183
#3	-.0039	.0022	.0003	-.0033	-.0007	.0009	-.0024	-.0026	.0192

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0146**	**.0118**	**.3357**	**.0765**	**.0016**	**.0007**	**.0107**	**-.0008**	**.0001**
Stddev	.0032	.0069	.0095	.0064	.0007	.0001	.0013	.0001	.0000
%RSD	22.00	58.30	2.825	8.325	41.52	10.85	11.96	15.58	57.98
#1	.0183	.0106	.3467	.0804	.0024	.0006	.0101	-.0008	.0001
#2	.0130	.0191	.3298	.0691	.0011	.0007	.0098	-.0009	.0000
#3	.0124	.0056	.3307	.0799	.0014	.0008	.0121	-.0006	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0028**	**.0065**	**.0042**	**.0044**	**-.0032**	**-.0129**	**-.0023**
Stddev	.0003	.0006	.0001	.0020	.0011	.0005	.0015
%RSD	10.19	9.552	2.465	46.33	34.52	3.827	62.42
#1	-.0026	.0061	.0041	.0021	-.0020	-.0132	-.0011
#2	-.0027	.0072	.0043	.0060	-.0034	-.0123	-.0040
#3	-.0031	.0062	.0043	.0050	-.0043	-.0131	-.0020

Zoom In Zoom Out

Sample Name: CRCONF Acquired: 5/1/2019 13:45:41 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**147420.**	**24070.**	**5782.9**	**9924.2**
Stddev	218.	51.	4.4	10.9
%RSD	.14767	.21204	.07686	.11008
#1	147660.	24128.	5783.8	9923.8
#2	147370.	24032.	5778.1	9913.6
#3	147230.	24050.	5786.8	9935.4

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 5/1/2019 13:50:58 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0001**	W **-.0011**	**-.0001**	**-.0001**	**.0003**	**.0000**	**.0002**
Stddev	.0001	.0000	.0005	.0001	.0003	.0003	.0000	.0001
%RSD	56.86	38.37	40.95	97.58	425.3	125.7	350.2	28.07
#1	-.0003	-.0001	-.0013	-.0000	-.0002	.0005	-.0000	.0002
#2	-.0003	-.0001	-.0006	-.0001	-.0003	.0003	.0000	.0002
#3	-.0001	-.0001	-.0015	-.0002	.0002	-.0001	-.0000	.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0003**	**-.0007**	**5.386**	**-.0001**	**.0001**	**-.0002**	**.0013**
Stddev	.0002	.0001	.0001	.008	.0009	.0007	.0010	.0002
%RSD	113.3	25.98	11.21	.1429	662.2	605.3	637.4	18.83
#1	.0000	.0003	-.0007	5.384	-.0009	.0003	.0010	.0011
#2	.0004	.0004	-.0007	5.380	.0008	.0007	-.0006	.0015
#3	.0001	.0002	-.0006	5.395	-.0003	-.0007	-.0008	.0012

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0101**	**-.0594**	**.0029**	**.0103**	**.2576**	**.0441**	**-.0003**	**-.0000**
Stddev	.0087	.0017	.0011	.0155	.0373	.0033	.0006	.0001
%RSD	85.89	2.839	39.04	150.8	14.46	7.405	201.7	528.1
#1	-.0201	-.0576	.0022	-.0048	.2161	.0425	.0004	-.0001
#2	-.0049	-.0598	.0041	.0095	.2686	.0479	-.0006	-.0001
#3	-.0053	-.0609	.0022	.0262	.2881	.0419	-.0006	.0001

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**.0002**	**-.0002**	**-.0000**	**-.0001**	**-.0000**	**.0013**	**-.0013**
Stddev	.0007	.0001	.0001	.0003	.0009	.0000	.0017	.0009
%RSD	20.78	24.25	62.67	1103.	598.9	99.25	127.6	68.67
#1	.0029	.0002	-.0003	.0002	-.0012	-.0001	.0017	-.0020
#2	.0026	.0002	-.0001	-.0003	.0002	.0000	.0029	-.0003
#3	.0039	.0003	-.0002	-.0000	.0005	-.0001	-.0005	-.0016

Zoom In Zoom Out

Sample Name: ASCONF Acquired: 5/1/2019 13:50:58 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0142**	**-.0021**
Stddev	.0004	.0010
%RSD	3.037	47.93
#1	-.0145	-.0032
#2	-.0145	-.0015
#3	-.0137	-.0015

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**146980.**	**24310.**	**5958.9**	**9929.7**
Stddev	583.	50.	5.1	1.7
%RSD	.39654	.20639	.08617	.01751
#1	147330.	24315.	5961.7	9928.9
#2	146300.	24357.	5952.9	9928.6
#3	147300.	24257.	5961.9	9931.7

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/1/2019 13:56:03 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**2.098**	**2.044**	**2.064**	**2.053**	**2.031**	**2.072**	**2.064**	**.2553**
Stddev	.004	.002	.002	.003	.004	.004	.020	.003	.0005
%RSD	.1998	.1109	.1127	.1208	.2051	.1773	.9473	.1499	.1930
#1	2.040	2.097	2.046	2.064	2.054	2.035	2.068	2.063	.2552
#2	2.044	2.101	2.045	2.066	2.049	2.028	2.055	2.067	.2548
#3	2.048	2.096	2.041	2.061	2.057	2.031	2.093	2.061	.2558
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**	**2.065**	**2.012**	**2.120**	**2.058**	**2.040**	**2.020**	**40.99**	**41.12**
Stddev	.003	.001	.001	.010	.004	.002	.004	.03	.07
%RSD	.1545	.0452	.0709	.4926	.2030	.0906	.2201	.0705	.1642
#1	2.041	2.066	2.014	2.112	2.061	2.037	2.025	40.97	41.05
#2	2.038	2.065	2.011	2.132	2.060	2.041	2.020	41.02	41.18
#3	2.044	2.065	2.011	2.115	2.053	2.040	2.016	40.97	41.15
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	**41.04**	**40.97**	**41.07**	**41.09**	**2.063**	**2.037**	**5.079**	**2.058**	**2.070**
Stddev	.04	.03	.13	.05	.002	.001	.034	.002	.004
%RSD	.0885	.0802	.3183	.1177	.0831	.0431	.6611	.0765	.1672
#1	41.01	41.00	41.18	41.04	2.064	2.037	5.058	2.060	2.066
#2	41.08	40.98	41.11	41.13	2.061	2.037	5.061	2.059	2.073
#3	41.02	40.94	40.93	41.10	2.064	2.036	5.118	2.057	2.072
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: 5/1/2019 13:56:03 Type: QC
Method: SGS 3 NO Valve(v328) 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	**2.017**	**1.979**	**2.020**	**2.041**	**2.047**	**2.051**	**2.029**
Stddev	.002	.002	.002	.005	.004	.007	.012
%RSD	.0833	.1181	.1139	.2540	.1911	.3619	.5818
#1	2.016	1.982	2.021	2.037	2.051	2.043	2.017
#2	2.016	1.978	2.017	2.039	2.048	2.053	2.040
#3	2.019	1.978	2.021	2.047	2.043	2.058	2.030
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	**136220.**	**23525.**	**5613.8**	**8950.2**
Stddev	707.	80.	8.9	8.3
%RSD	.51866	.33992	.15912	.09289
#1	136820.	23522.	5605.4	8940.6
#2	136410.	23447.	5623.2	8956.0
#3	135440.	23607.	5612.8	8953.9

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/1/2019 14:01:05 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0000**	**.0001**	**.0001**	**-.0001**	**.0005**	**.0000**	**-.0001**
Stddev	.0002	.0000	.0001	.0001	.0002	.0002	.0000	.0004
%RSD	1780.	258.9	43.48	64.36	154.1	38.14	49.49	380.0
#1	.0002	-.0000	.0002	.0000	.0001	.0003	.0001	.0001
#2	-.0001	.0000	.0001	.0001	-.0002	.0006	.0000	-.0006
#3	-.0000	-.0000	.0002	.0001	-.0003	.0007	.0000	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0003**	**-.0005**	**.0010**	**-.0002**	**-.0001**	**-.0016**	**.0011**
Stddev	.0001	.0004	.0001	.0003	.0002	.0013	.0012	.0012
%RSD	33.83	121.9	12.57	29.14	93.48	907.5	74.96	107.8
#1	.0001	.0005	-.0005	.0013	-.0003	-.0002	-.0007	.0020
#2	.0003	-.0001	-.0005	.0007	.0000	-.0014	-.0011	-.0002
#3	.0002	.0006	-.0006	.0010	-.0003	.0012	-.0029	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**-.0019**	**.0013**	**.0064**	**.1960**	**.0381**	**.0014**	**.0001**
Stddev	.0132	.0019	.0009	.0087	.0147	.0046	.0003	.0002
%RSD	623.8	100.4	65.66	136.0	7.485	11.98	23.08	160.4
#1	-.0161	-.0021	.0006	.0047	.1875	.0427	.0017	-.0000
#2	-.0003	-.0037	.0011	-.0013	.2129	.0381	.0011	.0004
#3	.0100	.0001	.0023	.0158	.1875	.0336	.0013	.0001
Check ?	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: 5/1/2019 14:01:05 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0013**	**.0000**	**.0001**	**.0003**	**-.0002**	**.0001**	**.0003**	**-.0014**
Stddev	.0003	.0003	.0000	.0003	.0001	.0002	.0025	.0012
%RSD	24.65	921.5	13.25	101.5	41.50	321.6	964.0	84.40
#1	.0014	-.0000	.0001	.0004	-.0002	-.0002	.0013	-.0004
#2	.0015	-.0002	.0001	-.0000	-.0002	.0002	-.0026	-.0026
#3	.0009	.0004	.0001	.0004	-.0001	.0002	.0021	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0115**	**-.0024**
Stddev	.0004	.0022
%RSD	3.306	91.24
#1	-.0113	-.0049
#2	-.0119	-.0020
#3	-.0112	-.0005
Check ?	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	**145440.**	**23815.**	**5862.5**	**9796.8**
Stddev	603.	61.	14.2	10.4
%RSD	.41431	.25445	.24147	.10622
#1	145780.	23860.	5846.4	9787.6
#2	144750.	23746.	5873.0	9808.1
#3	145800.	23839.	5868.1	9794.7

Zoom In Zoom Out

Sample Name: MP14600-MB1conf Acquired: 5/1/2019 14:06:12 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**.0009**	**.0018**	**.0022**	**.0009**	**.0001**
Stddev	.0004	.0000	.0002	.0002	.0003	.0007	.0000	.0003	.0001
%RSD	141.4	649.2	542.3	287.5	27.16	36.90	1.731	29.33	174.5
#1	.0007	.0000	.0002	-.0001	.0008	.0023	.0022	.0012	.0001
#2	.0000	-.0000	-.0002	.0002	.0012	.0011	.0022	.0010	.0001
#3	.0001	.0000	.0002	.0001	.0008	.0021	.0022	.0006	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0071**	**.0002**	**-.0003**	**-.0002**	**.0011**	**-.0004**	**.1026**	**.0750**
Stddev	.0001	.0001	.0015	.0011	.0001	.0009	.0002	.0070	.0013
%RSD	54.09	1.263	962.8	337.1	72.92	83.44	58.70	6.851	1.776
#1	.0003	.0071	-.0006	.0005	-.0001	.0019	-.0003	.1105	.0763
#2	.0003	.0070	.0018	-.0016	-.0003	.0011	-.0006	.1000	.0750
#3	.0001	.0071	-.0008	.0001	-.0001	.0002	-.0002	.0971	.0737

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1563**	**.0665**	**.1291**	**.0776**	**.0007**	**.0003**	**.0211**	**.0194**	**.0005**
Stddev	.0004	.0157	.0491	.0098	.0003	.0001	.0010	.0004	.0000
%RSD	.2547	23.65	38.05	12.67	42.48	45.61	4.548	2.034	9.411
#1	.1562	.0508	.1703	.0836	.0007	.0003	.0206	.0199	.0005
#2	.1559	.0663	.1422	.0831	.0010	.0002	.0222	.0192	.0004
#3	.1567	.0823	.0747	.0663	.0004	.0004	.0205	.0192	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0016**	**.0003**	**.0111**	**-.0017**	**-.0096**	**.0227**
Stddev	.0003	.0006	.0003	.0012	.0010	.0020	.0003
%RSD	12.60	35.76	83.40	10.39	57.70	20.64	1.268
#1	.0024	.0017	.0002	.0115	-.0020	-.0093	.0228
#2	.0019	.0021	.0002	.0120	-.0006	-.0118	.0224
#3	.0023	.0010	.0006	.0098	-.0024	-.0079	.0229

Zoom In Zoom Out

Sample Name: MP14600-MB1conf Acquired: 5/1/2019 14:06:12 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**149420.**	**24668.**	**6011.5**	**9966.9**
Stddev	421.	86.	4.1	5.3
%RSD	.28156	.34732	.06820	.05298
#1	148970.	24570.	6014.2	9963.7
#2	149500.	24716.	6013.5	9973.0
#3	149800.	24719.	6006.8	9964.0

Zoom In Zoom Out

Sample Name: MP14600-B1 7 Acquired: 5/1/2019 14:11:18 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.066**	**2.123**	**2.043**	**2.085**	**2.060**	**2.055**	**2.061**	**2.084**	**.2547**
Stddev	.001	.005	.001	.002	.004	.002	.016	.002	.0002
%RSD	.0312	.2301	.0557	.0822	.2156	.1174	.7908	.0734	.0723
#1	2.066	2.127	2.043	2.083	2.060	2.054	2.057	2.082	.2546
#2	2.065	2.117	2.045	2.085	2.065	2.058	2.079	2.085	.2549
#3	2.066	2.124	2.042	2.086	2.056	2.055	2.047	2.085	.2545

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.043**	**2.082**	**1.966**	**2.141**	**2.078**	**2.015**	**1.978**	**25.45**	**25.76**
Stddev	.002	.003	.003	.004	.002	.002	.003	.04	.04
%RSD	.1067	.1417	.1732	.1636	.0904	.1116	.1390	.1417	.1658
#1	2.045	2.082	1.969	2.145	2.076	2.017	1.978	25.46	25.80
#2	2.044	2.085	1.962	2.139	2.078	2.015	1.980	25.41	25.71
#3	2.041	2.079	1.965	2.139	2.079	2.013	1.974	25.48	25.76

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.69**	**25.66**	**25.51**	**25.88**	**2.021**	**2.005**	**.0186**	**2.058**	**2.095**
Stddev	.04	.02	.10	.02	.005	.002	.0011	.003	.002
%RSD	.1505	.0710	.3820	.0774	.2503	.1153	6.033	.1613	.1161
#1	25.72	25.64	25.53	25.87	2.015	2.005	.0195	2.062	2.098
#2	25.65	25.68	25.41	25.87	2.023	2.008	.0190	2.056	2.094
#3	25.69	25.66	25.60	25.91	2.025	2.003	.0174	2.056	2.094

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.998**	**1.636**	**1.988**	**.0173**	**.0685**	**-.0072**	**1.967**
Stddev	.000	.002	.001	.0010	.0012	.0011	.007
%RSD	.0082	.1277	.0645	5.496	1.740	14.98	.3525
#1	1.998	1.634	1.988	.0164	.0697	-.0083	1.973
#2	1.998	1.638	1.989	.0171	.0674	-.0062	1.969
#3	1.998	1.635	1.987	.0183	.0684	-.0072	1.960

Zoom In Zoom Out

Sample Name: MP14600-B1 7 Acquired: 5/1/2019 14:11:18 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142340.**	**24070.**	**5769.8**	**9241.7**
Stddev	441.	38.	18.1	18.7
%RSD	.30995	.15695	.31400	.20201
#1	142850.	24106.	5760.2	9230.8
#2	142110.	24074.	5758.4	9231.0
#3	142070.	24030.	5790.7	9263.3

Zoom In Zoom Out

Sample Name: MP14600-S1 Acquired: 5/1/2019 14:16:17 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.490**	**2.006**	**1.979**	**1.801**	**3.022**	**1.944**	**3.692**	**1.934**	**.2171**
Stddev	.008	.005	.016	.012	.088	.043	.095	.013	.0040
%RSD	.3049	.2635	.8227	.6493	2.909	2.240	2.585	.6548	1.822
#1	2.484	2.005	1.967	1.791	3.042	1.950	3.682	1.923	.2141
#2	2.498	2.012	1.998	1.814	3.099	1.985	3.792	1.948	.2157
#3	2.488	2.001	1.972	1.798	2.926	1.898	3.602	1.931	.2216

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.772**	**2.985**	**2.144**	**1.711**	**1.834**	**1.855**	**1.023**	**194.7**	**38.44**
Stddev	.105	.026	.017	.010	.012	.016	.009	2.5	.08
%RSD	2.775	.8797	.7952	.5946	.6264	.8665	.9092	1.291	.2104
#1	3.792	2.969	2.128	1.701	1.825	1.836	1.016	192.4	38.40
#2	3.864	3.015	2.162	1.721	1.847	1.865	1.033	197.4	38.53
#3	3.658	2.970	2.143	1.709	1.831	1.863	1.019	194.5	38.38

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1051.**	**54.71**	**80.31**	**26.13**	**2.201**	**1.846**	**3.613**	**1.785**	**2.163**
Stddev	13.	.15	.27	.09	.020	.016	.032	.015	.004
%RSD	1.277	.2718	.3345	.3377	.8936	.8445	.8886	.8159	.1813
#1	1038.	54.60	80.19	26.04	2.186	1.833	3.584	1.776	2.161
#2	1049.	54.88	80.62	26.22	2.223	1.863	3.648	1.802	2.168
#3	1065.	54.65	80.13	26.13	2.194	1.840	3.607	1.777	2.161

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.666**	**1.444**	**1.866**	**2.575**	**.2260**	**.0415**	F **18.82**
Stddev	.152	.012	.048	.021	.0125	.0012	.14
%RSD	2.690	.8062	2.563	.8187	5.523	2.990	.7278
#1	5.697	1.436	1.877	2.554	.2285	.0426	18.73
#2	5.801	1.458	1.908	2.596	.2370	.0402	18.97
#3	5.501	1.439	1.814	2.576	.2124	.0418	18.75

Zoom In Zoom Out

Sample Name: MP14600-S1 Acquired: 5/1/2019 14:16:17 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**141060.**	**25073.**	**5722.1**	**10003.**
Stddev	3992.	95.	52.8	64.
%RSD	2.8300	.37792	.92234	.63875
#1	140180.	25178.	5734.8	10021.
#2	137590.	25048.	5664.1	9931.9
#3	145420.	24994.	5767.3	10056.

Zoom In Zoom Out

Sample Name: MP14600-S2 Acquired: 5/1/2019 14:21:33 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.475**	**1.962**	**1.949**	**1.788**	**2.949**	**1.939**	**3.710**	**1.922**	**.2250**
Stddev	.005	.002	.007	.004	.004	.006	.015	.002	.0056
%RSD	.2068	.1050	.3414	.2134	.1304	.3298	.4145	.1023	2.487
#1	2.471	1.961	1.941	1.783	2.952	1.947	3.720	1.920	.2312
#2	2.481	1.965	1.951	1.790	2.944	1.936	3.692	1.924	.2237
#3	2.474	1.961	1.954	1.790	2.950	1.935	3.718	1.921	.2202

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.689**	**2.929**	**2.124**	**1.696**	**1.823**	**1.832**	**1.007**	**193.7**	**48.77**
Stddev	.006	.007	.002	.005	.001	.005	.002	3.3	.07
%RSD	.1555	.2272	.0741	.3254	.0688	.2970	.1938	1.698	.1453
#1	3.696	2.921	2.122	1.701	1.822	1.836	1.005	196.7	48.81
#2	3.686	2.931	2.124	1.697	1.825	1.834	1.007	194.1	48.82
#3	3.686	2.934	2.125	1.690	1.823	1.826	1.009	190.2	48.69

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1020.**	**56.90**	**79.41**	**25.93**	**2.165**	**1.836**	**4.047**	**1.778**	**2.157**
Stddev	20.	.14	.20	.04	.006	.004	.007	.004	.003
%RSD	1.926	.2442	.2504	.1404	.2827	.2117	.1799	.2203	.1191
#1	1040.	57.04	79.33	25.93	2.159	1.832	4.039	1.774	2.155
#2	1017.	56.91	79.64	25.97	2.165	1.837	4.050	1.777	2.160
#3	1001.	56.76	79.27	25.90	2.172	1.840	4.053	1.782	2.156

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.621**	**1.464**	**1.875**	**2.043**	**.2123**	**.0409**	F **18.08**
Stddev	.009	.004	.003	.005	.0011	.0012	.30
%RSD	.1504	.2586	.1840	.2648	.5204	2.973	1.634
#1	5.630	1.460	1.879	2.047	.2130	.0403	18.32
#2	5.619	1.467	1.874	2.046	.2110	.0402	18.17
#3	5.613	1.465	1.873	2.037	.2128	.0423	17.75

Zoom In Zoom Out

Sample Name: MP14600-S2 Acquired: 5/1/2019 14:21:33 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**139340.**	**24866.**	**5699.4**	**9891.6**
Stddev	163.	217.	15.8	12.1
%RSD	.11684	.87457	.27713	.12251
#1	139290.	24617.	5711.7	9893.2
#2	139200.	24961.	5704.9	9902.8
#3	139520.	25019.	5681.6	9878.7

Zoom In Zoom Out

Sample Name: JC86989-3 Acquired: 5/1/2019 14:26:48 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.5080**	**.0155**	**.0072**	**.0887**	**1.095**	*****	**1.824**	**.2197**
Stddev	.0009	.0001	.0002	.0003	.000	-----	.004	.0006
%RSD	.1743	.4735	2.213	.3021	.0312	-----	.2321	.2700
#1	.5090	.0156	.0072	.0891	1.095	-----	1.827	.2192
#2	.5078	.0154	.0073	.0886	1.095	-----	1.819	.2203
#3	.5073	.0155	.0070	.0886	1.095	-----	1.824	.2195

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	**1.875**	**1.163**	**.2352**	F **-.1095**	**.1765**	F **-.2171**	**.0841**
Stddev	-----	.001	.001	.0014	.0017	.0011	.0016	.0014
%RSD	-----	.0402	.0916	.6147	1.554	.6246	.7290	1.613
#1	-----	1.875	1.164	.2343	-.1100	.1768	-.2159	.0826
#2	-----	1.876	1.162	.2369	-.1108	.1753	-.2165	.0847
#3	-----	1.874	1.163	.2345	-.1076	.1775	-.2189	.0851

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**160.0**	**14.69**	F **1074.**	**30.51**	**52.46**	**1.255**	**.3642**	**-.0064**
Stddev	.0	.01	6.	.03	.07	.005	.0009	.0002
%RSD	.0219	.0610	.5252	.1143	.1320	.4226	.2587	3.414
#1	160.0	14.69	1068.	30.55	52.38	1.256	.3652	-.0062
#2	160.0	14.68	1075.	30.50	52.51	1.250	.3634	-.0064
#3	160.0	14.70	1079.	30.49	52.49	1.260	.3640	-.0066

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.779**	**.0196**	**.1541**	**3.509**	**.0183**	**.0037**	**2.175**	**.0997**
Stddev	.008	.0005	.0001	.000	.0008	.0001	.008	.0006
%RSD	.2834	2.696	.0451	.0109	4.487	3.705	.3799	.6499
#1	2.785	.0191	.1541	3.509	.0175	.0036	2.184	.1001
#2	2.781	.0197	.1540	3.509	.0182	.0037	2.175	.0990
#3	2.770	.0201	.1542	3.509	.0192	.0038	2.168	.1002

Zoom In Zoom Out

Sample Name: JC86989-3 Acquired: 5/1/2019 14:26:48 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0815**	F **16.45**
Stddev	.0007	.08
%RSD	.8118	.5064
#1	.0812	16.53
#2	.0823	16.45
#3	.0810	16.36

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**140970.**	**25034.**	**5817.1**	**10121.**
Stddev	496.	221.	13.4	15.
%RSD	.35166	.88224	.22975	.14563
#1	140600.	24836.	5814.1	10124.
#2	141530.	25272.	5831.7	10135.
#3	140780.	24993.	5805.4	10105.

Zoom In Zoom Out

Sample Name: MP14600-SD1 Acquired: 5/1/2019 14:31:59 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.5225**	**.0150**	**.0078**	**.1005**	**1.157**	*****	**1.931**	**.2575**
Stddev	.0014	.0002	.0002	.0006	.008	-----	.016	.0009
%RSD	.2628	1.228	1.986	.6076	.6729	-----	.8476	.3363
#1	.5223	.0150	.0079	.1002	1.159	-----	1.939	.2575
#2	.5213	.0148	.0079	.1001	1.149	-----	1.912	.2565
#3	.5240	.0152	.0076	.1012	1.164	-----	1.941	.2583

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.3002**	**1.943**	**1.258**	**.2328**	F **-.1251**	**.2018**	F **-.2305**	**.0927**
Stddev	.0045	.017	.001	.0021	.0019	.0051	.0082	.0058
%RSD	1.500	.8581	.1132	.9184	1.558	2.539	3.570	6.239
#1	-.3044	1.950	1.260	.2322	-.1256	.2055	-.2222	.0986
#2	-.2954	1.923	1.257	.2352	-.1230	.1960	-.2386	.0924
#3	-.3007	1.954	1.259	.2310	-.1269	.2040	-.2308	.0870

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**165.9**	**15.69**	F **1325.**	**33.42**	**55.70**	**1.399**	**.3929**	**-.0080**
Stddev	.4	.07	30.	.15	.08	.010	.0038	.0006
%RSD	.2267	.4409	2.240	.4493	.1494	.7307	.9697	7.800
#1	166.2	15.76	1349.	33.59	55.71	1.410	.3973	-.0076
#2	165.5	15.62	1292.	33.29	55.62	1.389	.3908	-.0077
#3	166.1	15.68	1334.	33.39	55.78	1.398	.3905	-.0087

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.899**	**.0206**	**.1597**	**3.602**	**.0262**	**-.0014**	**2.253**	**.0823**
Stddev	.007	.0049	.0002	.032	.0110	.0007	.009	.0058
%RSD	.2358	23.76	.1180	.8810	41.86	51.32	.3810	7.020
#1	2.892	.0220	.1597	3.622	.0324	-.0006	2.245	.0762
#2	2.905	.0152	.1595	3.565	.0135	-.0020	2.262	.0877
#3	2.901	.0247	.1599	3.619	.0327	-.0016	2.251	.0832

Zoom In Zoom Out

Sample Name: MP14600-SD1 Acquired: 5/1/2019 14:31:59 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0249**	**17.12**
Stddev	.0023	.11
%RSD	9.142	.6609
#1	.0274	17.15
#2	.0242	17.20
#3	.0230	16.99

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**142070.**	**23899.**	**5858.8**	**9644.7**
Stddev	1060.	218.	18.8	21.9
%RSD	.74608	.91118	.32103	.22743
#1	142190.	23669.	5837.1	9619.9
#2	143060.	24101.	5870.4	9652.9
#3	140950.	23929.	5868.9	9661.4

Zoom In Zoom Out

Sample Name: JC86989-1 Acquired: 5/1/2019 14:37:06 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3829**	**.0116**	**.0020**	**.0765**	**.8406**	*****	**1.269**	**.1802**
Stddev	.0003	.0001	.0001	.0003	.0029	-----	.003	.0003
%RSD	.0660	.9370	4.793	.3632	.3473	-----	.2477	.1742
#1	.3827	.0117	.0020	.0762	.8439	-----	1.272	.1801
#2	.3832	.0115	.0021	.0764	.8384	-----	1.267	.1806
#3	.3828	.0116	.0019	.0768	.8394	-----	1.267	.1800

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	**1.504**	**.8239**	**.1543**	F **-.0872**	**.2084**	F **-.1336**	**.0544**
Stddev	-----	.005	.0011	.0003	.0009	.0003	.0020	.0007
%RSD	-----	.3189	.1343	.1712	1.051	.1291	1.514	1.205
#1	-----	1.510	.8248	.1545	-.0866	.2087	-.1321	.0545
#2	-----	1.501	.8227	.1540	-.0883	.2082	-.1359	.0550
#3	-----	1.502	.8241	.1543	-.0868	.2084	-.1328	.0537

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**136.9**	**15.88**	F **705.8**	**33.64**	**43.81**	**1.313**	**.3596**	**-.0026**
Stddev	.3	.05	13.1	.10	.07	.004	.0008	.0003
%RSD	.2233	.3280	1.849	.2864	.1597	.3009	.2309	11.82
#1	137.3	15.94	711.4	33.72	43.89	1.317	.3591	-.0024
#2	136.7	15.85	715.2	33.53	43.77	1.309	.3606	-.0025
#3	136.9	15.86	690.9	33.67	43.78	1.314	.3592	-.0029

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.960**	**.0168**	**.1459**	**3.421**	**.0144**	**.0276**	**1.281**	**-.0062**
Stddev	.001	.0005	.0004	.007	.0005	.0001	.002	.0010
%RSD	.0396	3.056	.2547	.1991	3.700	.4510	.1675	15.95
#1	1.960	.0174	.1463	3.428	.0145	.0276	1.281	-.0060
#2	1.960	.0165	.1456	3.421	.0139	.0276	1.284	-.0073
#3	1.961	.0165	.1457	3.415	.0149	.0278	1.280	-.0054

Zoom In Zoom Out

Sample Name: JC86989-1 Acquired: 5/1/2019 14:37:06 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0771**	F **11.03**
Stddev	.0008	.09
%RSD	1.059	.8074
#1	.0762	11.06
#2	.0773	10.93
#3	.0778	11.11

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**143380.**	**25126.**	**5916.2**	**9833.8**
Stddev	635.	226.	11.3	19.2
%RSD	.44314	.90144	.19157	.19569
#1	142710.	25073.	5913.5	9837.1
#2	143970.	24930.	5928.7	9851.1
#3	143470.	25374.	5906.5	9813.1

Zoom In Zoom Out

Sample Name: JC86989-2 Acquired: 5/1/2019 14:42:09 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3739**	**.0126**	**.0047**	**.0783**	**.8761**	*****	**1.258**	**.1843**
Stddev	.0093	.0004	.0001	.0003	.0021	-----	.001	.0009
%RSD	2.496	2.928	2.712	.4152	.2445	-----	.0972	.4822
#1	.3846	.0130	.0047	.0787	.8782	-----	1.259	.1849
#2	.3672	.0123	.0047	.0782	.8762	-----	1.257	.1833
#3	.3699	.0124	.0045	.0781	.8739	-----	1.258	.1848

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	**1.615**	**1.010**	**.1921**	F **-.0966**	**.1512**	F **-.1840**	**.0704**
Stddev	-----	.002	.008	.0024	.0015	.0024	.0013	.0007
%RSD	-----	.1023	.7882	1.250	1.604	1.573	.7178	.9487
#1	-----	1.616	1.015	.1946	-.0981	.1536	-.1830	.0703
#2	-----	1.613	1.001	.1898	-.0950	.1513	-.1836	.0711
#3	-----	1.614	1.014	.1919	-.0965	.1488	-.1855	.0698

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**130.3**	**9.278**	F **951.5**	**25.02**	**43.57**	**.8937**	**.2965**	**-.0060**
Stddev	3.6	.260	12.8	.70	1.18	.0153	.0027	.0006
%RSD	2.769	2.807	1.344	2.785	2.698	1.712	.9170	9.837
#1	134.5	9.578	964.9	25.82	44.92	.9090	.2985	-.0060
#2	128.1	9.109	950.1	24.56	42.76	.8935	.2934	-.0054
#3	128.4	9.147	939.4	24.68	43.04	.8785	.2976	-.0066

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.242**	**.0179**	**.1138**	**2.869**	**.0144**	**.0059**	**.6326**	**.0860**
Stddev	.016	.0006	.0031	.003	.0005	.0001	.0077	.0023
%RSD	.7211	3.265	2.691	.1068	3.469	2.396	1.220	2.719
#1	2.251	.0184	.1173	2.871	.0141	.0061	.6365	.0854
#2	2.223	.0180	.1118	2.865	.0141	.0059	.6237	.0841
#3	2.252	.0172	.1124	2.870	.0149	.0058	.6377	.0886

Zoom In Zoom Out

Sample Name: JC86989-2 Acquired: 5/1/2019 14:42:09 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0778**	F **12.29**
Stddev	.0034	.18
%RSD	4.399	1.465
#1	.0814	12.33
#2	.0774	12.10
#3	.0746	12.45

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**141230.**	**24493.**	**5843.7**	**10044.**
Stddev	406.	767.	36.6	43.
%RSD	.28757	3.1331	.62717	.43137
#1	140970.	23613.	5831.8	10032.
#2	141700.	25021.	5884.8	10091.
#3	141020.	24846.	5814.5	10007.

Zoom In Zoom Out

Sample Name: JC86989-4 Acquired: 5/1/2019 14:47:11 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.5685**	**.0182**	**.0029**	**.1052**	**1.470**	*****	**1.040**	**.2305**
Stddev	.0002	.0001	.0003	.0004	.007	-----	.003	.0004
%RSD	.0437	.4067	10.08	.3909	.4855	-----	.2860	.1771
#1	.5683	.0182	.0030	.1049	1.474	-----	1.043	.2301
#2	.5687	.0181	.0032	.1051	1.474	-----	1.041	.2305
#3	.5683	.0182	.0026	.1057	1.461	-----	1.037	.2309

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	**2.486**	**1.247**	**.2218**	F **-.1386**	**.2078**	F **-.2278**	**.0928**
Stddev	-----	.007	.003	.0010	.0010	.0012	.0045	.0019
%RSD	-----	.2894	.2078	.4335	.7529	.5717	1.995	2.101
#1	-----	2.493	1.248	.2225	-.1377	.2073	-.2284	.0906
#2	-----	2.486	1.249	.2221	-.1385	.2070	-.2321	.0937
#3	-----	2.479	1.244	.2207	-.1397	.2092	-.2230	.0942

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**172.7**	**12.97**	F **1119.**	**34.69**	**67.23**	**1.189**	**.4573**	**-.0082**
Stddev	.9	.01	6.	.03	.09	.003	.0001	.0002
%RSD	.5184	.0656	.5595	.0999	.1402	.2188	.0153	2.460
#1	173.3	12.98	1124.	34.73	67.32	1.187	.4574	-.0082
#2	171.7	12.96	1122.	34.66	67.24	1.188	.4573	-.0084
#3	173.2	12.96	1112.	34.69	67.13	1.192	.4574	-.0080

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.694**	**.0201**	**.1296**	**3.975**	**.0188**	**.0173**	**1.274**	**.0980**
Stddev	.144	.0006	.0003	.007	.0014	.0002	.009	.0025
%RSD	5.361	2.899	.2335	.1763	7.556	1.104	.7208	2.587
#1	2.861	.0197	.1299	3.981	.0204	.0172	1.285	.0970
#2	2.617	.0208	.1297	3.976	.0181	.0171	1.269	.0961
#3	2.605	.0198	.1293	3.967	.0178	.0175	1.270	.1009

Zoom In Zoom Out

Sample Name: JC86989-4 Acquired: 5/1/2019 14:47:11 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0761**	F **17.63**
Stddev	.0014	.13
%RSD	1.878	.7531
#1	.0777	17.78
#2	.0755	17.52
#3	.0750	17.59

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**142280.**	**25094.**	**5857.5**	**10109.**
Stddev	691.	50.	16.9	19.
%RSD	.48588	.20054	.28853	.18409
#1	141840.	25132.	5846.2	10100.
#2	141920.	25113.	5849.3	10096.
#3	143080.	25037.	5876.9	10130.

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/1/2019 14:52:16 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.067**	**2.097**	**2.059**	**2.085**	**2.068**	**2.056**	**2.080**	**2.091**	**.2572**
Stddev	.004	.000	.005	.004	.002	.001	.005	.001	.0004
%RSD	.1956	.0197	.2639	.1804	.0842	.0665	.2315	.0648	.1666
#1	2.064	2.097	2.065	2.089	2.067	2.055	2.076	2.093	.2576
#2	2.066	2.097	2.056	2.082	2.070	2.057	2.086	2.091	.2574
#3	2.072	2.098	2.056	2.084	2.067	2.054	2.078	2.090	.2568
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	**2.050**	**2.079**	**2.029**	**2.129**	**2.080**	**2.062**	**2.036**	**41.01**	**41.23**
Stddev	.000	.005	.006	.007	.005	.006	.005	.05	.00
%RSD	.0184	.2655	.2877	.3267	.2203	.2890	.2598	.1103	.0045
#1	2.050	2.085	2.035	2.137	2.085	2.069	2.042	40.97	41.23
#2	2.050	2.076	2.025	2.124	2.077	2.058	2.032	40.99	41.24
#3	2.051	2.076	2.026	2.125	2.078	2.059	2.033	41.06	41.24
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	**41.36**	**41.08**	**41.39**	**41.34**	**2.085**	**2.047**	**5.100**	**2.070**	**2.103**
Stddev	.02	.05	.08	.06	.003	.007	.013	.007	.002
%RSD	.0468	.1291	.1851	.1366	.1446	.3264	.2588	.3234	.0916
#1	41.37	41.07	41.31	41.31	2.088	2.055	5.115	2.077	2.104
#2	41.36	41.14	41.43	41.31	2.082	2.043	5.090	2.064	2.101
#3	41.34	41.04	41.45	41.40	2.083	2.043	5.096	2.068	2.104
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: 5/1/2019 14:52:16 Type: QC
Method: SGS 3 NO Valve(v328) 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	**2.042**	**2.007**	**2.034**	**2.038**	**2.074**	**2.037**	**1.920**
Stddev	.000	.003	.002	.009	.001	.003	.011
%RSD	.0127	.1539	.1026	.4374	.0595	.1467	.5547
#1	2.042	2.011	2.035	2.047	2.075	2.041	1.931
#2	2.042	2.006	2.035	2.029	2.073	2.037	1.910
#3	2.041	2.006	2.032	2.038	2.073	2.035	1.919
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	**137240.**	**23325.**	**5630.0**	**8941.7**
Stddev	739.	87.	12.2	8.0
%RSD	.53816	.37230	.21701	.08993
#1	138050.	23278.	5616.0	8932.5
#2	137030.	23271.	5638.5	8946.1
#3	136620.	23425.	5635.4	8946.7

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/1/2019 14:57:17 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0001**	**-.0001**	**.0000**	**-.0002**	**.0004**	**-.0000**	**.0003**
Stddev	.0004	.0000	.0002	.0001	.0003	.0003	.0000	.0003
%RSD	1267.	6.651	271.8	181.5	191.8	92.26	97.85	116.9
#1	.0002	-.0001	-.0000	.0001	.0002	.0003	-.0001	-.0001
#2	.0002	-.0001	-.0002	.0001	-.0004	.0007	.0000	.0003
#3	-.0005	-.0001	.0001	-.0000	-.0003	.0001	-.0001	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0001**	**-.0006**	**-.0007**	**-.0008**	**.0000**	**-.0016**	**-.0002**
Stddev	.0005	.0004	.0000	.0007	.0024	.0010	.0003	.0022
%RSD	272.5	559.3	4.453	93.98	313.3	2409.	20.66	1410.
#1	.0001	-.0004	-.0006	-.0005	.0008	.0002	-.0014	.0022
#2	.0001	.0003	-.0006	-.0014	.0004	-.0010	-.0014	-.0004
#3	-.0007	-.0001	-.0006	-.0001	-.0035	.0010	-.0020	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0052**	**-.0063**	**.0005**	**.0082**	**.3029**	**.0237**	**.0005**	**-.0000**
Stddev	.0155	.0023	.0011	.0119	.0252	.0071	.0003	.0000
%RSD	299.5	35.95	221.4	144.7	8.334	30.03	62.10	737.5
#1	.0183	-.0063	-.0003	.0044	.3183	.0274	.0005	-.0000
#2	.0090	-.0086	.0001	.0215	.3168	.0281	.0002	.0000
#3	-.0119	-.0041	.0017	-.0013	.2738	.0155	.0009	.0000
Check ?	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: 5/1/2019 14:57:17 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**-.0000**	**-.0001**	**.0000**	**.0008**	**-.0000**	**.0002**	**-.0015**
Stddev	.0004	.0002	.0000	.0002	.0008	.0001	.0023	.0014
%RSD	40.68	1032.	53.71	648.4	98.31	152.3	1474.	94.78
#1	.0005	-.0001	-.0000	-.0001	.0015	.0000	-.0015	-.0029
#2	.0011	-.0001	-.0001	-.0001	-.0001	-.0001	.0027	-.0014
#3	.0012	.0002	-.0001	.0003	.0010	-.0000	-.0008	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0111**	**.0055**
Stddev	.0011	.0009
%RSD	9.786	15.84
#1	-.0099	.0056
#2	-.0116	.0064
#3	-.0119	.0046
Check ?	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	**145730.**	**23459.**	**5897.1**	**9795.6**
Stddev	601.	137.	12.1	14.2
%RSD	.41267	.58419	.20574	.14521
#1	145100.	23304.	5883.8	9780.0
#2	145800.	23564.	5907.6	9799.0
#3	146300.	23508.	5899.9	9807.8

Zoom In Zoom Out

Sample Name: JC86989-5 Acquired: 5/1/2019 15:02:25 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3124**	**.0106**	**.0034**	**.0611**	**.7165**	*****	**1.091**	**.1374**
Stddev	.0001	.0001	.0003	.0001	.0008	-----	.001	.0007
%RSD	.0366	.9547	8.769	.1931	.1130	-----	.1228	.4774
#1	.3124	.0107	.0037	.0610	.7168	-----	1.092	.1378
#2	.3123	.0105	.0031	.0612	.7156	-----	1.090	.1367
#3	.3125	.0107	.0035	.0612	.7171	-----	1.092	.1379

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	**1.196**	**.7273**	**.1523**	F **-.0742**	**.1485**	F **-.1307**	**.0530**
Stddev	-----	.001	.0006	.0008	.0012	.0009	.0019	.0007
%RSD	-----	.0935	.0865	.4966	1.631	.5984	1.490	1.341
#1	-----	1.197	.7280	.1531	-.0729	.1486	-.1297	.0538
#2	-----	1.195	.7271	.1517	-.0754	.1494	-.1330	.0528
#3	-----	1.197	.7268	.1519	-.0743	.1476	-.1294	.0524

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**111.2**	**10.29**	F **707.6**	**18.92**	**32.47**	**.9951**	**.2368**	**-.0033**
Stddev	.2	.02	4.8	.04	.08	.0111	.0007	.0002
%RSD	.1495	.1958	.6772	.2338	.2499	1.112	.2766	6.402
#1	111.3	10.31	704.8	18.96	32.43	.9866	.2368	-.0031
#2	111.1	10.27	704.7	18.88	32.42	1.008	.2374	-.0035
#3	111.3	10.30	713.1	18.91	32.57	.9911	.2361	-.0033

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.138**	**.0174**	**.1106**	**2.458**	**.0124**	**.0045**	**.8260**	**.0427**
Stddev	.005	.0002	.0001	.003	.0004	.0003	.0016	.0018
%RSD	.2213	1.023	.0648	.1128	3.523	7.413	.1966	4.126
#1	2.133	.0176	.1106	2.456	.0129	.0043	.8278	.0441
#2	2.143	.0174	.1106	2.456	.0122	.0048	.8251	.0407
#3	2.137	.0173	.1107	2.461	.0122	.0043	.8250	.0432

Zoom In Zoom Out

Sample Name: JC86989-5 Acquired: 5/1/2019 15:02:25 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0748**	F **11.35**
Stddev	.0015	.04
%RSD	2.023	.3158
#1	.0756	11.39
#2	.0730	11.33
#3	.0757	11.33

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**142790.**	**24835.**	**5922.3**	**9851.8**
Stddev	270.	108.	11.6	12.6
%RSD	.18901	.43503	.19506	.12746
#1	142660.	24800.	5912.8	9847.1
#2	143100.	24956.	5919.0	9842.3
#3	142610.	24749.	5935.1	9866.1

Zoom In Zoom Out

Sample Name: mp14600-s1 Acquired: 5/1/2019 15:07:25 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**2.632**	**2.118**	**2.087**	**2.172**	**3.309**	**2.003**	**4.148**	**2.354**	**.2715**
Stddev	.004	.009	.004	.003	.005	.004	.004	.005	.0021
%RSD	.1519	.4053	.2124	.1402	.1498	.1982	.0908	.2152	.7881
#1	2.636	2.126	2.092	2.170	3.308	2.006	4.147	2.350	.2730
#2	2.628	2.109	2.084	2.176	3.304	2.006	4.144	2.359	.2690
#3	2.631	2.118	2.086	2.170	3.314	1.999	4.152	2.352	.2724

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.031**	**3.349**	**2.240**	**2.146**	**2.267**	**2.012**	**1.067**	**206.7**	**42.15**
Stddev	.000	.009	.021	.009	.008	.023	.003	.8	.13
%RSD	.0071	.2793	.9327	.4393	.3535	1.123	.2358	.3864	.3097
#1	4.031	3.360	2.264	2.136	2.263	2.038	1.066	207.5	42.29
#2	4.031	3.342	2.223	2.155	2.261	2.002	1.066	206.0	42.02
#3	4.031	3.345	2.234	2.146	2.276	1.997	1.070	206.6	42.14

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1364.**	**61.72**	**87.05**	**27.84**	**2.437**	**2.002**	**4.008**	**2.016**	**2.306**
Stddev	5.	.22	.62	.03	.004	.002	.015	.004	.004
%RSD	.3361	.3519	.7130	.1066	.1440	.0920	.3814	.1867	.1625
#1	1368.	61.83	87.76	27.80	2.433	2.004	3.993	2.019	2.309
#2	1359.	61.47	86.70	27.86	2.439	2.000	4.024	2.012	2.302
#3	1363.	61.85	86.68	27.84	2.439	2.001	4.009	2.016	2.307

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.089**	**1.586**	**1.988**	**2.692**	**.1849**	**-.1025**	**19.89**
Stddev	.005	.016	.003	.032	.0098	.0050	.17
%RSD	.0851	1.037	.1243	1.168	5.326	4.878	.8333
#1	6.088	1.605	1.987	2.704	.1803	-.1026	20.05
#2	6.085	1.577	1.987	2.657	.1963	-.0975	19.72
#3	6.095	1.575	1.991	2.716	.1783	-.1075	19.89

Zoom In Zoom Out

Sample Name: mp14600-s1 Acquired: 5/1/2019 15:07:25 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142390.**	**23675.**	**5842.8**	**9500.8**
Stddev	612.	98.	17.1	16.7
%RSD	.43006	.41303	.29279	.17621
#1	142960.	23602.	5830.5	9495.5
#2	142460.	23636.	5862.3	9519.6
#3	141750.	23786.	5835.5	9487.4

Zoom In Zoom Out

Sample Name: mp14600-s2 Acquired: 5/1/2019 15:12:15 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**2.603**	**2.088**	**2.047**	**2.141**	**3.203**	**1.979**	**4.109**	**2.315**	**.2678**
Stddev	.005	.008	.016	.015	.018	.006	.008	.018	.0034
%RSD	.1861	.3948	.7962	.6978	.5523	.3308	.2006	.7876	1.280
#1	2.609	2.096	2.049	2.145	3.218	1.985	4.117	2.319	.2679
#2	2.599	2.090	2.030	2.125	3.207	1.979	4.110	2.296	.2643
#3	2.601	2.079	2.063	2.155	3.184	1.972	4.101	2.332	.2711

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.904**	**3.264**	**2.219**	**2.099**	**2.234**	**1.988**	**1.064**	**206.0**	**53.63**
Stddev	.016	.026	.009	.022	.013	.035	.025	.8	.29
%RSD	.4106	.7993	.3902	1.073	.5873	1.767	2.365	.3708	.5380
#1	3.921	3.269	2.219	2.102	2.227	1.989	1.052	206.9	53.93
#2	3.901	3.235	2.211	2.075	2.226	1.952	1.048	205.9	53.61
#3	3.890	3.287	2.228	2.119	2.249	2.022	1.093	205.4	53.35

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1279.**	**64.35**	**85.21**	**27.42**	**2.385**	**1.983**	**4.665**	**1.991**	**2.303**
Stddev	6.	.46	.62	.11	.020	.018	.034	.024	.008
%RSD	.4480	.7078	.7297	.4095	.8351	.8949	.7235	1.212	.3382
#1	1284.	64.83	85.90	27.54	2.384	1.986	4.672	1.995	2.309
#2	1281.	64.29	84.71	27.41	2.365	1.963	4.628	1.966	2.307
#3	1273.	63.92	85.01	27.32	2.405	1.998	4.695	2.014	2.295

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.975**	**1.595**	**1.980**	**2.142**	**.1738**	**-.0871**	**19.13**
Stddev	.016	.007	.005	.020	.0087	.0020	.21
%RSD	.2629	.4266	.2731	.9180	5.023	2.309	1.092
#1	5.993	1.589	1.986	2.136	.1654	-.0892	19.12
#2	5.969	1.593	1.979	2.125	.1828	-.0852	18.92
#3	5.963	1.602	1.976	2.164	.1730	-.0867	19.34

Zoom In Zoom Out

Sample Name: mp14600-s2 Acquired: 5/1/2019 15:12:15 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142650.**	**23516.**	**5885.0**	**9527.8**
Stddev	378.	251.	49.3	65.5
%RSD	.26528	1.0662	.83714	.68712
#1	142580.	23348.	5868.1	9504.9
#2	142320.	23396.	5940.5	9601.7
#3	143060.	23804.	5846.5	9476.9

Zoom In Zoom Out

Sample Name: jc86989-3 Acquired: 5/1/2019 15:17:07 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.5264**	**.0141**	**.0053**	**.0841**	**1.189**	**-.0059**	**2.130**	**.2591**	**.0074**
Stddev	.0030	.0007	.0005	.0013	.002	.0014	.002	.0025	.0068
%RSD	.5642	5.046	9.074	1.567	.1873	23.64	.1127	.9716	91.55
#1	.5243	.0133	.0048	.0850	1.187	-.0075	2.127	.2585	.0140
#2	.5252	.0144	.0057	.0826	1.190	-.0054	2.131	.2570	.0080
#3	.5298	.0146	.0055	.0847	1.190	-.0049	2.132	.2619	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.945**	**1.292**	**.3028**	**-.0191**	**.1576**	**-.0153**	**.0042**	**166.5**	**16.00**
Stddev	.004	.001	.0004	.0105	.0066	.0116	.0097	.4	.07
%RSD	.2069	.0620	.1342	55.06	4.180	76.04	230.8	.2105	.4567
#1	1.940	1.292	.3027	-.0311	.1500	-.0039	-.0025	166.1	15.91
#2	1.945	1.293	.3032	-.0116	.1616	-.0148	.0153	166.7	16.05
#3	1.948	1.291	.3024	-.0145	.1613	-.0272	-.0002	166.7	16.03

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1378.**	**34.14**	**55.08**	**1.162**	**.3936**	**.0037**	**2.940**	**.0218**	**.1640**
Stddev	1.	.20	.03	.086	.0062	.0019	.016	.0021	.0005
%RSD	.0430	.5729	.0613	7.431	1.565	50.37	.5297	9.840	.2881
#1	1377.	34.00	55.10	1.254	.3897	.0018	2.926	.0226	.1634
#2	1378.	34.05	55.04	1.151	.3904	.0038	2.957	.0234	.1642
#3	1378.	34.36	55.11	1.082	.4007	.0056	2.938	.0194	.1643

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.709**	**.0081**	**.1001**	**2.399**	**.0863**	**-.1134**	**19.43**
Stddev	.009	.0088	.0007	.016	.0062	.0065	.05
%RSD	.2293	108.6	.7336	.6686	7.226	5.760	.2619
#1	3.717	.0175	.0999	2.403	.0872	-.1210	19.46
#2	3.700	.0000	.1010	2.382	.0921	-.1099	19.38
#3	3.708	.0068	.0995	2.413	.0797	-.1094	19.46

Zoom In Zoom Out

Sample Name: jc86989-3 Acquired: 5/1/2019 15:17:07 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144160.**	**23584.**	**5873.5**	**9585.6**
Stddev	438.	90.	22.1	29.5
%RSD	.30406	.38217	.37604	.30742
#1	143860.	23534.	5877.4	9590.5
#2	144670.	23688.	5849.8	9554.0
#3	143970.	23530.	5893.4	9612.3

Zoom In Zoom Out

Sample Name: mp14600-sd1 Acquired: 5/1/2019 15:22:07 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.5346**	**.0105**	**-.0028**	**.0900**	**1.186**	**-.0021**	**2.154**	**.2628**	**.0182**
Stddev	.0143	.0009	.0035	.0046	.009	.0223	.002	.0041	.0300
%RSD	2.674	8.166	125.4	5.063	.7758	1087.	.0738	1.579	164.2
#1	.5248	.0095	.0009	.0858	1.196	-.0254	2.152	.2659	-.0000
#2	.5281	.0112	-.0032	.0949	1.177	.0191	2.154	.2581	.0019
#3	.5510	.0107	-.0061	.0892	1.186	.0002	2.156	.2644	.0528

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.957**	**1.320**	**.3370**	**-.0572**	**.1449**	**-.0440**	**-.0272**	**167.2**	**16.30**
Stddev	.006	.022	.0139	.0345	.0374	.0395	.0472	.9	.02
%RSD	.3195	1.646	4.125	60.43	25.84	89.84	173.7	.5627	.1472
#1	1.953	1.311	.3210	-.0723	.1251	-.0163	-.0299	166.2	16.28
#2	1.955	1.304	.3451	-.0176	.1215	-.0893	-.0730	168.1	16.32
#3	1.964	1.345	.3450	-.0815	.1881	-.0264	.0213	167.1	16.31

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1394.**	**35.25**	**63.27**	**1.105**	**.3572**	**.0019**	**3.039**	**.0237**	**.1655**
Stddev	2.	.40	2.04	.322	.0299	.0057	.025	.0323	.0022
%RSD	.1246	1.129	3.225	29.17	8.382	296.9	.8206	136.3	1.337
#1	1392.	34.81	61.15	.7344	.3766	-.0043	3.017	.0609	.1644
#2	1395.	35.37	63.45	1.261	.3723	.0033	3.033	.0071	.1641
#3	1395.	35.58	65.22	1.319	.3227	.0068	3.066	.0031	.1681

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.723**	**-.0182**	**.0947**	**2.232**	**.0685**	**-.6238**	**19.12**
Stddev	.042	.0624	.0048	.029	.0576	.0864	.37
%RSD	1.130	341.9	5.094	1.321	84.07	13.85	1.910
#1	3.675	-.0484	.1001	2.260	.0335	-.5282	19.20
#2	3.753	.0535	.0910	2.234	.0370	-.6466	18.72
#3	3.741	-.0598	.0929	2.201	.1350	-.6965	19.44

Zoom In Zoom Out

Sample Name: mp14600-sd1 Acquired: 5/1/2019 15:22:07 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**146620.**	**23751.**	**5903.4**	**9688.8**
Stddev	731.	123.	87.5	126.1
%RSD	.49869	.51962	1.4814	1.3013
#1	146460.	23753.	5941.7	9754.0
#2	147420.	23874.	5965.2	9768.9
#3	145990.	23627.	5803.4	9543.5

Zoom In Zoom Out

Sample Name: jc86989-1 Acquired: 5/1/2019 15:27:11 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3846**	**.0110**	**.0014**	**.0729**	**.9157**	**.0286**	**1.462**	**.2098**	**.0021**
Stddev	.0102	.0001	.0010	.0009	.0001	.0043	.006	.0006	.0030
%RSD	2.661	1.220	73.78	1.188	.0139	14.88	.3862	.3053	145.2
#1	.3776	.0110	.0022	.0724	.9156	.0272	1.456	.2098	.0002
#2	.3798	.0109	.0016	.0739	.9158	.0253	1.466	.2104	.0005
#3	.3963	.0112	.0002	.0724	.9158	.0334	1.465	.2092	.0055

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.590**	**.9391**	**.2057**	**-.0066**	**.2151**	**-.0122**	**.0222**	**139.2**	**16.62**
Stddev	.011	.0057	.0191	.0025	.0127	.0203	.0032	3.0	.37
%RSD	.7123	.6080	9.265	37.24	5.914	165.6	14.39	2.173	2.213
#1	1.583	.9326	.1867	-.0042	.2092	.0095	.0192	136.7	16.32
#2	1.603	.9413	.2056	-.0091	.2297	-.0306	.0219	138.4	16.51
#3	1.584	.9433	.2248	-.0064	.2063	-.0157	.0255	142.6	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	**823.8**	**36.05**	**45.23**	**1.181**	**.3979**	**.0052**	**2.162**	**.0186**	**.1494**
Stddev	18.3	.91	1.37	.070	.0039	.0007	.019	.0065	.0037
%RSD	2.217	2.521	3.023	5.927	.9835	12.70	.8669	34.92	2.465
#1	808.1	35.32	44.49	1.191	.3934	.0060	2.140	.0253	.1459
#2	819.6	35.78	44.40	1.107	.4007	.0048	2.171	.0180	.1491
#3	843.9	37.07	46.81	1.246	.3996	.0049	2.174	.0123	.1533

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.636**	**.0006**	**.0856**	**1.416**	**.0742**	**-.0938**	**12.64**
Stddev	.007	.0027	.0021	.012	.0060	.0151	.14
%RSD	.1983	451.8	2.417	.8782	8.033	16.15	1.083
#1	3.629	.0031	.0833	1.414	.0798	-.0837	12.51
#2	3.644	-.0022	.0861	1.404	.0747	-.0864	12.62
#3	3.635	.0009	.0873	1.429	.0680	-.1112	12.78

Zoom In Zoom Out

Sample Name: jc86989-1 Acquired: 5/1/2019 15:27:11 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144090.**	**23651.**	**5892.7**	**9569.7**
Stddev	1264.	223.	11.5	15.6
%RSD	.87701	.94168	.19469	.16329
#1	144140.	23636.	5899.1	9582.6
#2	142800.	23881.	5899.6	9574.2
#3	145330.	23437.	5879.5	9552.3

Zoom In Zoom Out

Sample Name: jc86989-2 Acquired: 5/1/2019 15:32:12 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3865**	**.0115**	**.0055**	**.0742**	**.9485**	**-.0113**	**1.474**	**.2134**	**.0127**
Stddev	.0011	.0007	.0013	.0019	.0013	.0004	.001	.0011	.0048
%RSD	.2881	6.119	23.75	2.592	.1418	3.340	.0919	.4980	38.13
#1	.3878	.0109	.0070	.0730	.9491	-.0111	1.475	.2140	.0183
#2	.3861	.0114	.0053	.0732	.9470	-.0110	1.475	.2141	.0101
#3	.3857	.0123	.0044	.0764	.9495	-.0117	1.473	.2122	.0097

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.676**	**1.122**	**.2474**	**-.0133**	**.1349**	**-.0053**	**.0146**	**134.6**	**10.51**
Stddev	.004	.003	.0082	.0062	.0196	.0041	.0113	.5	.03
%RSD	.2162	.2873	3.329	46.78	14.56	77.90	77.42	.3498	.2864
#1	1.680	1.119	.2499	-.0121	.1571	-.0023	.0096	135.1	10.54
#2	1.676	1.120	.2382	-.0078	.1199	-.0100	.0276	134.7	10.51
#3	1.673	1.125	.2541	-.0200	.1277	-.0035	.0067	134.2	10.48

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1167.**	**27.53**	**46.85**	**.8317**	**.3185**	**.0044**	**2.400**	**.0175**	**.1206**
Stddev	5.	.11	.37	.0911	.0043	.0006	.012	.0009	.0011
%RSD	.4036	.3887	.7969	10.95	1.357	12.60	.5080	5.148	.9199
#1	1172.	27.55	46.52	.9200	.3147	.0040	2.399	.0180	.1209
#2	1167.	27.62	47.26	.7381	.3175	.0050	2.388	.0165	.1216
#3	1162.	27.41	46.79	.8368	.3232	.0041	2.412	.0180	.1194

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.014**	**.0063**	**.0832**	**.6666**	**.0898**	**-.1269**	**13.16**
Stddev	.009	.0182	.0012	.0052	.0061	.0120	.05
%RSD	.3094	287.3	1.492	.7840	6.846	9.479	.3427
#1	3.003	.0134	.0834	.6721	.0893	-.1152	13.16
#2	3.021	.0199	.0819	.6659	.0962	-.1263	13.11
#3	3.018	-.0143	.0843	.6617	.0839	-.1392	13.20

Zoom In Zoom Out

Sample Name: jc86989-2 Acquired: 5/1/2019 15:32:12 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**143420.**	**23490.**	**5877.1**	**9591.8**
Stddev	304.	110.	2.2	5.9
%RSD	.21202	.46671	.03720	.06143
#1	143110.	23520.	5877.1	9597.5
#2	143420.	23369.	5879.4	9585.7
#3	143720.	23583.	5875.0	9592.3

Zoom In Zoom Out

Sample Name: jc86989-4 Acquired: 5/1/2019 15:37:14 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.5792**	**.0172**	**.0005**	**.1023**	**1.620**	**-.0397**	**1.292**	**.2771**	**-.0001**
Stddev	.0106	.0003	.0016	.0010	.015	.0034	.013	.0066	.0057
%RSD	1.825	1.858	314.1	.9359	.9155	8.449	1.025	2.382	6483.
#1	.5673	.0169	.0017	.1012	1.604	-.0390	1.278	.2694	-.0044
#2	.5830	.0173	-.0013	.1027	1.624	-.0434	1.295	.2805	-.0022
#3	.5874	.0175	.0011	.1030	1.633	-.0368	1.304	.2812	.0064

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.650**	**1.432**	**.3084**	**.0007**	**.2017**	**-.0337**	**.0248**	**176.5**	**13.78**
Stddev	.031	.011	.0030	.0056	.0083	.0133	.0072	2.4	.20
%RSD	1.154	.7912	.9880	813.5	4.105	39.38	28.88	1.371	1.416
#1	2.616	1.421	.3106	.0028	.2095	-.0197	.0166	174.4	13.61
#2	2.661	1.431	.3097	.0049	.1930	-.0353	.0300	175.9	13.74
#3	2.674	1.444	.3049	-.0057	.2026	-.0460	.0278	179.2	14.00

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1398.**	**37.96**	**69.93**	**1.019**	**.5165**	**.0037**	**2.889**	**.0204**	**.1331**
Stddev	19.	.60	.44	.072	.0021	.0008	.024	.0034	.0017
%RSD	1.382	1.591	.6252	7.027	.4038	20.57	.8359	16.84	1.248
#1	1381.	37.44	69.58	1.090	.5161	.0044	2.862	.0165	.1316
#2	1394.	37.83	69.78	1.021	.5146	.0038	2.896	.0219	.1327
#3	1419.	38.62	70.42	.9468	.5187	.0029	2.909	.0228	.1349

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.276**	**.0073**	**.1104**	**1.382**	**.1323**	**-.1341**	**19.34**
Stddev	.048	.0056	.0018	.034	.0181	.0181	.06
%RSD	1.115	76.34	1.636	2.444	13.70	13.50	.3089
#1	4.224	.0019	.1084	1.371	.1297	-.1391	19.28
#2	4.285	.0130	.1108	1.356	.1516	-.1140	19.35
#3	4.318	.0069	.1120	1.420	.1156	-.1491	19.40

Zoom In Zoom Out

Sample Name: jc86989-4 Acquired: 5/1/2019 15:37:14 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**143080.**	**23568.**	**5848.1**	**9549.3**
Stddev	134.	111.	14.1	15.5
%RSD	.09372	.47021	.24027	.16192
#1	143200.	23675.	5848.6	9550.8
#2	142940.	23453.	5861.8	9563.9
#3	143090.	23575.	5833.7	9533.1

Zoom In Zoom Out

Sample Name: jc86989-5conf Acquired: 5/1/2019 15:42:15 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3024**	**.0092**	**.0003**	**.0542**	**.7298**	**-.0005**	**1.189**	**.1524**	**.0032**
Stddev	.0028	.0007	.0006	.0029	.0060	.0013	.015	.0043	.0042
%RSD	.9418	7.417	193.4	5.436	.8235	264.3	1.245	2.812	131.4
#1	.2993	.0097	.0002	.0509	.7229	-.0011	1.175	.1491	-.0016
#2	.3029	.0095	.0010	.0565	.7323	-.0014	1.188	.1572	.0049
#3	.3049	.0085	-.0002	.0551	.7341	.0010	1.204	.1508	.0063

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.185**	**.7902**	**.2000**	**.0002**	**.1494**	**-.0228**	**.0212**	**107.9**	**10.30**
Stddev	.017	.0231	.0069	.0131	.0059	.0178	.0110	1.4	.16
%RSD	1.394	2.918	3.455	6111.	3.931	77.95	52.02	1.301	1.556
#1	1.169	.7688	.1950	-.0068	.1518	-.0070	.0230	106.6	10.15
#2	1.185	.7871	.2079	.0154	.1537	-.0421	.0094	107.6	10.26
#3	1.202	.8146	.1971	-.0079	.1427	-.0193	.0313	109.4	10.47

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**775.8**	**19.23**	**34.04**	**.9333**	**.2415**	**.0039**	**2.290**	**.0211**	**.1081**
Stddev	11.8	.19	.57	.0694	.0037	.0021	.071	.0046	.0006
%RSD	1.520	.9900	1.677	7.431	1.538	55.12	3.086	21.63	.5177
#1	765.5	19.11	34.05	.9243	.2420	.0059	2.223	.0158	.1075
#2	773.1	19.13	33.46	1.007	.2376	.0016	2.284	.0239	.1082
#3	788.7	19.45	34.61	.8689	.2450	.0042	2.364	.0236	.1085

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.439**	**.0084**	**.0578**	**.8961**	**.0615**	**-.1331**	**11.63**
Stddev	.033	.0068	.0008	.0342	.0099	.0258	.39
%RSD	1.360	81.76	1.462	3.814	16.11	19.35	3.334
#1	2.410	.0033	.0587	.8652	.0513	-.1594	11.23
#2	2.431	.0162	.0573	.8902	.0711	-.1079	11.65
#3	2.475	.0056	.0572	.9328	.0621	-.1321	12.00

Zoom In Zoom Out

Sample Name: jc86989-5conf Acquired: 5/1/2019 15:42:15 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144520.**	**23565.**	**5895.5**	**9612.6**
Stddev	279.	226.	14.1	19.1
%RSD	.19319	.95889	.23889	.19823
#1	144500.	23534.	5892.6	9604.8
#2	144810.	23804.	5910.8	9634.3
#3	144250.	23355.	5883.1	9598.7

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/1/2019 15:47:19 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.065**	**2.111**	**2.067**	**2.094**	**2.083**	**2.069**	**2.089**	**2.103**	**.2586**
Stddev	.005	.003	.002	.001	.003	.003	.004	.001	.0003
%RSD	.2254	.1359	.0964	.0686	.1399	.1194	.2080	.0419	.1001
#1	2.064	2.110	2.067	2.095	2.084	2.070	2.093	2.104	.2585
#2	2.060	2.109	2.069	2.093	2.080	2.067	2.089	2.103	.2585
#3	2.069	2.114	2.065	2.093	2.085	2.072	2.084	2.103	.2589
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	**2.055**	**2.085**	**2.040**	**2.129**	**2.092**	**2.072**	**2.044**	**41.10**	**41.43**
Stddev	.001	.003	.003	.008	.002	.004	.005	.01	.03
%RSD	.0527	.1394	.1582	.3748	.0789	.2085	.2391	.0340	.0831
#1	2.056	2.086	2.043	2.136	2.091	2.076	2.039	41.09	41.40
#2	2.054	2.087	2.040	2.120	2.094	2.067	2.049	41.09	41.45
#3	2.056	2.081	2.036	2.131	2.091	2.072	2.043	41.11	41.46
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	**41.68**	**41.24**	**41.55**	**41.46**	**2.094**	**2.048**	**5.120**	**2.069**	**2.119**
Stddev	.05	.05	.01	.05	.003	.001	.010	.003	.003
%RSD	.1224	.1278	.0293	.1127	.1540	.0488	.1981	.1618	.1556
#1	41.68	41.19	41.56	41.45	2.093	2.048	5.115	2.073	2.119
#2	41.62	41.29	41.54	41.42	2.098	2.049	5.131	2.067	2.116
#3	41.72	41.26	41.56	41.52	2.092	2.047	5.113	2.067	2.123
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: 5/1/2019 15:47:19 Type: QC
Method: SGS 3 NO Valve(v328) 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	**2.054**	**2.020**	**2.042**	**2.037**	**2.090**	**2.040**	**1.887**
Stddev	.001	.002	.002	.009	.003	.004	.010
%RSD	.0659	.0750	.1105	.4573	.1290	.1921	.5123
#1	2.055	2.020	2.042	2.047	2.093	2.037	1.897
#2	2.053	2.021	2.039	2.032	2.088	2.037	1.878
#3	2.055	2.018	2.044	2.031	2.088	2.044	1.886
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	**135700.**	**22956.**	**5606.4**	**8874.4**
Stddev	191.	183.	16.3	18.7
%RSD	.14082	.79600	.29159	.21037
#1	135640.	23085.	5596.7	8856.4
#2	135910.	22747.	5597.3	8873.2
#3	135540.	23036.	5625.3	8893.7

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/1/2019 15:52:20 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**-.0001**	**-.0000**	**-.0003**	**.0004**	**-.0000**	**-.0000**
Stddev	.0004	.0000	.0001	.0003	.0001	.0003	.0001	.0001
%RSD	468.5	27.76	145.4	2900.	42.56	86.46	363.4	325.9
#1	-.0002	-.0001	-.0001	.0001	-.0003	.0000	.0000	-.0000
#2	-.0001	-.0001	-.0001	-.0004	-.0005	.0005	-.0001	.0001
#3	.0005	-.0001	.0000	.0003	-.0002	.0006	.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**-.0006**	**-.0005**	**-.0007**	**.0001**	**.0003**	**.0006**
Stddev	.0003	.0003	.0001	.0006	.0012	.0011	.0009	.0005
%RSD	120.5	655.6	13.43	121.4	161.5	934.5	319.3	89.18
#1	.0005	-.0003	-.0007	.0000	-.0020	.0011	-.0007	.0009
#2	.0002	.0004	-.0006	-.0011	-.0005	-.0011	.0010	.0009
#3	-.0000	-.0000	-.0005	-.0004	.0003	.0003	.0006	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**-.0041**	**-.0001**	**.0206**	**.1246**	**-.0207**	**-.0008**	**.0000**
Stddev	.0040	.0047	.0017	.0060	.0283	.0019	.0002	.0002
%RSD	316.7	112.9	1640.	29.34	22.75	9.139	29.10	959.5
#1	.0056	-.0079	.0010	.0138	.1568	-.0213	-.0011	.0001
#2	-.0025	-.0057	-.0021	.0253	.1035	-.0186	-.0006	-.0002
#3	.0007	.0011	.0008	.0228	.1135	-.0222	-.0008	.0001
Check ?	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: 5/1/2019 15:52:20 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0004**	**-.0004**	**-.0000**	**-.0003**	**.0003**	**.0002**	**-.0004**	**-.0025**
Stddev	.0011	.0002	.0001	.0002	.0007	.0001	.0038	.0009
%RSD	253.9	42.55	2142.	84.04	239.7	70.17	851.6	33.87
#1	.0014	-.0003	-.0001	-.0003	.0001	.0003	-.0006	-.0034
#2	-.0008	-.0003	.0000	-.0000	-.0003	.0000	-.0042	-.0024
#3	.0007	-.0006	.0000	-.0005	.0010	.0002	.0034	-.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0090**	**.0078**
Stddev	.0022	.0017
%RSD	24.48	22.08
#1	-.0103	.0092
#2	-.0102	.0084
#3	-.0064	.0059
Check ?	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	**144960.**	**23395.**	**5881.4**	**9743.7**
Stddev	415.	116.	25.0	29.7
%RSD	.28606	.49524	.42502	.30456
#1	145380.	23452.	5882.9	9741.5
#2	144550.	23471.	5855.6	9715.2
#3	144970.	23261.	5905.6	9774.4

Zoom In Zoom Out

Sample Name: jc86989-1 Acquired: 5/1/2019 15:57:29 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3999**	**.0116**	**.0010**	**.0697**	**.9033**	**.0265**	**1.437**	**.1975**	**-.0004**
Stddev	.0005	.0001	.0012	.0016	.0030	.0021	.001	.0013	.0019
%RSD	.1282	1.183	117.8	2.234	.3364	7.887	.0870	.6744	489.5
#1	.4005	.0116	.0008	.0714	.9002	.0246	1.438	.1960	.0003
#2	.3999	.0114	.0023	.0683	.9063	.0261	1.436	.1979	-.0026
#3	.3994	.0117	-.0001	.0694	.9032	.0287	1.438	.1986	.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.567**	**.8873**	**.1928**	**.0033**	**.2025**	**.0017**	**.0132**	**142.8**	**16.99**
Stddev	.004	.0011	.0091	.0033	.0062	.0082	.0023	.2	.02
%RSD	.2636	.1281	4.739	98.35	3.082	483.5	17.54	.1579	.0974
#1	1.568	.8862	.2031	.0068	.2081	.0057	.0111	143.0	17.00
#2	1.571	.8873	.1857	.0029	.1958	.0071	.0156	142.9	16.99
#3	1.563	.8885	.1897	.0003	.2036	-.0077	.0127	142.6	16.97

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**817.6**	**36.73**	**46.48**	**1.344**	**.3836**	**.0043**	**2.029**	**.0191**	**.1556**
Stddev	5.7	.11	.30	.041	.0014	.0006	.004	.0019	.0004
%RSD	.7013	.2917	.6375	3.035	.3727	14.52	.1811	10.16	.2794
#1	820.7	36.75	46.81	1.391	.3852	.0037	2.028	.0191	.1558
#2	810.9	36.83	46.40	1.320	.3825	.0042	2.027	.0210	.1551
#3	821.0	36.62	46.23	1.321	.3831	.0050	2.034	.0171	.1558

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.604**	**.0062**	**.0854**	**1.322**	**.0981**	**-.0342**	**11.83**
Stddev	.007	.0022	.0036	.008	.0004	.0032	.02
%RSD	.2080	35.98	4.225	.6383	.4537	9.340	.1323
#1	3.595	.0044	.0842	1.329	.0979	-.0313	11.83
#2	3.609	.0055	.0826	1.325	.0986	-.0377	11.84
#3	3.607	.0086	.0895	1.313	.0978	-.0337	11.81

Zoom In Zoom Out

Sample Name: jc86989-1 Acquired: 5/1/2019 15:57:29 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142840.**	**23707.**	**5873.3**	**9505.3**
Stddev	166.	130.	14.2	8.7
%RSD	.11620	.54987	.24247	.09106
#1	143030.	23557.	5856.9	9495.3
#2	142760.	23774.	5879.8	9510.9
#3	142720.	23790.	5883.1	9509.7

Zoom In Zoom Out

Sample Name: jc86989-5 Acquired: 5/1/2019 16:02:38 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.3236**	**.0105**	**.0020**	**.0537**	**.7599**	**.0001**	**1.236**	**.1488**	**.0003**
Stddev	.0016	.0001	.0007	.0007	.0043	.0033	.001	.0003	.0034
%RSD	.5071	1.046	36.52	1.361	.5613	3235.	.0732	.1854	1147.
#1	.3224	.0104	.0012	.0546	.7560	-.0023	1.236	.1491	-.0010
#2	.3254	.0106	.0024	.0533	.7644	-.0013	1.236	.1486	-.0023
#3	.3229	.0104	.0026	.0533	.7594	.0039	1.237	.1487	.0042

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.231**	**.7754**	**.1942**	**-.0037**	**.1385**	**-.0041**	**.0084**	**115.3**	**10.96**
Stddev	.003	.0017	.0052	.0037	.0051	.0097	.0055	.2	.04
%RSD	.2501	.2137	2.661	100.4	3.665	238.5	65.71	.1603	.3468
#1	1.228	.7764	.1979	.0005	.1428	.0043	.0046	115.4	10.94
#2	1.234	.7735	.1883	-.0053	.1398	-.0147	.0147	115.4	11.00
#3	1.232	.7762	.1964	-.0064	.1329	-.0017	.0058	115.1	10.93

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**814.8**	**20.47**	**34.47**	**.9648**	**.2471**	**.0044**	**2.212**	**.0208**	**.1163**
Stddev	17.2	.09	.08	.0566	.0050	.0011	.016	.0006	.0003
%RSD	2.116	.4607	.2437	5.866	2.042	23.74	.7171	2.934	.2470
#1	806.0	20.37	34.41	1.027	.2478	.0052	2.217	.0212	.1162
#2	803.8	20.55	34.56	.9172	.2518	.0032	2.194	.0201	.1161
#3	834.7	20.49	34.43	.9498	.2418	.0049	2.224	.0210	.1166

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.553**	**.0026**	**.0608**	**.8449**	**.0717**	**-.0363**	**12.00**
Stddev	.006	.0021	.0015	.0060	.0134	.0078	.02
%RSD	.2327	78.45	2.461	.7144	18.74	21.55	.1701
#1	2.553	.0010	.0611	.8385	.0574	-.0338	11.98
#2	2.559	.0049	.0591	.8457	.0841	-.0451	12.01
#3	2.547	.0020	.0620	.8504	.0735	-.0300	12.02

Zoom In Zoom Out

Sample Name: jc86989-5 Acquired: 5/1/2019 16:02:38 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**143480.**	**23554.**	**5892.3**	**9553.0**
Stddev	666.	94.	22.1	30.4
%RSD	.46389	.40074	.37564	.31788
#1	144120.	23564.	5876.8	9538.8
#2	142790.	23454.	5917.6	9587.9
#3	143520.	23642.	5882.3	9532.4

Zoom In Zoom Out

Sample Name: MP14617-B1 Acquired: 5/1/2019 16:07:47 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.064**	**2.123**	**2.048**	**2.088**	**2.084**	**2.086**	**2.075**	**2.100**	**.2589**
Stddev	.001	.003	.000	.001	.002	.003	.020	.003	.0001
%RSD	.0310	.1558	.0185	.0404	.0903	.1207	.9581	.1267	.0570
#1	2.063	2.124	2.048	2.088	2.082	2.084	2.089	2.097	.2590
#2	2.063	2.119	2.048	2.088	2.085	2.089	2.052	2.102	.2588
#3	2.065	2.125	2.048	2.089	2.086	2.086	2.083	2.101	.2588

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.040**	**2.081**	**1.999**	**2.135**	**2.091**	**2.035**	**2.010**	**25.07**	**25.50**
Stddev	.001	.002	.003	.009	.000	.005	.002	.04	.04
%RSD	.0624	.0742	.1410	.4313	.0188	.2317	.1185	.1481	.1693
#1	2.039	2.080	1.997	2.134	2.091	2.031	2.013	25.07	25.53
#2	2.040	2.082	1.998	2.126	2.092	2.034	2.008	25.03	25.45
#3	2.042	2.082	2.003	2.145	2.092	2.041	2.010	25.10	25.52

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.61**	**25.29**	**25.34**	**25.50**	**2.032**	**2.013**	**.0603**	**2.073**	**2.127**
Stddev	.04	.04	.07	.03	.000	.002	.0010	.003	.002
%RSD	.1643	.1499	.2669	.1013	.0198	.1189	1.717	.1613	.0684
#1	25.61	25.29	25.31	25.47	2.032	2.011	.0615	2.070	2.128
#2	25.56	25.25	25.30	25.50	2.032	2.014	.0594	2.073	2.126
#3	25.65	25.33	25.42	25.52	2.031	2.015	.0601	2.077	2.128

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.038**	**1.716**	**2.018**	**.0274**	**.0807**	**-.0128**	**1.827**
Stddev	.001	.001	.001	.0008	.0013	.0021	.011
%RSD	.0278	.0525	.0290	2.792	1.610	16.24	.5980
#1	2.038	1.715	2.018	.0283	.0805	-.0110	1.815
#2	2.039	1.717	2.017	.0270	.0795	-.0123	1.837
#3	2.038	1.716	2.018	.0269	.0821	-.0151	1.829

Zoom In Zoom Out

Sample Name: MP14617-B1 Acquired: 5/1/2019 16:07:47 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**139300.**	**23364.**	**5711.1**	**9092.2**
Stddev	292.	113.	2.6	2.2
%RSD	.20964	.48307	.04546	.02377
#1	139450.	23396.	5708.2	9090.1
#2	139490.	23458.	5713.2	9094.4
#3	138970.	23239.	5712.0	9092.1

Zoom In Zoom Out

Sample Name: mp14617-mb1 Acquired: 5/1/2019 16:12:47 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**.0007**	**.0032**	**.0004**	**.0007**	**-.0001**
Stddev	.0005	.0001	.0001	.0000	.0003	.0000	.0000	.0002	.0002
%RSD	590.2	572.0	93.46	195.7	36.51	1.107	4.339	29.97	156.5
#1	-.0005	-.0001	.0001	-.0000	.0010	.0032	.0004	.0005	-.0003
#2	-.0002	.0000	.0003	-.0001	.0005	.0031	.0004	.0009	.0000
#3	.0005	.0000	.0000	.0000	.0007	.0032	.0004	.0006	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0060**	**.0000**	**-.0006**	**-.0004**	**-.0000**	**-.0009**	**.0043**	**.0494**
Stddev	.0002	.0002	.0007	.0011	.0007	.0004	.0006	.0085	.0024
%RSD	273.7	2.918	4934.	182.7	186.8	855.9	64.32	197.4	4.856
#1	.0002	.0059	.0005	-.0004	.0000	-.0001	-.0004	-.0032	.0468
#2	-.0002	.0058	.0004	-.0018	.0000	.0004	-.0008	.0136	.0496
#3	.0002	.0062	-.0008	.0004	-.0012	-.0004	-.0015	.0026	.0516

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0263**	**.0251**	**.1441**	**.0489**	**.0009**	**.0003**	**.0115**	**.0226**	**.0004**
Stddev	.0001	.0200	.0165	.0074	.0005	.0002	.0007	.0003	.0001
%RSD	.3463	79.49	11.44	15.22	52.41	61.89	6.255	1.140	18.09
#1	.0264	.0046	.1519	.0571	.0013	.0001	.0107	.0224	.0004
#2	.0262	.0264	.1553	.0427	.0008	.0004	.0118	.0229	.0005
#3	.0264	.0444	.1252	.0467	.0004	.0003	.0120	.0224	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0041**	**.0007**	**.0085**	**-.0008**	**-.0111**	**.0292**
Stddev	.0004	.0004	.0001	.0023	.0003	.0020	.0020
%RSD	46.61	9.446	19.50	27.52	36.23	18.11	7.009
#1	.0013	.0037	.0007	.0067	-.0007	-.0088	.0313
#2	.0006	.0043	.0005	.0112	-.0006	-.0121	.0272
#3	.0006	.0044	.0008	.0078	-.0012	-.0124	.0291

Zoom In Zoom Out

Sample Name: mp14617-mb1 Acquired: 5/1/2019 16:12:47 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**147360.**	**23544.**	**5957.5**	**9828.8**
Stddev	954.	871.	17.0	17.2
%RSD	.64708	3.6975	.28580	.17490
#1	146880.	24222.	5941.7	9809.5
#2	146740.	23847.	5955.2	9834.7
#3	148460.	22562.	5975.6	9842.3

Zoom In Zoom Out

Sample Name: MP14617-S1 Acquired: 5/1/2019 16:17:53 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**3.191**	**1.986**	**1.955**	**2.126**	**2.954**	**2.797**	**7.343**	**2.246**	**.2526**
Stddev	.001	.002	.002	.002	.008	.008	.023	.003	.0007
%RSD	.0355	.1043	.0748	.0707	.2557	.2861	.3190	.1171	.2706
#1	3.192	1.987	1.955	2.127	2.952	2.789	7.326	2.249	.2529
#2	3.190	1.987	1.954	2.124	2.948	2.795	7.335	2.244	.2532
#3	3.191	1.983	1.957	2.126	2.962	2.805	7.370	2.245	.2519

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.172**	**6.172**	**2.148**	**2.036**	**3.559**	**1.909**	**.9467**	**179.6**	**50.93**
Stddev	.003	.011	.004	.009	.002	.006	.0020	.1	.08
%RSD	.1443	.1813	.1960	.4500	.0615	.3266	.2080	.0520	.1486
#1	2.169	6.170	2.143	2.026	3.557	1.902	.9448	179.6	50.97
#2	2.171	6.161	2.151	2.043	3.560	1.912	.9487	179.6	50.98
#3	2.175	6.184	2.149	2.040	3.561	1.913	.9468	179.5	50.85

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**226.3**	**55.39**	**44.01**	**25.57**	**1.901**	**1.846**	**2.907**	**2.027**	**2.181**
Stddev	.4	.08	.10	.02	.001	.002	.007	.004	.004
%RSD	.1779	.1412	.2219	.0626	.0590	.0819	.2370	.2110	.1606
#1	226.4	55.44	43.99	25.58	1.900	1.845	2.914	2.022	2.181
#2	226.7	55.44	43.92	25.55	1.901	1.845	2.900	2.029	2.185
#3	225.9	55.30	44.11	25.57	1.902	1.847	2.906	2.029	2.178

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.709**	**1.180**	**1.821**	**18.69**	**.1405**	**.1597**	**7.871**
Stddev	.002	.002	.002	.05	.0039	.0016	.031
%RSD	.0352	.1936	.1089	.2664	2.788	.9899	.3983
#1	4.707	1.182	1.818	18.63	.1381	.1612	7.860
#2	4.709	1.180	1.821	18.73	.1450	.1598	7.907
#3	4.710	1.177	1.822	18.70	.1384	.1580	7.847

Zoom In Zoom Out

Sample Name: MP14617-S1 Acquired: 5/1/2019 16:17:53 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144680.**	**24647.**	**5939.8**	**9160.4**
Stddev	360.	165.	27.2	32.2
%RSD	.24881	.67044	.45735	.35125
#1	145050.	24635.	5949.6	9172.9
#2	144660.	24489.	5960.7	9184.5
#3	144330.	24818.	5909.1	9123.9

Zoom In Zoom Out

Sample Name: MP14617-S2 Acquired: 5/1/2019 16:22:52 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**2.957**	**2.007**	**1.986**	**2.143**	**2.752**	**2.636**	**6.464**	**2.245**	**.2551**
Stddev	.011	.006	.004	.004	.012	.014	.063	.003	.0012
%RSD	.3764	.3044	.1978	.2009	.4490	.5105	.9792	.1176	.4602
#1	2.944	2.003	1.985	2.141	2.738	2.621	6.392	2.243	.2540
#2	2.959	2.004	1.991	2.148	2.757	2.639	6.509	2.248	.2550
#3	2.966	2.014	1.983	2.140	2.761	2.647	6.491	2.244	.2563

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.143**	**5.320**	**2.124**	**2.088**	**3.438**	**1.932**	**1.044**	**152.8**	**47.44**
Stddev	.009	.014	.009	.005	.007	.004	.005	.4	.10
%RSD	.4053	.2577	.4127	.2281	.1989	.1857	.4471	.2434	.2002
#1	2.133	5.314	2.119	2.087	3.433	1.934	1.045	152.5	47.37
#2	2.147	5.336	2.135	2.093	3.446	1.928	1.048	152.9	47.42
#3	2.150	5.310	2.120	2.084	3.436	1.934	1.039	153.2	47.55

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**195.5**	**51.20**	**41.46**	**25.41**	**1.943**	**1.873**	**3.009**	**2.031**	**2.167**
Stddev	.6	.19	.20	.11	.007	.004	.020	.004	.006
%RSD	.3000	.3634	.4918	.4316	.3427	.2150	.6482	.1958	.2865
#1	194.9	51.06	41.25	25.30	1.938	1.871	2.996	2.032	2.161
#2	195.5	51.12	41.48	25.41	1.950	1.877	3.032	2.034	2.169
#3	196.0	51.41	41.65	25.51	1.940	1.870	3.001	2.026	2.173

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.399**	**1.084**	**1.874**	**16.50**	**.1292**	**.1281**	**6.947**
Stddev	.018	.005	.007	.08	.0023	.0043	.059
%RSD	.4073	.4339	.3819	.4582	1.750	3.370	.8479
#1	4.379	1.079	1.866	16.46	.1272	.1327	6.883
#2	4.406	1.086	1.877	16.59	.1289	.1241	6.999
#3	4.413	1.088	1.879	16.46	.1316	.1275	6.958

Zoom In Zoom Out

Sample Name: MP14617-S2 Acquired: 5/1/2019 16:22:52 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144560.**	**24179.**	**5951.3**	**9208.9**
Stddev	810.	128.	20.3	24.6
%RSD	.56051	.53028	.34112	.26693
#1	145200.	24156.	5940.2	9191.9
#2	143650.	24064.	5939.1	9197.8
#3	144840.	24317.	5974.8	9237.1

Zoom In Zoom Out

Sample Name: JC86986-4 Acquired: 5/1/2019 16:27:51 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9007**	**.0061**	**.0007**	**.0697**	**.2513**	**.0600**	**1.912**	**.1737**	**.0002**
Stddev	.0004	.0000	.0001	.0001	.0004	.0005	.026	.0004	.0007
%RSD	.0411	.7662	15.12	.1657	.1602	.8584	1.361	.2211	300.1
#1	.9009	.0061	.0006	.0696	.2514	.0596	1.882	.1732	.0009
#2	.9010	.0061	.0008	.0698	.2509	.0597	1.923	.1740	-.0004
#3	.9003	.0061	.0007	.0696	.2517	.0605	1.931	.1737	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2451**	**.3991**	**.0279**	**.0011**	**.0760**	**-.0002**	**-.0013**	**123.0**	**19.37**
Stddev	.0006	.0007	.0001	.0005	.0007	.0011	.0006	.2	.07
%RSD	.2648	.1773	.4851	44.45	.9508	596.8	47.32	.1533	.3526
#1	.2444	.3998	.0280	.0008	.0767	.0011	-.0010	122.9	19.29
#2	.2452	.3984	.0278	.0017	.0760	-.0007	-.0020	122.8	19.37
#3	.2457	.3991	.0278	.0008	.0753	-.0010	-.0009	123.2	19.43

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**124.6**	**32.24**	**11.39**	**2.083**	**.0397**	**.0036**	**1.875**	**.0228**	**.1363**
Stddev	.4	.21	.04	.003	.0007	.0001	.003	.0006	.0002
%RSD	.2828	.6555	.3771	.1431	1.841	3.379	.1676	2.433	.1831
#1	124.2	32.01	11.43	2.086	.0405	.0036	1.875	.0223	.1364
#2	124.7	32.29	11.38	2.080	.0390	.0038	1.872	.0234	.1360
#3	124.9	32.42	11.35	2.084	.0396	.0035	1.879	.0228	.1365

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.005**	**.0010**	**.0979**	**5.731**	**.0969**	**.1660**	**2.050**
Stddev	.002	.0005	.0001	.038	.0019	.0017	.011
%RSD	.0555	54.29	.1106	.6624	1.960	1.011	.5240
#1	4.002	.0016	.0977	5.727	.0950	.1647	2.053
#2	4.005	.0009	.0979	5.695	.0988	.1678	2.038
#3	4.007	.0005	.0979	5.771	.0968	.1653	2.059

Zoom In Zoom Out

Sample Name: JC86986-4 Acquired: 5/1/2019 16:27:51 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**150610.**	**25773.**	**6251.7**	**9237.8**
Stddev	169.	332.	14.5	17.7
%RSD	.11199	1.2888	.23155	.19152
#1	150760.	26115.	6235.6	9217.6
#2	150660.	25752.	6263.6	9245.1
#3	150430.	25452.	6255.9	9250.6

Zoom In Zoom Out

Sample Name: JC86986-5 Acquired: 5/1/2019 16:32:55 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2038**	**.0030**	**.0005**	**.0484**	**.1253**	**.0757**	**1.109**	**.0842**	**.0005**
Stddev	.0003	.0000	.0001	.0003	.0003	.0004	.001	.0003	.0004
%RSD	.1280	.6888	24.69	.6492	.2325	.4642	.1125	.4109	70.64
#1	.2039	.0030	.0006	.0484	.1255	.0760	1.109	.0840	.0004
#2	.2036	.0030	.0004	.0486	.1250	.0757	1.107	.0846	.0009
#3	.2041	.0030	.0004	.0480	.1255	.0753	1.109	.0840	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1791**	**.3568**	**.0254**	**.0008**	**.0710**	**-.0016**	**.0012**	**87.58**	**1.848**
Stddev	.0001	.0012	.0004	.0007	.0001	.0021	.0008	.24	.004
%RSD	.0585	.3297	1.489	97.71	.1992	131.9	65.61	.2747	.2329
#1	.1790	.3571	.0252	.0001	.0711	-.0038	.0008	87.31	1.844
#2	.1792	.3578	.0252	.0016	.0709	-.0011	.0006	87.73	1.852
#3	.1792	.3555	.0259	.0006	.0708	.0002	.0020	87.71	1.848

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**129.5**	**19.64**	**9.159**	**.4881**	**.0506**	**.0048**	**2.204**	**.0247**	**.0254**
Stddev	.2	.10	.020	.0083	.0003	.0001	.014	.0004	.0000
%RSD	.1566	.4968	.2228	1.691	.6204	1.360	.6513	1.538	.0822
#1	129.3	19.53	9.152	.4885	.0506	.0048	2.209	.0246	.0254
#2	129.6	19.72	9.142	.4796	.0503	.0048	2.215	.0251	.0254
#3	129.7	19.66	9.182	.4961	.0509	.0049	2.187	.0244	.0254

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.226**	**.0010**	**.0734**	**.5750**	**.0531**	**.1177**	**1.163**
Stddev	.000	.0010	.0002	.0016	.0012	.0012	.003
%RSD	.0099	92.61	.2207	.2863	2.209	1.028	.2504
#1	2.225	.0010	.0733	.5733	.0544	.1164	1.160
#2	2.226	.0001	.0736	.5766	.0521	.1183	1.163
#3	2.226	.0020	.0734	.5750	.0528	.1185	1.166

Zoom In Zoom Out

Sample Name: JC86986-5 Acquired: 5/1/2019 16:32:55 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145840.**	**24482.**	**6029.8**	**9366.1**
Stddev	213.	182.	14.3	14.7
%RSD	.14607	.74511	.23688	.15712
#1	145700.	24687.	6035.2	9375.2
#2	146090.	24420.	6013.7	9349.1
#3	145740.	24339.	6040.7	9374.1

Zoom In Zoom Out

Sample Name: JC86986-7 Acquired: 5/1/2019 16:37:53 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6517**	**.0168**	**.0103**	**.3125**	**.0593**	**.5958**	**.2091**	**.5714**	**.0004**
Stddev	.0009	.0001	.0001	.0007	.0005	.0009	.0003	.0011	.0000
%RSD	.1311	.5026	1.388	.2315	.8177	.1535	.1399	.1840	11.00
#1	.6511	.0168	.0103	.3118	.0591	.5967	.2091	.5702	.0004
#2	.6527	.0167	.0101	.3123	.0599	.5957	.2094	.5718	.0004
#3	.6514	.0169	.0104	.3133	.0590	.5949	.2088	.5722	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0544**	**1.393**	**.0598**	**.0008**	**.3340**	**.0405**	**.0065**	**24.01**	**6.950**
Stddev	.0003	.002	.0005	.0006	.0001	.0015	.0001	.05	.007
%RSD	.5729	.1283	.8903	75.57	.0161	3.721	1.602	.2189	.0994
#1	.0540	1.392	.0603	.0014	.3341	.0421	.0064	24.07	6.956
#2	.0545	1.392	.0593	.0008	.3340	.0391	.0065	23.97	6.942
#3	.0546	1.395	.0598	.0002	.3340	.0403	.0066	24.00	6.952

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.93**	**1.328**	**1.690**	**.7679**	**.0265**	**.0114**	**6.508**	**.0246**	**.3992**
Stddev	.12	.009	.062	.0127	.0007	.0002	.003	.0000	.0006
%RSD	.2128	.7077	3.690	1.649	2.520	1.508	.0424	.1117	.1419
#1	57.07	1.337	1.760	.7782	.0258	.0116	6.505	.0246	.3997
#2	56.84	1.329	1.639	.7716	.0267	.0113	6.510	.0246	.3986
#3	56.88	1.318	1.672	.7537	.0271	.0114	6.510	.0246	.3995

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.536**	**.0056**	**.0276**	**33.30**	**.0341**	**.0087**	**.6108**
Stddev	.001	.0008	.0001	.07	.0016	.0017	.0035
%RSD	.0771	14.46	.3388	.1996	4.602	19.77	.5752
#1	1.537	.0056	.0275	33.33	.0324	.0070	.6145
#2	1.536	.0065	.0276	33.22	.0344	.0088	.6075
#3	1.535	.0048	.0277	33.35	.0355	.0105	.6105

Zoom In Zoom Out

Sample Name: JC86986-7 Acquired: 5/1/2019 16:37:53 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**148550.**	**24787.**	**6049.5**	**9578.6**
Stddev	265.	204.	11.6	21.0
%RSD	.17860	.82305	.19254	.21906
#1	148720.	24612.	6054.8	9596.3
#2	148250.	24738.	6057.7	9584.0
#3	148690.	25011.	6036.2	9555.4

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/1/2019 16:42:53 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**2.078**	**2.034**	**2.074**	**2.055**	**2.050**	**2.046**	**2.091**	**.2566**
Stddev	.005	.009	.001	.003	.006	.004	.032	.003	.0004
%RSD	.2489	.4244	.0500	.1379	.2723	.2193	1.585	.1302	.1530
#1	2.049	2.079	2.033	2.072	2.058	2.053	2.081	2.088	.2569
#2	2.039	2.068	2.035	2.073	2.058	2.052	2.018	2.090	.2566
#3	2.046	2.085	2.035	2.077	2.048	2.045	2.038	2.094	.2562
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**	**2.053**	**2.017**	**2.092**	**2.076**	**2.050**	**2.019**	**40.26**	**40.76**
Stddev	.004	.001	.003	.005	.005	.005	.003	.16	.16
%RSD	.1966	.0469	.1390	.2509	.2501	.2636	.1381	.3935	.3855
#1	2.028	2.052	2.014	2.088	2.070	2.047	2.017	40.26	40.77
#2	2.031	2.054	2.020	2.098	2.078	2.056	2.022	40.10	40.59
#3	2.023	2.052	2.017	2.090	2.080	2.047	2.020	40.41	40.90
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	**41.23**	**40.67**	**40.81**	**41.04**	**2.068**	**2.010**	**5.050**	**2.032**	**2.106**
Stddev	.17	.13	.16	.10	.002	.002	.007	.006	.008
%RSD	.4225	.3085	.4032	.2541	.0748	.1082	.1341	.2735	.3885
#1	41.25	40.68	40.83	41.12	2.067	2.009	5.042	2.029	2.110
#2	41.05	40.55	40.64	40.92	2.070	2.013	5.055	2.039	2.096
#3	41.39	40.80	40.97	41.09	2.068	2.009	5.052	2.029	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: 5/1/2019 16:42:53 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.041**	**1.997**	**2.019**	**2.011**	**2.072**	**2.002**	**1.867**
Stddev	.003	.003	.004	.010	.005	.008	.010
%RSD	.1400	.1718	.1882	.5040	.2318	.3886	.5452
#1	2.042	1.993	2.019	2.003	2.067	2.005	1.858
#2	2.043	2.000	2.023	2.023	2.071	1.994	1.878
#3	2.038	1.997	2.015	2.009	2.077	2.009	1.865
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	**138110.**	**23105.**	**5692.4**	**8944.1**
Stddev	343.	125.	7.6	8.7
%RSD	.24829	.54168	.13401	.09701
#1	137820.	23243.	5698.5	8952.8
#2	138490.	23072.	5683.8	8944.0
#3	138030.	22999.	5694.9	8935.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/1/2019 16:47:55 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**-.0000**	**-.0000**	**-.0002**	**-.0001**	**-.0000**	**-.0001**
Stddev	.0003	.0001	.0001	.0003	.0002	.0004	.0001	.0002
%RSD	531.1	69.25	2502.	4183.	132.0	340.9	281.7	194.4
#1	-.0003	-.0001	.0001	-.0002	.0001	.0002	-.0001	-.0003
#2	.0002	-.0002	-.0001	.0004	-.0004	-.0006	-.0000	.0001
#3	.0003	-.0000	.0000	-.0002	-.0002	-.0000	.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0001**	**-.0005**	**.0002**	**.0002**	**-.0007**	**.0004**	**-.0008**
Stddev	.0003	.0002	.0000	.0006	.0019	.0004	.0010	.0005
%RSD	87.59	145.9	6.978	291.8	770.7	58.39	276.9	61.29
#1	-.0005	-.0000	-.0005	-.0005	.0003	-.0007	-.0008	-.0009
#2	-.0006	-.0003	-.0005	.0007	-.0016	-.0003	.0009	-.0011
#3	-.0000	.0000	-.0004	.0004	.0021	-.0011	.0009	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0177**	**-.0071**	**.0011**	**.0138**	**.2972**	**.0094**	**-.0004**	**.0001**
Stddev	.0094	.0008	.0017	.0049	.0444	.0129	.0002	.0000
%RSD	52.83	11.48	148.4	35.63	14.95	137.1	55.68	47.69
#1	-.0285	-.0079	-.0006	.0194	.2907	.0103	-.0006	.0001
#2	-.0138	-.0063	.0013	.0123	.2564	-.0039	-.0003	.0000
#3	-.0110	-.0070	.0028	.0099	.3445	.0218	-.0003	.0001
Check ?	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: 5/1/2019 16:47:55 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**.0003**	**-.0000**	**.0002**	**.0012**	**.0000**	**.0030**	**-.0018**
Stddev	.0005	.0002	.0001	.0005	.0004	.0001	.0032	.0005
%RSD	61.57	56.32	784.3	199.1	31.42	179.1	104.9	25.38
#1	.0005	.0004	.0001	.0002	.0012	.0000	.0055	-.0017
#2	.0015	.0001	-.0001	.0007	.0016	.0001	.0042	-.0023
#3	.0006	.0004	-.0001	-.0002	.0009	-.0000	-.0006	-.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0132**	**.0097**
Stddev	.0008	.0028
%RSD	6.179	29.15
#1	-.0139	.0068
#2	-.0123	.0099
#3	-.0134	.0125
Check ?	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	**146680.**	**23089.**	**5974.5**	**9858.4**
Stddev	230.	798.	94.1	136.6
%RSD	.15688	3.4580	1.5756	1.3853
#1	146450.	23475.	6078.6	10010.
#2	146910.	23621.	5949.8	9818.7
#3	146700.	22171.	5895.3	9746.1

Zoom In Zoom Out

Sample Name: icsa Acquired: 5/1/2019 16:53:02 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**.0008**	**-.0012**	**-.0071**	**.0034**	**-.0002**	**.0019**
Stddev	.0000	.0001	.0001	.0003	.0003	.0005	.0001	.0004	.0000
%RSD	6.114	411.5	41.71	33.95	21.88	7.745	2.965	201.1	1.908
#1	.0004	.0001	.0001	.0010	-.0010	-.0077	.0033	-.0001	.0019
#2	.0004	-.0001	.0001	.0005	-.0015	-.0068	.0034	-.0006	.0019
#3	.0004	.0000	.0002	.0009	-.0010	-.0067	.0035	.0002	.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	**-.0032**	**-.0014**	**.0007**	**-.0017**	**-.0007**	**-.0020**	**-.0010**	**511.4**	**386.4**
Stddev	.0002	.0001	.0003	.0018	.0005	.0035	.0013	5.3	4.1
%RSD	5.071	4.885	46.54	105.3	77.04	173.0	130.3	1.028	1.053
#1	-.0031	-.0013	.0005	-.0033	-.0013	.0020	-.0020	516.7	384.0
#2	-.0032	-.0014	.0011	.0003	-.0005	-.0044	.0004	506.2	391.1
#3	-.0034	-.0015	.0005	-.0022	-.0003	-.0036	-.0014	511.2	384.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**196.0**	**501.2**	**.4884**	**.0660**	**-.0023**	**.0002**	**.0010**	**-.0033**	**-.0001**
Stddev	1.2	.7	.0358	.0111	.0008	.0002	.0010	.0010	.0001
%RSD	.6211	.1327	7.333	16.82	34.88	100.1	101.6	30.37	134.3
#1	194.9	501.7	.4690	.0731	-.0014	.0004	.0016	-.0028	-.0001
#2	197.3	501.5	.4665	.0716	-.0030	-.0000	-.0002	-.0026	-.0003
#3	195.8	500.5	.5298	.0532	-.0024	.0002	.0017	-.0045	.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: 5/1/2019 16:53:02 Type: QC
Method: SGS 3 NO Valve(v328) 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	**-.0019**	**.0006**	**.0010**	**-.0047**	**-.0011**	**-.0133**	**.0294**
Stddev	.0002	.0001	.0001	.0018	.0021	.0009	.0028
%RSD	10.88	16.85	9.000	39.20	202.4	6.944	9.447
#1	-.0021	.0006	.0010	-.0067	.0013	-.0124	.0297
#2	-.0017	.0005	.0011	-.0031	-.0017	-.0132	.0264
#3	-.0019	.0007	.0009	-.0043	-.0028	-.0142	.0319
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	**124530.**	**22412.**	**5218.5**	**8148.2**
Stddev	842.	22.	18.1	21.9
%RSD	.67625	.09959	.34763	.26864
#1	124770.	22406.	5197.9	8125.2
#2	123590.	22394.	5232.3	8168.7
#3	125230.	22437.	5225.2	8150.6

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 5/1/2019 16:58:24 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5311**	**.5244**	**1.058**	**.5095**	**.5114**	**.5229**	**.5278**	**1.014**	**1.110**
Stddev	.0008	.0013	.004	.0018	.0023	.0009	.0004	.004	.002
%RSD	.1578	.2458	.3650	.3582	.4521	.1781	.0730	.4140	.1577
#1	.5301	.5229	1.054	.5077	.5136	.5230	.5282	1.010	1.112
#2	.5316	.5248	1.062	.5113	.5116	.5237	.5274	1.018	1.109
#3	.5316	.5254	1.058	.5095	.5090	.5219	.5280	1.012	1.109
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	**.5120**	**.9980**	**1.103**	**.9851**	**.9885**	**1.094**	**1.107**	**519.3**	**389.5**
Stddev	.0006	.0026	.001	.0046	.0020	.003	.002	9.8	3.3
%RSD	.1102	.2600	.1132	.4671	.2006	.3029	.1817	1.889	.8479
#1	.5126	.9958	1.104	.9822	.9863	1.097	1.105	513.5	387.8
#2	.5115	1.001	1.103	.9904	.9902	1.095	1.109	530.6	393.3
#3	.5119	.9973	1.102	.9827	.9890	1.091	1.107	513.7	387.4
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	**203.9**	**512.3**	**.4327**	**.0671**	**.5050**	**.4946**	**.5200**	**.4826**	**.5473**
Stddev	2.6	.9	.0149	.0116	.0038	.0012	.0027	.0006	.0011
%RSD	1.282	.1727	3.439	17.29	.7478	.2492	.5280	.1269	.2016
#1	204.8	511.3	.4372	.0610	.5007	.4943	.5191	.4823	.5462
#2	205.9	512.5	.4161	.0598	.5078	.4959	.5231	.4833	.5472
#3	200.9	513.0	.4449	.0804	.5064	.4935	.5178	.4822	.5484
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: 5/1/2019 16:58:24 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.5135**	**.4902**	**.5007**	**.5079**	**.5288**	**.5378**	**.4727**
Stddev	.0010	.0028	.0003	.0017	.0027	.0020	.0022
%RSD	.1942	.5610	.0539	.3328	.5100	.3809	.4666
#1	.5144	.4875	.5010	.5098	.5272	.5355	.4746
#2	.5124	.4930	.5004	.5065	.5319	.5390	.4734
#3	.5136	.4900	.5008	.5075	.5272	.5391	.4703
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	**124140.**	**22222.**	**5165.5**	**8116.1**
Stddev	140.	107.	10.4	20.9
%RSD	.11238	.47985	.20211	.25755
#1	123980.	22343.	5177.4	8137.9
#2	124180.	22180.	5157.7	8096.2
#3	124250.	22142.	5161.5	8114.2

Zoom In Zoom Out

Sample Name: JC86986-8 Acquired: 5/1/2019 17:03:42 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**1.198**	**.0068**	**.0011**	**.0719**	**.3247**	**.0649**	**2.513**	**.1924**
Stddev	.002	.0008	.0002	.0065	.0124	.0190	.094	.0018
%RSD	.1685	11.14	20.65	9.098	3.813	29.21	3.749	.9461
#1	1.197	.0072	.0010	.0676	.3181	.0756	2.468	.1906
#2	1.198	.0072	.0010	.0688	.3170	.0761	2.450	.1942
#3	1.200	.0059	.0014	.0795	.3390	.0430	2.621	.1925

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0142**	**.2997**	**.4669**	**.0356**	F **-.0049**	**.1167**	**-.0091**	**.0041**
Stddev	.0232	.0095	.0049	.0026	.0115	.0054	.0139	.0090
%RSD	163.0	3.183	1.057	7.199	234.9	4.666	152.8	219.1
#1	-.0006	.2943	.4636	.0365	.0021	.1176	.0002	-.0019
#2	-.0011	.2940	.4725	.0376	.0014	.1216	-.0024	-.0002
#3	-.0410	.3107	.4645	.0327	-.0181	.1108	-.0252	.0145

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**159.6**	**23.15**	**159.1**	**38.33**	**14.45**	**2.130**	**.0504**	**.0027**
Stddev	.1	.02	1.1	.08	.07	.015	.0003	.0011
%RSD	.0507	.0987	.6740	.2079	.4800	.7085	.6887	42.32
#1	159.7	23.18	159.9	38.38	14.50	2.113	.0503	.0033
#2	159.5	23.13	157.8	38.24	14.49	2.141	.0507	.0034
#3	159.6	23.15	159.5	38.38	14.37	2.136	.0500	.0014

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.139**	**.0212**	**.1684**	**4.889**	**.0037**	**.1163**	**6.177**	**.0130**
Stddev	.019	.0050	.0004	.168	.0029	.0025	.071	.1815
%RSD	.8962	23.60	.2658	3.442	78.00	2.156	1.158	1392.
#1	2.117	.0243	.1680	4.793	.0020	.1182	6.138	.1193
#2	2.152	.0240	.1683	4.790	.0021	.1174	6.259	.1163
#3	2.148	.0155	.1689	5.083	.0070	.1135	6.133	-.1965

Zoom In Zoom Out

Sample Name: JC86986-8 Acquired: 5/1/2019 17:03:42 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.2107**	**2.246**
Stddev	.0068	.063
%RSD	3.237	2.823
#1	.2064	2.262
#2	.2071	2.299
#3	.2185	2.176

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	*****	**25680.**	**6235.2**	**9157.0**
Stddev	-----	36.	68.0	90.8
%RSD	-----	.14074	1.0906	.99203
#1	150630.	25668.	6259.4	9196.5
#2	150200.	25721.	6158.4	9053.1
#3	-----	25652.	6287.7	9221.3

Zoom In Zoom Out

Sample Name: JC86986-9 Acquired: 5/1/2019 17:08:55 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.8395**	**.0029**	**.0058**	**.0387**	**.9668**	**.8779**	**1.575**	**.2959**
Stddev	.0013	.0001	.0002	.0002	.0046	.0024	.004	.0016
%RSD	.1554	2.487	3.028	.4208	.4746	.2740	.2644	.5261
#1	.8410	.0030	.0060	.0389	.9616	.8752	1.571	.2975
#2	.8384	.0029	.0057	.0386	.9702	.8797	1.578	.2944
#3	.8391	.0029	.0058	.0386	.9687	.8787	1.578	.2957

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.1043**	**.8483**	**.1097**	F **-.0052**	**.6969**	**.0206**	**.0140**
Stddev	.0018	.0001	.0030	.0004	.0008	.0023	.0027	.0015
%RSD	1308.	.1336	.3574	.4077	16.09	.3256	13.08	10.52
#1	.0014	.1042	.8514	.1092	-.0054	.6995	.0178	.0148
#2	.0004	.1044	.8454	.1101	-.0042	.6954	.0209	.0123
#3	-.0021	.1041	.8480	.1099	-.0059	.6957	.0231	.0149

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.19**	**41.93**	F **297.6**	**7.366**	**2.992**	**.6728**	**.0265**	**.1241**
Stddev	.09	.13	5.2	.012	.044	.0036	.0005	.0005
%RSD	.3482	.3037	1.735	.1656	1.471	.5394	1.861	.4121
#1	26.25	41.98	301.6	7.374	3.027	.6752	.0268	.1246
#2	26.24	42.03	299.5	7.372	3.007	.6747	.0268	.1236
#3	26.09	41.79	291.8	7.352	2.943	.6687	.0260	.1241

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.366**	**.1249**	**.2246**	**1.162**	**.0104**	**.0411**	F **371.7**	**.0398**
Stddev	.008	.0007	.0003	.003	.0008	.0003	2.3	.0028
%RSD	.1194	.5990	.1543	.2610	8.061	.7993	.6302	7.006
#1	6.371	.1255	.2249	1.158	.0101	.0414	374.4	.0366
#2	6.358	.1251	.2248	1.163	.0098	.0410	370.1	.0412
#3	6.370	.1240	.2242	1.164	.0114	.0408	370.6	.0415

Zoom In Zoom Out

Sample Name: JC86986-9 Acquired: 5/1/2019 17:08:55 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0071**	**.9258**
Stddev	.0022	.0023
%RSD	30.55	.2442
#1	.0047	.9255
#2	.0090	.9237
#3	.0076	.9282

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**141190.**	**23959.**	**5807.4**	**9549.8**
Stddev	714.	97.	23.3	40.6
%RSD	.50552	.40293	.40196	.42559
#1	142010.	24016.	5784.1	9507.7
#2	140780.	24014.	5830.8	9588.8
#3	140780.	23848.	5807.3	9553.0

Zoom In Zoom Out

Sample Name: JC86986-10 Acquired: 5/1/2019 17:14:01 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9104**	**.0064**	**.0009**	**.0671**	**.2802**	**.0882**	**2.672**	**.1791**	**-.0001**
Stddev	.0010	.0000	.0001	.0002	.0008	.0006	.008	.0006	.0001
%RSD	.1102	.2326	5.634	.2923	.2695	.6582	.3105	.3206	89.48
#1	.9107	.0064	.0009	.0669	.2806	.0876	2.665	.1789	-.0003
#2	.9112	.0064	.0010	.0672	.2793	.0882	2.681	.1797	-.0000
#3	.9093	.0064	.0009	.0673	.2807	.0887	2.668	.1786	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2469**	**.4914**	**.0320**	**.0003**	**.2555**	**.0007**	**.0003**	**126.3**	**18.90**
Stddev	.0002	.0003	.0004	.0010	.0030	.0009	.0023	.3	.05
%RSD	.0825	.0562	1.267	370.5	1.165	132.5	663.1	.2749	.2451
#1	.2467	.4911	.0318	.0005	.2525	.0009	.0030	125.9	18.85
#2	.2469	.4916	.0317	-.0008	.2584	.0015	-.0008	126.5	18.91
#3	.2471	.4916	.0325	.0011	.2557	-.0003	-.0011	126.4	18.94

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**164.8**	**33.03**	**14.20**	**1.536**	**.0485**	**.0071**	**2.030**	**.0257**	**.1357**
Stddev	.9	.02	.06	.009	.0003	.0004	.004	.0006	.0002
%RSD	.5605	.0654	.4207	.6134	.5337	5.152	.2162	2.405	.1522
#1	165.3	33.03	14.14	1.534	.0486	.0070	2.035	.0253	.1354
#2	163.8	33.06	14.26	1.546	.0482	.0075	2.028	.0264	.1358
#3	165.4	33.01	14.18	1.527	.0486	.0068	2.027	.0253	.1357

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.481**	**.0138**	**.1039**	**9.870**	**.1142**	**.1607**	**1.899**
Stddev	.001	.0012	.0002	.011	.0021	.0021	.015
%RSD	.0253	8.691	.1723	.1157	1.828	1.297	.7658
#1	4.480	.0124	.1039	9.858	.1139	.1584	1.916
#2	4.480	.0147	.1041	9.872	.1164	.1625	1.894
#3	4.482	.0142	.1038	9.880	.1123	.1612	1.888

Zoom In Zoom Out

Sample Name: JC86986-10 Acquired: 5/1/2019 17:14:01 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**149580.**	**25535.**	**6205.7**	**9265.0**
Stddev	255.	73.	19.8	19.6
%RSD	.17070	.28492	.31923	.21159
#1	149580.	25496.	6205.6	9267.3
#2	149840.	25619.	6225.6	9283.3
#3	149330.	25490.	6185.9	9244.3

Zoom In Zoom Out

Sample Name: JC86986-11 Acquired: 5/1/2019 17:19:15 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7634**	**.0068**	**.0028**	**.0302**	**.1511**	**.2310**	**3.167**	**.0848**	**.0008**
Stddev	.0020	.0000	.0000	.0002	.0016	.0026	.026	.0003	.0005
%RSD	.2669	.3496	1.451	.7461	1.068	1.121	.8268	.3391	56.87
#1	.7615	.0068	.0028	.0300	.1521	.2328	3.165	.0846	.0004
#2	.7630	.0068	.0028	.0302	.1520	.2321	3.193	.0847	.0006
#3	.7656	.0068	.0027	.0304	.1493	.2280	3.141	.0851	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1243**	**.4443**	**.0629**	**.0015**	**.9281**	**.0067**	**.0079**	**61.19**	**158.5**
Stddev	.0013	.0025	.0004	.0014	.0041	.0017	.0005	.15	1.3
%RSD	1.032	.5595	.5594	92.66	.4385	25.57	6.402	.2428	.8451
#1	.1249	.4419	.0631	.0024	.9237	.0076	.0083	61.04	157.5
#2	.1252	.4443	.0632	-.0001	.9287	.0048	.0073	61.19	158.0
#3	.1228	.4469	.0625	.0021	.9318	.0079	.0081	61.34	160.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.2**	**35.20**	**7.731**	**2.475**	**.0534**	**.0075**	**1.545**	**.0800**	**.3715**
Stddev	.3	.11	.046	.003	.0001	.0003	.008	.0006	.0009
%RSD	.2510	.3070	.5989	.1360	.2321	3.528	.5165	.7988	.2381
#1	104.9	35.14	7.681	2.479	.0533	.0076	1.538	.0804	.3707
#2	105.2	35.14	7.771	2.473	.0535	.0073	1.544	.0793	.3714
#3	105.5	35.33	7.743	2.473	.0532	.0078	1.553	.0803	.3725

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.558**	**.0004**	**.1787**	**10.20**	**.0944**	**.0585**	**4.433**
Stddev	.039	.0012	.0018	.08	.0034	.0009	.055
%RSD	1.099	348.0	1.019	.7443	3.567	1.462	1.250
#1	3.579	.0001	.1798	10.15	.0940	.0580	4.371
#2	3.581	-.0008	.1798	10.17	.0979	.0580	4.451
#3	3.512	.0017	.1766	10.29	.0912	.0595	4.477

Zoom In Zoom Out

Sample Name: JC86986-11 Acquired: 5/1/2019 17:19:15 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**150710.**	**26040.**	**6288.8**	**8987.6**
Stddev	1686.	132.	30.0	43.5
%RSD	1.1186	.50820	.47765	.48416
#1	150160.	25967.	6316.7	9024.9
#2	149380.	26193.	6292.7	8998.2
#3	152610.	25960.	6257.0	8939.8

Zoom In Zoom Out

Sample Name: JC86986-12 Acquired: 5/1/2019 17:24:30 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.137**	**.0056**	**.0006**	**.0915**	**.2491**	**.3488**	**2.864**	**.1886**	**-.0000**
Stddev	.003	.0001	.0001	.0059	.0004	.0009	.033	.0099	.0006
%RSD	.2514	1.533	13.95	6.429	.1463	.2637	1.139	5.265	12130.
#1	1.139	.0056	.0005	.0847	.2491	.3488	2.876	.1771	-.0001
#2	1.138	.0055	.0007	.0950	.2495	.3479	2.889	.1948	-.0005
#3	1.134	.0056	.0007	.0948	.2487	.3497	2.827	.1938	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2758**	**.8018**	**.0218**	**.0032**	**.7750**	**-.0002**	**.0015**	**121.1**	**55.77**
Stddev	.0010	.0450	.0012	.0017	.0370	.0010	.0009	.4	.13
%RSD	.3799	5.617	5.697	53.09	4.770	425.9	60.57	.3491	.2300
#1	.2760	.7498	.0204	.0051	.7323	-.0005	.0016	121.3	55.84
#2	.2768	.8279	.0222	.0024	.7953	.0009	.0023	121.3	55.84
#3	.2747	.8276	.0227	.0020	.7974	-.0010	.0005	120.6	55.62

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**197.3**	**63.05**	**58.19**	**1.298**	**.0177**	**.0026**	**1.832**	**.0740**	**.2841**
Stddev	2.2	.07	.30	.013	.0009	.0005	.108	.0031	.0006
%RSD	1.101	.1100	.5209	.9800	5.300	20.06	5.910	4.191	.1965
#1	194.8	63.11	58.38	1.311	.0166	.0025	1.707	.0705	.2843
#2	197.9	63.07	58.34	1.297	.0184	.0021	1.896	.0753	.2845
#3	199.1	62.98	57.84	1.286	.0179	.0031	1.893	.0763	.2834

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **9.753**	**-.0018**	**.0381**	**1.132**	**.2350**	**.1482**	**2.450**
Stddev	.043	.0010	.0002	.063	.0244	.0008	.107
%RSD	.4432	58.59	.4408	5.531	10.38	.5608	4.366
#1	9.722	-.0030	.0380	1.060	.2629	.1485	2.328
#2	9.735	-.0011	.0380	1.163	.2177	.1489	2.495
#3	9.802	-.0012	.0383	1.173	.2244	.1473	2.527

Zoom In Zoom Out

Sample Name: JC86986-12 Acquired: 5/1/2019 17:24:30 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**143900.**	**24606.**	**5992.3**	**9184.3**
Stddev	905.	62.	297.3	400.1
%RSD	.62858	.25398	4.9612	4.3563
#1	143730.	24643.	6335.6	9646.3
#2	143100.	24641.	5820.4	8955.3
#3	144880.	24534.	5820.8	8951.4

Zoom In Zoom Out

Sample Name: JC86986-13 Acquired: 5/1/2019 17:29:53 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.306**	**.0068**	**.0010**	**.1137**	**.2880**	**.4662**	**3.956**	**.2765**	**-.0007**
Stddev	.002	.0001	.0001	.0002	.0004	.0010	.050	.0008	.0006
%RSD	.1268	1.248	12.40	.2199	.1273	.2174	1.256	.3048	84.69
#1	1.304	.0068	.0009	.1137	.2884	.4650	3.974	.2768	-.0013
#2	1.306	.0069	.0012	.1139	.2877	.4669	3.900	.2771	-.0008
#3	1.308	.0067	.0010	.1134	.2881	.4665	3.995	.2755	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3666**	**1.059**	**.0191**	**.0053**	**.3100**	**-.0012**	**.0017**	**158.0**	**14.54**
Stddev	.0006	.003	.0004	.0015	.0021	.0023	.0020	.2	.02
%RSD	.1686	.3076	2.339	28.90	.6810	186.6	119.2	.1201	.1294
#1	.3670	1.056	.0192	.0058	.3106	-.0036	-.0006	157.9	14.53
#2	.3659	1.063	.0195	.0036	.3117	-.0011	.0027	157.9	14.52
#3	.3669	1.058	.0186	.0066	.3076	.0010	.0029	158.2	14.56

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **251.5**	**82.81**	**87.98**	**1.622**	**.0079**	**.0053**	**2.029**	**.0319**	**.1070**
Stddev	2.9	.14	.15	.005	.0009	.0002	.007	.0009	.0001
%RSD	1.172	.1751	.1750	.3243	11.04	3.345	.3556	2.877	.1084
#1	248.6	82.82	87.97	1.616	.0074	.0054	2.025	.0310	.1069
#2	251.5	82.66	87.83	1.627	.0089	.0051	2.037	.0328	.1071
#3	254.5	82.94	88.14	1.622	.0073	.0054	2.024	.0320	.1070

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **14.40**	**-.0017**	**.0276**	**.7827**	**.2609**	**.1788**	**3.464**
Stddev	.17	.0009	.0005	.0036	.0122	.0013	.020
%RSD	1.190	49.60	1.985	.4654	4.666	.7063	.5853
#1	14.44	-.0023	.0270	.7810	.2639	.1786	3.442
#2	14.55	-.0021	.0277	.7869	.2712	.1777	3.470
#3	14.21	-.0007	.0281	.7803	.2475	.1802	3.481

Zoom In Zoom Out

Sample Name: JC86986-13 Acquired: 5/1/2019 17:29:53 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**141920.**	**24358.**	**5857.0**	**9064.9**
Stddev	382.	207.	23.6	15.8
%RSD	.26906	.84969	.40342	.17468
#1	141680.	24247.	5883.9	9082.7
#2	142360.	24597.	5839.8	9052.4
#3	141720.	24230.	5847.2	9059.7

Zoom In Zoom Out

Sample Name: JC87092-1 Acquired: 5/1/2019 17:35:17 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7131**	**.0064**	**.0002**	**.0877**	**.2517**	**.0992**	**2.949**	**.1405**	**-.0008**
Stddev	.0026	.0000	.0002	.0025	.0018	.0005	.052	.0032	.0011
%RSD	.3638	.6921	133.6	2.864	.7108	.4728	1.770	2.303	139.0
#1	.7149	.0064	.0004	.0870	.2534	.0995	2.962	.1391	.0000
#2	.7143	.0064	-.0000	.0856	.2520	.0994	2.994	.1382	-.0004
#3	.7101	.0063	.0001	.0905	.2498	.0986	2.892	.1442	-.0021

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3254**	**.4085**	**.0471**	**.0024**	**.1251**	**.0003**	**-.0005**	**154.8**	**15.05**
Stddev	.0014	.0108	.0013	.0013	.0032	.0026	.0024	.3	.02
%RSD	.4280	2.641	2.764	55.43	2.562	912.1	472.8	.1778	.1521
#1	.3265	.4046	.0458	.0033	.1239	.0028	-.0011	155.0	15.07
#2	.3258	.4003	.0470	.0009	.1227	.0006	-.0026	154.9	15.06
#3	.3238	.4207	.0484	.0029	.1287	-.0025	.0021	154.5	15.03

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**175.0**	**22.31**	**13.16**	**4.343**	**.0376**	**.0070**	**2.035**	**.0247**	**.1122**
Stddev	4.3	.05	.02	.017	.0005	.0000	.053	.0004	.0003
%RSD	2.446	.2403	.1572	.4010	1.285	.5750	2.611	1.734	.2384
#1	177.1	22.37	13.16	4.361	.0375	.0070	2.017	.0247	.1125
#2	177.8	22.28	13.17	4.341	.0372	.0070	1.993	.0242	.1122
#3	170.1	22.28	13.13	4.326	.0381	.0071	2.094	.0251	.1120

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.539**	**.0010**	**.0899**	**3.242**	**.1148**	**.0992**	**2.749**
Stddev	.022	.0007	.0006	.079	.0051	.0013	.067
%RSD	.4877	63.89	.6773	2.437	4.476	1.306	2.453
#1	4.562	.0018	.0903	3.219	.1178	.0993	2.727
#2	4.538	.0007	.0903	3.177	.1177	.0979	2.696
#3	4.518	.0006	.0892	3.330	.1088	.1005	2.825

Zoom In Zoom Out

Sample Name: JC87092-1 Acquired: 5/1/2019 17:35:17 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**151980.**	**26215.**	**6330.0**	**9308.2**
Stddev	859.	106.	140.3	184.3
%RSD	.56520	.40552	2.2162	1.9797
#1	151260.	26282.	6378.6	9367.2
#2	151750.	26092.	6439.5	9455.6
#3	152930.	26270.	6171.9	9101.6

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/1/2019 17:40:31 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.054**	**2.098**	**2.057**	**2.086**	**2.071**	**2.068**	**2.056**	**2.105**	**.2581**
Stddev	.004	.006	.004	.002	.002	.003	.010	.004	.0007
%RSD	.1824	.2728	.2007	.0938	.0824	.1645	.4872	.1729	.2592
#1	2.051	2.103	2.053	2.084	2.069	2.065	2.047	2.101	.2589
#2	2.058	2.100	2.056	2.087	2.072	2.069	2.054	2.106	.2576
#3	2.053	2.092	2.061	2.088	2.072	2.072	2.067	2.108	.2579
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.040**	**2.069**	**2.034**	**2.098**	**2.090**	**2.067**	**2.039**	**40.55**	**41.04**
Stddev	.002	.006	.004	.012	.002	.001	.007	.13	.09
%RSD	.0813	.3090	.1887	.5687	.1052	.0684	.3267	.3133	.2277
#1	2.041	2.062	2.031	2.098	2.087	2.066	2.033	40.60	41.12
#2	2.039	2.070	2.038	2.110	2.090	2.069	2.037	40.64	41.07
#3	2.038	2.075	2.032	2.086	2.092	2.067	2.046	40.40	40.94
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	**41.63**	**40.93**	**40.92**	**41.15**	**2.092**	**2.028**	**5.099**	**2.047**	**2.125**
Stddev	.08	.03	.09	.09	.006	.003	.008	.003	.003
%RSD	.1859	.0841	.2137	.2132	.2943	.1228	.1531	.1365	.1244
#1	41.69	40.92	40.87	41.07	2.085	2.025	5.091	2.044	2.126
#2	41.67	40.97	41.02	41.24	2.093	2.030	5.098	2.050	2.127
#3	41.54	40.90	40.88	41.14	2.097	2.028	5.107	2.048	2.122
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: 5/1/2019 17:40:31 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**2.015**	**2.032**	**2.003**	**2.089**	**2.001**	F **1.755**
Stddev	.002	.003	.001	.014	.005	.007	.013
%RSD	.0719	.1563	.0673	.6840	.2609	.3468	.7177
#1	2.054	2.012	2.032	2.007	2.084	2.006	1.750
#2	2.052	2.015	2.031	2.013	2.090	2.004	1.770
#3	2.052	2.019	2.033	1.987	2.094	1.993	1.746
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	**136340.**	**22917.**	**5609.3**	**8833.8**
Stddev	189.	26.	24.8	28.6
%RSD	.13863	.11225	.44186	.32377
#1	136140.	22891.	5626.2	8855.4
#2	136380.	22917.	5620.9	8844.7
#3	136510.	22943.	5580.9	8801.4

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/1/2019 17:45:33 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0002**	**-.0000**	**-.0002**	**-.0000**	**.0003**	**-.0000**	**.0001**
Stddev	.0001	.0000	.0001	.0001	.0002	.0003	.0000	.0000
%RSD	599.6	12.15	785.0	28.22	987.5	93.05	96.19	12.84
#1	-.0001	-.0002	.0001	-.0002	-.0001	.0001	-.0001	.0001
#2	.0001	-.0002	-.0002	-.0003	-.0002	.0002	-.0000	.0001
#3	-.0001	-.0001	.0000	-.0002	.0002	.0007	-.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0002**	**-.0006**	**-.0002**	**.0005**	**.0002**	**.0003**	**-.0004**
Stddev	.0002	.0001	.0001	.0003	.0009	.0006	.0008	.0010
%RSD	745.6	28.43	12.55	138.2	179.4	312.5	303.1	292.3
#1	-.0001	-.0001	-.0006	-.0002	-.0003	.0002	.0002	-.0006
#2	-.0001	-.0002	-.0006	.0001	.0003	-.0004	-.0005	.0008
#3	.0002	-.0002	-.0007	-.0006	.0016	.0007	.0011	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0061**	**-.0060**	**.0012**	**.0125**	**.1923**	**.0027**	**-.0007**	**-.0000**
Stddev	.0106	.0013	.0009	.0034	.0237	.0051	.0008	.0002
%RSD	174.7	21.77	78.64	27.30	12.35	192.7	115.4	533.1
#1	.0051	-.0045	.0009	.0155	.1726	.0052	-.0005	.0002
#2	-.0073	-.0070	.0004	.0088	.2187	-.0032	-.0000	-.0001
#3	-.0161	-.0064	.0022	.0132	.1857	.0060	-.0015	-.0002
Check ?	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: 5/1/2019 17:45:33 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0013**	**.0005**	**.0000**	**-.0001**	**.0009**	**.0001**	**.0041**	**-.0024**
Stddev	.0006	.0004	.0001	.0005	.0010	.0002	.0007	.0019
%RSD	44.00	84.52	779.9	656.3	117.7	201.8	15.88	76.33
#1	.0009	.0005	.0001	-.0005	.0018	.0000	.0034	-.0043
#2	.0011	.0001	.0000	.0005	.0010	.0003	.0047	-.0026
#3	.0019	.0009	-.0001	-.0002	-.0002	-.0001	.0043	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0122**	**.0121**
Stddev	.0009	.0010
%RSD	7.431	7.897
#1	-.0118	.0110
#2	-.0132	.0129
#3	-.0115	.0124
Check ?	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	**146110.**	**23410.**	**5910.1**	**9755.0**
Stddev	485.	141.	18.6	21.4
%RSD	.33217	.60074	.31485	.21985
#1	146670.	23513.	5931.4	9778.1
#2	145850.	23250.	5902.0	9751.0
#3	145810.	23468.	5897.0	9735.8

Zoom In Zoom Out

Sample Name: JC87092-2 Acquired: 5/1/2019 17:50:41 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6494**	**.0065**	**.0020**	**.0735**	**.2945**	**.1223**	**1.735**	**.1573**	**-.0017**
Stddev	.0002	.0001	.0001	.0001	.0006	.0007	.010	.0006	.0002
%RSD	.0358	1.128	5.665	.1826	.2069	.5436	.5529	.4117	11.56
#1	.6494	.0064	.0020	.0734	.2944	.1223	1.739	.1578	-.0015
#2	.6492	.0066	.0020	.0735	.2952	.1216	1.724	.1566	-.0015
#3	.6496	.0066	.0018	.0737	.2940	.1229	1.742	.1575	-.0019

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4035**	**.4132**	**.0490**	**.0010**	**.1135**	**.0009**	**.0001**	**170.7**	**10.69**
Stddev	.0002	.0001	.0004	.0016	.0001	.0004	.0010	.2	.02
%RSD	.0513	.0284	.9143	163.0	.1068	46.95	1269.	.1219	.1528
#1	.4032	.4130	.0492	.0005	.1134	.0013	.0003	170.6	10.67
#2	.4035	.4132	.0485	.0027	.1136	.0005	.0009	170.7	10.69
#3	.4036	.4132	.0493	-.0003	.1136	.0008	-.0010	171.0	10.70

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **221.5**	**27.86**	**18.81**	**7.272**	**.0604**	**.0079**	**2.082**	**.0260**	**.0853**
Stddev	.5	.04	.06	.007	.0014	.0001	.007	.0005	.0000
%RSD	.2241	.1363	.3412	.0973	2.295	.8030	.3480	1.753	.0460
#1	222.0	27.82	18.81	7.264	.0617	.0079	2.079	.0265	.0854
#2	221.5	27.88	18.74	7.278	.0607	.0080	2.090	.0259	.0854
#3	221.0	27.88	18.87	7.275	.0589	.0079	2.077	.0256	.0853

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.275**	**.0025**	**.1112**	**1.082**	**.1588**	**.1099**	**2.628**
Stddev	.003	.0021	.0001	.009	.0019	.0008	.021
%RSD	.0506	85.16	.1154	.8315	1.202	.7211	.8008
#1	6.273	.0046	.1111	1.081	.1573	.1092	2.644
#2	6.273	.0003	.1112	1.091	.1609	.1097	2.636
#3	6.279	.0026	.1113	1.074	.1582	.1107	2.604

Zoom In Zoom Out

Sample Name: JC87092-2 Acquired: 5/1/2019 17:50:41 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145650.**	**24846.**	**6072.4**	**9187.0**
Stddev	466.	88.	10.5	7.2
%RSD	.31998	.35228	.17265	.07864
#1	145350.	24842.	6061.0	9178.8
#2	146190.	24760.	6074.6	9192.5
#3	145420.	24935.	6081.6	9189.7

Zoom In Zoom Out

Sample Name: JC87092-3 Acquired: 5/1/2019 17:55:51 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9711**	**.0057**	**.0025**	**.0769**	**.2795**	**.1121**	**4.114**	**.1480**	**-.0004**
Stddev	.0002	.0000	.0001	.0001	.0003	.0005	.039	.0002	.0011
%RSD	.0190	.8411	5.063	.1306	.1205	.4721	.9559	.1578	301.1
#1	.9713	.0057	.0023	.0770	.2793	.1117	4.086	.1478	.0000
#2	.9709	.0058	.0025	.0768	.2799	.1127	4.159	.1483	.0005
#3	.9712	.0057	.0026	.0768	.2793	.1120	4.096	.1480	-.0016

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3436**	**2.114**	**.0590**	**.0038**	**.1949**	**.0016**	**.0000**	**156.7**	**15.41**
Stddev	.0010	.001	.0006	.0012	.0012	.0007	.0011	.2	.02
%RSD	.2822	.0635	1.061	30.75	.6387	44.68	3778.	.1528	.1343
#1	.3426	2.115	.0596	.0034	.1935	.0024	.0007	156.5	15.39
#2	.3444	2.116	.0584	.0028	.1953	.0011	.0007	156.6	15.40
#3	.3439	2.113	.0591	.0051	.1959	.0012	-.0013	156.9	15.43

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **212.1**	**27.75**	**17.78**	**6.225**	**.0560**	**.0075**	**2.117**	**.0265**	**.1390**
Stddev	2.7	.03	.07	.005	.0004	.0002	.003	.0004	.0001
%RSD	1.290	.1143	.3673	.0871	.7501	2.173	.1326	1.384	.0806
#1	213.4	27.71	17.76	6.229	.0560	.0073	2.119	.0262	.1389
#2	213.9	27.78	17.72	6.228	.0556	.0076	2.119	.0264	.1389
#3	208.9	27.75	17.85	6.219	.0564	.0075	2.114	.0269	.1391

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.182**	**-.0034**	**.0858**	**1.803**	**.1301**	**.0934**	**3.132**
Stddev	.015	.0007	.0003	.010	.0019	.0026	.014
%RSD	.2835	19.54	.3002	.5308	1.460	2.771	.4573
#1	5.165	-.0031	.0857	1.795	.1281	.0959	3.125
#2	5.189	-.0042	.0861	1.814	.1304	.0908	3.149
#3	5.191	-.0030	.0856	1.801	.1319	.0934	3.123

Zoom In Zoom Out

Sample Name: JC87092-3 Acquired: 5/1/2019 17:55:51 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**147310.**	**25031.**	**6135.0**	**9254.7**
Stddev	1395.	68.	8.8	6.2
%RSD	.94723	.27281	.14381	.06716
#1	148880.	24953.	6144.7	9254.1
#2	146210.	25064.	6127.6	9248.8
#3	146850.	25076.	6132.5	9261.2

Zoom In Zoom Out

Sample Name: JC87092-4 Acquired: 5/1/2019 18:01:03 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6342**	**.0043**	**.0045**	**.0644**	**.1079**	**.1867**	**2.010**	**.1049**	**-.0003**
Stddev	.0005	.0001	.0001	.0004	.0011	.0016	.011	.0006	.0002
%RSD	.0747	1.550	2.615	.6990	1.018	.8751	.5333	.5980	65.54
#1	.6347	.0044	.0045	.0648	.1066	.1849	2.003	.1055	-.0001
#2	.6338	.0043	.0044	.0644	.1086	.1881	2.023	.1048	-.0002
#3	.6340	.0043	.0046	.0639	.1084	.1871	2.005	.1043	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2320**	**.8951**	**.0273**	**.0003**	**.1427**	**.0024**	**.0010**	**72.24**	**34.78**
Stddev	.0016	.0050	.0011	.0013	.0013	.0010	.0003	.08	.02
%RSD	.6885	.5560	4.133	408.2	.9056	40.23	28.81	.1071	.0455
#1	.2303	.8970	.0281	.0014	.1428	.0026	.0007	72.32	34.80
#2	.2335	.8990	.0279	-.0012	.1439	.0032	.0012	72.16	34.77
#3	.2322	.8895	.0260	.0008	.1413	.0013	.0010	72.24	34.77

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**106.3**	**21.97**	**6.875**	**4.915**	**.0191**	**.0051**	**1.743**	**.0246**	**.0913**
Stddev	.1	.04	.038	.004	.0005	.0000	.011	.0008	.0001
%RSD	.0824	.1880	.5540	.0747	2.637	.8716	.6499	3.137	.1382
#1	106.3	21.92	6.907	4.911	.0186	.0051	1.753	.0241	.0914
#2	106.3	21.98	6.884	4.917	.0191	.0051	1.746	.0255	.0911
#3	106.4	22.01	6.833	4.917	.0196	.0050	1.731	.0243	.0913

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.442**	**-.0011**	**.0222**	**3.324**	**.0600**	**.0373**	**3.786**
Stddev	.019	.0009	.0001	.002	.0012	.0006	.047
%RSD	.7950	80.01	.5968	.0533	1.991	1.549	1.229
#1	2.420	-.0001	.0221	3.326	.0586	.0377	3.752
#2	2.457	-.0017	.0224	3.324	.0602	.0367	3.766
#3	2.449	-.0015	.0221	3.323	.0610	.0377	3.839

Zoom In Zoom Out

Sample Name: JC87092-4 Acquired: 5/1/2019 18:01:03 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**149320.**	**25259.**	**6209.5**	**9214.1**
Stddev	1112.	170.	39.9	49.4
%RSD	.74464	.67146	.64313	.53644
#1	150490.	25441.	6195.7	9190.5
#2	148270.	25106.	6178.3	9180.9
#3	149210.	25231.	6254.5	9270.9

Zoom In Zoom Out

Sample Name: JC87092-5 Acquired: 5/1/2019 18:06:08 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6073**	**.0056**	**.0056**	**.0870**	**.2474**	**.2262**	**2.119**	**.1995**	**-.0003**
Stddev	.0072	.0000	.0001	.0003	.0010	.0012	.007	.0007	.0003
%RSD	1.186	.4887	1.402	.3875	.4236	.5256	.3152	.3443	99.38
#1	.5990	.0057	.0057	.0869	.2482	.2250	2.118	.1988	-.0006
#2	.6122	.0056	.0055	.0868	.2478	.2274	2.112	.1995	-.0002
#3	.6107	.0056	.0055	.0874	.2462	.2262	2.125	.2002	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3356**	**6.331**	**.0482**	**.0002**	**.3931**	**-.0004**	**.0015**	**132.1**	**17.89**
Stddev	.0008	.011	.0005	.0019	.0012	.0027	.0014	1.4	.17
%RSD	.2430	.1784	.9935	825.7	.3154	669.9	92.68	1.060	.9755
#1	.3358	6.341	.0479	-.0017	.3935	-.0014	.0017	130.5	17.69
#2	.3362	6.319	.0481	.0002	.3917	-.0024	.0027	132.9	17.98
#3	.3347	6.334	.0488	.0022	.3941	.0026	-.0000	132.9	18.00

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**188.2**	**23.77**	**16.36**	**4.870**	**.0398**	**.0075**	**2.065**	**.0305**	**.1370**
Stddev	2.4	.22	.15	.050	.0006	.0001	.006	.0003	.0017
%RSD	1.293	.9396	.9108	1.027	1.473	1.844	.2988	.9635	1.237
#1	185.5	23.52	16.19	4.813	.0405	.0073	2.069	.0306	.1350
#2	189.0	23.92	16.44	4.905	.0397	.0075	2.057	.0302	.1381
#3	190.2	23.87	16.44	4.892	.0393	.0076	2.067	.0307	.1378

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.909**	**-.0055**	**.0818**	**3.240**	**.1265**	**.1068**	**3.117**
Stddev	.009	.0014	.0003	.010	.0024	.0016	.015
%RSD	.1749	25.84	.3525	.2950	1.875	1.513	.4883
#1	4.916	-.0042	.0815	3.246	.1243	.1049	3.115
#2	4.913	-.0070	.0818	3.229	.1290	.1078	3.102
#3	4.900	-.0052	.0821	3.244	.1263	.1075	3.133

Zoom In Zoom Out

Sample Name: JC87092-5 Acquired: 5/1/2019 18:06:08 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**148680.**	**25329.**	**6207.4**	**9243.9**
Stddev	872.	25.	7.8	2.0
%RSD	.58633	.09849	.12580	.02118
#1	148290.	25353.	6202.7	9241.7
#2	148080.	25303.	6203.2	9244.5
#3	149680.	25331.	6216.4	9245.4

Zoom In Zoom Out

Sample Name: JC87092-6 Acquired: 5/1/2019 18:11:20 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8589**	**.0064**	**.0018**	**.0848**	**.3452**	**.0989**	**2.378**	**.2056**	**-.0008**
Stddev	.0013	.0000	.0001	.0004	.0009	.0008	.018	.0008	.0004
%RSD	.1529	.7628	6.754	.5048	.2553	.8145	.7537	.4114	45.95
#1	.8586	.0065	.0017	.0844	.3459	.0991	2.357	.2046	-.0009
#2	.8577	.0064	.0018	.0853	.3456	.0981	2.388	.2060	-.0012
#3	.8603	.0064	.0019	.0847	.3442	.0996	2.388	.2061	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3478**	**.3733**	**.0510**	**-.0000**	**.1035**	**.0003**	**-.0007**	**160.1**	**12.77**
Stddev	.0005	.0018	.0009	.0013	.0008	.0007	.0015	.3	.03
%RSD	.1299	.4693	1.776	4787.	.7393	251.9	198.3	.1944	.2175
#1	.3478	.3714	.0518	.0005	.1044	-.0003	.0002	160.0	12.76
#2	.3483	.3735	.0500	-.0015	.1030	.0010	-.0024	159.9	12.75
#3	.3474	.3749	.0512	.0009	.1032	.0000	-.0000	160.5	12.80

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**194.1**	**31.01**	**20.86**	**5.736**	**.0318**	**.0077**	**1.779**	**.0237**	**.1090**
Stddev	.9	.09	.04	.006	.0013	.0000	.004	.0008	.0004
%RSD	.4637	.2787	.1943	.0980	4.225	.3440	.2313	3.173	.3258
#1	194.8	30.99	20.82	5.731	.0304	.0078	1.774	.0229	.1089
#2	193.1	30.93	20.90	5.734	.0331	.0077	1.782	.0244	.1087
#3	194.5	31.10	20.87	5.742	.0318	.0077	1.779	.0238	.1094

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.055**	**-.0001**	**.0760**	**.5693**	**.1549**	**.0906**	**3.157**
Stddev	.011	.0015	.0001	.0034	.0014	.0007	.011
%RSD	.1860	2503.	.1039	.6017	.9068	.7439	.3310
#1	6.063	.0005	.0761	.5655	.1543	.0911	3.145
#2	6.060	.0010	.0760	.5703	.1565	.0898	3.163
#3	6.042	-.0017	.0761	.5722	.1538	.0909	3.164

Zoom In Zoom Out

Sample Name: JC87092-6 Acquired: 5/1/2019 18:11:20 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**151280.**	**25684.**	**6298.4**	**9185.6**
Stddev	319.	90.	24.1	24.3
%RSD	.21112	.35147	.38225	.26421
#1	151300.	25740.	6310.8	9203.6
#2	150950.	25732.	6313.7	9195.2
#3	151590.	25580.	6270.6	9158.0

Zoom In Zoom Out

Sample Name: JC87092-7 Acquired: 5/1/2019 18:16:33 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9316**	**.0048**	**.0031**	**.0854**	**.1844**	**.1765**	**2.872**	**.2415**	**-.0005**
Stddev	.0010	.0001	.0001	.0007	.0012	.0012	.022	.0019	.0005
%RSD	.1054	1.483	2.294	.7751	.6378	.7026	.7799	.8057	103.6
#1	.9309	.0047	.0031	.0861	.1847	.1766	2.875	.2436	-.0009
#2	.9312	.0047	.0030	.0848	.1854	.1777	2.893	.2397	.0001
#3	.9327	.0048	.0032	.0853	.1831	.1752	2.848	.2412	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2709**	**1.407**	**.0372**	**-.0004**	**.1741**	**-.0008**	**-.0009**	**103.9**	**21.96**
Stddev	.0014	.009	.0002	.0010	.0013	.0019	.0020	.2	.04
%RSD	.5230	.6404	.4874	248.3	.7348	222.0	216.1	.1760	.1906
#1	.2723	1.417	.0371	.0006	.1754	-.0030	.0004	103.7	21.91
#2	.2709	1.400	.0374	-.0004	.1729	.0003	-.0033	104.0	21.98
#3	.2695	1.404	.0371	-.0014	.1741	.0001	.0001	104.0	21.98

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**154.8**	**25.88**	**20.19**	**7.538**	**.0215**	**.0067**	**1.983**	**.0239**	**.0977**
Stddev	3.4	.08	.04	.010	.0001	.0002	.017	.0005	.0002
%RSD	2.192	.3263	.1981	.1337	.4015	2.953	.8792	2.239	.2301
#1	154.0	25.78	20.14	7.527	.0214	.0068	2.003	.0240	.0974
#2	158.5	25.94	20.22	7.545	.0215	.0068	1.969	.0244	.0977
#3	151.9	25.91	20.20	7.543	.0216	.0065	1.977	.0233	.0979

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.858**	**-.0007**	**.0411**	**2.346**	**.1469**	**.0852**	**5.751**
Stddev	.030	.0006	.0004	.009	.0010	.0019	.036
%RSD	.5079	81.82	.9010	.3667	.6705	2.200	.6336
#1	5.886	-.0012	.0414	2.355	.1472	.0850	5.789
#2	5.861	-.0008	.0411	2.338	.1477	.0834	5.746
#3	5.827	-.0001	.0407	2.344	.1458	.0872	5.717

Zoom In Zoom Out

Sample Name: JC87092-7 Acquired: 5/1/2019 18:16:33 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**152830.**	**25905.**	**6234.5**	**9146.7**
Stddev	403.	99.	28.3	45.1
%RSD	.26361	.38133	.45449	.49344
#1	152520.	25983.	6202.8	9095.8
#2	152680.	25794.	6257.3	9182.0
#3	153290.	25938.	6243.5	9162.2

Zoom In Zoom Out

Sample Name: MP14579-B1 Acquired: 5/1/2019 18:21:46 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.075**	**2.146**	**2.081**	**2.111**	**2.097**	**2.110**	**2.099**	**2.129**	**.2615**
Stddev	.002	.001	.003	.003	.003	.003	.016	.002	.0004
%RSD	.1131	.0316	.1343	.1281	.1366	.1500	.7772	.0959	.1446
#1	2.073	2.146	2.080	2.108	2.096	2.111	2.096	2.130	.2612
#2	2.074	2.145	2.079	2.111	2.100	2.113	2.085	2.127	.2616
#3	2.077	2.146	2.084	2.114	2.094	2.106	2.117	2.130	.2619

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.036**	**2.107**	**2.011**	**2.160**	**2.124**	**2.071**	**2.017**	**25.38**	**25.87**
Stddev	.002	.002	.003	.006	.003	.002	.004	.02	.03
%RSD	.0990	.1041	.1608	.2701	.1455	.1172	.1928	.0671	.1106
#1	2.034	2.105	2.014	2.166	2.122	2.069	2.014	25.40	25.89
#2	2.038	2.108	2.008	2.155	2.123	2.070	2.015	25.37	25.84
#3	2.035	2.109	2.011	2.158	2.128	2.074	2.021	25.38	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	**26.11**	**25.64**	**25.61**	**25.86**	**2.054**	**1.989**	**.0483**	**2.067**	**2.153**
Stddev	.04	.07	.07	.03	.005	.003	.0014	.004	.001
%RSD	.1447	.2857	.2875	.1249	.2318	.1246	2.984	.1775	.0359
#1	26.15	25.69	25.66	25.84	2.052	1.989	.0469	2.069	2.153
#2	26.07	25.56	25.52	25.84	2.051	1.986	.0481	2.063	2.153
#3	26.13	25.67	25.64	25.89	2.060	1.991	.0498	2.070	2.154

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.032**	**1.203**	**2.004**	**.0303**	**.0751**	**-.0112**	**1.758**
Stddev	.001	.007	.002	.0031	.0015	.0019	.008
%RSD	.0668	.6237	.0753	10.16	1.994	16.75	.4660
#1	2.032	1.196	2.003	.0338	.0753	-.0103	1.765
#2	2.031	1.204	2.006	.0284	.0764	-.0100	1.749
#3	2.033	1.210	2.004	.0286	.0735	-.0134	1.760

Zoom In Zoom Out

Sample Name: MP14579-B1 Acquired: 5/1/2019 18:21:46 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**139380.**	**23294.**	**5690.9**	**9021.6**
Stddev	406.	238.	15.4	15.3
%RSD	.29136	1.0206	.27069	.17005
#1	139840.	23043.	5700.0	9031.2
#2	139090.	23515.	5699.7	9029.7
#3	139200.	23323.	5673.2	9003.9

Zoom In Zoom Out

Sample Name: MP14579-MB1 Acquired: 5/1/2019 18:26:47 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**.0002**	**.0002**	**.0017**	**.0012**	**.0013**	**.0015**	**.0002**
Stddev	.0003	.0001	.0002	.0003	.0001	.0002	.0000	.0001	.0003
%RSD	179.2	112.2	114.2	203.2	6.699	18.76	2.748	9.008	140.6
#1	.0004	.0001	.0001	.0005	.0016	.0009	.0013	.0017	-.0001
#2	-.0000	.0000	.0000	-.0000	.0018	.0014	.0014	.0014	.0004
#3	.0000	.0000	.0004	-.0000	.0017	.0013	.0014	.0015	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0089**	**.0003**	**-.0001**	**.0003**	**.0001**	**.0001**	**.0389**	**.0781**
Stddev	.0001	.0001	.0016	.0005	.0006	.0018	.0018	.0028	.0011
%RSD	48.42	1.168	463.9	355.8	193.5	3442.	2246.	7.292	1.459
#1	.0001	.0088	-.0013	.0003	.0010	-.0020	.0021	.0367	.0779
#2	.0004	.0090	.0019	-.0007	-.0002	.0010	-.0005	.0378	.0793
#3	.0003	.0089	.0004	-.0000	.0001	.0012	-.0013	.0421	.0770

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0866**	**.0448**	**.1868**	**.0953**	**.0002**	**.0007**	**.0161**	**.0207**	**.0005**
Stddev	.0027	.0142	.0320	.0084	.0002	.0000	.0010	.0006	.0002
%RSD	3.164	31.75	17.15	8.825	82.80	6.177	6.494	2.809	29.61
#1	.0893	.0289	.2238	.0950	.0002	.0008	.0168	.0214	.0004
#2	.0865	.0562	.1671	.1039	.0005	.0007	.0149	.0206	.0005
#3	.0838	.0493	.1695	.0871	.0001	.0007	.0166	.0202	.0007

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0090**	**.0009**	**.0257**	**-.0003**	**-.0117**	**.0355**
Stddev	.0003	.0010	.0002	.0006	.0005	.0017	.0004
%RSD	11.55	11.26	16.08	2.248	167.1	14.59	1.135
#1	.0027	.0102	.0010	.0263	.0002	-.0133	.0360
#2	.0024	.0085	.0008	.0258	-.0003	-.0119	.0351
#3	.0022	.0084	.0010	.0251	-.0008	-.0099	.0355

Zoom In Zoom Out

Sample Name: MP14579-MB1 Acquired: 5/1/2019 18:26:47 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**148030.**	**23834.**	**5967.6**	**9804.6**
Stddev	556.	84.	7.6	8.2
%RSD	.37552	.35360	.12747	.08393
#1	147610.	23837.	5976.1	9813.9
#2	147820.	23917.	5961.4	9801.9
#3	148660.	23748.	5965.4	9798.2

Zoom In Zoom Out

Sample Name: MP14579-S1 Acquired: 5/1/2019 18:31:54 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.623**	**2.108**	**2.044**	**2.143**	**2.175**	**3.072**	**3.718**	**2.256**	**.2587**
Stddev	.047	.035	.001	.001	.004	.006	.022	.003	.0005
%RSD	1.781	1.637	.0429	.0443	.2059	.2074	.5922	.1187	.1829
#1	2.576	2.072	2.045	2.143	2.178	3.073	3.718	2.257	.2584
#2	2.669	2.141	2.044	2.143	2.177	3.078	3.739	2.257	.2593
#3	2.624	2.112	2.044	2.142	2.170	3.065	3.695	2.253	.2585

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.182**	**3.955**	**2.645**	**2.097**	**4.505**	**2.021**	**1.454**	**84.11**	**38.43**
Stddev	.002	.007	.003	.007	.004	.005	.000	1.43	.62
%RSD	.0705	.1757	.1303	.3222	.0956	.2600	.0266	1.702	1.614
#1	2.181	3.952	2.647	2.105	4.504	2.027	1.453	82.65	37.78
#2	2.184	3.963	2.647	2.095	4.510	2.016	1.454	85.52	39.02
#3	2.181	3.950	2.641	2.092	4.502	2.020	1.454	84.16	38.48

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**146.8**	**34.06**	**32.67**	**25.91**	**2.003**	**1.926**	**3.133**	**2.011**	**2.246**
Stddev	2.5	.56	.51	.41	.001	.002	.002	.006	.038
%RSD	1.669	1.639	1.549	1.600	.0674	.0825	.0734	.2783	1.702
#1	144.7	33.50	32.12	25.49	2.003	1.927	3.134	2.010	2.207
#2	149.5	34.61	33.11	26.32	2.002	1.926	3.135	2.017	2.283
#3	146.3	34.07	32.78	25.92	2.005	1.924	3.130	2.006	2.248

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.482**	**1.067**	**1.825**	**2.474**	**.1145**	**.0532**	**3.906**
Stddev	.001	.001	.001	.015	.0007	.0012	.021
%RSD	.0164	.0909	.0501	.6012	.6505	2.221	.5335
#1	3.483	1.068	1.825	2.492	.1153	.0541	3.930
#2	3.482	1.067	1.826	2.467	.1138	.0518	3.892
#3	3.482	1.067	1.824	2.465	.1145	.0536	3.896

Zoom In Zoom Out

Sample Name: MP14579-S1 Acquired: 5/1/2019 18:31:54 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142260.**	**24137.**	**5829.1**	**9002.0**
Stddev	379.	247.	24.2	29.7
%RSD	.26656	1.0226	.41512	.33007
#1	141960.	24334.	5845.4	9019.0
#2	142130.	23860.	5801.3	8967.7
#3	142680.	24217.	5840.6	9019.4

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/1/2019 18:36:57 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.028**	**2.081**	**2.047**	**2.082**	**2.077**	**2.072**	**2.063**	**2.102**	**.2581**
Stddev	.051	.050	.006	.005	.003	.002	.006	.005	.0010
%RSD	2.539	2.413	.2719	.2195	.1272	.1018	.3039	.2542	.3737
#1	2.058	2.113	2.051	2.086	2.076	2.074	2.058	2.106	.2574
#2	2.058	2.106	2.049	2.083	2.079	2.072	2.070	2.104	.2592
#3	1.968	2.023	2.040	2.077	2.074	2.070	2.060	2.096	.2576
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	**2.038**	**2.060**	**2.027**	**2.101**	**2.086**	**2.070**	**2.029**	**40.15**	**40.68**
Stddev	.003	.005	.006	.004	.006	.007	.004	.98	.98
%RSD	.1393	.2693	.3028	.1913	.2826	.3526	.1912	2.452	2.409
#1	2.038	2.065	2.034	2.105	2.089	2.078	2.031	40.77	41.32
#2	2.040	2.061	2.025	2.097	2.089	2.067	2.032	40.67	41.17
#3	2.035	2.054	2.022	2.101	2.079	2.064	2.024	39.02	39.55
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	**41.24**	**40.46**	**40.51**	**40.59**	**2.085**	**2.019**	**5.085**	**2.038**	**2.104**
Stddev	1.05	.96	.91	.98	.004	.006	.012	.004	.053
%RSD	2.536	2.380	2.252	2.425	.1858	.2755	.2375	.2087	2.541
#1	41.91	41.00	41.11	41.16	2.086	2.024	5.093	2.043	2.137
#2	41.77	41.03	40.97	41.15	2.088	2.019	5.091	2.036	2.133
#3	40.03	39.35	39.46	39.45	2.080	2.013	5.071	2.035	2.042
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: 5/1/2019 18:36:57 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**2.016**	**2.031**	**2.004**	**2.093**	**1.986**	F **1.760**
Stddev	.004	.004	.000	.010	.004	.047	.008
%RSD	.1870	.2115	.0176	.4767	.2085	2.368	.4512
#1	2.055	2.020	2.032	2.010	2.097	2.016	1.758
#2	2.056	2.016	2.031	1.993	2.093	2.010	1.768
#3	2.049	2.011	2.031	2.009	2.088	1.932	1.753
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	**136610.**	**23202.**	**5634.1**	**8851.8**
Stddev	806.	512.	14.9	17.7
%RSD	.58974	2.2062	.26447	.20005
#1	136870.	22949.	5619.8	8833.3
#2	135710.	22866.	5633.0	8853.6
#3	137260.	23791.	5649.5	8868.5

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/1/2019 18:41:58 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**.0001**	**-.0000**	**-.0000**	**.0002**	**.0001**	**-.0001**
Stddev	.0002	.0001	.0002	.0000	.0002	.0003	.0000	.0002
%RSD	369.3	6880.	286.5	604.2	2167.	139.1	40.86	286.2
#1	.0002	.0001	.0004	.0000	-.0002	-.0001	.0001	-.0000
#2	.0000	-.0000	-.0001	-.0000	-.0000	.0005	.0000	-.0002
#3	-.0001	-.0001	-.0000	-.0000	.0002	.0003	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0000**	**-.0005**	**.0002**	**-.0001**	**-.0005**	**-.0011**	**-.0001**
Stddev	.0005	.0003	.0001	.0005	.0007	.0010	.0003	.0019
%RSD	344.3	3745.	13.07	269.4	767.4	215.1	27.18	2856.
#1	-.0002	.0001	-.0005	-.0003	.0001	-.0016	-.0014	.0007
#2	.0004	-.0003	-.0005	.0006	-.0009	-.0003	-.0012	.0013
#3	-.0006	.0003	-.0006	.0002	.0005	.0005	-.0008	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**-.0064**	**.0009**	**.0145**	**.2448**	**.0085**	**.0010**	**.0000**
Stddev	.0069	.0005	.0010	.0151	.0382	.0058	.0006	.0002
%RSD	336.4	8.234	113.2	104.0	15.60	67.54	56.92	422.0
#1	-.0049	-.0065	.0017	.0273	.2701	.0100	.0016	.0000
#2	.0058	-.0068	.0012	.0184	.2009	.0022	.0007	-.0001
#3	-.0070	-.0058	-.0002	-.0021	.2635	.0134	.0007	.0003
Check ?	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: 5/1/2019 18:41:58 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**-.0003**	**.0001**	**.0003**	**.0025**	**.0002**	**.0033**	**-.0003**
Stddev	.0006	.0007	.0001	.0002	.0010	.0000	.0012	.0016
%RSD	107.9	216.2	91.95	88.11	41.64	10.94	35.98	473.3
#1	.0009	.0003	.0000	.0001	.0031	.0002	.0020	-.0014
#2	-.0001	-.0002	.0002	.0001	.0013	.0003	.0035	-.0010
#3	.0010	-.0010	.0001	.0006	.0031	.0002	.0043	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0129**	**.0126**
Stddev	.0004	.0023
%RSD	3.111	18.37
#1	-.0129	.0133
#2	-.0125	.0145
#3	-.0133	.0100
Check ?	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	**145460.**	**23504.**	**5886.0**	**9691.6**
Stddev	524.	165.	20.4	26.1
%RSD	.36039	.70001	.34590	.26897
#1	144880.	23314.	5867.9	9664.4
#2	145890.	23594.	5908.0	9716.3
#3	145600.	23603.	5882.0	9694.1

Zoom In Zoom Out

Sample Name: ticonf Acquired: 5/1/2019 18:47:05 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**-.0020**	**.0001**	**-.0009**	**.0000**	**.0002**	**-.0006**
Stddev	.0001	.0001	.0001	.0003	.0004	.0001	.0000	.0002	.0003
%RSD	193.1	61.60	110.5	13.72	291.5	13.30	116.4	92.83	57.11
#1	.0000	.0002	-.0000	-.0023	-.0002	-.0010	-.0000	.0004	-.0002
#2	-.0000	.0001	-.0001	-.0018	.0000	-.0008	.0001	.0004	-.0008
#3	-.0001	.0001	-.0003	-.0019	.0006	-.0008	.0000	-.0000	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**-.0007**	**-.0008**	**-.0006**	**.0005**	**-.0007**	**-.0016**	**.0005**	**-.0002**
Stddev	.0005	.0001	.0009	.0012	.0010	.0006	.0013	.0030	.0024
%RSD	68.33	18.22	107.7	196.6	212.8	87.47	80.99	655.6	1072.
#1	.0002	-.0007	.0002	.0005	.0016	-.0004	-.0002	.0010	-.0021
#2	.0010	-.0007	-.0014	-.0018	.0002	-.0004	-.0028	-.0028	-.0011
#3	.0012	-.0009	-.0013	-.0005	-.0003	-.0015	-.0017	.0032	.0025

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0076**	**-.0178**	**.1705**	**-.0060**	**.0006**	**-.0000**	**-.0197**	**-.0037**	**.0000**
Stddev	.0001	.0136	.0541	.0050	.0007	.0001	.0005	.0002	.0000
%RSD	.7339	76.25	31.71	84.50	115.8	3093.	2.647	4.706	211.3
#1	.0076	-.0137	.2304	-.0083	.0001	.0001	-.0196	-.0039	.0000
#2	.0076	-.0329	.1559	-.0002	.0004	-.0001	-.0192	-.0036	.0001
#3	.0075	-.0067	.1253	-.0094	.0014	-.0000	-.0203	-.0036	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **10.61**	**.0014**	**-.0016**	**.0058**	**.2232**	**-.0129**	**.1446**
Stddev	.05	.0006	.0002	.0008	.0012	.0019	.0004
%RSD	.5115	41.30	9.582	13.59	.5357	14.51	.3067
#1	10.67	.0012	-.0014	.0065	.2244	-.0148	.1441
#2	10.57	.0020	-.0017	.0058	.2220	-.0127	.1447
#3	10.58	.0009	-.0016	.0050	.2231	-.0111	.1449

Zoom In Zoom Out

Sample Name: ticonf Acquired: 5/1/2019 18:47:05 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145530.**	**23365.**	**5912.7**	**9692.9**
Stddev	216.	107.	18.4	23.4
%RSD	.14876	.45802	.31118	.24113
#1	145350.	23262.	5931.7	9718.2
#2	145470.	23356.	5895.0	9672.2
#3	145770.	23476.	5911.5	9688.1

Zoom In Zoom Out

Sample Name: vconf Acquired: 5/1/2019 18:52:22 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.0004**	**.0001**	**.0002**	**.0002**	**-.0004**	**-.0006**	**.0002**	**.0002**
Stddev	.0002	.0001	.0000	.0002	.0001	.0004	.0000	.0001
%RSD	52.43	54.01	18.99	86.07	21.87	75.67	14.50	52.84
#1	.0002	.0001	.0003	.0004	-.0004	-.0001	.0001	.0004
#2	.0005	.0001	.0002	.0002	-.0003	-.0008	.0002	.0002
#3	.0006	.0002	.0003	.0001	-.0004	-.0008	.0002	.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	F **10.66**	**.0005**	**.0015**	**.0078**	**-.0004**	**.0009**	F **-.0039**
Stddev	.0003	.09	.0000	.0004	.0046	.0005	.0016	.0005
%RSD	19.22	.8041	5.920	23.89	59.79	113.9	186.2	12.60
#1	-.0015	10.70	.0005	.0013	.0089	-.0007	-.0008	-.0045
#2	-.0018	10.72	.0005	.0020	.0117	.0001	.0010	-.0037
#3	-.0022	10.56	.0005	.0014	.0026	-.0008	.0024	-.0036

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0502**	**.0053**	**.0291**	**.1608**	**.0749**	**-.0009**	**-.0014**
Stddev	.0081	.0014	.0004	.0140	.0136	.0147	.0001	.0001
%RSD	642.9	2.779	6.851	48.20	8.465	19.66	11.55	6.377
#1	.0100	.0506	.0056	.0160	.1452	.0583	-.0007	-.0014
#2	-.0060	.0487	.0054	.0439	.1676	.0863	-.0009	-.0014
#3	-.0002	.0514	.0049	.0273	.1697	.0801	-.0009	-.0015

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.3264**	**-.0007**	**.0002**	**.0006**	**.0047**	**.0009**	**.0253**	**-.0021**
Stddev	.0044	.0002	.0000	.0003	.0014	.0000	.0035	.0014
%RSD	1.336	32.49	8.144	50.48	29.90	2.281	13.69	68.88
#1	-.3285	-.0007	.0002	.0009	.0058	.0009	.0293	-.0038
#2	-.3293	-.0009	.0002	.0006	.0031	.0009	.0239	-.0014
#3	-.3214	-.0004	.0002	.0003	.0050	.0009	.0228	-.0011

Zoom In Zoom Out

Sample Name: vconf Acquired: 5/1/2019 18:52:22 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0125**	**.0338**
Stddev	.0007	.0020
%RSD	5.502	5.951
#1	-.0118	.0324
#2	-.0132	.0329
#3	-.0124	.0361

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**144950.**	**23323.**	**5899.7**	**9664.9**
Stddev	513.	26.	22.0	23.6
%RSD	.35362	.11358	.37212	.24413
#1	144370.	23327.	5874.7	9638.2
#2	145340.	23294.	5916.0	9683.0
#3	145150.	23347.	5908.3	9673.5

Zoom In Zoom Out

Sample Name: moconf Acquired: 5/1/2019 18:57:38 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**.0002**	**-.0016**	**-.0011**	**.0018**	**-.0003**	**.0001**	**.0002**
Stddev	.0001	.0000	.0002	.0000	.0001	.0008	.0000	.0001	.0002
%RSD	15.36	41.63	90.55	2.578	8.685	40.89	3.344	79.65	149.4
#1	-.0007	.0000	.0002	-.0016	-.0011	.0010	-.0003	.0001	-.0000
#2	-.0007	.0001	.0003	-.0015	-.0010	.0022	-.0003	.0003	.0004
#3	-.0009	.0001	-.0000	-.0016	-.0012	.0023	-.0003	.0000	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0025**	**.0006**	**.0049**	**-.0004**	**-.0035**	**.0019**	**.1352**	**.0046**
Stddev	.0003	.0001	.0006	.0016	.0003	.0016	.0013	.0114	.0021
%RSD	52.71	2.265	114.2	31.84	75.10	45.90	68.65	8.420	46.54
#1	-.0007	-.0026	.0005	.0046	-.0001	-.0031	.0034	.1370	.0070
#2	-.0002	-.0025	-.0000	.0066	-.0007	-.0052	.0015	.1231	.0033
#3	-.0005	-.0025	.0012	.0036	-.0006	-.0021	.0009	.1456	.0034

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**-.0388**	**.2102**	**.0166**	**.0078**	F **10.50**	**-.0284**	**.0010**	**-.0000**
Stddev	.0025	.0104	.0161	.0028	.0004	.01	.0010	.0004	.0001
%RSD	86.44	26.86	7.664	16.69	5.729	.0612	3.594	35.64	2496.
#1	.0045	-.0399	.2030	.0196	.0077	10.51	-.0294	.0008	-.0001
#2	.0000	-.0486	.1990	.0142	.0083	10.50	-.0273	.0015	.0000
#3	.0042	-.0278	.2287	.0159	.0075	10.49	-.0284	.0008	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0032**	**.0054**	**-.0016**	**.0579**	**-.0032**	**-.0118**	**.0342**
Stddev	.0003	.0004	.0001	.0026	.0014	.0010	.0009
%RSD	7.748	7.869	8.832	4.430	43.17	8.606	2.702
#1	-.0029	.0051	-.0018	.0608	-.0048	-.0118	.0342
#2	-.0034	.0059	-.0016	.0571	-.0029	-.0109	.0332
#3	-.0034	.0053	-.0015	.0559	-.0020	-.0129	.0351

Zoom In Zoom Out

Sample Name: moconf Acquired: 5/1/2019 18:57:38 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145440.**	**23461.**	**5878.4**	**9675.4**
Stddev	201.	35.	6.2	5.0
%RSD	.13791	.14914	.10552	.05156
#1	145260.	23424.	5881.4	9679.7
#2	145660.	23493.	5871.3	9669.9
#3	145410.	23466.	5882.6	9676.5

Zoom In Zoom Out

Sample Name: snconf Acquired: 5/1/2019 19:02:42 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**-.0000**	**-.0000**	**.0005**	**.0000**	**.0002**	**.0002**
Stddev	.0001	.0000	.0003	.0001	.0003	.0001	.0000	.0001	.0004
%RSD	50.05	15.08	442.5	236.5	1184.	25.33	65.66	28.01	201.4
#1	.0001	-.0001	.0002	-.0001	-.0002	.0006	.0000	.0003	.0000
#2	.0003	-.0001	-.0004	.0001	.0003	.0005	.0001	.0002	.0006
#3	.0002	-.0001	.0000	-.0001	-.0002	.0003	.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	**.0001**	**.0002**	**.0007**	**-.0009**	**.0002**	**-.0014**	**-.0028**	**.0011**	**.0020**
Stddev	.0002	.0000	.0017	.0012	.0008	.0013	.0011	.0101	.0013
%RSD	158.0	21.61	223.2	127.9	333.9	91.49	39.91	897.6	64.01
#1	-.0001	.0002	.0021	-.0020	.0009	-.0019	-.0016	-.0105	.0008
#2	.0002	.0002	-.0011	-.0012	.0004	.0001	-.0032	.0078	.0033
#3	.0003	.0003	.0012	.0004	-.0006	-.0023	-.0037	.0060	.0019

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0134**	**.2122**	**-.0248**	**.0037**	**.0005**	**-.0135**	F **10.64**	**.0000**
Stddev	.0013	.0126	.0196	.0129	.0001	.0001	.0009	.07	.0001
%RSD	1347.	93.52	9.229	51.96	2.701	17.97	6.779	.7039	978.8
#1	.0009	.0280	.2342	-.0099	.0036	.0006	-.0144	10.58	.0001
#2	.0004	.0058	.1969	-.0317	.0038	.0004	-.0126	10.61	-.0001
#3	-.0016	.0065	.2054	-.0327	.0037	.0004	-.0136	10.72	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0126**	**.0001**	**.0034**	**-.0014**	**-.0127**	**.0134**
Stddev	.0004	.0001	.0002	.0011	.0010	.0004	.0012
%RSD	4730.	1.109	281.0	31.66	72.34	3.129	8.589
#1	.0003	-.0126	.0001	.0040	-.0026	-.0132	.0129
#2	.0002	-.0126	-.0001	.0022	-.0007	-.0126	.0126
#3	-.0005	-.0124	.0002	.0040	-.0009	-.0124	.0147

Zoom In Zoom Out

Sample Name: snconf Acquired: 5/1/2019 19:02:42 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145170.**	**23318.**	**5894.2**	**9673.3**
Stddev	550.	216.	36.3	49.2
%RSD	.37914	.92682	.61536	.50864
#1	145730.	23565.	5926.3	9716.1
#2	145150.	23162.	5901.5	9684.1
#3	144630.	23229.	5854.8	9619.5

Zoom In Zoom Out

Sample Name: mnconf Acquired: 5/1/2019 19:07:49 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0001**	**-.0004**	**-.0001**	**.0019**	**.0001**	F **10.11**	**.0008**	**-.0003**
Stddev	.0002	.0000	.0001	.0001	.0002	.0005	.02	.0001	.0004
%RSD	1076.	32.07	34.30	90.21	12.54	313.3	.1503	14.31	113.6
#1	.0002	-.0001	-.0005	.0000	.0021	.0001	10.10	.0009	-.0006
#2	-.0002	-.0002	-.0004	-.0001	.0020	.0006	10.13	.0009	.0001
#3	-.0000	-.0001	-.0002	-.0001	.0017	-.0003	10.10	.0007	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**.0000**	**-.0016**	**.0037**	**.0002**	**.0006**	**.0003**	**.0017**	**-.0028**
Stddev	.0004	.0001	.0008	.0006	.0009	.0004	.0014	.0073	.0019
%RSD	8.217	256.2	53.65	17.09	441.2	73.48	547.5	432.5	68.01
#1	.0047	.0001	-.0018	.0032	-.0008	.0009	.0008	-.0001	-.0036
#2	.0045	.0000	-.0022	.0044	.0008	.0001	.0014	.0098	-.0006
#3	.0040	-.0001	-.0006	.0035	.0005	.0007	-.0014	-.0045	-.0042

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**.0084**	**.1764**	**-.0205**	**-.0014**	**-.0001**	**.0036**	**-.0000**	**.0001**
Stddev	.0019	.0092	.0302	.0015	.0002	.0000	.0010	.0003	.0001
%RSD	97.52	109.0	17.09	7.564	12.80	75.27	28.51	4965.	118.7
#1	-.0041	.0109	.1550	-.0217	-.0016	-.0000	.0027	.0002	.0001
#2	-.0007	-.0017	.2109	-.0210	-.0013	-.0000	.0034	-.0003	.0002
#3	-.0010	.0161	.1634	-.0187	-.0013	-.0001	.0047	.0001	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**-.0001**	**.0102**	**-.0005**	**-.0124**	**.0613**
Stddev	.0003	.0001	.0001	.0011	.0013	.0027	.0006
%RSD	445.2	80.18	142.3	10.57	257.6	21.97	.9299
#1	.0003	-.0001	-.0000	.0092	-.0011	-.0094	.0608
#2	.0002	-.0001	-.0002	.0114	-.0015	-.0146	.0619
#3	-.0003	-.0004	-.0000	.0102	.0010	-.0132	.0611

Zoom In Zoom Out

Sample Name: mnconf Acquired: 5/1/2019 19:07:49 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145020.**	**23435.**	**5885.4**	**9635.9**
Stddev	699.	139.	9.8	9.3
%RSD	.48179	.59232	.16682	.09605
#1	145280.	23387.	5882.9	9634.4
#2	145560.	23326.	5896.2	9645.8
#3	144230.	23591.	5877.0	9627.5

Zoom In Zoom Out

Sample Name: siconf Acquired: 5/1/2019 19:13:05 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**-.0001**	**-.0000**	**.0004**	**.0000**	**.0001**	**.0003**
Stddev	.0002	.0001	.0002	.0001	.0002	.0002	.0000	.0003	.0003
%RSD	234.1	86.84	2438.	249.3	702.8	41.45	98.77	308.2	76.12
#1	-.0001	-.0001	-.0002	-.0002	.0001	.0005	-.0000	.0001	.0006
#2	.0003	-.0001	.0000	-.0001	-.0002	.0002	.0000	.0003	.0003
#3	.0000	-.0000	.0002	.0001	.0001	.0003	.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	**-.0001**	**.0002**	**-.0006**	**-.0013**	**.0022**	**-.0003**	**.0015**	**-.0041**	**.0053**
Stddev	.0001	.0001	.0008	.0006	.0006	.0012	.0023	.0098	.0014
%RSD	95.61	50.62	147.8	46.24	28.35	369.5	150.9	236.6	25.98
#1	-.0002	.0001	.0003	-.0019	.0022	.0003	.0039	-.0124	.0054
#2	.0000	.0002	-.0013	-.0014	.0016	.0005	-.0007	.0067	.0065
#3	-.0002	.0003	-.0007	-.0007	.0029	-.0018	.0013	-.0067	.0038

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0079**	**.0048**	**.1848**	**-.0122**	**-.0013**	**.0001**	**9.929**	**-.0013**	**-.0004**
Stddev	.0014	.0097	.0098	.0091	.0006	.0003	.003	.0006	.0001
%RSD	18.31	200.4	5.280	74.79	45.15	237.6	.0322	48.59	21.98
#1	-.0089	-.0059	.1954	-.0057	-.0013	.0002	9.926	-.0019	-.0005
#2	-.0063	.0129	.1761	-.0082	-.0019	.0003	9.932	-.0014	-.0004
#3	-.0086	.0075	.1828	-.0226	-.0007	-.0002	9.931	-.0006	-.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0005**	**-.0000**	**.0056**	**-.0017**	**-.0137**	**.0298**
Stddev	.0002	.0012	.0000	.0009	.0017	.0025	.0023
%RSD	76.77	219.6	78.76	16.14	101.0	18.38	7.828
#1	-.0001	-.0018	-.0000	.0049	-.0036	-.0109	.0321
#2	-.0003	-.0003	-.0001	.0067	-.0004	-.0145	.0274
#3	-.0006	.0005	-.0000	.0054	-.0010	-.0157	.0298

Zoom In Zoom Out

Sample Name: siconf Acquired: 5/1/2019 19:13:05 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145900.**	**23522.**	**5929.3**	**9682.6**
Stddev	791.	30.	5.4	10.1
%RSD	.54222	.12923	.09141	.10438
#1	146150.	23487.	5935.4	9694.3
#2	145010.	23538.	5925.0	9676.2
#3	146540.	23541.	5927.5	9677.5

Zoom In Zoom Out

Sample Name: srconf Acquired: 5/1/2019 19:18:13 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0001**	**.0002**	**-.0000**	**.0013**	**.0005**	**.0002**	**.0003**	**.0003**
Stddev	.0002	.0001	.0001	.0002	.0001	.0003	.0000	.0002	.0003
%RSD	63.41	93.76	67.33	1969.	7.000	60.56	17.18	55.16	112.4
#1	.0006	-.0001	.0003	.0003	.0012	.0009	.0002	.0002	.0004
#2	.0002	.0000	.0002	-.0001	.0013	.0003	.0002	.0005	.0005
#3	.0003	-.0001	.0001	-.0002	.0012	.0003	.0001	.0002	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0003**	**.0003**	**-.0004**	**.0002**	**-.0005**	**-.0006**	**.0010**	**-.0002**
Stddev	.0004	.0001	.0006	.0006	.0007	.0012	.0009	.0066	.0029
%RSD	38.00	17.88	180.8	138.1	288.4	263.0	135.3	667.7	1784.
#1	.0005	.0003	.0008	-.0010	.0008	-.0015	-.0016	.0074	.0015
#2	.0011	.0003	-.0003	.0001	.0004	.0009	-.0001	.0013	.0015
#3	.0012	.0003	.0004	-.0004	-.0005	-.0008	-.0002	-.0058	-.0036

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.0198**	**.1377**	**-.0146**	**-.0016**	**.0002**	**.0022**	**.0005**	F **12.11**
Stddev	.0015	.0115	.0298	.0054	.0003	.0002	.0004	.0005	.25
%RSD	50.59	58.07	21.61	36.93	19.48	97.19	17.46	91.15	2.091
#1	.0041	.0289	.1034	-.0188	-.0013	.0003	.0021	.0007	12.29
#2	.0037	.0069	.1529	-.0165	-.0019	-.0000	.0026	-.0000	12.21
#3	.0013	.0236	.1569	-.0085	-.0016	.0003	.0018	.0009	11.82

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0105**	**.0013**	**.0069**	**-.0006**	**-.0137**	**.0139**
Stddev	.0001	.0002	.0001	.0010	.0008	.0005	.0014
%RSD	260.8	1.551	7.528	13.99	145.7	3.444	10.38
#1	-.0002	.0103	.0012	.0069	-.0011	-.0132	.0145
#2	.0000	.0107	.0013	.0059	-.0010	-.0141	.0149
#3	-.0000	.0105	.0013	.0078	.0004	-.0139	.0122

Zoom In Zoom Out

Sample Name: srconf Acquired: 5/1/2019 19:18:13 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144380.**	**23213.**	**5857.9**	**9620.6**
Stddev	655.	210.	30.9	42.1
%RSD	.45396	.90447	.52720	.43806
#1	145140.	23005.	5871.4	9639.4
#2	143980.	23209.	5879.6	9650.1
#3	144030.	23425.	5822.5	9572.4

Zoom In Zoom Out

Sample Name: coconf Acquired: 5/1/2019 19:23:30 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**.0021**	F **11.21**	**.0004**	**-.0002**	**.0002**	**-.0010**
Stddev	.0000	.0000	.0001	.03	.0001	.0004	.0000	.0001
%RSD	411.9	88.07	6.951	.2252	35.87	213.6	6.138	10.59
#1	-.0000	.0000	.0022	11.20	.0005	-.0006	.0002	-.0011
#2	.0001	.0000	.0022	11.23	.0002	-.0003	.0002	-.0010
#3	-.0000	.0001	.0020	11.18	.0003	.0003	.0002	-.0009

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0002**	**-.0004**	**.0003**	F **-.0032**	**-.0006**	**.0015**	**.0023**
Stddev	.0003	.0003	.0000	.0011	.0011	.0002	.0009	.0016
%RSD	110.0	122.3	11.51	314.2	34.52	34.71	57.81	67.49
#1	-.0000	-.0001	-.0004	-.0001	-.0023	-.0006	.0009	.0027
#2	.0002	.0003	-.0004	.0015	-.0029	-.0008	.0011	.0036
#3	.0005	.0005	-.0005	-.0004	-.0044	-.0004	.0025	.0006

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0172**	**.0012**	**.0001**	**.0027**	**.1348**	**-.0207**	**-.0027**	**.0000**
Stddev	.0079	.0005	.0018	.0042	.0439	.0045	.0006	.0002
%RSD	45.75	40.26	2539.	153.3	32.56	21.89	23.21	1029.
#1	-.0087	.0017	-.0004	.0074	.1315	-.0201	-.0022	.0003
#2	-.0242	.0007	.0020	.0014	.1802	-.0164	-.0034	-.0001
#3	-.0186	.0012	-.0014	-.0006	.0926	-.0254	-.0026	-.0001

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0002**	**.0001**	**-.0004**	**.0109**	**.0001**	**.0069**	**.0035**
Stddev	.0002	.0003	.0001	.0002	.0006	.0001	.0010	.0003
%RSD	66.99	151.1	43.34	47.83	5.662	121.7	14.81	7.709
#1	.0005	.0001	.0001	-.0006	.0105	.0000	.0079	.0037
#2	.0005	-.0005	.0001	-.0004	.0116	.0000	.0059	.0036
#3	.0001	-.0003	.0002	-.0002	.0105	.0002	.0069	.0032

Zoom In Zoom Out

Sample Name: coconf Acquired: 5/1/2019 19:23:30 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0133**	**.0378**
Stddev	.0037	.0014
%RSD	27.88	3.592
#1	-.0155	.0364
#2	-.0154	.0392
#3	-.0090	.0379

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**145020.**	**23573.**	**5889.0**	**9757.1**
Stddev	504.	114.	11.0	23.4
%RSD	.34765	.48455	.18740	.23951
#1	144540.	23493.	5887.4	9743.3
#2	144970.	23704.	5878.9	9743.8
#3	145550.	23523.	5900.8	9784.0

Zoom In Zoom Out

Sample Name: alconf Acquired: 5/1/2019 19:28:38 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**-.0004**	**-.0001**	**-.0001**	**-.0002**	**-.0002**	**-.0012**	**-.0014**	**-.0002**
Stddev	.0001	.0000	.0002	.0001	.0002	.0000	.0000	.0002
%RSD	22.51	26.83	162.9	81.44	123.2	3.363	1.125	122.2
#1	-.0003	-.0001	.0001	-.0001	-.0003	-.0012	-.0014	-.0000
#2	-.0005	-.0001	-.0002	-.0001	.0001	-.0012	-.0014	-.0001
#3	-.0004	-.0001	-.0002	-.0003	-.0003	-.0012	-.0013	-.0004

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**-.0004**	**-.0011**	**-.0002**	**.0032**	**.0022**	**-.0011**	F **-.0035**
Stddev	.0008	.0002	.0000	.0020	.0016	.0022	.0037	.0021
%RSD	25.17	54.83	2.466	1036.	48.92	100.1	331.2	60.60
#1	.0034	-.0002	-.0011	.0019	.0032	.0043	-.0053	-.0015
#2	.0022	-.0007	-.0011	-.0021	.0048	-.0001	.0011	-.0033
#3	.0036	-.0004	-.0011	-.0004	.0016	.0023	.0009	-.0057

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **525.8**	**.0014**	**.0023**	**.0181**	**.1284**	**.0074**	**-.0022**	**-.0006**
Stddev	3.6	.0021	.0007	.0102	.0319	.0123	.0005	.0002
%RSD	.6798	154.2	31.97	56.30	24.86	166.2	23.26	26.49
#1	526.0	-.0007	.0015	.0064	.1296	-.0045	-.0018	-.0004
#2	529.2	.0035	.0029	.0235	.1596	.0066	-.0020	-.0007
#3	522.1	.0013	.0023	.0245	.0958	.0201	-.0028	-.0007

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**-.0024**	**.0000**	**.0002**	**.0017**	**-.0002**	**.0073**	**-.0069**
Stddev	.0012	.0010	.0001	.0002	.0004	.0001	.0021	.0014
%RSD	36.78	42.55	206.3	109.3	25.75	85.42	29.23	20.60
#1	.0028	-.0033	.0001	.0000	.0013	-.0002	.0094	-.0085
#2	.0044	-.0013	.0001	.0002	.0021	-.0003	.0052	-.0065
#3	.0022	-.0025	-.0001	.0004	.0018	-.0000	.0072	-.0057

Zoom In Zoom Out

Sample Name: alconf Acquired: 5/1/2019 19:28:38 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0118**	**.0298**
Stddev	.0012	.0028
%RSD	10.18	9.266
#1	-.0109	.0270
#2	-.0112	.0326
#3	-.0131	.0298

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**129340.**	**23507.**	**5738.8**	**8724.1**
Stddev	2074.	109.	26.8	31.1
%RSD	1.6038	.46348	.46771	.35656
#1	126980.	23519.	5767.1	8751.2
#2	130150.	23393.	5735.6	8731.0
#3	130880.	23610.	5713.7	8690.2

Zoom In Zoom Out

Sample Name: caconf Acquired: 5/1/2019 19:33:47 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**-.0000**	**.0000**	**.0011**	**.0005**	**.0001**	**.0003**
Stddev	.0002	.0000	.0001	.0003	.0002	.0005	.0000	.0002	.0003
%RSD	102.2	197.6	400.7	4949.	623.1	40.25	8.220	154.6	89.50
#1	.0004	-.0000	-.0002	-.0002	.0002	.0011	.0005	-.0001	.0001
#2	.0002	-.0001	.0000	-.0001	.0000	.0016	.0006	.0002	.0007
#3	.0000	.0000	.0000	.0003	-.0001	.0007	.0006	.0003	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0004**	**-.0017**	**-.0010**	**-.0004**	**.0006**	**-.0017**	**.0369**	F **433.4**
Stddev	.0002	.0001	.0009	.0008	.0012	.0006	.0017	.0078	5.7
%RSD	154.5	15.30	50.76	77.87	293.8	105.7	97.51	21.01	1.320
#1	-.0001	.0004	-.0009	-.0020	-.0003	.0013	-.0002	.0425	440.0
#2	.0001	.0005	-.0026	-.0007	-.0016	.0004	-.0035	.0403	430.2
#3	-.0004	.0005	-.0016	-.0005	.0007	.0001	-.0015	.0281	430.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0064**	**.0146**	**.1615**	**-.0775**	**-.0017**	**-.0003**	**.0022**	**-.0016**	**-.0004**
Stddev	.0012	.0135	.0672	.0085	.0005	.0002	.0004	.0005	.0002
%RSD	18.13	92.76	41.62	10.91	30.79	80.07	17.25	31.13	40.31
#1	-.0052	.0070	.2376	-.0684	-.0020	-.0002	.0019	-.0022	-.0005
#2	-.0075	.0302	.1366	-.0851	-.0020	-.0001	.0026	-.0014	-.0004
#3	-.0064	.0066	.1103	-.0791	-.0011	-.0005	.0022	-.0012	-.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**-.0006**	**-.0002**	**-.0030**	**.0008**	**.0003**	**.0209**
Stddev	.0003	.0014	.0001	.0019	.0013	.0030	.0035
%RSD	18.07	242.2	36.37	65.31	155.8	962.1	16.95
#1	-.0018	-.0022	-.0001	-.0047	.0021	-.0029	.0199
#2	-.0015	.0003	-.0003	-.0009	.0009	.0031	.0248
#3	-.0013	.0002	-.0003	-.0033	-.0005	.0007	.0179

Zoom In Zoom Out

Sample Name: caconf Acquired: 5/1/2019 19:33:47 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**132240.**	**22656.**	**5404.4**	**8419.3**
Stddev	586.	69.	18.1	20.6
%RSD	.44279	.30502	.33555	.24449
#1	131620.	22616.	5393.9	8403.6
#2	132780.	22617.	5425.3	8442.6
#3	132310.	22736.	5393.9	8411.8

Zoom In Zoom Out

Sample Name: sconf Acquired: 5/1/2019 19:39:04 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0001**	**.0000**	**-.0000**	**-.0002**	**.0003**	**.0007**	**.0002**
Stddev	.0003	.0000	.0002	.0002	.0001	.0003	.0000	.0001
%RSD	2238.	34.63	632.0	746.7	90.96	91.75	6.222	26.74
#1	-.0003	-.0001	-.0001	.0001	-.0001	.0003	.0007	.0002
#2	.0002	-.0001	.0002	-.0003	-.0001	.0000	.0007	.0002
#3	.0000	-.0001	-.0000	.0001	-.0003	.0005	.0007	.0003

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0004**	**-.0012**	F **-.0022**	**-.0008**	**.0002**	**.0004**
Stddev	.0003	.0003	.0000	.0007	.0007	.0006	.0027	.0011
%RSD	212.5	584.2	12.63	60.82	31.48	78.99	1188.	299.1
#1	.0004	-.0001	-.0004	-.0015	-.0015	-.0015	.0015	-.0007
#2	-.0002	.0004	-.0003	-.0016	-.0022	-.0002	-.0029	.0015
#3	.0002	-.0001	-.0004	-.0004	-.0029	-.0007	.0021	.0002

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0111**	**.0016**	**.0154**	**.1588**	**.0011**	**-.0023**	**.0000**
Stddev	.0096	.0005	.0012	.0120	.0114	.0067	.0009	.0002
%RSD	1034.	4.355	75.70	77.72	7.178	618.8	41.46	1165.
#1	-.0108	.0116	.0012	.0085	.1457	.0058	-.0029	-.0002
#2	.0085	.0108	.0029	.0085	.1666	-.0066	-.0012	.0001
#3	-.0005	.0108	.0006	.0293	.1640	.0041	-.0027	.0002

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089**	**-.0009**	**.0001**	**-.0003**	**.0011**	**.0003**	**92.54**	**-.0003**
Stddev	.0003	.0003	.0001	.0002	.0012	.0001	.75	.0000
%RSD	3.844	34.55	163.7	88.60	105.4	51.52	.8109	2.326
#1	.0090	-.0011	.0000	-.0004	.0023	.0004	92.35	-.0003
#2	.0092	-.0011	-.0000	-.0000	.0011	.0003	93.37	-.0003
#3	.0085	-.0005	.0002	-.0003	-.0001	.0001	91.90	-.0002

Zoom In Zoom Out

Sample Name: sconf Acquired: 5/1/2019 19:39:04 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0147**	**.0300**
Stddev	.0017	.0020
%RSD	11.65	6.677
#1	-.0144	.0309
#2	-.0165	.0278
#3	-.0131	.0315

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**146210.**	**23394.**	**5935.9**	**9729.0**
Stddev	661.	161.	11.7	9.8
%RSD	.45195	.68780	.19728	.10118
#1	146790.	23570.	5932.5	9730.6
#2	146350.	23255.	5926.4	9718.4
#3	145490.	23356.	5949.0	9737.9

Zoom In Zoom Out

Sample Name: zrconf Acquired: 5/1/2019 19:44:09 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.0052**	**-.0001**	**-.0001**	**-.0000**	**-.0009**	**.0023**	**.0003**	**-.0002**
Stddev	.0003	.0000	.0000	.0002	.0002	.0006	.0000	.0002
%RSD	4.992	10.36	13.76	5486.	19.36	27.44	8.133	89.87
#1	.0050	-.0002	-.0001	.0002	-.0010	.0026	.0003	.0000
#2	.0055	-.0001	-.0001	-.0002	-.0007	.0015	.0003	-.0003
#3	.0052	-.0001	-.0001	-.0001	-.0010	.0026	.0003	-.0003

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0009**	**.0063**	**.0001**	**-.0011**	**-.0001**	**.0003**	F **-.0035**
Stddev	.0003	.0008	.0000	.0010	.0008	.0008	.0011	.0011
%RSD	23.84	84.74	.7428	1062.	76.43	677.2	408.6	30.53
#1	.0017	.0001	.0063	.0006	-.0001	-.0010	.0004	-.0034
#2	.0014	.0010	.0063	-.0010	-.0017	.0004	.0013	-.0025
#3	.0010	.0016	.0064	.0007	-.0014	.0003	-.0009	-.0046

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0302**	**.0665**	**.0042**	**.0168**	**.1236**	**-.0057**	**-.0023**	**-.0005**
Stddev	.0112	.0012	.0019	.0037	.0560	.0171	.0002	.0004
%RSD	37.19	1.876	43.87	22.21	45.31	301.6	7.136	73.66
#1	.0401	.0661	.0061	.0195	.1533	.0117	-.0025	-.0009
#2	.0327	.0679	.0024	.0183	.0590	-.0062	-.0022	-.0006
#3	.0180	.0655	.0042	.0125	.1585	-.0225	-.0022	-.0001

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0003**	**.0002**	**.0004**	**.0006**	F **11.34**	**.0166**	**-.0023**
Stddev	.0008	.0001	.0001	.0001	.0008	.03	.0027	.0014
%RSD	131.3	52.49	32.65	17.74	141.2	.2396	16.54	61.31
#1	.0002	.0002	.0002	.0005	-.0003	11.37	.0196	-.0015
#2	-.0013	.0004	.0002	.0003	.0010	11.33	.0144	-.0040
#3	-.0006	.0002	.0003	.0005	.0010	11.33	.0157	-.0015

Zoom In Zoom Out

Sample Name: zrconf Acquired: 5/1/2019 19:44:09 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0135**	**.0138**
Stddev	.0019	.0017
%RSD	13.85	12.55
#1	-.0147	.0120
#2	-.0145	.0155
#3	-.0113	.0140

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**142880.**	**23572.**	**5893.5**	**9676.8**
Stddev	381.	149.	10.4	15.5
%RSD	.26652	.63002	.17729	.16055
#1	142680.	23419.	5890.6	9680.6
#2	142640.	23581.	5884.8	9659.7
#3	143320.	23716.	5905.1	9690.1

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/1/2019 19:49:27 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.060**	**2.111**	**2.049**	**2.088**	**2.074**	**2.076**	**2.057**	**2.111**	**.2586**
Stddev	.002	.002	.002	.003	.005	.004	.024	.004	.0008
%RSD	.1035	.1028	.0821	.1287	.2567	.1869	1.175	.1782	.3026
#1	2.058	2.109	2.047	2.085	2.076	2.081	2.034	2.107	.2594
#2	2.059	2.113	2.050	2.090	2.078	2.075	2.082	2.114	.2587
#3	2.062	2.112	2.050	2.089	2.068	2.073	2.055	2.113	.2578
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.032**	**2.063**	**2.033**	**2.088**	**2.091**	**2.075**	**2.033**	**40.59**	**41.23**
Stddev	.004	.002	.005	.012	.002	.005	.002	.06	.05
%RSD	.2055	.1135	.2434	.5686	.0780	.2628	.1146	.1448	.1252
#1	2.034	2.061	2.029	2.076	2.093	2.069	2.034	40.52	41.17
#2	2.035	2.064	2.032	2.089	2.092	2.077	2.034	40.62	41.26
#3	2.028	2.065	2.039	2.100	2.089	2.080	2.030	40.63	41.26
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	**41.97**	**41.01**	**41.03**	**41.29**	**2.091**	**2.018**	**5.095**	**2.038**	**2.145**
Stddev	.04	.10	.06	.03	.004	.003	.008	.005	.002
%RSD	.1019	.2327	.1560	.0774	.1808	.1647	.1509	.2647	.0799
#1	41.93	40.90	40.96	41.26	2.088	2.014	5.086	2.033	2.143
#2	41.99	41.05	41.07	41.32	2.089	2.018	5.100	2.039	2.146
#3	42.00	41.08	41.07	41.27	2.095	2.021	5.100	2.043	2.147
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: 5/1/2019 19:49:27 Type: QC
Method: SGS 3 NO Valve(v328) 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	**2.059**	**2.019**	**2.031**	**2.007**	**2.100**	**2.011**	F **1.756**
Stddev	.005	.008	.004	.016	.004	.001	.006
%RSD	.2319	.3754	.1888	.8188	.1772	.0715	.3464
#1	2.065	2.011	2.034	1.991	2.100	2.010	1.750
#2	2.059	2.021	2.032	2.005	2.104	2.010	1.762
#3	2.055	2.025	2.027	2.024	2.097	2.013	1.757
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	**136580.**	**22848.**	**5615.1**	**8803.1**
Stddev	771.	115.	2.3	2.5
%RSD	.56484	.50139	.04129	.02816
#1	136580.	22928.	5612.8	8804.1
#2	135810.	22717.	5617.4	8800.3
#3	137350.	22899.	5615.3	8804.9

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/1/2019 19:54:28 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0001**	**-.0000**	**-.0001**	**-.0002**	**.0003**	**.0000**	**.0001**
Stddev	.0002	.0000	.0001	.0002	.0005	.0002	.0000	.0003
%RSD	123.3	55.99	677.1	118.3	229.9	65.88	111.8	178.8
#1	-.0000	-.0001	.0000	-.0000	-.0005	.0002	-.0000	.0004
#2	.0002	-.0001	.0000	-.0000	-.0006	.0005	.0000	.0000
#3	.0003	-.0000	-.0001	-.0003	.0004	.0002	.0000	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0003**	**-.0007**	**.0002**	**-.0011**	**-.0006**	**-.0011**	**-.0006**
Stddev	.0000	.0003	.0001	.0010	.0015	.0002	.0019	.0008
%RSD	19.67	101.5	16.26	618.6	137.3	28.09	172.5	129.3
#1	.0002	-.0000	-.0008	.0009	-.0010	-.0006	-.0024	.0003
#2	.0002	-.0007	-.0007	.0006	-.0026	-.0004	-.0020	-.0009
#3	.0003	-.0003	-.0006	-.0010	.0003	-.0007	.0011	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0026**	**-.0061**	**.0008**	**.0135**	**.1829**	**-.0011**	**.0000**	**.0002**
Stddev	.0090	.0023	.0010	.0109	.0335	.0071	.0001	.0002
%RSD	342.0	37.74	134.2	80.72	18.29	629.9	377.1	75.07
#1	-.0103	-.0052	.0019	.0116	.2094	-.0083	.0001	.0004
#2	.0073	-.0087	.0003	.0253	.1453	-.0011	-.0001	.0003
#3	-.0049	-.0044	.0001	.0037	.1939	.0060	.0002	.0001
Check ?	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: 5/1/2019 19:54:28 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**-.0001**	**.0000**	**-.0000**	**.0009**	**.0001**	**.0038**	**-.0011**
Stddev	.0003	.0005	.0002	.0003	.0009	.0001	.0007	.0014
%RSD	186.0	451.4	5472.	590.7	102.1	130.8	19.79	130.6
#1	.0001	.0005	.0000	-.0003	.0002	.0000	.0041	-.0008
#2	.0005	-.0002	.0001	.0002	.0019	-.0000	.0043	.0002
#3	-.0001	-.0006	-.0002	-.0001	.0005	.0002	.0029	-.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0137**	**.0144**
Stddev	.0016	.0012
%RSD	11.86	8.411
#1	-.0121	.0131
#2	-.0138	.0149
#3	-.0153	.0154
Check ?	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	**145220.**	**23367.**	**5873.7**	**9648.9**
Stddev	171.	52.	12.9	13.8
%RSD	.11767	.22362	.21877	.14311
#1	145100.	23332.	5878.7	9657.0
#2	145150.	23343.	5883.2	9656.8
#3	145420.	23427.	5859.1	9633.0

Zoom In Zoom Out

Sample Name: MP14579-S2 Acquired: 5/1/2019 19:59:36 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.657**	**2.095**	**2.021**	**2.115**	**2.166**	**3.178**	**3.818**	**2.242**	**.2571**
Stddev	.004	.004	.007	.006	.005	.008	.035	.007	.0004
%RSD	.1371	.1976	.3612	.2861	.2161	.2463	.9179	.3338	.1556
#1	2.653	2.098	2.021	2.116	2.164	3.169	3.840	2.243	.2566
#2	2.661	2.096	2.014	2.109	2.163	3.180	3.778	2.233	.2574
#3	2.657	2.090	2.028	2.121	2.172	3.184	3.837	2.248	.2572

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.161**	**4.286**	**2.637**	**2.059**	**4.497**	**2.003**	**1.364**	**89.80**	**41.64**
Stddev	.002	.011	.010	.010	.011	.007	.005	.14	.08
%RSD	.0787	.2461	.3648	.5026	.2534	.3339	.3560	.1611	.1883
#1	2.159	4.289	2.636	2.059	4.502	2.001	1.363	89.82	41.67
#2	2.160	4.274	2.628	2.048	4.484	1.998	1.360	89.93	41.69
#3	2.162	4.295	2.647	2.069	4.504	2.011	1.369	89.64	41.55

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**129.9**	**34.99**	**32.92**	**25.68**	**1.988**	**1.892**	**3.027**	**1.991**	**2.257**
Stddev	.2	.04	.02	.05	.009	.007	.010	.005	.002
%RSD	.1811	.1276	.0560	.2008	.4282	.3674	.3324	.2476	.0871
#1	130.0	34.97	32.94	25.63	1.988	1.893	3.027	1.991	2.258
#2	130.1	35.04	32.91	25.73	1.979	1.884	3.017	1.987	2.258
#3	129.7	34.96	32.91	25.66	1.996	1.898	3.037	1.997	2.255

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.427**	**1.056**	**1.769**	**3.045**	**.1156**	**.0619**	**3.736**
Stddev	.003	.006	.002	.026	.0011	.0022	.043
%RSD	.0716	.5271	.1085	.8510	.9760	3.561	1.160
#1	3.429	1.060	1.767	3.035	.1144	.0644	3.703
#2	3.427	1.049	1.770	3.025	.1159	.0605	3.721
#3	3.424	1.059	1.769	3.074	.1166	.0608	3.785

Zoom In Zoom Out

Sample Name: MP14579-S2 Acquired: 5/1/2019 19:59:36 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**140580.**	**23918.**	**5798.2**	**8951.1**
Stddev	682.	199.	11.2	18.1
%RSD	.48514	.83145	.19338	.20205
#1	139940.	24081.	5787.1	8935.1
#2	141300.	23696.	5809.5	8970.8
#3	140490.	23977.	5798.0	8947.5

Zoom In Zoom Out

Sample Name: JC86916-5conf Acquired: 5/1/2019 20:04:35 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0024**	**-.0003**	**-.0003**	**-.0000**	**-.0001**	**-.0028**	**-.0001**	**.0002**	**-.0000**
Stddev	.0001	.0000	.0000	.0001	.0001	.0001	.0000	.0002	.0001
%RSD	4.312	7.533	18.49	187.9	91.56	2.640	13.08	119.1	1567.
#1	-.0023	-.0003	-.0003	-.0001	-.0001	-.0027	-.0001	.0000	.0001
#2	-.0024	-.0003	-.0002	.0000	.0000	-.0029	-.0001	.0004	-.0001
#3	-.0025	-.0004	-.0003	-.0001	-.0001	-.0028	-.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	**-.0006**	**.0006**	**.0007**	**.0002**	**-.0004**	**-.0004**	**-.0012**	**-.0023**	**-.0132**
Stddev	.0002	.0021	.0004	.0004	.0002	.0002	.0008	.0095	.0004
%RSD	30.78	366.5	63.37	214.0	40.04	45.02	65.87	414.7	3.229
#1	-.0006	-.0007	.0011	.0002	-.0006	-.0002	-.0017	-.0120	-.0131
#2	-.0004	.0031	.0002	.0006	-.0005	-.0006	-.0016	-.0018	-.0128
#3	-.0007	-.0006	.0007	-.0002	-.0002	-.0004	-.0003	.0069	-.0136

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.0153**	**-.0051**	**-.0273**	**.0009**	**.0003**	**-.0058**	**-.0012**	**.0001**
Stddev	.0013	.0077	.0155	.0103	.0003	.0001	.0016	.0004	.0000
%RSD	122.6	50.64	304.2	37.52	29.01	30.75	26.68	31.17	60.72
#1	-.0004	.0193	.0113	-.0220	.0012	.0002	-.0068	-.0015	.0000
#2	-.0025	.0201	-.0072	-.0208	.0007	.0004	-.0040	-.0008	.0001
#3	-.0003	.0063	-.0195	-.0392	.0008	.0003	-.0067	-.0013	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0011**	**.0002**	**.0080**	**-.0003**	**-.0034**	**.0172**
Stddev	.0001	.0009	.0001	.0050	.0012	.0011	.0007
%RSD	43.92	79.29	33.15	62.17	460.8	31.49	4.039
#1	-.0001	-.0007	.0002	.0050	.0010	-.0032	.0165
#2	-.0003	-.0021	.0001	.0137	-.0004	-.0045	.0173
#3	-.0002	-.0005	.0002	.0052	-.0014	-.0024	.0179

Zoom In Zoom Out

Sample Name: JC86916-5conf Acquired: 5/1/2019 20:04:35 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**303370.**	**40145.**	**12987.**	**20451.**
Stddev	97.	66.	215.	345.
%RSD	.03188	.16410	1.6575	1.6871
#1	303350.	40113.	13114.	20678.
#2	303470.	40221.	12739.	20054.
#3	303280.	40101.	13109.	20622.

Zoom In Zoom Out

Sample Name: MP14579-SD1 Acquired: 5/1/2019 20:09:49 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**2.066**	**.0053**	**.0235**	**.0472**	**.1288**	**1.070**	**1.983**	**.1576**	**.0012**
Stddev	.001	.0003	.0008	.0005	.0015	.003	.004	.0002	.0014
%RSD	.0429	5.189	3.407	1.043	1.190	.2649	.2017	.1446	110.9
#1	2.065	.0056	.0232	.0477	.1293	1.071	1.985	.1574	.0026
#2	2.067	.0051	.0228	.0468	.1271	1.073	1.978	.1577	-.0002
#3	2.066	.0053	.0244	.0470	.1301	1.067	1.985	.1578	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1666**	**6.701**	**.8740**	**.0022**	**2.770**	**.0046**	**.0202**	**48.45**	**22.85**
Stddev	.0010	.006	.0060	.0029	.008	.0033	.0045	.09	.01
%RSD	.5893	.0910	.6911	135.1	.2984	72.56	22.17	.1924	.0354
#1	.1669	6.704	.8760	.0040	2.777	.0061	.0230	48.49	22.84
#2	.1655	6.695	.8672	.0038	2.761	.0008	.0150	48.52	22.86
#3	.1674	6.706	.8788	-.0012	2.772	.0069	.0226	48.35	22.86

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.3**	**9.874**	**5.830**	**.5629**	**.0276**	**.0134**	**1.480**	**.1278**	**.1826**
Stddev	.1	.056	.209	.0065	.0021	.0000	.005	.0021	.0003
%RSD	.0499	.5648	3.582	1.157	7.462	.2330	.3309	1.654	.1462
#1	153.3	9.926	6.068	.5663	.0291	.0134	1.483	.1287	.1828
#2	153.4	9.815	5.740	.5671	.0252	.0134	1.474	.1254	.1828
#3	153.2	9.883	5.680	.5554	.0284	.0135	1.482	.1294	.1823

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.259**	**-.0040**	**.0147**	**3.329**	**.0317**	**-.0042**	**4.220**
Stddev	.004	.0075	.0006	.005	.0129	.0035	.041
%RSD	.2989	187.0	4.358	.1629	40.68	82.61	.9679
#1	1.259	-.0114	.0150	3.323	.0301	-.0070	4.175
#2	1.255	.0037	.0152	3.332	.0197	-.0054	4.229
#3	1.263	-.0044	.0140	3.332	.0453	-.0003	4.256

Zoom In Zoom Out

Sample Name: MP14579-SD1 Acquired: 5/1/2019 20:09:49 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145600.**	**23501.**	**5945.9**	**9539.2**
Stddev	388.	107.	7.7	13.4
%RSD	.26655	.45676	.12953	.14078
#1	145610.	23478.	5941.0	9525.6
#2	145990.	23407.	5954.8	9552.5
#3	145210.	23618.	5942.0	9539.3

Zoom In Zoom Out

Sample Name: JC86837-1 Acquired: 5/1/2019 20:14:51 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.446**	**.0075**	**.0112**	**.0643**	**.2143**	**1.663**	**4.466**	**.3166**	**.0015**
Stddev	.001	.0000	.0002	.0002	.0006	.002	.018	.0005	.0005
%RSD	.0977	.4783	1.512	.3505	.2737	.1418	.3952	.1520	37.47
#1	1.447	.0075	.0110	.0641	.2148	1.664	4.485	.3161	.0019
#2	1.446	.0075	.0113	.0645	.2137	1.660	4.450	.3166	.0008
#3	1.444	.0075	.0111	.0642	.2145	1.665	4.463	.3170	.0017

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2649**	**4.373**	**.1614**	**.0019**	F **8.204**	**.0078**	**.1702**	**62.66**	**95.16**
Stddev	.0004	.004	.0005	.0005	.005	.0013	.0003	.25	.89
%RSD	.1413	.0808	.3043	26.77	.0629	17.02	.2049	.3939	.9399
#1	.2645	4.376	.1619	.0025	8.205	.0091	.1698	62.43	94.47
#2	.2650	4.369	.1611	.0017	8.209	.0064	.1704	62.63	94.83
#3	.2652	4.373	.1611	.0015	8.199	.0080	.1703	62.92	96.17

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **229.0**	**37.72**	**9.259**	**1.719**	**.0604**	**.0173**	**3.989**	**.3192**	**.5370**
Stddev	2.5	.11	.035	.009	.0007	.0000	.003	.0011	.0002
%RSD	1.112	.2958	.3767	.5299	1.193	.1935	.0687	.3480	.0412
#1	229.2	37.78	9.218	1.721	.0598	.0173	3.992	.3192	.5368
#2	226.3	37.59	9.279	1.727	.0601	.0174	3.987	.3181	.5371
#3	231.4	37.79	9.278	1.709	.0612	.0173	3.989	.3203	.5372

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.810**	**.0083**	**.0720**	**8.770**	**.0892**	**.0643**	**4.246**
Stddev	.004	.0010	.0004	.033	.0022	.0009	.045
%RSD	.1246	11.75	.5220	.3739	2.453	1.384	1.069
#1	2.811	.0094	.0720	8.734	.0916	.0640	4.193
#2	2.807	.0079	.0716	8.799	.0874	.0636	4.275
#3	2.814	.0075	.0723	8.777	.0887	.0653	4.268

Zoom In Zoom Out

Sample Name: JC86837-1 Acquired: 5/1/2019 20:14:51 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142020.**	**24061.**	**5817.7**	**9052.5**
Stddev	254.	145.	9.0	7.2
%RSD	.17865	.60439	.15555	.07908
#1	141750.	24024.	5808.3	9044.3
#2	142250.	24222.	5826.4	9057.2
#3	142050.	23938.	5818.3	9056.1

Zoom In Zoom Out

Sample Name: JC86837-2 Acquired: 5/1/2019 20:20:10 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8456**	**.0060**	**.0007**	**.0709**	**.2786**	**.0654**	**2.463**	**.1753**	**-.0015**
Stddev	.0032	.0001	.0001	.0000	.0019	.0011	.023	.0006	.0007
%RSD	.3747	1.064	9.719	.0617	.6819	1.711	.9451	.3401	45.72
#1	.8476	.0061	.0007	.0710	.2804	.0667	2.441	.1754	-.0009
#2	.8473	.0061	.0007	.0709	.2766	.0648	2.460	.1747	-.0014
#3	.8419	.0060	.0006	.0710	.2787	.0648	2.487	.1759	-.0022

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2516**	**.4295**	**.0399**	**.0006**	**.1400**	**-.0003**	**-.0011**	**121.1**	**18.99**
Stddev	.0013	.0004	.0011	.0004	.0013	.0023	.0033	.4	.07
%RSD	.5116	.0967	2.854	75.25	.9254	727.4	304.6	.3570	.3690
#1	.2528	.4296	.0409	.0008	.1414	.0023	-.0043	121.3	19.03
#2	.2502	.4290	.0402	.0009	.1389	-.0012	-.0012	121.3	19.03
#3	.2518	.4298	.0387	.0001	.1397	-.0021	.0023	120.6	18.91

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**142.9**	**34.24**	**14.51**	**1.848**	**.0494**	**.0026**	**1.245**	**.0214**	**.1268**
Stddev	2.7	.15	.07	.013	.0008	.0004	.000	.0004	.0004
%RSD	1.869	.4498	.4515	.6945	1.581	15.19	.0221	1.760	.3516
#1	145.9	34.37	14.54	1.862	.0489	.0030	1.245	.0215	.1271
#2	142.2	34.27	14.55	1.838	.0489	.0022	1.245	.0217	.1270
#3	140.7	34.07	14.43	1.843	.0503	.0027	1.245	.0210	.1263

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.831**	**.0002**	**.1132**	**4.316**	**.1339**	**.1661**	**1.991**
Stddev	.033	.0005	.0009	.014	.0024	.0009	.012
%RSD	.6762	252.8	.7786	.3344	1.758	.5172	.6143
#1	4.859	-.0004	.1142	4.307	.1333	.1654	1.985
#2	4.795	.0006	.1124	4.310	.1318	.1658	1.982
#3	4.839	.0003	.1132	4.333	.1365	.1670	2.005

Zoom In Zoom Out

Sample Name: JC86837-2 Acquired: 5/1/2019 20:20:10 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**148620.**	**25467.**	**6214.5**	**9102.1**
Stddev	605.	172.	7.0	17.0
%RSD	.40693	.67574	.11295	.18677
#1	148280.	25322.	6213.7	9096.9
#2	149320.	25423.	6221.8	9121.1
#3	148270.	25658.	6207.9	9088.4

Zoom In Zoom Out

Sample Name: JC86837-3 Acquired: 5/1/2019 20:25:22 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4680**	**.0031**	**.0001**	**.0284**	**.0721**	**1.246**	**.1863**	**.0667**	**.0006**
Stddev	.0064	.0000	.0000	.0001	.0003	.001	.0000	.0002	.0003
%RSD	1.367	1.261	32.86	.2693	.4150	.0475	.0150	.3406	53.57
#1	.4635	.0031	.0001	.0284	.0718	1.246	.1863	.0670	.0002
#2	.4753	.0030	.0001	.0284	.0723	1.246	.1863	.0666	.0009
#3	.4652	.0031	.0001	.0285	.0723	1.247	.1863	.0666	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0911**	**.1578**	**.1376**	**.0008**	**1.784**	**.0101**	**.0204**	**22.09**	**6.908**
Stddev	.0005	.0003	.0005	.0011	.001	.0009	.0018	.27	.083
%RSD	.4983	.2201	.3577	126.4	.0621	8.799	8.684	1.242	1.202
#1	.0911	.1574	.1380	.0020	1.782	.0110	.0183	21.91	6.846
#2	.0906	.1580	.1378	-.0000	1.784	.0101	.0214	22.41	7.003
#3	.0915	.1579	.1371	.0005	1.784	.0092	.0213	21.96	6.876

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.85**	**2.693**	**2.930**	**.6477**	**.0152**	**.0198**	**3.959**	**.0938**	**.2852**
Stddev	1.05	.019	.064	.0107	.0006	.0002	.012	.0003	.0036
%RSD	1.204	.7033	2.171	1.651	3.825	.9694	.3085	.3427	1.277
#1	86.14	2.672	2.963	.6409	.0155	.0197	3.949	.0939	.2826
#2	88.05	2.709	2.970	.6600	.0146	.0200	3.955	.0941	.2894
#3	86.36	2.699	2.857	.6421	.0156	.0196	3.972	.0935	.2837

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.624**	**.0025**	**.0314**	**11.32**	**.0417**	**.0269**	**1.478**
Stddev	.001	.0004	.0002	.04	.0013	.0023	.007
%RSD	.0625	15.77	.6658	.3664	3.232	8.568	.4808
#1	1.625	.0022	.0313	11.27	.0427	.0251	1.471
#2	1.623	.0030	.0316	11.32	.0423	.0262	1.478
#3	1.624	.0024	.0312	11.35	.0402	.0295	1.486

Zoom In Zoom Out

Sample Name: JC86837-3 Acquired: 5/1/2019 20:25:22 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**145860.**	**23932.**	**5954.3**	**9460.5**
Stddev	586.	290.	7.7	13.6
%RSD	.40202	1.2126	.13013	.14375
#1	145650.	24265.	5957.1	9457.5
#2	146520.	23731.	5945.6	9448.7
#3	145400.	23800.	5960.3	9475.4

Zoom In Zoom Out

Sample Name: JC86837-4 Acquired: 5/1/2019 20:30:20 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.066**	**.0015**	**.0000**	**.0259**	**.1080**	**.1338**	**.7170**	**.0609**	**-.0002**
Stddev	.004	.0000	.0001	.0002	.0004	.0007	.0002	.0001	.0003
%RSD	.1360	1.458	382.9	.5862	.3511	.5111	.0232	.0938	159.7
#1	3.063	.0015	.0001	.0257	.1084	.1345	.7172	.0610	-.0005
#2	3.070	.0015	-.0001	.0260	.1080	.1338	.7168	.0609	.0000
#3	3.064	.0014	.0000	.0260	.1077	.1331	.7170	.0609	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0630**	**.5958**	**.0528**	**-.0004**	F **22.22**	**.0000**	**.0069**	**35.56**	**4.819**
Stddev	.0005	.0004	.0007	.0013	.01	.0017	.0008	.05	.012
%RSD	.7630	.0741	1.277	319.2	.0479	17980.	12.01	.1540	.2571
#1	.0632	.5960	.0536	-.0018	22.21	-.0016	.0061	35.55	4.817
#2	.0634	.5953	.0525	.0007	22.21	.0019	.0068	35.61	4.833
#3	.0625	.5960	.0523	-.0001	22.23	-.0002	.0077	35.51	4.808

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**73.64**	**13.60**	**9.157**	**.3316**	**.0100**	**.0018**	**.9725**	**.1086**	**.0725**
Stddev	.13	.04	.008	.0078	.0006	.0003	.0026	.0001	.0001
%RSD	.1715	.2644	.0908	2.352	5.816	15.00	.2682	.1264	.1368
#1	73.55	13.58	9.151	.3231	.0093	.0016	.9754	.1087	.0724
#2	73.79	13.64	9.153	.3335	.0103	.0021	.9704	.1085	.0726
#3	73.59	13.57	9.166	.3384	.0104	.0017	.9716	.1087	.0725

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.865**	**-.0007**	**.0255**	**8.013**	**.0486**	**.0555**	**1.152**
Stddev	.001	.0020	.0002	.035	.0012	.0011	.006
%RSD	.0627	304.2	.6225	.4335	2.525	2.051	.5202
#1	1.866	.0002	.0255	7.992	.0498	.0542	1.150
#2	1.864	-.0029	.0257	7.993	.0473	.0559	1.146
#3	1.865	.0008	.0254	8.053	.0485	.0564	1.158

Zoom In Zoom Out

Sample Name: JC86837-4 Acquired: 5/1/2019 20:30:20 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144580.**	**23866.**	**5945.6**	**9361.2**
Stddev	197.	282.	9.8	7.5
%RSD	.13591	1.1815	.16496	.07977
#1	144790.	24181.	5934.9	9354.0
#2	144400.	23638.	5954.1	9368.9
#3	144560.	23778.	5947.7	9360.6

Zoom In Zoom Out

Sample Name: JC86837-5 Acquired: 5/1/2019 20:35:20 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2743**	**.0027**	**.0036**	**.0366**	**.1053**	**.0655**	**.6524**	**.0698**	**-.0001**
Stddev	.0007	.0000	.0002	.0003	.0005	.0003	.0004	.0002	.0002
%RSD	.2463	1.656	5.079	.8597	.4805	.4404	.0600	.2517	232.0
#1	.2739	.0027	.0038	.0365	.1050	.0657	.6529	.0698	.0001
#2	.2739	.0026	.0034	.0369	.1050	.0651	.6521	.0699	.0000
#3	.2750	.0027	.0036	.0363	.1059	.0655	.6524	.0695	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0956**	**1.303**	**.0456**	**-.0016**	**.1465**	**-.0002**	**-.0000**	**46.08**	**3.770**
Stddev	.0001	.001	.0002	.0007	.0005	.0016	.0012	.02	.002
%RSD	.1201	.1006	.4971	40.24	.3326	1000.	5606.	.0452	.0567
#1	.0956	1.304	.0458	-.0009	.1465	.0017	.0012	46.10	3.771
#2	.0957	1.304	.0457	-.0018	.1469	-.0010	-.0000	46.08	3.768
#3	.0954	1.302	.0454	-.0022	.1459	-.0013	-.0013	46.06	3.772

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**88.28**	**12.28**	**7.675**	**.2674**	**.0328**	**.0018**	**1.007**	**.0247**	**.0359**
Stddev	.03	.01	.017	.0094	.0008	.0001	.002	.0004	.0001
%RSD	.0350	.1201	.2180	3.525	2.504	2.904	.1639	1.476	.3687
#1	88.32	12.29	7.685	.2596	.0337	.0018	1.005	.0248	.0359
#2	88.26	12.26	7.656	.2648	.0325	.0018	1.008	.0243	.0360
#3	88.27	12.28	7.685	.2779	.0322	.0019	1.007	.0251	.0358

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.186**	**-.0027**	**.0322**	**3.920**	**.0292**	**.1369**	**1.538**
Stddev	.001	.0010	.0001	.008	.0003	.0022	.012
%RSD	.1129	38.50	.1943	.1956	1.082	1.587	.7522
#1	1.188	-.0038	.0322	3.919	.0289	.1383	1.543
#2	1.186	-.0023	.0322	3.929	.0296	.1380	1.546
#3	1.185	-.0019	.0323	3.913	.0292	.1344	1.524

Zoom In Zoom Out

Sample Name: JC86837-5 Acquired: 5/1/2019 20:35:20 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144460.**	**23931.**	**5950.1**	**9353.0**
Stddev	196.	136.	7.2	14.9
%RSD	.13593	.56755	.12020	.15891
#1	144670.	23841.	5956.5	9364.2
#2	144440.	24087.	5942.4	9336.1
#3	144270.	23864.	5951.5	9358.6

Zoom In Zoom Out

Sample Name: JC86837-6 Acquired: 5/1/2019 20:40:19 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9700**	**.0068**	**.0117**	**.0942**	**.8899**	**.7394**	**3.969**	**.1727**	**.0056**
Stddev	.0257	.0002	.0002	.0002	.0015	.0010	.005	.0004	.0014
%RSD	2.652	2.619	1.453	.2484	.1721	.1308	.1321	.2157	25.17
#1	.9547	.0066	.0116	.0944	.8916	.7384	3.974	.1729	.0040
#2	.9555	.0067	.0119	.0943	.8892	.7403	3.964	.1723	.0062
#3	.9997	.0069	.0117	.0940	.8888	.7396	3.968	.1730	.0066

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1759**	**3.785**	**.3720**	**.0028**	**1.349**	**.0094**	**.0029**	**87.90**	**20.03**
Stddev	.0001	.001	.0014	.0006	.001	.0012	.0002	2.49	.54
%RSD	.0376	.0264	.3742	21.99	.1005	12.37	7.336	2.837	2.681
#1	.1760	3.784	.3733	.0026	1.351	.0101	.0029	86.44	19.71
#2	.1758	3.785	.3705	.0023	1.349	.0080	.0031	86.49	19.73
#3	.1758	3.786	.3722	.0035	1.348	.0100	.0027	90.78	20.65

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**164.9**	**23.81**	**10.94**	**.8602**	**.0439**	**.0060**	**2.068**	**.1680**	**.1827**
Stddev	5.3	.68	.31	.0258	.0010	.0002	.001	.0007	.0045
%RSD	3.202	2.858	2.876	2.998	2.326	4.084	.0345	.4437	2.455
#1	159.1	23.39	10.75	.8403	.0439	.0063	2.069	.1680	.1802
#2	166.0	23.45	10.77	.8511	.0429	.0059	2.069	.1672	.1800
#3	169.5	24.60	11.31	.8894	.0449	.0058	2.067	.1687	.1879

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.140**	**-.0023**	**.0569**	**22.89**	**.0623**	**.1082**	**4.463**
Stddev	.001	.0020	.0002	.05	.0043	.0009	.018
%RSD	.0425	86.13	.4382	.2133	6.929	.8140	.4049
#1	2.140	-.0010	.0566	22.89	.0660	.1090	4.451
#2	2.139	-.0046	.0569	22.84	.0635	.1073	4.455
#3	2.141	-.0014	.0571	22.93	.0576	.1082	4.484

Zoom In Zoom Out

Sample Name: JC86837-6 Acquired: 5/1/2019 20:40:19 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**147720.**	**24724.**	**6051.8**	**9194.0**
Stddev	181.	787.	2.5	3.7
%RSD	.12276	3.1850	.04096	.04057
#1	147730.	25260.	6053.6	9193.0
#2	147900.	25092.	6052.9	9198.2
#3	147540.	23820.	6049.0	9190.9

Zoom In Zoom Out

Sample Name: CCV Acquired: 5/1/2019 20:45:30 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: 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**	**2.108**	**2.041**	**2.077**	**2.073**	**2.076**	**2.074**	**2.101**	**.2580**
Stddev	.005	.005	.004	.000	.006	.006	.021	.001	.0006
%RSD	.2242	.2529	.2053	.0167	.2717	.2994	1.018	.0617	.2366
#1	2.045	2.108	2.041	2.077	2.080	2.083	2.058	2.101	.2587
#2	2.052	2.114	2.045	2.078	2.069	2.071	2.065	2.102	.2577
#3	2.043	2.103	2.037	2.077	2.072	2.074	2.098	2.099	.2577
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	**2.029**	**2.054**	**2.023**	**2.085**	**2.082**	**2.067**	**2.025**	**40.42**	**41.07**
Stddev	.004	.006	.005	.009	.001	.004	.003	.07	.10
%RSD	.2188	.2866	.2396	.4534	.0687	.1736	.1217	.1820	.2404
#1	2.034	2.055	2.021	2.074	2.084	2.065	2.026	40.41	41.09
#2	2.025	2.059	2.028	2.090	2.082	2.071	2.028	40.50	41.16
#3	2.029	2.047	2.019	2.092	2.081	2.066	2.023	40.36	40.96
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	**41.77**	**40.75**	**40.75**	**40.95**	**2.082**	**2.008**	**5.070**	**2.026**	**2.140**
Stddev	.10	.10	.12	.07	.006	.004	.009	.004	.005
%RSD	.2285	.2569	.2974	.1651	.2982	.2040	.1851	.1805	.2515
#1	41.77	40.82	40.72	40.94	2.081	2.007	5.069	2.023	2.139
#2	41.86	40.80	40.88	41.03	2.089	2.013	5.080	2.030	2.146
#3	41.67	40.63	40.64	40.90	2.077	2.005	5.062	2.026	2.135
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: 5/1/2019 20:45:30 Type: QC
Method: SGS 3 NO Valve(v328) 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**	**2.010**	**2.027**	**2.001**	**2.093**	**2.012**	F **1.750**
Stddev	.003	.003	.003	.009	.002	.007	.018
%RSD	.1279	.1657	.1614	.4615	.0808	.3441	.9993
#1	2.057	2.008	2.031	1.991	2.092	2.016	1.735
#2	2.056	2.014	2.025	2.009	2.094	2.017	1.747
#3	2.052	2.008	2.026	2.003	2.095	2.004	1.769
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	**136570.**	**22993.**	**5629.2**	**8822.5**
Stddev	206.	51.	28.2	25.8
%RSD	.15064	.22134	.50017	.29250
#1	136760.	22987.	5616.5	8810.0
#2	136350.	23047.	5609.6	8805.3
#3	136610.	22946.	5661.5	8852.2

Zoom In Zoom Out

Sample Name: CCB Acquired: 5/1/2019 20:50:31 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0001**	**-.0001**	**-.0002**	**-.0001**	**.0000**	**.0001**	**.0000**
Stddev	.0002	.0000	.0001	.0002	.0004	.0002	.0000	.0002
%RSD	91.99	35.78	166.0	148.7	359.0	589.5	58.23	541.5
#1	-.0002	-.0001	-.0000	-.0001	-.0005	.0000	.0001	-.0001
#2	-.0005	-.0001	.0000	.0000	.0003	.0002	.0001	.0003
#3	-.0001	-.0001	-.0002	-.0004	-.0001	-.0002	.0000	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0000**	**-.0007**	**.0002**	**-.0004**	**.0002**	**-.0004**	**.0002**
Stddev	.0001	.0001	.0001	.0010	.0008	.0007	.0018	.0004
%RSD	270.2	438.9	13.68	604.7	217.5	482.2	489.9	167.3
#1	.0000	-.0001	-.0008	.0005	-.0011	.0009	-.0024	.0005
#2	-.0002	.0001	-.0006	.0009	-.0005	-.0005	.0009	.0004
#3	.0000	.0000	-.0008	-.0009	.0005	-.0000	.0004	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0050**	**-.0063**	**.0012**	**.0017**	**.2297**	**.0058**	**-.0001**	**.0001**
Stddev	.0012	.0027	.0012	.0063	.0049	.0125	.0001	.0002
%RSD	22.99	43.44	101.0	366.6	2.125	214.3	136.2	177.7
#1	-.0055	-.0089	.0023	.0042	.2247	.0049	-.0002	-.0001
#2	-.0037	-.0065	.0014	.0064	.2344	.0188	-.0001	.0002
#3	-.0059	-.0035	-.0001	-.0054	.2301	-.0062	.0000	.0003
Check ?	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: 5/1/2019 20:50:31 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0019**	**-.0007**	**.0000**	**-.0000**	**.0010**	**.0002**	**.0036**	**.0004**
Stddev	.0009	.0004	.0001	.0001	.0005	.0001	.0014	.0009
%RSD	46.90	56.17	490.0	674.7	48.41	69.18	40.35	237.6
#1	.0019	-.0003	-.0000	-.0000	.0015	.0002	.0043	.0012
#2	.0027	-.0008	.0002	.0001	.0006	.0000	.0045	-.0005
#3	.0010	-.0011	-.0001	-.0001	.0008	.0002	.0019	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0133**	**.0148**
Stddev	.0012	.0009
%RSD	9.232	5.935
#1	-.0119	.0138
#2	-.0141	.0153
#3	-.0139	.0154
Check ?	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	**146640.**	**23532.**	**5894.7**	**9672.0**
Stddev	954.	109.	34.0	48.9
%RSD	.65068	.46121	.57710	.50522
#1	145780.	23410.	5915.0	9706.0
#2	146480.	23618.	5913.6	9694.0
#3	147670.	23569.	5855.4	9616.0

Zoom In Zoom Out

Sample Name: JC86837-7 Acquired: 5/1/2019 20:55:39 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3321**	**.0026**	**.0010**	**.0487**	**.1687**	**.0721**	**2.857**	**.1088**	**.0001**
Stddev	.0002	.0001	.0002	.0003	.0003	.0006	.011	.0003	.0002
%RSD	.0524	2.029	21.63	.6443	.1693	.7936	.3849	.2419	297.6
#1	.3320	.0027	.0012	.0484	.1685	.0724	2.862	.1090	.0003
#2	.3323	.0026	.0009	.0490	.1685	.0715	2.865	.1089	.0000
#3	.3322	.0026	.0008	.0486	.1690	.0726	2.845	.1085	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1131**	**.4416**	**.0325**	**.0019**	**.1828**	**-.0010**	**-.0016**	**53.57**	**13.86**
Stddev	.0004	.0006	.0005	.0002	.0018	.0016	.0014	.18	.05
%RSD	.3810	.1267	1.539	8.713	1.011	167.9	89.78	.3440	.3497
#1	.1126	.4418	.0321	.0020	.1848	.0001	-.0001	53.69	13.89
#2	.1133	.4409	.0330	.0017	.1824	-.0028	-.0017	53.66	13.89
#3	.1134	.4419	.0323	.0020	.1812	-.0002	-.0029	53.36	13.80

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**96.14**	**22.85**	**8.191**	**.8300**	**.0306**	**.0032**	**1.182**	**.0299**	**.0844**
Stddev	.21	.07	.042	.0024	.0002	.0001	.002	.0003	.0002
%RSD	.2181	.2933	.5127	.2911	.7088	3.818	.1698	1.089	.2741
#1	96.26	22.87	8.193	.8310	.0309	.0032	1.181	.0296	.0843
#2	96.26	22.91	8.232	.8317	.0305	.0033	1.184	.0298	.0846
#3	95.90	22.78	8.148	.8272	.0305	.0031	1.181	.0302	.0842

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.803**	**.0049**	**.0517**	**4.188**	**.0734**	**.0846**	**2.483**
Stddev	.011	.0006	.0002	.018	.0012	.0009	.010
%RSD	.4009	12.31	.3248	.4302	1.584	1.021	.4147
#1	2.796	.0054	.0515	4.208	.0721	.0852	2.489
#2	2.797	.0042	.0518	4.174	.0737	.0851	2.489
#3	2.816	.0050	.0518	4.181	.0744	.0836	2.471

Zoom In Zoom Out

Sample Name: JC86837-7 Acquired: 5/1/2019 20:55:39 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**147640.**	**24524.**	**6068.2**	**9311.1**
Stddev	147.	229.	7.9	11.1
%RSD	.09967	.93459	.13014	.11930
#1	147470.	24261.	6072.5	9299.8
#2	147750.	24683.	6072.9	9322.0
#3	147690.	24628.	6059.0	9311.5

Zoom In Zoom Out

Sample Name: JC86837-8 Acquired: 5/1/2019 21:00:46 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8691**	**.0049**	**.0147**	**.0561**	**.5565**	**.5233**	**1.013**	**.1508**	**.0030**
Stddev	.0046	.0000	.0001	.0013	.0012	.0005	.002	.0025	.0002
%RSD	.5304	.5588	.9787	2.403	.2207	.0892	.1461	1.657	7.226
#1	.8745	.0049	.0148	.0566	.5577	.5237	1.014	.1523	.0032
#2	.8666	.0049	.0148	.0571	.5553	.5228	1.011	.1521	.0028
#3	.8664	.0048	.0145	.0545	.5564	.5233	1.013	.1479	.0031

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1550**	**2.335**	**.1468**	**.0010**	**.9661**	**.0075**	**.0027**	**73.48**	**12.85**
Stddev	.0004	.049	.0025	.0009	.0166	.0022	.0004	.46	.08
%RSD	.2825	2.092	1.695	89.43	1.714	28.99	13.76	.6210	.6031
#1	.1551	2.361	.1485	.0017	.9722	.0051	.0027	74.01	12.94
#2	.1546	2.365	.1480	-.0000	.9787	.0093	.0023	73.21	12.79
#3	.1554	2.279	.1439	.0014	.9473	.0083	.0030	73.23	12.82

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**124.0**	**18.93**	**8.697**	**.8498**	**.0327**	**.0109**	**1.399**	**.1129**	**.1647**
Stddev	.7	.09	.042	.0080	.0008	.0000	.031	.0025	.0009
%RSD	.5798	.4906	.4853	.9359	2.582	.3864	2.185	2.256	.5543
#1	124.9	19.04	8.742	.8570	.0334	.0109	1.413	.1144	.1657
#2	123.5	18.88	8.659	.8510	.0328	.0109	1.420	.1143	.1643
#3	123.7	18.88	8.690	.8413	.0318	.0109	1.364	.1099	.1640

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.514**	**-.0012**	**.0607**	**19.13**	**.0724**	**.0978**	**3.436**
Stddev	.003	.0002	.0001	.39	.0022	.0026	.071
%RSD	.1339	20.71	.1767	2.040	3.070	2.691	2.056
#1	2.515	-.0014	.0606	19.33	.0705	.1001	3.477
#2	2.510	-.0009	.0608	19.38	.0719	.0983	3.477
#3	2.517	-.0012	.0608	18.68	.0748	.0949	3.355

Zoom In Zoom Out

Sample Name: JC86837-8 Acquired: 5/1/2019 21:00:46 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**146400.**	**24398.**	**6085.5**	**9349.2**
Stddev	589.	177.	109.1	144.1
%RSD	.40231	.72343	1.7923	1.5417
#1	145740.	24200.	6025.4	9271.0
#2	146870.	24538.	6019.8	9261.0
#3	146590.	24457.	6211.5	9515.5

Zoom In Zoom Out

Sample Name: JC86837-9 Acquired: 5/1/2019 21:05:42 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.2315**	**.0017**	**.0008**	**.0492**	**.1079**	**.0511**	**2.586**	**.0799**
Stddev	.0004	.0003	.0002	.0019	.0101	.0056	.247	.0007
%RSD	.1627	16.62	21.29	3.842	9.330	10.92	9.533	.9163
#1	.2318	.0017	.0008	.0484	.1019	.0550	2.421	.0796
#2	.2311	.0019	.0006	.0478	.1022	.0536	2.468	.0795
#3	.2317	.0014	.0010	.0513	.1195	.0447	2.870	.0808

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0072**	**.0681**	**.6836**	**.0447**	**.0006**	**.0708**	**-.0063**	**.0026**
Stddev	.0133	.0033	.0013	.0016	.0011	.0005	.0069	.0041
%RSD	184.1	4.886	.1935	3.556	197.4	.6836	108.9	158.4
#1	.0003	.0660	.6840	.0447	.0013	.0707	-.0013	-.0011
#2	.0006	.0664	.6822	.0462	-.0007	.0713	-.0036	.0018
#3	-.0226	.0719	.6847	.0431	.0011	.0704	-.0142	.0069

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.31**	**8.234**	**82.10**	**14.36**	**6.113**	**.4771**	**.0221**	**.0008**
Stddev	.05	.004	.07	.05	.047	.0022	.0004	.0004
%RSD	.1311	.0436	.0876	.3503	.7628	.4535	1.713	49.03
#1	38.29	8.237	82.13	14.38	6.145	.4792	.0223	.0010
#2	38.36	8.230	82.15	14.39	6.135	.4772	.0223	.0011
#3	38.27	8.235	82.02	14.30	6.060	.4749	.0217	.0004

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.102**	**.0268**	**.0504**	**1.260**	**.0026**	**.0344**	**6.299**	**.0052**
Stddev	.003	.0010	.0002	.110	.0051	.0006	.025	.0426
%RSD	.3029	3.628	.4421	8.763	196.0	1.789	.4044	815.7
#1	1.101	.0277	.0502	1.196	.0005	.0348	6.329	.0293
#2	1.100	.0268	.0502	1.196	-.0011	.0346	6.286	.0303
#3	1.106	.0258	.0506	1.387	.0084	.0337	6.283	-.0440

Zoom In Zoom Out

Sample Name: JC86837-9 Acquired: 5/1/2019 21:05:42 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0638**	**1.605**
Stddev	.0056	.018
%RSD	8.851	1.154
#1	.0612	1.616
#2	.0599	1.616
#3	.0703	1.584

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	*****	**24323.**	**6009.4**	**9368.0**
Stddev	-----	239.	12.5	17.1
%RSD	-----	.98229	.20726	.18277
#1	147450.	24252.	6021.5	9386.0
#2	146630.	24127.	6010.0	9365.8
#3	-----	24589.	5996.6	9352.0

Zoom In Zoom Out

Sample Name: JC86837-10 Acquired: 5/1/2019 21:10:51 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5620**	**.0035**	**.0042**	**.0442**	**.1370**	**.4139**	**1.205**	**.1399**	**.0002**
Stddev	.0012	.0001	.0000	.0002	.0001	.0012	.003	.0005	.0001
%RSD	.2069	1.507	.6074	.3934	.1062	.2879	.2641	.3375	46.12
#1	.5633	.0036	.0042	.0442	.1369	.4148	1.208	.1397	.0001
#2	.5611	.0035	.0042	.0441	.1369	.4125	1.202	.1397	.0002
#3	.5617	.0035	.0042	.0444	.1371	.4144	1.206	.1405	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2286**	**1.062**	**.0567**	**.0003**	**1.158**	**.0012**	**.0055**	**48.54**	**53.46**
Stddev	.0008	.001	.0004	.0014	.003	.0003	.0005	.20	.26
%RSD	.3656	.1041	.6941	495.7	.2492	28.92	9.885	.4097	.4821
#1	.2295	1.062	.0572	-.0012	1.155	.0015	.0061	48.77	53.76
#2	.2278	1.061	.0565	.0006	1.159	.0010	.0051	48.41	53.31
#3	.2285	1.063	.0565	.0015	1.161	.0009	.0052	48.44	53.31

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**129.9**	**28.11**	**5.888**	**.4951**	**.0257**	**.0098**	**1.421**	**.0654**	**.1680**
Stddev	.5	.15	.056	.0031	.0013	.0001	.002	.0003	.0005
%RSD	.4078	.5307	.9476	.6282	5.145	1.493	.1576	.4738	.2778
#1	130.5	28.28	5.937	.4915	.0263	.0097	1.421	.0651	.1685
#2	129.7	28.07	5.827	.4971	.0266	.0098	1.419	.0655	.1676
#3	129.5	27.99	5.899	.4967	.0242	.0100	1.424	.0657	.1678

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.596**	**.0083**	**.0501**	**2.938**	**.0432**	**.0645**	**1.589**
Stddev	.004	.0011	.0002	.010	.0015	.0006	.011
%RSD	.2555	13.44	.3717	.3459	3.528	.8809	.7127
#1	1.599	.0095	.0503	2.930	.0442	.0652	1.584
#2	1.591	.0072	.0500	2.950	.0440	.0642	1.602
#3	1.597	.0083	.0499	2.936	.0414	.0642	1.581

Zoom In Zoom Out

Sample Name: JC86837-10 Acquired: 5/1/2019 21:10:51 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**142560.**	**23908.**	**5870.1**	**9161.3**
Stddev	678.	153.	21.2	28.9
%RSD	.47527	.63795	.36179	.31516
#1	141780.	23759.	5850.0	9133.6
#2	142990.	23901.	5892.3	9191.2
#3	142920.	24064.	5868.0	9159.0

Zoom In Zoom Out

Sample Name: JC86837-11 Acquired: 5/1/2019 21:15:49 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2066**	**.0088**	**.0029**	**.0592**	**.2679**	**.3589**	**.7741**	**.1305**	**-.0004**
Stddev	.0009	.0001	.0002	.0004	.0021	.0023	.0039	.0006	.0010
%RSD	.4526	.9457	7.805	.6648	.7914	.6498	.4975	.4913	240.9
#1	.2060	.0089	.0028	.0589	.2696	.3608	.7766	.1309	-.0007
#2	.2062	.0088	.0031	.0591	.2655	.3563	.7697	.1298	.0007
#3	.2077	.0087	.0028	.0597	.2685	.3596	.7760	.1309	-.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1620**	**1.250**	**.0391**	**-.0006**	**.3878**	**.0008**	**.0024**	**71.90**	**3.098**
Stddev	.0011	.002	.0008	.0009	.0016	.0017	.0012	.17	.003
%RSD	.6686	.1954	2.065	154.8	.4075	204.8	48.50	.2295	.0923
#1	.1625	1.252	.0400	-.0010	.3880	.0002	.0038	71.73	3.095
#2	.1607	1.247	.0386	-.0012	.3861	.0028	.0018	71.91	3.099
#3	.1627	1.250	.0386	.0005	.3892	-.0004	.0017	72.06	3.101

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**169.3**	**12.21**	**7.541**	**.3062**	**.0305**	**.0049**	**1.310**	**.0313**	**.0398**
Stddev	1.4	.01	.093	.0057	.0003	.0003	.005	.0005	.0000
%RSD	.8213	.0801	1.230	1.855	.9730	5.133	.4160	1.749	.0489
#1	168.5	12.20	7.509	.3036	.0308	.0051	1.313	.0318	.0398
#2	170.9	12.22	7.469	.3022	.0303	.0050	1.303	.0307	.0398
#3	168.6	12.21	7.646	.3127	.0304	.0046	1.313	.0315	.0398

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8918**	**-.0005**	**.0534**	**.4909**	**.0228**	**.0673**	**2.828**
Stddev	.0041	.0007	.0001	.0034	.0012	.0014	.020
%RSD	.4543	151.0	.2218	.6845	5.133	2.017	.6964
#1	.8944	-.0013	.0534	.4912	.0242	.0682	2.821
#2	.8871	-.0000	.0533	.4873	.0221	.0657	2.812
#3	.8938	-.0001	.0535	.4940	.0222	.0680	2.850

Zoom In Zoom Out

Sample Name: JC86837-11 Acquired: 5/1/2019 21:15:49 Type: Unk
Method: SGS 3 NO Valve(v328) 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.**	**24841.**	**6121.6**	**9277.9**
Stddev	483.	178.	6.8	3.7
%RSD	.32280	.71689	.11142	.03935
#1	149100.	24868.	6114.3	9276.6
#2	150030.	24651.	6127.9	9282.0
#3	149340.	25004.	6122.4	9275.0

Zoom In Zoom Out

Sample Name: JC86837-12 Acquired: 5/1/2019 21:20:58 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.7113**	**.0050**	**.0040**	**.0436**	**.1351**	**.4630**	**1.147**	**.1178**
Stddev	.0969	.0007	.0038	.0026	.0002	.0216	.010	.0009
%RSD	13.62	14.72	94.64	6.000	.1478	4.657	.8610	.7602
#1	.7670	.0054	.0018	.0422	.1352	.4745	1.151	.1174
#2	.5994	.0042	.0083	.0467	.1349	.4382	1.135	.1189
#3	.7674	.0055	.0018	.0421	.1352	.4764	1.154	.1173

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0131**	**.1468**	**1.264**	**.5071**	F **-.0051**	**6.000**	**-.0055**	**.0241**
Stddev	.0230	.0011	.004	.0021	.0073	.009	.0181	.0061
%RSD	175.9	.7502	.2866	.4230	143.9	.1511	327.6	25.47
#1	.0002	.1463	1.262	.5088	.0010	5.994	.0051	.0196
#2	-.0396	.1481	1.268	.5047	-.0131	6.010	-.0264	.0311
#3	.0002	.1461	1.261	.5078	-.0031	5.996	.0047	.0217

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**74.18**	**6.499**	**156.0**	**12.54**	**5.956**	**.4933**	**.0244**	**.0079**
Stddev	10.05	.888	22.0	1.71	.822	.0599	.0007	.0012
%RSD	13.55	13.66	14.13	13.64	13.81	12.15	2.819	15.66
#1	79.87	7.002	167.5	13.50	6.443	.5272	.0239	.0087
#2	62.57	5.473	130.6	10.57	5.007	.4241	.0251	.0065
#3	80.10	7.020	169.9	13.56	6.418	.5286	.0241	.0086

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.488**	**.0663**	**.1084**	**1.191**	**.0097**	**.0221**	**1.609**	**.0155**
Stddev	.009	.0009	.0146	.001	.0099	.0066	.014	.0317
%RSD	.6136	1.371	13.48	.0776	102.1	29.79	.8430	204.2
#1	1.480	.0671	.1165	1.190	.0042	.0258	1.595	.0335
#2	1.498	.0653	.0915	1.192	.0211	.0145	1.622	-.0211
#3	1.486	.0664	.1170	1.192	.0037	.0259	1.610	.0341

Zoom In Zoom Out

Sample Name: JC86837-12 Acquired: 5/1/2019 21:20:58 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0806**	**3.520**
Stddev	.0048	.016
%RSD	6.013	.4493
#1	.0836	3.504
#2	.0750	3.521
#3	.0831	3.536

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**145690.**	*****	**6027.1**	**9321.9**
Stddev	257.	-----	5.9	10.2
%RSD	.17669	-----	.09799	.10950
#1	145410.	24335.	6024.2	9322.3
#2	145920.	-----	6023.1	9311.5
#3	145740.	24495.	6033.9	9331.9

Zoom In Zoom Out

Sample Name: JC86901-3 Acquired: 5/1/2019 21:26:03 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**.7893**	**.0099**	**.0002**	**.1797**	**.3522**	*****	**6.575**	**.3712**
Stddev	.0015	.0000	.0000	.0004	.0014	-----	.065	.0002
%RSD	.1906	.1190	14.58	.2428	.4060	-----	.9922	.0556
#1	.7883	.0100	.0002	.1794	.3523	-----	6.650	.3715
#2	.7910	.0099	.0002	.1802	.3536	-----	6.541	.3711
#3	.7885	.0099	.0002	.1795	.3507	-----	6.533	.3711

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0911**	**.3520**	**.8006**	**.0452**	F **-.0224**	**.2337**	F **-.0613**	**.0240**
Stddev	.0003	.0006	.0006	.0010	.0010	.0003	.0021	.0024
%RSD	.3209	.1611	.0716	2.157	4.543	.1401	3.488	9.996
#1	-.0913	.3518	.8012	.0446	-.0227	.2333	-.0616	.0244
#2	-.0913	.3527	.8005	.0446	-.0231	.2338	-.0590	.0262
#3	-.0908	.3516	.8001	.0463	-.0212	.2340	-.0632	.0215

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**183.1**	**5.627**	F **363.1**	**66.16**	**27.92**	**1.570**	**.1780**	**.0034**
Stddev	.6	.007	5.2	.19	.01	.006	.0007	.0002
%RSD	.3357	.1242	1.441	.2933	.0316	.3948	.4062	6.031
#1	182.9	5.625	358.7	66.28	27.93	1.577	.1774	.0032
#2	183.8	5.634	368.9	66.27	27.93	1.568	.1778	.0036
#3	182.6	5.621	361.7	65.94	27.91	1.565	.1788	.0032

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.504**	**.0119**	**.1357**	**6.725**	**.0128**	**.0631**	**.3356**	F **-.2212**
Stddev	.003	.0003	.0002	.053	.0006	.0002	.0019	.0023
%RSD	.1930	2.368	.1176	.7945	5.027	.2955	.5621	1.047
#1	1.506	.0123	.1356	6.695	.0134	.0629	.3361	-.2205
#2	1.501	.0117	.1358	6.694	.0130	.0631	.3372	-.2192
#3	1.505	.0118	.1359	6.787	.0121	.0633	.3335	-.2237

Zoom In Zoom Out

Sample Name: JC86901-3 Acquired: 5/1/2019 21:26:03 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.4414**	**1.728**
Stddev	.0003	.007
%RSD	.0568	.3966
#1	.4414	1.734
#2	.4411	1.729
#3	.4416	1.720

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**148050.**	**25317.**	**6115.4**	**9185.7**
Stddev	327.	107.	4.4	6.3
%RSD	.22073	.42312	.07254	.06871
#1	148160.	25387.	6113.1	9183.5
#2	147680.	25194.	6112.6	9180.9
#3	148310.	25371.	6120.5	9192.9

Zoom In Zoom Out

Sample Name: JC86901-9 Acquired: 5/1/2019 21:31:32 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5453**	**.0068**	**.0002**	**.0974**	**.2726**	**.2539**	**3.712**	**.1826**	**-.0023**
Stddev	.0029	.0001	.0001	.0003	.0011	.0015	.007	.0002	.0009
%RSD	.5239	.7879	64.10	.3016	.3944	.5813	.1856	.1191	37.24
#1	.5485	.0068	.0003	.0970	.2732	.2555	3.710	.1829	-.0015
#2	.5443	.0067	.0001	.0975	.2733	.2536	3.720	.1826	-.0032
#3	.5430	.0068	.0003	.0976	.2714	.2526	3.706	.1824	-.0022

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4249**	**.4661**	**.0758**	**.0012**	**.1545**	**.0018**	**.0009**	**224.6**	**7.087**
Stddev	.0005	.0017	.0003	.0018	.0005	.0026	.0014	3.5	.029
%RSD	.1268	.3687	.3810	158.5	.3514	141.7	162.2	1.550	.4167
#1	.4255	.4659	.0756	.0031	.1551	.0047	-.0005	224.0	7.121
#2	.4246	.4644	.0762	-.0006	.1540	-.0003	.0007	221.4	7.066
#3	.4246	.4678	.0757	.0010	.1544	.0010	.0024	228.3	7.075

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **286.2**	**32.24**	**13.81**	**.6264**	**.0649**	**.0084**	**1.654**	**.0247**	**.0884**
Stddev	4.6	.10	.07	.0164	.0005	.0001	.002	.0005	.0004
%RSD	1.615	.3062	.4861	2.619	.8449	1.373	.1299	1.871	.4713
#1	291.4	32.36	13.89	.6328	.0648	.0085	1.654	.0251	.0887
#2	282.5	32.19	13.77	.6387	.0655	.0084	1.651	.0242	.0885
#3	284.6	32.18	13.77	.6078	.0644	.0083	1.655	.0248	.0879

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.238**	**.0020**	**.1117**	**.5537**	**.1221**	**.2147**	**2.859**
Stddev	.011	.0003	.0003	.0038	.0005	.0011	.021
%RSD	.2541	15.64	.2965	.6892	.4184	.5184	.7208
#1	4.250	.0016	.1121	.5508	.1218	.2160	2.871
#2	4.229	.0023	.1117	.5523	.1227	.2140	2.836
#3	4.235	.0020	.1114	.5580	.1219	.2141	2.872

Zoom In Zoom Out

Sample Name: JC86901-9 Acquired: 5/1/2019 21:31:32 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**140300.**	**24061.**	**5907.9**	**9151.9**
Stddev	557.	205.	33.2	28.6
%RSD	.39691	.85302	.56125	.31245
#1	139920.	23837.	5916.3	9156.4
#2	140040.	24239.	5936.0	9178.0
#3	140940.	24108.	5871.3	9121.3

Zoom In Zoom Out

Sample Name: JC86901-13 Acquired: 5/1/2019 21:36:52 Type: Unk
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8426**	**.0152**	**.0011**	**.1448**	**.2916**	**.0682**	**4.709**	**.2909**	**-.0044**
Stddev	.0019	.0001	.0002	.0019	.0021	.0009	.053	.0030	.0010
%RSD	.2242	.5891	21.75	1.303	.7183	1.314	1.125	1.031	22.91
#1	.8434	.0151	.0014	.1464	.2893	.0675	4.682	.2935	-.0048
#2	.8440	.0152	.0011	.1453	.2919	.0692	4.674	.2915	-.0032
#3	.8405	.0152	.0009	.1427	.2935	.0678	4.770	.2876	-.0051

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3428**	**.9524**	**.0415**	**.0031**	**.1387**	**-.0025**	**.0024**	**231.1**	**8.169**
Stddev	.0032	.0123	.0009	.0007	.0012	.0021	.0007	1.1	.020
%RSD	.9246	1.289	2.140	21.30	.8732	81.54	29.32	.4949	.2426
#1	.3401	.9652	.0425	.0038	.1393	-.0020	.0020	230.5	8.148
#2	.3418	.9513	.0409	.0024	.1395	-.0008	.0020	230.4	8.187
#3	.3463	.9407	.0410	.0031	.1373	-.0048	.0032	232.5	8.172

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **315.8**	**90.05**	**76.16**	**1.579**	**.4149**	**.0035**	**1.612**	**.0217**	**.1084**
Stddev	3.4	.13	.15	.012	.0052	.0001	.021	.0007	.0001
%RSD	1.076	.1469	.2004	.7776	1.258	1.890	1.319	3.082	.1321
#1	313.6	89.97	76.00	1.584	.4203	.0036	1.634	.0225	.1083
#2	319.8	90.20	76.30	1.587	.4144	.0035	1.610	.0214	.1084
#3	314.2	89.97	76.17	1.564	.4099	.0036	1.592	.0212	.1086

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.533**	**.0010**	**.1063**	**.3505**	**.1343**	**.6640**	**1.707**
Stddev	.039	.0008	.0009	.0045	.0061	.0014	.017
%RSD	.8637	81.43	.8380	1.280	4.542	.2074	.9773
#1	4.498	.0002	.1054	.3552	.1297	.6629	1.725
#2	4.526	.0011	.1064	.3502	.1320	.6636	1.704
#3	4.575	.0018	.1072	.3462	.1412	.6656	1.692

Zoom In Zoom Out

Sample Name: JC86901-13 Acquired: 5/1/2019 21:36:52 Type: Unk
Method: SGS 3 NO Valve(v328) 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	**144320.**	**25010.**	**6024.3**	**8983.6**
Stddev	632.	16.	74.4	88.3
%RSD	.43818	.06358	1.2350	.98316
#1	144890.	24992.	5945.2	8890.4
#2	144430.	25020.	6035.0	8994.5
#3	143640.	25018.	6092.8	9066.1

Zoom In Zoom Out

Sample Name: ccv Acquired: 5/1/2019 21:42:15 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.075**	**2.136**	**2.064**	**2.105**	**2.101**	**2.108**	**2.091**	**2.134**	**.2620**
Stddev	.005	.003	.004	.003	.003	.004	.014	.003	.0016
%RSD	.2284	.1546	.1999	.1550	.1319	.1672	.6582	.1216	.6127
#1	2.080	2.136	2.068	2.108	2.103	2.106	2.106	2.136	.2609
#2	2.074	2.140	2.060	2.102	2.102	2.112	2.088	2.131	.2638
#3	2.071	2.134	2.064	2.105	2.098	2.106	2.079	2.134	.2612
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	**2.053**	**2.075**	**2.049**	**2.098**	**2.111**	**2.099**	**2.050**	**40.85**	**41.53**
Stddev	.004	.007	.003	.009	.004	.003	.005	.10	.07
%RSD	.1765	.3291	.1365	.4231	.1834	.1259	.2323	.2462	.1682
#1	2.057	2.083	2.051	2.088	2.115	2.099	2.052	40.86	41.53
#2	2.052	2.070	2.046	2.099	2.108	2.096	2.045	40.95	41.59
#3	2.049	2.073	2.049	2.106	2.109	2.101	2.054	40.75	41.46
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	**42.36**	**41.14**	**41.17**	**41.45**	**2.106**	**2.027**	**5.137**	**2.044**	**2.182**
Stddev	.07	.09	.11	.12	.004	.002	.009	.002	.003
%RSD	.1695	.2272	.2587	.2801	.1976	.1104	.1843	.0948	.1461
#1	42.40	41.16	41.21	41.56	2.110	2.029	5.148	2.046	2.184
#2	42.41	41.22	41.24	41.45	2.102	2.025	5.129	2.043	2.184
#3	42.28	41.03	41.05	41.33	2.106	2.028	5.135	2.043	2.178
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: 5/1/2019 21:42:15 Type: QC
Method: SGS 3 NO Valve(v328) 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	**2.089**	**2.041**	**2.055**	**2.028**	**2.127**	**2.032**	F **1.781**
Stddev	.005	.005	.003	.006	.002	.002	.001
%RSD	.2299	.2326	.1516	.2921	.1138	.1072	.0773
#1	2.095	2.046	2.058	2.022	2.126	2.033	1.781
#2	2.089	2.041	2.054	2.030	2.126	2.034	1.780
#3	2.085	2.036	2.052	2.033	2.130	2.030	1.783
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	**135410.**	**22863.**	**5587.3**	**8726.1**
Stddev	413.	74.	29.5	36.6
%RSD	.30487	.32474	.52732	.41946
#1	134950.	22844.	5553.5	8684.7
#2	135520.	22800.	5607.5	8754.1
#3	135750.	22945.	5601.0	8739.6

Zoom In Zoom Out

Sample Name: ccb Acquired: 5/1/2019 21:47:16 Type: QC
Method: SGS 3 NO Valve(v328) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**.0001**	**.0001**	**-.0000**	**.0004**	**.0001**	**.0002**
Stddev	.0002	.0000	.0000	.0001	.0003	.0003	.0000	.0001
%RSD	203.8	49.48	96.61	72.82	1029.	69.98	51.28	27.96
#1	.0001	-.0001	.0001	.0002	.0002	.0006	.0001	.0002
#2	-.0001	-.0001	.0000	.0001	.0000	.0002	.0000	.0001
#3	-.0003	-.0000	.0000	.0000	-.0004	.0002	.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0002**	**-.0006**	**-.0008**	**-.0003**	**.0006**	**-.0009**	**.0001**
Stddev	.0005	.0001	.0001	.0001	.0006	.0008	.0016	.0014
%RSD	529.0	55.26	9.744	15.63	187.7	133.9	167.4	1341.
#1	.0000	.0002	-.0007	-.0008	-.0011	.0007	-.0025	-.0007
#2	-.0003	.0003	-.0006	-.0010	.0000	.0013	.0006	-.0007
#3	.0006	.0001	-.0007	-.0007	.0000	-.0003	-.0009	.0017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0072**	**-.0056**	**.0020**	**.0192**	**.2428**	**-.0012**	**-.0006**	**.0001**
Stddev	.0041	.0009	.0016	.0027	.0277	.0044	.0001	.0001
%RSD	57.33	15.42	83.82	14.11	11.40	367.2	13.12	102.9
#1	-.0040	-.0064	.0025	.0171	.2150	-.0063	-.0005	.0001
#2	-.0056	-.0058	.0033	.0183	.2429	.0018	-.0006	.0002
#3	-.0118	-.0047	.0001	.0223	.2704	.0008	-.0007	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Inst QC: MA46628

Zoom In
Zoom Out

Sample Name: ccb Acquired: 5/1/2019 21:47:16 Type: QC
Method: SGS 3 NO Valve(v328) 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	**.0003**	**-.0004**	**.0002**	**-.0002**	**-.0002**	**.0001**	**.0035**	**-.0007**
Stddev	.0004	.0006	.0001	.0003	.0015	.0001	.0006	.0001
%RSD	125.7	145.9	23.89	208.2	941.7	86.20	17.24	9.560
#1	.0008	-.0002	.0003	.0001	.0012	.0002	.0028	-.0007
#2	.0004	-.0010	.0002	-.0001	-.0019	.0001	.0039	-.0006
#3	-.0001	.0000	.0002	-.0005	.0002	.0000	.0037	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0133**	**.0162**
Stddev	.0014	.0006
%RSD	10.78	3.916
#1	-.0143	.0168
#2	-.0117	.0155
#3	-.0139	.0163
Check ?	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	**144270.**	**23348.**	**5861.3**	**9590.1**
Stddev	187.	139.	3.1	5.2
%RSD	.12951	.59429	.05218	.05376
#1	144480.	23189.	5864.7	9595.1
#2	144210.	23441.	5858.7	9590.3
#3	144110.	23414.	5860.6	9584.8

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	0.000906	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	0.013800	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	-0.001530	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	-0.000230	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	-0.004200	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	0.001200	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	-0.039088	0.000000	No
			Mn	0.002890	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	0.008080	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	0.000000	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	-0.000172	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	0.000035	0.000000	No
				Al	0.000015	0.000000	No
				Ca	0.000001	0.000000	No
				Ni	-0.000716	0.000000	No
				Cr	0.023400	0.000000	No
				V	-0.003422	0.000000	No
				Zn	-0.000115	0.000000	No
				Mo	-0.004911	0.000000	No
				Ti	0.000630	0.000000	No
				Sn	-0.005225	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}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.014901	1.919736	0.000000	1.000000
	Be 313.042 {108}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000354	3.112879	0.000000	1.000000
	Cd 228.802 {448}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000520	1.258679	0.000000	1.000000
	Co 228.616 {448}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000053	0.755943	0.000000	1.000000
	Cr 267.716 {126}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000054	0.167308	0.000000	1.000000
	Cu 324.754 {104}2	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.002764	0.270220	0.000000	1.000000
	Mn 257.610 {131}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000107	0.959840	0.000000	1.000000
	Ni 231.604 {446}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000136	0.601927	0.000000	1.000000
	Ag 328.068 {103}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000196	0.166631	0.000000	1.000000
	V 292.402 {115}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000273	0.247312	0.000000	1.000000
	Zn 206.200 {464}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000631	1.869077	0.000000	1.000000
	As 189.042 {478}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000065	0.133050	0.000000	1.000000
	Tl 190.856 {477}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000057	0.073671	0.000000	1.000000
	Pb 220.353 {453}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000758	0.268212	0.000000	1.000000
	Se 196.090 {472}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000046	0.100902	0.000000	1.000000
	Sb 206.833 {463}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000800	0.174778	0.000000	1.000000
	Al 396.152 { 85}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000380	0.040269	0.000000	1.000000
	Ca 317.933 {106}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.005705	0.111515	0.000000	1.000000
	Fe 259.940 {130}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000109	0.061658	0.000000	1.000000
	Mg 279.079 {121}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000106	0.012306	0.000000	1.000000
	K 766.490 { 44}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000647	0.022604	0.000000	1.000000
	Na 589.592 { 57}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.007745	0.093533	0.000000	1.000000
	B 208.959 {462}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.001260	0.263705	0.000000	1.000000
	Mo 202.030 {467}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000897	0.872533	0.000000	1.000000
	Si 212.412 {459}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.002814	0.235609	0.000000	1.000000
	Sn 189.989 {478}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000398	0.263514	0.000000	1.000000
	Sr 407.771 { 83}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.001713	3.446329	0.000000	1.000000
	Ti 334.904 {101}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000114	0.189250	0.000000	1.000000
	Y 360.073 { 94}*	5/2/2019 8:57:06	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 371.030 { 91}*	5/2/2019 8:57:06	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	Y 224.306 {451}*	5/2/2019 8:57:06	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	In 230.606 {446}*	5/2/2019 8:57:06	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
	W 207.911 {462}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000716	0.419632	0.000000	1.000000
	Zr 339.198 { 99}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000448	0.557864	0.000000	1.000000
	S 182.034 {485}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	-0.000526	0.059424	0.000000	1.000000
	Bi 223.061 {451}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.000170	0.198965	0.000000	1.000000
	Li 670.784 { 50}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	None	0.002148	0.539060	0.000000	1.000000
	P 177.495 {490}	5/2/2019 8:57:06	5/1/2019 12:30:48	Linear	1/Conc	-0.003064	0.051157	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	0.000293	0.000975	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	1.000000	0.000000	0.000066	0.000220	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	1.000000	0.000000	0.000195	0.000650	OK.	1.000000	0.000000	1	0
	Co 228.616 {448}	1.000000	0.000000	0.000235	0.000784	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	1.000000	0.000000	0.000302	0.001008	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}2	1.000000	0.000000	0.000428	0.001426	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	1.000000	0.000000	0.000048	0.000158	OK.	1.000000	0.000000	1	0
	Ni 231.604 {446}	1.000000	0.000000	0.000338	0.001128	OK.	1.000000	0.000000	1	0
	Ag 328.068 {103}	1.000000	0.000000	0.000455	0.001518	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	1.000000	0.000000	0.000348	0.001161	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	0.001144	0.003813	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	1.000000	0.000000	0.001480	0.004933	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	1.000000	0.000000	0.001069	0.003563	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	1.000000	0.000000	0.002066	0.006888	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	1.000000	0.000000	0.001545	0.005150	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	1.000000	0.000000	0.011457	0.038192	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	1.000000	0.000000	0.002315	0.007715	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	1.000000	0.000000	0.002074	0.006913	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	1.000000	0.000000	0.013381	0.044602	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	1.000000	0.000000	0.037162	0.123873	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	1.000000	0.000000	0.009463	0.031543	OK.	1.000000	0.000000	1	0
	B 208.959 {462}	1.000000	0.000000	0.000710	0.002365	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	1.000000	0.000000	0.000267	0.000891	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	1.000000	0.000000	0.001142	0.003808	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	1.000000	0.000000	0.000573	0.001911	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	1.000000	0.000000	0.000111	0.000370	OK.	1.000000	0.000000	1	0
	Ti 334.904 {101}	1.000000	0.000000	0.000359	0.001197	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	0.001109	0.003695	OK.	1.000000	0.000000	1	0
	Zr 339.198 { 99}	1.000000	0.000000	0.000172	0.000575	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	1.000000	0.000000	0.002398	0.007994	OK.	1.000000	0.000000	1	0
	Bi 223.061 {451}	1.000000	0.000000	0.001823	0.006078	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	1.000000	0.000000	0.001674	0.005579	OK.	1.000000	0.000000	1	0
	P 177.495 {490}	1.000000	0.000000	0.002205	0.007349	OK.	1.000000	0.000000	1	0

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**	**.1052**	**-.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

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

SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3C.

MA Batch #:	MA46581
Analyst:	EAL/LL
Date:	4/25/2019
Balance ID:	B24
Reagents:	See attached sheet
Auto pipet ID:	M72

Hot Block # 7 Start Time: 9:30 End Time: 10:00 Tube # 1-48 .

Start Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .

End Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .

Hot Block # _____ Start Time: _____ End Time: _____ Tube # _____ .

Start Temp: _____ Corrected Start Temp: _____ Correction: _____ Thermometer ID: _____ .

End Temp: _____ Corrected Start Temp: _____ Correction: _____ Thermometer ID: _____ .

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spikelot and Conc.	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N	(mg/L)		
1	MP14565-MB1	0.6001	100				MP14565	
2	MP14565-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-343-HGA1, IN. V
3	MP14565-S1	0.6826	100	2.0 ml	Y	0.1		JC86837-10, HG-19-144-343-HGA1, IN. V
4	MP14565-S2	0.6968	100	2.0 ml	Y	0.1		JC86837-10, HG-19-144-343-HGA1, IN. V
5	JC86837-10	0.6574	100					
6	JC86837-1	0.6662	100					
7	JC86837-2	0.6541	100					
8	JC86837-3	0.6131	100					
9	JC86837-4	0.7481	100					
10	JC86837-5	0.6332	100					
11	JC86837-6	0.7058	100					
12	JC86837-7	0.6712	100					
13	JC86837-8	0.6893	100					
14	JC86837-9	0.6409	100					
15	JC86837-11	0.7847	100					
16	JC86837-12	0.6034	100					
17	JC86633-4	0.6422	100					
18	JC86771-1	0.7053	100					
19	JC86771-2	0.6134	100					
20	JC86771-3	0.6869	100					
21	JC86793-1	0.6845	100					
22	JC86821-9	0.6139	100					
23	JC86821-11	0.6830	100					
24	JC86821-12	0.6669	100					
25	MP14566-MB1	0.6001	100				MP14566	
26	MP14566-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-144-343-HGA1, IN. V
27	MP14566-S1	0.6284	100	2.0 ml	Y	0.1		JC86864-1, HG-19-144-343-HGA1, IN. V
28	MP14566-S2	0.6383	100	2.0 ml	Y	0.1		JC86864-1, HG-19-144-343-HGA1, IN. V
29	JC86864-1	0.6341	100					
30	JC86864-2	0.6958	100					
31	JC86864-3	0.6740	100					
32	JC86864-4	0.6593	100					
33	JC86864-5	0.7096	100					
34	JC86864-6	0.7357	100					
35	JC86864-7	0.6434	100					

Form: HG-022F-02
Revision Date:08/24/15

ANALYST: LL
SPIKE WITNESS: EAL
QC REVIERER: _____

DATE: 4/25/19
DATE: 4/25/19
DATE: _____

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SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3C.

MA Batch #:	MA46581
Analyst:	EAL/LL
Date:	4/25/2019
Balance ID:	B24
Reagents:	See attached sheet
Auto pipet ID:	M72

Hot Block # 7 Start Time: 9:30 End Time: 10:00 Tube # 1-48 .

Start Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .

End Temp: 94 Corrected Start Temp: 93 Correction: -1 Thermometer ID: 6805236 .

Hot Block #_____ Start Time:_____ End Time:_____ Tube #_____.

Start Temp:_____ Corrected Start Temp:_____ Correction:_____ Thermometer ID:_____.

End Temp:_____ Corrected Start Temp:_____ Correction:_____ Thermometer ID:_____.

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spikelot and Conc.	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N	(mg/L)		
36	JC86864-8	0.6940	100					
37	JC86864-9	0.6422	100					
38	JC86864-10	0.6254	100					
39	JC86813-8	0.7788	100					
40	JC86813-9	0.6168	100					
41	JC86813-10	0.7533	100					
42	JC86813-11	0.6761	100					
43	JC86813-12	0.6966	100					
44	JC86813-13	0.6508	100					
45	JC86813-14	0.6859	100					
46	JC86815-3	0.6847	100					
47	JC86815-9	0.6696	100					
48	JC86815-13	0.6364	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 DATE: 4/25/19
SPIKE WITNESS: EAL DATE: 4/25/19
QC REVIERER:_____ DATE:_____

SGS

Mercury Digestion Log

Product: **HG /HGLIQ**
Matrix: **Soil / Oil / SL / Wipes**

Method: SW846 7471B
Required corrected Temp. Range is 95C. +/- 3 C.

MA Batch #: MA46581
Analyst: EAL/LL
Date: 4/25/2019
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M72

Hot Block # 7 Start Time: 9:00 End Time: 9:30 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-19-144-344-HGA2, IN. V
S-3	0.50 ug/l standard	0.6	100 ml	5.0 ml	Y	0.0100	N/A	HG-19-144-344-HGA2, IN. V
S-4	1.00 ug/l standard	0.6	100 ml	1.0 ml	Y	0.1000	N/A	HG-19-144-343-HGA1, IN. V
S-5	2.50 ug/l standard	0.6	100 ml	2.5 ml	Y	0.1000	N/A	HG-19-144-343-HGA1, IN. V
S-6	5.00 ug/l standard	0.6	100 ml	5.0 ml	Y	0.1000	N/A	HG-19-144-343-HGA1, IN. V
ICV	ICV (External)	0.6	100 ml	3.0 ml	Y	0.1		HG-19-144-345-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-19-144-343-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-19-144-344-HGA2, IN. V

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SGS

Reagent Information Log- Hg Soil

MA # 46581

Reagents	Exp. Date	Reagent # or manufacturer lot #
Conc. HydroChloric Acid	4/15/2021	Baker 217157
Conc. Nitric Acid	4/2/2021	Baker -213500
Sodium Chloride-Hydroxylamine Hydrochloride	10/15/2019	HG-19-144 307 -HGHCL
Potassium Permanganate	10/15/2019	HG-19-144 305 -HGKM2
Stannous Chloride	4/26/2019	HG-19-144 346 -HGS
STD Hg standard solution 1000 ppm	3/1/2020	Inorganic Ventures K2-HG669550
STD Hg standard solution 100 ppb	4/26/2019	HG-19-144 343 -HGA1
STD Hg standard solution 10 ppb	4/26/2019	HG-19-144 344 -HGA2
ICV Hg standard solution 1000 ppm	6/30/2021	Ultra T00601
ICV Hg standard solution 100 ppb	4/26/2019	HG-19-144 345 -HGB1
Solid Lab control/Soil LC	3/31/2020	ERA D094-540
Aqua Regia	4/26/2019	HG-19-144 347 -HGKAQ
Dilution acid	10/15/2019	HG-19-144 308 -HGD1
Digestion Tubes	N/A	Environmental Express 1808354
Teflon Chips (For Soil MB)	N/A	Chemware , Lot: 23656541

Form: GN087A80-04
Rev.Date: 06/06/17

SGS North America Inc.

Solids/Soil Metals Digestion Form

Batch Information

Batch ID	Start Date	Start Time	End Date	End time	QC Samp 1	QC Samp 2
MP14579	4/26/2019	7:00	4/26/2019	1130	JC86916-5	

Temperature

		Block ID	Therm. ID#	Balance ID	Temperature	Correction	Corrected Temp
1	Start	9	4156488	B-41	93	0	93
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
MP14579-MB1	N/A	100	1.02	ABCD		
MP14579-B1	N/A	100	1.05	ABCD	ABCD	
MP14579-S1	4	100	0.97	ABCD	ABCD	
MP14579-S2	4	100	0.97	ABCD	ABCD	
MP14579-SD1	4	100	0.97	ABCD		
JC86837-1	3	100	1.02	ABCD		
JC86837-10	2	100	0.98	ABCD		
JC86837-11	2	100	0.99	ABCD		
JC86837-12	2	100	1.01	ABCD		
JC86837-2	2	100	1.02	ABCD		
JC86837-3	2	100	1.03	ABCD		
JC86837-4	2	100	0.99	ABCD		
JC86837-5	2	100	1.00	ABCD		
JC86837-6	2	100	1.00	ABCD		
JC86837-7	2	100	1.02	ABCD		
JC86837-8	2	100	0.97	ABCD		
JC86837-9	2	100	0.97	ABCD		
JC86901-13	1	100	1.02	ABCD		
JC86901-3	1	100	0.96	ABCD		
JC86901-9	1	100	1.02	ABCD		
JC86916-5	4	100	0.97	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 REV-1	1
B	ACCUTEST 14A REV-1	1
C	MINERALS 5000PPM	0.5
D	AG 20PPM	1.25
E		
F	AG 20PPM	1.25
G		
H		

Comments:

Analyst COLLEENH **Approved by** Wendyz **Approved on** 4/26/2019

Note: Reagent traceability for batch Start Date can be seen on the reagent traceability page for this batch.
Serial Dilution samples shown for QC purposes only.
Acceptable Temperature range is 90-95 degrees C unless otherwise noted

SGS

Metals Digestion Reagents Information Log

Digestion Batch ID: MP 14579 **Date:** 4/26/19

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	4/23/2021	LOT: 213500 MFG: J.T. BAKER
Nitric Acid (1:1)	10/23/2019	MP-018-42-191 1:1 HNO3
Hydrochloric Acid	4/23/2021	LOT: 217157 MFG: J.T. BAKER
Hydrochloric Acid (1:1)	10/23/2019	MP-018-42-192 1:1 HCL
Hydrogen Peroxide	4/18/2021	LOT: 188006 MFG: FISHER
Soil Lab Control/Soil LC	3/31/2020	LOT: D094-540 MFG: ERA
Teflon Chips(For Soil MB and Blank Spike)	N/A	LOT: 24242815 MFG: SAINT-GOBAIN
Digestion Tubes	N/A	LOT: 1812114 MFG: ENV. EXPRESS
pH Paper	6/15/2021	LOT: 217518 MFG: HYDRION
Filter paper Q8	N/A	LOT: 16917460 MFG: FISHER
Filter paper 0.45µm	N/A	LOT: F8MA26136E MFG: FISHER

Spike witnessed By: BP

Validated By:

Validated On:

Metals Prep Reagent
1/17/18

13.4.2 13

14617
14636

Date 5/2/2019 Analyst NV MP # 14600
14578

Post spike for ICP Method 6010D

QC sample #

Spiking solution	Elements	Spike added (Y/N)	Vendor	Intermediate Lot #	Exp. Date	Conc. (mg/l)	Amt of Spike added (ml)	Digestate sample volume (ml)	Final Digestate volume in ml (Spike+ Sample)	Final Conc at the instrument (mg/l)
Mixed ICP intermediate Metals Solution (ACCUTEST-13A-REV1)	Ba,Be,B Cd,Cr,Co,Cu,Pb, Mn,Ni,P,Se,Sr,TL, V,Zn	Yes	Inhouse	MP-015-1119	6/7/19	200	0.2	19.75	20	2
Mixed ICP intermediate Metals Solution (ACCUTEST-14A-REV1)	Sb,As,Mo,Sn,Ti, W,Zr	Yes	Inhouse	MP-015-1120	6/7/19	200	0.2			2
Ag Spike Intermediate	Ag	Yes	Inhouse	MP-015-1116	5/28/19	20	0.25			0.25
Metals Mix	Ca,Al,Fe,Mg,K, Na	Yes	Inorganic Ventures	N2-MEB 67-2948	11/27/19	5000	0.1			25
S spike	S					200	0.2			2
Bi Spike	Bi					200	0.2			2
Li Spike	Li					200	0.2			2
Si spike	Si					1000	0.1			5

Form: DAYT-MET-0095-01-FORM
Rev. Date : 7/10/2018

Reviewed by:

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC86837
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	GP20977/GN94885	0.24	0.0	mg/kg	2	2.16	108.0	90-110%
Cyanide	GP20999/GN94838	0.24	0.0	mg/kg	2	2.19	109.5	90-110%

Associated Samples:
Batch GP20977: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11
Batch GP20999: JC86837-12
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP20977/GN94885	JC87130-1	mg/kg	0.55	0.54	1.8	0-49%
Cyanide	GP20999/GN94838	JC86916-5	mg/kg	1.4	1.4	0.0	0-49%
Solids, Percent	GN94689	JC87152-1	%	77.1	74.3	3.7	0-5%
Solids, Percent	GN94706	JC86825-1	%	95.1	96.4	1.4	0-5%

Associated Samples:
Batch GN94689: JC86837-10
Batch GN94706: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-11, JC86837-12
Batch GP20977: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11
Batch GP20999: JC86837-12
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC86837
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	GP20977/GN94885	JC86837-5	mg/kg	0.17 U	2.57	2.7	105.2	75-125%
Cyanide	GP20999/GN94838	JC86916-5	mg/kg	1.4	2.76	4.9	126.9N(a)	75-125%

Associated Samples:
Batch GP20977: JC86837-1, JC86837-2, JC86837-3, JC86837-4, JC86837-5, JC86837-6, JC86837-7, JC86837-8, JC86837-9, JC86837-10, JC86837-11
Batch GP20999: JC86837-12
(*) 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: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050219W1.CN Date Analyzed: 05/02/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: KI Run ID: GN94838
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:13	GN94838-STD1	1		STDA
15:14	GN94838-STD2	1		STDB
15:16	GN94838-STD3	1		STDC
15:17	GN94838-STD4	1		STDD
15:18	GN94838-STD5	1		STDE
15:20	GN94838-STD6	1		STDF
15:21	GN94838-STD7	1		STDG
15:23	GN94838-ICV1	1		
15:27	GN94838-ICV2	1		
15:29	GN94838-ICB1	1		
15:30	GN94838-CCV1	1		
15:31	GN94838-CCB1	1		
15:33	GP20953-MB1	1		
15:34	GP20953-B1	1		
15:35	GP20953-S1	1		
15:37	GP20953-S2	1		
15:38	GP20953-D1	1		
15:39	JC86815-3	1		(sample used for QC only; not part of login JC86837)
15:41	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:44	ZZZZZZ	1		
15:45	ZZZZZZ	1		
15:46	GN94838-CCV2	1		
15:48	GN94838-CCB2	1		
15:49	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:52	ZZZZZZ	1		
15:53	ZZZZZZ	1		
15:54	ZZZZZZ	1		
15:56	ZZZZZZ	1		
15:57	ZZZZZZ	1		
15:59	ZZZZZZ	1		
16:00	JC86717-11	1		(sample used for QC only; not part of login JC86837)

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050219W1.CN Date Analyzed: 05/02/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: KI Run ID: GN94838
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:01	ZZZZZZ	1		
16:03	GN94838-CCV3	1		
16:04	GN94838-CCB3	1		
16:05	ZZZZZZ	1		
16:07	ZZZZZZ	1		
16:08	ZZZZZZ	1		
16:09	GN94838-CCV4	1		
16:11	GN94838-CCB4	1		
16:26	GN94838-CCV5	1		
16:27	GN94838-CCB5	1		
16:28	GP20999-MB1	1		
16:30	GP20999-B1	1		
16:31	GP20999-S1	1		
16:32	GP20999-S2	1		Over calibration curve. See rerun at dilution.
16:34	GP20999-S3	1		
16:35	GN94838-CCV6	1		
16:36	GN94838-CCB6	1		
16:38	GP20999-D1	1		
16:39	JC86837-12	1		
16:41	ZZZZZZ	1		
16:42	ZZZZZZ	1		
16:43	ZZZZZZ	1		
16:45	ZZZZZZ	1		
16:46	ZZZZZZ	1		
16:47	JC86916-5	1		(sample used for QC only; not part of login JC86837)
16:49	JC86916-6	1		(sample used for QC only; not part of login JC86837)
16:50	ZZZZZZ	1		
16:51	GN94838-CCV7	1		
16:53	GN94838-CCB7	1		
16:54	ZZZZZZ	1		
16:56	ZZZZZZ	1		
16:57	ZZZZZZ	1		
16:58	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050219W1.CN Date Analyzed: 05/02/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: KI Run ID: GN94838
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:00	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:02	ZZZZZZ	1		
17:04	ZZZZZZ	1		
17:05	JC87313-3	1		(sample used for QC only; not part of login JC86837)
17:06	ZZZZZZ	1		
17:08	GN94838-CCV8	1		
17:09	GN94838-CCB8	1		
17:10	ZZZZZZ	1		
17:12	GP20976-MB1	1		
17:13	GP20976-B1	1		
17:15	GP20976-S1	1		
17:16	GP20976-S2	1		
17:17	GP20976-D1	1		
17:19	ZZZZZZ	1		
17:20	ZZZZZZ	1		
17:21	JC86763-3	1		(sample used for QC only; not part of login JC86837)
17:23	ZZZZZZ	1		
17:24	GN94838-CCV9	1		
17:25	GN94838-CCB9	1		
17:27	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:30	ZZZZZZ	1		
17:31	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:40	GN94838-CCV10	1		
17:42	GN94838-CCB10	1		
17:43	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050219W1.CN Date Analyzed: 05/02/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: KI Run ID: GN94838
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:45	JC86768-6	1		(sample used for QC only; not part of login JC86837)
17:46	ZZZZZZ	1		
17:47	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:50	ZZZZZZ	1		
17:51	GP20977-MB1	1		bsp failed high, back to need
17:53	GP20977-B1	1		bsp failed high, back to need
17:54	GP20977-S1	1		bsp failed high, back to need
17:55	GP20977-S2	1		bsp failed high, back to need
17:57	GN94838-CCV11	1		
17:58	GN94838-CCB11	1		
17:59	GP20977-D1	1		bsp failed high, back to need
18:01	ZZZZZZ	1		
18:02	JC87130-1	1		(sample used for QC only; not part of login JC86837)
18:04	ZZZZZZ	1		
18:05	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:09	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:12	ZZZZZZ	1		
18:13	GN94838-CCV12	1		
18:14	GN94838-CCB12	1		
18:16	JC86837-1	1		bsp failed high, back to need
18:17	JC86837-2	1		bsp failed high, back to need
18:19	JC86837-3	1		bsp failed high, back to need
18:20	JC86837-4	1		bsp failed high, back to need
18:21	JC86837-5	1		bsp failed high, back to need
18:23	JC86837-6	1		bsp failed high, back to need
18:24	JC86837-7	1		bsp failed high, back to need
18:25	JC86837-8	1		bsp failed high, back to need
18:27	JC86837-9	1		bsp failed high, back to need
18:28	JC86837-10	1		bsp failed high, back to need

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050219W1.CN Date Analyzed: 05/02/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: KI Run ID: GN94838
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:29	GN94838-CCV13	1		
18:31	GN94838-CCB13	1		
18:32	JC86837-11	1		bsp failed high, back to need
18:34	GP20999-S2	3		1:3 dilution
18:37	GN94838-CCV14	1		
18:38	GN94838-CCB14	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050219W1.CN Date Analyzed: 05/02/19 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Run ID: GN94838 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN94838-ICV1	Cyanide	0.335	0.010	0.0041			
GN94838-ICV2	Cyanide	0.315	0.010	0.0041	.3	105.0	90-110
GN94838-ICB1	Cyanide	-0.00563	0.010	0.0041			
GN94838-CCV1	Cyanide	0.413	0.010	0.0041	.4	103.3	90-110
GN94838-CCB1	Cyanide	-0.00610	0.010	0.0041			
GN94838-CCV2	Cyanide	0.404	0.010	0.0041	.4	101.0	90-110
GN94838-CCB2	Cyanide	-0.00481	0.010	0.0041			
GN94838-CCV3	Cyanide	0.406	0.010	0.0041	.4	101.5	90-110
GN94838-CCB3	Cyanide	-0.00549	0.010	0.0041			
GN94838-CCV4	Cyanide	0.405	0.010	0.0041	.4	101.3	90-110
GN94838-CCB4	Cyanide	-0.00569	0.010	0.0041			
GN94838-CCV5	Cyanide	0.440	0.010	0.0041	.4	110.0	90-110
GN94838-CCB5	Cyanide	-0.00934	0.010	0.0041			
GN94838-CCV6	Cyanide	0.420	0.010	0.0041	.4	105.0	90-110
GN94838-CCB6	Cyanide	-0.00766	0.010	0.0041			
GN94838-CCV7	Cyanide	0.419	0.010	0.0041	.4	104.8	90-110
GN94838-CCB7	Cyanide	-0.00869	0.010	0.0041			
GN94838-CCV8	Cyanide	0.421	0.010	0.0041	.4	105.3	90-110
GN94838-CCB8	Cyanide	-0.00758	0.010	0.0041			
GN94838-CCV9	Cyanide	0.419	0.010	0.0041	.4	104.8	90-110
GN94838-CCB9	Cyanide	-0.00714	0.010	0.0041			
GN94838-CCV10	Cyanide	0.417	0.010	0.0041	.4	104.3	90-110
GN94838-CCB10	Cyanide	-0.00739	0.010	0.0041			
GN94838-CCV11	Cyanide	0.429	0.010	0.0041	.4	107.3	90-110
GN94838-CCB11	Cyanide	-0.00930	0.010	0.0041			
GN94838-CCV12	Cyanide	0.421	0.010	0.0041	.4	105.3	90-110
GN94838-CCB12	Cyanide	-0.00702	0.010	0.0041			
GN94838-CCV13	Cyanide	0.419	0.010	0.0041	.4	104.8	90-110
GN94838-CCB13	Cyanide	-0.00737	0.010	0.0041			
GN94838-CCV14	Cyanide	0.419	0.010	0.0041	.4	104.8	90-110
GN94838-CCB14	Cyanide	-0.00776	0.010	0.0041			

(!) Outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050319W1.CN Date Analyzed: 05/03/19 Methods: EPA 335.4, EPA 335.4/LACHAT, SW846 9012B/LACHAT,
Analyst: KI Run ID: GN94885
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:56	GN94885-STD1	1		STDA
11:57	GN94885-STD2	1		STDB
11:59	GN94885-STD3	1		STDC
12:00	GN94885-STD4	1		STDD
12:02	GN94885-STD5	1		STDE
12:03	GN94885-STD6	1		STDF
12:04	GN94885-STD7	1		STDG
12:06	GN94885-ICV1	1		
12:07	GN94885-ICB1	1		
12:08	GN94885-CCV1	1		
12:10	GN94885-CCB1	1		
12:11	GP20985-MB1	1		
12:12	GP20985-B1	1		
12:14	GP20985-D1	1		
12:15	JC87132-1	1		(sample used for QC only; not part of login JC86837)
12:17	GP20987-MB1	1		
12:18	GP20987-B1	1		
12:19	GP20987-D1	1		
12:21	JC86901-9A	1		(sample used for QC only; not part of login JC86837)
12:22	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:25	GN94885-CCV2	1		
12:26	GN94885-CCB2	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:33	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:37	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:40	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050319W1.CN Date Analyzed: 05/03/19 Methods: EPA 335.4, EPA 335.4/LACHAT, SW846 9012B/LACHAT,
Analyst: KI Run ID: GN94885
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:41	GN94885-CCV3	1		
12:42	GN94885-CCB3	1		
12:44	ZZZZZZ	1		
12:45	GN94885-CCV4	1		
12:46	GN94885-CCB4	1		
12:51	GN94885-CCV5	1		
12:52	GN94885-CCB5	1		
12:53	GP20975-MB2	1		
12:55	GP20975-B2	1		
12:56	GP20975-S1	1		
12:58	GP20975-S2	1		
12:59	GP20975-D1	1		
13:00	JC86782-2	1		(sample used for QC only; not part of login JC86837)
13:02	JC87191-1	1		(sample used for QC only; not part of login JC86837)
13:03	GN94885-CCV6	1		
13:04	GN94885-CCB6	1		
13:06	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	GP20998-MB1	1		
13:15	GP20998-B1	1		
13:17	GP20998-S1	1		
13:18	GP20998-S2	1		
13:19	GN94885-CCV7	1		
13:21	GN94885-CCB7	1		
13:22	GP20998-D1	1		
13:23	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:28	JC86986-2	1		(sample used for QC only; not part of login JC86837)

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050319W1.CN Date Analyzed: 05/03/19 Methods: EPA 335.4, EPA 335.4/LACHAT, SW846 9012B/LACHAT,
Analyst: KI Run ID: GN94885
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:29	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:32	JC86986-5	1		(sample used for QC only; not part of login JC86837)
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:36	GN94885-CCV8	1		
13:37	GN94885-CCB8	1		
13:38	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	GP20977-MB1	1		
13:51	GP20977-B1	1		
13:52	GN94885-CCV9	1		
13:53	GN94885-CCB9	1		
13:55	GP20977-S1	1		
13:56	GP20977-S2	1		
13:57	GP20977-D1	1		
13:59	ZZZZZZ	1		
14:00	JC87130-1	1		(sample used for QC only; not part of login JC86837)
14:01	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:08	GN94885-CCV10	1		
14:10	GN94885-CCB10	1		
14:11	ZZZZZZ	1		
14:12	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050319W1.CN Date Analyzed: 05/03/19 Methods: EPA 335.4, EPA 335.4/LACHAT, SW846 9012B/LACHAT,
Analyst: KI Run ID: GN94885
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:14	JC86837-1	1		
14:15	JC86837-2	1		
14:16	JC86837-3	1		
14:18	JC86837-4	1		
14:19	JC86837-5	1		
14:21	JC86837-6	1		
14:22	JC86837-7	1		
14:23	JC86837-8	1		
14:25	GN94885-CCV11	1		
14:26	GN94885-CCB11	1		
14:27	JC86837-9	1		
14:29	JC86837-10	1		
14:30	JC86837-11	1		
14:31	GP21018-MB1	1		
14:33	GP21018-B1	1		
14:34	GP21018-S1	1		
14:36	GP21018-D1	1		
14:37	JC87355-1	1		(sample used for QC only; not part of login JC86837)
14:38	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:41	GN94885-CCV12	1		
14:42	GN94885-CCB12	1		
14:44	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	5		
14:51	ZZZZZZ	10		
14:54	GN94885-CCV13	1		
14:55	GN94885-CCB13	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC86837
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E050319W1.CN Date Analyzed: 05/03/19 Methods: EPA 335.4, EPA 335.4/LACHAT, SW846 9012B/LACHAT,
Run ID: GN94885 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN94885-ICV1	Cyanide	0.313	0.010	0.0041	.3	104.3	90-110
GN94885-ICB1	Cyanide	-0.00666	0.010	0.0041			
GN94885-CCV1	Cyanide	0.395	0.010	0.0041	.4	98.8	90-110
GN94885-CCB1	Cyanide	-0.00440	0.010	0.0041			
GN94885-CCV2	Cyanide	0.396	0.010	0.0041	.4	99.0	90-110
GN94885-CCB2	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV3	Cyanide	0.399	0.010	0.0041	.4	99.8	90-110
GN94885-CCB3	Cyanide	-0.00588	0.010	0.0041			
GN94885-CCV4	Cyanide	0.401	0.010	0.0041	.4	100.3	90-110
GN94885-CCB4	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV5	Cyanide	0.398	0.010	0.0041	.4	99.5	90-110
GN94885-CCB5	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV6	Cyanide	0.401	0.010	0.0041	.4	100.3	90-110
GN94885-CCB6	Cyanide	-0.00444	0.010	0.0041			
GN94885-CCV7	Cyanide	0.404	0.010	0.0041	.4	101.0	90-110
GN94885-CCB7	Cyanide	-0.00441	0.010	0.0041			
GN94885-CCV8	Cyanide	0.402	0.010	0.0041	.4	100.5	90-110
GN94885-CCB8	Cyanide	-0.00432	0.010	0.0041			
GN94885-CCV9	Cyanide	0.413	0.010	0.0041	.4	103.3	90-110
GN94885-CCB9	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV10	Cyanide	0.411	0.010	0.0041	.4	102.8	90-110
GN94885-CCB10	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV11	Cyanide	0.414	0.010	0.0041	.4	103.5	90-110
GN94885-CCB11	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV12	Cyanide	0.417	0.010	0.0041	.4	104.3	90-110
GN94885-CCB12	Cyanide	0.0041 U	0.010	0.0041			
GN94885-CCV13	Cyanide	0.414	0.010	0.0041	.4	103.5	90-110
GN94885-CCB13	Cyanide	0.0041 U	0.010	0.0041			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC86837-1 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: PSCB-41R(0.5-2)

Wet Weight (Total)	35.75	g
Tare Weight	23.32	g
Dry Weight (Total)	33.38	g
Solids, Percent	80.9	%

Sample: JC86837-2 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: PSCB-41R(9-11)

Wet Weight (Total)	33.88	g
Tare Weight	20.56	g
Dry Weight (Total)	30	g
Solids, Percent	70.9	%

Sample: JC86837-3 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: TP-44R(3-5)

Wet Weight (Total)	38.6	g
Tare Weight	27.37	g
Dry Weight (Total)	36.21	g
Solids, Percent	78.7	%

Sample: JC86837-4 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: TP-44R(5-7)

Wet Weight (Total)	33.61	g
Tare Weight	21.24	g
Dry Weight (Total)	30.65	g
Solids, Percent	76.1	%

Sample: JC86837-5 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: TP-44R(7-9)

Wet Weight (Total)	36.94	g
Tare Weight	26.32	g
Dry Weight (Total)	34.59	g
Solids, Percent	77.9	%

Sample: JC86837-6 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: S-135(4-6)

Wet Weight (Total)	35.38	g
Tare Weight	24.62	g
Dry Weight (Total)	32.29	g
Solids, Percent	71.3	%

Percent Solids Raw Data Summary

Job Number: JC86837
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: JC86837-7 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: S-135(8-10)

Wet Weight (Total)	32.79	g
Tare Weight	22.01	g
Dry Weight (Total)	29.54	g
Solids, Percent	69.9	%

Sample: JC86837-8 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: S-136(4-6)

Wet Weight (Total)	37.84	g
Tare Weight	26.74	g
Dry Weight (Total)	34.8	g
Solids, Percent	72.6	%

Sample: JC86837-9 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: S-136(7-9)

Wet Weight (Total)	40.02	g
Tare Weight	27.47	g
Dry Weight (Total)	37.68	g
Solids, Percent	81.4	%

Sample: JC86837-10 **Analyzed:** 30-APR-19 by RC **Method:** SM2540 G 18TH ED MOD
ClientID: S-111(2-4)

Wet Weight (Total)	28.51	g
Tare Weight	19.36	g
Dry Weight (Total)	27.25	g
Solids, Percent	86.2	%

Sample: JC86837-11 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: S-111(4.5-6.5)

Wet Weight (Total)	36.66	g
Tare Weight	25.79	g
Dry Weight (Total)	35.29	g
Solids, Percent	87.4	%

Sample: JC86837-12 **Analyzed:** 30-APR-19 by JMP **Method:** SM2540 G 18TH ED MOD
ClientID: S-107(2-4)

Wet Weight (Total)	30.36	g
Tare Weight	18.97	g
Dry Weight (Total)	28.88	g
Solids, Percent	87	%

General Chemistry

Raw Data

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E050219W1.CN
Analyst: KI

Date Analyzed: 05/02/19
Run ID: GN94838

Methods: EPA 335.4/LACHAT, 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 5/2/19

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 _____

GN94838

e050219w1.cn

Author: Chemistry

Date : 5/2/2019

Original Run Filename: OM_5-2-2019_03-12-21PM.OMN Created: 5/2/2019 3:12:21 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-2-2019_03-12-21PM.OMN Last Modified: 5/2/2019 3:25:34 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	5/2/2019@3:13:30 PM	
STDB	1	2	0.600	5/2/2019@3:14:53 PM	
STDC	1	3	0.400	5/2/2019@3:16:15 PM	
STDD	1	4	0.100	5/2/2019@3:17:37 PM	
STDE	1	5	0.0200	5/2/2019@3:18:59 PM	
STDF	1	6	0.0100	5/2/2019@3:20:21 PM	
STDG	1	7	0.00	5/2/2019@3:21:42 PM	
ICV	1	8	0.335	5/2/2019@3:23:04 PM	
		Known Conc:	0.300		
		Calibration:	Table/Fig. : 1		

%rec

111.7

Channel 1 - Set: 1 / 1

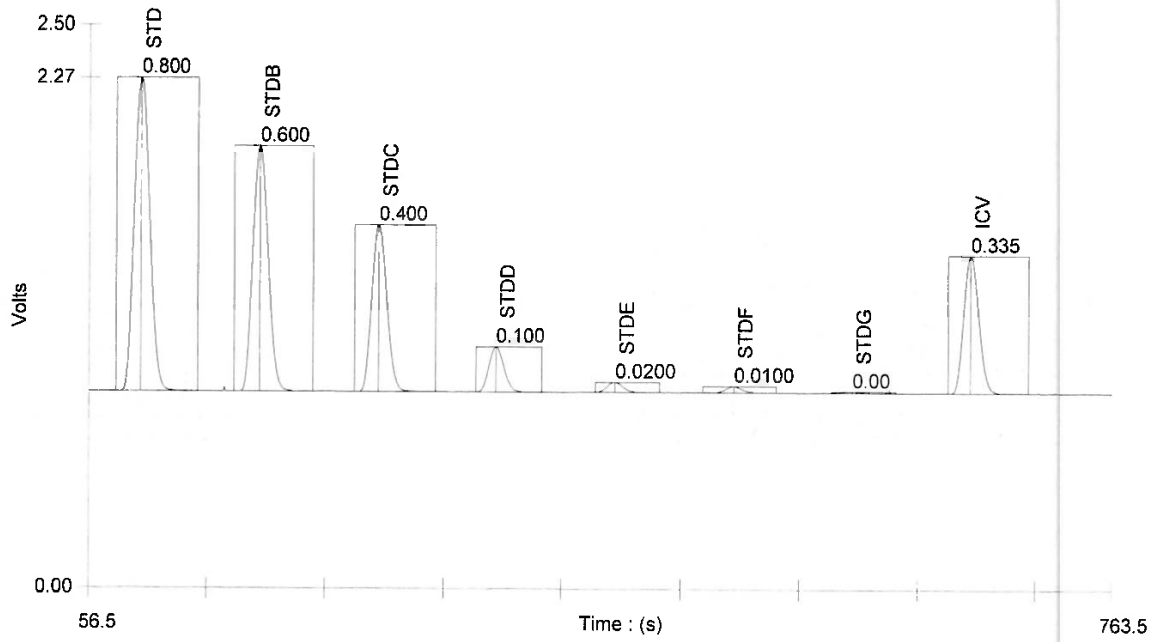


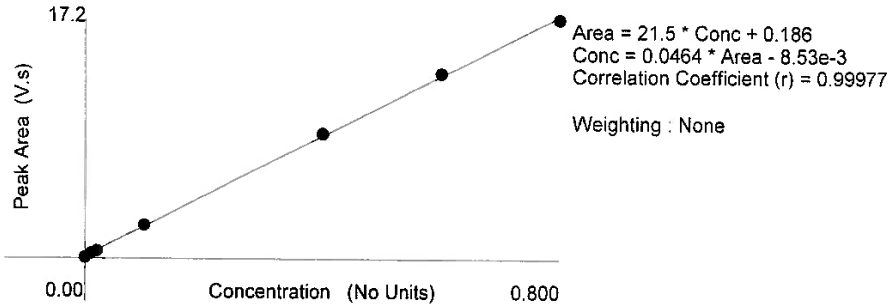
Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	17.2	1.39	0.0	1.3	0.789	5/2/2019	3:13:30 PM
2	0.600	1	13.3	1.09	0.0	-1.5	0.609	5/2/2019	3:14:53 PM
3	0.400	1	8.95	0.738	0.0	-1.7	0.407	5/2/2019	3:16:15 PM
4	0.100	1	2.43	0.200	0.0	-3.7	0.104	5/2/2019	3:17:37 PM
5	0.0200	1	0.561	0.0450	0.0	9.0	0.0175	5/2/2019	3:18:59 PM
6	0.0100	1	0.364	0.0277	0.0	9.4	8.36e-3	5/2/2019	3:20:21 PM
7	0.00	1	0.0776	5.23e-3			-4.93e-3	5/2/2019	3:21:42 PM

Author: Chemistry

Date : 5/2/2019

Figure : 1 (CN)



e050219w2 cn

Author: Chemistry

Date : 5/2/2019

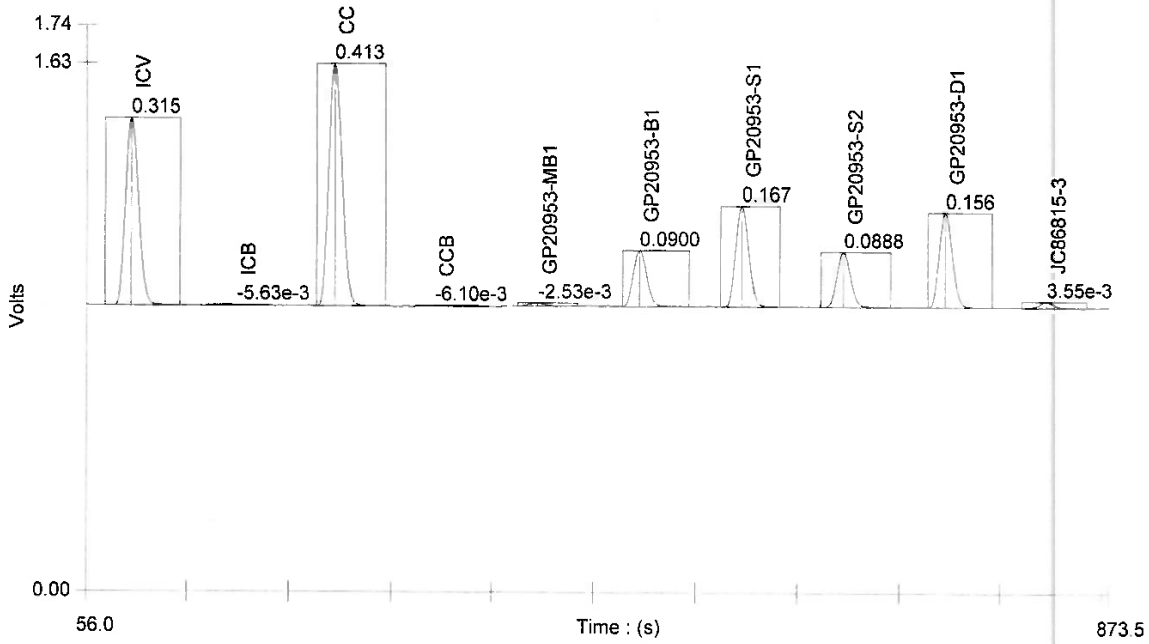
Original Run Filename: OM_5-2-2019_03-26-35PM.OMN Created: 5/2/2019 3:26:35 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-2-2019_03-26-35PM.OMN Last Modified: 5/2/2019 4:13:39 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	%6 rec
ICV	1	8	0.315	5/2/2019@3:27:43 PM		
	Known Conc:		0.300			105
ICB	1	9	-5.63e-3	5/2/2019@3:29:05 PM		
	Known Conc:		0.00			
	Calibration:		Table/Fig. : 1			
CCV	1	S9	0.413	5/2/2019@3:30:26 PM		
	Known Conc:		0.400			103.25
CCB	1	S10	-6.10e-3	5/2/2019@3:31:48 PM		
	Known Conc:		0.00			
GP20953-MB1	1	10	-2.53e-3	5/2/2019@3:33:10 PM		
GP20953-B1	1	11	0.0900	5/2/2019@3:34:31 PM		108
GP20953-S1	1	12	0.167	5/2/2019@3:35:52 PM		
GP20953-S2	1	13	0.0888	5/2/2019@3:37:13 PM		
GP20953-D1	1	14	0.156	5/2/2019@3:38:34 PM		
JC86815-3	1	15	3.55e-3	5/2/2019@3:39:55 PM		
JC86815-9	1	16	4.08e-3	5/2/2019@3:41:17 PM		
JC86960-3	1	17	5.07e-3	5/2/2019@3:42:40 PM		
JC86960-4	1	18	3.04e-3	5/2/2019@3:44:02 PM		
JC86960-5	1	19	4.35e-3	5/2/2019@3:45:24 PM		
CCV	1	S9	0.404	5/2/2019@3:46:45 PM		
	Known Conc:		0.400			101
CCB	1	S10	-4.81e-3	5/2/2019@3:48:07 PM		
	Known Conc:		0.00			
JC86960-6	1	20	3.03e-3	5/2/2019@3:49:29 PM		
JC86973-1	1	21	0.0140	5/2/2019@3:50:51 PM		
JC86710-3	1	22	8.00e-3	5/2/2019@3:52:13 PM		
JC86717-1	1	23	0.0724	5/2/2019@3:53:35 PM		
JC86717-3	1	24	0.0569	5/2/2019@3:54:56 PM		
JC86717-5	1	25	8.30e-3	5/2/2019@3:56:18 PM		
JC86717-7	1	26	0.0630	5/2/2019@3:57:39 PM		
JC86717-9	1	27	0.0265	5/2/2019@3:59:00 PM		
JC86717-11	1	28	0.0867	5/2/2019@4:00:21 PM		
JC86717-13	1	29	0.0295	5/2/2019@4:01:42 PM		
CCV	1	S9	0.406	5/2/2019@4:03:03 PM		
	Known Conc:		0.400			101.5
CCB	1	S10	-5.49e-3	5/2/2019@4:04:25 PM		
	Known Conc:		0.00			
JC86717-15	1	30	0.153	5/2/2019@4:05:46 PM		
JC86717-17	1	31	0.0369	5/2/2019@4:07:08 PM		
JC87077-1	1	32	7.03e-3	5/2/2019@4:08:31 PM		
CCV	1	S9	0.405	5/2/2019@4:09:52 PM		
	Known Conc:		100			101.25
CCB	1	S10	-5.69e-3	5/2/2019@4:11:14 PM		
	Known Conc:		100			

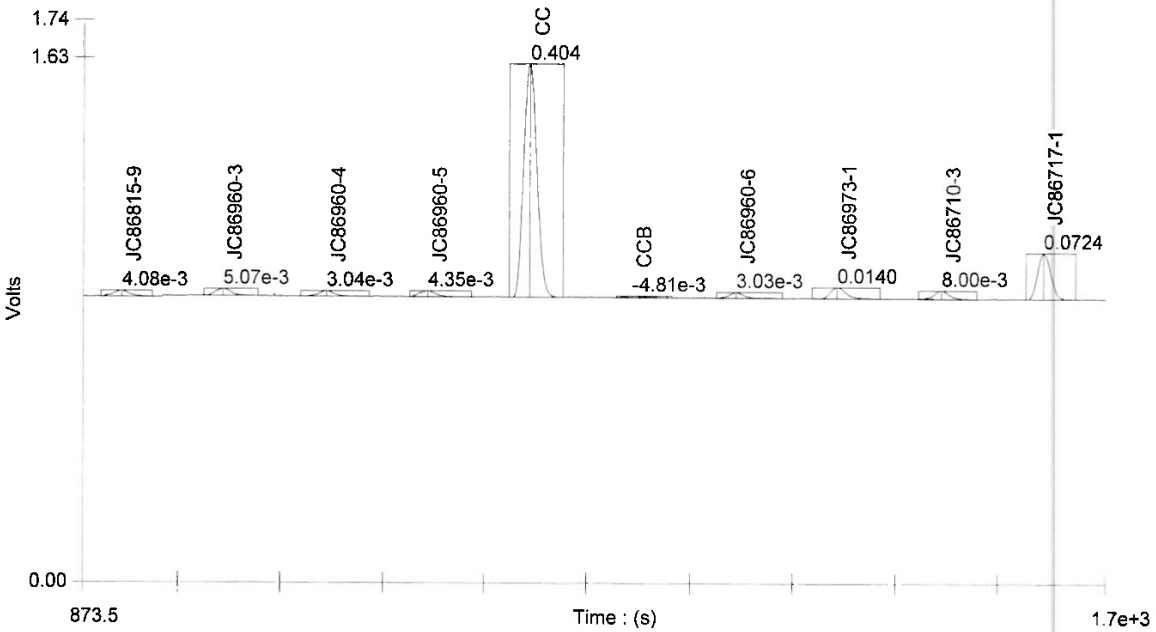
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 1 / 4



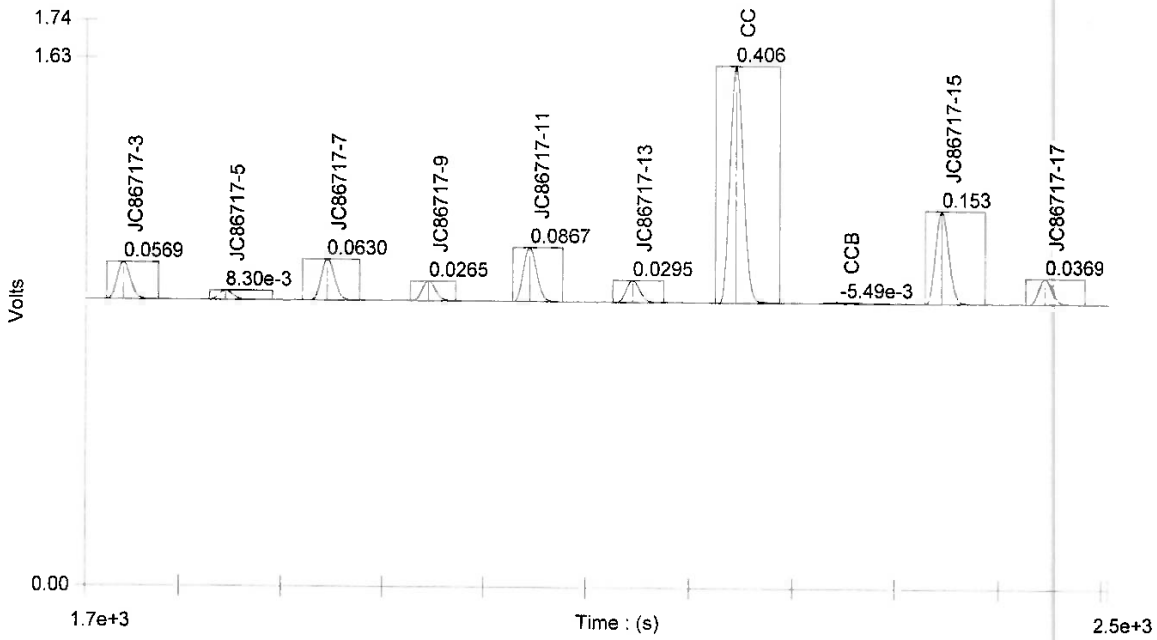
Channel 1 - Set: 2 / 4



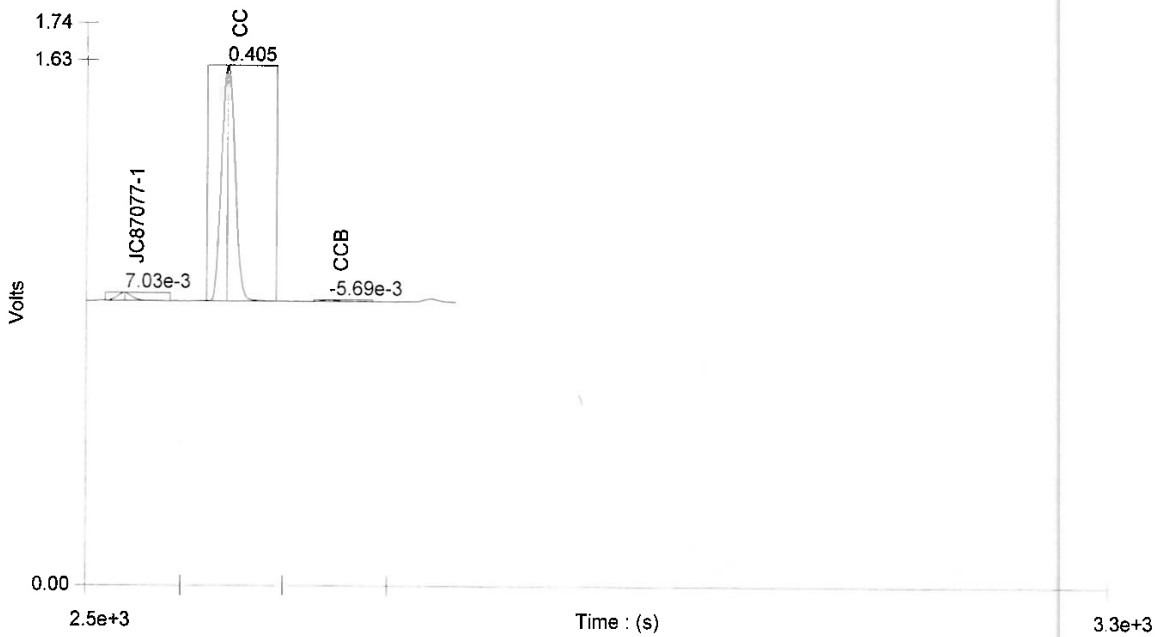
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 3 / 4



Channel 1 - Set: 4 / 4



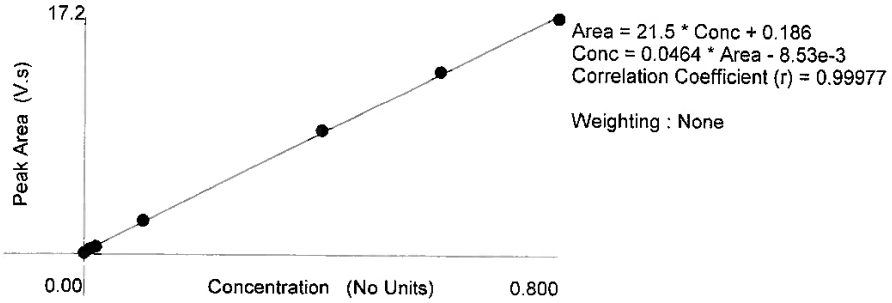
Author: Chemistry

Date : 5/2/2019

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	17.2	1.39	0.0	1.3	0.789	5/2/2019	3:13:30 PM
2	0.600	1	13.3	1.09	0.0	-1.5	0.609	5/2/2019	3:14:53 PM
3	0.400	1	8.95	0.738	0.0	-1.7	0.407	5/2/2019	3:16:15 PM
4	0.100	1	2.43	0.200	0.0	-3.7	0.104	5/2/2019	3:17:37 PM
5	0.0200	1	0.561	0.0450	0.0	9.0	0.0175	5/2/2019	3:18:59 PM
6	0.0100	1	0.364	0.0277	0.0	9.4	8.36e-3	5/2/2019	3:20:21 PM
7	0.00	1	0.0776	5.23e-3			-4.93e-3	5/2/2019	3:21:42 PM

Figure : 1 (CN)



I050219w3.cn

Author: Chemistry

Date : 5/2/2019

Original Run Filename: OM_5-2-2019_04-24-47PM.OMN Created: 5/2/2019 4:24:47 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-2-2019_04-24-47PM.OMN Last Modified: 5/2/2019 6:40:35 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	0.440	5/2/2019@4:26:04 PM		
	Known Conc:		100			110
CCB	1	S10	-9.34e-3	5/2/2019@4:27:26 PM		
	Known Conc:		100			
	Calibration:		Table/Fig. : 1			
GP20999-MB1	1	33	-1.57e-3	5/2/2019@4:28:48 PM		
GP20999-B1	1	34	0.0911	5/2/2019@4:30:10 PM		109.3
GP20999-S1	1	35	0.149	5/2/2019@4:31:32 PM		
GP20999-S2 (2)	1	36	1.12	5/2/2019@4:32:54 PM		overrange. see rerun
GP20999-S3	1	37	0.0868	5/2/2019@4:34:16 PM		
CCV	1	S9	0.420	5/2/2019@4:35:37 PM		
	Known Conc:		0.400			105
CCB	1	S10	-7.66e-3	5/2/2019@4:36:59 PM		
	Known Conc:		0.00			
GP20999-D1	1	38	0.0520	5/2/2019@4:38:21 PM		
JC86837-12	1	39	0.429	5/2/2019@4:39:42 PM		
JC86904-9	1	40	7.27e-3	5/2/2019@4:41:04 PM		
JC86916-1	1	41	0.0142	5/2/2019@4:42:25 PM		
JC86916-2	1	42	0.0405	5/2/2019@4:43:46 PM		
JC86916-3	1	43	0.0392	5/2/2019@4:45:07 PM		
JC86916-4	1	44	0.0324	5/2/2019@4:46:28 PM		
JC86916-5	1	45	0.0477	5/2/2019@4:47:49 PM		
JC86916-6	1	46	0.371	5/2/2019@4:49:11 PM		
JC86916-7	1	47	0.0419	5/2/2019@4:50:34 PM		
CCV	1	S9	0.419	5/2/2019@4:51:56 PM		
	Known Conc:		0.400			104.75
CCB	1	S10	-8.69e-3	5/2/2019@4:53:18 PM		
	Known Conc:		0.00			
JC86916-8	1	48	0.0441	5/2/2019@4:54:40 PM		
JC86916-9	1	49	0.0323	5/2/2019@4:56:02 PM		
JC86916-10	1	50	0.247	5/2/2019@4:57:24 PM		
JC86916-11	1	51	0.289	5/2/2019@4:58:46 PM		
JC86916-12	1	52	6.38e-5	5/2/2019@5:00:07 PM		
JC86916-13	1	53	3.60e-4	5/2/2019@5:01:29 PM		
JC87313-1	1	54	4.50e-4	5/2/2019@5:02:51 PM		
JC87313-2	1	55	2.85e-3	5/2/2019@5:04:12 PM		
JC87313-3	1	56	4.32e-3	5/2/2019@5:05:33 PM		
JC87313-4	1	57	1.58e-3	5/2/2019@5:06:54 PM		
CCV	1	S9	0.421	5/2/2019@5:08:15 PM		
	Known Conc:		0.400			105.25
CCB	1	S10	-7.58e-3	5/2/2019@5:09:37 PM		
	Known Conc:		0.00			
JC87313-5	1	58	7.26e-3	5/2/2019@5:10:58 PM		
GP20976-MB1	1	59	3.03e-4	5/2/2019@5:12:19 PM		
GP20976-B1	1	60	0.0911	5/2/2019@5:13:39 PM		109.3
GP20976-S1	1	61	0.0884	5/2/2019@5:15:01 PM		
GP20976-S2	1	62	0.0861	5/2/2019@5:16:24 PM		
GP20976-D1	1	63	4.35e-3	5/2/2019@5:17:46 PM		
JC86763-1	1	64	0.0135	5/2/2019@5:19:08 PM		
JC86763-2	1	65	4.99e-3	5/2/2019@5:20:30 PM		
JC86763-3	1	66	2.94e-3	5/2/2019@5:21:52 PM		
JC86763-4	1	67	3.43e-3	5/2/2019@5:23:14 PM		
CCV	1	S9	0.419	5/2/2019@5:24:36 PM		
	Known Conc:		0.400			104.75
CCB	1	S10	-7.14e-3	5/2/2019@5:25:57 PM		
	Known Conc:		0.00			
JC86763-5	1	68	3.75e-3	5/2/2019@5:27:19 PM		
JC86763-6	1	69	0.0117	5/2/2019@5:28:41 PM		
JC86763-7	1	70	4.02e-3	5/2/2019@5:30:02 PM		
JC86763-8	1	71	8.17e-3	5/2/2019@5:31:23 PM		

Author: Chemistry

Date : 5/2/2019

JC86763-9	1	72	2.50e-3	5/2/2019@5:32:45 PM	
JC86763-10	1	73	0.0141	5/2/2019@5:34:06 PM	
JC86768-1	1	74	4.99e-5	5/2/2019@5:35:27 PM	
JC86768-2	1	75	4.20e-3	5/2/2019@5:36:48 PM	
JC86768-3	1	76	0.0142	5/2/2019@5:38:10 PM	
JC86768-4	1	77	5.47e-3	5/2/2019@5:39:33 PM	
CCV	1	S9	0.417	5/2/2019@5:40:54 PM	
	Known Conc:		0.400		
CCB	1	S10	-7.39e-3	5/2/2019@5:42:16 PM	
	Known Conc:		0.00		
JC86768-5	1	78	3.13e-4	5/2/2019@5:43:38 PM	
JC86768-6	1	79	-2.60e-3	5/2/2019@5:45:00 PM	
JC86768-7	1	80	1.89e-3	5/2/2019@5:46:22 PM	
JC87091-3	1	81	8.25e-3	5/2/2019@5:47:44 PM	
JC87091-7	1	82	5.28e-3	5/2/2019@5:49:06 PM	
JC87091-13	1	83	1.28e-3	5/2/2019@5:50:27 PM	
GP20977-MB1 (S)	1	84	-1.18e-3	5/2/2019@5:51:48 PM	
GP20977-B1	1	85	0.0921	5/2/2019@5:53:10 PM	
GP20977-S1	1	86	0.100	5/2/2019@5:54:31 PM	
GP20977-S2	1	87	0.0885	5/2/2019@5:55:52 PM	
CCV	1	S9	0.429	5/2/2019@5:57:14 PM	
	Known Conc:		0.400		
CCB	1	S10	-9.30e-3	5/2/2019@5:58:35 PM	
	Known Conc:		0.00		
GP20977-D1 (S)	1	88	0.0150	5/2/2019@5:59:57 PM	
JC87091-19	1	89	1.08e-3	5/2/2019@6:01:18 PM	
JC87130-1	1	90	0.0133	5/2/2019@6:02:39 PM	
JC87130-2	1	91	0.0191	5/2/2019@6:04:01 PM	
JC87130-3	1	92	8.70e-3	5/2/2019@6:05:24 PM	
JC87130-4	1	93	0.0160	5/2/2019@6:06:46 PM	
JC87130-5	1	94	0.0137	5/2/2019@6:08:08 PM	
JC86821-9	1	95	6.31e-3	5/2/2019@6:09:30 PM	
JC86821-11	1	96	7.66e-3	5/2/2019@6:10:52 PM	
JC86821-12	1	97	7.82e-3	5/2/2019@6:12:13 PM	
CCV	1	S9	0.421	5/2/2019@6:13:35 PM	
	Known Conc:		0.400		
CCB	1	S10	-7.02e-3	5/2/2019@6:14:57 PM	
	Known Conc:		0.00		
JC86837-1 (S)	1	98	0.0124	5/2/2019@6:16:18 PM	
JC86837-2	1	99	4.01e-3	5/2/2019@6:17:40 PM	
JC86837-3	1	100	0.0569	5/2/2019@6:19:01 PM	
JC86837-4	1	101	-2.28e-3	5/2/2019@6:20:23 PM	
JC86837-5	1	102	1.61e-3	5/2/2019@6:21:44 PM	
JC86837-6	1	103	0.0120	5/2/2019@6:23:05 PM	
JC86837-7	1	104	-9.93e-6	5/2/2019@6:24:27 PM	
JC86837-8	1	105	0.0687	5/2/2019@6:25:48 PM	
JC86837-9	1	106	0.0261	5/2/2019@6:27:11 PM	
JC86837-10	1	107	0.0215	5/2/2019@6:28:33 PM	
CCV	1	S9	0.419	5/2/2019@6:29:55 PM	
	Known Conc:		0.400		
CCB	1	S10	-7.37e-3	5/2/2019@6:31:17 PM	
	Known Conc:		0.00		
JC86837-11 (S)	1	108	0.0880	5/2/2019@6:32:39 PM	
GP20999-S2	1	109	0.417	5/2/2019@6:34:01 PM	3.00
CCV	1	S9	0.419	5/2/2019@6:37:05 PM	
	Known Conc:		0.400		
CCB	1	S10	-7.76e-3	5/2/2019@6:38:27 PM	
	Known Conc:		0.00		

104.25

110.6 > bsp failed high, back to need

107.25

bsp failed high, back to need

105.25

bsp failed high, back to need

104.75

bsp failed high, back to need

104.75

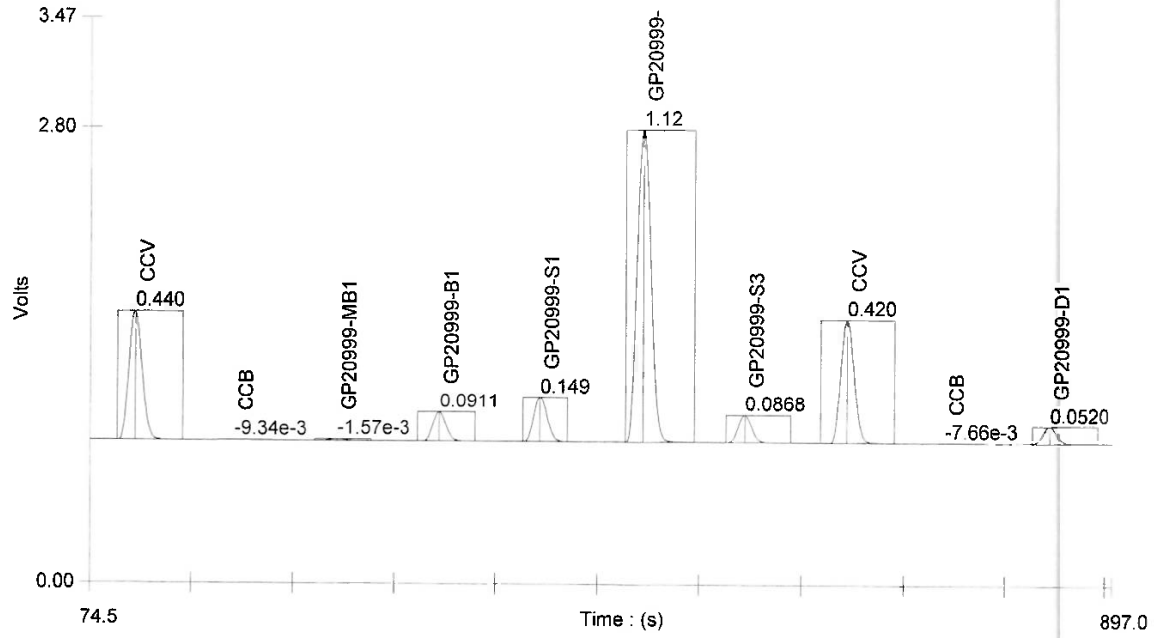
15.1

15

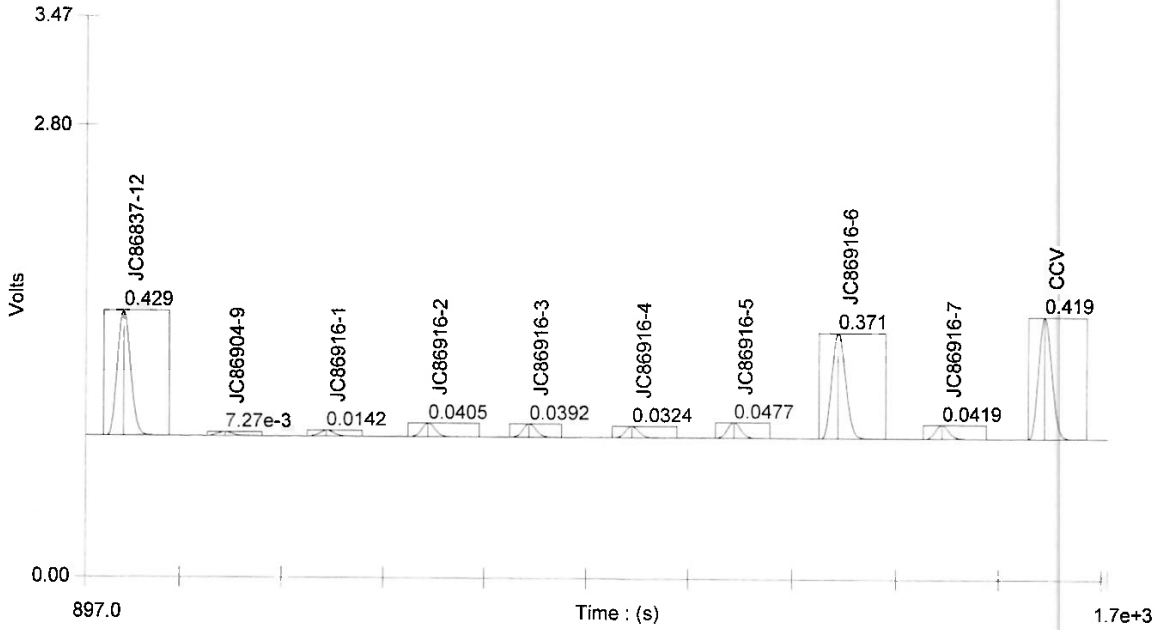
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 1 / 10



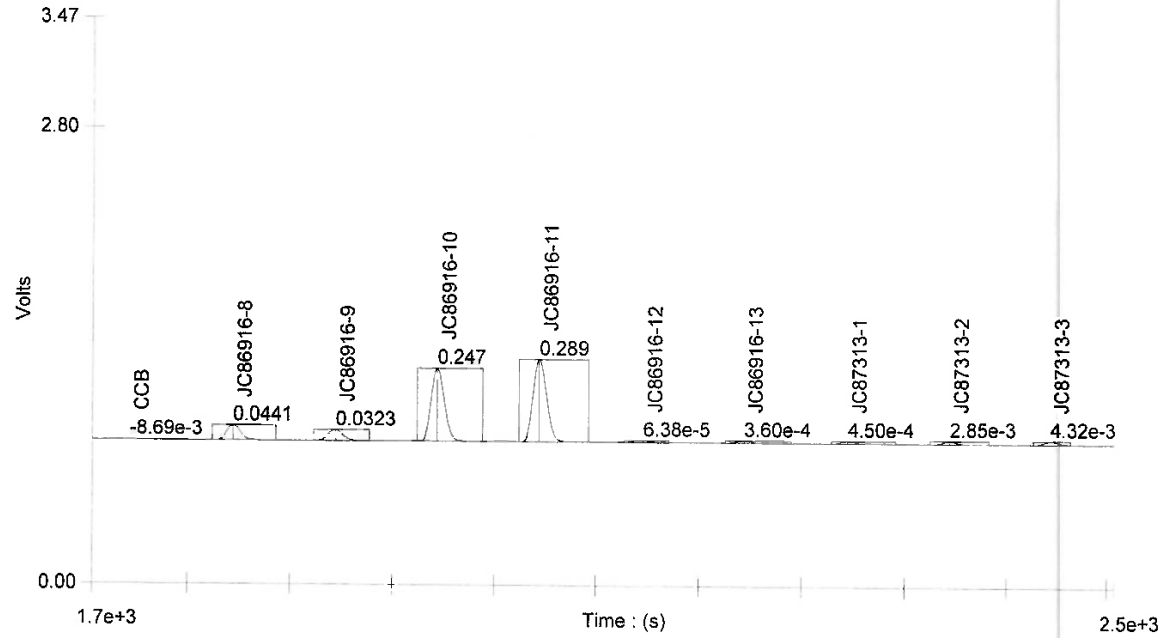
Channel 1 - Set: 2 / 10



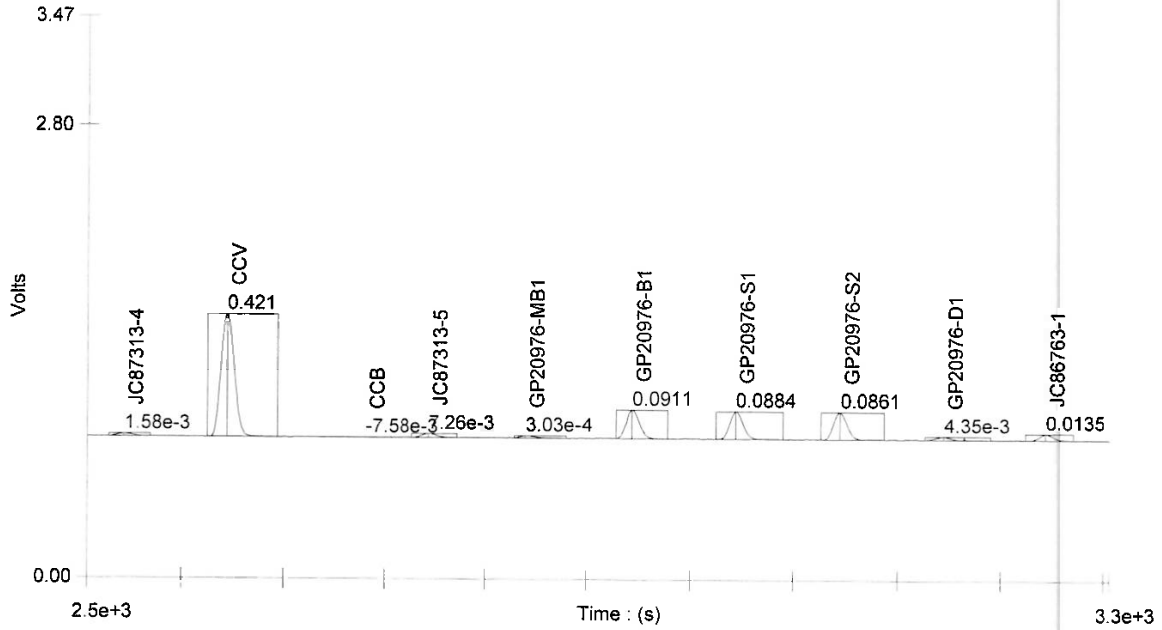
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 3 / 10



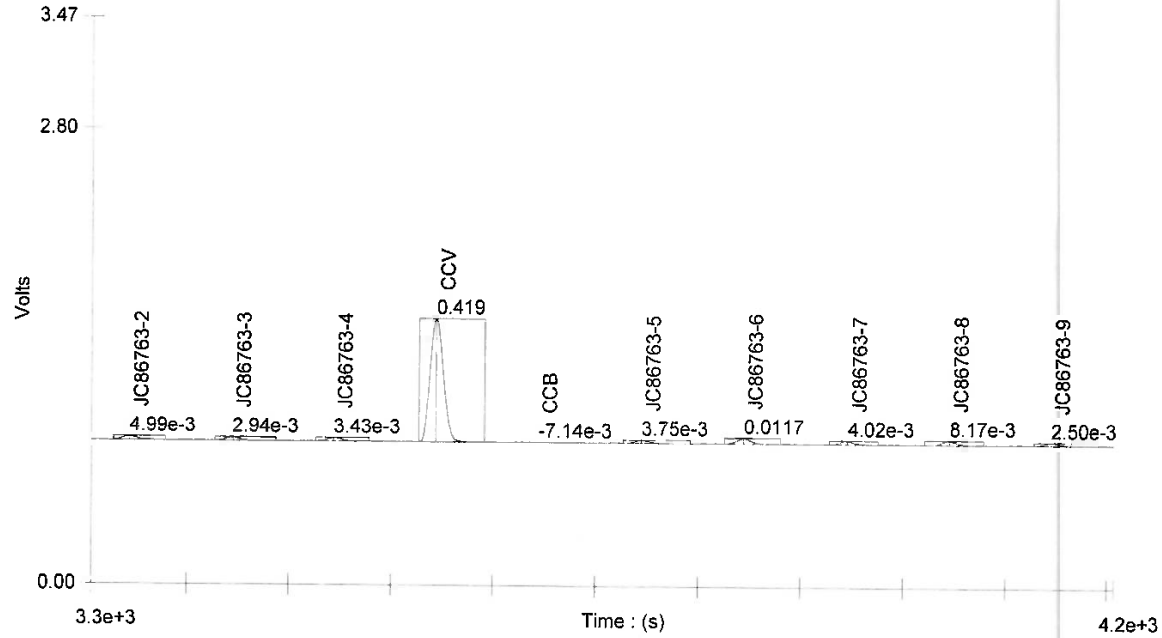
Channel 1 - Set: 4 / 10



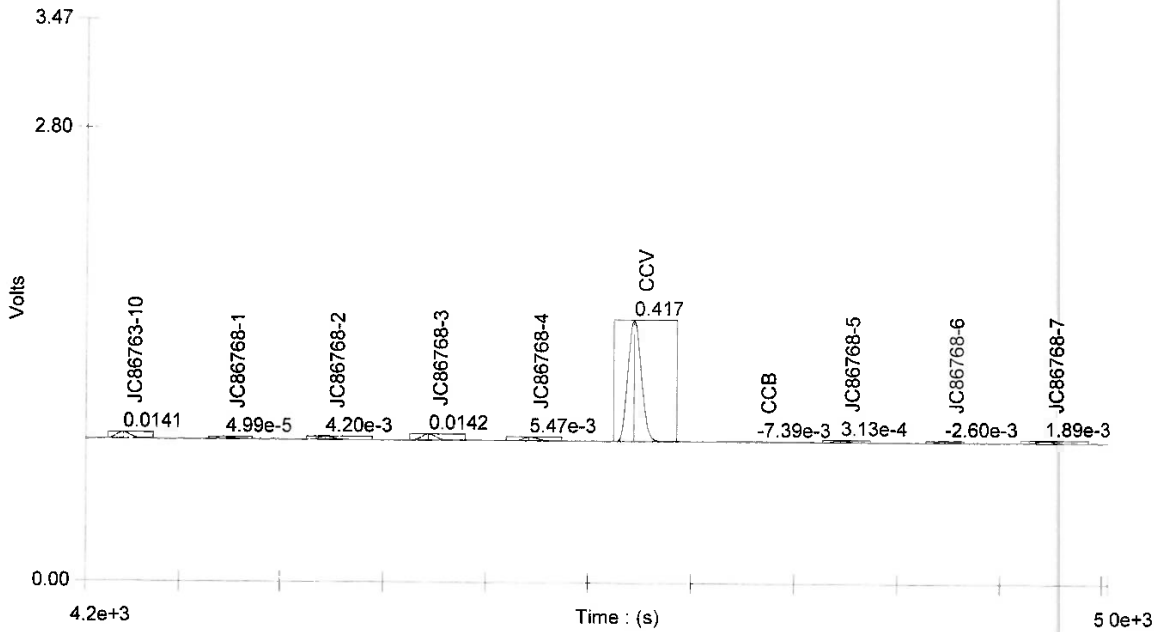
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 5 / 10



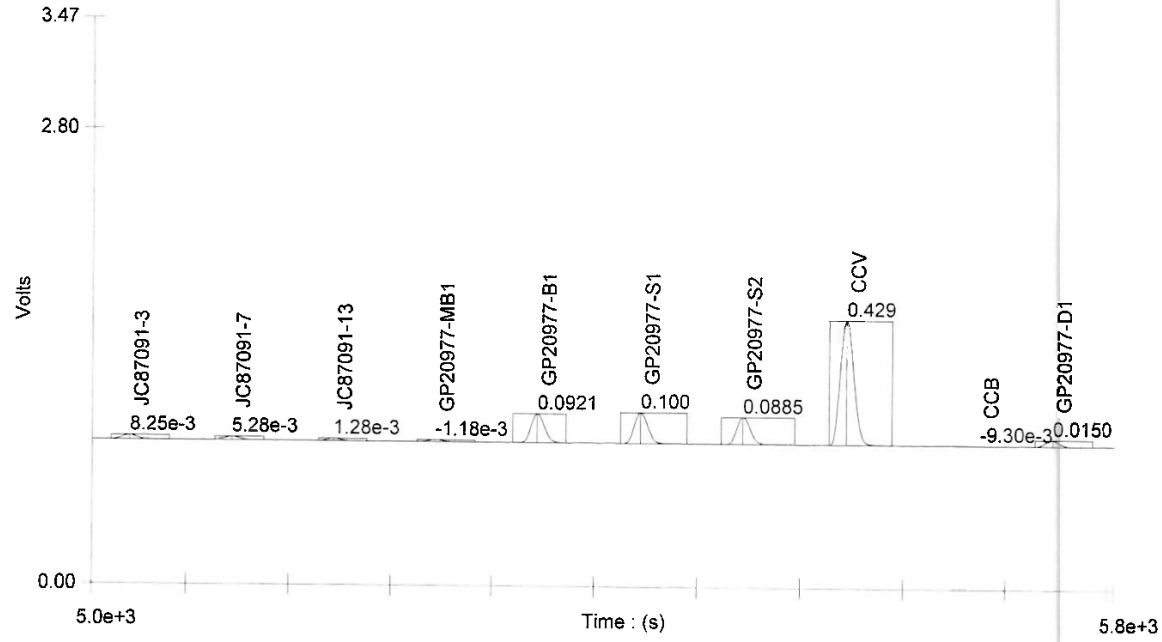
Channel 1 - Set: 6 / 10



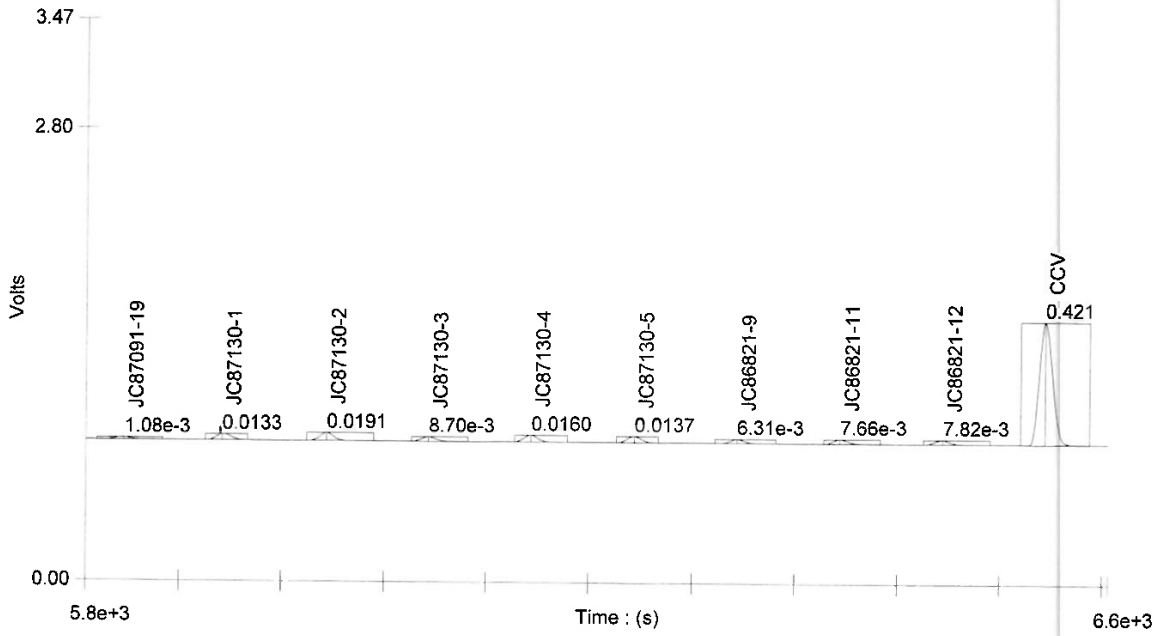
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 7 / 10



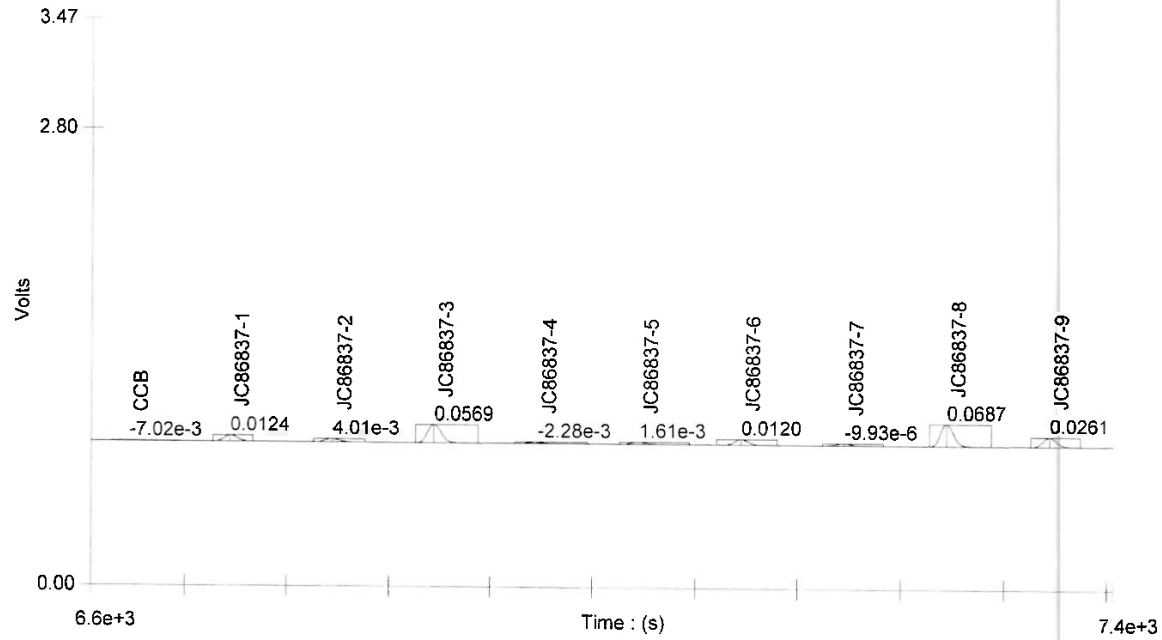
Channel 1 - Set: 8 / 10



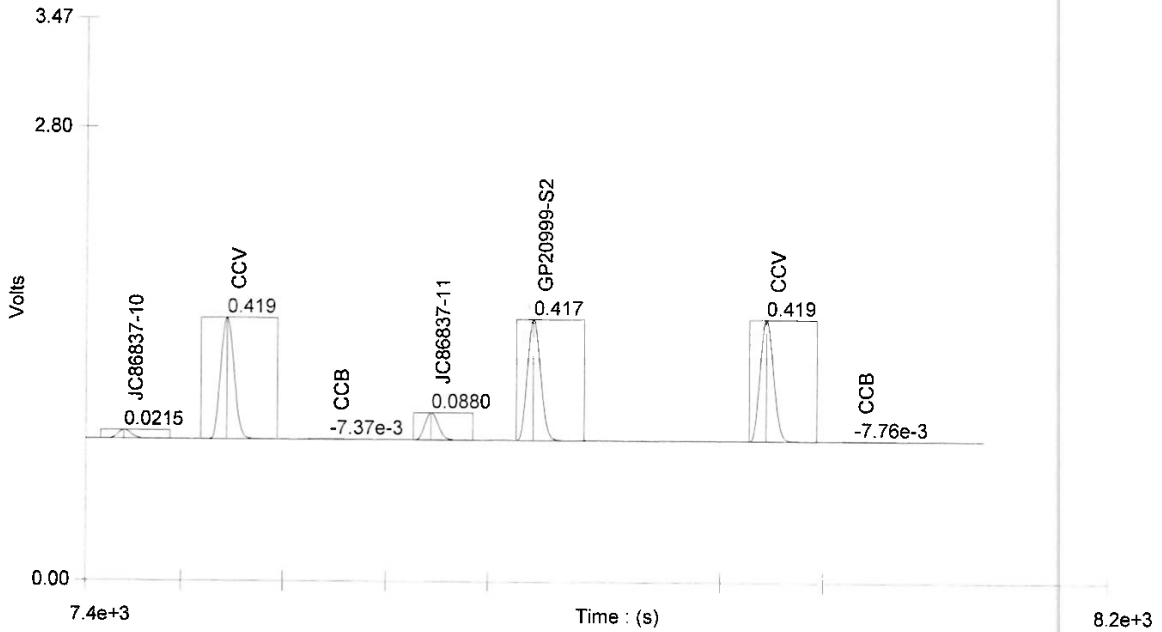
Author: Chemistry

Date : 5/2/2019

Channel 1 - Set: 9 / 10



Channel 1 - Set: 10 / 10



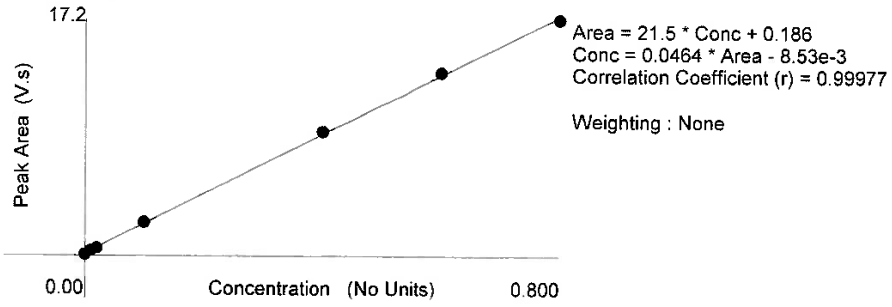
Author: Chemistry

Date : 5/2/2019

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	17.2	1.39	0.0	1.3	0.789	5/2/2019	3:13:30 PM
2	0.600	1	13.3	1.09	0.0	-1.5	0.609	5/2/2019	3:14:53 PM
3	0.400	1	8.95	0.738	0.0	-1.7	0.407	5/2/2019	3:16:15 PM
4	0.100	1	2.43	0.200	0.0	-3.7	0.104	5/2/2019	3:17:37 PM
5	0.0200	1	0.561	0.0450	0.0	9.0	0.0175	5/2/2019	3:18:59 PM
6	0.0100	1	0.364	0.0277	0.0	9.4	8.36e-3	5/2/2019	3:20:21 PM
7	0.00	1	0.0776	5.23e-3			-4.93e-3	5/2/2019	3:21:42 PM

Figure : 1 (CN)



SGS

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: GN94838

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

Redo

Batch ID: _____

GP 20953

Autopipette ID: 43

Balance ID: B27

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	12:30	13:00	5/2/19	GP -MB1			BM
	↓	B1	↓	↓	↓	0.25	↓	↓	↓	↓	↓	GP -B1	0.10 ml of 5.0 mg/l (c)	/	↓
		S1 JC86717-11				0.26						GP -S1	0.10 ml of 5.0 mg/l	/	
	↓	S2 JC86815-3				0.23						GP -S2	0.10 ml of 5.0 mg/l	/	
	3	D1 JC86717-11				0.29						GP -D1			
1		JC86815-3 QC				0.25									
1		-9				0.30									
1		JC86960-3				0.28									
1		-4				0.21									
1		-5				0.28									
1		-6				0.29									
1		JC86973-1				0.28									
1		JC86710-3				0.22									
1		JC86717-1				0.25									
1		-3				0.25									
1		-5				0.26									
1		-7				0.21									
1		-9				0.20									
2		-11 QC				0.27									
1		-13				0.20									
6		-15				0.25									
1		-17				0.25									
1	↓	JC87077-1	↓	↓	↓	0.21	↓	↓	↓	↓	↓				↓

(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:

QC Reviewer: _____ Date: _____

Form: GN0012-05

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP209853

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: GP20953

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

Form: GN087A-28
Rev. Date: 03/19/13

15.1 15

SGS

Batch ID: _____

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

GP 20999

Autopipette ID: 43

Balance ID: 627

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	12:30	13:00	5/2/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
		S1 JC86916-5				0.21						GP -S1	0.10 ml of 5.0 mg/l	✓	
		S2 ↓ -6				0.26						GP -S2	0.10 ml of 5.0 mg/l	✓	
		D1 JC86916-5				0.25						GP -D1			
1		JC86837-12				0.24									
1		JC86904-9				0.28									
2		JC86916-1				0.20									
1		-2				0.23									
1		-3				0.21									
1		-4				0.22									
1		-5 QC				0.23									
1		-6 QC				0.29									
1		-7				0.24									
1		-8				0.26									
1		-9				0.26									
1		-10				0.22									
1		-11				0.27									
1		-12				0.27									
1	↓	↓ -13				0.29									
1	2	JC87313-1				0.27									
1		-2				0.24									
1		-3 GC				0.22									
1		-4				0.21									
1		↓ -5				0.26									
	↓	S3 JC87313-3	↓	↓	↓	0.22	↓	↓	↓	↓	↓				↓

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: GP20999

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: GP20999

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

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SGS

Batch ID: _____

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

GP20976

Autopipette ID: 43

Balance ID: B27

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	15:40	16:10	5/11/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)		
		S1 JC86763-3				0.20						GP -S1	0.10 ml of 5.0 mg/l		
		S2 JC86768-6				0.24						GP -S2	0.10 ml of 5.0 mg/l		
		D1 JC86763-3				0.20						GP -D1			
1		JC86763-1				0.24									
1		-2				0.26									
1		-3				0.23									
1		-4				0.27									
1		-5				0.27									
1		-6				0.20									
1		-7				0.22									
1		-8				0.27									
1		-9				0.22									
1		-10				0.22									
1		JC86768-1				0.22									
1		-2				0.21									
1		-3				0.23									
1		-4				0.21									
1		-5				0.27									
1		-6				0.24									
1	2	-7				0.20									
1	1	JC87091-3				0.24									
1		-7				0.23									
1		-13				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 mg/l 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 20976

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 20976

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

15.1
15

Batch ID: _____

Autopipette ID: 43

Balance ID: B27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

GP 20977

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	15:40	16:10	5/1/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)		
		S1 JC87130-1				0.28						GP -S1	0.10 ml of 5.0 mg/l		
		S2 JC86837-5				0.30						GP -S2	0.10 ml of 5.0 mg/l		
		D1 JC87130-1				0.23						GP -D1			
1		JC87091-19				0.23									
4		JC87130-1				0.26									
1		-2				0.30									
1		-3				0.28									
4		-4				0.27									
1		-5				0.27									
1		JC86821-9				0.27									
1		-11				0.30									
1		-12				0.20									
1		JC86837-1				0.20									
1		-2				0.27									
1		-3				0.20									
1		-4				0.22									
1		-5				0.23									
1		-6				0.21									
1		-7				0.21									
1	3	-8				0.24									
1		-9				0.23									
1		-10				0.26									
1		-11				0.24									

(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:

QC Reviewer: _____ Date: _____

Form: GN0012.05

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP20977

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: GP20977

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

15.1
15

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E050319W1.CN
Analyst: KI

Date Analyzed: 05/03/19
Run ID: GN94885

Methods: EPA 335.4, EPA 335.4/LACHAT, SW846 9012B/LAC

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 5/3/19

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 5/6/19

GN94885 e050319w1 cn

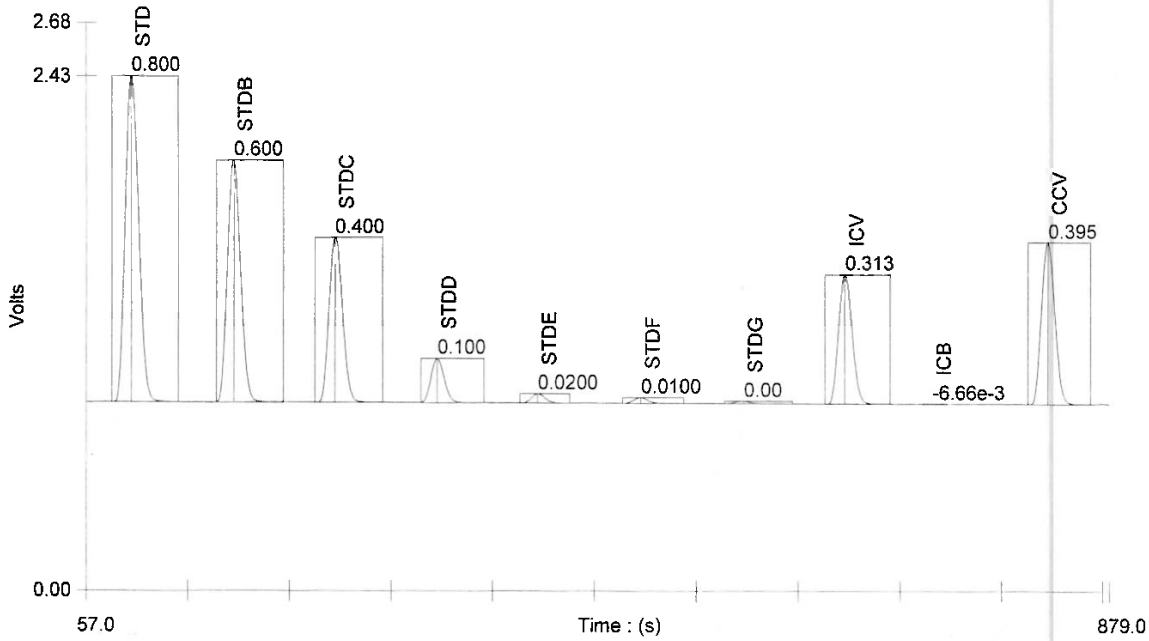
Author: Chemistry Date : 5/3/2019

Original Run Filename: OM_5-3-2019_11-55-27AM.OMN Created: 5/3/2019 11:55:27 AM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-3-2019_11-55-27AM.OMN Last Modified: 5/3/2019 12:49:16 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

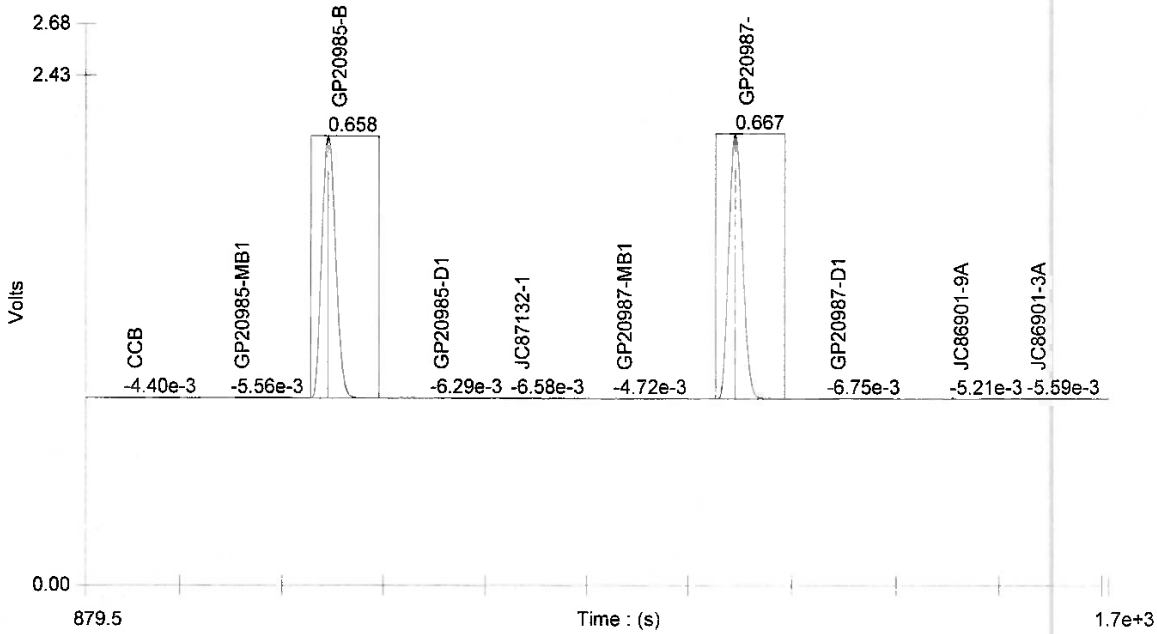
Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	% rec
STDA	1	1	0.800	5/3/2019@11:56:36 AM		
STDB	1	2	0.600	5/3/2019@11:57:58 AM		
STDC	1	3	0.400	5/3/2019@11:59:20 AM		
STDD	1	4	0.100	5/3/2019@12:00:42 PM		
STDE	1	5	0.0200	5/3/2019@12:02:04 PM		
STDF	1	6	0.0100	5/3/2019@12:03:26 PM		
STDG	1	7	0.00	5/3/2019@12:04:48 PM		
ICV	1	8	0.313	5/3/2019@12:06:10 PM		104.3
	Known Conc:		0.300			
	Calibration:		Table/Fig. : 1			
ICB	1	9	-6.66e-3	5/3/2019@12:07:31 PM		
	Known Conc:		0.00			
CCV	1	S9	0.395	5/3/2019@12:08:53 PM		98.75
	Known Conc:		0.400			
CCB	1	S10	-4.40e-3	5/3/2019@12:10:15 PM		
	Known Conc:		0.00			
GP20985-MB1	1	10	-5.56e-3	5/3/2019@12:11:36 PM		
GP20985-B1	1	11	0.658	5/3/2019@12:12:57 PM		32.9
GP20985-D1	1	12	-6.29e-3	5/3/2019@12:14:19 PM		
JC87132-1	1	13	-6.58e-3	5/3/2019@12:15:40 PM		
GP20987-MB1	1	14	-4.72e-3	5/3/2019@12:17:01 PM		
GP20987-B1	1	15	0.667	5/3/2019@12:18:21 PM		33.4
GP20987-D1	1	16	-6.75e-3	5/3/2019@12:19:44 PM		
JC86901-9A	1	17	-5.21e-3	5/3/2019@12:21:06 PM		
JC86901-3A	1	18	-5.59e-3	5/3/2019@12:22:28 PM		
JC86901-13A	1	19	-6.57e-3	5/3/2019@12:23:50 PM		
CCV	1	S9	0.396	5/3/2019@12:25:12 PM		99
	Known Conc:		0.400			
CCB	1	S10	-2.94e-3	5/3/2019@12:26:34 PM		
	Known Conc:		0.00			
JC87030-3A	1	20	-8.21e-3	5/3/2019@12:27:56 PM		
JC87084-1	1	21	-6.61e-3	5/3/2019@12:29:18 PM		
JC87084-2	1	22	-6.32e-3	5/3/2019@12:30:39 PM		
JC86768-1A	1	23	-7.15e-3	5/3/2019@12:32:01 PM		
JC86768-2A	1	24	-5.96e-3	5/3/2019@12:33:22 PM		
JC86768-3A	1	25	-6.66e-3	5/3/2019@12:34:44 PM		
JC86768-4A	1	26	-6.48e-3	5/3/2019@12:36:05 PM		
JC86768-5A	1	27	-4.44e-3	5/3/2019@12:37:27 PM		
JC86768-6A	1	28	-6.31e-3	5/3/2019@12:38:48 PM		
JC86768-7A	1	29	-5.62e-3	5/3/2019@12:40:08 PM		
CCV	1	S9	0.399	5/3/2019@12:41:30 PM		99.75
	Known Conc:		0.400			
CCB	1	S10	-5.88e-3	5/3/2019@12:42:52 PM		
	Known Conc:		0.00			
JC87190-1	1	30	-6.68e-3	5/3/2019@12:44:13 PM		
CCV	1	S9	0.401	5/3/2019@12:45:35 PM		100.25
	Known Conc:		100			
CCB	1	S10	-3.99e-3	5/3/2019@12:46:57 PM		
	Known Conc:		100			

Author: Chemistry Date : 5/3/2019

Channel 1 - Set: 1 / 4



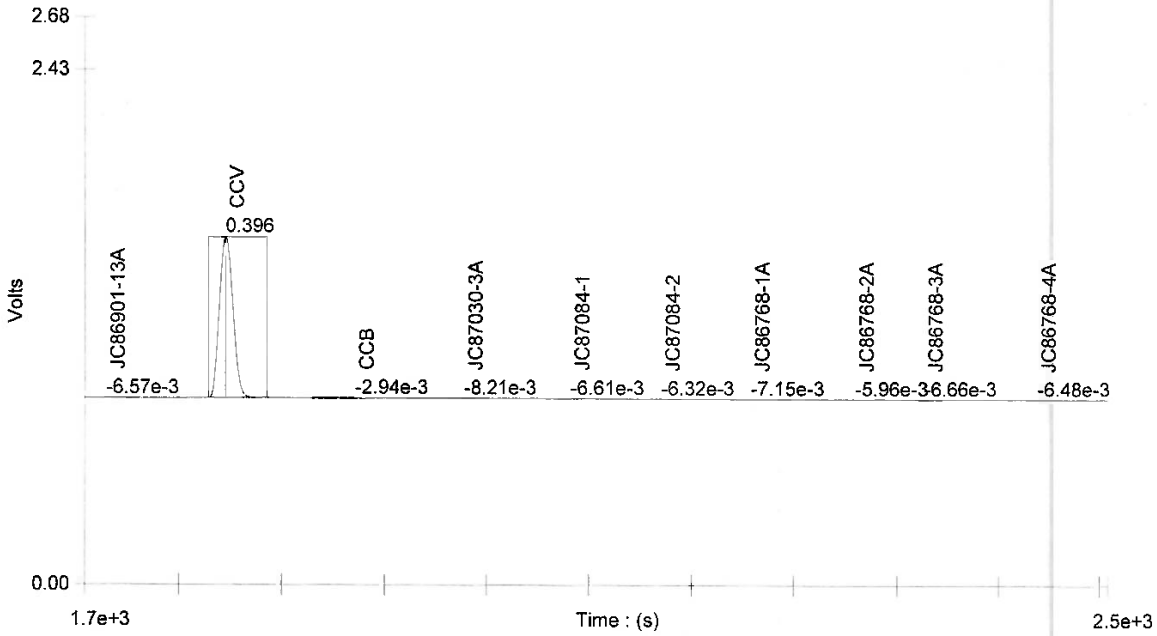
Channel 1 - Set: 2 / 4



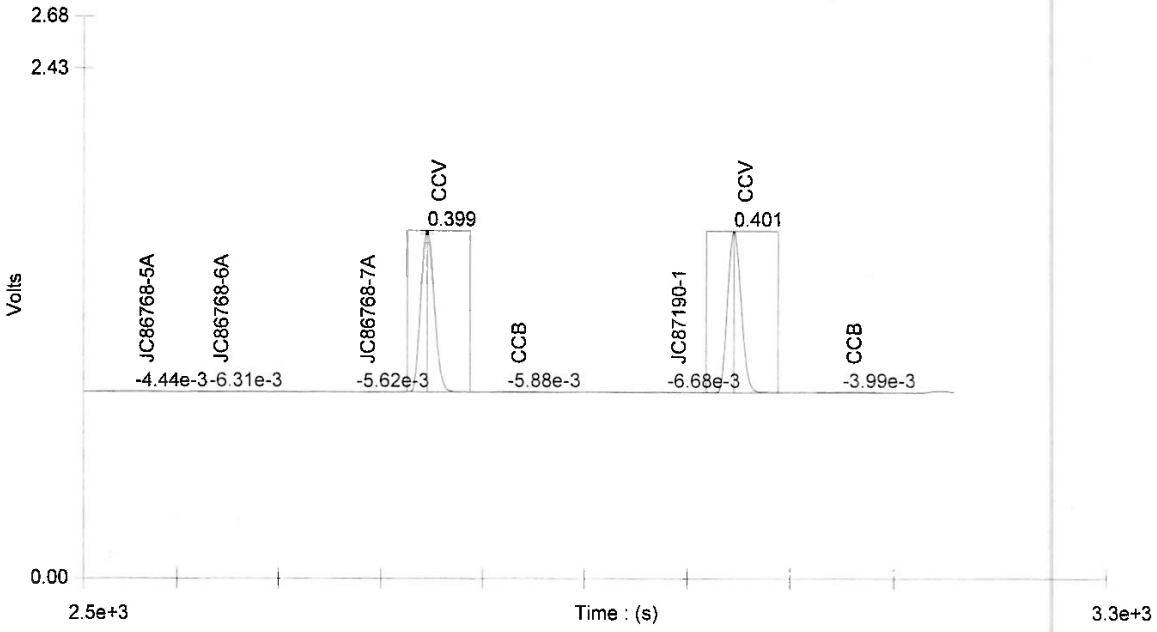
Author: Chemistry

Date : 5/3/2019

Channel 1 - Set: 3 / 4



Channel 1 - Set: 4 / 4



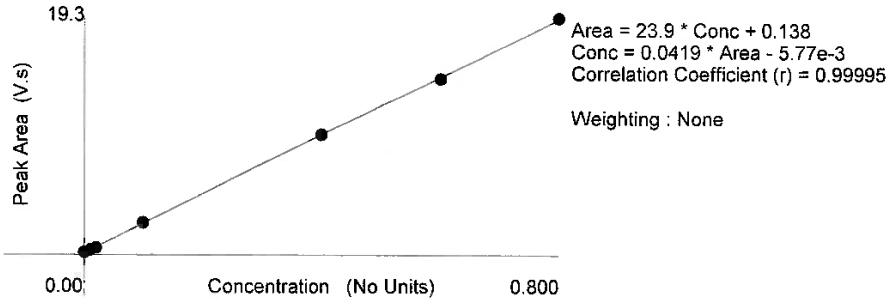
Author: Chemistry

Date : 5/3/2019

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	19.3	1.53	0.0	-0.5	0.804	5/3/2019	11:56:36 AM
2	0.600	1	14.3	1.14	0.0	0.9	0.594	5/3/2019	11:57:58 AM
3	0.400	1	9.67	0.780	0.0	0.1	0.399	5/3/2019	11:59:20 AM
4	0.100	1	2.58	0.208	0.0	-2.1	0.102	5/3/2019	12:00:42 PM
5	0.0200	1	0.566	0.0457	0.0	8.2	0.0179	5/3/2019	12:02:04 PM
6	0.0100	1	0.376	0.0285	0.0	0.2	9.99e-3	5/3/2019	12:03:26 PM
7	0.00	1	0.183	0.0125			1.91e-3	5/3/2019	12:04:48 PM

Figure : 1 (CN)



l050319w2.cn

Author: Chemistry

Date : 5/3/2019

Original Run Filename: OM_5-3-2019_12-50-06PM.OMN Created: 5/3/2019 12:50:06 PM
Original Run Author's Signature: [Chemistry]
Current Run Filename: OM_5-3-2019_12-50-06PM.OMN Last Modified: 5/3/2019 2:57:34 PM
Current Run Author's Signature: [Chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF
CCV	1	S9	0.398	5/3/2019@12:51:15 PM	
	Known Conc:		100		
CCB	1	S10	-3.47e-3	5/3/2019@12:52:37 PM	
	Known Conc:		100		
	Calibration:		Table/Fig. : 1		
GP20975-MB2	1	31	6.71e-4	5/3/2019@12:53:59 PM	
GP20975-B2	1	32	0.0868	5/3/2019@12:55:22 PM	
GP20975-S1	1	33	0.0629	5/3/2019@12:56:44 PM	
GP20975-S2	1	34	0.0486	5/3/2019@12:58:06 PM	
GP20975-D1	1	35	6.37e-3	5/3/2019@12:59:28 PM	
JC86782-2	1	36	6.39e-3	5/3/2019@1:00:50 PM	
JC87191-1	1	37	-2.01e-3	5/3/2019@1:02:11 PM	
CCV	1	S9	0.401	5/3/2019@1:03:33 PM	
	Known Conc:		0.400		
CCB	1	S10	-4.44e-3	5/3/2019@1:04:55 PM	
	Known Conc:		0.00		
JC87191-2	1	38	-2.08e-3	5/3/2019@1:06:16 PM	
JC87191-3	1	39	-2.39e-3	5/3/2019@1:07:38 PM	
JC87191-4	1	40	-9.03e-4	5/3/2019@1:08:59 PM	
JC87191-5	1	41	-2.68e-3	5/3/2019@1:10:21 PM	
JC87010-1	1	42	4.10e-3	5/3/2019@1:11:42 PM	
JC87050-1	1	43	7.79e-4	5/3/2019@1:13:03 PM	
GP20998-MB1	1	44	-6.18e-4	5/3/2019@1:14:23 PM	
GP20998-B1	1	45	0.0862	5/3/2019@1:15:44 PM	
GP20998-S1	1	46	0.0869	5/3/2019@1:17:06 PM	
GP20998-S2	1	47	0.0904	5/3/2019@1:18:28 PM	
CCV	1	S9	0.404	5/3/2019@1:19:50 PM	
	Known Conc:		0.400		
CCB	1	S10	-4.41e-3	5/3/2019@1:21:11 PM	
	Known Conc:		0.00		
GP20998-D1	1	48	0.0172	5/3/2019@1:22:33 PM	
JC86916-14 (2)	1	49	2.56	5/3/2019@1:23:55 PM	
JC86916-15	1	50	0.287	5/3/2019@1:25:17 PM	
JC86986-1	1	51	0.0111	5/3/2019@1:26:39 PM	
JC86986-2	1	52	0.0309	5/3/2019@1:28:01 PM	
JC86986-3	1	53	0.326	5/3/2019@1:29:23 PM	
JC86986-4	1	54	7.19e-3	5/3/2019@1:30:44 PM	
JC86986-5	1	55	5.05e-3	5/3/2019@1:32:06 PM	
JC86986-6	1	56	2.97e-3	5/3/2019@1:33:27 PM	
JC86986-7	1	57	0.0376	5/3/2019@1:34:48 PM	
CCV	1	S9	0.402	5/3/2019@1:36:09 PM	
	Known Conc:		0.400		
CCB	1	S10	-4.32e-3	5/3/2019@1:37:32 PM	
	Known Conc:		0.00		
JC86986-8	1	58	5.15e-3	5/3/2019@1:38:52 PM	
JC86986-9	1	59	0.230	5/3/2019@1:40:13 PM	
JC86986-10	1	60	0.0116	5/3/2019@1:41:34 PM	
JC86986-11	1	61	0.0314	5/3/2019@1:42:56 PM	
JC86986-12	1	62	4.18e-3	5/3/2019@1:44:19 PM	
JC86986-13	1	63	7.28e-3	5/3/2019@1:45:40 PM	
JC87231-5	1	64	3.48e-3	5/3/2019@1:47:03 PM	
JC87231-9	1	65	6.83e-3	5/3/2019@1:48:24 PM	
GP20977-MB1	1	66	1.17e-3	5/3/2019@1:49:46 PM	
GP20977-B1	1	67	0.0901	5/3/2019@1:51:08 PM	
CCV	1	S9	0.413	5/3/2019@1:52:29 PM	
	Known Conc:		0.400		
CCB	1	S10	-2.88e-3	5/3/2019@1:53:52 PM	
	Known Conc:		0.00		
GP20977-S1	1	68	0.0977	5/3/2019@1:55:13 PM	
GP20977-S2	1	69	0.0870	5/3/2019@1:56:34 PM	

- 1 -

Author: Chemistry

Date : 5/3/2019

GP20977-D1	1	70	0.0229	5/3/2019@1:57:56 PM	
JC87091-19	1	71	3.96e-3	5/3/2019@1:59:17 PM	
JC87130-1	1	72	0.0236	5/3/2019@2:00:38 PM	
JC87130-2	1	73	0.0223	5/3/2019@2:01:59 PM	
JC87130-3	1	74	0.0103	5/3/2019@2:03:20 PM	
JC87130-4	1	75	0.0191	5/3/2019@2:04:41 PM	
JC87130-5	1	76	0.0153	5/3/2019@2:06:04 PM	
JC86821-9	1	77	6.82e-3	5/3/2019@2:07:26 PM	
CCV	1	S9	0.411	5/3/2019@2:08:48 PM	
	Known Conc:		0.400		
CCB	1	S10	-2.35e-3	5/3/2019@2:10:10 PM	
	Known Conc:		0.00		
JC86821-11	1	78	0.0168	5/3/2019@2:11:32 PM	
JC86821-12	1	79	0.0119	5/3/2019@2:12:54 PM	
JC86837-1	1	80	0.0163	5/3/2019@2:14:16 PM	
JC86837-2	1	81	4.69e-3	5/3/2019@2:15:38 PM	
JC86837-3	1	82	0.0849	5/3/2019@2:16:59 PM	
JC86837-4	1	83	1.76e-3	5/3/2019@2:18:21 PM	
JC86837-5	1	84	1.93e-3	5/3/2019@2:19:42 PM	
JC86837-6	1	85	0.0176	5/3/2019@2:21:04 PM	
JC86837-7	1	86	-2.32e-4	5/3/2019@2:22:25 PM	
JC86837-8	1	87	0.0806	5/3/2019@2:23:46 PM	
CCV	1	S9	0.414	5/3/2019@2:25:08 PM	
	Known Conc:		0.400		
CCB	1	S10	-2.85e-3	5/3/2019@2:26:30 PM	
	Known Conc:		0.00		
JC86837-9	1	88	0.0224	5/3/2019@2:27:51 PM	
JC86837-10	1	89	0.0259	5/3/2019@2:29:12 PM	
JC86837-11	1	90	0.0992	5/3/2019@2:30:33 PM	
GP21018-MB1	1	91	3.09e-3	5/3/2019@2:31:56 PM	
GP21018-B1	1	92	0.0891	5/3/2019@2:33:18 PM	
GP21018-S1	1	93	0.0884	5/3/2019@2:34:40 PM	
GP21018-D1	1	94	4.59e-3	5/3/2019@2:36:02 PM	
JC87355-1	1	95	6.41e-3	5/3/2019@2:37:24 PM	
JC87355-2	1	96	6.25e-3	5/3/2019@2:38:46 PM	
JC87355-3	1	97	3.68e-3	5/3/2019@2:40:08 PM	
CCV	1	S9	0.417	5/3/2019@2:41:29 PM	
	Known Conc:		0.400		
CCB	1	S10	-2.22e-3	5/3/2019@2:42:51 PM	
	Known Conc:		0.00		
JC87355-4	1	98	3.93e-3	5/3/2019@2:44:13 PM	
JC87355-5	1	99	5.82e-3	5/3/2019@2:45:34 PM	
JC80499-2A	1	100	0.0100	5/3/2019@2:46:55 PM	
JC80499-2	1	101	0.0118	5/3/2019@2:48:17 PM	
JC86916-14	1	102	0.842	5/3/2019@2:49:38 PM	5.00
JC86916-14	1	103	0.485	5/3/2019@2:51:00 PM	10.00
CCV	1	S9	0.414	5/3/2019@2:54:04 PM	
	Known Conc:		0.400		
CCB	1	S10	-3.06e-3	5/3/2019@2:55:26 PM	
	Known Conc:		0.00		

102.75

103.5

102.9

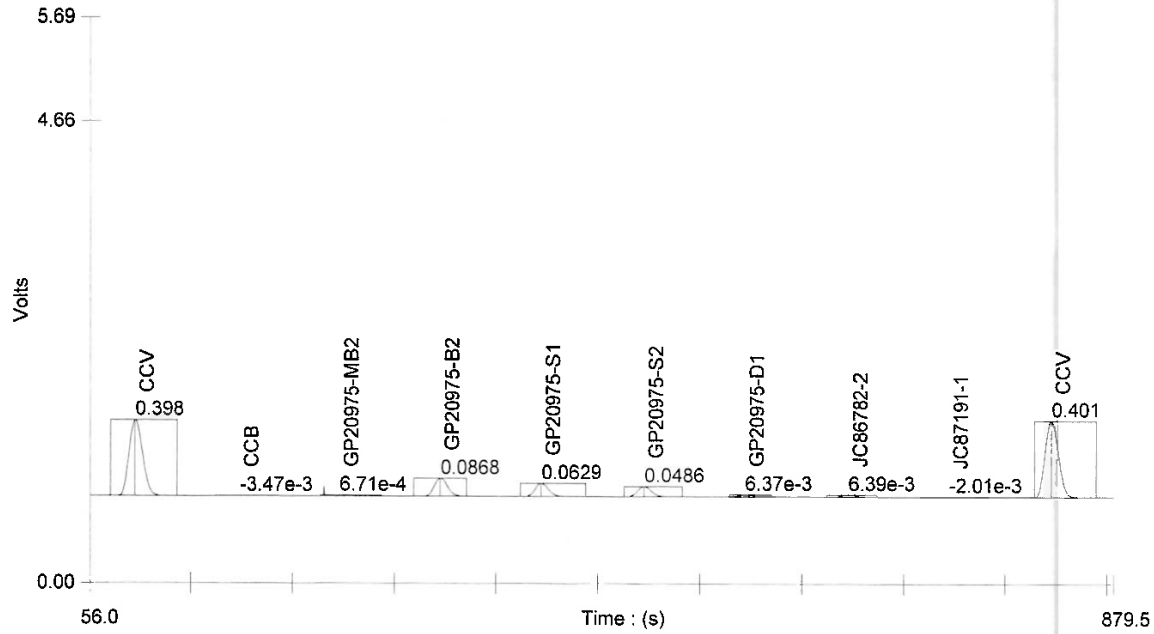
104.25

103.5

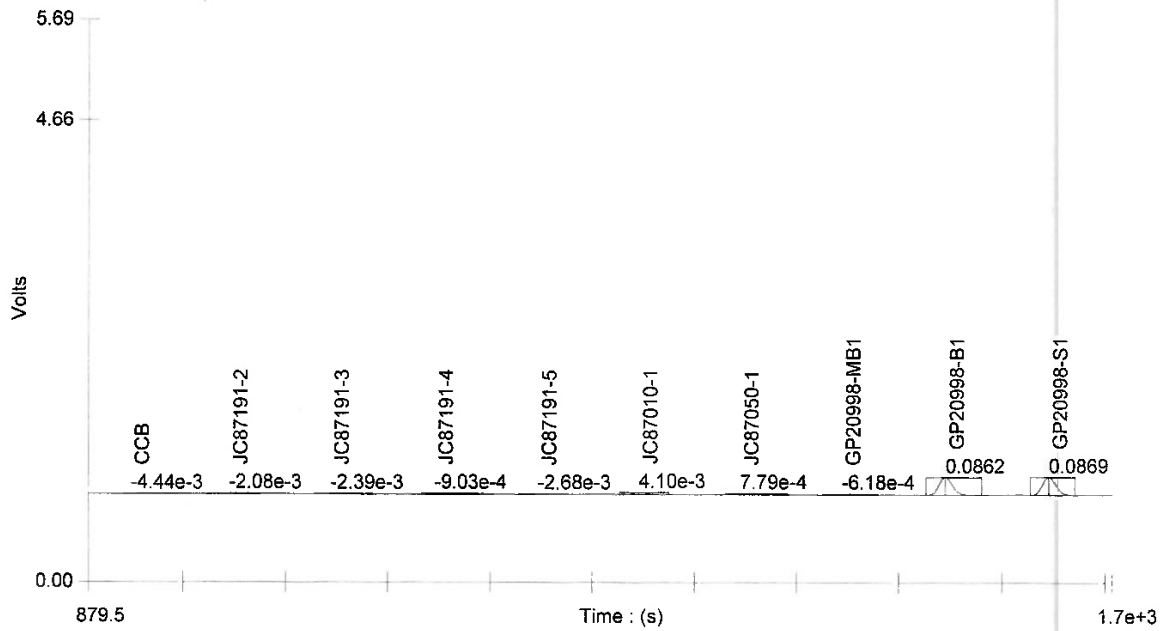
Author: Chemistry

Date : 5/3/2019

Channel 1 - Set: 1 / 10



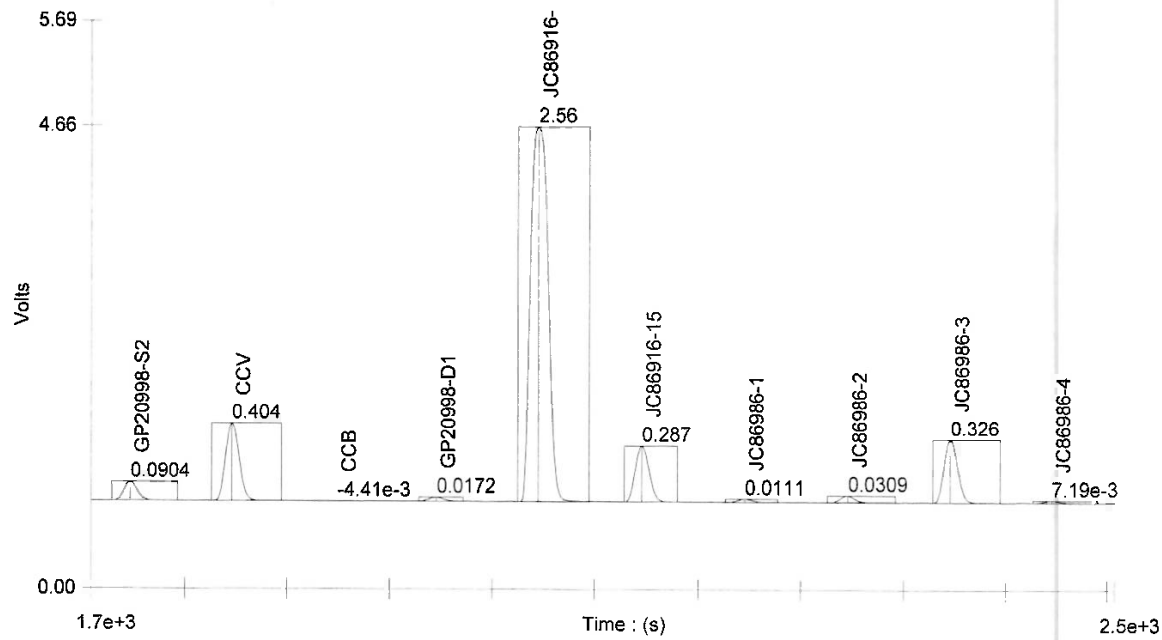
Channel 1 - Set: 2 / 10



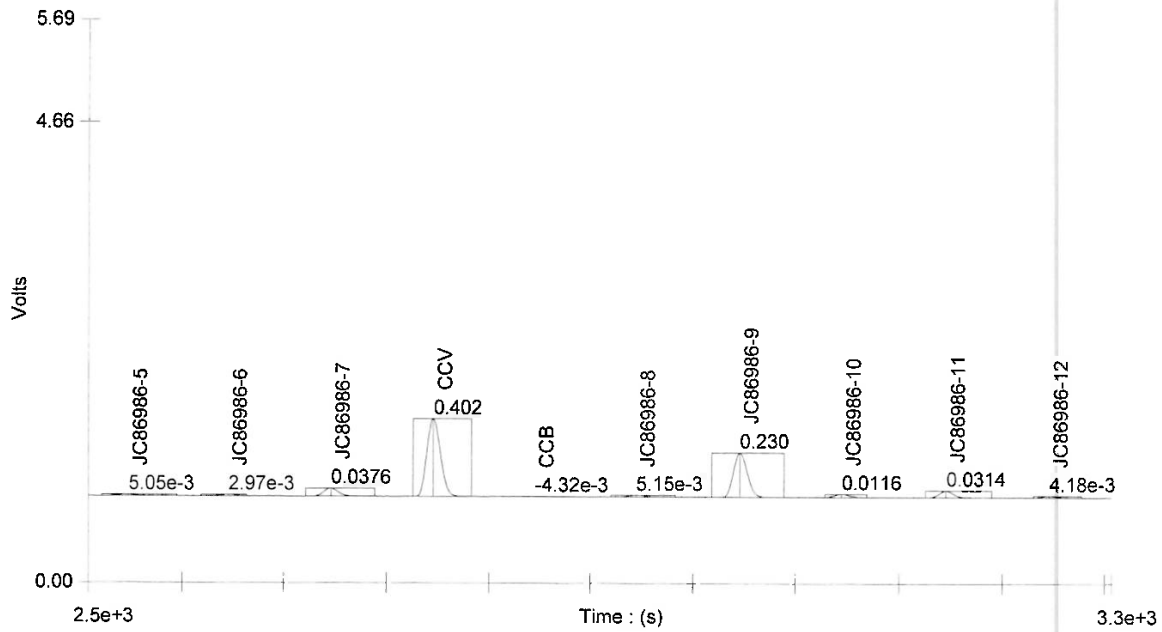
Author: Chemistry

Date : 5/3/2019

Channel 1 - Set: 3 / 10



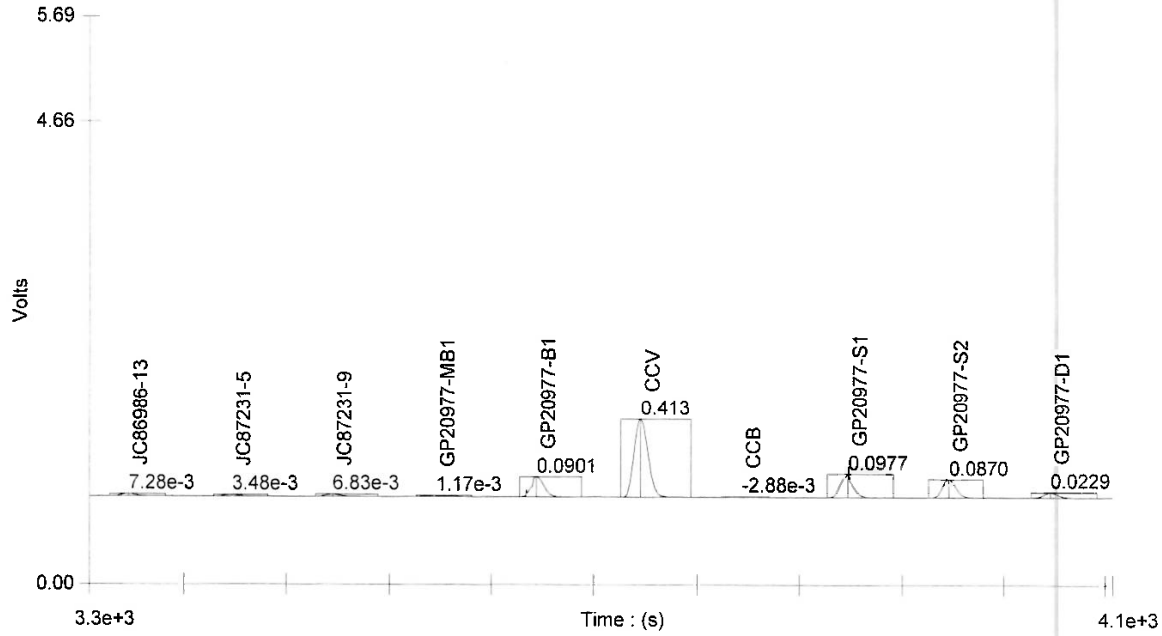
Channel 1 - Set: 4 / 10



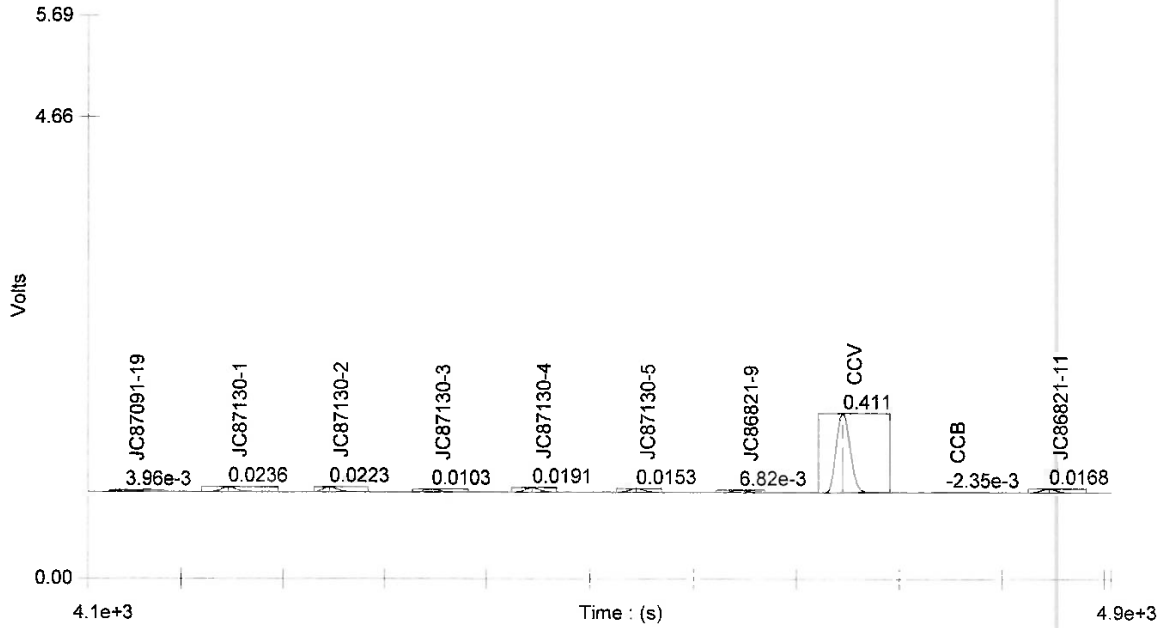
Author: Chemistry

Date : 5/3/2019

Channel 1 - Set: 5 / 10



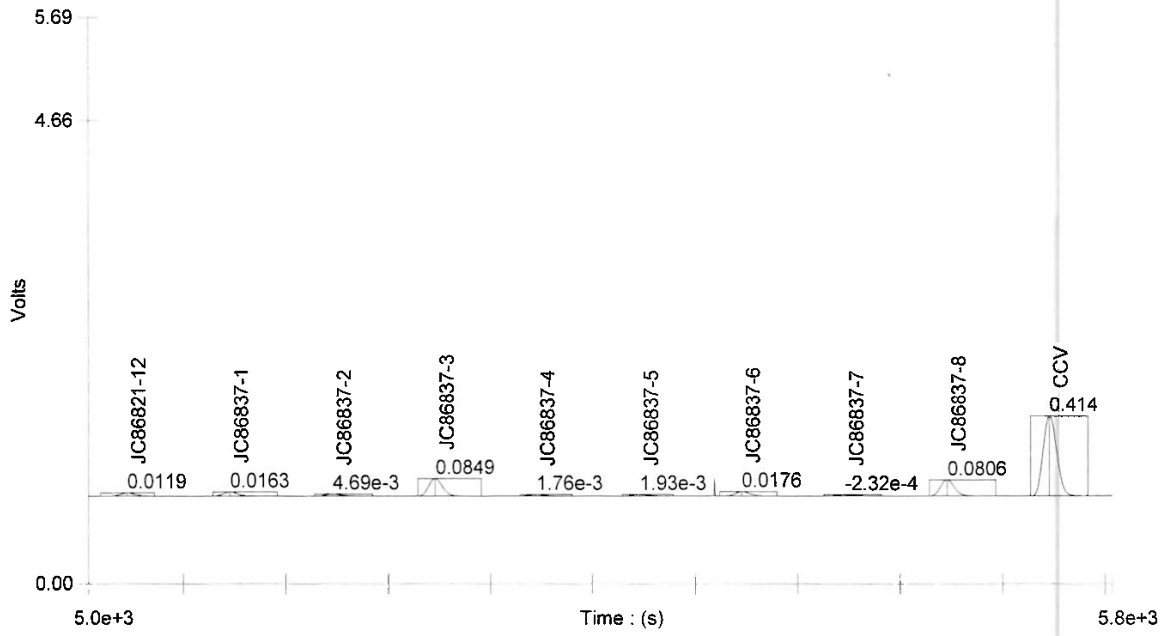
Channel 1 - Set: 6 / 10



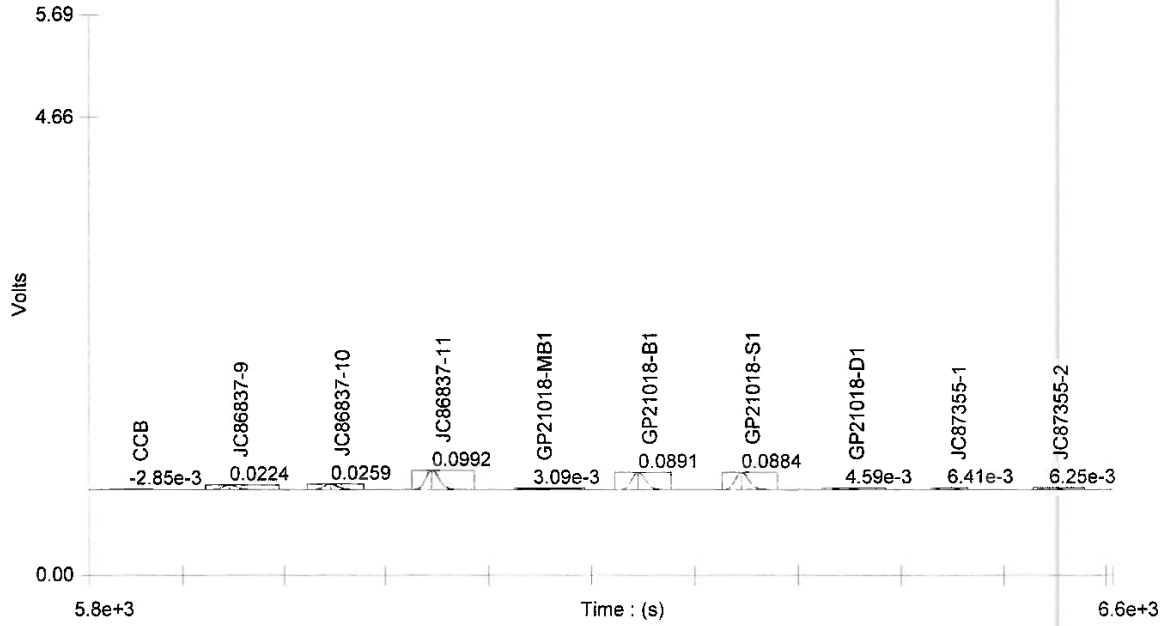
Author: Chemistry

Date : 5/3/2019

Channel 1 - Set: 7 / 10



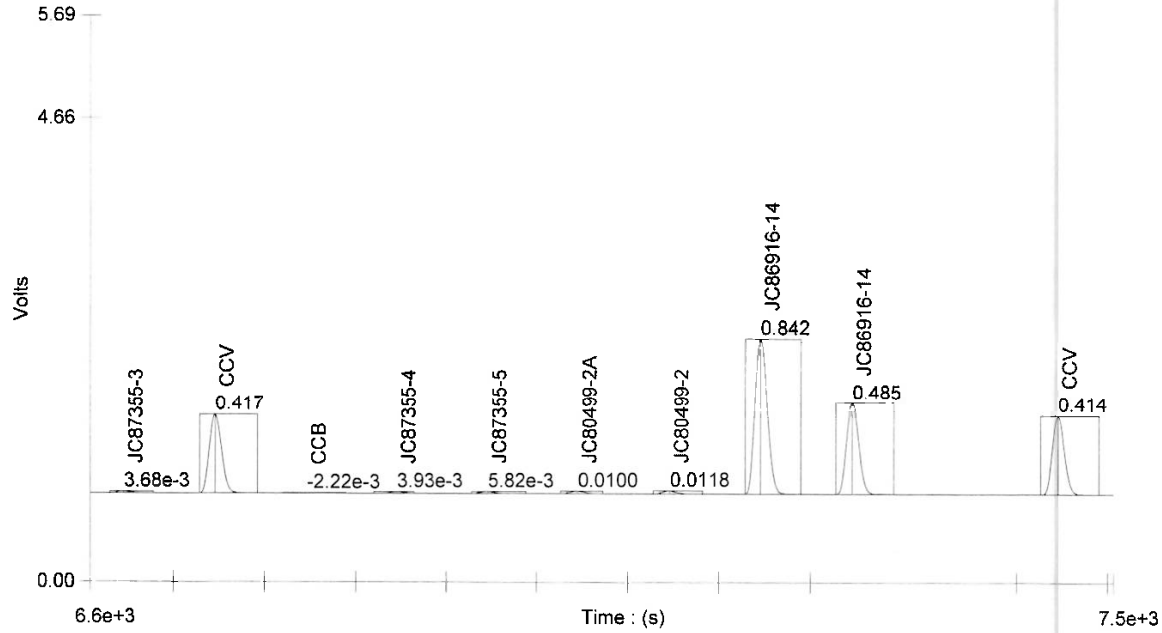
Channel 1 - Set: 8 / 10



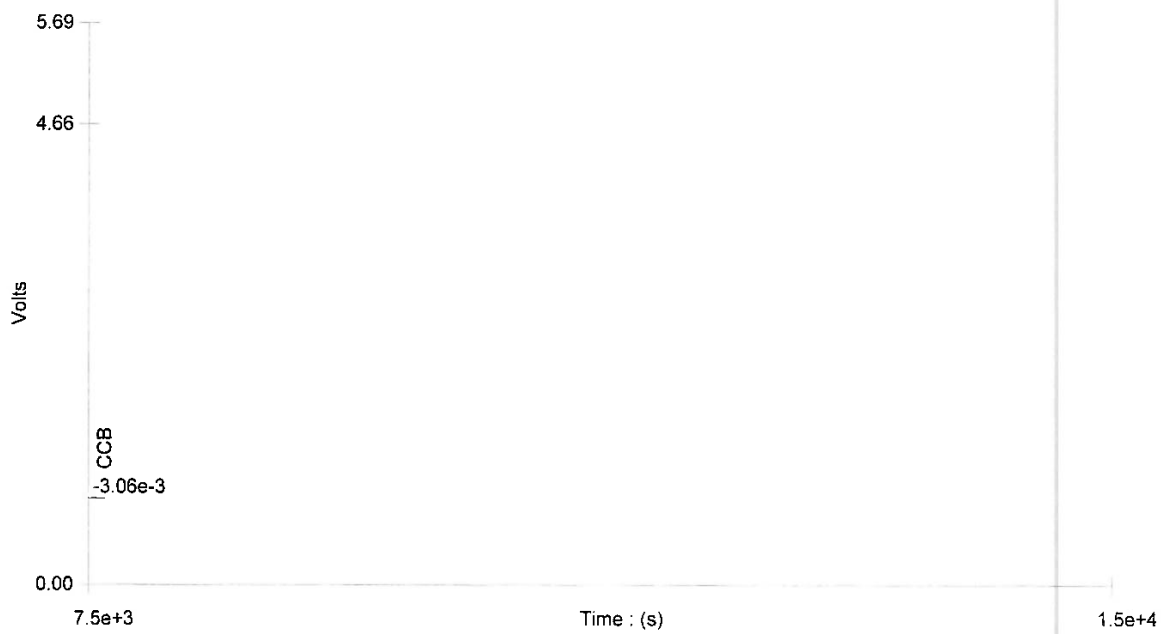
Author: Chemistry

Date : 5/3/2019

Channel 1 - Set: 9 / 10



Channel 1 - Set: 10 / 10



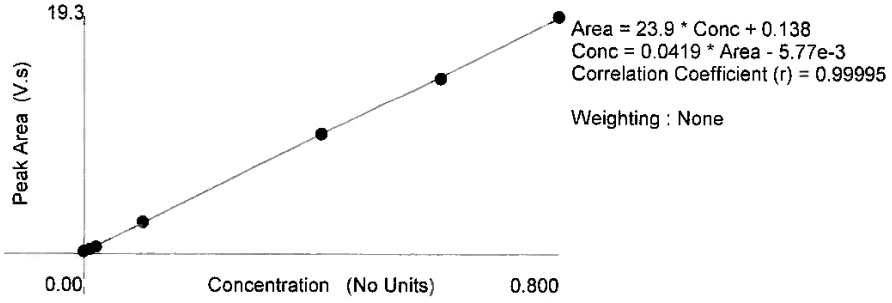
Author: Chemistry

Date : 5/3/2019

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	19.3	1.53	0.0	-0.5	0.804	5/3/2019	11:56:36 AM
2	0.600	1	14.3	1.14	0.0	0.9	0.594	5/3/2019	11:57:58 AM
3	0.400	1	9.67	0.780	0.0	0.1	0.399	5/3/2019	11:59:20 AM
4	0.100	1	2.58	0.208	0.0	-2.1	0.102	5/3/2019	12:00:42 PM
5	0.0200	1	0.566	0.0457	0.0	8.2	0.0179	5/3/2019	12:02:04 PM
6	0.0100	1	0.376	0.0285	0.0	0.2	9.99e-3	5/3/2019	12:03:26 PM
7	0.00	1	0.183	0.0125			1.91e-3	5/3/2019	12:04:48 PM

Figure : 1 (CN)



SGS

Analyst KI Product CN Autopipette # 43

Date 5/3/19 Batch ID Class A Vol. Flask

Sample Dilution Prep Log

Sample ID	Dilution	Initial Volume	Final Volume	Comments
JC86916-14	1:5	1	5	
↓	1:10	1	10	

QC Reviewer:_____ Date:_____

Form: GN165-01
Rev. Date: 2/25/03

SGS

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: GN94885

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
GP20984 / GP20985

Batch ID: _____

Autopipette ID: n/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	13:20		5/2/19	GP -MB1	both			CZD
	B1 creac	↓	↓	↓		↓	GP -B1	CREAC	✓	10mL of 100ppm	↓
	B1 sreac						GP -B1	SREAC	✓	10mL of 537ppm	
	JC87132-1 (S1)						GP -S1	SREAC	✓	10mL of 537ppm	
	(D1)						GP -D1	both			
	(QC) ↓							↓			

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

15.2
15

SGS

REACTIVITY DISTILLATION LOG (SOILS)

SREAC / CREAC
GP20986 / GP20987

Method: SW846 Chapter 7

Batch ID: _____

Autopipette ID: n/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
	MBi	10	500	13:20	13:50	5/2/19	GP -MB	both			CZD
	Bi creac	↓					GP -B	CREAC	✓	10ml of 100ppm	
	Bi sreac	↓					GP -B	SREAC	✓	10ml of 537ppm	
1	JC86901-9A (Si)	9.99					GP -S	SREAC	✓	10ml of 537 ppm	
1	(Di)	10.01					GP -D	both			
1	↓ (Qc)	10.00									
1	JC86901-3A	10.05									
1	JC86901-13A	10.04									
1	JC87030-3A	10.03									
1	JC87084-1	9.95									
1	JC87084-2	9.96		↓	↓						
1	JC86768-1A	10.04		14:26	14:56						
1	JC86768-2A	9.98									
1	JC86768-3A	10.01									
1	JC86768-4A	10.00									
1	JC86768-5A	10.02									
1	JC86768-6A	10.01									
1	JC86768-7A	9.98									
1	JC87190-1	9.97									

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

Redo

CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

GP20975

Batch ID:

Autopipette ID: 43

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	MB2	12	-	✓	6	6	120	12:30	13:00	5/2/19	GP -MB1			BM
		B2										GP -B1	0.10 ml of 5.0 mg/l (c)	/	
		S1 JC86782-2										GP -S1	0.10 ml of 5.0 mg/l	/	
		D1 ↓										GP -S2	0.10 ml of 5.0 mg/l	/	
8		JC86782-2										GP -D1			
5		JC87191-1													
5		-2													
5		-3													
5		-4													
5		-5													
5		JC87010-1													
1		JC87050-1													
	↓	S2 JC87191-1	↓	↓	↓	↓	↓	↓	↓	↓	↓				

ıeck 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.

ıe 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.

ıents:

eviewer: Date:

Form: GN0012-04
Rev. Date: 03/09/13

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP20975

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: GP20975

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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, 2s

Form: GN087A-28
Rev. Date: 03/19/13

15.2 15

SGS

Batch ID: _____

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

GP20998

Autopipette ID: 43

Balance ID: B27

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	12:30	13:00	5/2/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	1	
		S1 JC86986-2				0.25						GP -S1	0.10 ml of 5.0 mg/l	1	
		S2 ↓ -5				0.24						GP -S2	0.10 ml of 5.0 mg/l	1	
		D1 JC86986-2				0.29						GP -D1			
1		JC86916-14				0.29									
1		↓ -15				0.28									
1		JC86986-1				0.28									
2		-2QC				0.22									
1		-3				0.20									
1		-4				0.26									
1		-5				0.26									
1		-6				0.29									
1		-7				0.20									
1		-8				0.20									
1		-9				0.22									
1		-10				0.21									
1		-11				0.29									
1		-12				0.26									
1		↓ -13				0.26									
1		JC87231-5				0.27									
1	↓	↓ -9	↓	↓	↓	0.25	↓	↓	↓	↓	↓			↓	↓

(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:

QC Reviewer: _____ Date: _____

Form: GN0012-05

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP209?8

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: GP20998

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

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SGS

Redo

GP20977

Batch ID: _____

Autopipette ID: 43

Balance ID: 827

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	11:00	11:30	5/3/19	GP -MB1			BM
	1	B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	/	
		S1 JC87130-1				0.26						GP -S1	0.10 ml of 5.0 mg/l	/	
		S2 JC86837-5				0.25						GP -S2	0.10 ml of 5.0 mg/l	/	
		D1 JC87130-1				0.28						GP -D1			
1		JC87091-19				0.28									
4		JC87130-1QC				0.28									
1		-2				0.30									
1		-3				0.23									
4		-4				0.30									
1		-5				0.26									
1		JC86821-9				0.24									
1		-11				0.28									
1		-12				0.22									
1		JC86837-1				0.23									
1		-2				0.29									
1		-3				0.24									
1		-4				0.24									
1		-5QC				0.23									
1		-6				0.22									
1		-7				0.23									
1		-8				0.25									
1		-9				0.23									
1		-10				0.23									
1		-11				0.24									

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:

QC Reviewer: _____ Date: _____

Form: GN0012-05

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP20977

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: GP20977

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

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GP21018

~~GP21018 # 48M~~

Batch ID: _____

Autopipette ID: 43

Balance ID: B27

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	11:00	11:30	5/3/19	GP -MB1			BM
		B1				0.25						GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
		S1JC87355-1				0.22						GP -S1	0.10 ml of 5.0 mg/l		
		D1JC87355-1				0.20						GP -S2	0.10 ml of 5.0 mg/l	✓	
1		JC87355-1				0.21						GP -D1			
1		-2				0.23									
1		-3				0.24									
1		-4				0.24									
1		-5				0.27									
N/A		JC80499-2A				0.25									
↓	↓	↓ -2	↓	↓	↓	0.25	↓	↓	↓	↓	↓				↓

(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:

QC Reviewer: _____ Date: _____

Form: GN0012-05

LOD and LOQ Scheduling

LOD Sample ID: JC80499-2A

Product: CN
Matrix: SO
LOD Concentration: 0.18 (0.0075)
Units: ug/kg
LOD Prep: 0.15 ml of 5ppm CN STD up to 100ml 0.25N NaOH
Manufacturer/Lot: GNE3-57465-CN
GN ID:
Result/Units:
Within range of 50 to 150%? **
Expiration Date: 9/11/19
Analysis Date:
Recovery:

LOQ (RL) Sample ID: JC80499-2

Product: CN
Matrix: SO
LOQ Concentration: 0.24 (0.01)
Units: ug/kg
LOQ Prep: 0.2 ml of 5ppm CN STD up to 100 ml 0.25N NaOH
Manufacturer/Lot: GNE3-57465-CN
GN ID:
Result/Units:
Within range of 70 to 130%? **
Expiration Date: 9/11/19
Analysis Date:
Recovery:

** if outside of range, notify supervisory team immediately to reschedule

Analyst:
QC Review:
Date:
Date:

Form: GN271-02
Rev. Date: 3/2/18

SGS

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP240180

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: GP21018

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE3-57464-CN	3/11/2019
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

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